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SEED ANNUAL 1884

D. M. FERRY
& Co.,

DETROIT, MICH.

Any person receiving more than one of our Catalogues, will oblige us by handing his surplus to some one who has none.

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SUPPLEMENT.

Specialties in Vegetable Seeds, 1884.

Extra Early Lima Beans.

BEANS.

EXTRA EARLY LIMA.

A very desirable acquisition, combining the size and good qualities of the Large Lima, with the earliness of the Small Lima. Vigorous in habit, and productive.

Per packet, 10 cents; $\frac{1}{2}$ pint, 20 cents; pint, 35 cents; quart, 60 cents; 4 quarts, \$2.00; bushel, \$12.00.

If by mail or express, prepaid, 15 cents per pint, 30 cents per quart must be added for charges.

Cabbage-Very Early Etampes

This variety has made a very fine record on our trial grounds the past

season. It is very little if any later than the Early Jersey Wakefield. Its heads are small and compact, and of most excellent quality. From our own observation and the reports of others who have subjected it to a thorough trial, we are confident that the VERY EARLY ETAMPES has enduring merit. This is the sort catalogued by some dealers as "EARLIEST" at very high prices.

Very Early Etampes Cabbage

Per packet, 5 cents; oz., 25 cents; 2 oz., 40 cents; $\frac{1}{4}$ lb., 75 cents; lb., \$2.50.

CABBAGE--Early Jersey Wakefield.

TRUE, BEST AMERICAN—This well known cabbage is deservedly popular with market gardeners in the vicinity of our large cities. It is one of the surest headers, and is without doubt the MOST PROFITABLE EARLY variety, as the heads are of fine quality, compact, solid, endure shipping to considerable distance, and are produced at just the right season to command a good price. The price of the seed is usually high owing to the fact that this cabbage is a VERY SHY SEEDER. Our strain this year is equal to any we have ever offered, and can be depended upon as being TRUE and PURE.

Early Jersey Wakefield Cabbage

Per packet, 5 cents; oz., 35 cents; 2 oz., 60 cents; $\frac{1}{4}$ lb., \$1.00; lb., \$3.50.

CABBAGE--D. M. FERRY & CO'S PREMIUM FLAT DUTCH.

As a variety for winter market, we consider this sort superior to any other late cabbage, and as it is one of the best keepers, it is the kind most extensively cultivated for fall and winter use. It is a sure header, and with good cultivation, on moist, rich ground, ninety-five in a hundred will head up hard and fine. Our stock of this variety has been *selected with great care*, with a view of fully developing the very valuable qualities of this cabbage, and we confidently recommend it as at least *equal to any other strain of this standard variety*.

Per packet, 5 cents; oz., 30 cents; 2 oz., 55 cents; $\frac{1}{4}$ lb., \$1.00; lb., \$3.00.

D. M. Ferry & Co's Premium Flat Dutch Cabbage.

CARROT. Long Orange Improved.

A great improvement on the common Long Orange, obtained by a careful selection for a number of years of the best formed and deepest colored roots. It is larger and more certain to produce a crop. The flavor is unexcelled by any variety, making it especially desirable for table use, and it is also of great value for stock feeding.

Per packet, 5 cents; oz., 10 cents; 2 oz., 15 cents; $\frac{1}{4}$ lb., 25 cents; lb., 90 cents.

CAULIFLOWER. EARLY SNOWBALL.

Everything considered, this is certainly the best type of Cauliflower in the market. The experience of years shows it to be UNEXCELLED by ANY variety for earliness. If planted March 1st, large sized heads will be produced early in June, about one week earlier than other varieties, and scarcely a single head will fail to form. The outer leaves are short, so that the plants may be set at from 18 to 20 inches apart, thus allowing the planting of from 12,000 to 14,000 heads per acre. Its compact habit of growth renders it a peculiarly profitable variety to force under glass, and it does equally well for late planting.

Per packet, 25 cents; $\frac{1}{4}$ oz., \$1.75; 1 oz., \$6.00.

Cauliflower, Algiers.

A late cauliflower of great merit; a sure header, and very popular. Per pkt., 5 cts.; oz. \$1.25.

D.M.F. & Co's Large Purple Egg Plant.

EGG PLANT.

D.M.FERRY & CO'S IMPROVED LARGE PURPLE

The finest variety grown. The fruit is large, superior in flavor, and of long duration. Skin deep purple, with occasional stripes of green about the stem.

Per pkt., 5 cts; oz., 75 cts; 2 oz., \$1.25; $\frac{1}{4}$ lb., \$2.00; lb., \$7.50.

Gourd-JAPANESE NEST EGG

The fruit of this plant, resembles an egg in size and appearance. They are pure white, do not crack, are not injured by heat or cold, and so make the very best nest eggs. The plant grows rapidly, and with its pendant fruit in all stages of development, makes a very pretty vine for porch, veranda, &c. Per pkt 10 cts; oz. 50 cts.

MUSTARD--SOUTHERN GIANT CURLED.

By far the most desirable variety for southern culture. Chiefly used for salads. The plants are ready for use very early in the spring. They attain a height of about two feet, forming mammoth bunches, six of which fill an ordinary barrel.

Per packet, 5 cents; oz. 10 cents; 2 oz. 15 cents; $\frac{1}{4}$ lb. 25 cents; lb. \$1.00.

PEAS. BLISS' EVER-BEARING.

This pea was first obtained several years ago, by a cross between the Little Gem and Champion of England, made by the late Mr. Charles Arnold, of Canada, the celebrated horticulturist. Since then it has been improved by further trials and careful selections of the choicest plants.

The object of the originator was to obtain a pea for summer and autumn use that should be first class in every respect, and this pea is now offered to the public as the realization of this aim.

Season late to very late; height of vine 13 inches to 2 feet; foliage large, firm, and bright green; pods 3 to 4 inches long on the average, each pod producing from 6 to 8 wrinkled peas; size of peas very large, half an inch or over in diameter; quality unsurpassed in sweetness as well as flavor. Its habit of growth is of a peculiar branching character, forming as many as 10 stalks from one root stalk. 100 pods have been counted on a single vine. The branches are very strong, and when properly hilled, will stand up without brushing. The great value of this variety is found in its long continued bearing. Owing to the branching habit of the plant, a much smaller quantity of seed is required than for other varieties. The best results have been obtained by planting the single peas six inches apart in the rows, covering those planted in early spring 3 inches, and those planted in summer 4 to 5 inches.

Our stock of this variety was obtained directly from the introducers. This sort, unlike the other varieties on our list, all of which we can vouch for from personal acquaintance, has not yet been given a trial on our experimental grounds; nevertheless, from our thorough con-

fidence in the originator and introducers, we do not hesitate to offer it to our friends.

The stock is so limited this season, that we are only able to offer it in packets. Price, per packet, 25 cents, or 5 packets for \$1.00.

PEAS. FERRY'S FIRST AND BEST.

Another season has come and gone, and after careful trials and tests of all the leading varieties, we only deem it necessary to say of this variety, that it has well maintained its position as "FIRST AND BEST." To all wishing a FIRST EARLY PEA, we unhesitatingly offer it in preference to all others. It is pre-eminently the pea for all market gardeners who are desirous of taking advantage of the high prices obtained by the first peas marketed.

Per packet, 10 cts; $\frac{1}{2}$ pint, 15 cts; pint, 20 cts; quart, 30 cts; 4 qts., \$1.00; bu., \$6.00.

Ferry's First and Best Peas.

Bliss' American Wonder Peas.

PEAS--BLISS' AMERICAN WONDER.

Unquestionably one of the very best early peas. In productiveness and flavor it is unsurpassed, and in earliness it is nearly equal to our "First and Best." Very dwarf in habit. Owing to the fact that in some cases, spurious stocks of this variety have been sold, we desire to assure our patrons that our stock is perfectly true and pure.

Per packet, 10 cts; $\frac{1}{2}$ pint, 15 cts; pint, 25 cts; quart, 40 cts; 4 qts., \$1.50; bu., \$8.00.

EARLY MAYFLOWER POTATO.

Early Mayflower Potato.

When issuing our Seed Annual a year ago we wrote of this potato: "We unhesitatingly recommend this variety, submitting it to the most critical in the full assurance that its high merit warrants all and more than we have said, and being convinced that it is by far the best EARLY potato ever introduced." We recognized, fully, at the time the magnitude of our claims, but we had so thoroughly assured ourselves before offering the variety to our customers, that we felt perfectly secure in making our assertions. At times during the past season, one that will long be remembered by all interested in agriculture, as a season of disappointment and failure, we have wished that we might have selected a more favorable year. yet in spite of all, THE EARLY MAYFLOWER has achieved a success that has not only justified all our claims but surpassed our most sanguine expectations.

The Early Mayflower is VERY EARLY. From letters we have received from several hundred who planted it we get the testimony that it was generally as early, or earlier, than any other sort; very prolific, frequently being enormously so; of MEDIUM and UNIFORM size, with no tendency to rot.

This potato has a remarkable smooth and handsome appearance, is UNEXCELLED by ANY in quality, and although so early is a splendid keeper. We consider it the best potato for the garden ever offered for sale. We have sold the Early Mayflower from Maine to California, and from the most southern limits of our country to the extreme north, and from all parts of this vast territory we have heard the most flattering reports. We give below a few expressions from different parts of the country.

WHAT THEY SAY OF THE EARLY MAYFLOWER POTATO.

Mr. H. W. PALLIES, Marion Co., Oregon: Cannot find words to express my satisfaction; they are SIMPLY WONDERFUL. We had no rain for four and one-half months in Oregon, and the potatoes had no water from the time they were planted until they were dug. and while *eight* other varieties were a *total* failure, $\frac{1}{4}$ pound of Early Mayflower produced 10 pounds of fine medium sized tubers.

S. J. HILL, of Pierce Co., Wis., writes: The yield from the Early Mayflower was larger than from any variety I ever planted.

Mess. MOORE & BAIR, of Fillmore Co., Neb., write: The yield was larger, and they were earlier than any of 12 new varieties.

DAVID WILCOX, of Sempronius, Cayuga Co., N. Y., writes: I have been experimenting with potatoes for 16 years. Am well pleased with the Early Mayflower. I planted 70 different varieties this season. The Mayflower ripened 5 days before the much lauded Sun Rise..

R. H. RUSSELL, of Pleasant Grove, Olmsted Co., Minn., writes: I think the Early Mayflower potatoes are the "Boss." They did splendidly in every respect, and did not rot at all, while all other kinds planted on same ground rotted considerably.

WM. AARON, of Ellijoy, Gilmer Co., Georgia, writes: I purchased one pound of Early Mayflower potatoes of you; they were planted one month later than they should have been, and had very dry weather. Although I was unable to give them a fair test, they did finely; they were not surpassed in yield or earliness by any variety; were entirely free from rot; were very even in size, and their baking quality is unexcelled.

L. VALLEY, of Barton, Orleans Co., Vt., writes: Your Early Mayflower potatoes were way ahead of any early varieties in Orleans county. Their yield was double that of the Early Rose or Early Ohio.

WM. SHEPARD, Sr., of Croton, Lee Co., Iowa, writes: In yield and earliness, are way ahead of any I ever raised. Excellent in every respect.

Per lb. 75 cts; 2 lb \$1.25; 3 lb \$1.50; $\frac{1}{4}$ bu. \$1.75; $\frac{1}{2}$ bu. \$2.50; 1 bu. \$4.50; bbl. of 3 bu. \$12.00.

We send by Express or Mail, prepaid, at lb. quotations. Quarter bushels and upwards sent by Express or Freight, the purchaser paying charges.

POTATO---EARLY TELEPHONE.

The Early Telephone is a second early potato, and a great producer; handsome in appearance, the skin being smooth and of a light russety color; in quality it is superior the flesh being pure white, fine grained, dry and mealy, and the flavor very delicate. It is free from rot, and a splendid keeper. One of the very best for winter and spring use.

Per lb 50 cents; 2 lbs. 75 cents; 3 lbs. \$1.00; $\frac{1}{4}$ bu. \$1.00; $\frac{1}{2}$ bu. 1.50; 1 bu. \$2.25; bbl. of 3 bu. \$6.00.

Early Telephone Potato.

White Star Potato, (See next page.)

JOHN TURLEY, of Galveston, Cass Co., Indiana, writes: Raised 112 lbs. firm, large tubers from 1 lb. seed. In yield, the Mayflower *beats them all*. It was the earliest to mature; was free from rot; baked splendidly, the flavor being very fine and delicious.

JACOB RICE, of Cooperstown, Venango Co., Penn., writes: The Mayflower potatoes are equal to your claims, being the earliest to mature and the heaviest producers I ever planted. I like the size of them very much, they were all good, medium size, and no small ones; never ate any better potatoes.

DECATUR BRIDGES, of Bucksport, Hancock Co., Me., writes: The Mayflower potatoes you sent me excel any other kind.

Z. Y. FOWLER, of Yakima Co., Wash. Ter., says: I think the EARLY MAYFLOWER POTATO perfect in every respect. I purchased one pound of you, and had better success with them than with any other variety I have ever planted, although I only hoed them once. I dug 123 $\frac{3}{4}$ lbs. of nice sized tubers two weeks before my Early Rose were ready to dig.

C. H. HOLTSLANDER, of Genesee Co., Mich., writes: Every large potato is as good shape as the picture in your catalogue, and of very uniform size. The yield was double that of any other variety.

J. P. SHEETS, of Douglas Co., Kansas, says: I am greatly pleased with your Early Mayflower Potatoes. In yield and earliness, they were the best I had, and the tubers were of good size and entirely free from rot.

WM. GOULD, of Worcester Co., Mass., writes: I planted thirty varieties, nearly all new, this year, and your Early Mayflowers were the best of any. They yielded double the amount of any other new seedling.

J. H. THOMAS, of Shelby Co., Ind., writes: I planted your Early Mayflower Potatoes at the same time and on the same land with Early Rose, and the Mayflowers proved to be from five to seven days earlier and they yielded twice as much as the Early Rose. The tubers were good size, and run very evenly; the quality and flavor are fine.

POTATO--WHITE STAR.

The White Star has now been before the public several years, and has fully verified all of our claims for it. In season it is medium. It is one of the GREATEST PRODUCERS known. The tubers are large, oblong, of uniform size and very showy. In quality one of the finest, being equally good for boiling or baking. Of very strong and vigorous habit, possessing the quality of great adaptability to different soils, and succeeding where other varieties fail. By far the best potato to raise for the market, as it combines great yield with superior quality.

We had not thought to publish any White Star Potato testimonials this year, having sold it so widely that its merits are well known, but just before going to press we are in receipt of a letter from Mr. H. W. Stearns, of St. Lawrence Co., N. Y., of sufficient interest to warrant the publication of a portion of it at least. He writes under date of Dec. 7th, 1883:

I mail you this day one White Star tuber which I raised, *crop of 1882*, with the request that you will bake and eat it. I ate one with my Thanksgiving dinner, and considered it better than most varieties of this year's raising. I have still several other tubers of crop of 1882, in good condition. These potatoes have had no special care, other than breaking off the sprouts occasionally, and have been kept in an open box in an ordinary cellar. This year I planted White Stars on three separate fields, and they *averaged 425 bushels per acre*.

Per lb. 40 cents; 2 lbs. 65 cents; 3 lbs. 90 cts; $\frac{1}{4}$ bu. \$1.00; $\frac{1}{2}$ bu. \$1.25; 1 bu. \$1.75; bbl. of 3 bu. \$4.50.

We send by Express or Mail, prepaid, at lb. quotations. Quarter bushels and upwards sent by Express or Freight, the purchaser paying charges.

RADISH--DAYTON. —This excellent radish is intermediate in size between the California Mammoth Winter and the White China Winter, being six to seven inches in length and three inches in diameter at the crown, tapering pretty regularly to the point. The skin is very thin, clear white, with greenish purple tinge at top; flesh pure white, crisp and firm; flavor very pleasant and free from any sharp taste. It is a late summer or fall radish. It is in condition for table use when quite small, and continues so during full period of growth.

Per packet, 10 cents; oz. 15 cents; 2 oz. 25 cents; $\frac{1}{4}$ lb. 40 cents; lb. \$1.50.

Dayton Radish.

Spinage, Long Standing.

SPINAGE--LONG STANDING.

An improved strain of great value, having all the good qualities of the ordinary sorts; what renders it especially desirable is the fact that it is much later going to seed than any other variety. It remains fit for use about two weeks longer than any other sort. This valuable property will be appreciated by market gardeners.

Per packet, 5 cents; oz. 10 cents; 2 oz. 15 cents; $\frac{1}{4}$ lb. 20 cents; lb. 40 cents.

Livingston's Favorite Tomato.—From a Photograph.

Tomato-LIVINGSTON'S FAVORITE

Under the most trying tests during the past season, this splendid new tomato has not failed in any respect to reassert its claims to superiority. It is the largest perfect shaped tomato in cultivation, ripening as early as any large variety, and with great evenness. Flesh is solid, with but few seeds; does not crack or rot; ships well; yields largely. It is sure to become a favorite as soon as known. Our stock of seed being direct from the originator, can be relied upon as being perfectly true.

Per packet, 10 cents; oz. 50 cents; 2 oz. 85 cents; $\frac{1}{4}$ lb. \$1.50; lb. \$5.00.

Hubbard Squash.

HUBBARD SQUASH.

A standard variety, and without question the best winter squash known. The flesh is a bright orange yellow, finely grained, dry, sweet and rich flavored; will keep perfectly the entire winter; boils or bakes exceedingly dry, and is esteemed by many to be as good baked as the sweet potato. We have been improving our strain for several years, and believe that we have the finest in the country.

Per packet, 5 cents; oz. 15 cents; 2 oz. 25 cents; $\frac{1}{4}$ lb. 40 cents; lb. \$1.25.

Early Purple Top Munich.

T U R N I P .**Early Purple Top Munich**

A distinct variety of recent introduction. It occupies the same place among turnips that the Egyptian does among the beet family, that of being the earliest of all. The entire crop can frequently be dug two weeks before any other variety. Its flesh is snowy white, and has an excellent flavor, but becomes bitter with age. This variety is chiefly valuable for first crop.

Per packet, 5 cents; oz. 10 cents; 2 oz. 15 cents; $\frac{1}{4}$ lb. 25 cents; lb. 80 cents.

Early Yellow Montmagny.

T U R N I P .**Early Yellow Montmagny**

A new early sort; the most beautiful of the yellow fleshed varieties. Leaves medium sized, green, stained with purple; bulb oval, medium

sized, clear yellow, stained with bright purple at the top; flesh yellow, fine grained, sweet and tender. Among the earliest, and promises to be an exceedingly popular sort.

Per packet, 5 cents; oz. 10 cents; 2 oz. 15 cents; $\frac{1}{4}$ lb. 25 cents; lb. 80 cents.

WILD RICE.

An annual which sows itself in the fall, about the middle of September, lies dormant all winter; in spring it commences to sprout as soon as the water gets warm, reaching the surface during the first half of June. It grows very rapidly in one to eight feet of water, ripens late in August or early in September. It should be planted in the fall, before ice forms, broadcast, from a boat, in two or three feet of water having a mud bottom. It has been successfully planted, through the ice in winter and in the spring, but it succeeds best when planted in the fall.

As an attraction for wild fowl it cannot be equalled. We would call the attention of sportsmen, particularly to this fact. In large ponds and lakes it purifies the water, affords a refuge for the small fry from the large fish, as well as furnishing the small fry plenty of food from the animalculæ on the stalks. For planting in fish ponds it is especially desirable. It also does well along the shores of marshes, and makes a good hay. In the south, two crops can be cut, and all cattle are very fond of it.

Per lb. \$1.00, postpaid; \$5.00 per bu. of 15 lbs. by express or freight, not prepaid.

Johnson Grass.**(SORGHUM HALAPENSE.)**

One of the most valuable forage plants of recent introduction. It is already very popular in the Southern States, and it is claimed will come into universal use in all parts of the United States when known. It is perennial, a rapid grower, very nutritious, being eagerly devoured by all kinds of stock, comes early in spring, grows until the frosts cut it down in the fall; stands the drought better than any grass, having long, cane-like roots which penetrate the soil for moisture; superior both as a grazing and hay grass; has abundance of roots which decay, thereby enriching the ground, rather than exhausting it as Timothy does; belonging to the sorghum family, it contains much saccharine, which is an important factor in the food of stock. It will grow on any land where corn will grow.

On lands that will produce a bale of cotton to the acre, four or six tons of hay can be cut per annum, cutting three or four times.

Per lb. 60 cts., postpaid; \$6.00 per bu. of 25 lbs., by express or freight, not prepaid.

COLLECTION N^o 1.

12 BEST VARIETIES OF VEGETABLES.

RADISH.
Early Scarlet Turnip Rooted.

CELERY.
Crawford's Half Dwarf.

BEEF,
*Extra Early
Egyptian Blood Turnip*

CABBAGE,
D.M.F. & Co's Premium Late Flat Dutch.

LETTUCE,
Ferry's Early Prize Head

ONION
*Yellow Globe
Danvers*

WATER MELON.
D. M. FERRY & Co's Peerless.

SQUASH.
Hubbard.

TOMATO.
Livingston's Perfection.

TURNIP.
Purple Top, White Globe. New.

CARROT.
Long Orange, Improved.

PARSNIP.
Hollow Crown

PRICE 5 CENTS EACH.

THE WHOLE 12 VARIETIES SENT POST PAID FOR 50 CENTS.

D.M. FERRY & CO'S

SEED ANNUAL

1884

We have come to look upon the growth and improvement possible in the seed business as practically without limit. American tables to-day are supplied with the finest vegetables in the world. Their quality, as compared with that of vegetables a quarter century ago is striking evidence of well directed progress and improvement. It is but a few years since Celery and Tomatoes were almost unknown as food plants. To-day, in a single county, 300 factories employ 1,500 persons in canning tomatoes; and celery, besides being found in nearly every garden in our land, is grown commercially in immense quantities in certain favorable localities. The corner grocer now is asked not merely for "green peas," but consumers are aware of the choice varieties, and insist on being served with "Little Gems" and "Champions." This wide spread demand of the people for better vegetables has pressed upon the seedsman in the shape of a call for the necessary seeds, until it is true that nothing in the history of the seed business is more marked than the improvement during late years in the quality of the seeds themselves. Instead of being grown by men who knew little about it, and merely grew a few by accident, or saved such as were self-sown and self-cultivated, nowadays seeds are produced by those who have given seed growing years of careful study, and from stock which has been developed by good culture and judicious selection, to the highest attainable excellence.

The past year, as well as its predecessors, has had its own share in this improvement, and we can say truly that good as our seeds have always been, they have never been so good as now. Briefly, and without boasting, we have in the following pages described our unexcelled facilities for supplying you with the best of seeds. The quality of seeds is necessarily a matter of confidence between buyer and seller, but if you will consider our long experience, and read what we say about our business—the largest of its kind in this country—we think you must admit that no goods can be purer or better than D. M. FERRY & CO'S SEEDS.

Our Greenfield Seed Farms, a view of which is given on page 7, are located just outside of Detroit, extending one and one-fourth miles along the Grand River Road. They are nearly level, but are well underdrained by tile laid two rods apart and three to four feet deep. The soil is partly sandy and partly clay loam, and very rich, as we annually use two or three thousand two-horse loads of stable manure, besides about four thousand barrels of blood, meat and bone, which is composted with lime, plaster and sulphuric acid, so as to make an excellent superphosphate. The labor is mostly performed by German women, we sometimes having as many as 125 at work at once. Their manner of work is well shown in the cut on the next page.

These farms are under the management of one of the most experienced and successful growers in America, and the statement has frequently been made by those fully competent to judge, that while they are not the largest they are certainly the best cultivated and most productive seed farms in the country, if not in the world. But to grow all of our seeds on a single tract would be impracticable, for we require the product of nearly 800 acres of cucumbers, 650 acres of beans, and a proportionate amount of corn, tomato, melon and other seeds; nor would it be desirable to grow all our seeds at one point, for not only is there the danger of mixing the varieties, but often the soil and climate best suited to grow one sort is entirely unfitted to grow another, so we make

Contracts for Seed to be Grown for us in localities ranging from Connecticut on the east to California on the west, and from Georgia to northern Michigan, besides having special crops grown for us in Canada, England, France, Germany and Italy. These con-

Scene on D. M. Ferry & Co's Seed Farm—HOEING.

tracts are with experienced growers, many of whom have devoted their entire time and attention for years to the production of some special crop to which their location is peculiarly adapted, and so have acquired a skill in growing this particular seed which no gardener or even general seed grower can hope to equal. But we are not content to rely solely on their reputation and experience, but each crop is visited and a careful record kept, not only of its condition and quality, but of the facilities for, and pains taken to secure, the highest excellence. The stock seed used is in all cases furnished or controlled by us, and in procuring it we make every effort to secure the very best attainable regardless of cost or trouble. In this work we are greatly aided by

Our Trial Grounds. These are located within the city on Woodward avenue, and here we have planted, side by side, and treated precisely alike, samples of the stocks from different growers, and also samples of any new sorts or improved stocks of old varieties which we may be able to procure; and a careful record is made of the slightest difference in quality or character, so that we can detect the least tendency to deterioration, or notice and take advantage of any superiority in any particular stock. Some idea of the extent of this work may be gathered from the size of our grounds which occupy nearly seven acres; and also from the number of samples planted, which last season was over 2,300. Here, too, seeds are tested as to vitality, a sample from every lot of seeds received being counted out and planted, and a record made of the percentage that will grow. How this was done was well described in last year's catalogue, and is illustrated on page 2. That this work is well done is proven by the fact that not only has a record of the work been asked for and published by scientific societies in this country, but the methods and arrangements used have been made the subject of an illustrated and highly complimentary article by the leading periodical devoted to scientific agriculture in Germany. Intermediate between the Trial Grounds and the Seed Farms proper are several parcels of land devoted to the development of improved stock seed. Whenever, in visiting crops, we see a plant of noticeably superior quality, we save the seeds produced by it and plant them by themselves in one of these gardens; and if the product is found to be superior, it is saved and grown by itself as a commencement of a new or improved stock. In this way we are each year improving our seeds.

Interior Testing House on Trial Grounds.

JEFFERSON'S 111

CHAS. J. S.

D. M. FERRY & CO'S TRIAL GROUNDS.

SMALL PAPER BAG MANUFACTURING ROOM.

But having secured a crop of pure and well grown seeds, the work is but half done; for they must now be distributed in small quantities to those who may want them. No one can appreciate without experience, the difficulty of so distributing the hundreds of varieties the trade now demands, without mistakes of labeling or mixing of samples, and it certainly cannot be done without the best facilities for the work. In this respect we think we have the advantage of any seedsmen in America in our

Central Seed Store and Warehouse, represented on page 5. It occupies one-half of the block bounded by Randolph, Croghan, Brush and Lafayette streets, extending 300 feet on Brush and 120 feet on Croghan and Lafayette streets. It has a handsome exterior of stone and brick, is four stories high, with a well lighted and ventilated basement under the whole. The aggregate area of the several floors is between four and five acres, and all is used in the handling rather than the storing of our seeds. Our large store house at the farm and arrangements with our growers enabling us to store our seeds so that they need be in the central building but a short time. The interior arrangements are very complete and convenient as may be judged by the illustration of several of the rooms, and which we think are sufficiently comprehensive to render any further explanation unnecessary. Directly opposite our central store is

Our Box Factory. It is a three story building, in the same architectural style as the warehouse, and especially adapted to the manufacture and repair of our boxes of which we have in use over 250,000. Here, in the busy season, 100 men are at work with various machines designed especially for us, and capable of doing everything from the sawing of the lumber to the sand-papering of the finished boxes. We annually manufacture over 700,000 feet of lumber, much of it black walnut, into about 35,000 boxes.

Our Canadian Branch. For the accommodation of our Canadian friends, we have a branch establishment at Windsor, Ontario, opposite Detroit. Although connected by telephone, and but a few minutes ride from our central store, this is an entirely distinct establishment. The stocks, which are essentially duplicates of those used in the States, are imported directly into Canada. By this arrangement, we are enabled to execute promptly all Canadian orders in large or small quantities, by express or freight, without the vexatious delays and expensive processes of entering and paying duties on small parcels.

But all these material aids would be of but little service unless used efficiently. In this respect we have the advantage of a large body of trained assistants, the number employed in the

D. M. FERRY & CO'S MAMMOTH SEED STORE and WAREHOUSE.

ERECTED BY THEM IN 1879.

Dimensions, 300 feet on Brush St., 120 feet on Croghan St., and 120 feet on Lafayette St.

Area of Floors, nearly Five Acres.

PUTTING UP SEEDS IN SMALL PACKETS.

central building often reaching six hundred, some of whom have been with us since we commenced business, and have acquired a knowledge of seeds, and a skill and accuracy in handling them, that reduces the possibility of mistakes to a minimum.

We have thus outlined our facilities for doing business, not in a boastful spirit, but to show that we have the capacity for filling your orders accurately and promptly with the best of seeds. Can you do better than send to us for anything you may want in our line?

PUTTING UP SEEDS IN PACKAGES.

Birdseye View of D. M. Ferry & Co's Greenfield Seed Farms.

FORMATION AND MANAGEMENT

OF

VEGETABLE GARDENS.

SITUATION AND EXPOSURE.—The vegetable garden should never be in an orchard, or have trees or shrubs within it. If the space must accommodate both fruit and vegetables, it is better to set the fruit at one end so as to leave the portion for vegetables unbroken and unshaded, even if it is much smaller. On the farm, it should be so placed as to be easily reached from the barn, to facilitate horse cultivation. Abrupt slopes in any direction are to be avoided. A gentle inclination to the south and east is the warmest, will give the earliest vegetables, and be best for Corn, Melons, Tomatoes, &c., but it suffers more from a spring or early fall frost, because of receiving the direct rays of the morning sun. An inclination to the north and west is later, suffers less in a drought, and is the best for Peas, Cabbage, Lettuce, &c. So it is an advantage, in a large garden, to have both these exposures, but for small gardens, a gentle inclination to the south and east, or a level surface, is the best.

SOIL.—A good garden can be made on *any soil*, but that best suited to the purpose is a deep, rich, friable loam; and the more nearly other soils can be made to approach this the better. This may be accomplished in tenacious clays (and must be for a good garden) by good drainage, deep and judicious cultivation, use of coarse manure, and liberal applications of leached ashes, sand, and in some cases of peat. If the soil is naturally too light and sandy, it may be improved by rolling and the use of large quantities of well composted manure and muck, and dressings of clay.

SIZE AND FORM.—A single bed ten feet square, well manured, well spaded, and thoroughly cultivated and cared for, will produce more *good* vegetables, be more profitable, and give better satisfaction, than an acre unmanured, half prepared, and poorly cared for. Our golden rule for size is, make your garden *no larger* than you can prepare and care for in the best possible manner. If it all has to be done by hand, it will take the entire time of one man to keep in good order a garden of one acre, but if it is so arranged that the horse cultivator can be used, he can care for four times that area. In village gardens, the form is usually determined by that of the lot, but where there is a choice, a rectangle several times longer than wide, the sides running from north to south, is the most economical; if this can be so placed that a space eight feet wide at both ends or along both sides can be left for a horse to turn in, it will be a great advantage.

DRAINAGE.—Nothing is more essential for a good garden than good drainage. It is impossible to raise a supply of fine vegetables without it. If the soil is at all wet, it should be well drained with tile, but if this is not possible, something can be gained by ploughing or throwing the soil up into beds from six to thirty feet wide, with smooth bottomed trenches between them to collect and carry off the surface water.

MANURES.—For garden purposes, there is nothing better than well rotted stable manure, with which tobacco stems, bones (which after a few weeks in fermenting manure will crumble to powder), leaves, or any refuse vegetable or animal matter may be composted with advantage. This should be ploughed in unless the soil is quite sandy and the manure very fine, when it may be applied on the surface and simply harrowed or raked in. Plaster, salt, wood ashes, guano, ground bone, all are valuable and can be used to advantage in connection with the stable manure. Plaster should not be applied until the plants are well up. Ashes and salt should not be mixed with the other manures, and may be sown broadcast and raked in just before planting. Guano, ground bone, and superphosphate give better results if one-half is sown broadcast at planting and the balance when the vegetables are half grown. In some cases, sand, leached ashes and peat on clay soils, and clay and muck on sandy soils will prove as valuable as manures. Occasionally a spot which has been used for a garden for many years will become unproductive in spite of liberal manurings. We know of no other remedy than to abandon it for a garden, seed down to clover and allow it to remain two years, when it may be ploughed under, and the garden will be found to have regained its original fertility.

PREPARATION OF THE GROUND.—Thorough preparation of the ground is of vital importance in raising good vegetables; if this work is well done, all that follows will be easier. The garden should be *well* ploughed or spaded, taking care if it is a clay soil that the work is not done when it is too wet. If a handful from the bottom of the furrow moulds with slight pressure into a ball which cannot be easily crumbled into fine earth again, the soil is too wet, and if ploughed then will be hard to work all summer. The surface should be made as fine and smooth as possible with the harrow or rake, and in the case of sandy soils, it should be rolled with a heavy roller. It is generally necessary to plow the whole garden at once, and to do this in time for the earliest crops, but the part which is not planted for some weeks should be kept mellow by frequent cultivation. Stiff clay soils are frequently wonderfully improved by trenching, that is spading two feet deep in such a way as to leave the surface soil on top. This is accomplished by digging a trench two feet wide across one side and a second one adjoining and parallel with it, one spade deep. The remaining earth of the second trench is then thrown into the first and covered with the surface soil from a third trench; the balance of the third is then thrown into the second and covered with the surface of the fourth; and so on until all is worked over, when the soil from the first trench is used to fill the last. This is quite expensive, but frequently changes a soil upon which nothing can be grown, into one producing the finest vegetables, and its effects last for several years.

ARRANGEMENT.—In city gardens, or where most of the work is done by hand, this may be entirely a matter of taste, but it is quite important to have the garden so arranged that most of the work can be done by

NORTH.

Gate to Barn.	Walk 8 feet wide.												Gate to Barn.			
	Water Melon and Winter Squash.	Cucumber and Musk Melons.	Tomatoes and Pole Beans.	Late Sweet Corn and Summer Squash.	Early Sweet Corn.	Late Cabbage.	Bush Beans.	Lettuce, Endive, Parsley.	Onion.	Early Lettuce from hot bed, Radish.	Early Cabbage and Cauliflower.	Beets and Turnips.	Early Potatoes, followed by Celery.	Peas.	Parsnip, Salsify and Early Peas, followed by Spinage.	Asparagus, Rhubarb, Artichoke.
8 feet.	8 feet.	6 feet.	4 ft.	4 ft.	4 ft.	3 ft.	3 ft.	2½ ft.	2½ ft.	3 ft.	3 ft.	3 ft.	3 ft.	3 ft.	5 feet.	5 feet.
Turning ground 8 feet wide—may be planted with Winter Squash late in the season.																

SOUTH.

horse power. We can best point out the things to be considered in the arrangement by means of the accompanying illustration. The points gained in this plan are:—

First—Ability to cultivate the ground. All but a strip five feet wide between the radish and parsley can be worked by any common one-horse cultivator.

Second—Placing those vegetables which may stay out all winter side by side, where they will not interfere with next season's ploughing.

Third—Arranging the vegetables very nearly in the order in which they should be planted or set out in the spring. This would be nearly perfect if the Late Cabbage were to follow the Tomatoes.

Fourth—Providing for easy rotation of crops by simply reversing (with the exception of the permanent row of Asparagus, &c.) the plan.

The number of rows of each vegetable and the relative proportion of each may be varied according to the wants of the family, but the proportion given here will be found to suit most families who depend upon the garden for both winter and summer vegetables.

If necessary, the turning ground at both ends may be filled with Winter Squashes, as these are planted so late and at such a distance apart that they would not seriously hinder the turning of a steady horse with a careful driver. Whatever the arrangement followed may be, we earnestly urge that every effort be made to secure straight and perfect rows. There is perhaps no one thing that will make the subsequent cultivation easier, or contribute more to the owner's satisfaction in his garden than this, and a little extra effort in this respect at the first will give pleasure all through the season.

SOWING THE SEED.—There is no more prolific source of disappointment and failure among amateur gardeners than hasty, careless or improper sowing of the seed. A seed consists of a minute plant minus the roots, with a sufficient amount of food stowed in or around it to sustain it until it can expand its leaves, form roots, and provide for itself, the whole inclosed in a hard and more or less impervious shell. To secure germination, moisture, heat, and a certain amount of air are necessary. The first steps are the softening of the hard, outer shell, the developing of the leaves of the plant from the absorption of water, and the changing of the plant food from the form of starch to that of sugar. In the first condition the food was easily preserved unchanged, but the plant with its undeveloped leaves and no root was incapable of using it, while in its sugary condition it is easily appropriated; but if not used it speedily decays itself and induces decay in the plant. A seed then may retain its vitality and remain unchanged for years, while after germination has commenced, a check of a day or two in the process may be fatal. There is no time from that when the seed falls from the parent plant until it in turn produces seed, ripens and dies, when the plant is so susceptible of fatal injury from the overabundance or want of heat and moisture, as at that between the commencement of germination and the formation of the first true leaves, and it is just then that it needs the aid of the gardener to secure favorable conditions. These are:—

First—A proper and constant degree of moisture without being soaked with water. This is secured by making the surface of freshly dug soil so fine that the smallest seeds may come in immediate contact on all sides with the particles from which they are to absorb the required moisture, and the pressing of the soil over the seeds so firmly with the feet or the back of the hoe that the degree of moisture may remain as nearly as possible the same until the plants are up.

Second—A proper degree of heat, secured by sowing each variety of seed when the average temperature of the locality is that most favorable for its germination. This may be learned from a careful study of the following pages and the experience of the most successful gardeners of your vicinity.

Third—Covering the seed to such a depth that while it is preserved at a uniform degree of heat and moisture, the necessary air can readily reach it, and the tiny stem push the forming leaves into the light and air. This depth will vary with different seeds and conditions of the soil, and can be learned only from practical experience. In general, seeds of the size of the Turnip should be covered with half an inch of earth pressed down, while Corn may be an inch, Beans two or three, and Peas two to six inches deep.

Fourth—Such condition of soil that the ascending stem can easily penetrate it, and the young roots speedily find suitable food. We can usually secure this by thorough preparation of the ground, and taking care *never to sow fine seeds when the ground is wet*. Occasionally a heavy or long continued rain followed by a bright sun will so bake and crust the surface that it is impossible for the young plant to find its way through it, or a few days of strong wind will so dry the surface that no seed can germinate. In such cases our only remedy is to plant again.

CULTIVATION.—Every weed should be removed as soon as it appears, especially while the plants are young; this will require almost daily attention, but if well done early in the season, the later work will be light, but mere destruction of weeds is by no means the only object of cultivation. A. J. Downing, who was perhaps the best horticulturist America has known, said: "If I were to preach a sermon on horticulture, I should take as my text, 'STIR THE SOIL,' and certainly the text would contain much of the gospel of successful gardening; frequent and deep stirring will enable one to grow fine vegetables on comparatively poor and slightly manured soil, while without it one fails to gain much advantage from the richest and finest soil. Care should be taken that the cultivation is not done when the soil is wet, or Peas, Beans and Melons stirred when the leaves are wet with dew, as such disturbance is liable to injure the leaves, and make them susceptible to injury from rust. With this exception, cultivate as often and as thoroughly as possible.

HOT-BEDS.

For early vegetables, some provision for starting certain plants earlier than can be done in the open air is necessary; for this purpose, nothing is better than a good hot-bed, and its construction is so simple and the expense so light that every garden should have one. A hot-bed proper not only protects the plants from the cold, but supplies *bottom heat*; by this term the gardener means that the soil is constantly kept several degrees warmer than the air above, that being the condition so far as heat is concerned which is most favorable for rapid and vigorous growth. It is evident that to produce this we must in some way apply our heat below the surface, and it is usually done by making a compact pile of some fermenting material and covering it with the earth in which the plants are to grow.

HEATING MATERIAL.—The best heating material that is easily available is *fresh* horse manure, containing a liberal quantity of bedding, which may be straw, shavings, or best of all, leaves. Such manure, if thrown into a loose pile, will heat violently and unevenly and will soon become cold. What is wanted in the hot-bed is a steady and moderate but lasting heat. To secure this, the manure should be forked over and thrown into a loose pile, which should remain undisturbed for a few days and then be forked over again, piled and allowed to heat a second time, when after a few days more it will be ready for use. The object of this repeated forking over and piling is to get the whole mass into a uniform degree of fermentation.

SASH.—Gardeners commonly use sash made especially for hot-beds and glazed with small lights cut from odds and ends and so furnished at very low rates. Such sash can usually be procured in any of our large cities and cost much less than if made to order. For garden use, however, we much prefer a small size that can be easily

handled, and the use of larger and better glass. We would recommend that the sash be three by five feet, and that the glass be not less than 10x14, laid with not more than one-quarter inch lap. In giving the order to one unaccustomed to the work, it would be well to state what they are to be used for, and that they need to be made like sky-light sash.

THE FRAME.—This may be made of sound, one-inch lumber, the back twelve to fourteen inches high, the front ten to twelve. It should be well fitted to the sash so as to leave as little opening as possible and yet allow the sash to be easily slid up and down, even when the frame is quite wet.

THE SOIL.—This should be *light, rich, friable*. Any considerable amount of clay in it is very objectionable. If possible, it should be quite dry and unfrozen when put into the bed; for this reason it is much better to prepare it the fall before and cover the pile with enough coarse manure or straw to keep out frost.

MAKING THE BED.—This requires careful attention, as future success depends largely upon the manner in which this work is done. Having cleared away all snow and ice, build a rectangular bed one foot larger each way than the frame to be used, carefully shaking out and spreading each forkful, and repeatedly treading down the manure so as to make the bed as uniform as possible in solidity, composition and moisture; unless this is done, one portion will heat quicker than the others, and the soil will settle unevenly, making it impossible to raise good plants. The proper depth of the bed will vary with the climate, season, and the kind of plants to be raised. A shallow bed will give a quick, sharp heat and soon subside; a deeper one, if well made, will heat more moderately but continue much longer. For general purposes, a bed one and a half to two feet deep will be best.

The bed completed, the frame and sash may be put on, and fresh manure carefully packed around the outside to the very top (this outside banking should be replenished as it settles, if the weather is at all severe). The bed should then be allowed to stand a few days with the sash partially open, to allow the steam and rank heat to pass off. The heat will at first be quite violent, frequently rising in the first few days to 120°, but it soon subsides, and when it recedes to 90° the earth may be put in and the seed planted. If from any reason you are obliged to use frozen soil, it may be placed in small piles upon the manure immediately upon the completion of the bed, but it should not be again disturbed until it has thawed and dried out, and care should be used to give free vent for the escape of the steam and moist air. The importance of allowing this gross heat to pass off before planting the seeds is very great, as every season thousands of hot-beds are failures, and their builders blame the seedsmen for sending them poor seed, when the real difficulty was that their seeds were burned up by this first heat.

MANAGEMENT OF THE BED.—The essentials for success are a steady, uniform degree of heat and moisture; keeping the soil at all times a few degrees warmer than the air, and the careful "hardening off" (by exposure to the air and diminishing the supply of water) of the plants before transplanting into the open air. Simple as these seem to be, there are many difficulties in the way of securing them, prominent among which are overheating the air under a bright sun. Without experience, one would scarcely believe how quickly the temperature inside of a well built hot-bed will rise to 90 or 100 degrees upon a still, sunny day even when the temperature outside is far below freezing, or how quickly the temperature will fall to that outside, if upon a windy, cloudy day the sash is left open ever so little; besides such a rush of cold air driven over the plants is far more injurious than the same temperature when the air is still. Again, a bed will go several days without watering when kept closed except during cloudy weather, but will dry out in an hour when open on a sunny day. The details of management, however, must be learned by experience, but may easily be acquired by one who gives the matter careful attention, keeping constantly in mind the essentials given above.

A COLD FRAME is a simple construction of boards for wintering cabbage, lettuce, cauliflower, brocoli, &c., for planting out early in the spring.

Select a dry, southern exposure; form a frame from four to six feet wide and as long as required. The back should be fourteen and the front six inches high, with a cross tie every six feet. Seeds of the above named vegetables, sown in open border early in September, will be ready to plant in cold frames about the last of October. The soil should be well prepared and smoothly raked before planting. Admit air freely on all pleasant days, but keep close in severe weather.

These frames are particularly useful at the south, and may be covered more cheaply with cloth shades than by sash. The shades are made as follows: Make light but strong wooden frames to fit over the bed, and of a width to receive some common brand of cotton cloth. The cloth may be unbleached, and should be stretched over and securely tacked to the frames and then painted with two coats of boiled linseed oil in which a little rosin has been melted and then a little patent dryer added.

SHADES.—At the south it is frequently desirable to shade beds of seedlings. This can best be done by shades made as follows: Make light frames the length of the width of your bed and four feet wide; to these tack common lath so as to leave from one to three inches between them. Support them about eight inches above the plants by tacking the frames to short stakes or securing them by easily removed pins. They are more effective if the beds are so placed that the lath will run north and south.

TRANSPLANTING.—In transplanting, the main points to be regarded are care in taking up the plants so as to avoid injury to the roots, planting firmly so as to enable the plant to take a secure hold of the soil, reducing the top to prevent evaporation, and shading to prevent the hot sun from withering and blighting the leaves. In transplanting from a hot-bed, harden the plants by letting them get quite dry a day or two before, but give an abundance of water a few hours before they are taken out. It is most apt to be successful if done just at evening, or immediately before or during the first part of a rain, about the worst time being just *after* a rain, when the ground being wet it is impossible to sufficiently press it about the plant without its baking hard. If water is used at all, it should be used freely and the wet surface immediately covered with dry soil.

WATERING.—The best time to water plants is at sunrise or just at evening, and always use rain water when it is to be had. If well water is to be used it should be exposed to the sun a day or two till it rises to the temperature of the air, before it is applied. Water may be given to the roots at any time, but should never be sprinkled over the leaves in the hot sun, for it will make them blister and cover them with brown spots wherever it touches. If watering a plant has been commenced, keep on until the necessity ceases, or more injury than good will result from it; one copious watering is better than a little and often. The use of the hoe should always follow the watering pot as soon as the ground becomes dry.

VALUABLE TABLES.

Quantity of Seed requisite to produce a given number of plants and sow an acre of ground.

	Quantity per acre.		Quantity per acre.
Artichoke, 1 oz. to 500 plants.....	$\frac{1}{2}$ lb.	Hemp.....	$\frac{1}{2}$ bu.
Asparagus, 1 oz. to 200 plants.....	5 lbs.	Kale, 1 oz. to 3,000 plants.....	4 oz.
Barley.....	$\frac{2}{3}$ bu.	Kohl Rabi, 1 oz. to 200 feet of drill.....	$\frac{1}{2}$ lbs.
Beans, dwarf, 1 quart to 150 feet of drill.....	$\frac{1}{4}$ "	Leek, 1 oz. to 250 feet of drill.....	4 "
Beans, pole, 1 quart to 200 hills.....	$\frac{1}{2}$ "	Lettuce, 1 oz. to 250 feet of drill.....	4 "
Beet, garden, 1 oz. to 100 feet of drill.....	10 lbs.	Martynia, 1 oz. to 50 feet of drill.....	10 "
Beet, Mangel, 1 oz. to 150 feet of drill.....	6 "	Melon, Musk, 1 oz. to 100 hills.....	$\frac{1}{3}$ "
Brocoli, 1 oz. to 3,000 plants.....	5 oz.	" Water, 1 oz. to 25 hills.....	$\frac{1}{2}$ "
Broom Corn.....	10 lbs.	Nasturtium, 1 oz. to 50 feet of drill.....	10 "
Brussels Sprouts, 1 oz. to 3,000 plants.....	5 oz.	Oats.....	$\frac{2}{3}$ bu.
Buckwheat.....	$\frac{1}{2}$ bu.	Okra, 1 oz. to 50 feet of drill.....	10 lbs.
Cabbage, 1 oz. to 3,000 plants.....	5 oz.	Onion Seed, 1 oz. to 200 feet of drill.....	5 "
Carrot, 1 oz. to 150 feet of drill.....	$2\frac{1}{2}$ lbs.	" " for Sets.....	30 to 50 "
Cauliflower, 1 oz. to 3,000 plants.....	5 oz.	Onion Sets, 1 quart to 20 feet of drill.....	8 bu.
Celery, 1 oz. to 10,000 plants.....	4 "	Parsnip, 1 oz. to 250 feet of drill.....	5 lbs.
Clover, Alsike and White Dutch.....	6 lbs.	Parsley, 1 oz. to 250 feet of drill.....	8 "
" Lucerne, Large Red & Crimson Trefoil.....	10 "	Peas, garden, 1 quart to 150 feet of drill.....	$\frac{1}{2}$ bu.
" Medium.....	10 "	" held.....	$\frac{2}{3}$ "
Collards, 1 oz. to 2,500 plants.....	6 oz.	Pepper, 1 oz. to 1,500 plants.....	4 oz.
Corn, sweet, 1 quart to 500 hills.....	8 qts.	Potatoes.....	8 bu.
Cress, 1 oz. to 150 feet of drill.....	8 lbs.	Pumpkin, 1 quart to 300 hills.....	4 qts.
Cucumber, 1 oz. to 80 hills.....	$\frac{1}{4}$ "	Radish, 1 oz. to 150 feet of drill.....	8 lbs.
Egg Plant, 1 oz. to 2,000 plants.....	8 oz.	Rye.....	$\frac{1}{2}$ bu.
Endive, 1 oz. to 300 feet of drill.....	3 lbs.	Salsify, 1 oz. to 60 feet of drill.....	8 lbs.
Flax, broadcast.....	$\frac{1}{2}$ bu.	Spinage, 1 oz. to 150 feet of drill.....	10 "
Garlic, bulbs, 1 lb to 10 feet of drill.....	2 lbs.	Summer Savory, 1 oz. to 500 feet of drill.....	2 "
Gourd, 1 oz. to 25 hills.....	$2\frac{1}{2}$ lbs.	Squash, Summer, 1 oz. to 40 hills.....	2 "
Grass, Blue Kentucky.....	2 bu.	" Winter, 1 oz. to 10 hills.....	3 "
" Blue English.....	1 "	Tomato, 1 oz. to 3,000 plants.....	3 oz.
" Hungarian and Millet.....	$\frac{1}{2}$ "	Tobacco, 1 oz. to 5,000 plants.....	2 "
" Mixed Lawn.....	3 to 4 "	Turnip, 1 oz. to 250 feet of drill.....	$\frac{1}{2}$ lbs.
" Orchard, Perennial Rye, Red Top, Fowl Meadow and Wood Meadow.....	2 "	Vetches.....	2 bu.
		Wheat.....	1 to 2 "

Number of Plants or Trees to the Acre at given distances.

Dis. apart.	No. plants.	Dis. apart.	No. plants.
$\frac{1}{2}$ foot.....	174,240	6 feet.....	1,210
1 ".....	43,560	7 ".....	889
$1\frac{1}{2}$ feet.....	19,360	8 ".....	680
2 ".....	10,890	9 ".....	573
$2\frac{1}{2}$ ".....	6,960	10 ".....	435
3 feet by 1 foot.....	14,520	11 ".....	360
3 " 2 feet.....	7,260	12 ".....	302
3 " 3 ".....	4,840	15 ".....	193
4 " 1 foot.....	10,888	18 ".....	134
4 " 2 feet.....	5,444	20 ".....	108
4 " 3 ".....	3,629	25 ".....	69
4 " 4 ".....	2,722	30 ".....	49
5 " 5 ".....	1,742		

Weight of Various Articles in the State of Michigan.

Apples.....	per bush. 48 lbs.	Onions.....	per bush. 54 lbs.
dried.....	22 "	Peas.....	60 "
Barley.....	48 "	Plastering Hair.....	8 "
Beans.....	60 "	Rape.....	50 "
Buckwheat.....	48 "	Red Top Seed.....	56 "
Broom Corn.....	46 "	Salt, Coarse.....	14 "
Blue Grass, Kentucky.....	14 "	" Michigan.....	56 "
" English.....	24 "	Sweet Potatoes.....	56 "
Bran.....	20 "	Timothy Seed.....	45 "
Canary Seed.....	60 "	Turnips.....	58 "
Castor Beans.....	46 "	Wheat.....	60 "
Clover Seed.....	67 "	Beef and Pork, per bbl., net.....	20 "
Corn, shelled.....	56 "	Flour, per bbl., net.....	195 "
" on ear.....	70 "	White Fish and Trout, per bbl., net.....	20 "
Corn Meal.....	50 "	Salt, per bbl.....	280 "
Charcoal.....	22 "	Lime.....	220 "
Coal, Mineral.....	80 "	Hay, well settled, per cubic foot.....	$4\frac{1}{2}$ "
Cranberries.....	40 "	Corn, on cob, in bin,.....	22 "
Dried Peaches.....	28 "	" shelled, ".....	45 "
Flax Seed.....	56 "	Wheat, ".....	48 "
Hemp Seed.....	44 "	Oats, ".....	25 $\frac{1}{2}$ "
*Hungarian Grass Seed.....	50 "	Potatoes, ".....	38 $\frac{1}{2}$ "
Irish Potatoes, heaping measure.....	60 "	Sand, dry, ".....	95 "
Millet.....	50 "	Clay, compact, ".....	135 "
Malt.....	38 "	Marble, ".....	169 "
Oats.....	32 "	Seasoned Beech Wood, per cord.....	5,616 "
Osage Orange.....	33 "	Hickory, ".....	6,960 "
Orchard Grass.....	14 "		

*In Chicago and all the other large seed markets of the country, Hungarian is sold at 48 lbs. per bushel, so we are compelled to conform, and we buy and sell 48 lbs. per bushel.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE

WITH

GENERAL DIRECTIONS FOR CULTIVATION.

☞ The Terms and Prices of Vegetable Seeds will be found in the Retail Price List, in the back part of this Catalogue.

ARTICHOKE.

French. *Artichaut*.—German. *Artischoke*.

CULTURE.—Sow in seed beds early in spring, in drills twelve inches apart. The permanent beds should be spaded deep, and well dressed with rotted manure, ashes and a little salt. When the plants are six inches high, transplant, setting them about two feet apart. The edible portion is the undeveloped flower heads,

Large Globe.

which should be used before they begin to open, and then the stalk cut to the ground, for if the flowers expand they weaken the plants. In the fall, cover with manure, which should be spaded in the following spring, taking care not to injure the plants. The crop is the largest and best the second year, after which the bed should be renewed by seed or suckers.

Large Globe.—The best sort for general use. Buds large, nearly round; scales deep green, shading to purple, very thick and fleshy.

ASPARAGUS.

Fr. *Asperge*.—Ger. *Spargel*.

Asparagus is one of the earliest spring vegetables, and would be in universal use were it not for the prevalent idea that it is difficult to grow it. We think this is a mistake, and that there is no vegetable on our list that can be produced so cheaply and easily as this. It delights in a moist, sandy soil, but can be grown in any garden by following the directions given below.

CULTURE.—Beds are usually formed by setting plants one or two years old, which can be procured of us; but if you wish to grow them yourself, prepare a light, rich spot as early as possible in the spring, and after soaking the seed twenty-four hours in warm water, sow in drills one foot apart. When the plants are well up, thin to two or three inches in the row, and give frequent and thorough cultivation during the summer; and if this has been well done, the plants will be fit to set the next spring. The permanent bed should be prepared by deep spading, working in a large quantity of rotted manure—the more the better. Dig trenches four feet apart and twelve to eighteen inches deep, and spade in at least four inches of well rotted manure in the bottom. Set the plants about one foot apart in this trench, and cover with about two inches of fine soil. After the

plants are well up gradually fill up the trenches, and give frequent and thorough cultivation. Early the next spring spade in a heavy dressing of manure, and two quarts of salt to each square rod, and cultivate well until the plants begin to die down. The next season it may be cut for the table two or three times, taking care to cut all the shoots, large and small, as soon as they appear. After the final cutting, give a good dressing of manure and salt. The next season, and ever after that, the bed should give a full crop and be annually dressed with manure and salt after the last cutting, and well cultivated until the plants occupy the whole space. In the fall the tops should be cut and burned, but not until they are dead ripe.

Conover's Colossal.—A mammoth sort, frequently sending up fifteen to thirty sprouts from one to one and a half inches in diameter from a single plant, and spreading less than most sorts. Color deep green; quality good.

Giant.—An old and popular variety, producing green or purple shoots according to the soil it is grown in. Very hardy, but not so large or the plants as compact as the last.

BEANS, Dwarf, Bush or Snap.

Fr. *Haricot*.—Ger. *Bohne*.

Under this name are classed all the low growing sorts, called in different catalogues *Bush, Bunch, Snap, String or Dwarf Beans*.

CULTURE.—It is a great mistake to suppose, as many do, that Beans do best on light, poor land. No crop responds more readily to good soil and cultivation than this, and the finer garden varieties must have it to do well, that best adapted to them being a light, rich, well drained loam, which was manured for the previous crop. If too rank manure is used it is apt to make them grow too much to vine. They are all extremely sensitive to frost and wet, and it is useless to plant them before the ground has become warm and light. The largest return will result from planting in drills about two feet apart and the plants two to eight inches apart in the row. Up to the time of blossoming they should be frequently cultivated, but never when the ground or plants are wet with rain or dew, as it would be sure to injure them; nor should they be disturbed after they commence to bloom, as it would prevent their setting well.

D. M. F. & Co's
Golden Wax.

In the following descriptions the varieties are placed about in the order of ripening, and it is assumed that they are grown on rich, light soil, as different soils produce quite a variation in vines, pods and beans:

D. M. Ferry & Co's Golden Wax.—Introduced by us, and we think it decidedly the earliest and best for general use. Vines medium size, erect, moderately spreading, hardy and productive, with small, smooth leaves, and small, white blossoms. Pods long, nearly straight, broad, flat, golden yellow, very fleshy and wax like, with short, fleshy, green point, cooking quickly as snaps, and shelling well when green, and of the highest quality in both conditions. Beans medium size, oval, white, more or less covered with two shades of purplish red.

German Wax, Black Seeded.

Ivory Pod Wax.

—Vine large, spreading, but slender, with long runners, large thin leaves, and large, white blossoms; very productive; pods medium length, oval, with small, white point, very white, wax like and handsome, but inferior in quality to either of the above. Dry beans small, oval, white.

German Wax, White Seeded.—Vines small, stout, erect with large, light colored leaves and white blossoms. Pods short, broad, flat, white, fleshy and wax like, of medium quality but very handsome. Beans medium size, oval, white.

Crystal White Wax.—New and distinct. Very desirable for snaps or for pickles. Vines large, spreading, very productive, having many runners, producing pods in pairs throughout their whole length; blossoms small, yellowish white; pods medium length, curved, round, or thicker than wide with crease in the back, very fleshy and brittle, greenish-white. Ripe beans small, oval, white.

Lemon Pod Wax.—An acquisition, in that it is very late and prolongs the season for dwarf wax beans at least two weeks. Vines less productive but similar to Crystal White Wax, with more and longer runners, and the leaves are irregular in size and color; blossoms large, white; pods long, broad, flat, wavy in outline, very wax like, a beautiful golden color, and of best quality. Dry beans white, variable in size and shape.

The following are green podded varieties, and are named about in the order of ripening, although this varies in different seasons. The earliest are about one week later than the Golden Wax:

China Red Eye.—Vines medium, stout, erect,

healthy, with large leaves and white blossoms; pods short, straight, flat, and if picked young, of good quality as snaps; beans medium size, oblong, white with reddish-purple blotch about the eye. When green, they are thin skinned, mealy and excellent, and when dry are one of the best for baking.

Early Round Yellow Six Weeks.—Much used at the south for shipping north. Vines medium stiff, erect, with large, thin leaves and lilac or white blossoms; pods slightly curved, narrow, with long, straight point, of fair quality; beans ovoid, orange yellow.

Early Yellow Kidney Six Weeks.—Vines large, vigorous, branching, productive, with large leaves and lilac blossoms; pods long, straight, narrow, handsome, and when young, of good quality; beans long, kidney shaped, yellowish-drab with darker marks about the eye.

Early Red Valentine.

—One of the finest of the green podded varieties for snaps, and by some preferred to the wax sorts. Vines medium spreading, with coarse, dark green leaves and large, white blossoms; pods medium length, curved, thicker than broad, with crease in back, very fleshy, crisp and tender; beans medium sized, long, irregular, pink marbled with red.

Early Red Valentine.

Early Mohawk.—The hardest of any, and it can frequently be planted so as to afford beans earlier than the above more tender sorts. Vines large, stout with large, coarse leaves which will stand a slight frost; blossoms large, purple; pods long, straight, coarse, with long, tapering point; beans long, kidney shaped, variegated with drab, purple and brown.

Early Rachel.—Vines large, spreading, productive, with coarse leaves and purple blossoms; pods long, straight, narrow; beans long, kidney shaped, brown, with dash of white on one end.

Dwarf Horticultural.—Vines vigorous, stout, erect, with occasionally short runners; leaves large, thick, coarse; blossoms large, purple; pods short, broad, green, changing to white, with red markings, of little value as snaps; beans large, ovate, yellow flesh color, streaked and splashed with red. Of the best quality either green or dry.

Newington Wonder.—Vines large, spreading, slender, with runners, and enormously productive; leaves small and thin; blossoms purple, in clusters; pods small, curved, flat, of good quality as snaps; beans small, drab, with yellowish-brown about the eye.

Refugee, or Thousand to One.—Vines large, spreading, with small, smooth leaves and large, lilac flowers, very late, and esteemed for late planting and for use as pickles; pods long, cylindrical, green, becoming white, streaked with purple, of good quality as snaps; beans long, light drab, dotted and splashed with purple.

The following sorts are planted as field beans:

Royal Dwarf Kidney.—Not as productive as some

of the following, but of very superior quality. Plant large, branching, with large, broad leaves and white flowers; pods medium sized, variable in shape, dark green, coarse; beans large, kidney shaped, slightly flattened, and of excellent quality green or dry.

Large White Marrow, or Mountain.—Vines large, slender, spreading, with short runners, small leaves and small, white blossoms; very prolific; pods medium, broad, green, changing to yellow; beans large, clear white, ovoid, cooking very dry and mealy.

White Corn Hill.—Similar to the last, but with more distinct runners.

Red French Kidney.—Vines vigorous and productive; beans large, flat, kidney shaped, deep red; popular at the south, and for shipping.

Early Marrow Pea, or Dwarf White Navy.—A comparatively new variety developed in western New York, and not only a surer cropper and much more prolific, but of better quality than the common white bean, and the beans are so hard as to resist the attacks of the bean weevil. Vines large, spreading, with occasional runners and small, thin leaves, and small, white flowers, very prolific, and ripening its crop early and all at once; pods short, straight, small, but containing six beans; beans small, oval, white, handsome, and of superior quality.

Prolific Tree Bean.—A new variety often sold at a very high price with extravagant claims of its productiveness, but it is an uncertain cropper and the claims will only be realized when one happens to have suitable soil and gives it good culture. Under these conditions it has been known to yield as high as sixty bushels per acre. Vines large, spreading, slender, with many runners having pods to the end; beans small; oval, dull white, of good quality.

BEANS, Pole, or Running.

Fr. Haricots a rames.—*Ger. Stangenbohne.*

CULTURE.—These are even more sensitive to cold and wet than the dwarf varieties, but are of superior quality and productiveness. After settled warm weather, set poles six to eight feet long in rows north and south four feet apart, the poles being three feet apart in the row, and set leaning to the north at an angle of about thirty-five degrees. Set in this way, the vines climb better, bear earlier and the pods are straighter and more easily seen. Around each hill plant from six to ten beans, taking care to place the eye down in the case of Lima or other flat varieties. When well started, thin to four plants, and start any that fail to climb, around the pole in the same direction as the others, for they will not grow in the opposite direction. When the vines reach the top of the poles pinch them off or train them along strings stretched on the tops of the poles.

London Horticultural.—Vines small, weak, with large, light colored leaves and purple blossoms; pods short, broad, pale green, but becoming streaked with bright red; beans large, ovate, splashed and spotted with wine red, and of the highest quality either green or dry, many people esteeming them better than the Limas.

Dutch Case Knife.—Vines moderately vigorous, climbing well but not twining so tightly as some, and so may be used for a corn hill bean. Leaves medium sized, crumpled; blossoms white; pods very long, flat, irregular, green, but becoming cream white; beans broad, kidney shaped, flat, clear white, and of excellent quality green or dry.

Indian Chief, or Tall Wax.—Vines large, but frequently not climbing well, with rough leaves and light purple blossoms; pods short, broad, flat, fleshy, white,

very wax like and of superior quality as snaps, remaining in suitable condition longer than most varieties; beans indigo blue, medium sized, oblong, shortened abruptly at the ends.

Southern Prolific.—The most prolific sort in cultivation, and very popular at the south for snaps. Vines vigorous, with large, thin, smooth leaves; blossoms white, growing in fours; pods green, nearly round, very long, fleshy, crisp and excellent; beans small, oval, dun colored, veined.

Cut Short, or Corn Hill.—An old variety, very popular for planting among corn; vines medium, not twining tightly, with dark colored, smooth leaves and white blossoms in small clusters; pods round, thick, fleshy and tender; beans nearly oblong, cut off diagonally at the ends, bluish white, covered at one end and partially over the whole surface with reddish-brown dots.

Giant Wax.—Vines large, with large, broad, deeply veined leaves and large, white blossoms; pods large, long, broad, flat, irregular, fleshy and of beautiful golden wax color, very handsome, but not of superior quality; beans small, red, irregular.

Extra Early Lima.

Extra Early Lima.—A decided acquisition, with beans as large and good as the late Limas, and as early as the Small Lima. Vines tall, vigorous and very productive; leaves large, pointed, whitish-green; blossoms white; pods borne in fours, large, broad, flat, curved to a sharp point, smoother than the Large Lima; beans large, flat, greenish-white.

Small White Lima, Carolina, or Sieva.—Vines vigorous but stout and short, so that they are sometimes grown without poles; very early and productive, with small, smooth, dark green leaves and small, yellowish-white blossoms; pods short, curved, thin, flat; beans white, small, broad, kidney shaped, but inferior in quality to the other Limas.

Dreer's Improved Lima.—Vines tall, vigorous and productive, with pointed leaves and white blossoms in racemes; pods short, broad, straight, coarse, and thicker than the other Limas; beans large, broad, flattened.

Large White Lima.—Too late for the extreme north, but the standard for quality. Vine tall growing, vigorous but slender; leaves medium sized, smooth, light green; blossoms small, white; pods borne in clusters, long, broad, very thin, dark green; beans large, ovoid, kidney shaped, greenish-white, flat.

White Runner.—Cultivated chiefly for its beauty. Vines and leaves large and coarse; blossoms in long racemes, large, pure white; pods large, broad, coarse; beans large, kidney shaped, thick, white, fair quality.

Scarlet Runner.—Similar to the last, but with scarlet blossoms, and the beans are lilac purple, variegated with black.

BEET.

Fr. Betterave.—Ger. *Runkel Rube.*

CULTURE.—The best results are obtained on a deep, rich, sandy loam. For table use, sow in hot-beds and transplant, cutting off the outer leaves; or sow as soon as the ground will permit in drills eighteen inches apart and thin out to three inches in the row. For winter use, the turnip varieties may be sown in June. If possible, always sow in freshly prepared soil.

Extra Early Egyptian Blood Turnip.—By many considered the best variety for forcing, being very early, with small top; leaf stems and veins dark red; leaf dark green, dotted with red; roots very dark red, flat on top but rounded beneath, with very small tap root;

Extra Early Egyptian
Blood Turnip.

Early Blood Turnip.

flesh dark red, zoned with lighter shade, hard, crisp and tender when young, but becoming woody with age.

Improved Early Blood Turnip.—Excellent either for forcing or for early planting. Tops small; leaf stems and veins dark red; leaves green; roots round or ovoid with small tap, dark red; flesh marbled, bright and light red, which color it retains when cooked; crisp, tender and sweet, and continuing so until full grown. A good keeper.

Dewing's Early Blood Turnip.—Tops medium sized; leaf stems and veins dark red; leaves green; roots dark red, turnip shaped, with largestap; flesh carmine red, zoned with lighter shade, tender, sweet and good.

Early Turnip Bassano.

Early Blood Turnip.—Tops and necks medium sized; leaf stems and veins red with green or red leaves; roots turnip shaped, deep purple, flesh blood red, zoned with lighter color, crisp, tender and sweet.

Early Turnip Bassano.—Not maturing as early as the above, but growing to a large size, may be

used early, and is the best variety to sow for greens. Tops large; leaf stems light red; leaves light green; roots large, round, turnip shaped; flesh pink, zoned with white, very sweet and tender when young, becoming woody and tasteless with age.

Henderson's Pine Apple.—Tops medium; leaf stems and veins red; leaves dark green or red; roots long, top shaped, small, dark red; flesh dark red, tender, crisp and sweet.

Half Long, Dark Blood, Rough Skinned.—Tops large; leaf stems and leaves red; roots long, top shaped, irregular, and with black skin resembling bark; flesh very dark red, tender, brittle and of the best quality.

Improved Long Dark Blood.—The most popular variety for winter use. Tops large; neck small; leaf stems and veins red; leaf green; roots large, tapering toward both ends, growing even with the surface, dark red; flesh dark red zoned with lighter shade, very tender and sweet, and remaining so when kept till spring.

Long Dark Blood.—Tops large; neck large; leaf stem and veins red; leaves red; roots very long, cylindrical, smooth, growing one-half out of the ground, brown above, dark red beneath; flesh dark red, crisp, tender, and keeps well.

French White Sugar.—Grown as a field beet, but liked by some for table use. Tops large, bright green; roots large, broad, top shaped, white, washed with green or brown; flesh tender and very sweet.

Swiss Chard.

Swiss Chard, Silver, or Sea Kale Beet.—A distinct vegetable, and much superior to the common beet for greens. If sown at the same time, it will be fit to use before them. Later, the plants form broad, flat, beautiful white and wax like stems to the leaves which are very delicious cooked as beets, or pickled. We recommend all of our customers to try it.

The following varieties are used for stock feeding. They are easily grown and harvested, keep well through the winter, and give an immense amount of cattle food at a small cost, but need a rich, well prepared soil. Sow in drills thirty inches apart, as early as the ground can be got in condition. Cultivate well when young, and thin out the plants to one foot apart in the row. If the largest leaves are cut off the thinnings can be easily reset to fill vacancies, and will make the largest roots. Care should be taken not to break or bruise the roots in harvesting.

French Yellow Sugar.—Grows to a large size, much above ground; roots half long, yellow; grown in this country for feeding stock. In France it is cultivated extensively for the extraction of sugar.

Vilmorin's Improved Imperial Sugar.—An improved variety from France. It affords the largest percentage of sugar of any known variety.

Lane's Improved Imperial Sugar.—This superb variety is the result of a careful selection for several years of the French Imperial Sugar Beet. After careful trial we recommend it as being hardy, productive and very sweet.

Long Red Mangel Wurzel.—A large, long variety, grown for stock feeding. It stands a good deal out of ground; color light red; flesh white and rose colored.

D. M. Ferry & Co's Improved Mammoth Long Red Mangel Wurzel.

D. M. Ferry & Co's Improved Mammoth Long Red Mangel Wurzel.—An improvement on the old variety. The roots are uniformly straight and well formed, and deeper colored than the common sort. Highly recommended for stock feeding.

Norbitan Giant Long Red Mangel Wurzel.—Very large, growing well out of ground. The roots are well formed, straight, smooth, and of a fine scarlet color, with comparatively small top and neck.

Yellow Globe Mangel Wurzel.—A large, round, orange colored variety, of excellent quality, which keeps better than the Long Red, and produces better crops on shallow soil.

Carter's Warden Prize Yellow Globe Mangel Wurzel.—A most excellent, yellow fleshed, globe vari-

ety. The tops are small and the roots, although large, are of excellent quality. Average weight fifteen to eighteen pounds. Highly recommended for shallow soil.

Yellow Ovoid.—Root ovoid, intermediate between the long and globe varieties; flesh solid, usually white, zoned with yellow; hardy, vigorous and productive.

Red Globe Mangel Wurzel.—Similar to Yellow Globe, except in color, which is a light red or pink.

BROCOLI.

Fr. Chou Brocoli.—Ger *Spargel Kohl.*

Although originating from a very distinct type, the modern improved sorts of Brocoli can scarcely be distinguished from Cauliflower; the points of difference being that it is generally taller and the heads more divided. By some considered more delicate than the Cauliflower.

CULTURE.—The same as that given for Cauliflower on page 20.

Early Purple Cape.—This is the best variety for our climate. It produces large heads, of a brownish purple color, very close and compact, and of excellent flavor.

BRUSSELS SPROUTS.

Fr. Chou de Bruxelles.—Ger *Sparsen Kohl.*

CULTURE.—The plant grows two or three feet high, and produces from the sides of the stalk numerous little sprouts one or two inches in diameter, resembling cabbages. The leaves should be broken down in the fall, to give the little cabbages more room to grow. They should be treated in all respects like winter cabbages or kale.

CABBAGE.

Fr. Choux Pommes.—Ger *Kopfkohl.*

There is no vegetable which may be cultivated with more certainty of success than this, and few if any that are so generally useful, as it may be made to follow other crops, and will give some return no matter how poor the soil or how negligent the cultivation, while it responds so readily to better care, that it claims a place in the finest garden, and the attention of the most skillful gardener.

CULTURE.—The requisites for complete success are *First* good seed; there is no vegetable where the seed has more influence on the quality of the product than in this, and gardeners should invariably select the best procurable. *Second*, rich, well prepared ground. *Third*, frequent and thorough cultivation. A heavy, moist and fresh loam is most suitable, which should be highly manured and worked deep. The early sorts should be sown very early in hot-beds, hardened off, and transplanted eighteen to twenty-four inches apart, early in the spring. At the south, sow from the middle of September to middle of October, and transplant into cold frames to preserve through winter, setting into open ground as early as possible.

The late autumn and winter varieties may be sown from the middle to the last of spring, and transplanted when about six inches high, three feet apart each way. Shade and water the late sowings in dry weather to get them up. It is important that the plants should stand thinly in the seed bed, or they will run up weak and slender, and be likely to make long stumps. In transplanting, they must be set in the ground up to the first leaf, no matter how long the stem may be.

Cabbages should be hoed every week, and the ground stirred deeper as they advance in growth, drawing up a

little earth to the plants each time, until they begin to head, when they should be thoroughly cultivated and left to mature. Loosening the roots will sometimes retard the bursting of full grown heads.

To preserve cabbages during the winter, pull them on a dry day, and turn them over on the heads a few hours to drain. Set them out in a cool cellar, or bury them, with the head downwards, in long trenches, in a dry situation. In the Middle States, bury the head and part of the stump in the open ground, and place over them a light covering of straw or boards, to protect them in severe weather.

Early Jersey Wakefield.

early as the earliest, and is of excellent quality. Well worthy of a trial by every one who plants either for market or home use.

Early York.—A very valuable early variety. Heads small, heart shaped, firm and tender; of very dwarf growth, and may be transplanted fifteen or eighteen inches apart.

Early Large York.—Succeeds the Early York, and is equally desirable. It is of larger size, about ten days later, more robust, and bears the heat better.

Early Sugar Loaf.—A very compact growing variety, and the plants may be set as close as sixteen inches apart each way; very early, but is more affected by the heat than most early varieties.

Very Early Etampes.

Little Pixie.—Heads small, very hard, and of very fine flavor. Plants dwarf but vigorous.

Henderson's Early Summer.—The earliest, large heading cabbage; growth compact, so that it may be set as close as the smaller sorts. Heads large, flat or slightly conical, handsome, and they keep longer without bursting than most of the early sorts. Valuable for both family and market.

Newark Early Flat Dutch.—The favorite second early sort with Long Island market gardeners. Heads large, solid, broad and roundish, very tender, fine grained and of the best flavor. Not only an excellent summer market sort, but well adapted for second crop for fall and winter use.

Early Dwarf Flat Dutch.—An excellent second early sort which does particularly well in the Southern States. Head of medium size, solid, flat, grows low on the stump, and is of good flavor.

Early Winnigstadt.—One of the best for general use, being a very sure header, and will grow a hard head

Early Winnigstadt.

under circumstances where most sorts would fail. Heads regular conical shape, very hard, and keep well both summer and winter.

Early Bleichfeld Giant.—This new, German cabbage has been highly commended wherever tried, and is worthy of extensive cultivation. It is short stemmed, a reliable and very solid header, and of the highest quality.

Filderkraut.—Similar to but larger, much more pointed, and heading up with fewer outside leaves than the Winnigstadt, and highly esteemed for making kraut. Good either for first or second crop.

Pottler's Early Drumhead, or Brunswick Short Stem.—An excellent second early sort, and particularly recommended for the South, as it withstands the heat well, and is a sure header. Heads low on the stump, compact, solid, weighing from ten to fifteen pounds.

Early Large Schweinfurt.—Forms a very large, showy head of excellent quality, but does not stand the heat well. When grown in perfection, one of the handsomest of the second early sorts.

Imperial French Oxheart.—Grows low on the stump, and heads very close and firm; color yellowish green.

Red Dutch, for Pickling.—Excellent for pickling or for eating raw. Forms very hard, oblong heads, round at the top, of a dark red, or purple color.

Fine Blood Red.—Of remarkably deep, blood red color, and a great favorite with the Germans. It is very true and constant.

Stone Mason Marblehead.—Characterized by its sweetness and delicacy of flavor, and by its reliability

D. M. Ferry & Co's Premium Flat Dutch.

in forming a large head. Very hardy, and will endure the cold of extreme northern climates.

Late Flat Dutch.—A low growing variety; heads large, bluish green, round, solid, broad and flat on the top, and often tinted with red and brown. An excellent fall and winter variety, and a good keeper.

D. M. Ferry & Co's Premium Flat Dutch.—This we consider superior to any late cabbage in cultivation. It possesses all the good qualities of the Late Flat Dutch, and is a sure header. Our stock of this variety is of our own raising from carefully selected heads, and we think it superior to any other strain of this popular variety.

Large Drumhead.—The Drumhead cabbage is a large fall or winter variety, with a broad, flat or round head, short stump, tender and good flavored, and an excellent keeper; grown extensively for shipping purposes.

D. M. Ferry & Co's Premium Drumhead.—We recommend this sort to market gardeners and growers, for shipping purposes. In good, rich soil, and with a favorable season, the heads will grow to enormous size; very compact and solid, and of excellent flavor.

Marblehead Mammoth Drumhead.—The largest cabbage known, weighing in some instances over *fifty pounds*. Under good cultivation, acres have been grown where the heads would average *thirty pounds* each.

Quintal Drumhead.—A French variety corresponding to our Flat Dutch, and one of the best of the Foreign sorts. Heads quite flat on the top, with few side leaves; solid, firm, hard and of good flavor.

Green Glazed.—A standard late variety in the south, as it is not affected by the heat. Heads large, but rather loose and open. Very desirable, from the immunity it enjoys from the attacks of insects.

Our English friends think the Savoy alone are best for the table, and they are certainly of much better flavor than the smooth sorts.

Dwarf Ulm Savoy.

Early Dwarf Ulm Savoy.—

One of the earliest and sweetest of the Savoy. Heads small, round, solid; leaves small, thick, fleshy, of fine deep green color, and of most excellent quality.

Green Globe

Savoy.—This does not make a firm head, but the whole of it being very tender and pleasant flavored, is used for cooking; leaves wrinkled and dark green; is very hardy, and improved by frost.

Improved American Savoy.—Closely approaching the cauliflower in delicacy and delicious flavor. The best of all the Savoy for general market or home use. It has a short stump, grows to a large size, is compact and solid, and is a sure header.

Drumhead Savoy.—Grows to a large size. Heads nearly round, a little flattened on the top; color dark green.

CARROT.

Fr. *Carotte*.—Ger. *Moehren*.

The Carrot is one of the most healthful and nutritious of our garden roots, and deserves to be more extensively used for culinary purposes, and we urge our readers to give some of the early table sorts a trial. As an agricultural root, the Carrot is not surpassed for feeding horses and milch cows, and every farmer should plant a few for this purpose.

CULTURE.—The Carrot succeeds best on a light,

sandy loam, made rich by manuring the previous year. In freshly manured land, the roots often grow pronged and ill shaped. It is better to sow as early in the spring as the ground can be made ready, but if planting is necessarily delayed until late in the season, soak the seed twenty-four hours in tepid water, then dry by mixing in sifted ashes or plaster, and sow on freshly prepared soil.

Earliest Short Horn (FOR FORCING).—The earliest variety in cultivation, and best suited for forcing. Tops small, finely divided; roots top shaped, with slender tap, and grooved at the crown, reddish orange.

Earliest Short Horn.

Early Scarlet Horn.—Best for early planting out of doors. Tops small, coarsely divided; roots top shaped, but tapering abruptly to a small tap; surface dented, orange red; flesh thick with indistinct yellow core.

Early Half Long Scarlet, Stump Rooted.—Excellent for early market and for field culture on shallow soils. Of medium size; flesh bright scarlet, brittle and of fine flavor.

Half Long Scarlet Nantes, Stump Rooted.—Tops medium, finely divided, dark; roots medium, cylindrical, smooth, bright orange; flesh orange, becoming yellow in center, but with no distinct core, of the finest quality.

Danvers.—One of the most productive, and best for field culture. Tops medium, dark colored; roots large but short, tapering abruptly at the point, very uniform and handsome; flesh deep orange with yellow center, sweet and tender.

Long Orange.—A well known standard sort. Roots long, thickest near the crown, tapering regularly to a point; color deep orange; suitable for the table and main field crop. It requires a deep soil, and the plants

Early Half Long Scarlet, Stump Rooted.

Danvers.

Large White Belgian.

should stand eight inches apart, in eighteen inch drills, for the roots to attain their full size.

Improved Long Orange.—An improvement on the preceding, obtained by careful selection for years, of the best formed and deepest colored roots.

Large White Belgian.—Grows one-third out of the ground. Root pure white, green above ground, with small top. It will grow to a very large size on light, rich soil, and is very easily gathered. Flesh rather coarse; is raised extensively for stock.

CAULIFLOWER.

Fr. *Chou-fleur*.—Ger. *Blumen-Kohl*.

The Cauliflower, although one of the most delicious of vegetables, is little known outside of our large cities. It needs, to bring it to perfection, a cool, moist atmosphere, and if this condition occurs when the plant is about to head, fine, large heads will result, while if the air is hot and dry, failure will result in spite of the best of seed and cultivation. The seed we offer is the finest procurable, and is obtained from the most careful growers in Europe.

CULTURE.—For the spring or summer crop, sow the early varieties about the last of winter, in a hot-bed, and transplant into the open air as soon as the ground can be worked. For the late, autumn crop, sow the late kinds about the middle of spring, and transplant like winter cabbages. In dry weather, water freely, and as they advance in growth, hoe deep, and draw earth to the stems. After they begin to head, they should be watered every other day. On the approach of frost, those plants which have not headed, may be set out in a cellar, where they can be aired in mild weather. In two or three weeks the strongest will begin to form flower heads, which should be cut for use while the "curd" is close and compact. It is then tender and delicious, but later the head opens, separates into branches, and soon becomes coarse, fibrous, strongly flavored and unfit for use. The leaves should be gathered and tied loosely over the tops of the heads, to facilitate blanching.

Cauliflower.

Extra Early Dwarf Erfurt.—An extra early variety, much prized in Germany for early market use. Scarcely a plant fails to produce a good head. It is of dwarf habit, compact growth, short outside leaves, and can be planted twenty inches apart each way. The best for early market and family use, and we think can

be entirely relied upon, as the seed was selected with extra care, by one of the most careful growers in Germany.

Early Snowball.—Highly esteemed by market gardeners, for its earliness and reliability as a sure header. Tested with several other varieties, it has proved to be as early, if not earlier than any other sort.

Extra Early Paris.—Heads large, white, compact and solid, of excellent flavor, tender and delicious. Leaves large, stalk short. Being so early, it must always be a favorite, especially with market gardeners.

Early Erfurt.—One of the best for general cultivation. Heads large, but close and compact and very white.

Early London.—This is a standard variety; very tender and quite early; heads compact, solid, and of delicious flavor; good for general use.

Early Walcheren.—Vigorous, hardy, and well adapted to our climate. Stem short, leaves rather pointed and serrated. It not only resists the cold in winter, but the drought in summer, better than many other sorts.

Early Paris or Nonpareil.—A most excellent French variety with good sized, uniform, close heads, which are tender and delicious. Planted at same time with the Extra Early Paris, it will afford a succession.

LeNormand's Short Stem.—Considered by the French one of the very best sorts. Plant hardy, semi-dwarf, producing many leaves which protect the close, solid curd, keeping it well blanched.

Large Algiers.—A valuable late sort, sure to head, of the best quality, and very popular with market gardeners everywhere. One of the very best.

Late London.—A fine, large, white, compact variety, taller, with larger leaves, and somewhat later than the Early London. Sown at the same time, it will afford a succession.

Veitch's Autumn Giant.—A distinct and valuable late variety. The heads are very large, beautifully white, firm and compact, and being well protected by foliage, remain a long time fit for use. The plants should be started and transplanted early in the season, to insure their full development.

CELERY.

Fr. *Celeri*.—Ger. *Sellerie*.

This is becoming more and more popular, and whole farms are given up to its production. It delights in a rich, friable, well drained muck soil, but can be grown of excellent quality in any good garden soil.

CULTURE.—Sow the seed (which is slow to germinate) in shallow boxes, or in a finely prepared seed bed out of doors, in straight rows so that the small plants may be kept free from weeds. When about two inches high thin out and transplant so that they may stand two inches apart, and when the plants are four inches high cut off the tops, which will cause them to grow stocky. The crop is usually made to succeed an earlier one, and if good plants are used they may be set out as late as the middle of August, but the best results are obtained from setting about the middle of June or first of July. In setting prepare broad shallow trenches about six inches deep and four feet apart, in which the plants should be set six inches apart, cutting off the outer leaves and *pressing the soil firmly about the roots*. In about six weeks the plants should be "handled," which is done by one man's gathering the leaves together, while a second draws the earth about the plant

to one-third its height, taking care that none of the earth falls between the leaves as it would be likely to cause them to rust or rot. After a few days draw more earth about them and repeat the process every few days until only the top of the leaves are visible, when in a few days more it will be fit to use. Care should be taken

that the plants are not disturbed while they, or the ground is wet, as it would be sure to injure them. A part of the crop may be simply "handled," and then at the approach of severe freezing weather taken up and set out compactly so that all but the tops of the leaves can be covered with sand, in a light cellar or an unused cold frame, which can be kept just above the freezing point, and will then gradually blanch so that it may be used throughout the winter.

Golden Heart.—

A distinct variety, of sturdy, dwarf habit. It is solid, an excellent keeper, and of

Dwarf White Solid.

fine nutty flavor. When blanched, the heart, which is large and full, is of a pure golden yellow, making this an exceedingly showy and desirable variety for both market and private use.

Crawford's Half Dwarf.—The favorite variety with New York City market gardens. When blanched, it is of rather a yellowish white, and is entirely solid, possessing the nutty flavor peculiar to the dwarf kinds, while it has much more vigor of growth, surpassing most of the large growing sorts in weight of bunch, when grown under the same conditions.

Dwarf White Solid.—Dwarf, white, of stiff, close habit; solid, crisp and juicy. Said to keep in good order later in the season than any other variety.

Boston Market.—The most popular sort in the markets of Boston, and the only one planted by the market gardeners of that vicinity. It forms a cluster of heads, instead of a single large one, and is remarkably tender and crisp. The best variety for light soils.

Seymour's White Solid.—A large sized, vigorous

growing variety; stalks white, round, very crisp, perfectly solid, and of superior flavor.

Incomparable Dwarf Crimson.—The red varieties

Celery, or Turnip Rooted Celery.

keep better through the winter, and are generally considered to be of superior flavor, and they are yearly becoming more popular. This is a dwarf sort of deep, rich color, very crisp, and of the highest flavor.

Celery, or Turnip Rooted.—The root of this variety is turnip shaped, tender, and marrow like, having a sweeter taste, and stronger odor than other varieties. It is used principally for seasoning meats, and soups.

CHICORY.

Fr. Chicoree.—Ger. Cigorien.

Large Rooted, or Coffee.—Much used in Europe as a substitute for coffee, and large quantities of the prepared root are annually exported to this country for similar use. In the fall, the roots require to be taken up and cut in small pieces and put where they will dry. Give the same treatment as in drying apples. When required for use, it should be roasted and ground like coffee.

Collards

COLLARDS.

A species of cabbage, known in different sections as "Cole" and "Colewort." It is almost universally used in the south for "Greens," where it continues in luxuriant growth all winter.

Georgia, or Southern.—This is the variety so extensively used in the south, where it furnishes an abundance of food for both man and beast. Forms a large, loose, open head, or a mass of leaves on a tall stem, which are the better for freezing. Sow thick, in drills, in rich ground, transplanting when four inches high. In the south, sow from January to May and August to October. Manure like cabbage.

CORN.

Fr. Mais.—*Ger. Mais.*

CULTURE.—A rich, warm, alluvial soil is best, and immediately before planting this should be as deeply and thoroughly worked as possible. Cultivate deeply and thoroughly as soon as possible after the plants appear and every few days until it tassels. Thorough cultivation and warm, rich soil are the keys to success.

Early Marblehead.—The earliest sweet corn, and best for first crop. Quality excellent. Cook quickly using boiling hot water, for if simmered over a slow fire, or if it is allowed to stand in the water after cook-

ing, its red cob will color the grain. Stalk very short, with many suckers from the root; ears medium size, long, with few husks; cob red, small; kernel broad, shallow, white or tinged with red.

Dolly Dutton.—Stalk very short, with few suckers and fine leaves; ears small, straight, well covered with husks. The smallest sort in cultivation.

Extra Early Adams.—Nearly as early as the last, but much inferior in quality; will succeed at the south where other sorts fail. Stalks very short, with no suckers, bearing a single very full, round, *short* ear, well covered with husks; kernels white, smooth.

Early Minnesota.—Very little later than the above, but an old and popular market sort. Stalks short and not suckering, bearing one or two ears well covered with husks; ears long, pointed; kernels very broad, sweet and tender, not shrinking much in drying.

Early Red Naragansett.—We think this the best red variety of sugar corn grown. It is early, following the Minnesota. The kernels are much shriveled, and exceedingly sweet and tender. A good table variety, and many prefer it to any other sort.

Crosby's Extra Early.—A most excellent variety, and remarkably early. Ears of large size, produced very low on the stalk, medium length, sweet, rich and delicate.

Russell's Early Prolific Sugar.—Comes into use a few days after the preceding. Is of excellent quality, very productive, and one of the best for family use.

Early Sweet, or Sugar.—Ears good size, tender and sugary; plant productive, hardy and quite early. An excellent table sort.

Moore's Early Concord Sweet.—Large, full ears, coming into use after Crosby's Extra Early. The quality is unexceptionable, and it is valuable as an intermediate variety.

Black Mexican.—Although the ripe grain is black, or bluish black, the corn, when in condition for the table, cooks remarkably white, and is surpassed by none in tenderness. This by many is considered the most desirable for family use of the second early sorts.

Excelsior.—The best quality of the second early sorts, and the best for general crop. Stalks medium, bearing from three to six small, curved ears, which are filled out to the end with broad, white kernels, that cook exceedingly sweet and tender. (See cut.)

Amber Cream.—Stalks very vigorous, and stand drought better than most. Very productive. Ears large, long; kernels deep, rich, sugary, varying in color from light red to white.

Triumph.—Stalks large, with large ears of fine quality. The earliest of the very large sorts; highly esteemed by canners.

Egyptian Sweet.—A variety noted for its productiveness—the stalks having from two to four ears each—the large size of its ears, its sweetness and tenderness. It is peculiarly adapted for canning purposes, and the superiority of the canned green corn of this variety is noticeable. Its season is about the same as the Evergreen.

Mammoth Sweet.—This variety produces the largest ears of any sort with which we are acquainted, a single ear sometimes weighing two or three pounds. The quality is excellent—sweet, tender and delicious. For family use, it cannot be excelled.

Stowell's Evergreen Sweet.—This variety is intermediate in its season, and if planted at the same time with earlier kinds, will keep the table supplied till October. It is hardy and productive, very tender and sugary, remaining in a condition suitable for boiling a long time.

Early Adams, or Burlington.—An excellent early field variety, and often used for table, particularly at the south. Ears about eight inches long, twelve or fourteen rows; kernels white, rounded, somewhat deeper than broad, and indented at the outer end, which is whiter and less transparent than the inner.

Early Canada.—A very early yellow variety, much grown in Canada; good for localities where the seasons are short, or when first planting has failed.

Lackawaxen.—A white flint, eight rowed variety, with grains very large and deep; cob small; ears average over a foot in length, and in some cases reach sixteen inches. Usually two ears to a stalk. Height of stalk about eight feet. *It completes its growth in ninety-five days, and has yielded one hundred and forty-seven bushels shelled corn per acre.*

Early White Flint.—An excellent, productive variety. Ears good size, pearly white, and of a beautiful appearance. Much used for making hominy.

Large Red Blazed, Eight Rowed.—An excellent variety for field culture. Ears large, well filled out at the top and end; color yellow, splashed with red at the point. A very desirable variety.

Early Golden Dent.—A dent variety, as early as the common flint sorts, and strongly recommended for general use. Stalks medium, with very broad leaves; ears short, always filled to the point; kernels very long, yellow, making fine meal; cob small.

Chestnut County Mammoth.—A large, late variety, popular in Pennsylvania. A sure cropper and hardy, but will not mature at the extreme north. South of northern Ohio it is one of the best of the dent varieties. Stalks large, bearing one or two very large ears; kernels narrow, very long, deep yellow; cob very small.

Blunt's Prolific.—Probably the most prolific corn grown. The ears are short, well shaped, and average three, and frequently run as high as eight to a single stalk; the kernel is white, of the general form of the dent varieties, but harder and makes an extra quality of pure white meal. It is not early, and will not do well at the extreme north.

Rice, for Parching.—A very handsome variety. Ears short; kernels long, pointed, and resemble rice; color white; very prolific; used entirely for parching, for which purpose it has no superior.

CORN, BROOM.

There are many farmers who might make this a very profitable crop, as an acre will give about five hundred weight of broom and nearly forty bushels of seed, worth nearly as much as oats for feed.

CULTURE.—It requires similar soil and culture to corn, but should be planted later. It is frequently planted in drills three and a half feet apart, leaving the plants six inches apart.

Dwarf.—Grows from three to five feet high, and produces short, fine brush suitable for whisk brooms and brushes. Our stock is very pure and true.

Improved Evergreen.—Grows to a height of seven to nine feet; early, and produces a very fine brush of good length and of green color. Our stock is choice, having been established by a careful selection for many years of the finest plants.

Corn Salad.

Corn Salad, Fetticus, or Lamb's Lettuce.

Fr. *Mache*, *Salade de ble*.—Ger. *Ackersalat*, *Lammarsalat*.

This small salad is used during the winter and spring months as a substitute for lettuce, and is also cooked and used like spinach. In warm weather, the plants will mature in from four to six weeks.

CULTURE.—Sow the seed in shallow drills about one foot apart, during August and September. If the soil is dry, it should be pressed firmly over the seed, in order to secure prompt germination. On the approach of severely cold weather, cover with straw or coarse litter. The plants will also do well if the seed is sown very early in the spring, and like most salad plants, are greatly improved if grown on very rich soil, indeed, the ground can scarcely be made too rich for them.

Cress, or Peppergrass.

Fr. *Cresson*.—Ger. *Kresse*.

Curled.—This small salad was formerly much used with lettuce, to which its warm, pungent taste makes a most agreeable addition.

Curled Cress.

CULTURE OF THE CURLED VARIETIES.—The seed should be sown in drills about eighteen inches apart, on very rich ground, and the plants well cultivated. Keep off insects by dusting with Pyrethrum powder. It may be planted very early, but repeated sowings are necessary to secure a succession.

Water Cress.

True Water.—This is quite distinct from the last, and only thrives when its roots and stems are submerged in water. It is one of the most delicious of small salads, and should be planted wherever a suitable place can be found.

CULTURE.—The seed should be sown and lightly covered, in gravelly, mucky lands along the borders of small, rapid streams, and the plants will need no subsequent culture, as in favorable condition they increase very rapidly by self-sown seed and extension of the roots.

CUCUMBER.

Fr. *Concombre*.—Ger. *Gurken*.

This is one of those vegetables which can be grown to perfection by anyone who can control a few square yards of soil which is fully exposed to the sun, and the fruit is so much better when gathered fresh from the vines than it is when obtained in the market, that every family should be supplied from its own yard.

CULTURE.—The plants are tender, and planting should be delayed until settled warm weather, or ample facilities are provided for protecting them from frosts and during cold storms. Form low, flat hills six feet apart each way, of rich soil, by mixing in a quantity of thoroughly decomposed manure, stirring the soil to a depth of sixteen inches or more; or open shallow trenches the same distance apart and mix with the bottom earth a quantity of similar manure and replace the surface soil. Scatter on each hill fifteen or twenty seeds, or one every inch along the rows, and cover one inch deep, pressing the soil firmly over them.

As soon as the plants are up, they will be liable to attack by the striped cucumber beetle. These may be kept off by frequent dusting with air-slacked lime, soot, or sifted ashes diluted with fine road earth; care should be taken not to use too much, for if too strong, any of the above materials will kill the vines. When the plants are well established, thin to three plants to each hill. In gathering, pick all the fruit before it begins to ripen, as the vines will cease setting fruit as soon as any seed commences to mature. In field culture, plough furrows four feet apart across the field, and similar ones, but omitting every fourth furrow, at right angles to the first; this will form paths for the distribution of manure and the gathering of the fruit. At each intersection drop a shovelfull or more of well rotted manure, which should be well mixed with the soil, so as to form a low flat hill. In gathering for pickles, cut the stem, instead of pulling the fruit off, and be careful not to mar the fruit in any way, for if the skin is broken, the pickles will not keep.

Early Russian.—Earliest and hardiest. Vines vigorous and productive. Fruit three to four inches long, small, oval, pointed at each end, covered with fine small spines.

Early Cluster.—Vines vigorous, producing the bulk of the crop near the root and in clusters. Fruit short, holding full size to each end, dark green but paler at blossom end. Good for table use but not adapted to pickling.

Early Short Green or Early Frame.

Early Short Green or Early Frame.—Plants very vigorous and productive. Fruit straight, handsome, smaller at each end, bright green, lighter at the blossom end, with crisp, tender flesh, and makes excellent pickles when young.

Early White Spine.—One of the best sorts for table use. Vines vigorous, fruiting early and abundantly; fruit uniformly straight and handsome, light green, with a few white spines; flesh tender and of excellent flavor.

Bismark.—A cross between the White Spine and Long Green; established by careful selection. Fruit long, cylindrical, very handsome and constant in form and color, light green varying to white, with few spines; flesh very crisp and tender.

Improved Long Green.

Improved Long Green.—Produced by selection from the Long Green. Vines vigorous and productive, forming fruit fit for the table nearly as early as the shorter sorts; fruit about twelve inches long, firm and crisp, with very few seeds. The young fruit makes one of the best of pickles, and when ripe is the best of any for sweet pickles.

Long Green.—Fruit shorter than the above, and makes a good pickle, but is less crisp and tender.

D. M. Ferry & Co.'s Perfection Pickling.—This variety is not only the best for pickles, but is one of the best for the table. Vines vigorous, producing their fruit early and very abundantly; fruit of very distinct form, having three distinct ribs; color dark green, which they retain as pickles; flesh very crisp and tender.

Boston Pickling or Green Prolific.—A distinct variety very popular for pickles. It is medium long, pointed at each end, bright green, and a great producer.

Gherkin, for Pickling.—A very small, oval shaped, prickly, variety, having somewhat the appearance of a burr. It is grown exclusively for pickling; is the smallest of all the varieties, and should always be pickled when young and tender. The seed is slow to germinate.

Gherkin.

EGG PLANT.

Fr. *Aubergine*.—Ger. *Eierpflanze*.

The Egg Plant, when well grown and properly cooked, is a delicious vegetable, and it should find a place in every garden.

CULTURE.—The seed germinates slowly, and should be started in strong heat, for in this, as in all sub-tropical plants, it is of importance to secure a rapid and continuous growth from the first, the plants never recovering from a check received when young. When the plants have formed two rough leaves, transplant to three or four inches apart. Keep the bed closed and very warm, shading from the direct rays of the sun, and giving abundance of water until the ground is warm and all danger not only from frost, but from cold nights is past; then harden off the plants by gradual exposure to the sun and air, and decrease the supply of water, then carefully transplant into very warm, rich soil, setting the plants two and a half feet apart. If needed, shade the young plants and protect them from the potato bug which is very fond of them, and if not prevented, will soon destroy the young plants.

Early Long Purple.—This is one of the earliest and most productive varieties; fruit long, dark rich purple and of fine quality.

Early Long Purple.

Black Pekin.—Nearly as early as the last, and as large as the later sorts. Very prolific, and desirable for market gardeners' use. Fruit nearly round; skin smooth, black and glossy; flesh white, fine grained and delicate.

D. M. Ferry & Co's Improved Large Purple.

Large New York Purple.—Large, round, of excellent quality; later than the preceding and highly esteemed in the New York market.

D. M. Ferry & Co.'s Improved Large Purple.—The best variety in cultivation, being early, a sure cropper and of fine quality. Plants large, vigorous with light green leaves; fruit very large, oval, deep purple, with occasional dash of green about the stem; flesh white, tender, and of superior quality.

ENDIVE.

Fr. *Chicoree*.—Ger. *Endivien*.

Endive in its natural state, is very bitter, but when properly blanched, its leaves make a fine salad, and coming as it does after lettuce is past, is very useful.

CULTURE.—It may be grown at any season of the year, but is more generally used late in the fall. Sow the seed during June or July, in drills fourteen inches apart, and when well established, thin the plants to one foot apart. When nearly full grown, tie the outer leaves together over the center in order to blanch the heart of the plant. This will usually be fit for the table in ten days, and continues in condition for use about one week, so that the tying up should be done every few days in order to secure a succession.

Green Curled.—Is the hardest variety, with beautifully curled, dark green leaves, which blanch white, and are very crisp and tender.

Broad Leaved Batavian.—Has broad, thick, plain or slightly wrinkled leaves, forming a large head which is preferred for stews and soups; but if the outer leaves are gathered and tied at the top, the whole plant will

blanch nicely, and make an excellent salad for the table.

Broad Leaved Batavian.

GARLIC.

Fr. *Ail*.—Ger. *Knoblauch*.

A bulbous rooted plant with a strong, penetrating odor, but much esteemed by some for flavoring soups, stews, &c. We frequently receive orders for *garlic seed*, but we can supply the bulbs only.

CULTURE.—Prepare the ground the same as for onions, and plant the bulbs in drills eight inches apart, and four inches apart in the rows, and cover two inches deep. When the leaves turn yellow, take up the bulbs and dry in the shade, and lay them up in a dry loft, as you would onions.

GOURD.

Sugar Trough.—This variety grows to a very large size, and is valuable, when dry, for a variety of household purposes, such as baskets, buckets, cans, &c.

CULTURE.—The Gourd is a tender annual, and should not be planted till all danger of frost is over and not less than six feet apart each way, in good, rich loam. Three plants in a hill will be sufficient to leave at the last hoeing.

For Ornamental Varieties, see Flower Seeds.

HORSE RADISH.

The best Horse Radish is produced from small pieces of root; these are to be set small end down so that the top will be two inches below the surface. The soil should be very rich and well cultivated. It is also grown but of inferior quality from the crowns of the old plants. It is hardy and may be left in the ground until spring before digging. We frequently receive orders for the *seed* of this vegetable, but we can supply the roots only.

KALE.

Fr. *Chou Vert*.—Ger. *Blatter Kohl*.

Borecole, Kale, or German Greens are general terms applied to those classes of cabbage which do not form heads, but are used in their open growth. Some of the varieties are the most tender and delicate of any of the cabbage tribe. They are hardy, and improved rather than injured by frost.

CULTURE.—As far north as New York, they may be sown in September and treated like spinach, although at the south they will live and grow throughout the winter without protection, or they may be planted and treated like winter cabbage, and will continue growing till very late. If cut when frozen, thaw out in cold water before boiling.

Tall Green Curled Scotch.—This is very hardy, and improved by a moderate frost. About two feet high, with an abundance of dark green, curled and

Tall Scotch Kale.

at the south, where, if sown in the fall, it needs no protection, growing vigorously all winter; but is not equal to the other sorts for use at the north.

KOHL RABI.

Fr. *Chou-rave*.—Ger. *Kohl-rabi*.

The Kohl Rabi is a vegetable intermediate between the cabbage and turnip, and combines the flavor of both. The edible part is a turnip shaped bulb formed by the swelling of the stem. When used for the table, this should be cut when quite small, as it is then very tender and delicate, but if allowed to reach its full size, it becomes tough and stringy.

Kohl Rabi.

CULTURE.—Cultivate same as ruta бага for general, and like early cabbage for early crop. They should be used before they have attained their full growth.

Early White Vienna.—Very early, small handsome, white bulb. Best early variety for table.

Early Purple Vienna.—Nearly identical with the last except in color, which is a bright purple, with the leaf stems tinged with purple.

Large Green.—Hardy, quite late, and used for feeding stock. Bulbs large, weighing eight to ten pounds, whitish green in color; leaves large and numerous.

LEEK.

Fr. *Poireau*.—Ger. *Lauch*.

This is a branch of the onion family, is very hardy, and by some is preferred to the onion.

CULTURE.—Dig trenches eight inches deep, and make the soil at the bottom fine and rich (it can scarcely be made too rich). Sow the seed early in the spring, and cover lightly with earth. Thin to six inches apart, and when the plants are twelve inches high, gather the leaves together and fill the trench so as to blanch the lower part of the plant. Dig, and store in the cellar, or out of doors like celery, before severe weather.

wrinkled leaves. It stands the winters in the Middle States without any protection.

German Dwarf Purple.—A dwarf, compact plant composed of a mass of large, finely frilled leaves of a deep purple color. Tender, and of excellent quality; so handsome that it is frequently grown for ornament.

German Dwarf Green.—A smooth

leaved sort, very popular in our markets, and which can only be secured by growing the plants in one's own garden. So we earnestly urge all of our readers who can possibly do so, to grow their own lettuce.

London Flag.—Is the variety more generally cultivated in this country than any other. Is hardy, and of good quality.

LETTUCE

Fr. *Laitue*.—Ger. *Lattich-salat*.

There is no vegetable which is more universally used than this and yet few people know how inviting and appetizing it is when brought to the table fresh and unwilted, a condition in which it is rarely, if ever, found in our markets, and

Leek.

CULTURE.—The quality of lettuce depends largely upon rapid and vigorous growth; and to secure this, we need *very rich, mellow soil*, frequent surface cultivation, and an abundant supply of water. For the earliest crop, sow under glass in March, and thin out the plants so as to prevent their becoming crowded. If it is intended to mature the plants under glass, keep the bed quite close, give frequent and abundant watering with liquid manure, and shade during *very sunny* days; if the plants are to be set in the open ground, give all the air possible without freezing the plants, and "harden off" by full exposure and withdrawal of water before transplanting. The plants should be set out as soon as a warm spot can be made very rich and mellow. At the time the plants are set out, sow seed in drills fourteen inches apart, and thin out as wanted for the table until they stand eighteen inches apart. Give frequent hoeings, and if possible, water during any dry time. The Cos varieties should be tied up seven to ten days before using, in order to blanch the inner leaves.

Early Tennis Ball.—(TRUE BLACK SEEDED).—The best variety of head or cabbaging lettuce for growing under glass. Very hardy. Leaves thick, crisp and tender, forming under glass a compact head, but apt, unless planted very early, to be loose and open in the open air.

Early Tennis Ball.

Black Seeded Simpson.—The leaves of this variety are very large, and form a compact mass rather than a distinct head; they are thin, very tender, of superior quality and of a very light green color, which prevents any wilting of the plant from being noticed, and so the sort is exceeding popular among market gardeners.

Simpson's Early Curled.—One of the best early sorts for market or family use. All the leaves tend to produce a large, loose head. Leaves beautifully crimped, dark green, very tender and crisp. Recommended for general cultivation.

Early Boston Curled.—Leaves numerous, large, dark green, growing close together, and the edges deep-

ly frilled, so that the whole plant forms a round mass closely resembling a bunch of moss. Quality good.

Ferry's Early Prize Head.

Ferry's Early Prize Head.—*The best lettuce known. It forms a mammoth plant, in which even the outer leaves are crisp and tender, and remains so throughout the season. It is slow to run up to seed, of superb flavor and very hardy. We desire to call the attention of families and amateurs to this variety, as being decidedly the best in cultivation for home use, but it is unsuited for market gardeners, as it is too tender to bear much handling.*

Hanson.

Hanson.—A very fine heading variety of the largest size, and standing the sun better than any other sort. The heads are very large, solid, sweet, tender and crisp throughout, and entirely free from any bitter taste. We have a very fine stock of this variety, and can recommend it as one of the best on our list.

Deacon Hine or Ice.—Plant small, with very thick smooth, dark green leaves, which are very crisp and tender. Highly esteemed.

Early Curled Silesia.—An early variety of very strong growth; leaves large, light yellow, wrinkled. In quality resembling the Cos varieties. It does not form a head, but is the best variety for cutting and bunching when young.

Frankfort Head.—A dark green curled variety with close, round heads, which cut open finely blanched and very crisp. It remains a long time in head; seeds black, produced very sparingly.

Large Drumhead.—Heads remarkably large, somewhat flattened, compact; pale green without, and white at the center; crisp and tender; one of the finest summer varieties; seeds white.

Philadelphia Butter.—Medium size; leaves smooth, thick, bluish green, forming a compact, hard head very early. Desirable for forcing and for very early planting out of doors, but does not stand the sun well.

Large Drumhead.

Brown Dutch.—An old sort, noted for its hardness. Leaves large, thick, green, tinged with brown. It always forms a large, solid head which is somewhat coarse looking, but the inner leaves are beautifully blanched, exceedingly sweet, tender and good flavored. Desirable because of its hardness and fine quality.

Green Fringed.—An exceedingly ornamental variety. The inside of the leaves is white, the edges a delicate green, and beautifully fringed and crimped, making this the most beautiful variety on our list, and well worthy of cultivation for table decoration, although the quality is quite inferior.

White Paris Cos.

White Paris Cos.—The heads are long, upright, with oblong leaves. It is very hardy, of large size, and long in running to seed; tender, brittle, and high flavored. Considered in England to be far better than the other varieties.

MARTYNIA.

A strong growing, hardy, annual plant, with curious shaped seed pods, which, when young and tender, are highly prized for pickling. The pods are produced in great abundance, and should be gathered when about half grown; after the hardening of the flesh they are worthless.

Proboscidea.—The common variety. Sow in rich, warm soil after corn is well up, in drills three feet apart, and thin the plants out to two feet in the row.

Martynia, pod.

MELON, MUSK.Fr. *Melon*.—Ger. *Zucker-Melone*.

The Musk Melon is too universally popular to need any special description.

CULTURE.—Cultivate as recommended for cucumbers, except that the hills should be six feet apart, but avoid planting near those plants, as they will mix with and injure the quality of the melons; this and heavy rains at the time of ripening will destroy the flavor of the finest stock. *Rich earth* for the young plants is far better than *maure*, but if the latter must be used, see that it is well rotted. If the plants grow very rank, more

and finer fruit will be secured by pinching off the ends of the shoots when about three feet long.

Jenny Lind.—The earliest green fleshed melon, and we think the sweetest variety in cultivation. Quite small, round, much flattened at the ends, ribbed, finely netted.

Surprise.

Flesh green and *very* sweet, but not high flavored.

Surprise.—Skin yellowish white; vines hardy and productive; fruit not deeply ribbed, and the flesh a deep salmon color. *Quality the very best.*

Improved Green Nutmeg.—We think we have by careful selection and growing secured in this a variety of the largest size, but having all the good qualities of the old Green Nutmeg. We consider the best variety for family use, in cultivation. Vines vigorous, hardy, productive; fruit very large, round, slightly flattened at both ends, ribbed, covered with coarse netting; flesh very thick, green and of the highest flavor.

Pine Apple.

Pine Apple.—Vines medium, very productive and hardy. Fruit oval, tapering to stem, medium size, slight ribs and dark green at first, but becoming covered with shallow gray netting. Flesh green, very thick, soft, delicate and exceedingly sweet and high flavored. One of the best of all the melons for home use.

Bay View.—Fruit large, often sixteen to eighteen inches long, and will ripen up finely if picked quite green, making it one of the best for shipping long distances, and this, combined with its great beauty, makes the variety a favorite with market gardeners. Flesh thick, of rich green color, juicy and very sweet and rich.

Casaba, or Green Persian.—One of the largest and best musk melons in cultivation. Flesh green, very sweet, melting and delicious.

Long Yellow.—A large variety; long, oval shape, deeply ribbed; flesh thick, light salmon colored, and of a peculiar musky flavor. This variety is used in its green state for Mangoes.

MELON, WATER.Fr. *Melon d'eau*.—Ger. *Wassermelone*.

The Water Melon is a tropical fruit, and can be produced to perfection only on warm, light soil, and under a bright, hot sun.

CULTURE.—Although the finest melons are produced on light, sandy, comparatively poor soil, a vigorous start for the young plant is necessary, and for this we need a hill of rich earth, similar to that for cucumbers. If very large fruit is desired, pick off all but a few melons.

Early Jersey.—One of the earliest varieties. Above the medium size, oval-round, light green, mottled. Flesh scarlet, solid, fine grained, very sweet and juicy. An excellent variety, either for market or home use.

Phinney's Early.—A valuable variety for use at the north, being the most hardy and surest cropper. Vine vigorous and productive, fruiting quite early; fruit oblong, smooth, marbled with two shades of green; rind thin; flesh pink, *very* sweet, tender and brittle.

D. M. Ferry & Co.'s Peerless.

D. M. Ferry & Co.'s Peerless.—The best melon for general use, particularly at the north. Vine vigorous, hardy, productive; fruit medium, oval, finely mottled, light and dark green, somewhat in stripes; rind thin; flesh bright scarlet, solid to the center, crisp, nutty and sweet. Our stock of this variety is most carefully selected.

Black Spanish.—Vine small, so that they may be planted closer than most sorts. Round, very dark green, with scarlet flesh and black seeds. It is not so large as some of the other sorts, but has a very thin rind, and a rich, sugary flavor.

Gypsy, or Georgia Rattlesnake.—One of the largest varieties, and stands shipment long distances better than any other. The sort used at the south for northern shipments. Fruit cylindrical, square at the ends, smooth, distinctly striped and mottled light and dark green. Flesh bright scarlet, and very sweet.

Scaly Bark.—A new variety exceedingly popular at the south; it will keep in good condition after picking longer than any other sort. Vine large with large coarse foliage; fruit large, oblong, covered with mottled green, with white spots in groups, looking something like fish scales; rind thin, but very tough; flesh red, very tender, nutty, crisp; seeds reddish brown.

Cuban Queen.—One of the largest melons known, specimens having been grown that weighed *eighty-two pounds*. Vine vigorous; skin striped light and dark green. Rind medium thick, but the fruit stands shipment well. Flesh bright red, solid, very crisp and sugary.

Gypsy, or Georgia Rattlesnake.

Mountain Sweet.—A large, long, oval variety; flesh scarlet, and quite solid to the center; very sweet and delicious.

Mountain Sprout.—A large, long, striped variety, with bright scarlet flesh and drab colored seeds; it differs from the Mountain Sweet in color and shape, is rather late, and will keep longer in the fall.

Excelsior.—Resembles Mountain Sprout, being beautifully marked with bright green stripes; flesh bright red, delicate and sweet; in size one of the largest.

Orange.—An oval melon; skin green; flesh scarlet, of good quality, and is peculiar in that the flesh may be easily separated from the rind, like an orange.

Ice Cream.—Medium size, scarlet flesh, and very sweet; a good variety for main crop.

Citron.—Employed in making preserves. Grows uniformly round and smooth, striped and marbled with light green. Flesh white and solid; seeds red.

Mushrooms.

MUSHROOMS.

The Mushroom is an edible fungus, of a white color, changing to brown when old. The gills are loose, of a pinkish red, changing to liver color. It produces no seed, but instead, a white, fibrous substance in broken threads, called spawn, which is preserved in horse manure, being pressed in the form of bricks. Thus prepared, it will retain its vitality for years.

CULTURE.—Mushrooms can be grown in the cellar, in sheds, or in hot-beds in open-air, on shelves, or out-of-the-way places. Fermenting horse manure, at a temperature of about 70 degrees, is made into beds the size required, eighteen inches deep. In this bed plant the broken pieces of spawn six inches apart, covering the whole with two inches of light soil, and protect from cold and severe rains. The mushrooms will appear in

about six weeks. Water with luke warm water, and only when quite dry.

MUSTARD.

Fr. *Montarde.*—Ger. *Senf.*

Mustard is not only used as a condiment, but the green leaves are used as a salad, or cut and boiled like spinach.

CULTURE.—Should be same as that of cress.

Southern Giant Curled.—

This mustard is very highly esteemed in the south, where the seed is sown in the fall, and the

plants used very early in the spring as a salad. The seed is brown and produces plants which grow about two feet high and form enormous bunches, *six of which will fill an ordinary barrel.*

White English.—The leaves are light green, mild and tender when young; seed light yellow.

Brown Italian.—This is a larger plant than the preceding, with much darker leaves; seed brown, and more pungent.

NASTURTIUM.

Fr. *Capucine.*—Ger. *Kapuziner Kress.*

CULTURE.—Sow after the ground is warm, in drills one inch deep, by the side of a fence, trellis work, or some other support to climb upon. They will thrive in good ground, in almost any situation, but are more productive in a light soil.

Tall Mixed.—Cultivated both for use and ornament.

Its beautiful, orange colored flowers serve as a garnish for dishes, and the young leaves are excellent for salads. The flower buds, scarcely formed, and the green seed pods preserved in vinegar, make a pickle greatly esteemed by many.

For other varieties, see *Flower Seeds.*

OKRA.

Fr. *Gombo.*—Ger. *Ocher.*

This is an annual from the West Indies, cultivated for its green seed pods, which are used in soups or stewed and served like asparagus. It is highly esteemed at the south for making gumbo soup. The pods when young and tender should be sliced in sections, strung on a thread and hung up in the

shade to cure like dried apples. In this condition it can be used for soup at any time.

CULTURE.—Sow the seed thinly in dry, warm soil, in shallow drills two feet apart. Cover the seeds lightly. After the plants are up, thin them out to nine inches apart; hoe frequently and draw a little earth to the stems as they continue to grow. Gather the pods when quite green, and about an inch and a half long.

Okra

Tall White.—About four feet high; pods eight to ten inches long.

Dwarf White.—A decided improvement on the preceding. Two and a half feet high, very productive; pods a foot long, very thick and fleshy.

ONION.

Fr. *Oignon*.—Ger. *Zwiebeln*.

The Onion not only contains considerable nutriment and has valuable medicinal properties, but is most useful in counteracting the bad effects of sedentary life. The disagreeable odor it imparts to the breath may be avoided in a great measure by thorough cooking, or by eating a few leaves of parsley.

There is no vegetable where the quality of the seed exerts a greater influence upon the crop than in onions. On our trial grounds we have found a difference of over 400 per cent. in the marketable product of two rows of onions, planted the same day, side by side, thinned to the same number of plants to the rod, hoed and treated in every way precisely alike, the difference being entirely owing to the seed, which were samples of stock offered us by two growers. Here then, if nowhere else, the greatest care should be taken to secure the best possible seed. Seed grown in the north will be pretty sure to produce better onions when sown in the Southern States, than southern grown seed.

We make a specialty of onion seed, and grow and dispose of many tons annually. The demand for our seed has increased so rapidly that we are yearly increasing our facilities for growing, so that we think we annually produce on our seed farms near Detroit, the largest crop grown by any one firm in America. Our stock is all grown from choice, selected bulbs, under our own supervision, therefore those who order seed of us will be sure of getting new, choice seed of the best quality. Beware of CHEAP ONION SEED! as much of it is worthless, and is sure to disappoint the purchaser.

ONIONS—HOW TO RAISE THEM.

This is a question we are asked many times every year, and which we will try and answer from our experience in raising many thousands of bushels.

SOIL.—A good crop of onions can be raised on any soil which will produce a full crop of corn, unless it be a stiff clay, very light sand or gravel, or certain varieties of muck or swamp lands. We prefer a rich, sandy loam, with a light mixture of clay. This is much better if it has been cultivated with hoed crops, kept clean of weeds, and well manured for two years previous, because if a sufficient quantity of manure to raise an ordinary soil to a proper degree of fertility is applied at once, it is likely to make the onions soft.

MANURE.—There is no crop where the quality of the manure used is of greater importance than in this. If it is too rank it is quite sure to make soft onions, with many scullions. It should be well fermented and shovelled over at least twice during the previous summer to kill weed seeds. Of the commercial manures, we prefer fine ground bone to any other, but large crops are raised by the use of superphosphates. If these manures are used, one-half should be applied when the crop is sown, and the rest just before they begin to form bottoms.

PREPARATION.—In time to complete the work before the ground freezes up, remove all refuse of previous crops, and spread the composted manure evenly, at the rate of about fifty cart loads to the acre. This should first be cultivated in, and then the ground ploughed a moderate depth, taking a narrow furrow, in order more thoroughly to mix the manure with the soil. Carefully avoid tramping on the ground during the win-

ter, and as early in the spring as it can be worked, cultivate or thoroughly drag it with a heavy harrow, and then in the opposite direction with a light one, after which the entire surface should be raked with steel hand rakes. It is impossible to cultivate the crop economically unless the rows are perfectly straight; to secure this, stretch a line along one side, fourteen feet from the edge, and make a distinct mark along it; then, having made a wooden marker something like a giant rake with five teeth about a foot long and standing fourteen inches apart, make four more marks by carefully drawing it with the outside tooth in, and the head at right angles to the perfectly straight mark made by the line. Continue to work around this line until on the third passage of the marker you reach the side of the field where you began; measure fifteen feet two inches from the last row, stretch the line again, and mark around in the same way. This is much better than to stretch a line along one side, as it is impossible to prevent the rows gradually becoming crooked, and by this plan we straighten them after every third passage of the marker.

SOWING THE SEED.—This should be done as soon as the ground can be got ready, and can best be done by a hand seed drill. This should be carefully adjusted (testing it by running it over a barn floor), to sow the desired quantity of seed and about one-half inch deep. The quantity needed will vary with the soil, the seed used, and the kind of onions desired. Thin seeding gives much larger onions than thick. Four or five pounds is the usual quantity needed to grow large onions. We use a drill with a roller attached, but if the drill has none, the ground should be well rolled with a hand roller immediately after the seed is planted.

CULTIVATION.—As soon as the onions are up so they can be seen the length of the row, give them the first hoeing just skimming the ground between the rows. We use a hoe made expressly for that purpose. The blade is eight inches long and one and a half broad, with a long, crooked shank set in a handle five feet long. The shape of the hoe allows the earth to pass over the blade without moving it out of its place. A few days after give them the second hoeing, this time close up to the plants, after which weeding must be commenced. This operation requires to be carefully and thoroughly done; the weeder must get down to his work on his knees astride of the row, stirring the earth around the plants, in order to destroy any weeds that have just started and cannot be seen. In ten days or two weeks they will require another hoeing and weeding similar to the last, and two weeks later give them still another hoeing, and if necessary, another weeding. If the work has been thoroughly done, and at the proper time, the crop will not need anything more until ready to gather.

GATHERING.—As soon as the tops die and fall, the crop should be gathered by pulling four rows and laying them in a single one the tops all one way, and then returning on the next four forming a similar row, but with the tops in the opposite direction; laying the tops in this way greatly facilitates the "topping." If the weather is fine they will need no attention while curing, but if it is not, they will need to be stirred by simply moving them slightly along the row. When the tops are perfectly dry, cut them off about half an inch from the bulb and throw each pair of rows together forming windrows about nine feet apart. After a few days more of bright weather, they will be fit to store.

For Pickles or Sets.—Good ground should be used prepared as above, but the seed sown in broad drills and very thick, thirty to sixty pounds per acre.

How to Keep Onions through Winter.

The essentials for the preservation of onions are dryness, thorough ventilation, coolness, and freedom from

frost, or if frozen, they must not be permitted to thaw and freeze again.

One of the most popular methods of keeping onions, is to spread straw to the depth of eighteen inches upon the barn floor, scaffold or garret; upon this spread the onions six to ten inches deep, and cover with two feet of straw. If in good condition and sufficient depth of covering is used, they will keep in fine condition till May.

A cool, dry cellar of some out-building, barn or carriage house will be found excellent for keeping onions, if it has windows for ventilation. The cellar of a dwelling house is usually too warm. They should be spread on scaffolds, about six inches deep, with room enough between the boards for the air to circulate. On approach of cold weather, close the doors and windows, and keep the temperature just above freezing point. With proper care, they can thus be kept without freezing at all, and will come out sound and nice in the spring.

Extra Early Red.

Extra Early Red.—A medium sized, flat variety; an abundant producer, and very uniform in shape and size; moderately strong flavored, and comes into use nearly two weeks earlier than the Large Red Wethersfield; very desirable for early market use.

Early Red Globe.—A comparatively new variety, maturing as early as the flat sort. It is globe shaped; skin deep red; flesh mild and tender. Very handsome in appearance.

Large Red Wethersfield.

Large Red Wethersfield.—This is the standard variety, and the favorite onion in the east, where immense crops are grown for shipment. Large size; skin deep purplish red; form round, somewhat flattened; flesh purplish white; moderately fine grained, and stronger flavored than any of the other kinds. Very productive, the best keeper, and one of the most popular for general cultivation.

Large Yellow, or Yellow Dutch.—One of the oldest sorts and as a market variety, probably better

known than any other. Flesh white, fine grained, mild, and well flavored.

Yellow Danvers.

Yellow Danvers.—A fine variety, originated in South Danvers, Mass. Above the medium size, globular in form; skin yellowish brown; flesh white, comparatively mild and well flavored; productive, six hundred bushels per acre from seed being a not uncommon crop. By careful selection, we have improved the original shape of this variety, so that to distinguish it from the old stock, many seedsmen catalogue it as *Yellow Globe Danvers*.

White Portugal, or American Silverskin.—A large, flat onion; of mild flavor; fine for early winter use, and much esteemed for pickling. It is the best keeper of the white varieties.

White Silverskin, for Pickling.—This is of small size, silvery white, and, on account of its small size and handsome appearance, is preferred for pickling.

White Globe.

White Globe.—Yields abundantly, producing handsome and uniformly globe shaped bulbs. The flesh is firm, fine grained, and of mild flavor. Sometimes called Southport White Globe.

El Paso, or Large Mexican.—Grows in Mexico to a diameter of six inches and to a weight of two or three pounds, and used in that region in preference to any other sort. Color variable from white to light red; flesh white, rather coarse grained, but of very mild flavor. Resembles a mammoth White Portugal.

FOREIGN ONIONS.

The following varieties have been tested in this country, and have given perfect satisfaction. While we would not recommend the risking of a large crop of onions by sowing imported seed, we believe the following varieties will be found very desirable for early market and home garden use. The flavor of the Italian

varieties is milder, and they seem every way well adapted to culinary purposes:

Giant Rocca.—*An immense onion.* Globular in form; skin light brown; flesh mild and tender. It will produce a large onion from seed the first season, but to attain the largest growth, the smallest bulbs should be set out the next spring, when they will continue increasing in size, instead of producing seed, as is the case with American onions.

Early Neapolitan Marzajola.—A beautiful, flat, white skinned variety, one of the *earliest of all*, and a good keeper. It can be sown in February or March, and will mature a crop very early in the season; or sown in July, the crop will be matured the same season. In the south, the seed can be sown in the autumn, and large onions produced in March.

Giant White Italian Tripoli.—A large, beautiful, pure white, flat onion of mild and excellent flavor, and will produce a somewhat larger onion from seed than our White Portugal; but to attain the full size, the small bulbs should be set out the next spring.

New Queen.

New Queen.—A silver skinned variety, of quick growth and remarkable keeping qualities. If sown in February, it will produce onions one to two inches in diameter early in summer, which will keep good until the following summer; and if sown in July, will be ready to pull late in autumn, and be sound and fit for use till the following autumn. Particularly valuable for pickles, as if sown thickly they will mature perfect, hard onions from one-half to three-quarters of an inch in diameter.

BULBS.

Top Sets or Buttons.—Produce, instead of seed, a number of small bulbs or onions, about the size of acorns, on the top of the stalk, which, if planted, will produce a large onion, maturing earlier than from seed. The large onion produces the top onion, and the little top onion produces the large onion.

Red Bottom Sets.—Produced by sowing seed very thickly in the spring, and not thinning out. They mature under this method when about half an inch through, and are used precisely as top onions are, setting them out in the spring, instead of sowing seed.

Yellow Bottom Sets.—Identical with the preceding, except in color, and used in the same manner.

White Bottom Sets.—The seed of the White Silverskin or White Portugal varieties is used to produce the white set. They do not keep as well as the red or

yellow, but produce beautiful, white onions, early in the season.

Onion Sets.

Potato Onion.—Produces a quantity of young bulbs on the parent root, which should be planted early in spring, in rows eighteen inches apart, six inches apart in the row, and covered one inch deep. With this and the preceding variety, the large bulbs produce the small and the small the large alternately.

Any of the preceding six varieties can be recommended as a small, early crop for family use and early home market, but *not as a main crop*, the increase of marketable onions over the seed being too small. *Of all the various modes of propagation, sowing the seed for a main crop deserves the first rank. Its cheapness, compared with other modes, the facility with which it is sowed, and the superior bulbs which it produces, recommend it to general use.*

PARSNIP.

Fr. *Panais*.—Ger. *Pastinake*.

The value of the Parsnip as a culinary vegetable is well known, but it is not generally appreciated at its full value for stock feeding. On favorable soil, it yields an immense crop of roots, which are more nutritious than carrots or turnips, and particularly well adapted for dairy stock.

CULTURE.—They do the best on a deep, rich, sandy soil, but will make good roots on any soil which is deep and mellow and moderately rich. Do not enrich with fresh manure, as it is apt to make the roots coarse and ill shaped. As the seed is sometimes slow to germinate, it should be sown as early as possible; cover one-half inch deep, and press the soil firmly over the seed; give frequent cultivation, and thin the plants to six or eight to the foot. In digging field crops, they may be thrown out so as to be easily gathered, by running a subsoil plow along one side of the row.

Long White Dutch, or Sugar.—Roots very long, white, smooth, tender, sugary, and most excellently flavored. Very hardy, and will keep through winter without protection.

Hollow Crown.—Roots oblong, ending somewhat abruptly, with a small tap root; grows mostly below the surface; has a very smooth

clean skin, and is easily distinguished by the leaves arising from a cavity on the top or crown of the root.

PARSLEY.

Fr. *Persil*.—Ger. *Petersilie*.

A very useful vegetable for flavoring soups and stews, and for garnishing. For flavoring, the green leaves are used, or they may be dried crisp, rubbed to a powder, and kept in bottles until needed.

CULTURE.—It requires rich, mellow soil. The seed is even slower than parsnip in germinating, and should be sown as early in the spring as possible, and when the plants are two inches high, transplant. The oftener the plants are transplanted and cut back, the finer and more perfect the leaves will be. When well grown, each plant will form a handsome rosette eighteen inches or more in diameter.

Carter's Fern-Leaved.—A new variety, of most beautiful form and coloring, and is well adapted for garnishing dishes on the table, and also makes a very ornamental plant in the flower garden.

Fine Triple Curled.

Fine Triple Curled.—A fine, dwarfish, curled variety, which, when well grown, resembles a tuft of finely curled moss. It is hardy, and slow in running to seed, but liable to degenerate, as it constantly tends to increase in size, and to become less curled.

Myatt's Garnishing.—This variety is larger, and the plant of stronger habit than the preceding, with foliage as finely curled. The leaves are bright green above, paler beneath. Admirably adapted for garnishing purposes.

PEAS.

Fr. *Pois*.—Ger. *Erbse*n.

In spite of the multitude of varieties now in cultivation, there are each year many new sorts brought out, each of which is claimed to be superior. We take great pains to secure and test on our trial grounds samples of all these new sorts, and present the following list as containing all which are really desirable.

CULTURE.—For early peas, the soil should be light, warm and sheltered, but for general crop, a moderately heavy soil is better. Sow as early as possible a few of the earliest variety on warm, quick soil prepared the fall before. The general crop can be delayed until later, but we have met with better success from sowing all the varieties comparatively early, depending for succession upon selecting sorts that follow each other in ripening. The first sowing will be earlier if covered only one inch deep; the other sorts should be covered from two to six inches deep, the deep planting preventing mildew, and prolonging the season. Fresh manure, or wet, mucky soil should be avoided, as they cause the vines to grow too rank and tall.

The crop should be gathered as fast as it becomes fit for use. If even a few pods begin to ripen, young

pods will not only cease to form, but those partly advanced will cease to enlarge.

ALL WRINKLED PEAS are superior to, more delicate in flavor, and remain longer in season than the smooth sorts, for, as in sugar corn, the wrinkled appearance indicates a greater amount of saccharine matter.

EXTRA EARLY SORTS.

Ferry's First and Best.—Another season of careful comparison convinces us that this is the earliest and most uniformly ripening pea in existence, and decidedly the best of any for market garden use, maturing all the pods in about forty-five days, so that frequently the ground can be ready for a second crop in seven weeks from planting. Vine small about 18 inches high, bearing three to seven straight handsome pods, each containing six to eight medium sized round peas of good quality.

D. M. Ferry & Co's Extra Early.—For family use, this is probably equal to the preceding, though it does not ripen as evenly. Peas large enough to eat are afforded as early as from any known variety, and the pods continue in bearing for a week or ten days, which is a desirable feature for family use.

Bliss' American Wonder.

Bliss' American Wonder.—A highly improved variety, whose stout, branching vines grow only about nine inches high, and are covered with long, well filled pods produced nearly as early as First and Best. The peas are of the best quality. We have taken particular pains in raising our stock, to be sure it was true and of the best quality, as some spurious stock is being offered.

Kentish Invicta.—A round, blue pea, about two feet in height, with straight, handsome, well filled pods. Tested by the side of our Extra Early, it proved only two days later; it is the earliest of the blue sorts, and superior in flavor to any of the white varieties.

Laxton's Alpha.—The earliest wrinkled pea known. About three feet high; seeds much indented and wrinkled, light blue, and of delicious flavor; one of the best in every respect.

Ferry's Extra Early Tom Thumb.—Established by many years selection from the Common Tom Thumb Vine dwarf, about nine inches high, so that it can be

planted in rows ten inches apart. Peas small, round, but not of the best quality.

Blue Peter.—Sometimes called Blue Tom Thumb. A blue pea of fine quality; as dwarf as the Tom Thumb, and a great producer. An excellent pea in all respects, and one of the best of the dwarf varieties. Peas large, round, semi-wrinkled.

McLean's Little Gem.

EARLY SORTS.

McLean's Little Gem.—A very desirable early, dwarf, green, wrinkled variety, growing about fifteen inches high. When in a green state, it is very large, sweet, and of delicious flavor.

Premium Gem.—Somewhat like the last, but with a little heavier, more prolific vines and larger pods. This and the last fully equal the later sorts in quality, which with their earliness, dwarf habit and productiveness, make them the most desirable for private gardens, of any on the list.

Carter's First Crop.—This English variety has been grown in this country several years, and ranks among the earliest peas, but we fail to discover any superiority over our Extra Early. It grows from two to three and a half feet high, is very prolific, and of good flavor.

Caractacus.—Nearly identical with the preceding, though perhaps not quite so early.

Extra Early Kent.—This is a very early variety, growing about three feet high. Pods well filled with good sized peas; productive, ripening nearly all at once. An early market variety *when true*, but has greatly degenerated of late years. *Our stock is true.*

Improved Daniel O'Rourke.—By careful selection we have secured a stock of this old and popular variety, which has all the good qualities it originally possessed.

Extra Early Philadelphia.—A variety somewhat in demand in the vicinity of Philadelphia. We have failed to discover any merit in it over earlier and more prolific varieties.

Carter's Little Wonder.—A new variety from England, well entitled to its name, Little Wonder. It is a sweet, wrinkled pea, very early and of delicious flavor. Cannot fail to become a favorite where introduced. Height twenty to twenty-four inches.

Dwarf Champion.—In quality and flavor equal to the Champion of England, while the vine is much more prolific. Peas white, much shriveled and indented.

McLean's Advancer.—A green, wrinkled variety, about two and a half feet high, with broad, long pods, which are abundantly produced and well filled to the end. Considered by some the best of its season, being of most excellent flavor.

LATE SORTS.

Yorkshire Hero.—Vines stout, about two feet high, bearing at the top a number of broad pods filled with large peas, which keep a long time in season, and never become as hard as most sorts. They are of fine quality, and will be preferred to any other by those who like a rich, marrow like pea.

Champion of England.—Universally admitted to be one of the richest and best flavored peas grown, and very productive. Height four or five feet; seed whitish green and much shriveled. We consider this equal in quality to any in cultivation, either for the amateur or market gardener, and it will always sell, green, better than any other variety.

Large Blue Imperial.—About three feet high, and very strong. Pods large, long, pointed, rather flat, containing eight or nine peas. Seed large, blue and a little flattened. A good bearer, and one of the best varieties for summer use, but requires to be planted early, or it will be apt to mildew.

Dwarf White Marrowfat.—Similar in general character and appearance to the Large White Marrowfat, but of stiffer habit and dwarfier growth, being only three or four feet high. It will do very well without bushing, and is much earlier than the Tall Marrowfat.

Large White Marrowfat.—Cultivated more extensively for the summer crop than any of the others. About five feet high, of strong growth. Pods large, round, rough, light colored and well filled; seed large, round and yellow or white, according to the soil in which they are grown. It is excellent for summer use, but inferior in quality to the newer sorts, although undoubtedly the greatest bearer in the field or garden.

Large Black Eyed Marrowfat.—An excellent variety, growing about five feet high; pods large and full; a prolific bearer, and can be recommended as one of the very best Marrowfat sorts.

EDIBLE PODDED SORTS.

Dwarf Gray Sugar, Edible Pods.—Grows about two feet high, and is remarkable for its earliness as well as its prolific character. The seeds are large, shriveled and indented, of a dark brown color. The pods are broad, flat and crooked, and contain five or six peas.

Tall Sugar, Edible Pods.—About five feet in height; very sweet and tender. Designed only to be eaten with pods.

FIELD SORTS.

The Golden Vine, Crown and Blue Prussian are, perhaps, the best varieties on the list for general cultivation, though large quantities of Creepers, Common White and Common Blue are used annually. The Golden Vine can be sown later than any other variety, and on lower land, as they are not liable to mildew. These varieties are used for field culture only. In their dry state they are used extensively for feeding stock, for making soups, and in the manufacture of coffee. It is highly essential to have them as free from bugs as pos-

sible, and for soups and coffee, absolutely necessary. We keep constantly on hand a large stock of all these varieties, obtained from the Province of Ontario, where the bugs do not infest them. Our customers may rely on having the seed pure and free from bugs.

PEPPER.

Fr. *Piment*.—Ger. *Pfeffer*.

The Pepper is much esteemed for its seasoning qualities. In all the various methods of preparation, it imparts vitality and promotes digestion. It is extensively used for pickling, and is valuable for feeding to fowls during winter, a few chopped up with their feed once a week having a marked influence in increasing the number of eggs.

CULTURE.—Should be the same as for egg plant, and the plants need quite as much heat to perfect them, but taking a shorter time to mature, the seed may be sown later, or even planted out of doors after warm weather has fairly set in. Guano, hen dung, or any other bird manure, applied to the surface and hoed in, when the plants are about six inches high, will be found to increase the product wonderfully.

Chili.—Used in the manufacture of pepper sauce. Pods sharply conical, brilliant scarlet, and exceedingly pungent when ripe. Requires a long, warm season, and plants should be started quite early in hot-bed.

Long Red Cayenne.—A long; slim pod, rather pointed, and when ripe, of a bright red color. Extremely strong and pungent.

Cayenne.

Large Squash.—Fruit large, flat, tomato shaped, more or less ribbed; skin smooth and glossy; flesh mild, thick meated, and pleasant to the taste, although possessing more pungency than many other sorts; very productive, and the best variety for pickling.

Large Bell, or Bull Nose.—A very large sort, of square form, tapering to a point, mild, thick and hard; suitable for filling with cabbage, &c., and for a mixed pickle. Less pungent than most other sorts, and one of the earliest varieties.

Sweet Mountain.—Nearly identical with the preceding, though perhaps somewhat larger.

Monstrosum.—Fruit the largest of any, often eight inches to a foot long and two to three inches thick. Quality good, and desirable for pickling.

POTATOES.

Every year we receive samples of a score or more of new potatoes, each of which is claimed to be new, distinct, and superior in some respects to any in the market. These are all carefully tested, and are usually found to be practically identical with, or inferior to some established variety; but among these hundreds of seedlings, there is occasionally an improvement, and we aim to include in our list all such new sorts, together with the best of the older kinds.

Early Mayflower.—We think we have found in the Mayflower what we have been looking for, namely an

early potato which is of the best quality. It is an excellent keeper, and does not start readily in the spring, and needs high culture and rich soil. It is of medium size,

the crop running very evenly, with scarcely any very large or very small potatoes, slightly flattened oval shape, light lemon color, with smooth skin well covered with very fine netting. Eyes few, small, and nearly even with the surface; flesh white, solid; cooks evenly and thoroughly without falling to pieces, and has no hard center or spots so common to many of the modern varieties, and is entirely free from any strong or earthy flavor. We recommend it as the best early potato and the best variety for culture in the garden.

Early Mayflower.

White Star.

White Star.—This valuable variety is proving to be all we claimed for it, that is, the best sort for general crop. The vine is strong, semi-erect, branching, a single stem being produced from each eye. The foliage is very abundant and vigorous, the leaves medium sized, smooth, dark green. The tubers are produced abundantly, in a compact cluster, are large, oblong, of uniform size, and very handsome. The skin is white, covered with a minute russet netting. The flesh is white, of the finest quality either baked or boiled. The White Star is suited to all soils and is fast becoming a standard sort in nearly every part of the country.

Early Telephone.

Early Telephone.—A new and valuable variety, produced by a cross of the Snowflake and Peachblow. The skin is a light russet color, smooth and very handsome. The flesh pure white, fine grained, dry and mealy; flavor exceedingly delicate. This potato is a great producer and splendid keeper. During the past season some very fine tubers were grown from tubers saved from the crop of 1886. So far, this potato has been

entirely free from rotting. The potato is in all respects a very fine and desirable one, and ranks among the very best.

Brownell's Best.—An excellent seedling, originated in 1875, belonging to that superior strain represented by the Snowflake, Pride of America, and a few others. Skin russety-white; flesh white; eyes few and nearly even with the surface; size medium to large. The plants are healthy and vigorous, and the tubers grow compactly in the hill. They ripen second early, and are equally valuable for an early market or winter potato; the flesh is fine grained and floury.

Early Ohio.—The market men of this vicinity regard this as their best early potato, being earlier than the Early Rose, and an abundant yielder. The vines are vigorous and free from blight; the tubers are nearly round, and about the color of the Rose; the flesh is solid, and cooks dry and mealy, but is not pure white, although of the finest quality.

Beauty of Hebron.—One of the best of the early varieties. In some sections it proves earlier than the Early Rose, and in others it is reported as later. Vine vigorous, growing very rapidly; productive, the tubers lying compactly in the hill. Tubers similar in shape to the Early Rose, but shorter. Skin tinged with pink at first, but becomes pure white during the winter. Flesh solid to the center, even in large specimens, and of the finest quality.

Clark's No. 1.—Vines the most vigorous of any of the early sorts. Tubers similar to, but lighter colored than, the Early Rose, and they cook mealy, and are of excellent flavor.

Early Rose.—This was the first of Mr. Breese's seedlings, offered in the spring of 1868, and has now become the standard variety for earliness, quality and productiveness.

Mammoth Pearl.—Vines very large and strong growing, so that in many cases they outstrip the bugs, and produce a crop in spite of them. The tubers, which ripen in August, are large, oblong, usually a little flattened, very smooth and uniform. Eyes even with the surface; skin very white; flesh as white as that of any variety, and cooks as white as snow.

St. Patrick.

St. Patrick.—A most excellent medium early potato, and enormously productive. Very handsome, smooth, white skin and white flesh. Eyes few and shallow; is never hollow; produces few small tubers, the whole crop being uniform in size. A cross between the Early Rose and Garnet Chili.

Burbank's Seedling.—A white skinned, medium early variety, a seedling of the Early Rose, of fine form and good proportions; it has few eyes, which are but little below the surface. Either boiled or baked it is dry and floury, while the flesh is of fine grain and excellent flavor. The vines are very vigorous and healthy, and in some cases have been entirely free from blight when it has destroyed crops of other varieties in the same field.

Pride of America.—Very productive, growing to a large size. Flesh exceedingly fine grained and of snowy whiteness; cooks quickly and evenly, dry and floury,

and has no hard center or core. The tubers grow compactly in the hill, so that the crop is easily harvested. A remarkable keeper, and free from disease. As a table variety it is absolutely without fault.

PUMPKIN.

Fr. *Courge*.—Ger. *Kuerbis*.

The Pumpkin more properly belongs to the farm than the garden, especially as it readily mixes with and injures the quality of the finer squash.

CULTURE.—Pumpkins are not so particular in regard to soil as melons or cucumbers, but in other respects are cultivated in a similar manner, though on a larger scale. They are generally raised on cultivated farms between hills of corn, and may be planted with success, in fields by themselves.

Large Yellow.—Grows to a large size, and is adapted for cooking purposes and feeding stock. It is irregular in shape and size, some being depressed and flattened at the ends, others round or elongated; of deep, rich yellow color; of fine grain and excellent flavor.

Cushaw.—A great favorite in the Southern States, but too tender for general cultivation in northern climates. In form, much resembling the Winter Crook-neck Squash, though growing to a very large size, frequently weighing seventy pounds; color light cream, sometimes slightly striped with green; flesh salmon colored. Very productive.

Sweet.—By far the best variety for culinary use, large, oblong, mottled, light green and yellow, with very thick sweet tender yellow flesh and large seeds.

RADISH.

Fr. *Radis*.—Ger. *Rettig*.

Cultivated for its roots, which should always be eaten when quite young, as they are apt to be pithy and tough when full grown. The young seed leaves are used as a small salad, and the green seed pods for a pickle.

CULTURE.—A warm, sandy loam, made rich and light by some good, well rotted manure and a liberal dressing of salt, will be most likely to afford them brittle and free from worms. Sow in twelve-inch drills as early as the ground can be worked, and once in two weeks for succession, and thin to one or two inches apart as soon as the rough leaves appear.

It should be borne in mind that radishes must have plenty of room, and be grown quickly, or they will invariably be tough and wormy.

Early Long Scarlet, Short Top Improved.

THREE POTATOES THAT SHOULD BE IN THE HANDS OF
EVERY FARMER AND GARDENER.

EARLY MAYFLOWER.

Early; best in quality; very productive.

PRICE.	{	1 lb.,	2 lbs.,	3 lbs.,	$\frac{1}{4}$ bu.,	$\frac{1}{2}$ bu.,	1 bu.,	Bbl. of 3 bu.,
		75 cts.	\$1.25.	\$1.50.	\$1.75.	\$2.50.	\$4.50.	\$12.00.

EARLY TELEPHONE.

Second Early; fine quality; good keeper.

PRICE.	{	1 lb.,	2 lbs.,	3 lbs.,	$\frac{1}{4}$ bu.,	$\frac{1}{2}$ bu.,	1 bu.,	Bbl. of 3 bu.,
		50 cts.	75 cts.	\$1.00.	\$1.00.	\$1.50.	\$2.25.	\$6.00.

WHITE STAR.

Great yielder; succeeds in all soils; does not rot.

PRICE.	{	1 lb.,	2 lbs.,	3 lbs.,	$\frac{1}{4}$ bu.,	$\frac{1}{2}$ bu.,	1 bu.,	Bbl. of 3 bu.,
		40 cts.	65 cts.	90 cts.	\$1.00.	\$1.25.	\$1.75.	\$4.50.

We Send by express or mail, prepaid, at pound quotations. Quarter bushels and upwards sent by express or freight, the purchaser paying charges.

The above three varieties will prove very profitable to the planter. They can scarcely be too highly recommended for quality and productiveness.

Early Long Scarlet, Short Top, Improved.—This is unquestionably the best standard variety for private gardens or market use. It grows six or seven inches long, half out of the ground; is very brittle and crisp, and of quick growth; color bright scarlet; small top; tapers regularly to the root, and is uniformly straight and smooth. Highly recommended.

Wood's Early Frame.—A sub-variety of the preceding, brilliant scarlet color, mild, brittle, of fine flavor, and suitable for forcing and early in market garden.

Early Round Deep Scarlet.—An improvement on the Scarlet Turnip Radish, much darker and more beautiful in color, so much so as to attract attention, and readily bring a higher price. Flesh white, very crisp and tender; top small. Well adapted for growing in frames.

Scarlet, Turnip Rooted.

very ornamental for table use, and is becoming very popular as a market variety. It is of same size and shape as the Early Scarlet Turnip.

Early White, Turnip Rooted.—Like the preceding in shape, but in color, pure white; flesh pure white, and semi-transparent. It is a few days later than the preceding, and will bear the heat longer without becoming spongy.

Early Scarlet, Olive Shaped.—In the form of an olive, terminating in a very slim tap root. Skin fine scarlet; neck small; flesh rose colored, tender and excellent. Early, and well adapted for forcing or general crop.

French Breakfast.—A medium sized radish, olive shaped, small top, of quick growth, very crisp and tender, of a beautiful scarlet color, except near the root, which is pure white. A splendid variety for the table, not only on account of its excellent qualities, but for its beautiful color.

Golden Globe.—This variety is very popular in the Southern States. It is of quick growth, tender and brittle, of perfect globe shape and golden colored skin. It seems to produce tender radishes in the hottest climates.

Early Yellow Summer Turnip.—An oblong, turnip shaped and russet colored sort, growing much larger than the White or Red Turnip varieties, and having a larger top. The best kind for the south, as it stands the extreme heat and drought better than any other kind.

Grey Summer Turnip.—Round, turnip shaped,

Early Scarlet Rooted.—A small, round, red, turnip shaped radish, with a small top, and of very quick growth. A very early variety, deserving general cultivation on account of its rich color, crisp and tender qualities; should be used while young. The white and red do well mixed.

Early Scarlet Turnip, White Tipped.—A beautiful variety, deep scarlet with white tip. It is

though often irregular in form. The skin is mottled with greenish brown, wrinkled and often marked with transverse white lines. Flesh mild, of greenish white color, and tolerably solid. Half-early, and a good variety for summer use.

Long White Naples.—Skin white, and of fine texture; flesh fine grained, crisp, and very good flavored. A late, fall variety.

Dayton.—This splendid radish, in size, is intermediate between the California Mammoth Winter and the White China Winter, being six or seven inches in length and three inches in diameter at the crown, tapering pretty regularly to the point. The skin is very thin, clear white with greenish purple tinge at top; flesh pure white, crisp and firm; flavor very pleasant and free from any sharp taste. It is a late summer or fall radish. It is in condition for table use when quite small, and continues so during its full period of growth.

WINTER VARIETIES.

CULTURE.—Sow about the same time as winter turnips, on light, rich soil, in drills eighteen inches apart; give frequent cultivation, and thin to two or three inches apart. For winter use, pull before severe frost, and store in damp sand in cellar.

Dayton.

Scarlet China, Winter.—Form rather conical, and very smooth; of a bright rose color; flesh firm, like the Black Spanish, but more pungent. Cultivation the same as for that variety.

White China, Winter.—Similar in shape to the preceding, though more regular in form. Average specimens average about five inches in length, by two inches in diameter. Flesh rather piquant, solid and brittle, and skin white and clean; tops large. A most excellent sort for late fall and winter use.

Long Black Spanish, Winter.—One of the latest as well as the hardiest of the radishes, and is considered an excellent sort for winter use. Roots oblong, black, of very large size and firm texture.

Large White Spanish, Winter.—Roots somewhat fusiform, retaining their diameter for two-thirds their length, sharply conical at the base, and when full grown, measuring seven or eight inches in length, by about three inches in diameter at the fullest part. Skin white, slightly wrinkled, sometimes tinged with purple, where exposed to the sun. Flesh white, solid and pungent, though milder than the Black Spanish.

California Mammoth White China, Winter.—First introduced into this country by the Chinese, in California. It is pure white, about one foot long, and two or three inches through, tapering regularly to the root. The flesh is tender and crisp, and it keeps perfectly well through the winter.

RAPE.

This plant is extensively cultivated in England, both for forage and for the seed, from which is manufactured rape seed oil. The seeds are also much used as food for canary birds. It is sometimes used as a salad plant like mustard. As a forage plant, the yield is abundant, and fed green, it is very nutritious, and nearly all animals are very fond of it. Sown in May, either broadcast or in drills; if the former, ten pounds, and if the latter, four pounds per acre.

RHUBARB, or PIE PLANT.

Fr. *Rhubarbe*.—Ger. *Rhabarber*.

Rhubarb, familiarly known as Pie Plant or Wine Plant, is cultivated in gardens for its leaf stalks, which are used for pies and tarts. Immense quantities are now annually sold in all the large markets. No private garden should be without a bed of it.

CULTURE.—Rhubarb succeeds best in deep, somewhat retentive soil. The richer its condition, and the deeper it is stirred, the better. Sow in drills an inch deep, and thin out the plants to six inches apart. In the fall trench a piece of ground, and manure it well; then transplant the young plants into it three feet apart each way. Cover with leaves or litter the first winter, and give a dressing of coarse manure every fall. The stalks should not be plucked till the third year, and the plant never allowed to exhaust itself by running to seed. Our seed is saved from selected plants of Linnaeus, Giant and other improved sorts. Like the seeds of fruit trees, seed cannot be relied upon to reproduce the same variety.

ROQUETTE.

An annual plant, of which the leaves are used as a salad.

Sow thinly in drills a foot apart as soon as spring opens. Watering often, when necessary, diminishes the tart taste of the leaves. This is objectionable only as the leaves become old; they should be used while young.

Salsify, or Vegetable Oyster.

Fr. *Salsifis*.—Ger. *Haferwurzel*.

Salsify.

The long, white, tapering root of Salsify resembles a small parsnip, and when cooked, is a good substitute for oysters, having a very similar flavor.

CULTURE.—It succeeds best in a light, well enriched soil, which should be stirred to the depth of twelve or fourteen inches. If it is necessary to use manure, it should be very fine and well rotted, for if it is fresh and coarse, the roots will grow irregular and ill shaped. Sow early and quite deep, and give the general culture recommended for the parsnip. The roots are perfectly hardy, and may remain out all winter, but should be dug early in the spring, as they deteriorate rapidly after growth commences. Store a quantity for winter use in sand.

SPINAGE.

Fr. *Epinard*.—Ger. *Spinat*.

The Spinage is very hardy, extremely wholesome and palatable, and makes a delicious dish of greens, retaining its bright green color after cooking.

CULTURE.—Should be planted in very rich ground, the richer the better. Sow in drills one foot apart, and commence thinning out the plants when the leaves are an inch wide, and all should be cut before hot weather, or it will be tough and stringy. For early spring use, the seed should be sown early in autumn, and every two weeks thereafter if a succession is desired. In the Northern States, the plants will require a slight protection of leaves or straw, but in the Southern States, no protection is necessary, and they will continue their growth most of the winter.

Round Summer.

—This variety is generally preferred for early sowing, and is the most popular with our market gardeners; leaves large, thick and fleshy; not quite so hardy as the Prickly, but stands the winter very well.

Improved Thick Leaved Summer.

—An improvement on the preceding, with larger and thicker leaves, and of more substance. Particularly recommended for market garden use.

Long Standing (Late Seeding).—An improved strain of excellent merit, having all the good qualities of the ordinary sorts; what renders it especially desirable is the fact that it is much later in going to seed than any other variety. This valuable property will be appreciated by market gardeners.

Prickly Winter.

—The hardest variety, and will withstand the severest weather, with only a slight protection of leaves or straw. The seed is prickly, leaves triangular, oblong, or arrow shaped. It is employed for fall sowing, which in this latitude is made about the first of September.

Round Summer.

Prickly Winter.

SQUASH.

Fr. *Courge*.—Ger. *Kuerbis*.

The Squash is one of the most nutritious and valuable of all our garden vegetables. The summer varieties come to the table early in the season, and are very palatable, while the winter sorts can be had in perfection from August until the summer varieties are again in condition. Few farmers appreciate the value of winter squash as food for stock. We think an acre of squash, costing no more to cultivate, and much less to secure, will give twice as much food available for feeding stock as an acre of corn, and this we strongly urge our readers to try a "patch" for this purpose.

CULTURE.—The plants are very tender and sensitive to cold, and planting must be delayed until settled warm weather. The general principles of culture are the same as those given for cucumbers and melons, but the plants are less particular as to soil. The summer varieties should be planted six feet apart each way, and the winter sorts eight feet. Three plants are sufficient for a hill; and care should be taken not to injure or break the stems from those intended for winter use, as the slightest injury will increase the liability to decay.

Early Bush Scallop.

in color, which is white.

Summer Crookneck.—One of the best; very early and productive. It is small, crooked neck, covered with warty excrescences; color bright yellow; shell very hard when ripe.

Perfect Gem.—The vines of this variety grow at first like those of the summer squash, but later they throw out runners bearing a great number of squashes, which are small, nearly round, slightly ribbed, and have a thin, smooth, creamy white skin. The flesh is fine grained, dry, very sweet, and of delicious flavor. It is remarkable for its keeping qualities.

WINTER VARIETIES.

Improved American Turban.—An excellent variety for use in the autumn and early winter. Shaped something like a turban, light yellow color with occasionally a dash of light bluish green. Flesh orange yellow, thick, fine grained, sugary and well flavored.

Essex Hybrid.—A new and excellent variety, having the color and shape of the Turban, with the dryness and hard shell of the Hubbard. It is one of the finest grained of all the squashes, and, although ripening very early, it will keep till the following June. The flesh is very rich colored, thick and solid, and it is heavier than most other sorts of same size.

Boston Marrow.

Boston Marrow.—A fall and winter variety, very popular in the Boston market. Of oval form; skin thin: when ripe, bright orange mottled with light cream color; flesh rich salmon yellow, very dry, fine grained, and for sweetness and excellence, unsurpassed, but not as dry as the Hubbard.

Hubbard.—This is a superior variety, and the best winter squash known; flesh bright orange yellow, fine grained, very dry, sweet and rich flavored; keeps per-

Hubbard

fectly good throughout the winter; boils or bakes exceedingly dry, and is esteemed by many to be as good baked as the sweet potato. We have an unusually fine strain of this variety, and can recommend our stock as in all probability the best in the country.

Butman.—This is a cross between the Yokohama and Hubbard. The flesh is between a salmon and a lemon color. It has all the qualities of a first class squash, being very dry, fine grained, and of excellent flavor. Size medium; color light stone, distinctly striped and splashed with yellowish white.

Marblehead.

Marblehead.—It is unquestionably an excellent keeper, and is finer grained and drier than any sort we have seen. About the size of the Hubbard with shell of bluish green, and bright orange flesh. Requires the whole season to mature.

Winter Crookneck.—The most certain to produce a crop of any, the strong growing vines suffering less from insects than those of the other sorts. Color varying from dark green to clear yellow, frequently changing to the latter after being gathered. Flesh variable, sometimes close grained and fine flavored, and in other cases coarse and stringy. If kept from cold and damp, they will keep the entire year.

SUGAR CANE.

Early Amber.—This comparatively new variety is now being successfully grown in our extreme northern latitudes. It may be planted as late as the 15th of June, and will be ripe enough to manufacture in September. It is the earliest variety with which we are acquainted. The beautiful, amber colored syrup it produces is thought to be superior in flavor to any other, and for sugar, it is unsurpassed. There are many varieties that can be profitably grown where the seasons are long, but this can be grown wherever Indian corn will grow. It is useless to plant cane seed before the weather is warm in spring. Three or four pounds are required per acre.

Early Orange.—An exceedingly valuable variety. Very large, of strong and vigorous habit, and does not fall down. Its yield is 25 per cent. in excess of the Early Amber, and has a very pleasant flavor. It is an early cane, maturing only ten days later than the Early Amber. We recommend it highly to all desiring a superior article, for all localities, excepting the extreme north.

SUNFLOWER.

Large Russian—*Helianthus*.—The Sunflower, during the past few years, has attracted considerable attention as a profitable field crop, its leaves being used for forage, and its seeds as food for poultry, and the manufacture of oil. It is also planted with satisfactory results on low, swampy grounds, to absorb miasma.

TObACCO.

Tobacco is an annual plant, and although it grows to greater size in the south, an equally good quality can be produced in the hot, dry summers of the north.

CULTURE.—The seed should be sown as early as possible after the danger of frost is over. A good plan is to burn a quantity of brush and rubbish in the spring, on the ground intended for the seed bed, then dig and thoroughly pulverize the earth and mix with the ashes, after which the seed may be sown and covered very lightly. When the plants are about six inches high, transplant into rows six feet apart each way, and cultivate thoroughly with plow and hoe.

Connecticut Seed Leaf.—Best adapted to the climate of the Middle and Northern States, as it is more hardy and endures the cold better than the tender varieties grown south. In many of the Northern States and in Canada, this variety is a staple crop.

Yellow Oronoko.—This variety has smaller leaves than the preceding, and is intermediate in size and vigor.

Silky Prior.—Used very largely in the manufacture of bright wrappers, for which purpose this variety and the preceding are unexcelled.

White Burley.—Especially desirable for the manufacture of cigars, as the leaf of this kind readily absorbs a large quantity of manufacturing material.

Havana.—Pure Cuban grown seed, raised in the famous district of Vuelta de Abajo. When grown in this country commands a high price for cigar stock.

Maryland Broad Leaf.—A well known standard sort, valuable for cigar wrappers.

Virginia.—Used in the south in the manufacture of the finer grades of smoking.

TOMATO.

Fr. Pomme d'Amour.—*Ger. Liebesapfel.*

This vegetable is too well known to need any description. There has been a great improvement in it during the last few years, and the varieties now offered are greatly superior to those known a few years ago.

CULTURE.—Tomatoes do best on light, warm, not over rich soil, and success depends upon securing a rapid, vigorous, unchecked growth during the early part of the season. Sow in hot-beds during March, or from six to eight weeks before they can be set out of doors; when the plants have four leaves, transplant into shallow boxes, setting them four or five inches apart; give plenty of air, and endeavor to secure a vigorous, but steady and healthy growth, so that at the time of setting in the open ground they will be strong and stocky, about as broad as high. A slight check while the plants are small, will materially diminish their productiveness. Set out of doors as soon as danger from severe frosts is over, but before doing so, harden off the plants by grad-

ually exposing them to the night air and the withdrawal of water until the wood becomes hard and the leaves thick and of a dark green color. Transplant carefully, and cultivate well as long as the vines will permit. The fruit is improved in quality if the vines are tied to a trellis or to stakes.

FIRST EARLY SORTS.

Early Conqueror.—This seems to be the earliest at the north, and is very popular. Vine medium size, vigorous, productive, bearing immense clusters of fruit, which is medium size, irregular, flattened and slightly corrugated, scarlet crimson color, often dotted and splashed with gold color.

Hundred Day.—At the south, this seems to be the earliest sort, and is largely used for shipping north. Vine medium, with few and small leaves, bearing small clusters of irregular shaped fruit of medium size, distinct bright scarlet vermilion color, flat, with broad, shallow corrugations at the stem, but perfectly smooth and of a regular, wavy outline at center. Quality very good, and ripens well after picking.

Canada Victor.

Canada Victor.—Very early. Vines large, spreading, productive. Fruit of light scarlet color, round, smooth, of medium size, solid, and ripening up well. A very popular variety.

Hathaway's Excelsior.—Vines large, vigorous, continuing productive through the season; fruit a little below medium size, always round, smooth, apple shaped, and when fully ripe, of a dark, rich color. Those who insist upon perfectly smooth fruit will find this the best early sort.

Hubbard's Curled Leaf.—Vines very dwarf, so that the plants can be set closer than most; leaves broad and thick, but curling up at the edges as the fruit ripens; fruit in small clusters, of rich, dark color, and fair quality, but stands shipment and ripens up better after picking than any other sort.

VARIETIES FOR GENERAL CROP.

Ferry's Improved Early Large Smooth Red.—A valuable variety for general crop. Vine vigorous and productive. Fruit medium size, oval form, light crimson color, and of excellent flavor.

Acme.—One of the most popular varieties, both with marketmen and consumers. Vines large, and continuing to produce abundantly until frost. Fruit in clusters of four or five, invariably round, smooth, and of good size, ripening evenly and without cracking, and stands shipping well; color purplish pink; flesh solid and of good flavor.

Trophy.—Well known as one of the best. Vines of medium size, but producing compact clusters of fruit in immense quantities; fruit large, smooth, of bright red color, solid and of good flavor. Our stock is from carefully selected specimens grown from seed procured direct from the originator.

Livingston's Favorite Tomato.

LIVINGSTON'S FAVORITE.—Originated with Mr. Livingston, who also introduced the Acme and Paragon, and presents this as the largest perfect shaped tomato in cultivation. On our Trial Grounds, and in the hands of many others who have tested it during the past season, it has proven not only the largest and handsomest, but one of the best in quality of any on our list. Vine medium, with large, dark green, healthy leaves, having numerous clusters of from three to seven very large, smooth tomatoes which are a rich, dark red color, oval outline, exceedingly smooth, free from all cracks or blemishes, and ripening evenly throughout; flesh very firm but without green spots. This variety seems remarkably free from rot, and must become a favorite with all who try it. Our stock of seed is direct from the originator.

We are testing a new tomato, which, if it does as well as it has in the past, will prove to be far in advance of anything now cultivated, and we hope to be able to offer it next season.

Essex Hybrid.—A new variety similar to the Acme, but with larger, darker colored fruit, which is always smooth and handsome. Quality among the best. An improved Acme.

Paragon.—Vine very large, vigorous and productive, and continuing so until killed by frost. Fruit large,

round, of a very dark, rich crimson scarlet color, with occasionally a purplish tinge. It ripens up evenly, and the flesh is thick and fine flavored.

Livingston's Perfection.—A new variety, similar to the last, but an improvement upon it, it being a little earlier, and invariably smooth and handsome. It is probably the handsomest tomato grown, and all who have tried it pronounce it of the highest quality.

Queen.—A new sort, very popular at the east for canning. Vine very large and late, producing a large quantity of very large, solid, well ripened fruit of fine scarlet color, and which is so firm that it will stand rough usage better than any other large sort.

Trophy

TURNIP.

Fr. Navet.—*Ger. Rucben.*

This wholesome and agreeable vegetable has been cultivated from time immemorial, as a field crop, and is one of the staple products of the farm. It is most easily affected in its form and flavor by soil, climate, and mode of culture. There are a great many varieties, but we have selected the following as the best for the garden or farm.

CULTURE.—Sow in drills fourteen inches apart, and half an inch deep, or they may be sown broadcast, but in either case be sure to have the ground freshly dug. Keep them perfectly free from weeds, and when the bottoms begin to enlarge, brush away the earth from about the roots to the depth of half an inch or more, and give them a light dressing of wood ashes. This is the surest mode of obtaining fair and smooth turnips in old gardens, where they are almost certain to grow wormy if the earth is allowed to remain in contact with the roots. For the spring and summer crops, it is important to get them started very early so that they may have time to grow to sufficient size before hot weather, when they will soon become tough and strong.

FOR TURNIPS.—For the fall and main crop, sow, in the Middle and Western States, from the middle of July to the last of August, as directed for the spring sowing. In the field, turnips are more generally sown broadcast, though much the larger crops are obtained by drill culture.

FOR RUTA BAGAS.—The Ruta Baga is usually sown from the 20th of June till the 15th of July, in two-foot drills, and thinned out to ten inches apart. It is necessary that the ground should be dry, and made very rich. To preserve turnips in good order for winter, store them in barrels placed alongside the wall of a cool cellar, and cover them with sand or turf to keep them fresh. Another method is to put them in a cellar or dry pit, and cover with straw, and then earth over to the depth of eight or ten inches. Thus protected, they will keep well till spring.

For feeding stock in fall and winter, there is nothing superior to turnips and ruta bagas, and they will yield a larger amount of food than almost anything else, on the same space of ground. We cannot too earnestly recommend farmers to increase their sowings largely, for we are sure no crop will prove more remunerative.

WHITE FLESHED SORTS.

Early Purple Top Munich.—A very handsome, early turnip, decidedly earlier than any other sort. Color white, with bright purplish red top; of fine quality when young, but becoming bitter with age; we can recommend this variety as the best for first crop.

White Egg.

White Egg.—A quick growing, egg shaped, perfectly smooth, pure white variety, growing half out of the ground, with small top and rough leaves. Its smooth, white skin and quick growth make it particularly adapted for fall market purposes. The flesh is very sweet, firm and mild, never having the rank, strong taste of some varieties.

Early White Stone.—This is an English, garden variety, of round shape, firm texture, quick growth, medium size, and is cultivated extensively as an early market variety.

Jersey Navet.—An exceedingly delicate, sweet, white turnip for table use. It is very popular in Paris markets, where it is esteemed one of the best. Grows long, somewhat like a parsnip in form.

Early White Flat Dutch.—A medium sized, white,

Early Purple Top Munich.

flat turnip, of quick growth, juicy, and of excellent quality when young. Sow in spring or fall. It is designed for table use, and is spongy and inferior when overgrown.

Early White Flat Dutch, Strap Leaved.—A most excellent, early, garden variety, much used in the Southern States. Is sure to bottom; very early, sweet and tender, and grown for table use. The seed we offer is our own growing, from selected bulbs.

Early Purple Top, Strap Leaved.

Early Purple Top, Strap Leaved.—This is very similar to the preceding, except in color, being purple, or dark red on the top. It is of good quality, and recommended highly as a garden turnip.

D. M. Ferry & Co's Improved Purple Top, Strap Leaved.—This is a very early variety, and is rapidly becoming the favorite for table use; form round, flat, medium size, very small top, with but few leaves, which are entire and of upright growth, resembling horseradish leaves in shape; flesh fine grained and tender; a purely American variety.

Cow Horn, or Long White.—This variety is carrot like in form, growing nearly half out of the ground, and generally slightly crooked. It is pure white, except a little shade of green near the top. It is delicate and well flavored, of very rapid growth, and has obtained considerable favor as a market sort for fall and early winter use. It is in increasing demand every year.

Improved Purple Top Mammoth.—Globe shaped, large, firm in texture, juicy, and of exceedingly quick growth, and very hardy.

Large White Flat Norfolk.—A standard sort for

field culture, and is extensively grown all over the world for stock feeding. It is round, flat; color white; often attains a very large size. The seed should be sown a little earlier than the table sorts. It is allowed to stand out during the winter at the south and south-west, where the tops are used for greens.

Red Top Flat Norfolk.—A handsome, flat shaped root, purple above ground, with small top and tap root. An excellent variety, grown both for table use and stock, differing but little in shape from the Purple Top Strap Leaved, except in the form of the leaf, though not of so fine a quality.

Pomeranian White Globe.—Is one of the most productive kinds; in good, rich soil, the roots will frequently grow to twelve pounds in weight; it is of the most perfect globe shape; skin white and smooth, leaves dark green, and of strong growth.

Purple Top White Globe.—A variety of the purple top flat turnip, from which it originated. It is globular in form, and nearly as large as the Pomeranian White Globe; of beautiful appearance, of most excellent quality, and equally desirable for table or stock. It keeps well, and is a fine market sort.

Sweet German.—This variety is very popular in many sections, notably so in the New England States. It partakes largely of the nature of the ruta бага, and should be sown a month earlier than the flat turnips. The flesh is white, hard, firm and sweet, and it keeps nearly as well as the ruta бага. Highly recommended for winter and spring use.

Seven Top.—Cultivated extensively in the south for the tops, which are used for greens. It is very hardy, and will grow all winter, but does not produce a good bulb, and is only recommended for the tops.

YELLOW FLESHED SORTS.

Early Yellow Montmagny.

Early Yellow Montmagny.—A new early sort, the most beautiful of the yellow fleshed varieties. Leaves medium sized, green stained with purple; bulb oval, medium sized, clear yellow stained with bright purple at the top; flesh yellow, fine grained, sweet and tender. Among the earliest and promises to be an exceedingly popular sort.

Large Amber Globe.—One of the best varieties, either for table use or for a field crop for stock. Flesh yellow, fine grained and sweet; color of skin yellow, with green top. Hardy, keeps well, a good cropper, and grows to a very large size. Very popular south.

Orange Jelly, or Robertson's Golden Ball.—Undoubtedly among the most delicate and sweetest yellow fleshed turnips yet introduced. Not of large size, but firm, hard and of most excellent flavor. Keeps well, and as a table variety is superior.

Purple Top Yellow Aberdeen.—Roots medium size, round form; flesh pale yellow, tender and sugary; hardy and productive, and keeps well. It is an old, esteemed variety, considered as approaching very nearly to the ruta бага in hardness and firmness of texture.

Early Yellow Finland.—An early yellow fleshed variety, of beautiful form, medium size, flat shape. The flesh is remarkably fine and close grained, and of rich, sugary flavor. A most excellent early, garden variety, and said to be less troubled by worms eating the roots, than most sorts.

Early Yellow Malta.—This is a beautiful, symmetrical, early variety of medium size. Skin very smooth, bright orange yellow, fine grained, sweet and tender. Foliage small and bulbs can be grown quite close together. One of the best yellow summer turnips in every respect.

SWEDES, or RUTA BAGAS.

Yellow Swede or Ruta Baga.—This and the following form a distinct class, and should be sown at least a month earlier than the preceding. Shape oblong; dull reddish color above ground, but yellow underneath; is harder than the common turnip, and will keep solid till spring.

Carter's Imperial Hardy Purple Top Yellow Ruta Baga.—A most excellent sort for either table use or feeding stock. Flesh yellow, solid, firm, sweet and rich. It is a hardy sort, yields heavily, with no tendency to long necks.

Large Ovoid Purple Top Swede.—This variety is the result of a long selection of roots to obtain the highest perfection of weight, quality, purity, and permanence of type. In size it is mammoth, and is a very heavy cropper. It closely resembles D. M. Ferry & Co's celebrated Improved Purple Top Yellow Ruta Baga, except in shape and size, this variety being longer, and more

D. M. Ferry & Co's Yellow Ruta Baga.

oblong. When a large Swede of superior quality is desired, we recommend this variety.

D. M. Ferry & Co's Improved Purple Top Yellow Ruta Baga.—The best variety of Swedish turnip in cultivation. Hardy and productive. Flesh yellow, of solid texture, sweet and well flavored; shape slightly oblong, terminating abruptly with no side or bottom roots; color deep purple above, and bright yellow under the ground; leaves small, light green, with little or no neck; the most perfect in form, the richest in flavor, and the best in every respect.

Bangholm Ruta Baga.—A very superior variety, both in form and quality, and held in high estimation in many parts of England. Of large size, small neck, few or no side roots, and yields well. Flesh yellow, sweet and solid; skin yellow, with purple top.

Sweet Russian, or White Ruta Baga.—This variety is a most excellent kind, either for the table or stock. It grows to a very large size; flesh white, solid, firm texture, sweet and rich; keeps better than any of the preceding, and is very popular.

AROMATIC, MEDICINAL AND POT HERBS.

GENERAL CULTURAL DIRECTIONS.—Most of the varieties thrive best on rich, sandy soil, which should be carefully prepared and well cultivated as the young plants are for the most part delicate and easily choked out by weeds. Sow as early as the ground can be made ready, in drills sixteen to eighteen inches apart; or they may be planted as a second crop—the seed sown in beds in April, and the plants set out in June. Most of them should be cut when in bloom, wilted in the sun, and then thoroughly dried in the shade.

Borage.

Anise, (*Pimpinella anisum*). Fr. *Anis*.—Ger. *Anis*.—A well known annual herb whose seeds, which have an agreeable, aromatic odor and taste, are used for dys-

Dandelion.

pepsia and colic and as a corrective of griping and unpleasant medicines. Sow early, and thin to three inches apart in the row.

Balm, (*Melissa officinalis*). Fr. *Melisse*.—Ger. *Melisse*.—A perennial herb. The leaves have a fragrant odor, similar to lemons, and are used for making balm tea for use in fevers, and a pleasant beverage called balm wine. Plant early, and thin to ten inches apart.

Bene, (*Sesamum Indicum*). Fr. *Bene*.—Ger. *Bene*. Much used at the south, but too tender at the north. The seeds are used for food, and furnish an oil which does not easily become rancid, and is used for softening and whitening the skin. The leaves, if immersed in a tumbler of water, will convert it into a mucilaginous drink very beneficial in cases of cholera infantum, diarrhoea, etc. Do not plant until settled warm weather, and allow the plants to stand two feet apart.

Borage, (*Borago officinalis*). Fr. *Bourrach*.—Ger. *Boretsch*.—A hardy annual, used as a pot herb, and for bee pasturage. The leaves, immersed in water, give it an agreeable taste and flavor. Sow in April, and thin to eight inches apart. In some places this becomes a troublesome weed.

Caraway, (*Carum carui*). Fr. *Carvi*.—Ger. *Kum-mel*.—Cultivated for its seeds which are used in confectionery, cakes, etc., and the leaves are sometimes used in soups. If sown in August, the plants will give a fair crop of seed the next season. Plant in drills, and thin to six inches apart.

Catnip, (*Nepeta cataria*). Fr. *Nepeta*.—Ger. *Katzenkraut*.—A hardy perennial, well known as a valuable mild nerve for infants. The plant should be pulled up by the roots when in full flower, and dried in the shade. The seed may be sown in drills twenty inches apart, either in fall or spring.

Coriander, (*Coriandrum sativum*). Fr. *Coriandre*.—Ger. *Koriander*.—A hardy annual, cultivated for its seeds which have an agreeable taste, and are used in confectionery and to disguise the taste of medicines. Sow early in the spring, and gather on a dry day, bruising the stems and leaves as little as possible, as when injured they have a disagreeable odor which they impart to the seed.

Dandelion, (*Taraxacum dens-leonis*). Fr. *Pissen-lit*.—Ger. *Loewenzahn*.—Improved Thick Leaved.—Those who only know the Dandelion as the persistent weed of our roadsides and lawns, know no more of its real value than one who has only seen the poisonous wild parsnip or carrot knows of the value of these vegetables. The improved variety makes one of the earliest and best greens in cultivation. For this purpose, sow early in the spring, on very warm, rich soil, in drills eighteen inches apart; thin the young plants to five inches in the row, and cultivate well, and they will be fit for cutting the next spring. It is also grown extensively for its roots; for this purpose, sow in Sep-

Sage.

Summer Savory.

Tansy.

tember, and cultivate well during the fall and the following season, and the roots will be fit to dig in October.

Dill, (*Anethum graveolens*). Fr. *Aneth*.—Ger. *Dill*.—An annual, cultivated for its seeds which have an aromatic odor, and a warm, pungent taste. They are good for flatulence and colic in infants, and are sometimes added to pickled cucumbers to heighten the flavor. Sow early in spring, and keep clear of weeds.

Horehound, (*Marrubium vulgare*). Fr. *Marrube*.—Ger. *Andorn*.—A perennial herb, with a strong, aromatic smell, and a bitter, pungent taste. It is a tonic, and enters largely into the composition of cough syrups and lozenges. Will thrive in any soil, but is stronger if grown on light, poor land.

Hyssop, (*Hyssopus officinalis*). Fr. *Hyssope*.—Ger. *Isop*.—A hardy perennial with an aromatic flavor, and warm, pungent taste. It is a stimulant and expectorant, and is used in asthma and chronic catarrh. The flowering summits and leaves are the parts used. It likes a dry, sandy soil, and the plants should be thinned to eighteen inches apart.

Lavender, (*Lavandula vera*). Fr. *Lavande*.—Ger. *Wohlbriechende spicke*.—A hardy perennial. Its long spikes are used for the distillation of lavender water, or are dried and used to perfume linen. The flowers should be picked before fading, and dried quickly.

Rosemary, (*Rosemarinus officinalis*). Fr. *Rosmarin*.—Ger. *Rosmarin*.—A hardy perennial with fragrant odor, and a warm, aromatic, bitter taste. May be easily raised from seed, but does not reach a size fit for use until the second season. The dried leaves deteriorate rapidly by keeping.

Rue, (*Ruta graveolens*). Fr. *Rue*.—Ger. *Raute*.—A hardy perennial with a peculiar smell. The leaves are bitter, and so acrid as to blister the skin. It is a stimulant and anti-spasmodic, but must be used with great caution, as its use sometimes results in serious injury. It must not be suffered to run to seed, and does best on poor soil.

Saffron, (*Carthamus tinctorius*). Fr. *Saffran*.—Ger. *Saffron*.—A hardy annual from Egypt, but which has become naturalized in many parts of the country. Cultivated for its flowers, which are used in dyeing and to make the cosmetic powder called *rouge*, also, to adulterate the valuable European saffron, which is the flower of the *Crocus sativus*, and has strong medicinal properties. Sow early, and gather the leaves before fading, drying them in the shade.

Sage, (*Salvia officinalis*). Fr. *Sauge*.—Ger. *Salbei*.—A hardy perennial, possessing some medicinal properties, but cultivated principally for use as a condiment,

it being used more extensively than any other herb for flavoring and dressing. Sow early in spring, on very rich ground, cultivate often, and thin the plants to sixteen inches apart. Cut the leaves and tender shoots just as the plant is coming into flower, and dry quickly in the shade. The plants will survive the winter, and may be divided, and will give a second crop of superior quality to the first.

Sweet Basil, (*Ocimum basilicum*). Fr. *Basilic*.—Ger. *Basilikum*.—A hardy annual from the East Indies. The seeds and stems are used in flavoring soups and sauces, and have the flavor of cloves.

Sweet Fennel, (*Anethum foeniculum*). Fr. *Fenouil*.—Ger. *Fenchel*.—A hardy perennial. The leaves are largely used in Europe in soups, fish sauces, garnishes and salads, the seed being sometimes used in confectionery. Sow and cultivate like Anise.

Sweet Marjoram, (*Origanum marjoram*). Fr. *Marjolaine*.—Ger. *Marjoram*.—A perennial plant, but not hardy enough to endure the winter at the north. The young, tender tops are used green for flavoring, or they may be dried for winter use. Sow in drills, as early as possible, and thin out the plants to ten inches.

Summer Savory, (*Satureja hortensis*). Fr. *Sarriette annuelle*.—Ger. *Bohnenkraut*.—A hardy annual, the dried stems, leaves and flowers of which are extensively used for flavoring, particularly in dressings and soups. Culture the same as that of Sweet Marjoram.

Tansy, (*Tanacetum vulgare*). Fr. *Tanaïsie*.—Ger. *Wurmkraut*.—A hardy, perennial plant from Europe, but growing wild in many parts of the country. The leaves, when green, have a peculiar aromatic odor which they lose in drying. Cultivated for its medicinal properties, which are those common to bitter herbs.

Tarragon, (*Artemisia dracunculul*). Fr. *Estragon*.—Used in salads to correct the coldness of the other herbs. Its leaves are excellent when pickled. Poor, dry soil is essential to produce it in perfection.

Thyme, (*Thymus vulgaris*). Fr. *Thym*.—Ger. *Thymian*.—This herb is a perennial, and is both a medicinal and culinary plant. The young leaves and tops are used for soups, dressing and sauce, and a tea is made of the leaves, which is a great remedy in nervous headache. Sow as early as the ground will permit.

Wormwood, (*Artemisia absinthium*). Fr. *Armoise*.—Ger. *Wermuth*.—A perennial plant of strong and fragrant odor, and aromatic, but intensely bitter taste. The leaves are used as a tonic and vermifuge, and also for fresh bruises. Is raised from seed, and propagated by cuttings or dividing the roots. A dry, poor soil is best adapted to bring out the peculiar virtues of this plant.

FRUIT TREE SEEDS.

Apple.—Apple seeds do not reproduce the same varieties, but generally give a hardy, though inferior sort, and upon these seedlings are grafted or budded the finer varieties. The seed may be planted in the fall, in rows two feet apart, or they may be planted in early spring, but in that case the seed must first be mixed with damp sand and frozen, after which care must be taken that they do not become dry before planting. As soon as the plants are up, they should be well cultivated, and every effort made to secure a vigorous growth the first season, and as soon as large enough, may be budded in the summer or grafted in the spring.

Cherry, mazzard.—This is the stock used for standard trees. Success is much more certain if the seed is planted in the fall, as it is very difficult to keep it in good condition through winter. The general culture should be the same as for the apple, except that budding should be employed instead of grafting.

Cherry, mahaleb.—Used as stocks when dwarf trees are wanted. Culture same as the above.

Pear.—Success will depend very largely upon having a deep, rich, moist soil, as this is essential to vigorous growth. Plant and cultivate like the apple, and bud when large enough. Every effort should be made to secure a rapid and vigorous growth from the first.

Peach.—Plant three inches deep in nursery rows three feet apart, in the fall, or if delayed until spring, crack the pits and plant the kernels only. They should be large enough to bud the first season, and may be profitably set in orchards two years from planting.

Quince.—Quinces generally produce the same variety from seed, but occasionally vary. The general culture, and requirements of soil are the same as for the pear, except that they are not budded.

Forest Tree and Hedge Seeds.

Few investments made by our farmers will return a larger profit in the course of a few years than the planting of land now uncultivated or cultivated at a loss, to forest trees. The time is coming, not only surely but rapidly, when a few acres covered with our best forest trees will constitute a handsome fortune. Forests are needed, not only for supplying us with timber, but for protection against winds and hurricanes. Grain fields and orchards are destroyed or parched by dry winds which were never known before the protecting forests were destroyed. The terrible cyclones so frequent in our Western States, and the beds of little streams in the East now long dried up, should admonish all who have a thought beyond the present, to the planting of forest trees.

EVERGREEN TREE SEEDS.

The seeds of evergreen trees should be kept till time of sowing in a dry, cool situation. As early in spring as the ground can be worked, the seeds should be sown thinly in beds of fine, sandy loam, raised about four inches above the general surface. The seeds can be raked in, or if very small, they may lie upon the surface and then be rolled in or patted with the back of the spade to firm the earth around the seeds. Then water very sparingly, and with a fine rose, as the young plants are very apt to damp off; and need to be shaded from the hot sun and drying winds. A good shade can be made of laths nailed two inches apart to a light frame. This should be supported about eight inches above the seed bed in such a way as to be easily removed to allow cultivation and weeding. Keep the young plants well weeded, and allow them to remain one or two years before transplanting where they are to remain.

American Arbor Vitæ (*Thuja occidentalis*).—Grows to a small size, seldom over thirty feet high. Grows well under cultivation, and is one of the best for a hedge as a screen and wind break. If planted in exposed places, along the country roads, would prove effectual in preventing snow drifts. Its wood, which has an agreeable odor and is easily split, is very durable. It is best grown from seeds, which should be sown and the seedlings transplanted as directed above. They should be carefully watered when transplanted, and if a dry summer ensues, watering should be continued until the plants are well rooted.

Silver Fir (*Abies pectinata*).—An important timber tree, and grows to a large size. While the timber is softer and less durable than pine, it is not liable to warp or shrink, and is valuable for shingles, cabinet work, boat building, etc. When young, the trees are tender and easily injured by frost, but as it grows larger, it is entirely hardy.

Hemlock (*Tsuga Canadensis*).—One of the most beautiful of our native evergreen trees. Of graceful habit with light, elegant and delicate foliage. The timber is well known; coarse but strong. It is valuable for planks, bridge building, roof boards, etc., as it endures exposure to the weather for a long period. The bark is used to an immense extent for tanning leather. It requires a light, dry soil, and should never be planted on a stiff clay which will make the tree tender and liable to winter kill, though it is entirely hardy hundreds of miles north of our latitude. Planted singly or among deciduous trees, it is one of the most desirable varieties for ornamental planting.

Scotch Pine (*Pinus sylvestris*).—Very hardy, and growing surely and rapidly on nearly every variety of soil, forming a beautiful tree, and invaluable as a wind break. Prof. C. S. Sargent says: "It is the most valuable tree farmers can plant for screens and wind breaks about their fields and buildings."

White, or Weymouth Pine (*Pinus Strobus*).—The most majestic and valuable of all our native pines, and has furnished immense quantities of the white pine lumber so well known throughout the country. It thrives best in a light sand with clay subsoil, and prefers plains and broad river valleys to higher lands. Except on high limestone soils, it should be planted largely where pine lumber is wanted.

Norway Spruce (*Abies excelsa*).—Well known as one of our most beautiful evergreen trees. It is hardy, of rapid growth, and forms a dense, close screen, or hedge. About 20,000 seeds to the pound.

DECIDUOUS TREE SEEDS.

With the seeds of deciduous trees, only a little care is required in sowing at the proper season to insure success. Those with hard shells like the locusts and hawthorn should be planted in the fall or placed in boxes with sand and exposed to frost before planting, otherwise they may lie in the ground from one to three years without sprouting. If too late in spring to expose them to the action of frost, pour boiling water over the seeds and let it stand till cool, when a portion of the seeds will have swollen; pick these out and scald the rest again, continuing until all have swollen.

The seeds of the other deciduous trees on our list should be planted from the middle of April to the middle of May, in drills about two feet apart, and covered to the proper depth—about twice the diameter of the seed.

White Ash (*Fraxinus Americana*).—Requires a moist, deep soil, on which it will grow very rapidly. It deserves especial attention from those who wish to grow trees for timber, because its wood is very light, strong, elastic and durable, and is without an equal for making

fork and rake handles and many other agricultural implements, besides being largely employed in carriage building, cooperage, and ornamental carpenter work. Succeeds best from seeds, which should be planted where the trees are to stand, like corn, but not over an inch in depth. When grown singly it is very ornamental, forming a large, round head.

European Ash (*Fraxinus excelsior*).—Succeeds best in rather a warm climate; thrives upon the plains in deep soils, but does poorly on stiff clay or light sandy soils. Its timber is valuable in carriage making and manufactures.

Barberry (*Berberis vulgaris*).—A shrub of medium size, and one of the best hedge plants we possess. It is very hardy, and forms a dense shrub from four to eight feet high, with many upright, slender branches covered with sharp, stout prickles. Requires but little pruning to make an almost impenetrable hedge. Seed should be sown in wide drills, and transplanted into hedge rows when one or two years old.

White Birch (*Betula alba*).—Valuable for ornamental planting, and a favorite wood for shoe pegs, spoons, bobbins and similar small articles. The birch prefers a cool, humid climate, and is readily propagated from seed. Seeds thrive best on new ground. They scarcely admit of any covering but if simply pressed into the ground with the feet they will grow. When one year old transplant into nursery rows. When two or three feet high, set out the young trees where they are to remain.

Hardy Catalpa (*Catalpa speciosa*).—Quite distinct from and much harder than, the common catalpa. Scarcely a tree on our list can be so strongly recommended as this for planting on the vast treeless prairies of our western States. It is of very quick growth, has proven itself hardy as far north as Dakota, and is one of the most durable timbers known, lasting in many well authenticated instances nearly or quite a century.

Catalpa seeds can be sown dry on a still day, but the better way is to wet the seeds for a few hours before planting, and mix them with a little sifted soil to prevent their sticking together. They will germinate more promptly for the soaking they have received, and will not be so likely to be blown away while being sown. Sow in April or May in well prepared loamy soil, in rows four feet apart, sowing seed thickly in the rows, covering half an inch deep and firming the soil well over the seeds. Thick sowing is desirable as a dozen little plants together can force their way through the surface easier than singly, and if they are too thick they can be thinned and transplanted on a damp day as easily as cabbage plants. Cultivate well during the summer, keeping them free from weeds. In the fall or following spring, the seedlings can be transplanted where they are to remain. Four feet apart each way is the proper distance, and they should be cultivated about like corn for two seasons. There are from 16,000 to 20,000 seeds to the pound.

As an ornamental tree, the catalpa appears to the best advantage planted in small groves.

Hawthorn (*Crataegus oxyacantha*).—Seldom grows over twenty feet high and makes an excellent hedge. Seed should usually be sown in the fall, or frozen before planting, as recommended above. Sometimes they remain in the ground two years before they germinate.

European Larch (*Larix Europæa*).—Grows to a large size, and makes excellent timber. Planted on lands of very little value for ordinary farming, it improves instead of impoverishing them, as the annual crop of leaves deposits more nutriment than the tree takes up; besides the yield of timber in a series of years would prove a very profitable investment. Seeds should be sown in a half-shady situation.

European Linden (*Tilia Europæa*).—A great favorite for ornamental planting in Europe. Its wood is very white, light, not liable to crack, and much prized for cabinet work and the panels of carriages. It should be planted by all bee keepers, as no flower of its size yields better honey or in greater abundance.

Honey Locust (*Gleditsia triacanthos*).—On account of its rapidity of growth and durability of the timber, we regard this as one of the most valuable of our native trees. It is not so liable to injury by the borer as the common locust, and does not sprout from the root to a greater extent than do most of our forest trees. Without the preparation recommended above, the seeds may lie from one to three years in the ground without sprouting. Take up and heel in or cover the plants in the fall, and set out the next spring. After the first season, they are perfectly hardy. One pound contains about 2,300 seeds.

Yellow Locust (*Robinia pseudo-acacia*).—This tree grows so rapidly that railroad ties may be cut ten years from the planting of the seed, while the durability of its timber is well known, fence posts of it having stood for sixty years. Culture same as the above. One ounce contains about 1,300 seeds.

Sugar Maple (*Acer saccharinum*).—This tree, also commonly known as Rock, or Hard Maple, is altogether the most valuable of the maples. It thrives best in a moderately cool climate, and in a loamy, calcareous soil rather than a sandy one. The gorgeous splendor of the northern forests in autumn is largely due to the colors assumed by the foliage of this tree at that season. The sugar maple, when planted alone, assumes a rounded, symmetrical form of great beauty, sixty to eighty feet high, with a trunk two feet or over in diameter. In woodlands, it takes on a regular form, not so rounded but taller and more majestic than when grown singly. Very profitable when grown for its sap, which, by evaporation, makes maple syrup and sugar. An annual tapping for sap after they are ten or twelve inches in diameter, does not injure the growth nor beauty of the trees. The wood is hard and firm, highly valued as fuel, and much used in fine cabinet work. Sometimes a tree is found in which the grain has a wavy, undulating appearance; this is the curly, or bird's-eye maple so highly prized for veneers and ornamental wood work.

White Mulberry (*morus alba*).—Desirable for feeding silk worms. Grows readily and rapidly from seeds, which should not be covered too deep, as they are quite small. It delights in a warm, dry soil, and will succeed in almost any place that will produce a good corn crop.

Russian Mulberry.—Introduced into this country by the Mennonites, and by them extensively planted for silk worm culture. Of rapid growth, resembling the apple tree in habit, with a greyish bark and drooping branches. It is very easily cultivated, and kept in dwarf form makes a fine hedge and wind break. It bears very young, and it is said every year. The fruit is similar to the blackberry, varying in flavor from sub-acid to sweet. In cold regions especially, this should prove a very valuable variety for its timber, shade and fruit. It is said to reproduce itself exactly from seed, and as our seed is direct from the Mennonite colony, it can be depended on as true and reliable.

Osage Orange (*Maclura aurantiaca*).—How to PLANT, CULTIVATE AND MAKE A HEDGE.—The Osage Orange is a native of Texas, but can be grown and cultivated advantageously in most parts of the United States. The ground should be thoroughly pulverized by either plowing or spading, before the seed is planted. The surest way is to sprout the seed before planting, as it is very slow to germinate when put into the ground

without being sprouted, sometimes taking a whole season to come up. To sprout the seed, put into a vessel and cover with warm (*not hot*) water. Keep the vessel in a warm place, and change the water once a day. Let the seed soak about five or six days, after which pour off the water and cover the vessel with a cloth. Keep in a warm room and stir the seed occasionally. In about one week more they will begin to sprout, and are ready for planting. A pound of seed, if properly managed, will produce five thousand (5,000) plants. The seed should be sown in April or May, with twelve good seeds to the foot, in drills twenty inches apart. They should be kept free from weeds, as the young plants are very tender and delicate until they are from three to five inches high. They can be set out in permanent hedges the following spring, in rows, placing them six inches apart in the row, but should be cut back to within an inch of the ground before they are set out, and to make a thick hedge, it will be necessary to cut back the first three years' growth, leaving only about eight inches of the season's growth. This system must be pursued every season until the hedge is of the desired height and form. Under proper treatment, a good hedge that will turn all kinds of stock, can be grown from seed in from three to four years.

CLOVER SEEDS.

There are no plants so valuable for fertilizers as the Clovers. They have the faculty of absorbing nitrogen from the air, and also of rendering available much of the inert plant food of the soil. Their long, powerful tap roots penetrate to a great depth, loosen the soil, admit air, and by their decay add immensely to the fertility of the soil. The seed may be sown in fall or spring; which is the best season will depend upon local climate, and method of culture, but in the majority of cases, in the Eastern, Middle and Western States, the best results will come from sowing in the spring, and it is often sown on the late snows of April. In any case, it should be evenly distributed on a mellow, well prepared soil. Plaster will increase the growth remarkably, and should be sown broadcast the season following the seeding.

Mammoth, or Large Red (*Trifolium pratense*).—It grows five or six feet high, but its stalks are so coarse and large that stock will eat only the leaves, but by its judicious use, lands which have been exhausted can be reclaimed, as it will grow where the common clover will fail. Sow at the rate of about eight pounds per acre. Sixty pounds per bushel.

Medium Red, or June (*Trifolium pratense*).—This is by far the most important of all the varieties for the practical purposes of agriculture. Sow in spring or fall; and when no other grasses are used, at the rate of eight to ten pounds per acre, more being required on old, stiff soils, than on new and lighter ones. Sixty pounds per bushel.

Alsike, or Swedish (*Trifolium hybridum*).—This valuable variety is fast gaining great popularity. It is the most hardy of all the clovers; perennial. On rich, moist

Alsike, or Swedish.

soils it yields an enormous quantity of hay or pasture, and may be cut several times in a season, but its greatest value is for sowing with other clovers and grasses, as it forms a thick bottom, and greatly increases the yield of hay, and cattle prefer it to any other forage. The heads are globular, very sweet and fragrant, and much liked by bees, who obtain a large amount of honey from them. Sow in spring or fall, at the rate of six pounds per acre, where used alone. Sixty pounds per bushel.

Crimson Trefoil.

Crimson Trefoil, or Scarlet Italian (*Trifolium incarnatum*).—This is an annual variety, in common use in Italy and the south of France for feeding green. The yield in fodder is immense, and after cutting, it at once commences growing again, and continues until severe cold, freezing weather. It grows about one foot high; the roots are nearly black; leaves long; blossoms long, pointed, and of a very deep red, or carmine color. Makes good hay. Sow in April or May, eight pounds of seed per acre.

White Dutch.

White Dutch (*Trifolium repens*).—A small, creeping, spreading, perennial variety, valuable for pasture and for lawns. It accommodates itself to a variety of soils, but prefers moist ground. In conjunction with blue grass, it forms the most nutritious food for sheep or cows. Sow in spring, at the rate of six pounds per acre; or when used with other grasses, half that amount will be sufficient.

Lucerne, or Alfalfa (*Medicago sativa*).—Where this succeeds it is the most valuable of all the clovers. It is more difficult to establish the first year, requiring a fine, mellow soil, but will then produce a profitable crop from

five to twelve years. It yields a prodigious amount of green fodder for cattle, and should be cut when first commencing to bloom, when it pushes out fresh shoots, and the after growth is something wonderful. In the driest and most sultry weather, when every blade of grass withers, Lucerne is as fresh and green as in spring, because the roots go down to the moisture in the ground. Although such a prodigious yield, it does not exhaust the soil, but rather improves it. It should not be sown on compact, clay soils, even with a light subsoil.

Lucerne.

One of our customers writes us from Utah as follows: "I have had years of experience, both here and in California. We always sow broadcast, twenty-five pounds per acre; the thicker it is sown the finer your hay will be. If it is planted thin, it stools out and the stalks are thick and not relished by stock. It requires no hoeing whatever when sown as above. We cut four crops a year, and its yield is enormous. The fall is the best time for sowing here, as it will stand the winter and do much better the following season than when sown in the spring. The above is my experience for fifteen years."

In some sections it is sown in the spring, in drills, twelve inches apart, and hoed until it covers the surface. This process requires about eight pounds of seed per acre.

Bokhara (*Melilotus alba*) *Sweet Clover*.—This is exceedingly valuable as pasturage for bees. It is occasionally found growing wild by the roadside, in company with the more common sweet clover (*Melilotus officinalis*), and may be distinguished from it by its white flowers and less coarse and more leafy stems.

GRASS SEEDS.

Timothy (*Phleum pratense*).—This is the most valuable of all the grasses for hay, especially at the north. Thrives best on moist, loamy soils of medium tenacity.

Timothy.

Red Top.

It should be cut just when the blossom falls. Sow either in spring or fall, at the rate of twelve pounds per acre, if alone, but less if mixed with other grasses. Forty-five pounds per bushel.

Orchard Grass, or Cock's Foot (*Dactylis glomerata*).—One of the most valuable grasses, on account of its quick growth and valuable aftermath. It is ready for grazing in spring two weeks sooner than most grasses, and when fed off is again ready for grazing in a week, and will continue green when other grasses are withered by dry weather. It is palatable and nutritious, and stock eat it greedily when green. It has a tendency to grow in tufts, and so does better if sown with clovers, and as it ripens at the same time, the mixed hay is of the best quality. For grazing, it has no equal, and should be used more than it is. When sown alone, two bushels are required per acre; if sown with clover, half that amount. It is perennial, and will last for years, but its habit of growth unfits it for lawns. Fourteen pounds per bushel.

Red Top (*Agrostis vulgaris*).—In some sections this is called RHODE ISLAND BENT GRASS. In Pennsylvania and States farther south, it is known as HERD'S GRASS, a name applied in New England and New York to timothy. It is a good, permanent grass, standing our climate well, and makes a good pasture when fed close. Is valuable for low, wet meadows, producing a large return in good hay. When sown alone, two bushels per acre are required, sown in spring or fall. Fourteen pounds per bushel.

Fowl Meadow, or False Red Top (*Poa serotina*).—It yields well when sown on low, moist land, and will not suffer if not cut at the exact time. It can be mowed almost any time from July to October. When three feet high it falls down, or lodges, and after a little time every joint puts forth new branches. The stalk is always sweet and tender, and cattle and sheep are fond of it. It thrives best when mixed with other grasses. Though resembling red top in some respects, it is distinct, and we think superior in every respect. Requires about the same amount of seed per acre as red top, sown in spring or fall. Twelve pounds per bushel.

English Blue Grass, or Meadow Fescue (*Festuca pratensis*).—This is one of the most valuable pasture grasses we are acquainted with, as its long and tender leaves are much relished by stock of all kinds. It succeeds well, even in a poor soil, and as its roots penetrate the earth twelve or fifteen inches, it is not affected except by exceedingly dry weather. When cured like timothy, it yields a very superior quality of hay.

Notwithstanding its acknowledged merits, this grass has been sown only to a limited extent in this country. It is deserving of much more attention than it has hitherto received from American farmers.

Sow one bushel per acre, in spring or fall. September is the best season for sowing south of the Ohio river. Twenty-four pounds per bushel.

Kentucky Blue Grass (*Poa pratensis*).—This is known in some sections as GREEN MEADOW GRASS, and JUNE GRASS, but should not be confounded with *Poa compressa*, called by some JUNE GRASS, or WIRE GRASS. This species produces the most nourishing food for cattle of any, and till a late period in winter, and at the south abundant food throughout the winter. In conjunction with white clover, it forms the finest and closest of lawns; for this purpose, an extra quantity of seed should be used, say two bushels of blue grass and six pounds of white clover per acre. If sown by itself, two bushels will be required, sown early in the spring, or in October or November. Fourteen pounds per bushel.

Perennial Rye Grass (*Lolium perenne*).—A very valuable variety for permanent pasture; very nutritious,

and stock are very fond of it. Succeeds best on moderately moist land, for which it is peculiarly adapted. Large quantities are raised in England and nearly all of Europe. It is also largely used for lawns, in con-

Kentucky Blue Grass.

Sweet Vernal Grass.

junction with other grasses. One and a half to two bushels per acre, in the spring. Twenty pounds per bushel.

Wood Meadow Grass (*Poa nemoralis*).—Grows from one and a half to two feet high; has a perennial creeping root, and an erect, slender, smooth stem. Its chief value is in that it will produce a good crop of hay in moist, shady situations, where it frequently grows quite tall. Cattle are fond of it; it is succulent and nutritious, and is perhaps the best variety for sowing in orchards, under trees, and shaded situations, either for hay or pasture, and for parks and pleasure grounds. About fourteen pounds per bushel. Two bushels per acre.

Sweet Vernal Grass (*Anthoxanthum odoratum*).—One of the earliest of grasses in spring, as well as the latest in autumn, and about the only grass that is fragrant. As a pasture grass, mixed with other species, it is valuable on account of its earliness, and mixed with blue grass and white clover, it is an invaluable adjunct for lawns, presenting a beautiful appearance, and exhaling a delightful fragrance when in blossom. Should form a part of the mixed grasses in every lawn and door yard. About ten pounds per bushel.

Common Millet (*Panicum miliaceum*).—Requires a dry, light, rich soil, and grows two and a half to four feet high, with a fine bulk of stalks and leaves, and is excellent for forage. For hay, sow broadcast, one-half bushel per acre, from May first to August first. For grain, sow in drills, one peck to the acre, and not later than June 20th. Fifty pounds per bushel.

German, or Golden Millet.—An improved variety, medium early, growing three to five feet high. The heads are closely condensed, though the spikes are very numerous. The seeds are contained in rough, bristly sheaths, and are round, golden yellow, and beautiful in appearance.

From close observation during the past few years, the fact has been established beyond doubt, that seed of the German, or Golden Millet grown in southern latitudes will produce a much larger yield of hay than from seed

grown in northern or western sections of the country, and for that reason is far better for farmers to sow. We have a good stock of southern grown seed, and knowing its value, confidently recommend it. Bear in mind that to the farmer southern grown seed is worth double that of northern or western grown. Northern and western grown seed is degenerated and hybridized with other millets.

Johnson Grass (*Sorghum Halapense*).—This is one of the most valuable forage plants of recent introduction. It is already very popular in the Southern States, and it is claimed will come into universal use in all parts of the United States when known.

Some of its virtues are as follows: it is perennial, a rapid grower, very nutritious, being eagerly devoured by all kinds of stock; comes early in the spring, grows until the frosts cut it down in the fall; stands the drought better than any grass, having long, cane-like roots which penetrate the soil for moisture; superior both as a grazing and hay grass; has abundance of roots which decay, thereby enriching the ground

Johnson Grass.

rather than exhausting it as Timothy does; belonging to the Sorghum family, it contains much saccharine, which is an important factor in the food of stock. It will grow on any land where corn will grow.

On lands that will produce a bale of cotton to the acre, four to six tons of hay can be cut per annum, cutting three and four times. Heavy fertilizing would produce greater results.

The best results follow sowing the seed in August and September, enabling the seed to get a good root by fall, and forming a better turf the following season. Sow broadcast, with clean seed, at the rate of one bushel to the acre, or seed in the chaff at the rate of two bushels to the acre, and cover with a light brush, or sow just before a heavy rain. Three good crops the following season will be the result if the season is favorable. Sowing in the spring does well, but the crop would not be as heavy the first year. But if a farmer is ready to sow in the spring, he had better sow than wait, as he gains so much time in growth.

The seed we offer has been well re-cleaned, and one bushel will sow an acre.

Hungarian Grass (*Panicum Germanicum*).—This is a species of millet, growing less rank, with smaller stalks, often yielding two or three tons of hay per acre. It is very popular and valuable with those who are clearing timber lands. Like the millet, it is an annual, and requires to be sown every season, but will produce a larger return than almost any other crop. Sow and cultivate like millet. Forty-eight pounds per acre.

Fine Mixed Lawn Grass (*Central Park Mixture*).—The essentials for a fine lawn are proper drainage, a careful preparation of the soil, thorough rolling, and a selection of the seeds of such grasses as will present a luxuriant verdure from early spring till late in autumn; and then frequent mowings with a lawn mower. However much care is bestowed on the soil and seed, no lawn will be beautiful without frequent moving and rolling. Too much care cannot be bestowed upon the selection

of crasses, as some varieties are the most luxuriant in spring, others in summer, others again in autumn, and a combination of the proper sorts is required for a perfect, carpet-like lawn. We have given much thought and made many experiments to secure the best mixture, and think what we offer is the best possible mixture for permanent lawns, resisting the severe droughts of our climate better than any other. It may be planted early in spring or fall, and should be sown at the rate of from sixty to eighty pounds to the acre, much more being required than for hay or pasturage.

MISCELLANEOUS FARM SEEDS.

WINTER WHEAT.

It is an encouraging fact that our farmers are beginning to appreciate the importance not only of good seed grain, but of selecting the variety best adapted to their farms and methods of culture; and as a result we now have a score or more of new varieties of winter wheat, each claiming to be the best. Realizing the importance of the subject, we have made most careful inquiries concerning these new sorts, and now have growing on our trial grounds, samples of over thirty varieties. We have also made arrangements to have the most promising sorts tested by skillful farmers of our own and adjoining States, and aim to procure a quantity of any new and improved sort that may be offered, and to keep a supply of all the best of the old sorts. The following varieties are at present the most popular sorts:

Michigan Bronze, or Mediterranean Hybrid.—This is a cross between the old Diehl and the Red Mediterranean, having the fine flouring quality and bearded head of the latter, with the productiveness, hardness and close, compact head of the former. Tested both on our trial grounds in Michigan, and those of the Rural New Yorker, in New York, by the side of forty other varieties, it proved one of the hardiest and best.

We think this wheat surer to produce a crop under adverse circumstances than any other, and believe it a most desirable variety, particularly for farmers' home use. It is a vigorous grower, well adapted to light soils; stands four feet high, and is of good stooling habit. The straw is rather large at the base but small and stiff below the head, and turns red or bronze at maturity. The leaves are large and very dark green; heads somewhat club shaped, short but very compact, and squarely filled out at both ends, containing about sixteen breasts of from three to four kernels each. The berry is of a bright amber color, of medium size and very handsome.

Valley.—Originated in Ohio, and although it has not been extensively advertised, is one of the most promising of the newer varieties, and under favorable circumstances, will give enormous yields, but needs rich ground and good cultivation. It stands from four to four and a half feet high. The straw is of medium size, standing up and stooling out well. The heads are bearded, long and loose, and of a peculiar rough or ragged appearance, and contain from sixteen to twenty breasts of three or four kernels each. The berry is amber, long and hard.

Martin's Amber.—This new variety originated in the eastern part of Pennsylvania, in 1878. It is of hybrid origin, one of its parents being the old Mediterranean, the other unknown. While young, the plants lie spread out over the ground, affording a good protection to their own roots. It stools out remarkably well, requiring only about three-fourths of a bushel of seed per acre. The straw is tall and very stiff, standing up better than most varieties. The leaves are of medium size,

dark green and very free from rust. It has a large, bald, smooth, well filled out head, containing from sixteen to eighteen breasts, and is rather late in ripening. The berry is of a light amber color, good size and very plump and handsome; has a very thin hull, makes but little bran, and yields a large return of flour of the very best quality.

Democrat.—This comparatively new variety originated in Pennsylvania, by the selection of a single head in a field of fall wheat. It is now becoming very popular in Canada. It is very early, ripening up at least one week earlier than the Clawson. The heads are bearded and compact, with white chaff; the berry is of a very light amber color, and much superior to Clawson in milling qualities.

Fultz.—Although not as showy in the field as Clawson, the Fultz will generally yield quite as much grain, and it is of much better milling quality. It usually exceeds the expectation of yield while the Clawson as generally falls below it. It is well known and much esteemed in Pennsylvania and Ohio, and is becoming popular elsewhere, being frequently introduced under other names. The straw stands from four to five feet high, and is rather small but very stiff, standing up well. The leaves are large, of a dark green color and free from rust. It has smooth, medium sized, compact heads, containing from sixteen to eighteen breasts of two and three kernels each. The berry is of a dull amber color, medium size and long.

Besides these, we have several other new sorts on trial, and think that we shall be able to offer sorts which will do well on all varieties of soil.

N. B.—It should be borne in mind that all seed wheats we offer have been carefully grown and re-cleaned for seed purposes.

Barley, common.—Barley succeeds best on lands more sandy and lighter than those adapted to wheat. It is sown in the spring, and can be grown farther north than any other grain. Unless intended for seed, it should be cut before fully ripe, as it is then heavier, of better quality and less liable to shell. The land should always be rolled immediately after sowing; or perhaps a better method is to roll the ground when the plants are one or two inches high. The quantity of seed sown per acre is about two and a half bushels, sown broadcast. The weight per bushel is forty-eight pounds, though it is almost always sold by the 100 pounds. The product is from forty to sixty bushels per acre, according to cultivation.

Barley, Mansury.—A six rowed barley, with long, heavy, well filled heads, containing large, plump grains. Straw bright, very strong, and is not apt to lodge, even on the richest lands. Ripens a week to ten days later than common six rowed barley, or about the same time as two rowed barley. Yields from 40 to 60 bushels per acre, and is superior for malting.

Barley, Naked, or Hulless.—This is a peculiar grain, and not generally known. The corolla is not attached to the grain, and it thus resembles wheat. It is a splendid grain for all purposes for which barley is used, and will make excellent bread when bolted and ground like wheat, while the yield is much greater than wheat, and fully equal to common barley. Nothing can surpass this grain for grinding into meal for stock, as it produces from forty to sixty bushels of solid grain per acre, and is a very certain crop.

Rye, Winter.—The time for sowing is from the middle of August to last of September. One plowing is given, and the seed sown broadcast, at the rate of one and a half bushels per acre, and dragged in. Harrowing and rolling in the spring are recommended. If cut before fully ripe, the grain makes better flour and more

in quantity. If intended for seed, it should be fully ripe. Some sow rye among standing corn, hoeing it in, leaving the ground level as possible, and after the corn is removed, rolling the ground. It succeeds best on sandy soils.

Buckwheat, common.—Buckwheat should be sown about the 20th of June, broadcast, at the rate of from one to three pecks per acre. The average yield is from twenty-five to thirty bushels per acre. It should be threshed as soon as dry, on the ground or barn floor. If allowed to stand in mass, it quickly gathers moisture.

Buckwheat, Silver Hull.—This improved variety is much better than the old sort. It is in bloom longer, matures sooner, and yields double the quantity per acre. The husk is thinner, the corners less prominent, and the grain of a beautiful light grey color. The flour is said to be better and more nutritious.

Field Peas (*Pisum sativum*).—The varieties of field peas have never been very numerous, nor are they much increasing. The kinds mostly used are the Golden Vine, Crown, Blue Prussian, Common White, Common Blue and Creeper. Field peas, in general, may be sown broadcast or in drills, after the manner of field beans, about three bushels per acre.

Spring Vetches, or Tares (*Vicia sativa*).—A species of the pea, grown extensively in England, and to a considerable extent in Canada, for stock, but not much used in the States. Culture same as field peas, two bushels per acre.

Flax (*Linum usitatissimum*).—Sow late enough in the spring to avoid frost, and early enough to secure the early rains. A fair average quantity of seed to be sown on an acre is one-half bushel, when cultivated for seed; if for the fibre, a larger quantity should be sown. Cut before quite ripe, and, if the weather be dry, let it lie in the swath a few hours, when it should be raked, bound

and secured from the weather; thresh early in the fall and in dry weather.

Hemp (*Cannabis sativa*).—If raised for manufacturing, must be sown broadcast, at the rate of one-half bushel to the acre; if for seed, should be planted in hills four feet apart, and the plants thinned out to three or four most vigorous stems in each hill.

Wild Rice (*Zizania aquatica*).—An annual which sows itself in the fall, about middle of September, lies dormant all winter, in spring commences to sprout as soon as the water gets warm, reaching the surface during the first half of June. It grows very rapidly, in one to eight feet of water, ripens late in August or early in September. It should be planted in the fall, before ice forms, broadcast, from a boat, in two to three feet of water, having a mud bottom. It has been successfully planted through the ice in winter and in the spring, but it succeeds best when planted in the fall.

As an attraction for wild fowl, it cannot be equaled. In large ponds and lakes it purifies the water, affords a refuge for the small fry from the large fish, as well as furnishing the small fry plenty of food from the animalculæ upon the stalks; for planting in fish ponds it is especially desirable. It also does well along the shores of marshes, and makes a good hay. At the south, two crops can be cut, and all cattle are very fond of it.

BIRD SEEDS.

Canary Seed (*Phalaris canariensis*).

Hemp Seed (*Cannabis sativa*).

Maw (*Papaver rhæas*).

Millet Seed (*Panicum miliaceum*).

Rape Seed (*Brassica napus*).

Lettuce Seed (*Lactuca sativa*).

FLOWER SEEDS.

BRIEF HINTS ON SOWING AND CULTIVATING.

SELECTION OF VARIETIES.—Success in flower culture depends quite largely upon a judicious selection of varieties. Every sort we offer is, under certain conditions, attractive and desirable, but some of them, while exceedingly beautiful under favorable circumstances, will be most unsatisfactory and little better than weeds under others; we therefore urge our friends to carefully study the following pages before ordering, that they may select the sorts best suited to their wants.

HARDY ANNUALS are those which require no artificial heat at any period of their growth, every stage of their development, from germination to ripening of the seed, being passed in the open ground.

They are the most easily cultivated of all plants; the number of their varieties is large, and their flowers, when properly grown, are frequently of most attractive beauty and elegance. It is only to be regretted that they are not generally cultivated to that extent to which their merit justly entitles them. The seed may be sown from the first of April to the middle of June, along the border, in little patches four or six inches square, or in drills, on the spot where they are wanted to blossom; and in doing so, care should be taken to have the different varieties arranged in such a manner as to produce a pleasing effect when they are in bloom.

HALF-HARDY ANNUALS are those species that flower and ripen their seeds in the open air, but need the assistance of artificial heat in the earlier stages of their growth. They should be sown in a hot-bed, or in pots in a green-house, if one is available, or in a sunny window. Keep them well shaded, which will prevent absorption by the rays of the sun, and the consequent necessity of frequent watering, which bakes the soil, and does much mischief to seeds of slow growth. Towards the middle or end of May, many of the seedlings will be ready for transplanting to borders; but previous to this exposure, it will be necessary to harden them, preparatory to removal, by gradually admitting air to the frame both day and night.

BIENNIALS AND PERENNIALS.—Biennials are those plants that do not generally flower the first year, and are only in perfection one season. Perennials continue to flower several years in succession. The seed may be sown as has already been stated, at times when the ground is moist, but not very wet, from the first of April to August. Many of them may be raised in the open ground, like hardy annuals, and transplanted; but tender or half-hardy kinds should be sown as directed for half-hardy annuals. As they do not generally bloom the first year, they may be thinned out or removed from the seed bed as soon as they are well rooted, and planted either in different parts of the garden, or into nursery beds, in rows a foot apart. The half-hardy or tender bien-

COLLECTION N^o 2.

TWELVE MOST POPULAR ANNUAL FLOWERS.

VERBENA.
Fine Mixed Price 10 Cts.

CYPRESS VINE,
Mixed Price 5 Cts.

ACROCLINIUM,
Mixed Price 5 cts

MORNING GLORY.
Mixed Price 5 cts.

ZINNIA.
Mixed Double Price 10 Cts

PETUNIA.
Large Flowered Mixed Price 10 Cts.

PINK.
Double China Price 5 cts.

SWEET MIGNONETTE.
Price 5 Cts.

PHLOX DRUMMONDII.
Extra Choice, Mixed, Price 10 Cts.

ASTER.
Mixed Peony Flowered, Price 10 Cts.

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Meteor, Price 10 cts.

PORTULACA.
Fine Mixed, Price 5 Cts.

THE WHOLE SET AMOUNTING TO 90 Cts. FOR 75 Cts.
THE ABOVE SELECTION IS ENOUGH FOR ANY SMALL YARD OR GARDEN AND WILL BE
FOUND VERY VALUABLE.

nials must be kept during winter in a green-house or dry cellar, and tender perennials must be protected from frost by a cloth or mat being fastened or tied around them, and covered afterwards with leaves or litter.

THE SOIL.—Another great object to be considered is the soil into which flower seeds are to be sown. The soil best adapted to flowering plants generally, is a light, friable loam, containing a sufficient amount of sand to render it porous. A great many varieties will *live* in almost any kind of soil, except it be extremely dry, calcareous, or of a stiff, heavy character; still, to give them a fair chance for development, some little pains should be taken in adding to the soil, as much as possible, what may be wanting in it. Most flowers are better if produced on plants of most vigorous growth, so the greater portion of the garden should be prepared by deep digging, thorough pulverization, and liberal enriching with large quantities of *well rotted* manure. On the other hand, some sorts do best on very poor soil, so a portion of the garden should be left without enriching at all. As the process of germination is shorter or longer in the different kinds of seeds, the patience of the cultivator is often sorely tried with seeds of a slowly germinating character; the patience of a devoted florist, however, is never exhausted in these manipulations, and the certainty of his final success repays him fully for the trouble.

BRIEF DIRECTIONS FOR SOWING.—Nine-tenths of the failures in flower culture come from improper treatment of the seeds and young plants; and we urge every purchaser of our seeds to study carefully the cultural directions printed on each package, and the following general rules:

Do not plant any of the seeds when the ground is wet. Make the surface as fine and smooth as possible.

Cover each sort of seed to a depth proportionate to its size: the finest, like portulaca, not more than one-quarter inch deep; those the size of a pin head one-half inch, and those as big as a pea one inch.

Press the soil down firmly over the seed. After making the soil as fine as possible with the rake, make it, for the smaller seeds, still finer, by crumbling the lumps up in the hands.

Procure a bit of lath (it would be better if planed smooth) about two feet long, press the edge down into the soil evenly, so as to make a groove as deep as the seed is to be planted; scatter the seed along this, allowing four or five of the larger to fifteen or twenty of the smaller seeds to the space one plant is to occupy when grown. *Take care not to spill any of the seeds between the rows.* Cover the seed by pinching the earth together over it; then turn your lath flat-ways, and *press the soil down firmly and evenly.*

Put a little stick at each end of each row, so as to mark it, then *pull up all weeds* that appear between the rows *the first day they can be seen.* Do not pull plants out of the row unless you are sure they are weeds.

HOT-BED CULTURE.—Many varieties of flowers can scarcely be brought to perfection without the assistance of hot-bed or cold-frame, and much care is often necessary in transplanting, sheltering, and pricking out the young plants. It is a work that requires much experience, and no doubt many disappointments will naturally occur. Still, a hot-bed is a necessity, without the aid of which many of our choicest and most beautiful flowers cannot be successfully grown. Experience is a rapid teacher, and the lover of flowers an apt scholar. See pages 10 and 11.

TERMS OF FLOWER SEEDS.

Our Flower Seeds are the very best obtainable from the oldest and most experienced growers in Germany, France, England and America, and will be found *very superior*.

The packets are tastefully put up, most of them having a colored illustration lithographed or printed on the paper, and full directions for planting and cultivating. Notwithstanding the enhanced cost and superior quality of seed grown with such care, we shall fill every packet with a liberal quantity of good, new seed; and we believe that when *quality and quantity* are considered, our prices will compare favorably with those of any *reliable seedsman* in this country.

CLUBS.—In every community there can usually be found some lady who is extremely fond of flowers. Her neighbors look to her for assistance in procuring seeds, and instructions in cultivating. Her advice is nearly always gratuitous, for it is a pleasure to her to assist in cultivating a taste for the beautiful; but in order to encourage the growing of flowers, and as a slight compensation for such service, we have arranged the *following premium list, which applies to Flower Seeds in PACKETS ONLY, and at CATALOGUE PRICES, and not to seeds in bulk:*

Send us \$1.00, and select packets to the value of \$1.15	Send us \$5.00, and select packets to the value of \$6.15
" 2.00, " " " " 2.35	" 10.00, " " " " 12.50
" 3.00, " " " " 3.60	" 20.00, " " " " 26.00
" 4.00, " " " " 4.85	

SEEDS BY MAIL.—At catalogue prices, all Flower Seeds will be sent by mail, *post paid*, unless otherwise ordered.

REMITTANCES.—Remittances may be made at AT OUR RISK by either of the following methods, viz: Post Office Order, Draft on New York, Express, Express Co.'s money order or by Registered Letter.

If currency is sent by express the charges should be prepaid, and if local checks are used 25 cents must be added to cover the cost of collection.

The rates charged for Post Office Orders are now so low that this is the very best way to remit where P. O. Orders can be obtained. Postal notes are cheaper but are little, if any, safer than the currency, because if lost duplicates will not be issued, and if stolen they are payable to bearer.

When P. O. Orders cannot be obtained letters containing money should always be registered. Money in ordinary letters is *unsafe*.

SIGN YOUR NAME.—In sending for seeds by mail, please use our order sheet and envelope, when possible and *give your Name, Post Office, County and State*, and write every letter so plainly that there can be no mistaking it. It is surprising how many fail to comply with above instructions, and then blame us for not receiving their seeds promptly.

The Cash must **ALWAYS** be sent with the Order.

CATALOGUE

OF

CHOICE IMPORTED FLOWER SEEDS.

The figures at the right of the column show the price of a packet of seeds. Thus, 5 is five cents per packet; 10 is ten cents per packet, etc.

ABOBRA.

A rapid growing and very beautiful climbing gourd. Foliage delicate and of a very dark green; fruit oval and bright scarlet, forming a striking contrast with the glossy foliage. Half-hardy perennial. Start in hot-bed. *Abobra, viridifolia*10

Abobra.

ABRONIA.

Charming trailer, with verbena-like flowers. Very fragrant and a long time in bloom. The seeds are enclosed in a husky covering which remove before planting, and transplant to one foot apart. Half-hardy annual. Start under glass.

- Abronia, umbellata*, delicate lilac, white center10
 " *arenaria*, waxy yellow; fragrant10
 " mixed, above mixed10

ABUTILON.

Very popular, perennial, green-house shrub, with bell shaped, drooping flowers, which are borne in profusion nearly the entire year. Well adapted to house culture, and desirable for bedding out in the summer. There are several varieties, the flowers of which vary from pure white and yellow to deep orange and crimson, streaked with yellow. Can be propagated by cuttings, in sand, under glass, during summer. If seeds are sown before April, under glass, plants will bloom the first season.

- Abutilon*, finest mixed25

ACROCLINIUM—(Everlasting).

Very pretty, half-hardy annual, with rose and white daisy-like flowers. These are "Immortelles," which bloom in August and September, and are fine for winter bouquets and wreaths. The flowers should be gathered for drying when partially opened. They grow about one foot high, and should be planted four inches apart.

- Acroclinium, album*, pure white 5
 " *roseum*, light rose; good for mixing 5
 " mixed 5

ADLUMIA—(Climbing Fumitory).

A most beautiful and graceful climber, thriving in a sheltered situation. It is sometimes known as Mountain Fringe, Wood Fringe, and Alleghany Vine. The beautiful pink and white flowers are produced in abundance during the three summer months. It is biennial, and makes but little growth the first season. Sow the seed in April, and the following autumn transplant to the place where they are to blossom. Hardy biennial climber; fifteen feet high.

- Adlumia, cirrhosa*, white and pink10

ADONIS FLOWER.

Known as Pheasant's Eye. The flowers are very brilliant but not very freely produced. The foliage is

Adonis.

pretty, delicate and many parted. Hardy annual; one foot high.

- Adonis, autumnalis*, dark blood red 5

Agapanthus.

AGAPANTHUS—(African Lily).

The Agapanthus is a tuberous rooted plant, with recurved leaves. The handsome blue flowers are produced at the top of the flower stems, which grow about three feet high, often bearing from twenty to thirty flowers. The seed produces small tubers which will require two seasons' growth to become of sufficient size to flower. Plant in sandy loam in green-house, and transplant to open ground when weather is warm. Secure the tubers from extreme cold.

Agapanthus, umbellatus..... 15

AGERATUM.

A valuable plant, on account of the length of time it remains in bloom, and for contrast of color with the more brilliant varieties. It blooms constantly all summer in

Ageratum.

the garden, and if removed to the green-house, all winter. Desirable for cut flowers for bouquets. Colors light blue and pure white. Start the seeds under glass, and transplant. Hard annual.

Ageratum, Mexicanum, light blue..... 5

" Imperial Dwarf White..... 5

" Tom Thumb, dwarf blue, *distinct variety*;
desirable for edging..... 5

" Lasseauxi, *rose colored*.....10

" conspicuum, valuable for winter; white..... 5

" mixed, seeds of the above varieties mixed... 5

AGROSTEMMA.

Perfectly hardy plants, producing pretty, pink-like blossoms on long, slender stems. Very useful for cutting for bouquets, and pretty in masses, in beds. The annual variety is known as Rose of Heaven; the perennial as Rose Campion. About one and a half feet high.

Agrostemma, coronaria, crimson; perennial..... 5

" cœli rosa, rose, white center; annual..... 5

AGROSTIS—(Ornamental Grass.)

A hardy, ornamental grass, much used in connection with everlastings, for winter bouquets. Grows easily in any common garden soil. Hardy annual; about one and a half feet high.

Agrostis, nebulosa, fine and delicate.....10

" pulchella, exceeding graceful..... 10

ALONSOA.

The flowers are remarkably brilliant, and are scarcely equaled among the crimson and scarlet flowers. Properly green-house plants, but bloom finely in open ground when treated as tender annuals. Grow from one and a half to two feet high. Plants removed to green-house in autumn, will bloom all winter.

Alonsoa, grandiflora, deep scarlet..... 5

" Warzewiczii, bright crimson..... 5

" mixed, seeds of the above varieties mixed... 5

ALYSSUM.

Alyssum, sweet (maritimum). A desirable hardy annual, flowering from early spring till killed by frost, and all winter in the green-house if sown in August. Flowers pure white, in racemes, and of a peculiar delicate fragrance. Most effective in masses, with plants one foot apart. Useful in all kinds of small bouquets. Grows one foot high..... 5

" golden (saxatile). Flowers brilliant golden yellow, completely hiding the foliage. Plants about one foot high; desirable for rock work, and quite showy in masses. Hardy perennial. 5

AMARANTHUS.

Valuable for its variety of handsome foliage, whether grown in the conservatory or garden. The colors will be more brilliant if planted in moderately rich soil.

Amaranthus, melancholicus rubber, beautiful blood red foliage. Hardy annual, two and a half feet high.... 5

Amaranthus, tricolor, leaves yellow, red and green; well known as

Amaranthus, Tricolor.

" Joseph's Coat." Very showy in beds alone. Hardy annual; two feet high..... 5

Amaranthus, bicolor olbiensis, dark purple foliage, edged at the terminals with bright crimson. Four feet high.....10

" salicifolius, two and a half to three feet high, pyramidal in form, branching close to the ground. Leaves beautifully undulated, varying from green to bronze, and later to a bright orange-red color, forming magnificent, bright colored plumes.....10

" Henderi, beautiful drooping foliage, richly colored in many shades.....10

Ammobium.

AMMOBIUM.—(Everlasting).

One of the hardiest of everlastings, and desirable for the garden, but more valuable for forming winter bouquets in connection with grasses and other everlastings. Grows two feet high. The flowers are rather small, pure white, and should be gathered before fully opened, to preserve for winter. Hardy annual.

Ammobium, alatum 5

ANAGALLIS.

Interesting plants of easy culture, and remarkable for the beauty of their flowers. Even the wild variety, known as Pimpernel, or Poor Man's Weather Glass, is exceedingly pretty. They are well adapted to rock

Anagallis.

work or borders. Planted under glass and transplanted into light, rich soil, in a sunny situation, they will cover the ground all summer with a profusion of bright, rich colored flowers. Half-hardy annual; about six inches high.

Anagallis, grandiflora, Garibaldi, vermilion..... 10
" *grandiflora, Eugenie, light blue, shaded white*. 10

" " *Napoleon III, rich crimson ma-*
" " *roon*..... 10
" " *mixed, above mixed* 10

ANCHUSA.

Peculiarly adapted to shady situations, succeeding where many plants would fail for want of sunshine. Two to three feet high.

Anchusa.

Anchusa, italica, intense blue flowers freely produced; fine for bees. Hardy perennial 5

" *angustifolia, splendid for bouquets; long bloomer;*

azure blue, forget-me-not-like flowers. Tender perennial 10

ANEMONE.—(Wind Flower).

Among the earliest and brightest of our spring flowers. The colors run through various shades of scarlet, purple, blue, white and striped, with various colored eyes. Succeeds well in rich, light loam, in a sunny situation. Hardy perennial; six inches high.

Anemone, coronaria 10

ANTIRRHINUM.—(See Snapdragon).**AQUILEGIA.—(See Columbine).****ARABIS.**

Among the earliest blooming plants and very useful for rock work, edgings, &c. Hardy perennial; nine inches high.

Arabis, alpina, pure white..... 10

ARDISIA.

A shrubby green-house plant, producing scarlet berries which remain on the plant a long time, giving it a very showy appearance. Fine for conservatory or drawing room. Tender perennial; one and a half feet high.

Ardisia, crenulata 25

ARGEMONE.

Free blooming plants, sometimes called Prickly Poppy. The flowers are large, brilliant, and resemble the single poppy. The leaves are armed with slender prickles, and marked with white stripes, and are rather pretty. Hardy annual; two feet high.

Argemone, grandiflora, white; large..... 5

" *Mexicana, bright yellow* 5

" *Hunnemanni, carmine and yellow* 5

" *mixed, all best colors*..... 5

ARISTOLOCHIA.—(Dutchman's Pipe.)

A beautiful and rapid climber, with heart shaped leaves and singular, siphon shaped, rich purple flowers. As a covering for verandas, it is very effective. Hardy perennial; 30 feet high.

Aristolochia, siphon 10

ARMERIA.—(Thrift, or Sea Pink.)

These plants, though dwarf, are very handsome, and well adapted for ornamenting rock work, and are very valuable for edging walks. May also be grown in pots in sandy loam. Hardy perennial; six inches high.

Armeria, maritima, pink 5

ASPERULA.

A profuse blooming annual of dwarf habit, only attaining a height of twelve inches. Flowers sweet scented, produced in clusters and of a delicate lavender blue color. Very beautiful in bouquets, and entirely hardy.

Asperula, azurea setosa 5

ASTER.

No family of plants bears such distinct marks of progress as the Aster, and none are more eagerly sought. An almost endless variety, always reliable, it is not strange that they should become a necessity. The seed should be sown early in spring, and the young plants transplanted from one to two feet apart, according to the height and size.

Aster, Truffaut's peony flowered, very large flowers, brilliant in color and unsurpassed in habit of plant. One and a half feet high. Twelve colors mixed..... 10

" *Truffaut's peony flowered, Perfection, the highest and most perfect type of this class. Seed saved from the most perfect of Mr. Truffaut's magnificent strain. One and a half feet high. Twelve distinct and brilliant colors mixed*..... 15

" *mixed peony flowered, the flowers of this variety are remarkable for their perfect form and immense size, being four or five inches in diameter, oval in shape, not showing an open center till the last stages of growth, on account of the many closely set reflexed petals. The colors run through twelve shades. Two feet high* 10

" *Imbricated Pompon, the flowers are of very perfect form, so double as to appear a sphere*

Imbricated Pompon Aster.

and densely imbricated. Plants are of pyramidal growth, and about one and a half feet high. *Twelve distinct colors mixed*.....10

Aster, mixed Victoria, one of the most beautiful asters in cultivation. Flowers very large, globular in form, and beautifully imbricated. Plants of pyramidal growth, about two feet high, and a single plant will often produce ten to twenty perfect flowers. *Thirty distinct colors mixed*.....15

" **mixed rose flowered**, flowers large, brilliant very double, and regularly imbricated; they are oval in form, and somewhat resemble a double rose. Plants one and a half feet high. *Fifteen colors mixed. One of the very best sorts*....15

" **mixed Dwarf Pyramidal Bouquet**, a magnificent dwarf variety, about one foot high. When well grown, a single plant forms a complete bouquet of pyramidal shape, and covers itself with blossoms, often numbering 150 to 200 flowers, and entirely hiding the foliage. Fine for edging and small beds. *Six distinct colors mixed*.....10

" **mixed dwarf chrysanthemum**, a dwarf variety, growing only about ten inches high; is also late, and valuable for succession. The

Chrysanthemum Flowered Aster.

flowers are very large, three or four inches in diameter, and freely produced. A single plant is a bouquet of itself. *There are twenty-five distinct colors mixed*.....15

Aster, Porcupine, or Hedgehog, the distinguishing feature of this variety is the quills or sharply pointed petals. The flowers are very curious

in appearance, and quite showy. Plants grow about two feet high. *Twelve distinct colors mixed*.....10

Aster, Reid's Improved Quilled, remarkable for the globular form of its singular flowers. The single petals consist of tubes or quills, and the outer courses are blossom petals, which are slightly reflexed. Plants are one and a half to two feet high, and there are *eight distinct colors mixed*.....10

" **mixed German Quilled**, very double, of oval form; the petals have the appearance of quills or tubes; the outer ring is sometimes slightly reflexed, so as to form a sort of guard petal. The colors run through *twelve shades*. Flowers large, brilliant, and freely produced. One and a half to two feet high.....5

" **new dwarf Bouquet**, (Boltz), about eight inches high, very constant in height and habit of plant, which is a valuable quality. Extremely pretty, and flowers freely. *Six splendid sorts mixed*.....10

" **Betteridge's Choice**, this celebrated strain of quilled asters has been brought to perfection by Mr. Betteridge, and has taken *ten first class prizes. Fifteen colors mixed*.....10

" **Giant Emperor**, *snowy white* flowers, very double, of enormous size, and good form. Good for bouquets; two feet.....10

" **Mont Rose**, *splendid variety*, with flowers of a charming *peach color*. The blossoms are freely produced, of enormous size, and most perfect form. Plant of robust, branching habit.....20

" **Mont Blanc**, similar to the Mont Rose, but having enormous white flowers.....20

" **new Washington**, a remarkably large variety, exceeding all the other varieties in size, frequently measuring five to six inches across the blossom; of robust growth, and most perfect in form and color. The colors are very delicate, and run through various shades. A valuable acquisition.....20

" **new crimson**, *an entirely new variety*; very brilliant and conspicuous. Its extremely large blossoms are valuable for florists; of same type and habit as Mont Rose.....25

" **newest Bismarck**, in growth like the Dwarf Pyramid, with dark foliage. The flowers have a peculiar shining lustre, and are of various colors.....20

" **newest Shakespeare**, a dwarf aster, of wondrous beauty. The plants form a compact bush of ten or twelve inches in diameter, and six inches high. Flowers extra double, and well imbricated. Extremely full blooming, and keeps in flower till frost comes. *Twelve colors mixed*.....20

" **Trophy**, plants twenty inches high, very hardy, regularly branched, forming fine, self-supporting, globular bushes, studded with beautifully imbricated, symmetrically formed, perfectly double, globular flowers of exquisite beauty. Extremely showy. *Twelve colors mixed*.....25

" **Diamond**, *a novelty of the highest merit*, especially recommended by the floral committee of the London Horticultural Society. Plants eighteen inches high, with very large flowers of the greatest perfection; constant in habit and color. *Thirteen colors mixed*.....25

" **Meteor**, *a beautiful novelty*, quite new in

habit; the profusely branching plant represents a dense, globular bush, fifteen inches in diameter, covered with small, globular, extremely double, finely imbricated, *bright crimson flowers* 25

AURICULA—(Primula).

A favorite with florists, and much in demand in England and Scotland, where it is to be found in perfection. Does not bear well the extremes of heat and cold. The flowers all have various colored eyes; the light ones with dark ground colors are considered preferable. The best soil to grow them in is leaf mold and sand, enriched with decomposed manure. The seed should be sown early in spring, in pots, in hot-bed, and transplanted one foot apart. Tender perennial.

Auricula, Alpine, a native of the Alpine regions of Switzerland, improved by cultivation, and the most hardy variety 15
 “ *finest prize*, collection of the best sorts, embracing all choice known varieties; selfs, grey, white, and green edged 20

AZALEA.

Spring flowering shrubs, universally admired for their beautiful flowers, which are invariably produced in great profusion. The flowers are of all conceivable colors, and for brilliancy, are unsurpassed. Need hot-house culture. Plant in April, in cold-frame; prick out the seedlings the year following, in beds, four inches apart, to remain till they flower. It is well to cover the plants in the fall, with straw or mulch, as the late frosts sometimes destroy the young, early shoots.

Azalea.

Azalea, indica, finest mixed. Green-house, evergreen shrubs; flowers very beautiful. 25
 “ *pontica, finest varieties*. Hardy, deciduous shrubs, producing flowers of surpassing beauty, and all conceivable colors 25

RACHELOR'S BUTTON.

A perfectly hardy border plant, succeeding finely in any common garden soil, but the flowers are more brilliant if grown in gravelly ground. Under cultivation, it is really a handsome flower, sporting into varieties of white, purple, pink, parti-colored, &c. Hardy annual; two to three feet high.

Centaurea, cyanus, single mixed 5

BALLOON VINE—(Cardiospermum)

Remarkable for its inflated membranaceous capsules, and sometimes called Love-in-a-Puff. The flowers are insignificant, but the plant is a rapid and graceful climber. Sow in open ground, from 1st to 15th of May, and give plant support to run upon. Tender annual; six feet high.

Cardiospermum, halicacabum, white; from India. 10

BALSAM.

The Balsam has been so much improved by cultivation as to be scarcely recognized. The blossoms are double, though some semi-double and single ones will be pretty certain to appear, and such plants should be

removed. The flowers will be improved by planting in a hot-bed, and transplanting when two leaves have formed, one to two feet apart. Pinch off a portion of the shoots, which will increase the size of the flower and vigor of the plant.

Double Solferino Balsam.

Balsam, double Solferino, satiny white, streaked and spotted with crimson and lilac. *Very choice* 10

Double Camellia flowered Balsam.

Balsam, double camellia, as double as a camellia, which they resemble; white, blotched with various colors 10

“ *mixed double rose*, the peculiarity of this variety is its perfectly double, rose-like blossoms of almost every shade of color 10

“ *double dark red (atrosanguinea plenissima)* a very double, dark red variety, highly recommended 10

“ *double pure white*, well adapted for florists, for bouquets; nearly every flower is perfectly double, and pure white 20

“ *mixed double dwarf*, grows only about one foot high. *Twelve best colors mixed* 10

“ *mixed double tall*, grows about two feet high, and embraces *twelve of the best colors* 5

BARTONIA.

A very pretty flowering plant of the Gentian family, producing a profusion of fine, bright metallic-yellow blossoms about two and a half inches across. The leaves are thistle-like, and dark green, covered with down. It succeeds best when planted in a hot-bed and transplant-

ed into rich, moist ground, but suffers from dry weather. Tender annual; about one foot high.

Bartonia, aurea, golden yellow 5

BAPTISIA—(False Indigo).

A very ornamental border plant, producing bright blue, pea shaped flowers, borne on spikes six inches long. Hardy herbaceous perennial; three feet high.

Baptisia, Australis, blue 10

BEGONIA—(Tuberous Rooted).

The tuberous rooted Begonias are resplendent with their beautiful flowers during the whole of the summer. Being as hardy as many of the plants used for bedding out, they constitute a valuable adjunct to them. The simplicity of their culture places them within the reach of almost every one. They require the same treatment as tender annuals. Sow in heat, in February, pot the young seedlings off as soon as large enough, and repot when necessary. In three or four months the plants begin to display their splendid and continuous bloom.

Begonia seeds are so very small as to be scarcely perceptible to the naked eye, besides being exceeding costly; therefore a very large quantity of seed cannot be afforded to a single packet, but by actual count, more are sent than in many large seeded varieties.

Begonia, robusta perfecta, double blooming novelty; splendid new variety, remarkable for its robust and compact habit; succulent, dark green foliage, and large, double flowers, of brilliant cinnabar scarlet. 50

" *Sedeni*, flower buds, on the point of opening, measure an inch and a half in length and the developed flowers are over three inches in diameter, in clusters of five to ten, of a beautiful, rich carmine; one of the finest single blooming sorts. 25

" *new varieties mixed*, a very choice collection of the many new sorts, embracing those which are remarkable both for foliage and flowers; *very choice*. 25

BELVIDERE—(Summer Cypress).

An ornamental, cypress-like plant, with inconspicuous, green flowers, nearly hidden by the foliage. It is well adapted for growing in cemeteries. Hardy annual; *Belvidere, (Chenopodium scoparium)* 5

BIGNONIA—(Trumpet Vine).

A well known and much admired hardy, deciduous climber, perhaps the most showy of all the flowering climbers. The brilliant scarlet, trumpet shaped flowers almost cover the vine. One of the best climbers for covering a wall, side of house or veranda. Hardy perennial; 30 feet high. *Bignonia, radicans*, 10

BOCCONIA.

Magnificent, stately, half-hardy, evergreen shrubs, with ornamental foliage; well adapted for lawns, either singly or in groups. They will require some protection through the winter, by straw or mulch. Easily cultivated in loamy soil, and increased from seed, and cuttings in sand, in gentle heat, under glass.

Bignonia.

They will require some protection through the winter, by straw or mulch. Easily cultivated in loamy soil, and increased from seed, and cuttings in sand, in gentle heat, under glass.

Bocconia, Formosa Veitchi, half-hardy perennial, growing two feet high, and producing white and yellow flowers of great beauty. 15

" *Japonica*, from Japan; quite hardy; from four to six feet high; splendid foliage, and clusters of pure white flowers; one of the finest. 10

" *frutescens*, the well known shrubby Celandine, having such beautiful foliage, and white and yellow blossoms; grows six feet high; from West Indies 15

BRACHYCOME—(Swan River Daisy).

A dwarf growing plant from Swan River, flowering the greater part of the season. Very effective in edgings, beds, or rustic baskets. Requires light, rich soil, Half-hardy annual; one-half foot high.

Brachycome, iberidifolia, blue 10

" *alba-flora*, white 10

" *mixed*, seeds of the above varieties mixed. 10

BRIZA—(Ornamental Grass).

Very useful ornamental grass, much sought for in forming winter bouquets and wreaths; one foot high.

Briza, maxima, large; attractive. 5

" *gracilis*, slender; dwarf 5

BROWALLIA.

Handsome, profuse blooming plants, covered with pretty blue and white blossoms throughout the whole summer. Sow in hot-bed and transplant to border in June, one foot apart. The plants are quite minute when they first come up, and should be protected from the hot sun, or they will be destroyed. Half-hardy annual; one and a half feet high.

Browallia, elata, alba, white 10

" *elata, cœrulea*, blue 10

" *grandiflora*, sky blue; large 10

" *Roetzlii*, this variety makes a compact plant eighteen inches high, and produces pure white and blue flowers of twice the size of the older sorts. 15

" *fine mixed* 10

BRYONOPSIS.

An ornamental climber of the gourd family, bearing green fruits, which change in color as the season advances, to bright scarlet striped with white. Very handsome, and of rapid growth. Tender annual climber; ten feet high.

Bryonopsis, laciniosa erythrocarpa. 5

CACALIA—(See Tassel Flower).

Bryonopsis.

CALEANDRINIA.

Fine, dwarf plants for growing in masses, having fleshy leaves and succulent stems like the portulaca, and producing an abundance of blossoms, which, when fully expanded, make a beautiful appearance, and suitable for edgings, rockeries, and clumps; in bloom a long time. The seed should be sown in hot-bed, early in spring, and planted out in June, in rich, sandy loam, in masses. Tender annual, but perennial if protected in winter; one-half to one foot high.

Calandrinia, grandiflora, rosy lilac 5

" *umbellata*, crimson 5

CALEMPELIS.

A beautiful, tender climber from Chili, with delicate foliage, and bright orange blossoms in racemes, freely produced late in the season. The plants should be started early in hot-bed, and potted when five leaves have formed, and planted out in June. Tender perennial; fifteen feet high.

Calempelis (Eccremocarpus), scaber 10

CALCEOLARIA.

A favorite and universally admired genus, remarkable for their large, beautifully spotted blossoms, which are very showy, and from which an almost countless number of hybrids have been raised. They are perennial, are grown in pots in the conservatory, green-house and garden; but few flowers are held in greater esteem. They prefer a turfy loam, a mixture of peat and sand, or a rich open garden mold, and are propagated from seed or cuttings. Some of them are herbaceous perennials, others shrubby evergreens.

Calceolaria.

Calceolaria, hybrida grandiflora, flowers of immense size; seed saved from finest specimens.

Very choice 25

" *hybrida tigrina*, flowers of the largest dimensions; beautifully maculated or spotted. Seed saved from *choicest collection* 25

" *rugosa*, bedding variety; shrubby; grown in and out of doors. Mixed seed, saved from the *finest shrubby sorts only* 25

" *hybrida pumila compacta tigrina*, a new, very dwarf variety, only ten inches high, and of compact growth. Flowers of *fine form and beautiful color*; desirable for contrast with taller sorts 25

" *James' International Prize*, one of the finest prize sorts. Flowers beautifully spotted, of large size and perfect form. *Very desirable* 25

Calceolaria, finest hybrids mixed, seed saved only from the *most perfect flowers*, embracing many of recent introduction; all desirable 25

CALENDULA—(See Marigold).

CALLA.

An old and very desirable plant, either as an aquatic or for the ornamentation of the drawing room and conservatory. Thrives in any light rich soil when plentifully watered. The seeds, which should be sown in green-house in early spring, produce small bulbs in the fall, which should be repotted in rich soil. The production of large plants from seed takes some time, but the beautiful creamy white flowers are an ample reward for the care and patience bestowed. Half-hardy perennial.

Calla, æthiopica 25

CALLIOPSIS, or CORREOPSIS.

A very showy border plant, producing flowers in nearly every shade of yellow, orange, crimson, red, and brown. If the seed pods are removed as soon as they appear, the plant will remain in bloom much longer. Sow where they are to remain, and thin to two feet apart. Hardy annual; two feet high.

Calliopsis, tinctoria bicolor, crimson, brown center 5

" *tinctoria marmorata*, brown and yellow 5

" " *atrosanguinea*, blood red 5

" *filifolia*, thread leaved; yellow 5

" *Burridgi atropurpurea*, yellow, purple, and scarlet 5

" *cardaminifolia*, yellow 5

" *fine mixed* 5

CALLIRHOE.

A pretty plant, resembling the scarlet Linum, producing an abundance of rich violet-purple blossoms, each blossom having a white eye. The leaves are sub-digitate, and the plant begins to flower when six inches high, and continues to yield a succession of its attractive blossoms till frost. Succeeds better when planted in hot-bed and transplanted two feet apart. Hardy annual; one to two feet high.

Callirhoe, involucreta, trailing; purplish crimson. 5

" *pedata*, purple, white eye 5

" *nana*, dwarf; one foot 5

CAMELLIA.

All species of Camellias are universally admired on account of their beautiful, rose-like flowers, and elegant, dark green, shining, laurel-like leaves. They are hardy green-house shrubs of easy culture, requiring only to be protected from frost. The best soil for them is an equal quantity of good, sandy loam and peat. They are propagated by inarching, cuttings, grafting, and from seed, the latter being the only method of obtaining new varieties. When the plants are not growing, they should receive but little water, and when growing freely, can scarcely receive too much. A regular succession of flowers may be obtained from autumn till July, if attention be given to removing the potted and growing plants from a warm to a cooler atmosphere. When the growth is completed and flower buds formed, a cool, sheltered situation is best for they will be seriously injured if exposed to the rays of the sun.

Camellia, japonica, fine double mixed, seed saved from the *finest double varieties*, and will undoubtedly produce some very valuable kinds, of various colors 25

CAMPANULA—(Bell Flower.)

Very handsome little plants from Italy, giving an abundance of pure white and purplish blue flowers about two inches across. The flowers are bell shaped, and

when the plant is cultivated in masses, the flowers are very showy and ornamental, and continue in bloom a long time. Hardy annual; about nine inches high.

Campanula, fined mixed, blue and white 5
(See also *Canterbury Bell*.)

CANARY BIRD FLOWER.

(*Tropeolum canariense*.)

A beautiful climber, the charming little canary colored blossoms bearing a fancied resemblance to a bird with its wings half expanded. The plant has a fine, luxuri-

Canary Bird Flower.

ant, rambling character, and if the seeds are planted by the side of an arbor or trellis, to run upon, it will run twenty feet high, and blossom from July till frost comes. The flowers will be more numerous and brilliant in light moderately rich soil. Tender annual; twenty feet high.

Canary Bird Flower 10

CANDYTUFT.

Universally known and cultivated, and considered indispensable for cutting. All the varieties look best in beds or masses. Seed sown in the autumn produces flowers early in spring; when sown in April, flowers from July to September, and some of the sorts till frost comes. All the varieties are hardy and easy to cultivate. Single plants transplanted look well, and bloom profusely. Hardy annual; one foot high.

Candytuft.

Candytuft, purple. 5

Candytuft, white 5
" **Rocket, white** 5
" **fragrant white** 5
" **new crimson, fine** 5
" **fine mixed** 5
" **new carmine, of dwarf, compact habit.** The plant presents one perfect mass of vivid and rich bloom 10
" **perennial (*Sempervirens*)** 10

CANTERBURY BELL. (*Campanula Medium*.)

Handsome, hardy biennial, of stately growth, rich color, and profuse bloom. Succeeds best in light, rich

soil, and should be transplanted two feet apart. Their large, bell shaped flowers are freely produced throughout the summer, and are strikingly effective.

Canterbury Bell, double white 10
" " **blue** 10
" " **mixed, blue and white** 10
" " **calycanthema, mixed, one of the**
newer sorts; flowers large, of fine form, white, lilac, rose and purple. Hardy perennial 10

Canterbury Bell.

CANNA.

Stately and highly ornamental plant, desirable not only for the beauty of its spikes of flowers, but for its elegant foliage. The leaves are a rich, deep green, three feet long and six inches wide, very handsome as they unfold themselves. Start the plants in hot-bed in pots, and transplant in June, and blossoms will appear in July or August. Soak the seed thoroughly before planting, and keep in a warm spot. The roots can be kept in the green-house from year to year, and then it becomes perennial. Tender annual in open ground; four to six feet high.

Canna, Indica (Indian Shot), scarlet blossoms ... 10
" **gaboniensis, yellow flowers; fine** 15
" **nigricans, orange blossoms** 15
" **Warszewiczii, bright red flowers; striped foliage; very beautiful; four varieties mixed** ... 10

CARDIOSPERMUM — (See Balloon Vine).

CARNATION and PICOTEE — (*Dianthus Caryophyllus*).

No flower can surpass in delicacy of marking, form, or delicious fragrance, the richly hued Carnation. It has always been one of the most esteemed of the florist's collection, and there is no flower more desirable for the garden. The seed will not produce all double flowers, though a good percentage will be double, and of all shades and colors, many being very fragrant. Sow under glass in green-house or hot-bed, and when of sufficient size, transplant two feet apart each way. New and choice varieties are obtained from seed. Half-hardy perennial; one and a half feet high.

Carnation, fine double selves, one color 15

Carnation.

Carnation, fine double striped	20
" " double dwarf, early flowered	20
" " perpetual flowered, seed saved from choicest double flowers	25
" choicest white ground	50
" " Italian	50
" " German	50
" double Grenadin, a splendid variety for flor- ists; very early, charming double scarlet flow- ers. Exceedingly valuable for making bou- quets, as the color is so brilliant as to render it very conspicuous	25
" extra fine mixed double Picotee	25
" extra choice double mixed, seed saved from the choicest French, German, Italian, and English stocks. A large proportion of this seed will produce double flowers, and will be appreciated by the florist	25
" double mixed, good seed, producing many dou- ble flowers of all shades and colors, many being very fragrant	10

CASTOR BEAN—(Ricinus).

Tall majestic plants for lawns, with leaves of glossy green, brown, or bronzed metallic hue, and long spikes of prickly capsules of scarlet and green. An elegant plant for a lawn, and of very quick growth in rich soil. Plant in hot-bed, and transplant when three leaves have formed, or plant where they are required. Tender annual; eight to ten feet high.

<i>Ricinus, sanguineus</i> , splendid red fruit in clusters; blood red stalks	10
" <i>tricolor</i> , leaves spotted	10
" <i>giganteus</i> , leaves of large size, richly veined and marbled; ten feet high	10
" <i>communis major</i> (Palma Christi), the com- mon Castor Oil Bean	5
" mixed	10

CATANANCHE.

A plant from the south of Europe. The flowers are white with a violet center, and blue with purple center, quite double, somewhat resembling a pink, and extremely showy. It will blossom more freely in light, well drained soil; will begin to bloom in July or August from seed sown in April. Hardy perennial; one and a half to two feet high.

<i>Catananche, cœrulea</i> , blue, purple center	5
" <i>bicolor</i> , white, violet center	5
" mixed	5

CATCHFLY—(Silene).

An easy growing, free flowering plant, producing dense umbels of white, red and rose pink-like blossoms.

The plant is covered with a glutinous moisture, from which flies cannot disengage themselves, hence the name Catchfly. After having been once grown, the seed will sow itself in the ground. Hardy annual; one foot high.

<i>Silene, armeria, alba</i> , white	5
" " <i>rubra</i> , red	5
" " <i>rosea</i> , rose	5
" " mixed	5

CEDRONELLA.

A beautiful, hardy, herbaceous, perennial plant, having fragrant leaves, and producing long spikes of salvia shaped, crimson blossoms, which remain a long time. Three feet high.

<i>Cedronella, cana</i>	10
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CELASTRUS—(Climbing Bitter-Sweet).

Hardy, deciduous climber, producing yellow blossoms early in the season, and later, ripened fruit, which is very ornamental, and remains on the vines nearly all winter. Grows about twenty feet high.

<i>Celastrus, scandens</i>	10
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CELOSIA.

Magnificent plants for green-house or conservatory decoration, producing elegant, plume shaped spikes of flowers; look well in vases out of doors in summer. Sow in good, rich soil, and transplant at proper period. Half-hardy annuals; one to three feet high.

<i>Celosia, argentea</i> , long spikes of silvery white, shaded with flesh color; splendid	10
" <i>new crimson feathered</i> , crimson spikes; beau- tiful	10
" <i>pyramidalis plumosa</i> , beautiful, long plumes, pyramidal in form, of red, yellow, violet, &c.; very striking	10
" <i>Huttonii</i> , bushy habit, pyramidal form, pro- fusely branched, each leading branch being tipped with a small spike of bright crimson flowers. The upper side of the leaf is a deep claret color, while the under side is a bright crimson shade	15
" <i>cristata</i> , (see Cockscomb)	

CENTAUREA—(Dusty Miller).

An exceedingly interesting genus of plants, embracing annuals, biennials and perennials. Some of the varieties are magnificent foliage plants, indispensable for borders and edges of beds; while others are noted for their beautiful flowers. All the kinds named below are worthy careful cultivation.

Centaurea, Candidissima.

<i>Centaurea, gymnocarpa</i> , silvery gray foliage; drooping habit; very graceful	15
" <i>candidissima</i> , fine, ornamental plant of great beauty. Silvery white, deeply cut foliage, Half-hardy perennial	25
" <i>Clementi</i> , foliage white, deeply cut, and alto- gether very beautiful. Half-hardy perennial	25

- Centaurea Americana** hardy annual from Arkansas two feet in height, and of strong, robust growth; flowers deep red, very pretty. 5
 " **cyanus**, (see Bachelor's Button).
 " **moschata atropurpurea**, (see Sweet Sultan).

CEAMÆROPS—(See Palm).

CHEIRANTHUS—(See Wall Flower).

CHRYSANTHEMUM.

The following are the old garden varieties, producing flowers, white, yellow and variegated, single and double. They flower in autumn, and are desirable as they are brilliant and striking. The single sorts are quite as handsome as the double. Hardy annual; one and a half to two feet high.

Chrysanthemum, frutescens, *Marguerite*, or *Paris Daisy*. This variety, under the name of *Marguerite*, has obtained great popularity among eastern florists. The pretty, star shaped, white flowers are freely produced, and the plant will grow under almost any circumstances. 10

- Chrysanthemum, coronarium**, double white... 5
 " **coronarium**, double yellow... 5
 " **Burridgatum**, crimson, white center; single... 5
 " **coronarium**, mixed... 5

The following varieties are for pot culture, for blooming in the house in winter, and for florists for cutting for bouquets.

- Chrysanthemum, indicum**, fl. pl. half-hardy perennial; very double; mixed colors. 25
 " **japonicum**, fl. pl., *new*, *Japanese variety*. Flowers of very peculiar form, and much beauty, combining numerous shades of color. Very interesting. Half-hardy perennial. 25

Cineraria, Maritima Candidissima.

CINERARIA.

Green-house perennials, which can be planted out in summer. They thrive best in a mixture of loam and peat, and young cuttings root freely under glass. One to three feet high.

- Cineraria, maritima candidissima**, extremely handsome, silvery white foliage; very ornamental as a decorative pot plant, or for bedding purposes... 10
 " **hybrida**, very dwarf, *new*, dwarf variety, growing only four inches high. Plants globular in shape, and blossom profusely in many colors; *very desirable*... 25
 " **hybrida flore pleno**, the flowers are perfectly and evenly double, being entirely made up of ligulate florets, as in double *Jacobæa*. The colors run through all the shades peculiar to *Cinerarias*... 50
 " **choicest mixed**, from the best named varieties. Flowers from this seed have obtained many first-class prizes, *Extra choice*... 25

CLARKIA.

The flowers are very pretty, and of many colors, double and single. It is better to sow the seed in September, and the plants will be large enough by spring to make good bloom. Hardy annual; one and a half feet high.

- Clarkia, pulchella, flore pleno**, double; beautiful, rich magenta color... 5
 " **pulchella integripetala**, rosy crimson... 5
 " **elegans, flore pleno**, double; rosy purple... 5
 " **mixed**, best and finest varieties... 5

CLEMATIS.

Well known and universally admired climbers, some of the varieties being remarkable for the beauty and fragrance of their blossoms. Fine for covering arbors, verandas, &c., as they cling readily to almost any object. Most of the kinds are hardy, herbaceous perennials, but some little protection in northern latitudes, through winter, is advised. Will do well in any good garden soil.

- Clematis, pitcheri**, *new*; elegant habit, neat foliage, and exceedingly pretty, bright red blossoms; hardy climber... 25
 " **Virginiana** (*Virgin's Bower*), a rapid climber, with white blossoms, growing twenty feet in a single season; is hardy, dying down in winter, but starting up again in the spring. It is equally remarkable when in fruit, the long feathery tails of the fruit separating like tufts of wool... 10
 " **Verticellata**, produces beautiful, blue flowers from June to September, on long peduncles from the axis of the leaves; rather bell shaped and nodding. Grows eight to ten feet in a season... 10
 " **Flammula**, a luxuriant climber with clusters of small, white, fragrant flowers in August and September. Sometimes called Sweet Virgin's Bower... 10

CLIANTHUS.

Curious, green-house shrubs, with singularly beautiful foliage, and magnificent clusters of long drooping flowers, somewhat resembling a parrot's beak. About three feet high, and succeeds best in loam, peat and sand mixed; does well planted in a border of the conservatory, or will flourish against a south wall, if protected from cold and frost. Among the most magnificent blooming plants in cultivation.

- Clianthus, Dampieri**, bright scarlet blossoms... 20

Climanthus.

CLINTONIA.

Charming little trailing plants, suitable for baskets, pots, or rock work. The flowers are somewhat like the Lobelia, blue, purple and spotted, about half an inch in diameter. The seed is exceedingly small, and should be sown with great care, covering very slightly with earth, and shading from the rays of the sun, till firmly established. Tender annual; six inches high.

<i>Clintonia, elegans</i> , light blue.....	5
" <i>pulchella</i> , blue, yellow and white.....	10
" <i>pulchella atropurpurea</i> , violet-purple, center yellow, margined with white.....	10
" fine mixed.....	10

COBÆA.

A fine, rapid growing climber, with handsome foliage and large, bell shaped flowers, green at first, but rapidly changing to a beautiful, deep violet-blue. Seeds should be started in hot-bed, or by a warm window in the

Cobæa.

house, in rather dry soil, as they are apt to rot in open ground. A well established plant will run fifty feet in a season, covering a large veranda with handsome foliage and beautiful flowers. Tender perennial.

<i>Cobæa, scandens</i>	10
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COCKSCOMB—(Celosia).

Cockscomb.

three feet apart. Tender annual; one to three feet high.

<i>Celosia, cristata</i> , mixed tall, twelve of the most splendid tall varieties mixed.....	10
" <i>cristata</i> , dwarf crimson, brilliant.....	10
" " " rose, deep rose.....	10
" " " yellow, fine.....	10
" " " mixed.....	10
" new Japan (<i>Celosia Japonica</i>), the comb is finely cut, delicate as lace, and wonderfully brilliant.....	10
" new variegated, variegated in branch, leaf, and comb; very handsome.....	10
" Glasgow Prize, a very fine, semi-dwarf variety, with large, brilliant crimson comb, and handsome, dark foliage.....	15
" <i>Japonica cristata nana</i> (<i>new dwarf crested Cockscomb</i>). The striking features of this singular variety are its perfectly symmetrical growth, the leaves covering the entire stem with dark bronze red, which, in contrast with white leaved plants, produces a most striking effect. It is one of the most valuable plants we know of when used largely as a border plant. The color of the comb is an intensely brilliant shining <i>carmine</i> , rendering it very conspicuous even among most brilliant colored flowers, like scarlet geraniums, roses, carnations, etc. The three to five little combs form themselves on separate side stems in a perfectly symmetrical manner around the plant, keeping about eight inches lower than the head, and in no way interfering with the gracefulness of the leaves. The most characteristic feature is the leaflets which grow on the neck of the comb, and form a beautiful circle or collar around each comb, as true in the small as the large flower, all standing out perfectly horizontal.....	20

COLEUS.

Probably there is no other kind of ornamental foliage plant so well known and universally admired as the Coleus. The leaves are of all shapes, shades and colors, and nearly all have a rich, velvety appearance of extraordinary beauty. No yard should be without these decorative plants. They should be planted in a greenhouse or a warm situation in-doors in a temperature of 70°, and can be bedded out as soon as danger of frost is over. They will continue to grow and thrive till cut down by frost in autumn. Slips should be taken from the finest, which will grow finely all winter, if potted and placed in green-house or conservatory.

Coleus.

Coleus, mixed, *twenty-five best named sorts* 25
 " new hybrids mixed 25

COLUMBINE—(Aquilegia).

The old single varieties of Columbine have been known and admired for centuries under the name of Honey-suckle. The new double sorts are very beautiful, and embrace a great variety of colors and forms. They are nearly all hardy, and seeds can be sown in open ground in spring or autumn; and they can also be increased by dividing the roots. Hardy perennial; two feet high.

Aquilegia, alba plena, double white 10
 " caryophylloides, white, nicely striped with reddish crimson; a beautiful double variety 10
 " Skinneri, crimson, scarlet and orange 10
 " vernaeneana fol. variegatis, one of the few striking variegated plants, reproduced with certainty from seed. Double, rose colored blossoms; exceedingly beautiful 15
 " mixed double, *best and finest colors* 10

COMMELINA—(Day Flower).

The splendid white and blue flowers of this plant cannot be excelled, and its profusion of blossoms renders it worthy of cultivation. The roots can be taken up and kept in the cellar, like Dahlias, and replanted in spring, and will produce larger and more blossoms. Plant in any good garden soil, and thin to six inches apart. Tender perennial; one and a half to two and a half feet high.

Commelina, cœlestis, sky blue 5
 " alba, white 5
 " mixed 5

CONVOLVULUS.

A magnificent class of trailing annuals, some of which produce flowers of wondrous beauty. Useful for verandas, lattice, &c., and grows freely in any good garden soil.

Convolvulus, aureus superbus, very large, golden yellow flowers; grows six feet high; *new* 15
 " mauritanicus, hardy, trailing plant, about one foot high, and produces an abundance of rich, satiny, lavender blossoms. Especially adapted to rock work or baskets 10
 " Major, (see Morning Glory).

**CONVOLVULUS MINOR.
(Dwarf Morning Glory).**

Dwarf plants, of trailing, branching habit, each plant occupying a space of two feet. At mid-day it is com-

Convolvulus.

pletely covered with a mass of most brilliant, many colored blossoms, which remain open till evening, in dry weather. The colors are pure white, blue, passing into white, yellow, red, purple, &c. Will do well in any common garden soil. Thin to three feet apart each way. Half-hardy annual; one foot high.

Convolvulus Minor, tricolor, bright blue, shaded to pure white, next to the golden center 5
 " Minor, alba, pure white 5
 " striata, finely striped 5
 " mixed 5
 " flore pleno, a new, double variety 10
 " unicaulis, a single, upright stem without a branch, and a compact head of flower buds in great profusion, which expand into blossoms of immense size, of very rich, purplish blue color, and continues in bloom the whole season 10

COIX—(See Job's Tears).**CRUCIANELLA.**

A pretty little plant, growing one foot high, and producing clusters of star shaped, pink flowers. Fine for rock work, vases, etc. Hardy perennial.

Crucianella, stylosa 5

CUCURBITA—(See Gourds).**CUPHEA.**

A favorite bedding plant with green-house men; familiarly known as Cigar Plant, on account of the fancied resemblance to a lighted cigar. The colors are fiery red and crimson brown. Planted on gentle heat and transplanted to the garden, it will continue to blossom all summer, and on the approach of frost may be removed to the green-house or conservatory, and will continue to bloom all winter. Tender perennial; one and a half feet high.

Cuphea, platycentra (Cigar, or Firecracker Plant), scarlet, white and purple 10
 " silenoides, dark crimson brown 10
 " Zimpani, violet red 10
 " mixed 10

CYCLAMEN.

Well known and universally admired bulbous rooted plants, producing exceedingly handsome red and white flowers. The seed should be sown in spring, and by autumn will produce a bulb, which if potted and placed in conservatory or green-house, will blossom the following spring. Propagated only from seed.

Cyclamen, persicum, mixed, green-house variety of great beauty and many colors 2

Cyclamen.

Cyclamen, James' Prize varieties, saved from Mr. James' choice collection; very fragrant.... 50

CYPRESS VINE.
(*Ipomœa Quamoclit*).

A most beautiful climber, with delicate, dark green, feathery foliage, and an abundance of bright, star shaped, rose, scarlet and white blossoms, which, in the bright sunshine, present a mass of beauty. Planted by the side of veranda, tree or stakes, and trained properly, there is nothing prettier. The seed will germinate more freely if warm water be poured on the ground after planting. Tender annual; fifteen feet high.

Cypress Vine, scarlet.....	5
" " rose.....	5
" " white.....	5
" " mixed.....	5

DAHLIA.

This exceedingly beautiful genus comprises an almost endless number of varieties, all more or less showy in the flower garden in the autumn, when most other flowers have faded. They are all of easy cultivation, growing freely in almost any soil, from seed sown in spring. The seed should be sown in shallow pans, in March, and the seedlings transplanted to small pots. As soon as danger of frost is over, plant out, one foot apart. These plants will make a tuber, which should be taken up in the fall and kept through the winter in a dry place, away from frost, and planted out in the spring, when it will blossom the following autumn. New varieties are constantly being produced from seed, some of them of exquisite beauty.

Dahlia, finest double, mixed, seed saved from choicest double flowers..... 15

DAISY—(Bellis).

Charming little plants for edgings and borders. The flowers are quilled and flat petaled, white, pink, red, and variegated. Not all will come double from seed, and the single ones should be pulled out. Sow early in hot-bed, and when large enough, transplant to a rich, cool, partially shaded situation. Set the plants six inches apart. Roots can be divided any time. Flowers are most abundant in spring. Tender perennial; six inches high.

Daisy, double mixed, choice..... 15

DATURA.

Large, branching plants, producing handsome, double and single, trumpet shaped blossoms, yellow, white, lilac and blue, and of exquisite fragrance. Some of the flowers are equal in beauty to our choicest lilies. Sow in hot-bed, and transplant to three or four feet apart each way. The blossoms open during the night, remain open

Daisy.

one day, and then perish. Roots can be kept all winter in cellars. Tender perennial; three feet high.

Datura.

- Datura, *Wrightii*, pure white at the center, passing into lilac and blue at the border; very fragrant 5
 " *chlorantha fl. pl.*, magnificent, large, double, yellow blossoms, richly scented..... 5
 " *fastuosa, alba, fl. pl.*, flowers double; pure white..... 5
 " mixed, seeds of the above varieties mixed..... 5

DELPHINIUM—(See Larkspur).

DIANTHUS—(See Pink).

DIANTHUS BARBATUS—(See Sweet William).

DIANTHUS CARYOPHYLLUS—(See Carnation).

DIGITALIS—(See Foxglove).

DOLICHOS—(See Hyacinth Bean).

ELICHRYSUM—(See Helicrysum).

ERAGROSTIS—(See Love Grass).

ERIANTHUS RAVENNÆ.

A very desirable ornamental grass, equal to Pampas Grass in appearance and habit of growth, and superior to it for general culture, as it is entirely hardy, and blooms more abundantly. When plants are two or three years old, the flower stalks are often ten feet in height, surmounted by beautiful silvery plumes. Sow early in spring, in green-house or hot-bed, and transplant when weather becomes warm.

Erianthus, ravenne..... 10

ERICA—(Cape Heath.)

A genus of shrubby plants of much interest and beauty. Most of the species are without odor, but this lack is compensated for by elegance, as well in their foliage as in their flowers. The flowers, in beauty of form, delicacy of aspect and variety of tint, can scarcely be surpassed. To succeed well, the seed should be sown in hot-bed, or better still, in green-house or conservatory. Half-hardy perennial.

Erica, capensis, mixed varieties.....25

ERYTHRINA—(Coral Tree.)

Handsome, leguminous shrubs, popularly known as Coral Trees. They are cultivated for the sake of their beautiful, bright scarlet, pea shaped flowers, which are arranged in terminal spikes. Start in heat, and transplant out of doors in warm situations, where the plants will grow freely. Half-hardy shrubs.

Erythrina, crista galli.....25

ESCHSCHOLTZIA.

Finely cut leaves of a glaucous color, and blossoms about two inches in diameter, of many brilliant and showy colors. A bed of *Eschscholtzia* in the sunshine makes a blaze of color. As the stalks and branches are delicate, they will do better if supported by small sticks. Sow where the plants are wanted to bloom, as they do not bear transplanting. Thin to six inches apart. Half-hardy perennial; one foot high.

Eschscholtzia.

Eschscholtzia, mandarin, a new and very beautiful variety, introduced by Messrs. Carter, of London. The outer side of the petals are brilliant scarlet, the inner side rich orange;

rare.....15
 " *Californica*, bright yellow.....5
 " *crocea alba*, creamy white.....5
 " " *striata*, beautifully striped.....5
 " " *rosea*, rose colored.....5
 " *aurantiaca*, distinct orange; a deep colored mark running up the center makes the flowers look like a maltese cross.....5
 " mixed.....5

EULALIA JAPONICA.

A most magnificent ornamental grass from Japan, growing five to six feet high, and exceedingly graceful. A single plant often makes thirty to forty elegant, recurved flower spikes of light violet color, resembling ostrich plumes. Beautiful for vases in the winter. Transplant from hot-bed to ten feet apart.

Eulalia, japonica, light violet; beautiful.....20

EUPHORBIA.

A large family, widely differing in their habits, many varieties being unworthy of cultivation. We have selected the most useful and beautiful variety for border and pot culture.

Euphorbia, variegata, hardy annual; foliage beautifully veined and margined with white; very showy. Sometimes known as Mountain of Snow.....5

EUTOCA.

Foliage dull green, covered with hairs; blossoms blue striped, three-quarters of an inch across, produced in terminal racemes. Excellent for cutting, because a branch placed in water will bloom many days, and the blue is intense in color. Succeeds best in warm, sandy soil, not over rich. Sow in open ground early in spring, and thin to one foot apart. Hardy annual; one foot high.

Eutoca, viscidula, blue.....5

" " *alba striata*, striped.....5

" " mixed.....5

FEATHER GRASS—(Stipa.)

Hardy, biennial, ornamental grass of much beauty, used in the formation of winter bouquets. Seed should be started in hot-bed, as they germinate slowly.

Stipa, pennata (Feather Grass), delicate and pretty.....10

FENZLIA—(Dianthoides).

Charming, little, hardy annual, with pink-like flowers, one for border, or pots in conservatory, and well adapted for vases and rock work. Sow in open border in April. *Fenzlia, dianthiflora*, from California; purple and yellow flowers; three inches high.....20

FERNS.

Flowerless plants, too well known to need description. Many of the varieties are exquisitely beautiful. There are so many sorts, varying so widely in habit, that to give explicit directions for the culture of each would require a volume of itself. As a general rule they should be kept in a warm, humid atmosphere, and watered abundantly. The soil best adapted to their growth is a

Fern—*Aspidium Angulare.*

turfy, fibrous peat, mixed with sand and leaf mold, and underlaid with pieces of broken crock. Many of the most beautiful sorts are propagated from seed only. Their exceeding grace and beauty will well repay all care bestowed upon them.

Ferns, fine mixed (Filices), an almost endless variety.....25

" fifty finest species mixed, very beautiful.....25

✂ We do not offer the different varieties of ferns

Fern - Polypodium vulgare

separate, but our packet of fifty species mixed will contain all the newest and most desirable kinds.

FEVERFEW—(See Matricaria and Pyrethrum).

FORGET-ME-NOT—(Myosotis).

The Forget-Me-Not is an old favorite plant, bearing clusters of star shaped, delicate blue flowers with white and yellow eyes. It flourishes best in a moist, shady situation, and it is in constant bloom nearly the whole season. If the seed be sown in autumn, it will succeed best, and flower early in spring. Hardy perennial; six inches high.

- Myosotis, palustris**, blue flowers, with white and yellow eyes 10
 " **azurea grandiflora**, light azure blue; one-half foot high; fine 10
 " **dissitiflora**, very deep blue; early blooming; a welcome addition to this class of spring bedding plants, so much in requisition 15

FOUR O'CLOCK—(Marvel of Peru).

Old fashioned, but none the less beautiful on that account. The plants are large, and require four feet space; make a pretty hedge. Some of the varieties have beautifully variegated leaves. The flowers are funnel shaped, white, red and striped, very fragrant, and open about four o'clock in the afternoon, remain open all night, and generally perish before noon the next day. The French call it *Belle de Nuit*, "Beauty of Night." Will grow in any common garden soil, from seed sown in open ground. Hardy annual; two feet high.

Four O'Clock.

- Four O'Clock, gold striped** 5
 " **red** 5
 " **scarlet** 5
 " **silver striped** 5

- Four O'Clock, white** 5
 " **yellow** 5
 " **variegated foliage** 5
 " **sweet scented** 5
 " **mixed** 5

FOXGLOVE—(Digitalis).

Ornamental plants of much beauty, producing dense spikes of flowers on stems three to five feet high. The blossoms are thimble shaped, purple, white and spotted, and very striking. Seed can be sown in spring or autumn, and large roots can be divided. Blossom the second season. Hardy biennial; three feet high.

Foxglove.

- Digitalis, Ivery's new spotted**, great improvement on the old sort; an endless variety of colors; robust, strong and hardy 10
 " **splendid mixed** 10

FRAGARIA—(Chinese Strawberry).

Pretty, hardy, herbaceous creeper from India, with beautiful, yellow blossoms, and bright red fruit, like small strawberries. Elegant for rock work or hanging baskets. Propagated from seed and runners. Seed should be sown very early in the house, and plants transplanted. Perfectly hardy.

Fragaria, indica. 10

Fragaria.

FRENCH HONEYSUCKLE—(Hedysarum).

Very handsome, free flowering plants, producing racemes of beautiful, pea-like flowers; particularly adapted for borders or rock work. Sow in open border in spring. Hardy perennial; four feet high.

- Hedysarum, coronarium**, brilliant scarlet 5
 " **fl. albo, true**; white 5

FUCHSIA.

Well known, half-hardy, perennial, deciduous shrubs, worthy a place in every garden. The varieties are now

Fuchsia.

numbered by hundreds, and some are exceedingly beautiful. They are as easily grown from seed as cuttings, and from seed many improved varieties are obtained. Sow in March, in shallow pots; prick out in crocks four inches in diameter, when of convenient size, where they can continue to grow till they bloom. As soon as they have flowered, select such as have good points, and change into larger pots. When frost appears, protect the plants.

Fuchsia, double, finest mixed, from the

finest specimens25

Fuchsia, double, white corollas, very beautiful. 25

GAILLARDIA.

Showy, and universally admired perennials, flowering the first year, and among the gayest ornaments of summer flowering beds.

Gaillardia, picta nana, one foot high; flowers creamy yellow 5

" picta Lorenziana, one of the most striking and valuable of the annual novelties introduced of late years. For general decorative purposes, as well as for bouquets, it is invaluable, its gay colored flowers being abundantly produced, and without intermission, from July until frost sets in. In a strict botanical sense, it is not double, but it is so entirely different from the old single Gaillardia, that the blooms would scarcely be recognized as belonging to the same species. The colors offered (in mixture) are sulphur and golden yellow, orange, claret and amaranth, and are produced quite as freely as any of the older sorts.25

" Richardsoni, grandiflora hybrida, the largest and most beautiful flowers of the species; blossoms orange colored10

GERANIUM—Pelargonium.

Probably the Geranium is better known and more universally admired than any other plant grown. The constant succession and durability of bloom till frost comes, the brilliancy of the scarlet and other colors, and the exquisite markings of the leaves of some of the va-

Geranium.

rieties, render them very desirable for pot culture and bedding. No garden seems complete without a bed of them, and in every collection of conservatory or parlor plants we are sure to find the Geranium. *Propagation by seed is the only sure way to obtain superior varieties.* Sow in March, in gentle heat, in well drained pots. Water moderately, and as soon as the third leaf appears, pot singly in two-inch crocks, exchanging for larger ones as the plants require. As soon as the weather will permit, plunge the pots in open border, and on approach of frost, remove to cover. They will blossom the succeeding spring. The following are all very choice varieties, and seed sparingly.

Geranium (Pelargonium) diadematum, splendid variety50

" (Pelargonium) Odier, five petals blotched.... 50

" " fancy, splendid mixed.....25

" double, finest double varieties mixed.....50

" Zonale, scarlet, Col. Holden, a new, profuse blooming variety of great merit. Large, globular trusses thrown well above the foliage. Color rich crimson, shaded with scarlet; very bright and distinct; *comes true from seed*....25

" Zonale, scarlet, mixed sorts.....25

" " white, all white leaved varieties mxd. 25

" " golden and bronze; *Magnificent*....50

" apple scented, *very fragrant*25

GILIA.

Hardy annual, one to two feet high; grows in almost any situation, in beds or in rockery. Delicate in leaf and flower.

Gilia.

Gladiolus.

Gilia, capitata, dense, globular heads of clustered blossoms of celestial blue. Two feet high... 5

" tricolor, flowers blue, with yellow and purple center. Sow in masses. One foot high 5

GLADIOLUS.

Magnificent plants, with sword like leaves, and long spikes of flowers, of every conceivable color and shade. The varieties are now numbered almost by thousands, each year bringing forth new and choice selections which have been produced from seed, which is the only method of obtaining new varieties. The plant and flower are from a bulb, which requires two or three years to produce from seed of sufficient size to flower well. The bulbs should be taken up on approach of winter, and kept from freezing till warm weather in spring, and then planted out in groups and borders.

Gladiolus, finest mixed. from fifty choice named varieties25

For Bulbs, see Spring Bulbs, in this Catalogue.

GLAUCIUM—(Horned Poppy).

One of the most ornamental of silver leaved plants. The leaves are recurved, elegantly indented, and silvery. Flowers bell shaped, orange. Hardy perennial; one and one-half feet high.

Glaucium, corniculatum10

**GLOBE AMARANTH—
(Gomphrena).**

A desirable everlasting, valued for its handsome, globular heads of flowers, which, if cut when well matured, will retain their beauty for years. Seeds germinate slowly. Start in hot-bed, or soak in warm water to soften the woolly husk. Tender annual; two feet high.

Globe Amaranth.

Gomphrena, globosa, purple	5
“ “ white	5
“ “ flesh colored	5
“ “ orange	5
“ “ striped	5
“ “ mixed	5

GLOXINIA.

Stove perennial plants, producing rich and beautifully colored flowers. They deserve extensive cultivation, and thrive best in an equal mixture of peat, loam and sand. Sow in March, on the surface, in a warm, moist atmosphere. When the second leaf appears, transplant into shallow pots to grow through summer. Allow them to rest through autumn, and keep in same pots through winter, giving little water. In spring, repot and water freely; will blossom second season. *The first three following varieties have peculiar leaves, being large, thick, light green, and recurved in such a manner as to entirely hide the pot. From the center of the plant are produced very large flowers of the most brilliant colors and finest form. Quite a new and distinct tribe of Gloxinias.*

Gloxinia, hybrida crassifolia grandiflora erecta.25	
“ “ “ horizontalis.25	
“ “ “ pendula.....25	
“ “ mixed, all choice sorts	25

GNAPHALIUM—(Everlasting).

An interesting class of immortelles, with rather homely foliage, but beautiful clusters of bright golden blossoms, which, if plucked when on the point of opening, and dried in the shade, will retain their beauty for years. Good for forming winter bouquets, in conjunction with other everlastings and grasses. Tender annual; one and a half feet high.

Gnaphalium, fetidum	10
“ leontopodium (Edelweiss), this is the true	

Edelweiss found on the Alps, and so highly esteemed by travelers in Switzerland. Flowers star shaped, pure white, and downy in texture, Perennial15

GODETIA.

Beautiful garden plants, of easy cultivation in any good garden soil, and remarkable for the delicacy of their very fine, large blossoms. Hardy annual, one to one and a half feet high.

Godetia.

Godetia, rubicunda splendens, a very showy, new variety. Rosy lilac flowers, with purple stain in the center	5
“ rosea alba (Tom Thumb), delicately blotched blossoms, white at the outer portion, and rose at the base of the petals	5
“ Lady Albemarle, intense carmine-crimson; compact habit; very beautiful.....	10

GOURDS.

A tribe of climbers with curiously shaped fruit, in various colors. Being of rapid growth, they are fine to cover old fences, trellises, stumps, &c. The foliage is quite ornamental, and the markings of some of the fruit quite extraordinary. Do not plant the seed till all dan-

Gourd, bottle.

Gourd, Hercules' Club.

ger of frost is over, and select rich, mellow ground. Tender annual climbers; ten to twenty feet high.

- Gourd, orange, the well known Mock Orange... 5
 " egg shaped, white; fac simile of an egg; elegant... 10
 " apple shaped, yellow; beautifully striped... 10
 " pear shaped, yellow and green, striped with cream color... 10
 " pear shaped (*piriformis annulata*), exceedingly beautiful fruit, with rings running round it; green ends... 10
 " bottle, handsome and useful... 10
 " Corsican, elegant fruit and rapid climber... 10
 " siphon, or dipper, long, slim handles, useful for dippers... 10
 " powder horn, in the form of a powder horn... 10
 " Hercules' Club, the longest of all the varieties... 10
 " mixed, ornamental... 10

GRAMMANTHES.

A charming little succulent plant, producing an abundance of bright scarlet and orange-yellow blossoms in the shape of a star. It is especially adapted for rock work, hanging baskets, edgings, &c. The segments of the corolla have the appearance of the letter V on them. Give it a warm, sunny situation, and good, rich soil. Tender annual; six inches high.

Grammanthes, gentianoides, rich orange-scarlet. 15

GUNNERA.

A curious, herbaceous perennial, growing best in rich mold kept moist. It is increased by seed and by division of roots. Has curious, cone shaped blossoms. Green-house plant.

Gunnera.

Gunnera, scabra, large, rhubarb-like leaves, and purple blossoms. One and a half feet high; curious... 15

GYNERIUM—(See Pampas Grass).

GYPSOPHILA.

Delicate, free flowering little plants, covered with a profusion of little star shaped, white blossoms. Well adapted for hanging baskets and edgings, and valuable for making bouquets. Blossom first season, and continue to blossom several years. Make handsome specimens dried.

Gypsophila, elegans, white and pink flowers; hardy perennial; one foot... 5
 " *muralis*, pink flowers; hardy annual; six inches. 10

HEDYSARUM—(See French Honeysuckle).

HELIANTHUS—(See Sun Flower).

HELICHRYSUM.

Helichrysum.

Large, full, double flowers of various colors, from bright yellow to scarlet, shaded and tipped. Peculiarly desirable as dried specimens; and exceedingly handsome bouquets may be formed of them for winter, if blossoms be gathered when on the point of expanding. Sow early in spring, in any good garden soil, and thin the plants to one foot apart each way. Hardy

annual; six inches to two feet high.

Helichrysum, bracteatum (Golden Eternal

- Flower), bright yellow... 5
 " *nanum atrosanguineum*, deep crimson... 10
 " *compositum album*, flowers white... 10
 " *monstrosum*, fl. pl., mixed, eight varieties of largest double flowers, mixed... 10
 " *nanum* fl. pl., mixed, five dwarf growing double flowering varieties mixed... 10
 " *minimum* fl. pl., mixed, four varieties of beautiful little miniature double flowers; fine... 10
 " mixed... 5

HELIOTROPE.

Highly valued for the fragrance of their flowers, and duration of bloom, and are to be met with in most gardens. They succeed in any rich, light soil, and cuttings of the shrubby kinds, taken off while young, strike readily. Half-hardy perennial; one foot high.

Heliotrope.

Heliotropium, Anna Turrell, violet-blue... 10
 " *Roi des Noirs*, black; splendid... 10

Heliotropium, Triomphe de Liege, deep blue; fine. 10
 " dark varieties mixed, *very choice*.....10

HELIPETERUM—(Everlasting).

A very desirable and distinct dwarf everlasting, with small foliage, and large, globular clusters of bright golden, and pure white, star-like flowers. Is excellent for forming winter bouquets, for which purpose the flowers should be gathered when on the point of opening, and dried in the shade; they will open while drying, and will retain their brilliancy for years. Hardy annual; one foot high.

Helipeterum, Sanfordii.

Helipeterum, Sanfordii, golden.....15
 " *anthemoides*, pure white.....15
 " mixed.....15

HIBISCUS.

A branching plant of the easiest culture, with rather pretty foliage, and large blossoms, which are exceedingly showy; continues to bloom from June till October. The seed should be planted early, and the plants thinned to one foot apart each way.

Hibiscus, Africanus, cream colored blossoms, purple in the center. Hardy annual; two feet high.....5
 " *coccineus*, large, brilliant scarlet blossoms; very showy; green-house plant; three feet high...10
 " *mutabilis, albus fl. pl.*, a double white variety; *very choice*.....25

HOLLYHOCK.

The Hollyhock, in its present state of perfection, is very unlike its parent of olden time; it now ranks with the dahlia, aster, camellia, &c. For a back ground to a flower garden, perhaps no plant is so useful. The flowers are as double as a rose, of many shades of color, from deep yellow, red, purple, to pure white. Plant the seed in June or July, in open ground, and in the autumn, when the plants have made five leaves, transplant to permanent position three feet apart. The following summer they will bloom. Each plant should be supported by a stake. Hardy perennial; five feet high.

Hollyhock, double, pure white.....15
 " " black.....15

Hollyhock.

Hollyhock, double, orange.....15
 " " rose.....15
 " mixed.....10
 " *Chater's finest mixed*, twelve double varieties of the greatest perfection mixed.....15

HONESTY, or SATIN FLOWER.
(Lunaria.)

Early, free flowering plants, interesting for the silver like tissue of the seed pods in their matured state. The flower is purple, not very conspicuous. The seed pods are fine for skeletonizing and working in with other

Honesty

everlasting flowers for winter bouquets. Blossoms the second year from seed, and then dies. Hardy biennial; two feet high.

Honesty, (Lunaria, biennis).....5

HORDEUM—(Ornamental Grass).

A beautiful, ornamental grass for forming winter bouquets. It somewhat resembles our domestic barley, having heavy, bearded heads. It is very hardy, and will grow in any common soil.

Hordeum, jubatum, exceedingly ornamental; two feet high.....10

HUMEA.

A remarkable, handsome plant for decorative purposes. Leaves very fragrant when slightly rubbed. Succeeds best in light, rich soil. Half-hardy biennial; six feet high.

Humee, elegans, red; from New South Wales.....10

Hyacinth Bean.

HYACINTH BEAN—(Dolichos).

Splendid climber, with abundant clustered spikes of purple and white flowers, which are followed by exceedingly ornamental seed pods; of rapid growth, often running twenty feet in a season. Plant where they are to remain, after the weather has become warm, and cultivate like common beans, only give support for the vines to run upon. Tender annual; ten to twenty feet high.

Dolichos lablab, purpurea, purple.....10
 " *lablab*, alba, white,10
 " " mixed, the above mixed.....10
 " *giganteus*, tall growing variety, with large, purple flowers; fourteen feet; very fine.....10

IBERIS—(See Candytuft).**ICE PLANT—(Mesembryanthemum)**

Ice Plant.

Mesembryanthemum, crystallinum (Ice Plant), handsome and curious plant for hanging baskets, rock work, vases and edgings. The leaves and stems are succulent and fleshy, and appear as though covered with ice crystals, and look like rock candy. The whole plant is peculiarly brilliant in the sunshine. The flower is white, and not conspicuous. Succeeds best in dry, sandy loam, and in a warm situation. Can be grown in pots or open border, the former having preference. Tender annual trailer; six inches high.....5

" *cardifolium variegatum*, the leaves are blotched with light yellow and cream colored spots. Fine for hanging baskets or dwarf masses. Hardy annual; six inches high.....10

Dew Plant.

Mesembryanthemum, tricolor (Dew Plant), pink, with purple center.....5

INDIAN SHOT—(See Canna Indica).**IPOMEA.**

Beautiful climbers, and exceedingly attractive mixed with other climbers. The flowers are of a variety of

shapes and sizes, and of an endless, number of colors, many being wondrously brilliant, and of graceful form. They are alike good for green-house, for pots and baskets, and for trellis, stumps, arbors, etc. They require heat in starting, and some of the varieties will not succeed out of the green-house. Tender annuals; five to ten feet high.

Ipomea, coccinea (Star Ipomea), fine scarlet.....5
 " *bona nox* (Good Night), pure white.....10
 " *limbata*, elegantly blotched and margined with white.....10
 " *limbata hybrida*, great variety of colors; fine.....10
 " " *elegantissima*, large flowers, in form of a five pointed star, with intense purple center, and pure white margin.....10
 " *rubra cœrulea*, immense flowers of bright celestial blue; stove or green-house climber.....10
 " fine mixed.....10

IPOMEA QUAMOCUIT—(See Cypress Vine)**IPOMOPSIS—(See Tree Cypress).****JACOBÆA—(Senecio).**

Remarkably pretty, free growing, profuse flowering plants, almost unsurpassed for brilliancy and beauty. Grow freely from seed, and are easily propagated from cuttings, not one in fifty failing. *The double are the only ones worth cultivating.* Hardy annuals in open border, biennial in green-house. Sow in loam mixed with leaf mold. One foot high.

Jacobæa, double.

Jacobæa, double crimson, extra fine.....10
 " double white, elegant.....10
 " " yellow.....10
 " new double dwarf blue, carefully selected, constant in height, pure in color, and double to the center.....10
 " mixed, above varieties mixed.....10

JASMINE.

Hardy, deciduous, ornamental shrubs, growing three feet high, and producing beautiful yellow flowers, which are very fragrant, and much admired. The seeds require bottom heat to start.

Jasminum, fruticans, yellow; fragrant.....10

JOB'S TEARS—(Coix.)

Curious, ornamental grass from East Indies, with broad, corn-like leaves, and seeds of a light slate color, wonderfully lustrous. Valuable for the formation of winter bouquets, in connection with everlasting flowers.

and strings of handsome beads are formed from the seeds. Plant in open ground, in hills three feet apart, four or five seeds in a hills, and cover half an inch deep. Hardy annual; three feet high.

Coix, lachryma (Job's Tears)..... 5

Kaulfussia.

Kaulfussia, amelloides, atroviolacea, the richest violet color of any annual in cultivation..... 5
 " **fine mixed** 5

LANTANA.

These plants are rapid growers, forming small, hardy shrubs, and producing their pink, yellow, orange, white, constantly changing heads of flowers in great abundance, which have an agreeable, aromatic, perfume. Any loamy soil suits them, and they are readily increased by cuttings, in sand, in heat.

Lantana, finest French hybrids mixed, all colors..... 10

" **alba magna**, pure white; one foot 15

" **Imperatrice Eugenie**, rosy lilac; two feet..... 10

LARKSPUR—(Delphinium).

The Larkspur is one of the handsomest and most useful of plants, and for large gardens is invaluable. The

Larkspur.

leaves are much divided, and the flowers in terminal spikes. The brilliancy of some of the colors is unsurpassed. Easily propagated by seed, or by dividing the roots; delights in a deep, rich soil, and should be sown in August or September.

Delphinium, ajacis (Double Dwarf Rocket Larkspur), hardy annual; ten inches; *twelve kinds mixed* 5

" **cardiopetalum**, deep blue, heart shaped. Hardy annual; from the Pyrennes; one and a half feet high..... 5

" **elatum (Bee Larkspur)**, has hairy petals in the center, and a fancied resemblance to a bee. Hardy perennial; five feet high..... 5

" **grandiflorum album**, large, double white flowers. Hardy perennial; four feet high..... 10

" **formosum**, rich blue and white. Hardy perennial; three feet high..... 5

" **consolida candelabrum fl. pl.**, a new type of annual larkspur, growing in the form of a branched candlestick; flowers double and of various colors. *Very showy*..... 10

" **nudicaule**, a splendid novelty, eighteen inches high, with *scarlet* flowers; fine for rockeries, flower borders or pot culture; hardy biennial..... 10

" **mathiolaeflorum nanum (Dwarf Stock flowered)**, *ten brightest colors mixed*. Long spikes of perfectly double blossoms in all colors. Hardy annual; one foot high..... 5

" **mathiolaeflorum (Tall Stock flowered)**, *eight brightest and best colors mixed*. Spikes of double flowers eighteen inches long; *very beautiful*. Hardy annual; two feet high..... 5

" **imperiale fl. pl., Double Emperor Larkspur**, one and a half feet high, compact and profusely blooming, almost every plant having 100 close, erect spikes of perfectly double flowers, which, in a dried state, are fine for winter bouquets. Mixed colors..... 10

LATHYRUS LATIFOLIUS—(See Peas).

LATHYRUS ODORATUS—(See Sweet Peas).

LEPTOSIPHON.

A charming little plant, with delicate foliage and cheerful, star shaped flowers; pure white, with yellow anthers. Make beautiful, low edgings for borders or walks. They do not bear our hot, scorching summers well, and the seed had better be sown late in the autumn or very early in spring, and, if possible, select a sheltered situation. Hardy annual; six inches high.

Lily of the Valley.

- Leptosiphon*, androsaceus, mixed colors..... 5
 " *aureus*, beautiful orange color; hardy annual;
 one-half foot..... 5

LILY OF THE VALLEY. (*Convellaria*).

The Lily of the Valley is a sweet little plant, thriving in any common soil; it will do well in any shaded situation, where few other plants will thrive; can be multiplied by dividing the roots, or by seed. Hardy perennial.

- Convellaria*, *majalis*, white, sweet scented blossoms;
 one foot..... 10

LIMNANTHES.

A native of California; quite hardy; of prostrate habit, and stems ten or twelve inches long, crowned with numerous fragrant flowers, each about an inch across. A large portion of the flower is yellow, the extremities of the petals only being white. Blooms from June to August. Sow the seed in spring, and give each plant two feet of room. Hardy annual; three inches high.

- Limnanthes*, *Douglasi*..... 5

Linum.

LINARIA. (*Kenilworth Ivy*)

A pretty, trailing plant for covering rock work, and very useful for hanging baskets. Hardy perennial.

- Linaria*, *cymbalaria*... 15

LINUM.

A beautiful and effective genus of plants, of slender and delicate growth, and a profusion of bright flowers.

- Linum*, *grandiflorum rubrum* (*Scarlet Flax*), from Algiers.
 Hardy annual..... 5

- Linum*, *coccineum*, deep crimson; one of the handsomest annuals ever introduced; in brilliancy of color surpassed by none..... 5

Lobelia, *Crystal Palace*.

LOBELIA.

A most elegant and useful genus of plants, of easy culture, and well adapted for bedding, edging, pots or rockeries. They are employed as universally in general summer gardens as scarlet geraniums, to beds of which they form a neat and effective edging. Seeds should be covered lightly.

- Lobelia*, *speciosa*, *Blue King*, intense dark blue, with a white spot; dark colored foliage. Showy and valuable for bedding purposes. Half-hardy perennial..... 10
 " *speciosa*, *Queen of Whites*, pure white flowers, not tinted with the slightest shade of any color. Blooms until destroyed by frost; tender perennial..... 10
 " *speciosa*, *Crystal Palace* variety, magnificent variety, with large blue and white flowers. 20
 " *Queen Victoria*, scarlet, new, scarlet flowering variety, with the darkest leaves, and very constant. Hardy annual..... 15
 " *pumila grandiflora*, very compact growing, and admirably adapted for edging. The plants are full of intense, deep, brilliant blue blossoms, opening till frost; hardy annual..... 10
 " *cardinalis* (*Cardinal Flower*), a magnificent native variety, with spikes of brilliant scarlet flowers. Will flourish in any common soil. Seeds need to be well started with heat. Hardy perennial; two feet..... 10
 " *gracilis*, very fine for baskets, vases, &c., trailing gracefully, and blooming profusely. Half-hardy annual..... 10

LOPHOSPERMUM.

Beautiful evergreen climbers, with purple and violet blossoms. Require green-house or cold frame in winter; will run up fences or verandas in summer. Propagated

Lophospermum.

- by preserving the fleshy roots in dry earth in winter. Seed should be sown in hot-bed in March or April.
Lophospermum, *scandens*, flowers violet-purple;
 ten feet..... 10

LOVE GRASS—(*Eragrostis*).

A very pretty species of ornamental grass, growing one foot high; splendid for winter bouquets; hardy annual.

- Eragrostis*, *elegans*, beautiful, dancing sparklets.. 5

LOVE GROVE—(*Nemophila*).

This popular plant is to be found in almost every

Love Grove.

thin to one foot apart. Hardy annual; six inches high.
Nemophila, mixed, several colors..... 5

LOVE-IN-A-MIST—(*Nigella*).

This singular plant is known as Lady-in-the-Green, and Devil-in-a-Bush, because the blossoms are partly concealed by the abundance of finely cut foliage. The plant and flower are both handsome, require but little care, and are worthy a place in the flower garden. Sow the seed in spring, and thin to one foot apart. Hardy annual.

Love-in-a-mist.

Nigella, *Damascena* fl. pl., double, blue blossoms; one and a half to two feet high..... 5
 " *Damascena nana* fl. pl., double, white and blue blossoms; one foot high..... 5

LUPIN—(*Lupinus*).

Very conspicuous plants, with spikes of pea-shaped blossoms of various colors. The taller varieties look well as a back-ground to other low growing annuals, and the dwarf look best in masses. Sow the seed where the plants are required, early in spring, and thin to one and a half feet apart. Hardy annual; one to three feet high.

Lupinus, *Hartwegi*, a beautiful species with delicate foliage, and blue blossoms..... 5
 " *Cruikshanki*, blossoms white, shaded with yellow, blue and purple..... 5

LYCHNIS.

There are few plants that produce such brilliant blossoms. The flowers are produced in clusters, and are constantly coming out all summer. Sow the seed in spring, in rich, loamy soil, and the following spring transplant to the border, one foot apart. Flowers the second season. Hardy perennials; one to three feet high.

Lychnis chalconica (*London Pride*), bright scarlet; two feet..... 5
 " *Haageana* (*Benary*), elegant, large, scarlet blossoms with jagged petals. Perennial, but will blossom first year; one foot..... 10
 " *Sieboldii*, produces large, white flowers; two feet high..... 15
 " *Haageana grandiflora gigantea*, a very large flowering variety, about three feet high. The flowers are scarlet, much larger than any of the preceding; perennial, but will blossom first season..... 10

LYTHRUM.

A showy, perennial plant of easy culture, growing in any good garden soil, and producing long, numerous spikes of bright rose flowers during the season. If seed be planted in autumn, the plants will flower the following season. Hardy perennial; two feet high.

Lythrum, *roseum superbum*..... 5

MARIGOLD.

The Marigold has been an inhabitant of the flower garden from time immemorial, and where a rich display of bloom is desired, is almost indispensable. The African varieties are tall, growing usually two feet or more, while the French are more dwarf, of most perfect form and gorgeous beauty; all are desirable. Half-hardy annuals, in bloom till frost comes.

Marigold, Single Cape.

Marigold, *Meteor*, a splendid new variety with very large, beautifully imbricated; extremely double, striped blossoms; deep orange on almost white ground. The stripes are very regular, and the flower striking. Covered with blossoms from May till autumn. Comes true from seed..... 10
 " *African*, orange quilled, a very double variety, with quilled petals; very showy..... 5
 " *African*, mixed, selected from the finest double flowers; very beautiful..... 5
 " *French*, *Tagetes*, *signata pumila*, bright yellow flowers; elegant habit. Finest varieties mixed..... 5
 " *French*, new gold striped, magnificent stripes of brown on deep gold; very double..... 5
 " *Cape*, *Calendula*, *pongei* fl. pl., double white; fine..... 5
 " *Cape*, *Calendula*, *pulvialis*, flowers single, white, brown underneath..... 5

MARVEL OF PERU—(*Mirabilis*)— (See Four O'Clock).

MARTYNIA.

Extremely handsome, large flowering, half-hardy annual, deserving of the most extensive cultivation. Should be started in green-house or conservatory, and transplanted singly into borders.

Martynia, *formosa* (*fragrans*), foliage thick soft and velvety. Flowers delicate rosy lilac, blotched and shaded with bright crimson. Needs plenty of room; very fragrant..... 5
 " *lutea*, yellow blossoms..... 5
 " *proboscidea*, a curious plant, on account of its singularly curious seed vessels, which are much esteemed when young, for pickles..... 5

Martynia.

MATHIOLA—(See Stocks).**MATRICARIA**—(Feverfew).

Matricaria

Sow from December to April, in shallow boxes, in a temperature of sixty degrees. As soon as the young plants can be handled, transplant singly into small pots or shallow boxes, where they may remain until the time of planting out in the open ground in May.

Matricaria, capensis fl. pl. (Double Feverfew), pure white, double flowers; very beautiful; desirable for bedding...10

MAURANDIA.

Graceful climber for green-house, parlor, baskets, or out-door purposes. Set out in the border with a little frame to which to attach their tendrils, they will be loaded all the season with rich purple, white and rose, foxglove-shaped blossoms. The seed should be started in hot-bed or green-house, as without artificial heat, they will scarcely flower the first season. They must be removed to a warm place on the approach of cold weather in autumn. Tender perennial climber; six feet high.

Maurandia, Barclayana, purple, rose, white and violet.....10

" **mixed**, choicest kinds mixed.....10

MESEMBRYANTHEMUM—(See Ice Plant).

MIGNONETTE.

A well known hardy annual, producing dense, semi-globular heads of exceedingly fragrant flowers, borne on spikes from three to six inches long. Is in bloom nearly the whole season, and the perfume is so fragrant that the whole atmosphere around is perfumed. No garden should be without it. If sown at intervals during the spring and early summer, it will be in bloom till killed by the frost. Seeds sown in autumn, will bloom early in spring. Hardy annual; perennial if protected; one foot high.

Mignonette, Golden Queen, a new variety, and literally a mass of fragrant gold. The flowers are golden yellow, and powerfully fragrant....15

" **Diamond**, a new and very valuable variety, producing pure white flowers.....15

Mignonette.

Mignonette, Victoria, a very valuable new variety, producing dark red blossoms; very attractive.....15

" **reseda odorata grandiflora**, large flowered The common Sweet Mignonette.....5

" **crimson flowered Giant**, of robust habit, with very large spikes of handsome, crimson flowers of exquisite fragrance; a free and perpetual bloomer.....10

" **Parson's white flowering Giant**, flowers almost pure white, of great fragrance, borne on spikes six inches to a foot in length. May be grown as a tree or dwarf, and is especially valuable for the latter mode of culture.....10

" **Dwarf Compact**, a distinct and very desirable variety. It forms a dense, semi-globular bush about ten inches high and eighteen inches in diameter. Highly recommended for pot culture or market purposes.....10

" **Tall Pyramidal**, this variety has woody stems and vigorous branches, which are clothed with dark green leaves and club like spikes of flowers ten inches long, of a fine red tinge.....10

" **Pyramidal Bouquet**, this forms a dense, short pyramid of free growth, the numerous branches being terminated by large spikes of intense red flowers, as many as 300 of them being produced on one full grown specimen. This variety is recommended for pot culture, and for the open border.....10

MIMOSA—(See Sensitive Plant).

MIMULUS.

Strikingly handsome flowers of easiest cultivation. Perennial in the green-house, annual in the open air.

Mimulus, moschatus (Musk Plant), cultivated on account of the musky odor of the plant. Needs rich soil and plenty of moisture. May be cultivated to an upright plant, though usually trailing.....10

" **punctatus** (Monkey Flower), large, beautifully spotted blossoms; blooms first year.....10

" **inimitable double**, splendid variety, with beautiful, double tubed flowers; very interesting...25

MOLUCELIA.

Molucca Balm, or Shell Flower is a very curious plant. Within the calyx a button shaped bud appears, which unfolds into a shell shaped flower of a white and purple color. It is a strong annual, growing two or

Mimulus, Inimitable Double.

three feet in height with but few leaves, but such numerous branches that its width is often as great as its height. Sow in hot-bed in spring, and about the end of May transplant into dry, warm border, where it will flower freely.

Molucella, laevis.....10

MOMORDICA.

A curious, annual climber, with yellow blossoms and foliage similar to the Canary Bird Flower. The fruit is the chief curiosity, is egg and pear shaped, and covered with warty excrescences, and when ripe, bursts suddenly open, scattering its seeds, and showing a brilliant carmine interior. Fine for trellises, fences, stumps, &c.

Momordica.

Momordica, balsamina (Balsam Apple,)..... 5
" charantia (Balsam Pear)..... 5

MORNING GLORY. (Convolvulus Major.)

Handsome, showy climber of easy culture, and suitable for covering arbors, windows, trellises, old stumps, &c. It is so perfectly hardy as to grow in almost any soil. Without care, will soon cover any unsightly place if support be given for the vines. The flowers are most brilliant in the morning, and run through many shades, from white to dark blue, red and striped. Hardy annual; ten feet high.

Morning Glory.

Convolvulus Major, striped..... 5
" " blue..... 5
" " crimson..... 5
" " white..... 5
" " purple..... 5
" " mixed..... 5

(See also Convolvulus.)

MOURNING BRIDE—(Scabious).

Handsome flowers in hemispherical heads on long stems; of exceeding sweetness, and sometimes called Sweet Scabious. The colors are deep and light purple, scarlet, white, and dark mulberry red; some of the dark shades are tipped with white. With proper protection of the roots, they will bloom two or three years. Very useful for bouquets, as their long stems work easily, and their striking colors, as well as fragrance, are desirable. Plant in hot-bed, and transplant one and a half feet apart. Tender perennial; one to two feet high.

Mourning Bride.

Scabiosa, atropurpurea, deep purple..... 5
" candidissima, pure white.....10
" coccinea, scarlet..... 5
" mixed..... 5

MYOSOTIS—(See Forget-Me-Not).

NASTURTIIUM, TALL.
(*Tropæolum Lobbianum*.)

The Lobbianum differs materially from the common running Nasturtium, and is admirably adapted for greenhouse or conservatory decoration in winter. It is a very rapid grower and strikes freely from cuttings, but seeds sparingly. The colors are very brilliant, and of many shades, from scarlet to black. Fine for covering arbors, trellis, and rustic work. Hardy annual; ten to twenty feet high.

<i>Tropæolum Lobbianum</i> , <i>Coleur de Bismarck</i> , brown	15
" <i>Lobbianum</i> , <i>Geant des Batailles</i> , carmine ..	15
" " <i>Roi des Noirs</i> , black	15
" " <i>Von Moltke</i> , bright, bluish rose ..	15
" " mixed	10
" tall mixed, the common tall varieties	5

NASTURTIIUM, DWARF.
(*Tropæolum Minor*.)

A bed of Dwarf Nasturtiums in the yard is very brilliant and attractive, and they are in bloom all the season. The flowers are more brilliant if the soil be not over rich. Give each plant a foot of room. Hardy annual; one foot high.

<i>Nasturtium</i> , dwarf, <i>Crystal Palace Gem</i> , sulphur, spotted maroon	5
" dwarf, scarlet	5
" " <i>King Theodore</i> , very dark	5
" " <i>Beauty</i> , orange and vermilion	5
" " yellow	5
" " Pearl, white	5
" " rose	5
" " <i>King of Tom Thumbs</i>	5
" " <i>Golden King of Tom Thumbs</i> , brilliant gold color	5
" " <i>Spotted King</i> , yellow, spotted chocolate	5
" " mixed	5

NEMOPHILA—(See Love Grove).**NIEREMBERGIA.**

Charming little plants, well adapted for edgings, baskets, &c. The seed should be sown in greenhouse, or in pans in the house, and set out in open ground, after danger of frost is over.

Nierembergia, gracilis, a fine bedding plant; white with purple eye; slender and graceful

NIGELLA—(See Love-in-a-Mist).

NOLANA.

Beautiful, trailing plants, with prostrate stems, much branched; almost equal to the *Portulaca* for growing in masses, and unsurpassed for rock work, pots, baskets,

Nolana.

or vases, as the branches hang pendulous over the edge of vase or basket. The blossoms are convolvulus shaped, brilliant, freely produced, of various colors. Sow in open ground, in light, sandy soil, early in spring; plenty of sun, and a dry situation are essential. Hardy trailing annual; six inches high.

<i>Nolana, atriplicifolia</i> , blue, white and yellow	5
" mixed	5

NYCTERINIA.

Charming little plants, well adapted for rockeries and baskets. The flowers are borne on large heads, are of various colors, star shaped, and during the evening are very fragrant. Produces richer, larger, and more blossoms in light soil. Start in hot-bed, and transplant six inches apart. They will blossom very early in spring, and remain in bloom the whole season. Tender perennial; six inches high.

<i>Nycterinia, capensis</i> , white, yellow center	10
" mixed	10

Nycterinia.

NYMPHÆA—(Water Lily).

Hardy, aquatic plants, bearing exceedingly beautiful, fragrant, white blossoms, which appear as if floating on the water. They are very much admired, and becoming more and more popular every year. Are increased by sowing the seed, or by dividing the roots or tubers. They grow readily in ponds or streams of shallow water having muddy bottoms, and can be grown in aquariums, tubs or tanks, in the house, if there be sufficient mud at the bottom, and the seeds or roots be kept continually covered with water.

Nymphaea.

CULTIVATION—In Tubs.—Take a strong barrel, free from tar, oil or salt, saw it in two, fill this one-third full with fine, black, garden soil, or meadow mud, if handy; plant the seed in this mixture, covering them one inch deep, add water gently so as not to disturb the seed, until the tub is full. This is all the care needed; always keep the tub full of water. Set this on a brick or board platform in any place you desire. The tubs, with their contents, should be placed in a cellar during the winter, kept from frost, and not allowed to entirely dry up.

For Aquariums.—Put in five inches of fine, black

loam, cover the seed one inch deep in this, and sift on enough fine sand to entirely cover the loam.

Nymphæa, odorata, white; fragrant 20

ÆNOTHERA—(See Primrose).

OLEANDER—(Nerium).

This well known shrub, originally a native of India, is of easy culture, and flowers freely the greater part of the year. In warm, moist climates, it requires no protection, and attains the proportions of a good sized tree. The flowers have a salver shaped corolla, with a crown of torn appendages in the center, are of a beautiful shade of pinkish red. They can be produced successfully in the house if the atmosphere is kept moist and warm. Sow seeds in gentle heat in February or March, in light, rich soil, which must be kept moist. When young plants are three or four inches high, repot in rich soil. The temperature in which plants are grown should not fall below 35°. The young shoots made one season should bloom the next.

Nerium, Oleander 10

OXALIS.

Very pretty, herbaceous plants with rich, rose colored blossoms. They thrive well in a mixture of loam and sand; they should not be watered after they have done flowering, until they begin to grow afresh. They are desirable for green-house decoration, rock work or baskets out of doors. The plants can be wintered successfully in cold frame if they are kept dry and the frost excluded. Sow seeds in gentle heat early in spring, and when well started, transplant where they are to flower. Half-hardy perennial.

Oxalis, rosea, rose colored 10

" *floribunda, alba, white* 10

PÆONY.

New varieties of these justly popular flowers are obtained from seed, and some are sure to repay the little care required. If the seed be sown in a cold-frame in autumn, the plants will be large enough to transplant the following spring, and a year later will begin to bloom.

Pæony, herbacea (Chinensis), from a splendid collection of finest double sorts of all colors 25

PAIM—(Chamærops).

The Palm is perhaps one of the most ornamental plants in the green-house, and those varieties that are hardy enough to bear planting out in the lawn during warm weather, are sure to command attention. The seeds are imported, and must of course have the aid of green-house or conservatory to make them germinate. Seeds are frequently four months in germinating.

Palm.

Chamærops, (humilis Dwarf Fan Palm), the most hardy sort, and in Scotland has stood out several winters with but slight protection. It

is also the most dwarf of its species, seldom attaining over eight or ten feet in height 15

Chamærops, excelsa (Hempen Palm of China), is a green-house variety in our climate. As a lawn plant in our Southern States, nothing could be more conspicuously attractive. A well grown specimen will attain the height of twenty-five or thirty feet. 25

PAMPAS GRASS—(Gynerium).

Magnificent, ornamental grass, producing numerous flower stems, surmounted by plumes of silvery inflorescence. Half-hardy perennial, from South America; ten feet high. Start in heat.

Gynerium, argenteum 10

PANSY.

These lovely flowers are favorites with all, not only for the brilliancy and variety of their colors, but for the durability of their bloom. Seed may be sown in open ground in spring or summer, or in hot-bed early in spring. Young plants produce the largest and best flowers. The plants should always occupy a cool, partially shaded situation, and the ground cannot be too rich; coolness and moisture are necessary. Transplant when an inch high. Seed sown in July will blossom late in autumn; if sown in October, will bloom the following spring. Hardy biennial; four inches high.

Pansy, Striped.

The following varieties we have imported from the best English, German and French florists, and can recommend them with confidence. They are saved from the choicest and finest flowers, and comprise all shades of color, from pure white to King of the Blacks

Pansy, copper colored 15
 " *Emperor William, indigo, dark center* 15
 " *King of the Blacks, coal black* 15
 " *large stained, large, and extra fine* 15
 " *Odier, each petal blotched* 15
 " *pure yellow* 15
 " *variegated and striped, fine* 15
 " *white, pure* 15
 " *purple, white edged* 15
 " *sky blue* 15

COLLECTION NO. 3.

9 BEST VARIETIES
OF
PANSIES

1

2

3

4

5

6

7

8

- 1 Odier.
- 2 Emperor William.
- 3 Gold Margined.
- 4 Copper Colored.
- 5 Pure Yellow.
- 6 Pure White.
- 7 Large Stained.
- 8 Variegated or Striped.
- 9 King of the Blacks.

PRICE 15 CENTS PER PACKET FOR EACH VARIETY.

\$ 1.00 FOR THE WHOLE SET OF 9 VARIETIES.

Pansy, fawn colored.....	15
" gold margined.....	15
" marbled.....	15
" mahogany colored.....	15
" violet, white edged.....	15
" purple and yellow.....	15
" Prince Bismarck, golden bronze, marbled; remarkably beautiful.....	25
" Lord Beaconsfield, a novelty of 1881, intro- duced by the celebrated florist, Mr. Benary, of Germany. The ground color is purple-vi- olet, shading off in top petals only to a whitish hue, a peculiarity which lends to the whole flower an unusually bright appearance. The flowers are of immense size, and it is altogether very desirable.....	25
" Snow Queen, or Snow Flake, new; flowers of a delicate, pure white; very pretty.....	25
" extra choice mixed, from choicest named flowers.....	15
" fine mixed, good quality.....	10
" mixed.....	5

SEE COLORED PLATE IN THIS CATALOGUE.

PASSION FLOWER.

Passion Flower.

A most interesting and well known order of climbers, bearing singularly beautiful flowers. They are the pride of South America and West Indies, where the woods are filled with the species, which climb about from tree to tree, bearing flowers of striking beauty. We have selected two varieties which seem best adapted to our climate, being more hardy than many other sorts.

Passiflora, cærulea, hardy, deciduous climber, with blue and white flowers of remarkable beauty. It is hardy enough to withstand our winters, if the roots are protected with straw, leaves, or mulch.....10

Disemma coccinea, magnificent green-house climber, with brilliant scarlet blossoms in the form of a double coronet or crown. Is rather tender, but can be planted out after danger of frost is over; must be sheltered or protected from frost in autumn or winter.....20

PEAS—(Lathyrus).

A perennial climber, producing a long succession of white, rose, and purple blossoms, in clusters of eight or ten each. Suitable for trellises, arbors, etc. Young plants flower the second year freely, but the third and fourth year they produce an abundance of foliage and bloom. They die down every year, and start again in spring. Hardy perennial; ten feet high.

Lathyrus, latifolius , rose.....	10
" white.....	15
" mixed perennial.....	15
" odoratus (see Sweet Pea).	

PENNISETUM. (Ornamental Grass).

A species of hardy grass, useful only for the formation of winter bouquets. The heads are barbed and feathery, and present a beautiful appearance when

mixed with Gomphrenas and other immortelles. Is perfectly hardy, and will grow in any common soil.

Pennisetum, longistylum, hardy, perennial, ornamental grass; two feet high.....5

PENTSTEMON.

These handsome, herbaceous plants are deservedly growing in favor for bedding purposes. The flowers are bell shaped, in racemes or spikes, and are constantly produced during the whole season. No one who has ever seen their beauty will willingly do without them. They are hardy perennials, and will live out of doors with a little protection. The seed should be sown in open border, covered very lightly, and the plants transplanted when four inches high.

Pentstemon.

Pentstemon, Hartwegi, one of the freest blooming kinds, and highly recommended; flowers brilliant scarlet, and very striking. Two feet high...10

" **Murrayanus**, one of the best; a single spike has been known to produce upwards of fifty blossoms; flowers rich, shining scarlet; three feet high.....10

" choice named varieties, seed saved from collection of newest varieties, and cannot fail to give great satisfaction.....10

Perilla

Petunia Grandiflora Superbissima,

PERILLA.

Ornamental foliage plants similar to Coleus. Fine for bedding with silver leaved plants. Foliage metallic bronze; nothing else like it. Half-hardy annual.

Perilla, atropurpurea lacinata 5

PETUNIA.

Petunias are unsurpassed, if indeed equalled for massing in beds. Their richness of color, duration of bloom, and easy culture, will always render them popular. They will do well sown in open border in spring, or earlier in cold-frame or hot-bed, and transplanted eighteen inches apart. By the latter process, they will come into bloom much earlier, though they do perfectly well sown in open ground. Be careful not to cover the small seeds too deeply; they like a sandy loam. Tender perennial; one and a half feet high.

Petunia, Countess of Ellesmere, deep rose, white throat.....10

" finest striped and blotched, saved from magnificent collection of striped and blotched varieties .. 10

" large flowered, spotted, very fine.....25

" fine, green edged varieties, beautiful.....20

" new fringed varieties, desirable novelty.....20

" atropurpurea, dark red 5

" nyctaginiflora, pure white 5

" hybrida grandiflora superbissima, novelty; splendid, large throat.....25

" compacta elegantissima, new; dwarf compact; free blooming.....25

" hybrida grandiflora, choicest mixed; seed saved from show flowers15

" large flowered mixed, saved from largest flowers10

" hybrida, fine mixed 5

" double mixed, finest varieties carefully fecundated with best double flowers. Sure to produce a good percentage of double flowering plants.....20

" hybrida robusta, fl. pl., new, dwarf, of robust growth, forming a compact, upright, branched bush about ten inches in height and fourteen inches in width, with double, sometimes even double fringed flowers in all shades of colors existing in petunias. An extremely

Petunia, Double.

handsome, valuable sort for market culture. 25
Petunia, extra double fringed, many colors;
beautifully fringed; a good percentage
double; new

PHLOX DRUMMONDII.

Remarkable for the brilliancy and abundance of their large, terminal flowers, completely hiding the foliage. The blossoms are of many colors, from pure white to deepest purple, eyed and striped. For masses of separate colors and for cutting for bouquets, they are unsurpassed. The seed can be planted in open ground in autumn or spring, or plants may be started in hot-bed and transplanted. Give good, rich ground, and set plants six inches apart each way. Hardy annual; one foot high.

Phlox Drummondii, alba, pure white.....10

" " scarlet, black center.....10

" " rosea, deep rose.....10

" " Black Warrior, fine10

" " Leopoldii, red, white eye.....10

" " Queen Victoria, violet, white eye10

Phlox Drummondii.

Phlox Drummondii, marmorata alba rosea,
white, rose eyed and marbled.....10

" Drummondii, Cardinal, brilliant scarlet.....10

- Phlox Drummondii**, General Grant, rich purple .10
 " " **grandiflora**, choice mixed, scarcely inferior in size and texture to the perennial sorts. One of the finest of recent introductions .10
 " **Drummondii**, **grandiflora splendens**, extra choice mixed, this very fine variety has proved itself to be the gem of the new large flowering race of *P. Drummondii*. The flowers are large, handsomely rounded, and of great substance; the color vivid crimson, with a pure white disc; the habit of growth free and robust .10
 " **Drummondii**, fine mixed, many fine varieties 5

PHLOX PERENNIAL.

The varieties of Perennial Phlox are among the choicest of our flowers for bedding and border plants. They are perfectly hardy, and need no protection; will flourish in any soil, succeeding better however, in deep, rich, rather moist ground.

Phlox Perennial, mixed, seeds saved from the newest, splendid sorts .15

PINK—(*Dianthus*).

The family of *Dianthus* is by far the most useful of all the biennials and perennials, and for beauty and variety cannot be surpassed. The delicacy and richness of the tints, combined with the aromatic fragrance of many of the species, are valuable recommendations for the entire family.

Pink, Heddwig's. Pink, Double Florist's.

- Dianthus, Chinensis fl. pl.** (**Double China Pink**), this species is a biennial of dwarf habit; flowers the first year, but the bloom is stronger the second. The colors are very rich, and in large beds, you can hardly find two alike. Seeds saved from double flowers will produce double ones .5
 " **Plumarius** (**Pheasant Eyed Pink**), white or pink, with dark eye. The flowers deeply fringed or feathered; very fragrant. Hardy perennial .5
 " **Plumarius Scoticus fl. pl.** (**Double Florist's Pink**), saved exclusively from Mr. Turner's very best varieties of show pinks; extra. .50
 " **Chinensis Heddwigii fl. pl.** (**Heddwig's Pink**), flowers very large and double, having a diameter of nearly three inches; of various shades of brilliant colors, almost unsurpassed. An elegant acquisition. Half-hardy biennial. 10
 " **Chinensis laciniatus fl. pl.** (**Double Japan Pink**), to be properly appreciated, these should

be seen, as it is impossible otherwise to convey any idea of their beauty. Rich in hue, very double, deeply fringed petals—only lacking fragrance to make them perfect. Half-hardy biennial. .10

Dianthus Heddwigii diadematus (**Double Diadem Pink**), this is of denser growth than the Heddwigii, and of dwarfer habit. Very regular, densely double, and of all tints, from crimson-purple to deep black-purple. It has often a velvet like, radiant fire, impossible to reproduce. .10

" **Chinensis imperialis fl. pl.** (**Double Imperial Pink**), a superb, double variety from China. 10

Pink, Double Imperial.

The following two varieties are selections from the finest formed varieties of *Dianthus Heddwigii*, and are remarkably fine:

- Dianthus, Heddwigii, Eastern Queen**, beautifully marbled; the broad bands of rich mauve upon the paler surface of the petals are very striking and pretty. .25
 " **Heddwigii, Crimson Belle**, rich, vivid, crimson like color; flowers of extraordinary size and substance, evenly and finely lacinated. Both the above varieties come perfectly true from seed .25
 " **barbatus** (see Sweet William).
 " **caryophyllus** (see Carnation).

POPPY—(*Papaver*).

Old fashioned flowers, but very popular. There are a few species of great beauty, which are an ornament to any garden. The following four varieties will be found to be magnificent, worth more than all the rest. Hardy perennials, blooming first year from seed, if sown early; will not bear transplanting well.

- Papaver, bracteatum pulcherrimum**, superb, large, double, orange-crimson flowers .5
 " **Oriente**, large, gorgeous, orange-scarlet blossoms; bottom of petals black; beautiful. .5
 " **umbrosum**, rich vermillion, with a shining black spot on each petal; one of the most showy of all the varieties .10
 " **Carnation**, brilliant, large, showy, double flowers of various colors; two feet high .5

The last variety, under the name of *Papaver somniferum*, is the sort used extensively for the extraction of opium.

Poppy, Umbrosum.

Poppy, Carnation.

PORTULACA.

There are scarcely any flowers in cultivation that make such a dazzling display of beauty as a bed of many hued, brilliant colored Portulacas. They are in bloom from about the first of July till killed by frost in autumn. Plant in open ground after it has become warm, in a light, sandy soil, and in a dry situation. After the plants appear, withhold water; and if the bed have a full exposure to the sun, the ground will be covered with the plants, and the effect will be beautiful. Tender annual; nine inches high.

Portulaca, single.

Portulaca, alba, pure white.....	5
" aurea, deep golden	5
" striata, striped yellow	5
" caryophylloides, carnation striped.....	5
" fine mixed, many beautiful kinds.....	5

DOUBLE VARIETIES.

Portulaca, double.

amount of dry weather.

The double varieties of this plant are most beautiful. The blossoms are about one and a half inches across, perfectly double, and of many colors. Not all the plants will be double, but the single ones can be pulled out. They will stand any

Portulaca, double, white	20
" " orange	20
" " scarlet	20
" " rose striped.....	20
" " sulphur	20
" " mixed.....	15

**PRIMROSE, EVENING.
(Ecnothera).**

The Ecnothera, or Evening Primrose produces large, showy blossoms, which are fully expanded only towards and during evening. The blossoms are three to four inches across, usually yellow or white, and very freely and constantly produced. They all do better if seed be started in hot-bed, and the plants transplanted.

Ecnothera, Lamarckiana.

Ecnothera, acaulis alba, of prostrate habit, the leaves lying on the ground; produces an abundance of large flowers about three inches across, of most wonderful beauty, being transparent, and of the color and lustre of mother of pearl. Hardy perennial; six inches high..... 10
 " Lamarckiana, superb spikes of large, bright yellow blossoms, about four inches across. As many as 400 buds and blossoms have been counted on a single spike, and they are constantly produced from early spring till late in autumn. Hardy perennial; four feet high... 5
 " gigantea, the stem grows very tall, changing at about two-thirds its height into an immense flower spike of bright yellow. Notwithstanding its shrubby appearance, it is an annual, and may be grown as easily as the other kinds. 10

**PRIMULA, SINENSIS.
(Chinese Primrose).**

These are perhaps the most desirable of all house blooming plants. They are in almost constant bloom all winter, and if the plants be transferred to the border, they will bloom nearly all summer. Though perennial, new plants flower more freely, and seed should be sown every year. Give them a long time for growth before flowering, and do not force the young plants, but simply protect them

Primula.

from frost, and damp, cutting winds. Sow the seed in shallow boxes, filled with good, rich soil, dusting a little fine earth over them; if covered too deeply, or if the seed be wet and allowed to dry again, they will not germinate. Transplant into pots, and they will be ready for winter blooming in the drawing room. Tender perennial; six to nine inches high.

Primula, sinensis fimbriata, new scarlet, distinct and striking.....25

" *sinensis fimbriata*, rose, rose varieties mixed.....25

" " " Village Maid, pure white.....25

" " " alba maxima, flowers

large, of great substance, finely fringed, pure

white; *extra*.....50

" *sinensis fimbriata*, James' Prize, dark car-

mine.....50

" *sinensis fimbriata punctata elegantissima*,

the darkest primula known; flowers velvety

crimson, admirably fringed and regularly spotted

on the edge with white.....50

" *sinensis fimbriata*, choicest fern leaved,

dark carmine and pure white.....25

" *sinensis fimbriata*, choicest mixed, from

Mr. James' choicest strain of best fringed var-

ieties; confidently recommended to give the

greatest satisfaction; all colors mixed.....25

Primula flower, double.

DOUBLE VARIETIES.

The following four varieties can be relied upon to come true from seed. They are very choice and highly recommended for florists.

Primula, sinensis fimbriata, double crimson.....50

" " " white.....50

Primula, Japonica.

Primula, sinensis fimbriata, double red.....50

" " " " mixed.....50

" *Japonica*, the Queen of Primroses; noble in foliage and bearing. The beautiful, fine, large, magenta colored flowers stand in whorls, pyramidically arranged on stout flower stems, which are over one foot high.....25

PYRETHRUM—(Feverfew).

(Also see *Matricaria*.)

Very useful, and universally admired bedding plants, deserving a place in every garden. Sow from December to April, in shallow boxes, in a temperature of 60°. As soon as the young plants can be handled, transplant singly into small pots or shallow boxes, where they may remain until the time of planting out into the open ground in May.

Pyrethrum parthenifolium aureum (Golden

Feather, beautiful, gold leaved bedding plant, retaining its ornamental character until late in autumn. One of the finest recent acquisitions for geometrical designs; flower white.....10

Pyrethrum, roseum (*Insect Powder Plant*). Practical entomologists have long been looking for some effective, safe and cheap insecticide, and now tell us they have found it in the *Persian Insect Powder*. This is the dried and powdered flowers of the *Pyrethrum Roseum*, and is certain death to Plant Lice, Flies, Cabbage Worms, and nearly every form of insect life. It is harmless to man, but when diluted with ten times its bulk of flour, kills every cabbage worm or other insect it touches. Hitherto the high cost of the powder and the difficulty of securing a *pure* and *fresh* article has prevented its coming into general use, but experiments made by Prof. Riley, of the United States Entomological Commission and others, showed that it can be grown successfully in all of the Southern and many of the Northern States.

CULTURE.—Sow in boxes of prepared soil, as early as the season will permit, and transplant to sixteen inches apart whenever the plants are large enough. The young seedlings are small and of slow growth, but the older plants hardy and vigorous. The largest crop of flowers is produced the second season. They should be gathered when in full bloom, dried carefully, and stored in paper bags. Before using, the flowers should be powdered as fine as possible. *Per pkt 10c.; oz. \$1.00.*

QUAKING GRASS—(See Briza).

RHODANTHE—(Everlasting).

Of all the many varieties of everlastings, we think the *Rhodanthe* the finest and most beautiful. The flowers are of various colors, pure silvery white with yellow

Rhodanthe.

disc, rosy crimson and bright purple, rose suffused with white, &c. For winter bouquets, the blossoms should be gathered before they are fully expanded, and if dried in the shade, they will retain their brilliancy for years. The leaves are heart shaped and lustrous, and the calyx long, scaly and shining. The seeds should be started in hot-bed, and the plants transplanted to a warm situation, one foot apart. Tender annual; one foot high.

- Rhodanthe, Manglesi**, rich rose color, suffused with white 10
 " **Manglesi double**, a novelty and a curiosity; produces 10 to 15 per cent. of double blossoms 25
 " **maculata**, rosy crimson, bright purple or white with golden center, surrounded by a velvety band 10
 " **maculata alba**, pure white, with yellow disc; elegant 10
 " mixed 10

RICINUS—(See Castor Bean).

ROCKET.

The Sweet Rocket produces clusters of flowers which are very fragrant during the evening. The seed readily germinates in the open ground with very little care. Hardy perennial; one and a half feet high.

- Rocket Sweet, purple** 5
 " **white** 5

ROSE CAMPION—(See *Agrostemma Coronaria*).

ROSE OF HEAVEN—(See *Agrostemma Cœli-rosa*).

SALPIGLOSSIS.

Very showy bedding or border plants, with richly colored, erect, funnel shaped flowers. The colors are beautifully marbled and pencilled, purple, scarlet, crimson, yellow, buff, blue, and almost black. They are biennial in green-house, but annual in open ground. Start seed in hot-bed, and transplant one foot apart into a mixture of loam and sand, with well rotted horse manure at the bottom. Bloom from August to October. Tender annual; one and a half to two feet high.

Salpiglossis.

- Salpiglossis, New Black**, a new variety; recommended for its distinct character as a black blossom 15
 " **fine mixed**, colors beautifully marbled; purple, scarlet, crimson, yellow and blue 10

SALVIA.

The *Salvia*, or Flowering Sage, is a very ornamental plant, flowering in spikes of fiery red, crimson and blue, and continues in blossom, in open ground, till frost, when the plants can be removed to the green-house, and will continue in bloom a long time. Start the plants in hot-bed, and transplant into light, rich soil, about one foot apart. Tender annual; one to five feet high.

- Salvia, splendens compacta**, the finest *salvia* grown, being literally covered with blossoms; grows well from cuttings 15
 " **Roemeriana**, deep crimson; beautiful; one foot 10
 " **patens**, one of the brightest and purest of all blue flowered plants, and holds a pre-eminent position 20

SANVITALIA.

Very pretty, dwarf, trailing plants, excellent for rock work, borders or edgings of beds. It is so completely covered with flowers as to nearly hide the foliage. The flowers are double, and of a brilliant golden yellow, resembling a miniature double zinnia in form. Single varieties are not worth cultivating. Sow where required, in open ground, in spring, and thin to six inches apart;

Sanvitalia.

the plants will then cover the ground. Hardy annual; six inches high.

- Sanvitalia, Procumbens**, fl. pl. 10

SCABIOUS—(See Mourning Bride).

SCARLET FLAX—(See *Linum*).

SEDUM.

A species of low, succulent plants, some of which are remarkably pretty; grow readily upon stones, rocks, walls and roofs of houses; are admirably adapted for the center of hanging baskets.

- Sedum, cœruleum**, the common blue sedum, frequently known as Blue Stonecrop. Hardy annual; six inches high 10

SENSITIVE PLANT—(*Mimosa*).

An interesting and curious plant, with globular heads of pink flowers, well known for the extreme irritability of its leaves and foot stalks, which close and droop at the slightest touch, or in cloudy, damp weather, and during the night. The plant is most irritable in the greatest heat, and if the upper branches be touched and droop, touching the lower ones, the whole plant will appear as if wilted and dying. Start in hot-beds, or pots, and transplant into a warm situation, six inches apart. Tender annual; two feet high.

- Mimosa, pudica** 5

Sensitive Plant

SMILAX.

No climbing plant in cultivation surpasses this for graceful beauty of its foliage. In cut flowers, and for

wreaths, etc., it is indispensable to florists. Its hard texture enables it to be kept several days after being cut, without wilting. Nothing is finer for clothing statuettes, vases, etc. Soak the seed in warm water twelve hours, and plant in pots, in hot-bed or greenhouse, in February, and keep in a warm, moist place. One plant in a two-inch pot is enough. After they have completed their growth, and the foliage begins to turn yellow, turn the pots on their sides and withhold water till August, when the little bulb which has formed, can be repotted in good, rich earth, and watered freely, and it will grow all winter. Tender perennial climber; ten feet high.

Smilax, *Myrsiphyllum asparagoides* 15

Smilax.

SNAPDRAGON—(Antirrhinum).

The Snapdragon is an old favorite border plant, with dark and glossy leaves, and large, curiously shaped flowers with finely marked throats. They have been

Snapdragon.

much improved by careful selection, and now are really magnificent flowers. They will blossom the first season from seed sown in spring, but the blossom will be much stronger the second season. Succeeds best in dry, loamy soil. Tender perennial; two feet high.

Antirrhinum, majus album, pure white	5
" majus brilliant, crimson, white throat	5
" " caryophylloides, beautifully striped ..	5
" " Delila, white throat	5
" fine mixed, all the best colors	5

SOLANUM.

A class of beautiful, ornamental fruit bearing plants. They are useful for conservatory decoration, and present a beautiful appearance in the drawing room. Most of the varieties are half-hardy perennial shrubs, and can be planted out when danger of frost is over. The foliage is beautiful, but the fruit is the chief attraction, being very beautiful in appearance, but not edible.

Solanum, *pseudo capsicum*, covered with a profusion of miniature, pepper shaped, scarlet fruit..... 10

" *hybridum compactum*, large, orange-scarlet berries, produced abundantly. Elegant for house or green-house decoration during winter. 15

STATICE.

The species of Statice, or Sea Lavender, ought to be in every garden, on account of its lovely little flowers so freely produced. Sow in sand, loam or peat, in the house, and transplant into the garden when warm. Is perfectly hardy.

Statice, *Tatarica*, hardy, herbaceous perennial from Russia, producing an abundance of pink flowers. One and a half feet high..... 25

STEVIA.

A genus of plants, producing white and purple flowers which are of great value, and largely used in bouquets. If transplanted in the spring, in open beds, they bloom in autumn, but are more valuable in greenhouse or conservatory as winter flowering plants; they are indispensable to the florist. Sow seeds in spring, in sandy loam, and give protection in severe weather. Hardy perennial.

Stevia, *serrata*, white 10
" *purpurea*, purple..... 5

STIPA—(See Feather Grass).**STOCK.**

The Stock has for many years been a general favorite, but of late years the Germans have grown them in such perfection that they are considered almost indis-

Stock, double German Ten Weeks.

pensable where a fine display is wanted. The seed is grown with such great care that a very large proportion of double flowers are produced from the seed, and of great fragrance and beauty. To have them in bloom early, start in hot-bed, and transplant when small into pots, and turn out in June to open border. They will blossom late in the season if planted in open ground. Hardy annual; one foot high.

Stock, double German Ten Weeks, fifteen separate colors mixed; fine.....10

" **Brompton**, blooms well in winter; flowers very fragrant. Half-hardy biennial; one and a half feet high. *Six best colors mixed*.....10

" **Emperor, or Perpetual**, this beautiful and splendid variety of stock will bloom several years if protected from the frost; and if planted in pots early in spring, in green-house, will bloom the first autumn. The pots should be kept in a dry, cool place during winter, after blooming. The magnificent spikes of bloom are very rich and attractive, and for individual specimens are unequalled. Tender perennial; one and a half feet high. *Twelve most beautiful colors mixed*.....15

" **night scented, mathiola bicornis**, very sweet scented, the perfume being observable at a great distance, and as agreeable as mignonne; purple flowers.....15

" **night scented, mathiola tricuspidata**, valuable for edgings of beds; blossoms profusely till killed by frost. Mauve like, sweet scented flowers. This and the preceding are hardy annuals.....15

SUMMER CYPRESS—(See Belvidere).

SUNFLOWER—(*Helianthus*).

Sunflower.

Adapted by its stately growth for a back ground to a lawn, or a screen to hide unsightly places. It is also raised as an absorbent of miasma in damp or ill drained situations, thus preventing fevers. The flowers are really quite attractive. Plant the seed in spring, where desired, and thin to four feet apart in rows. Hardy annual; five feet high.

Sunflower, double (*Helianthus Californicus* fl. pl.), *very double*..... 5

" **Large Russian**, a very tall growing single variety, often fifteen to twenty feet high; the stalks are sometimes used for fuel..... 5

SWEET PEAS.
(*Lathyrus Odoratus*).

Showy, free flowering climber, and deservedly one of the most popular annuals that enrich the flower garden. The flowers are very freely produced, white, red, crimson, purple, black and striped, and quite fragrant. Plant four inches deep, very early in spring—the earlier the better. Hoe the earth towards the vines without ridging, and give support to the vine to run upon. Hardy annual; six feet high.

Sweet Peas, purple..... 5

" " **scarlet**..... 5

" " **striped**..... 5

" " **Painted Lady**..... 5

" " **invincible scarlet**..... 5

Sweet Peas.

Sweet Peas, invincible black..... 5

" " **mixed**..... 5

" " **Violet Queen**, a new and very beautiful variety, of rather dwarf habit, the colors ranging from deep mauve to light violet.....10

SWEET SULTAN—(*Centaurea*).

Handsome border plant of easy culture, bearing very fragrant, double, deep purple blossoms from July to October. They produce a striking effect in mixed borders, and are extremely useful for forming bouquets of cut flowers in connection with other colored flowers. Plant where required, in spring, and thin to six inches apart. Hardy annual, two feet high.

Centaurea, moschata atropurpurea, double purple 5

SWEET WILLIAM.
(*Dianthus Barbatus*).

A bed of the finer varieties sports into an endless variety of colors, and presents a beautiful sight. For display in the garden, the Sweet William is unsurpassed. The seed can be planted very early in spring, in open ground, and will blossom the following autumn; or it can be sown in August, and will make fine blooming plants for spring. The plants will bloom several years, but young plants bloom better, and seed should be sown every year. Hardy perennial; one and a half feet high.

Sweet William, double.

Sweet William.

Dianthus, barbatus, pure white, <i>pure white</i> flow- ers	10
" barbatus, black, reddish, velvety black.	10
" " fine mixed	5
" " mixed double, perfectly double, and great variety of colors	10

SWAN RIVER DAISY—(See *Brachycome*).

TAGETES—(See *Marigold*).

TASSEL FLOWER—(*Cacalia*).

A showy plant of easy culture, producing beautiful, scarlet and golden yellow, tassel shaped blossoms, from July to October. It is sometimes known as *Flora's Paint Brush*. Looks best when grown in clusters. Succeeds best in a mixture of fresh loam and leaf mold. Sow early in spring, in open ground, in clusters. Hardy annual; one and a half feet high.

<i>Cacalia, coccinea</i> , scarlet	5
" <i>aurea</i> , golden yellow	5
" mixed	5

TORENIA.

A very fine, new annual, with large, sky blue blossoms, with three large spots of dark indigo blue, and a yellow stain in the center. Sown from February till April, in pots, and kept under glass, it will flower from June to September. The prettiest annual for cultivation under glass, but will thrive well in open air during the warmer season of the year. In open air, the plants are dwarfer and more robust, flowering well till cold weather.

Torenia.

Torenia, Fournieri superbiens, the darkest spotted varieties

TREE CYPRESS—(*Ipomopsis*).

A wonderfully handsome plant, with fine, feathery foliage, somewhat like that of the cypress vine, and long spikes of beautiful flowers, dazzling scarlet spotted and marked with darker shades. It is equally desirable for out-door or conservatory cultivation. Sow the seed in August, in a dry situation; if the ground be at all wet, the plants will decay. Half-hardy biennial; three feet high.

Ipomopsis, elegans, scarlet

TRITOMA.

An interesting, half-hardy, summer and autumn blooming plant, producing magnificent spikes of rich, orange-red flower tubes. Needs protection of dry litter if left in the ground during winter; may be taken up in the fall, potted and kept from frost. Seeds should be sown in hot-bed or green-house, early in spring; the bulb which will be produced should not be watered too

Tree Cypress.

freely, nor forced till the succeeding spring, when it should be transplanted into rich, loamy soil.

Tritoma, uvaria grandiflora

TROPÆOLUM LOBBIANUM—(See *Nasturtium Tall*).

TROPÆOLUM MINOR—(See *Nasturtium Dwarf*).

TROPÆOLUM PEREGRINUM—(See *Canary Bird Flower*).

VALERIAN—(*Polemonium*).

An old, standard border plant, often called *Jacob's Ladder*, from its beautiful, pinnately cleft leaves. The flowers are lively blue, nodding at the end of upright

Valerian

stalks. It blooms in June, is of easy cultivation, perfectly hardy, and may be increased by dividing the roots. Sow early in spring, in open border, and thin to one foot apart. Hardy perennial; one and a half to two feet high.

Valerian, Greek (Polemonium cœruleum)

VERBENA.

No plant is more generally cultivated, or more eagerly sought after than the *Verbena*, and no plant excels it for masses in beds on the lawn. In the varieties may be found every color except yellow. The white is pure the crimson and scarlet so vivid, and the purple so deep, while the striped blossoms are so conspicuous, that they are very desirable. They flower perfectly well from seed sown in spring. If started in the house, in pots, in winter they will be in bloom sooner, but if sown in open ground

in May, they will bloom in August. Each plant will require a space of four feet. Tender perennial trailer; one foot high.

Verbena.

- Verbena. Aubletia grandiflora**, reddish purple... 5
 " **Niveni**, white; sweet scented... 10
 " **Vencsa**, rich purple... 5
 " **scarlet**, scarlet blossoms... 15
 " **Montana**, hardy; from Rocky Mountains; will stand our winters out of doots; rose, changing into lilac... 15
 " **Defiance**, seed may be relied upon to produce the true, deep scarlet color... 20
 " **hybrida**, blue, all shade of blue... 20
 " " **Italian striped**, beautiful... 20
 " " **Auriculiflora**, various shades, all with distinct eye of white or rose... 20
 " **hybrida, maxima perfecta alba**, produces large, pure white flowers of standard perfection; fine for florists... 25
 " **extra choice mixed**, seed saved from all named flowers; very choice... 20
 " **fine mixed**, embraces all colors... 10
 " **mixed**... 5

Vinca

VINCA.

A genus of ornamental, free flowering, green-house perennials, with glossy green foliage and beautiful circular flowers. If sown early under glass and transplanted in a warm situation, they will bloom in the summer and autumn, and may be potted for the house before frost. Two feet high.

- Vinca, alba**, white, with red eye... 10
 " " **pura**, pure white... 10
 " " **rosea**... 10

VIOLA TRICOLOR—(See Pansy).
VIOLET—(*Viola Odorata*).

The Violet should not be wanting in any garden, on account of its fragrance and early appearance. A single flower will perfume a whole room. Succeeds best in a shady, sheltered place, and can be easily increased by dividing the roots. The Violet is an emblem of faithfulness. Hardy perennial; six inches high.

Violet.

- Violet, sweet scented English** (*Viola Odorata*), flowers double and single:
 white; fragrant... 10
 " **white** (*Viola cornuta alba*), large, white blossoms... 10
 " **yellow** (*Viola cornuta lutea grandiflora*)... 10
 " **Mauve Queen**, mauve colored... 10
 " **Purple Queen**, deep, fine purple... 10

VIRGINIA CREEPER—(*Hedera*)—(*Ampelopsis Quinquifolia*).

The Virginia Creeper, or American Woodbine, is hardy, very ornamental, of rapid growth, and the foliage is luxuriant and beautiful. It is often made to cover the walls of houses forty or fifty feet high, clinging by its tendrils. The flower is reddish green, not showy, but is succeeded by clusters of nearly black berries, at which time the tendrils and stalk turn to a rich crimson color. It is exceedingly ornamental and conspicuous in October, after the first frost.

Virginia Creeper... 10

VIRGINIA STOCK—(*Malcomia*).

Hardy annuals, very useful for border or edging. A continual succession of blossoms may be kept up the whole season by sowing at intervals through the spring

Virginia Stock.

and summer. The flower and plant are quite as desirable as the candytuft; grows about nine inches high.

Virginia Stock, red and white mixed... 5

WAITZIA.

A class of everlastings, with clusters of most beautiful flowers. Very useful in the formation of winter bouquets for which purpose they should be picked as soon as open, and dried in the shade. They are very tender annuals, and should be started under glass, and transplanted as soon as danger of frost is over. They like a soil of sandy peat or leaf mold. One foot high.

Waitzia, aurea, yellow.....20
 " *grandiflora*, large, golden flowers.....20

WALL FLOWER—Cheiranthus Cheiri.

Wall Flower, Double.

Wall Flower, mixed double.....10
 " *Early Brown*, brownish red, fragrant flowers; large, thick spikes; early. Tender biennial. 10
 " *Tom Thumb*, new Golden, a new variety, free flowering, dwarf and compact habit; highly recommended for spring bedding, for which it is invaluable.....15

WAHLENBERGIA.

A very interesting family of hardy, perennial plants, with campanula-like flowers of white and blue, which are exceedingly beautiful. Sow under glass, or in the house, early in April, and transplant to open ground in May. Four feet high.

Wahlenbergia, grandiflora alba, pure white.....15
 " *grandiflora cœrulea plena*, deep blue.....15

WHITLAVIA.

A pretty plant, with delicate, handsome foliage, producing a constant succession of bright blue, and pure white, bell shaped flowers, in drooping clusters, half an inch in length. In heavy, wet soils it does not succeed well, but in light, sandy loam, few flowers give more satisfaction. Sow the seed in open border early in spring. Hardy annual; one foot high.

Whitlavia, grandiflora.....5

WIGANDIA.

Very ornamental plants with immense veined leaves, and stems covered with crimson hair. It grows rapidly, and should be formed into a bush. Its large leaves, and

clusters of lilac flowers which continue to open in succession for a long time, lend the plant a tropical aspect, and make it one of the most valuable ornamental foliage plants for garden and lawn decoration. Seeds, if sown early in spring, in hot-bed, will produce large plants by the middle of summer.

Wigandia, caracasana.....25

WISTARIA.

One of the most beautiful and rapid growing of hardy

climbers, growing, when well established, in good soil, from fifteen to twenty-five feet in a season. Frequently blooms both in spring and fall; the pale blue, pea shaped flowers are borne in long, drooping clusters similar in size and shape to a bunch of grapes. It thrives best in a light, rich soil, and should be trained against a south wall or veranda. Seeds should be sown in mellow loam early in the spring; if a green-house or hot-bed is available, start in winter, and when plants are a foot high, transplant into situations where they are to remain.

Wistaria, sinensis.....20

Wistaria.

XERANTHEMUM.

Of neat, compact habit, free flowering, and of the easiest cultivation. The leaves are covered with a silvery down, and the flowers are pure white, deep purple and yellow, single and double. If gathered before fully opened, and dried in the shade, they will retain their beauty for years. They make fine winter bouquets alone or mixed with grasses. Sow in spring, and thin to one foot apart. Hardy annual; one foot high.

Xeranthemum, mixed.....10

ZEAL MAIZE.**(Striped Japanese Corn).**

An ornamental foliage plant of much beauty. It is a species of corn, with large foliage, the leaves being beautifully striped with white and green. Half-hardy annual, from Japan; six feet high.

Zea Japonica, fol. variegatis, striped foliage.....5

Zinnia, double.

ZINNIA.

A very showy plant, with large, double flowers, which, when fully expanded, form hemispherical heads, become densely imbricated, and might easily be mistaken for dwarf dahlias. The colors run through all the shades of carmine, lilac, scarlet, purple, crimson, yellow, to pure white. If any single blossoms appear, they should be at once pulled up. Sow the seed early in spring, in open ground, and transplant to one and a half feet apart, in good, rich soil. Half-hardy annual; one and a half feet high.

By careful selection and several years cultivation, the European florists have obtained the following distinct varieties of this valuable plant. The seeds we offer can be entirely relied upon to reproduce the different colors, almost without sporting.

Zinnia, double carmine	10
" " scarlet	10
" " purple	10
" " crimson	10
" " orange	10

Zinnia, double, lilac	10
" " deep scarlet	10
" " deep purple	10
" " alba plenissima, pure white	10
" " choice mixed, very fine	10
" " mixed	5
" elegans plenissima, Emperor Francis Joseph, a new, extra double variety of superior quality; deep purple upon orange ground; beautiful	10
" Haageana fl. pl., a perfectly double variety, of deep orange color, finely margined with bright golden yellow; beautifully imbricated, representing a depressed globular cone	10
" Darwini, fl. pl., a distinct class of zinnias of most beautiful form and every conceivable shade of color. There are four classes known as <i>nana compacta</i> , <i>major</i> , <i>pyramidalis</i> and <i>vitata</i> , about twelve colors in each class. The seed we offer comprises a mixture of all the above classes	20

CHOICE FLOWER SEEDS IN BULK.

(FOR DESCRIPTIONS, SEE PRECEDING PAGES.)

For such of our customers as make extensive sowings of flower seeds, and for florists who require larger quantities of Flower Seeds than are usually sold in packets, we offer some of the leading sorts by weight. This list embraces the most desirable kinds for bedding, edging and ornamental planting. Those who plant largely, will find this a very economical mode of securing their seed.

We send free by mail, at prices annexed, but no discount or premium can be allowed on Flower Seeds by weight. Half ounces will not be supplied of such kinds as sell for less than 50 cents per oz.

	PER OZ.		PER OZ.
<i>Ageratum</i> , Mexicanum	60	<i>Larkspur</i> , double dwarf rocket, mixed	60
<i>Alyssum</i> , sweet	60	<i>Linum</i> , grandiflorum rubrum (<i>Scarlet Flax</i>)	60
" golden	75	<i>Lobelia</i> , speciosa	2 00
<i>Amaranthus</i> , melancholicus ruber	60	<i>Love Grove</i> (<i>Nemophila</i>), mixed	40
" tricolor (<i>Joseph's Coat</i>)	75	<i>Marvel of Peru</i> (<i>Four O'Clock</i>), mixed	30
<i>Antirrhinum</i> , fine mixed (<i>Snappedragon</i>)	1 00	<i>Mignonette</i> , sweet, large flowering . per lb., \$2.00 ..	20
<i>Aquilegia</i> , fine mixed (<i>Columbine</i>)	75	" tall pyramidal	30
<i>Aster</i> , mixed German quilled	1 00	<i>Nasturtium</i> , dwarf, mixed	50
" Truffaut's Perfection	5 00	" lobbianum, tall	40
<i>Balloon Vine</i>	50	<i>Pansy</i> , extra choice mixed, from named flowers	4 00
<i>Balsam</i> , double camellia, mixed	1 25	" fine mixed, all colors	2 00
" double white	1 50	<i>Petunia</i> , large flowered, mixed	3 00
" mixed double dwarf	1 00	" fine mixed	1 00
<i>Canary Bird Flower</i>	1 00	<i>Phlox Drummondii</i> , choice mixed	1 50
<i>Candytuft</i> , white, fragrant	40	" fine mixed	75
" white rocket	60	<i>Poppy</i> , carnation, double, mixed	50
" fine mixed	40	<i>Portulaca</i> , fine mixed	60
<i>Canna</i> , Indica, mixed	50	" double, mixed	6 00
<i>Canterbury Bell</i> , double, mixed	1 00	<i>Pyrethrum</i> , aureum (<i>Golden Feather</i>)	1 50
<i>Celosia</i> , cristata (<i>Cockscomb</i>) dwarf, mixed	1 00	" roseum (<i>Insect Powder Plant</i>)	1 00
" tall	75	<i>Ricinus</i> (<i>Castor Bean</i>), mixed	30
<i>Centaurea</i> , gymnocarpa, silvery foliage	2 50	<i>Salpiglossis</i> , fine mixed	1 00
<i>Cineraria</i> , maritima candidissima (<i>Dusty Miller</i>) ..	2 00	<i>Scabiosa</i> (<i>Mourning Bride</i>)	60
<i>Convolvulus</i> , major (<i>Morning Glory</i>)	25	<i>Sensitive Plant</i> , mimosa	75
" minor, mixed (<i>Dwarf Morning Glory</i>)	30	<i>Smilax</i>	3 00
<i>Cypress Vine</i> , scarlet	60	<i>Sweet Peas</i> , purple	25
" white	60	" scarlet	25
" mixed	50	" striped	25
<i>Dianthus</i> , chinensis fl. pl. (<i>Double China Pink</i>) ..	1 00	" Painted Lady	25
<i>Digitalis</i> (<i>Foxglove</i>), mixed	50	" invincible black	25
<i>Euphorbia</i> , variegata	60	" mixed	15
<i>Forget-Me-Not</i> , myosotis palustris	8 00	<i>Sweet William</i> , double, mixed	1 50
<i>Gilia</i> , tricolor	40	" fine mixed	50
" capitata	40	<i>Verbena</i> , extra choice mixed, splendid	3 00
<i>Hollyhock</i> , Chater's finest double mixed	3 00	" fine mixed, all colors	1 50
" fine double mixed	1 00	<i>Violet</i> , sweet scented	2 00
<i>Lantana</i> , finest hybrids, mixed	1 00	<i>Zinnia</i> , choice double, mixed	75

The following Classification will be of convenience to our
Customers in making Selections.

FLOWERS BLOOMING THE FIRST SEASON.

Abronia.	Canary Bird Flower.	Four O'Clock.	Leptosiphon.	Pink.
Acroclinium.	Candytuft.	Gaillardia.	Limnanthes.	Poppy.
Adonis.	Castor Bean.	Gilia.	Lirum.	Portulaca.
Ageratum.	Catananche.	Globe Amaranth.	Lobelia.	Primrose.
Agrostemma.	Catchfly.	Gnaphalium.	Love Grove.	Rhodanthe.
Alonsoa.	Celosia.	Godetia.	Love-in-a-Mist.	Ricinus.
Alyssum.	Centaurea.	Gourds.	Lupin.	Rocket.
Amaranthus.	Chrysanthemum.	Grammanthes.	Lychnis.	Salpiglossis.
Ammobium.	Clarkia.	Gypsophila.	Lythrum.	Salvia.
Anagallis.	Clintonia.	Helichrysum.	Marigold.	Sanvitalia.
Argemone.	Cockscomb.	Heliotrope.	Martynia.	Sensitive Plant.
Asperula.	Commelina.	Helipterum.	Maurandia.	Snaptadragon.
Aster.	Convolvulus.	Hibiscus.	Mignonette.	Stocks.
Bachelor's Button.	Convolvulus Minor.	Honesty.	Mimulus.	Sunflower.
Balsam.	Cuphea.	Humea.	Molucella.	Sweet Peas.
Bartonia.	Cypress Vine.	Hyacinth Bean.	Momordica.	Sweet Sultan.
Belvidere.	Datura.	Ice Plant.	Morning Glory.	Tassel Flower.
Brachycome.	Didiscus.	Indian Shot.	Mourning Pride.	Verbena.
Browallia.	Eschscholtzia.	Ipomea.	Nasturtium.	Virginia Stock.
Calempelis.	Euphorbia.	Jacobæa.	Nolana.	Waitzia.
Calandrinia.	Eutoca.	Job's Tears.	Nycterinia.	Whitlavia.
Calliopsis.	Fenzlia.	Kaulfussia.	Petunia.	Xeranthemum.
Callirhoe.	Forget-Me-Not.	Larkspur.	Phlox Drummondii.	Zinnia.
Campanula.				

FLOWERS BLOOMING THE SECOND SEASON.

Adlumia.	Canterbury Bell.	Foxglove.	Lobelia.	Primrose.
Agapanthus.	Carnation.	Fragaria.	Lychnis.	Salvia.
Agrostemma.	Cedronella.	French Honeysuckle.	Matricaria.	Statice.
Alyssum.	Chrysanthemum.	Gladiolus.	Oxalis.	Stocks.
Anchusa.	Clematis.	Glaucium.	Paony.	Sweet William.
Anemone.	Cobæa.	Hollyhock.	Pampas Grass.	Tree Cypress.
Arabis.	Columbine.	Jasminum.	Pansy.	Valerian.
Armeria.	Crucianella.	Larkspur.	Peas.	Violet.
Auricula.	Cyclamen.	Lily of the Valley.	Pentstemon.	Wahlenbergia.
Azalea.	Dahlia.	Linaria.	Phlox Perennial.	Wall Flower.
Bocconia.	Daisy.	Linum.		

ORNAMENTAL FOLIAGE PLANTS AND GRASSES.

Agrostis.	Centaurea.	Feather Grass.	Job's Tears.	Perilla.
Amaranthus.	Cineraria.	Ferns.	Love Grass.	Pyrethrum.
Bocconia.	Coleus.	Hordeum.	Palm.	Sedum.
Briza.	Erianthus.	Humea.	Pampas Grass.	Wigandia.
Canna.	Euphorbia.	Ice Plant.	Pennisetum.	Zea Maize.
Castor Bean.				

ORNAMENTAL CLIMBERS.

Abobra.	Bryonopsis.	Cypress Vine.	Maurandia.	Peas.
Adlumia.	Calempelis.	Gourd.	Momordica.	Smilax.
Aristolochia.	Canary Bird Flower.	Hyacinth Bean.	Morning Glory.	Sweet Peas.
Balloon Vine.	Celastrus.	Ipomea.	Nasturtium, Tall.	Virginia Creeper.
Bignonia.	Cobæa.	Lophospermum.	Passion Flower.	Wistaria.

EVERLASTING FLOWERS.

Acroclinium.	Gnaphalium.	Helichrysum.	Honesty.	Waitzia.
Ammobium.	Globe Amaranth.	Helipterum.	Rhodanthe.	Xeranthemum.

SEEDS DESIGNED FOR GREEN-HOUSE.

Abutilon.	Centaurea.	Fuchsia.	Mesembryanthemum.	Sedum.
Ardisia.	Chrysanthemum.	Geranium.	Mimulus.	Smilax.
Alonsoa.	Cineraria.	Gloxinia.	Nasturtium.	Solanum.
Auricula.	Clianthus.	Gunnera.	Nierembergia.	Stevia.
Azalea.	Coleus.	Humea.	Nymphæa.	Stocks.
Balloon Vine.	Convolvulus.	Heliotrope.	Oleander.	Tritoma.
Begonia.	Cuphea.	Ipomea.	Palm.	Torenia.
Bocconia.	Cyclamen.	Jacobæa.	Pampas Grass.	Verbena.
Calceolaria.	Daisy.	Lantana.	Pansy.	Vinca.
Calla.	Erica.	Lobelia.	Passion Flower.	Violet.
Camellia.	Erythrina.	Lophospermum.	Perilla.	Wall Flower.
Carnation.	Ferns.	Maurandia.	Primula.	

PLANTS FOR 1884.

We present our customers with a largely increased list of Plants from which to select, embracing nearly all of the valuable newer varieties that have been tested and found worthy a place in our catalogue. Rooted plants, such as we send out, seldom fail to give perfect satisfaction; not nearly the skill and patience are required with Plants that are necessary to produce bloom from the seed. Our system of packing is now so perfect that Plants can be sent about as safely in the coldest weather in winter, as in summer. It is now eleven years since we added the Plant feature to that of our seed business, and we are glad to say that the instances have been very rare where the Plants we sent out have failed to give satisfaction.

The poor as well as the rich are fast learning that a few nice, healthy Plants in their dwellings are a necessity rather than a luxury. They are regarded almost as members of the household, and many a delightful hour is spent in their companionship. How much real satisfaction is afforded in being able to offer your retiring guest in mid-winter a little bouquet of living flowers, grown in your own house, and perfected under your own supervision. Even the green leaves bring cheerfulness and sunshine. We cannot too strongly urge our friends to have some flowers and plants for winter blooming, at which season of the year even the most insignificant flower is more welcome than the most gorgeous display in summer, when all nature is blooming.

It is now well understood that we have unprecedented facilities for promptly and faithfully executing orders for plants, through our connection with one of the largest and most favorably known houses in central New York, with whom we have dealt for many years, and who have gained an enviable reputation both for us and themselves, by growing and sending out only healthy, fine specimens of plants. Their system of packing and facilities for shipping are complete, and perfect satisfaction can be relied on. The order and money must be sent to us, but the plants will be sent to party ordering direct from the green-house in central New York.

PLANTS BY MAIL.—At the prices quoted, except where expressly stated otherwise, we send plants by MAIL, POSTAGE PREPAID BY US. The rate of postage on seeds, bulbs and plants is *sixteen cents per pound*, so only small plants can be sent by mail. They will, however, be well rooted and healthy, and we will also wrap them carefully in oiled cloth, and use every other precaution to have them reach their destination safely and in good condition. In remote places, where the express charges would be exorbitant, we can *only* send plants by mail; and we cannot undertake to send to such remote places, under any circumstances, those plants, like Bouvardias and Camellias, which are offered to be sent only by express.

PLANTS BY EXPRESS.—In all cases where it is apparent that the express charges will not be exorbitant (from the long distance), it is much preferable to have your plants sent by express. The express charges will cost the purchaser a little more, but you will be sure of getting much larger, finer plants, and we will add to all good sized orders *a few extras*, to compensate for the small difference in cost between mail and express. Parties living at a great distance, such as Texas, Louisiana or the Territories, would not be justified in ordering by express, as the charges would be more than the plants would be worth when received. We shall use our judgment and experience in shipping for the benefit and protection of our customers. When plants are sent by express, the purchaser is in every case to pay the transportation charges.

BOXES AND PACKING.—We make no charges for boxes and packing, and the plants will be in fine condition when they leave us, and properly and carefully packed, but we cannot undertake to *guarantee* their condition when received. Our responsibility ceases with the delivery, in good order, to the express company or post office.

TERMS OF PLANTS.—The terms are strictly CASH WITH THE ORDER. The best method is to send draft on New York or Chicago to our order, or purchase a post office order payable to us. When neither of these is convenient, send the currency in registered letter.

ORDERS FOR PLANTS MUST AMOUNT TO FIFTY CENTS.—We cannot afford to give our attention to orders for plants amounting to less than fifty cents, unless in addition to the amount for plant or plants wanted, ten cents is sent. The office work on a small order is the same as on a larger one, and it also requires nearly as much time to pack it, and takes almost as much postage, as an order double or triple the size. If your order for plants amounts to less than fifty cents, ten cents extra must be added.

HOW TO MANAGE PLANTS WHEN RECEIVED BY MAIL.—When plants are received *through the mails*, they are sometimes lost for want of *proper and immediate* care; though this rarely occurs when sent by *express*. If the following brief directions are followed, they can often be saved: As soon as the box is opened, and before removing the moss in which they are packed, plunge them in water, allowing them to remain an hour, after which remove the moss and pot in good soil; then water freely and keep shaded for a few days, giving but little water until the roots begin to grow.

COLLECTIONS OF PLANTS.

For the convenience of our customers, we have made the following selections of plants which we offer at reduced rates. We have bestowed great care on the selections, and none but good, healthy plants will be sent. The varieties sent will all be labeled, but *exclusively our choice*, though only good sorts, such as are described in our catalogue, will be sent. We are only enabled to offer them at the following low prices, by *retaining the privilege of selecting the varieties ourselves when we fill the order*.

In ordering, please be particular to give the correct letter of the collection.

Collection A—Free by mail for \$1.00.—1 Fuchsia, 1 Tea Rose, 2 Tuberoses, 1 Lemon Verbena, 1 Heliotrope, 1 Salvia, 1 Carnation, 2 Gladioli.

Collection B—Free by mail for \$1.00.—1 Rose Geranium, 1 Silver Leaf Geranium, 1 Tea Rose, 2 Carnations, 1 Heliotrope, 1 Begonia, 2 Tuberoses, 1 Gladiolus.

Collection C—Suitable for hanging baskets or window gardens free by mail for \$1.25.—12 basket plants, our choice of sorts.

Collection D—Suitable for hanging baskets or window gardens, free by mail for \$1.25.—1 Geranium, 2 Begonias, 1 Coleus, 1 Achyranthus, 1 Cuphea, 6 assorted vines, our choice.

Collection E—Free by mail for \$2.00.—1 Fuchsia, 2 Tea Roses, 6 Verbenas, 2 Geraniums, 1 Cuphea, 1 Hydrangea, 2 Tuberoses, 2 Chrysanthemums, 2 Hybrid Perpetual Roses.

Collection F—Free by mail for \$2.00.—1 Fuchsia, 2 Heliotropes, 1 Dielytra, 2 Tea Roses, 2 Single Geraniums, 3 Double Geraniums, 3 Verbenas, 2 Tuberoses, 1 Gladiolus.

The following four collections can be sent only by express, the purchaser paying charges:

Collection G—By express only for \$3.00.—12 Verbenas, 6 Tuberoses, 6 Gladioli, 6 Geraniums, 1 Heliotrope, 3 Tea Roses, 2 Hybrid Perpetual Roses, 2 Fuchsias, 2 Begonias, 1 Violet, 3 Pansies, 2 Daisies.

Collection H—By express only for \$3.00.—6 Verbenas, 6 Tuberoses, 12 Gladioli, 3 Geraniums, 1 Heliotrope, 1 Veronica, 2 Tropæolums, 1 Passion Vine, 1 Lantana, 2 Dahlias, 1 Jasmine, 6 Coleus, 2 Ageratums, 1 Calla Lily, 1 Abutilon.

Collection I—By express only for \$5.00.—12 Coleus, 6 Achyranthus, 6 Verbenas, 3 Fuchsias, 3 Heliotropes, 1 Lemon Verbena, 6 Geraniums, 1 Feverfew, 1 Smilax, 3 Ferns, 1 Lantana, 1 Petunia, 6 Tuberoses, 6 Gladioli, 2 Honeysuckles, 3 Abutilons, 3 Chrysanthemums, 1 Hydrangea, 3 Tea Roses, 3 Hybrid Perpetual Roses.

Collection J—By express only for \$5.00.—2 Lobelias, 2 Ageratums, 6 Geraniums, 6 Tea Roses, 3 Dahlias, 2 Madeira Vines, 6 Pansies, 2 Dielytras, 2 Astilbe Japonica, 2 Geraniums (Ivy Leaf), 1 English Ivy, 1 Ampelopsis Quinquefolia, 2 Tuberoses, 2 Passion Vines, 2 Salvias, 6 Verbenas, 3 Coleus, 3 Carnations, 3 Begonias, 2 Centaureas, 2 Calceolarias, 2 Heliotropes.

PLEASE READ AND OBSERVE TERMS ON PAGE 94 WHEN ORDERING PLANTS.

Abutilons, 20 cents each, except where noted.

Yellow Boy, Flowers golden yellow, extra.

Gipsy Girl, Crimson

John Hopkins, lemon yellow.

Darwinii, flowers a deep orange scarlet, veined with pink.

Boule de Neige, the best white flowering abutilon that has yet been introduced.

Roseum, a free growing variety; flowers of a fine rose color.

Signor Rotuse, very free bloomer, of good habit; flowers orange and scarlet; very large.

Snow Storm, pure white; very dwarf; profuse bloomer.

Thompsonii, leaves spotted with bright golden yellow; one of the finest ornamental leaved plants.

Vexillarium var., climbing habit, veined and striped; scarlet and yellow.

Achania, *malvaviscus*, strong growing, ever blooming, green-house shrub; flowers intense scarlet. 25 cents.

Achyranthus, bright leaved plants, used largely in ribbon beds and masses. Will stand the hottest weather. 20 cents each.

Aureus reticulatus, leaves veined, stalks light carmine.

Emersonii, an improvement on *A. Lindenii*, much lighter, a large portion of the foliage being a beautiful pink.

Hoveyi, large, crimped leaves, beautiful carmine, blotched with bronze.

Lindenii, deep blood red.

Agapanthus, *umbellatus var.* 30 cents to \$1.00.

Agave, *Americana var.*, the well known variegated Century Plant. Valuable as a pot plant or for decorating lawns. 50 cents to \$1.30.

Ageratum, 20 cents each.

Blanche, pure white; dwarf.

Cannell's Dwarf, very bushy; deep blue.

Aloysia, *citriodora* (Lemon Verbena), of this well known shrub so indispensable for the delightful fragrance of its leaves, we offer fine plants. 20 cents.

Alyssum, *double white*, similar in every way to the common Sweet Alyssum, but with double flowers. It is valuable for cut flowers at all seasons. 15 cents.

Var., this is one of the most useful of variegated plants; good for bedding and cut flowers. 15 cents.

The Gem, new; an improved form of the variegated plants, with double white flowers. 25 cents.

Alyssum, Sweet.

Ampelopsis, *Veitchii*, a dwarf variety of the Virginia Creeper. The young growth during summer is a dark purple, changing in fall to the brightest tints of scarlet, crimson and orange. It clings to stone work or wood, and is a very rapid grower. 25 cents.

Quinquefolia, the well known Virginia Creeper, found in many parts of the country. It is a free grower, of strong habit, leaves splendidly variegated in the fall. 25 cents.

Aspidistra, *variegata*, a splendid striped and curious plant for Wardian Cases, and equally as good for Aquariums. 50 cents.

Lurida, plain green, equally as good for same purposes. 25 cents.

Astilbe, *Japonica* (Spirea Japonica), about one foot high, perfectly hardy, bearing its flowers in branching, feathery like spikes of purest white, and in great abundance. Valuable for winter blooming, and is extensively used by bouquet makers for forcing. 25 to 50 cents.

Basella Kubra var., succulent foliage, of a grayish green, very nicely bordered with creamy white. 20 cents.

Azalea, *Indica*, free flowering, green-house shrubs; flowers of all colors. 25 cents to \$2.00.

Begonia, *flowering varieties*, desirable plants, blooming more or less profusely from March to November; varying in color from white and rose, to bright

scarlet, assimilating in character to the well known Begonia Rex, in their great diversity of picturesque markings; rich crimson tinted stems, and silvery leaf markings. 20 cents each, except where price is given.

Flowering Begonia.

Agrostima prita, spotted white. 25 cents.

Glancophylla scandens, a creeping or drooping variety, peculiarly adapted for hanging baskets; large panicles of orange-salmon blossoms. One of the most beautiful plants in cultivation, when grown singly in hanging baskets. 30 cents.

Grandiflora rosea.

Hybrida grandiflora, rosy pink.

Hydrocotylon, 25 cents.

Manicata, 25 cents.

Palmata, a very ornamental variety, with peculiar palm shaped leaves. 30 cents.

Parvia flora, clear white; compact and dwarf.

Rex, large leaved varieties. 50 cents.

Begonia, rex.

Rubra, one of the most valuable acquisitions to winter flowering plants. Leaves dark green; flowers rosy scarlet, glossy and wax like. It is a model of perfection. 25 to 50 cents.

Sanguinea.

Saunderssonii, scarlet-crimson.

Subpeltatum nigricans, leaves are a rich shade of crimson; flowers bluish white. 30 cents.

Welltonensis, beautiful pink; winter blooming.

Bouvardia, valuable as winter blooming plants, equally desirable for bedding. Beginning to bloom in August, they continue until frost. Bouvardias are sent by express only. 25 cents each, except where price is given.

Alfred Neuner, white, double flowering. The flowers are rather larger than those of the single flowering, and composed of three perfect rows of petals of the purest waxy white color, each floret resembling a miniature tuberosc. 30 cents each.

Bouvardia, double white.

Elegans, scarlet-vermilion; trusses large and full. 25 cents.

Lientha, dazzling scarlet; small and compact. 25 cents.

President Garfield, double pink. 30 cents.

The Bride, pink; soft and pretty shade. 25 cents.

Vreelandii, pure white. 25 cents.

Cactus, best varieties 25 cents to \$2.00 each.

Calla, *Ethiopica*, very large, tube shaped, white flower. 25 to 50 cents each; \$2.50 per dozen.

Caladium, esculentum.

Caladium, *esculentum*, one of the best plants for lawns or center of large flower beds. Plants are produced from bulbs, like the Calla. Bulbs 25 to 50 cents.

Caprosma Bourina var., foliage glossy green, bordered with white, one of the best variegated plants grown. 25 cents.

Fancy, leaves spotted and striped in almost every color. 50 to 75 cents.

Camellia, *japonica*, one of the most popular greenhouse plants for winter bloom. Sent by express only. \$1.00 to \$5.00.

Campsidium, *filicifolium*, an elegant climber of rapid growth, for greenhouse culture, the leaves of which much resemble the fronds of a fern in miniature. May be grown as a pot plant, or trained to the rafters. 30 cents.

Canna, *Indica*, plants used largely in sub-tropical gardening, for the grand effect which their rich and varied colored leaves produce. 25 cents.

Carnations, *monthly*, indispensable either for decor-

Canna.

Carnation

ating the flower garden in summer, or green-house or parlor in winter. The flowers are of nearly every shade and marking, and most of them delightfully fragrant. 20 cents each, except where price is given.

Astoria, flaked red and yellow. 25 cents.

Chas. Summer, new; deep rosy pink; very double; free bloomer.

Crimson King, dark, rich velvety crimson; large, full flower. 25 cents.

Hinsdale, white, flaked with pink; fringed; very free and early.

Lady Emma, brilliant scarlet-crimson; fine form. 25c.

La Purite, carmine.

La Purite var., scarlet, striped.

Lilian, white, flaked and striped reddish purple.

Mrs. Henderson, a new scarlet carnation. 25 cents.

Peter Henderson, double white perpetual, this is one of the very best sorts yet introduced. It will produce twice the number of flowers, and of twice the size of any other.

President DeGraw, white.

Snowdon, pure white, very dwarf; its merits are that the flowers are of the purest white, borne in unequalled profusion on plants that rarely exceed one foot in height. This quality of dwarfness makes it exceedingly valuable as a pot plant for the parlor, or for market purposes.

Centaurea.

Centaurea, gymnocarpa, drooping habit silvery grey; valuable plant to contrast with *Coleus* and *Achyranthus*. 25 cents.

Chrysanthemum, this favorite autumn flower, since

the addition of so many choice varieties, has become still more popular; they are particularly suited for pot culture, while in any place south of New York they are perfectly hardy. The following are the best, selected from over one hundred varieties. 20 cents.

Amphilla, bright crimson; flowers medium size.

Alphonso, maroon; tipped yellow; extra.

Countess of Derby, pearl lilac, globular flowers; large.

Elaine (Japan), pure white; petals long, narrow.

Fulgare (Japan), tasseled; purple, crimson, white.

Gazelle (Japan), crimson, gold and brown; extra.

Geo. Peabody (large flowering), white, back of petals lilac.

Grandiflorum (large flowering), golden yellow.

Grand Turk (Japan), purple, changing to pearl white.

Geo. Glenny (large flowering), rich lemon yellow.

Guernsey Nugget (large), pale yellow; extra.

Gloria Mundi (Japan), yellow; extra large

Jardin des Plantes (Japan), rich golden yellow.

Juvena (Japan), Tasseled crimson; extra.

Laciniatum (Japan), tasseled white; extra.

Le Charmes, tasseled; lilac and purple.

Mrs. G. Rundel (large), pure white; incurved.

White Globe (Pompon), pure white; fine. 20 cents each; \$2.00 per dozen.

Cineraria, maritima, white foliage plant, similar to *Centaurea*, with deeply cut leaves. 20 cents.

Clematis.

Clematis, Jackmanii, the flowers when fully expanded are from four to six inches in diameter, of an intense violet-purple, and rich velvety appearance. It is perfectly hardy, and blooms continuously from July until cut down by the frost. 50 cents to \$1.50.

Languinosa candida, large, handsome and best white. 50 to 75 cents.

Mrs. James Bateman, new; pale lavender. 50 to 75c.

Rubella, rich velvety claret color. 50 to 75 cents.

Cobæa, scandens, a most useful climber on account of its rapid growth, and large, bell shaped flowers. 25c.

Coleus, these beautiful foliage plants are almost in-

dispensable in the formation of flower gardens. 15 cents each; \$1.50 per dozen; \$10.00 per 100, by express.

Black Prince, deep shade of maroon.

Crimson Velvet, maroon.

Excelsior.

Picta.

Mrs. Brown, yellowish green, netted with white; extra.

Mrs. Garfield, crimson, veined with pink.

Mrs. Shuster.

Superbissima.

Mrs. Wilson, ground light yellow, veined with pink and maroon.

The Shah, very striking, half the leaf assuming a golden yellow as soon as the plant is grown.

Velvet Crimson, a deep, rich shade of carmine.

Verschafieldii, velvety crimson; finest bedding sort.

Convolvulus, mauritanicus, a favorite drooping basket plant, with large, delicate blue flowers. 20 cents.

Cyclamen, persicum, a fine, ornamental, green-house plant; both flowers and leaves are valuable in floral work. 25 to 50 cents.

Cyperus, a grass like plant, surrounded at the top with a whorl of leaves. Fine for aquariums, window gardens, etc.

Alternifolius, bright green. 20c.

Alternifolius variegatus, of beautiful form, striped with white. 30 to 50 cents.

Cyclamen.

Dahlia, the Dahlia has always been a favorite for autumn flowering. The flowers are so symmetrical and perfect, and the range of brilliant colors so large and varied, that they will always be popular where display is wanted. The roots are tender, and easily injured by frost. They should be set out three feet apart, after all danger of frost is over, and during winter, placed in a cool cellar, and not allowed to freeze. The plants should be supported by tying to stakes.

Dahlia.

Our collection of mixed dahlias, taken from over one hundred varieties, is the best ever offered to the public, comprising all the positive colors, with their most striking shades. Ready for shipment about April 1st.

	EACH.	DOZ.	100
Extra choice mixed.....	25	2 50	15 00
Fine mixed.....	20	2 00	8 00

The following varieties of named dahlias are worthy the attention of the amateur or professional florist, being a very choice selection. 25 cents each; \$2.50 per doz.

Ben. Butler, orange, crimson tipped.

Bride, white, edged purple.

Caroline, dark scarlet.

Exquisite, golden yellow ground, pointed with scarlet.

Golden Fleece, primrose yellow, shaded.

German Boy, amber yellow.

Hector, cherry red.

Laura, claret.

Leader, dark purple.

Little Model, rosy crimson.

Loban Cadob, scarlet.

Lurline, light amber.

Miss King, bright orange, crimson edge.

Oriental, white, distinctly striped purple.

Signet, lilac, crimson striped.

Snowflake, pure white.

Striped Lady, crimson, striped orange.

Susan Ingram, deep maroon.

Wilson Hunt, orange, tipped pink.

Wm. Penn, blood orange.

Daisies, double white and red. 10 cents each; \$1.00 per dozen; \$6.00 per 100, by express.

Dracæna, Australis (Dragon Tree), wide, green foliage. 25 cents to \$1.00.

Congesta, narrow, green leaves. 75 cents to \$1.50.

Guilfoyleii, variegated; very showy. \$1.50 to \$3.00.

Terminalis, rich crimson foliage, marked pink and white. 50 cents to \$2.00.

Duranta, Baumgartii fol.

var., beautiful foliage plant, of tall and branching habit; leaves marked half their depth with golden yellow. 30 cents.

Echeveria, a genus of succulent plants, pretty and interesting. Five varieties, 25 cents each.

Eucharis, Amazonica, a lovely green-house plant from the river Amazon. Flowers pure white, star shaped and very fragrant. It requires a warm atmosphere and plenty of moisture. 25 cents to \$1.00.

Euonymus, japonicus aureus, handsome, evergreen shrub, with bright yellow blotch in the center of the leaf. An excellent house plant for winter, growing well in the shade. 25 cents.

Japonica radicans variegata. 25 cents.

Euphorbia, splendens, bright scarlet flowers, with yellow center. 25 to 50 cents.

Farfugium, Grandes, a very showy foliage plant, with large, dark green leaves spotted with yellow. 25 to 50 cents.

Ferns, too much cannot be said in favor of these graceful plants, and we are glad to see they are constantly growing in favor each year, till no collection of plants, however small, is now considered perfect without at least a few varieties of ferns. In places too shady for other plants to thrive, they grow in great beauty. Coming as they do from every clime, we find them a very interesting study. They are alike good for baskets,

Daisy.

vases, rock work, for ornamental plants for parlor or conservatory, and the pressed leaves of some of the varieties are marvels of graceful beauty. We make a specialty of them, and we doubt if many so large collections as ours can be found in this country.

Adiantum, decorum. 25 to 50 cents.

" *denticulatum.* 50 cents.

" *gracellinum.* 25 to 50 cents.

" *excisus multifidum.* 50 cents.

" *Roenbeckii.* 50 cents to \$1.00.

" *farleyense*, a new variety, and the most beautiful of all. Very large, beautiful leaves, of drooping habit; a single plant is often two feet in diameter, and resembles a fountain. It would be difficult to conceive of anything more elegant than a single specimen. \$2.00 to \$5.00.

Alsophila, australis (Tree Fern). 50 cents to \$5.00, by express only.

Asplenium balangeri. 25 cents to \$3.00.

" *fabianum.* 25 to 50 cents.

" *Blechnum, occidentale.* 25 cents to \$1.00.

Cheilanthes, hirta. 25 to 50 cents.

Davallia, dissecta. 25 to 50 cents.

" *Mooreana.* 25 cents to \$1.00.

Diplazium, decinatum. 25 to 50 cents.

Lomaria, gibba. 25 cents to \$3.00.

Lygodium, scandens (Japanese Climbing Fern), a native of Japan; of graceful, twining habit, and in its native clime, will grow fifty feet. Of easy culture, treated as other ferns, and valuable as a climbing or drooping plant. 25 to 75 cents.

Nephrolepis, exaltatum. 25 cents.

" *scabra.* 25 to 50 cents.

" *picta.* 25 to 50 cents.

Onychium, japonicum. 25 to 50 cents.

Platynerium, alaicorne (Stag Horn Fern), 75 cts to \$3.00

Platyroma, falcata. 25 cents to \$1.00.

Polypodium, aureum. 25 cents.

" *kurrudrianum.* 25 to 50 cents.

Pteris, argyrea. 25 cents to \$1.00.

" *critica alba lineata.* 25 cents.

" *serrulata.* 25 cents.

" " *cristata.* 50 cents.

" *tremula.* 25 cents to \$1.00.

Pellaea, hastata. 25 cents.

☞ We have also a great variety of other Ferns and Selaginellas, too numerous to name.

Feverfew, double white; summer blooming. 20 cts.
Golden, much used for massing or bordering. Leaves finely cut, of a golden yellow color. The flower stems should be cut as soon as they appear. 10 cents each; \$1.00 per dozen; \$6.00 per 100, by express.

Ficus, elastica, (India Rubber Tree), foliage large

dark green and shining; fine house plant. \$1.00 to \$5.00.

Pearcelli, a splendid decorative plant, with beautiful, variegated foliage. The leaves which are of large size, thin texture and coarsely serrated on the margin, are of a bright green color, profusely but irregularly blotched with creamy white and dark green, 50 cents to \$1.00.

Fragaria, Indica, bright red strawberry; used for rock work or baskets. 20 cents.

Fuchsia.

blooming, double variety, with scarlet tube and sepals, violet corolla. 30 cents.

Charming, new; sepals crimson, corolla violet.

Clipper, sepals carmine-scarlet, corolla deep purple.

Day Dream, double; corolla maroon, sepals crimson.

Fulgens, a fine old sort, very heavy foliage.

Golden Fleece, foliage golden yellow; free, early bloomer.

Lustre, scarlet corolla, blush sepals.

Miss Lucy Finnis, new; double white; dwarf.

Mrs. Bruant, double white; vigorous, free bloomer.

Mrs. Marshall, corolla carmine, sepals white; winter bloomer.

Pearl of England, cherry-red corolla, rosy white sepals.

Prince Imperial, dwarf; corolla purple, sepals recurved, crimson; one of the very best of the dwarf varieties.

Speciosa, corolla scarlet, sepals blush.

Sunray, beautiful, tri-colored variety; novelty. 30 cents.

GERANIUM, ZONALE.—Scarcely rivaled as bedders of the surest growth, on all soils, succeeding to perfection during the heat and drought of summer; of rich, massive, and often gay zoned foliage; compact growth, and profuse, constant, brilliant bloom in scarlet, crimson, salmon, and white; they are especially valuable and beautiful for winter blooming in the house. 20 cents each; \$2.00 per dozen; \$2.00 per 100, by express.

Bicolor, white, deep salmon eye.

Col. Holden, extra large truss; crimson-scarlet.

Dazzler, intense scarlet, white eye.

Delight, rose.

Dr. Denny, rich purplish magenta; extra.

Duchess of Sutherland, scarlet, white eye.

Emily Vaucher, white.

General Grant, scarlet; very large truss.

Helen Dick, pink and white.

Jealousy, orange-scarlet, with a decided orange hue.

Kate Nicholson, rosy pink.

Louis, crimson-purple; extra.

Mad. Muzard, magenta.

Margueretta, white, pink eye and border.

Master Christine, rich pink.

New Life, by far the finest striped variety; color deep scarlet, striped with white.

Pantaloon, scarlet with white blotch on center of each petal; very attractive.

Queen of the West, rosy scarlet.

White Clipper, pure white; dwarf.

Wood Nymph, new; clear pink.

GERANIUM, DOUBLE.—A beautiful selection of this well known plant, producing double flowers, and cultivated as easily as the single varieties. They are free blooming, and remain a long time in perfection, and are useful in a variety of ways, where the single ones are not. 20 cents each; \$2.00 per dozen; \$10.00 per 100, by express, except where noted.

Asa Gray, bright salmon, a soft and mellow tint.

Candissima plena, pure white.

Charles Darwin, rich, deep violet-purple, the base of the superior petals marked with a flaming color. 25 cents.

Charlotte, violet-purple; very dark.

Crimson Ling.

Depute Lafuze, truss round; vermilion-purple.

Douline, deep rose; dwarf.

Defiance, dark crimson.

Elegans, deep pink.

Ernest Lauth, glowing crimson,

Fright, striped; rightly named.

J. C. Rodbard, brilliant red.

Jewel, trusses of good size, deep scarlet in color.

J. G. Waggoner, rich crimson.

Le Pere Secchi, orange-salmon.

Little Gem, dwarf; scarlet; profuse bloomer.

Mary Anderson, new; vermilion-scarlet.

Meteor, light crimson.

Mme. Amelia Ballet, the best of all the double whites, flowers not changing as they grow old. 25 cents.

Mme. Thibaut, flowers very large, deep rose-pink, upper petals marked with white; habit dwarf and compact; splendid bedder. 25 cents.

Naomi, new; peculiar violet-pink; very fine.

Paul Charbonnier, new; light orange-scarlet. 25 cts.

Prokop Daubec, new; very pure, soft rose color. 25c.

Ruby, new; scarlet, very brilliant. 25 cents.

Sylphide, rose.

Wonderful, semi-double; orange-scarlet.

GERANIUM, HYBRID IVY LEAF, *Bijou*, scarlet.

GERANIUM, VARIEGATED.—Bronze, gold and silver edged; most elegantly variegated in foliage; flowers pink, carmine and scarlet; as vigorous in growth as the plain leaved varieties; admirable for contrast with other colors; partially shaded, succeed as bedders. 20 cents each; \$2.00 per dozen.

Cloth of Gold, yellow and green.

Crystal Palace Gem, golden and green.

Distinction, the leaves are encircled near the edge with a very narrow zone of deep black.

Freak of Nature, stems and leaf marked with creamy white.

Golden Crown, light yellow.

Happy Thought, a large, yellow blotch in the center of each leaf, with an outer band of green at the margin.

Marshal McMahon, ground color of the leaves golden yellow, marked with a deep chocolate ring.

Mountain of Snow, white margined, scarlet flowers.

Mrs. Pollock, best tri-colored variety.

GERANIUM, SCENTED.—20 cents each; \$2.00 per dozen.

Apple, round, light green leaf, delightfully fragrant.

Balm.

Dr. Livingstone, leaves finely divided.

Lady Plymouth, rose scented; silver edged.

Mrs. Taylor, scarlet flowers.

Nutmeg.

Pennyroyal.

Rose.

GERANIUM, IVY LEAF, SINGLE.—The value of this section is greatly enhanced by the beauty and profusion of its flowers during the spring and summer months, varying from white to pink. They are well adapted for rock work or vases; for drooping over baskets or on trellises, they are unsurpassed; but few plants give more satisfaction for home culture. 20 cents each; \$2.00 per dozen.

Diadem.

Duke of Edinburgh, leaves margined white.

L'Elegante var.

GERANIUM, IVY LEAF, DOUBLE.—20 cts

Alice Lee.

Annie Pfitzer, flowers very large; pink.

Gloire d'Orleans, magenta; profuse bloomer.

King Albert, mauve color.

Lucy Lemoine, white, veined with purple; very full.

Gazania, splendens, a low growing plant, with large, showy, orange-yellow flowers. 20 cents.

Gloxinias, these are among the handsomest of our summer blooming green-house plants. The bulbs should be started in the spring, in a warm place; they require partial shade and a liberal supply of water when growing. After blooming, water should be withheld, and the bulbs remain dry during the winter. 25 to 50 cents each.

Heliotrope, no plant succeeds better for summer flowering; is equally well adapted for green-house blooming in winter; it is a constant bloomer, and is a general favorite, on account of its delightful fragrance. 20 cents each; set of six \$1.00.

Glory de Massette, dark lavender.

Heloise Delesalle, lavender.

Homer, lilac.

Mad. Bierney, white.

Miss Nightengale, light lavender.

Star, the darkest of the heliotropes; white eye; dwarf habit.

Helleborus, *Niger* (Christmas Rose), this plant is perfectly hardy, and when covered with snow in mid-winter, by digging away the snow, buds may be found resembling roses. 25 cents.

Hibiscus, 25 cents each.

Cooperi, foliage variegated, white, green and pink.

Double, rosy crimson.

Hoya, *carnosa* (Wax Plant), delicate; waxy, star shaped flowers. 25 to 50 cents.

carnosa var., foliage variegated. 50 cents.

Hydrangea, *Hortensis*, the old, hardy variety of great merit; flowers pink, changing to bluish white. 25c.

Otaksa, flowers similar to *H. Hortensis*, but larger; plant more dwarf, and blooms younger. 25 cents.

Paniculata grandiflora, perfectly hardy; flowers white. 25 to 50 cents.

Thos. Hogg, white; one of the best. 25 cents.

Ivies, plain and variegated. Best varieties, 20 to 50c.

Ivy, *German*, rapid growing climber, for trellis or baskets. 20 cents.

Jasmine, *grandiflora*, flowers pure white and very fragrant. 25 cents.

Night blooming, the flowers are of a pale yellow color, and exceedingly fragrant, its delicate perfume being perceptible only at night. 20 cents.

Lantana, valuable plants for bedding out; of the most delicate colors; white, rose, orange, lilac and yellow. 20 cents each.

Alba perfecta, pure white; very fine.

Ball of Fire.

Delicatissima, deep lilac.

Roseum, bright rose, shaded with yellow.

Laurastinus, dark foliage shrub; rich winter bloom-er; flowers white. 25 cents to \$2.00.

Libonia, *Perohiensis*, flower tube shaped, maroon, orange and yellow in color. In winter and spring it is one mass of bloom. Few plants are more attractive. 20 cents each.

Lily of the Valley.

Lily of the Valley, 25 cents.

Lobelia, *speciosa*, a valuable plant for ribbon lines and baskets. 15 cents.

Mahernia, 20 cents each.

Hector, flowers yellow, tipped with scarlet.

Odorata, a neat growing, green-house plant, blooming in the early spring. Flowers yellow, bell shaped, and of exquisite fragrance.

Maranta, beautiful, ornamental foliage. They require a good deal of heat. New sorts, 25 cts. to \$2.00.

Mesembryanthemum, *grandiflorum*, very showy; pink and white. 20 cents each.

Mikania, *violacea*, a climbing or creeping plant; very striking; foliage of a purple-green; very showy for baskets or vases. 20 cents.

Myosotis, *palustris*, the well known Forget-Me-Not of the garden. 25 cents.

Myrtus, *communis* (Myrtle), double; white flowering. 20 cents.

Myrtle, *Pink Crape*, hardy in the south, but should be kept from frost in the north. It is a shrub, and produces wondrously beautiful flowers. 25 cents.

Nerium (Oleander), *double rose*. 25 to 50 cents.

Single white. 25 cents to \$1.00.

Othonna, *crassifolia*, small, tassel like flower; fine for vases and baskets. 20 cents.

Oxalis, excellent for baskets, vases or window culture, flowering nearly the entire season.

Double, flowers of large size, very double; yellow. 25c.

Golden yellow, blossoms most of the time through winter. 20 cents.

Grandiflora, pink; flowers and foliage very large. 20c.

We send dry bulbs of the above three varieties.

Floribunda alba, white. 15 cents.

" *rosea*, rose colored. 15 cents.

Pelargonium, or *Lady Washington Geranium*. 25 to 50 cents.

Gen. Taylor, deep rose; very fine.

London Blue, violet purple.

Palms, For decorative purposes, the Palm stands unrivaled, imparting a rich, tropical appearance wherever used. They are growing so rapidly in popularity, that no entertainment of importance is now given without a tasteful array of Palms among the decorations.

Chamærops, *Excelsa*. \$1.00 to \$3.00.

" *Fortunei*. \$1.00 to \$3.00.

" *Humilis*. \$1.00 to \$3.00.

Carculigo, *Recurvata*. \$1.00 to \$5.00.

Latania, *Borbonica*. \$1.00 to \$3.00.

Pandanus, *Utilis*. 50 cents to \$3.00.

Seaforthia, *Elegans*. \$3.00 to \$10.00.

Pansy.

Pansy (Heart's Ease), a charming class of plants for the spring garden, and extremely effective for edging beds; *splendid assortment*. 10 cents each; \$1.00 per dozen; \$6.00 per 100, by express.

Passiflora, *carulea*, blue. 20 cents.

Pfordti, very free, hardy climber; bluish purple] flowers. 25 cents.

Peperomia, *maculosa*, bright green, veined with white. 20 cents.

Resedaflora, this plant bears tiny spikes of white flowers; very fine for button hole bouquets. 20 cents.

Petunia, *double flowering varieties*. 25 cents each.

Blanche, pure white.

Magnet, blotched.

Pilea (Artillery Plant). 20 cents.

Pilogyne, *savvis*, a beautiful, rapid growing climber; excellent for screens or verandas; fine for the house in winter. 20 cents.

Pink, white fringed; hardy 25 to 50 cents.

Plumbago, *capensis*, very pretty plant, producing large heads of light blue flowers. 20 cents.

Larpenae, dwarf, hardy shrub, indigo blue; fine for edging; covered with bloom during summer and autumn. 25 cents.

Poinsettia, *pulcherrima*, a tropical plant of gorgeous beauty, the bracts of leaves that surround the flower being in well grown specimens, one foot in diameter, of the most dazzling scarlet. 25 cents to \$1.00.

Pomegranate, *dwarf*. (*punica nana*), this variety has the peculiarity of blooming when quite small. The flower is a rich shade of orange scarlet; a rare color. 25 cents.

Primula, single

Primula, chinensis, best varieties. 25 cents.
 " double white. 50 cents.

Primula, Double.

Richardia, alba maculata, a variety of calla; leaves spotted with white. 25 cents.

Rivina, humilis, a plant of slender growth; branches covered with red berries. 20 cents.

Rosmarinus, officinalis (Rosemary). 20 cents.

Roses, our stock of Roses this season is very fine, both for mailing and sending by express. Those offered as large plants have been bedded out, or grown in pots the past season, and wintered in cold-frame; they can be planted out in the spring with little or no risk. The rose requires high culture; it should be planted in good, well drained soil; the ground can scarcely be made too rich. The pruning required will vary with the sorts planted, the rank growing requiring less pruning than the weak ones. The points particularly to be observed are to prune before the buds start in spring, to cut out all unripe or old and feeble shoots, and to cut back the last season's growth to from one-half to two-thirds its length, according to the vigor of the sorts. Winter protection of tender sorts is accomplished by covering after a few severe frosts, with leaves, straw, evergreen boughs, or earth, or by removing the plants to a cool cellar. With a little care of this kind, the choicest tender roses may be safely wintered, and as they are the only really perpetual roses, they are abundantly worth the extra care. The insects most commonly injurious to the rose—as the Aphids, which appear in great numbers upon the young, growing shoots, and the Thrips, which prey upon the under side of the leaf, giving it a sickly, yellowish look—may easily be destroyed by syringing or dipping the plants in tobacco water. Purchasers will do better by allowing us some latitude in making selections, not only getting better plants, but greater distinction of variety.

Rose, Hybrid Perpetual.

Roses, hybrid perpetual, hardy, these bloom two or three times during the season. Bedding plants 20 cents each; \$2.00 per dozen. Large plants 35 to 50 cents each; \$20.00 per 100, by express.

Achille Gonod, dark carmine red.

Alexander Bachmetiff, bright red, large and very fine.

Alfred Colomb, beautiful carmine crimson.

Annie de Diesbach, large; deep rose.

Antoine Verdier, new; rosy carmine. 30 cents.

Augusta Mie, deep blush; extra.

Baron Maynard, pure white, edge of petals often tinged pink; fine.

Baron Prevost, pure rose color; free bloomer.

Beauty of Waltham, rosy crimson, changing to bright rosy carmine.

Belle Normandy, silvery rose color; large and full—extra fine.

Cardinal Patrizzi, brilliant crimson, exquisite color.

Caroline de Sansal, flesh color, full; one of the best.

Caroline Goodrich, crimson.

Couquette des Blancches, white; flowering in clusters.

Duplessis Morry, purplish crimson; a fine grower.

Eveque de Nismes, crimson purple; large and full.

Francis Levet.

General Jacqueminot, brilliant crimson; magnificent bud.

General Washington, scarlet crimson; very double.

Infant de Mount Carmel, deep crimson.

John Hopper, dark shade of pink; a showy sort.

Jules Margottin, bright carmine.

La France, silvery white and rose; fragrant.

La Reine, rosy pink; full and fragrant.

Leopold Hansburg, large, bright rose.

Lord Macartney, dark, velvety crimson; double.

Lord Raglan, brilliant crimson scarlet; very double.

Louis d' Argens, blush to white.

Louis Odier, rose color.

Louis Van Houtte, rich crimson maroon. 30 cents.

Maria Bauman, bright carmine.

Marshal Forey, bright crimson; double; extra.

Maurice Bernardin, clear, bright red.

Mme. Alf. de Rougemont, white, tinged with rose.

Mme. Victor Verdier, cherry red, changing to satin rose.

Mme. Theresa Coumer, bright rose.

Mme. Plantier, pure white; large and double.

Mrs. Elliott, bright rose.

Napoleon III, violet crimson.

Paul de Milleray, cherry red; very fine. 30 cents.

Paul Neron, dark crimson; a free bloomer.

Pierre Guillott, hybrid tea, bright dark crimson.

Pierre Notting, dark red; very double.

Pierre Seletzky, purplish red, shaded with violet.

President Lincoln, dark crimson, shaded red.

Prince Camille de Rohan, crimson maroon.

Prof. Koch, cherry crimson.

Reine des Belges, carmine.

Senator Vaisse, bright red; large, bold flower.

Wm. Knox, pink; excellent.

Roses, Hardy Moss, bedding plants; 30 cents each \$2.50 per dozen; large plants 50 cents to \$1.00.

Alfred Dalmas, blush, pink center; 30 cents.

Countess Muranais, pure white.

Glory of Mosses, rosy carmine; extra large and double.

Mrs. Wood, deep crimson.

Pellison, deep rose; full and fine. 30 cents.

Perpetual White, white.

Princess Adelaide, bright pink, densely covered with moss.

Salet, pale rose.

Roses, Hardy Climbing, bedding plants 20 cents each; \$2.00 per dozen.

Baltimore Belle, flowers white and blush, in clusters.

Gem of the Prairies, red, blotched with white.
Jules Margottin, bright carmine.
Queen of the Prairies, clear, bright pink, sometimes with white stripes.

Seven Sisters, pure white to deep crimson.
Triumph, white, shaded with rose.
Victor Verdier, rose, shaded bright carmine.

Roses, *Tea*, *Bengal* and *Bourbon*, monthly, these are admirably adapted for bedding out or pot culture; can be wintered in cold-frames or cool, dry cellars. No place should be without them. Bedding plants 20 cents each, except where noted; \$2.00 per dozen; large plants 35 to 50 cents each; \$20.00 per 100, by express.

Rose, Tea.

Agripina, velvety crimson; fine in bud.
Alba Rosea, bluish, rosy center.
Aline Sisley, a rare shade of violet red.
Appoline, light pink; cupped; exceedingly sweet.
Arch Duke Charles, rosy crimson; a constant bloomer.
Aurora, silvery rose; very double and sweet.
Banksia, five colored, white, yellow, rose and striped.
Beauty of Stapleford, hybrid tea; light pink, deep rosy center.
Bella, white; an excellent sort.
Bon Silene, purplish carmine; delightful fragrance.
Bougere, rosy bronze.
Cels Multiflora, bluish white; a beautiful variety.
Clements Nabormand, new; cream, red violet.
Cornelia Cook, pure white.
Devoniensis, magnolia rose, creamy white.
Douglas, rich crimson, entirely distinct in color.
Duchess de Brabant, light pink; very fragrant.
Duchess of Edinburgh, large buds; deep crimson; tea scented.
Gigantic, flesh color.
Hermosa, pink; very profuse bloomer.
Homer, rosy salmon; tea scented.
Isabella Sprunt, canary yellow; fine buds.
Jas. Gordon, red.
La Princess Vera.
Leveson Gower, rosy salmon.
Little White Pet.
Lucullus, dark crimson maroon, valuable out doors.
Marie Guillou, pure white; very double.
Maria, Sisley, white and rose.
Maria Van Houtte, light yellow, outer petals pink, 30 cents.
Melville, clear pink.
Mme. Margottin, dark, citron yellow, 30 cents.
Mme. Welche, pale yellow, orange and copper center, 30 cents.
Mme. Rachel, lemon white; beautiful buds.

Mme. Bosanquet, flesh color; perfect form.
Mme. Bracey, creamy white; excellent under glass.
Mme. Bureau, bluish.
Mme. Caroline Kuster, orange yellow; very sweet and desirable.

Mme. Ristori, bluish.
Nipheto, without doubt one of the best white roses grown; buds large and full, and a free bloomer.

Nina, creamy white.
Pauline Labante, salmon rose; rich tea scent.
Perte des Jardins, deep yellow; very double and luxuriantly perfumed.

Pink Daily, pink.
Purple Crown, purplish crimson.
Queen of Bedders, splendid bright dark crimson color; very free flowering.

Regulus, salmon, shaded with rose.
Safrano, buff.
Sanguinea, rich crimson; excellent for bedding.
Sir J. Paxton, vivid rose, shaded with crimson.
Sombrieul, white, bluish; one of the finest.
Souz. d'un Ami, salmon and rose shaded.
Souz. de la Malvaision, flesh color.
St. Joseph, light pink; delightfully tea scented.
Triumph de Luxemburg, coppery rose.
Viridiflora, green; a curiosity.
White Daily, white.

Roses, *Noisette*, or *Climbing* monthly, these are tender, and should be protected in winter; they are mostly fragrant, and well adapted to verandas, etc. Bedding plants 20 cents each; \$2.00 per dozen.

Caroline Mnnais, bluish white.
Gloire de Dijon, salmon; deep cup shaped.
James Sprunt, bright salmon; valuable as a pillar rose.
La Marque, straw color.
Marshal Neil, yellow; fine form; very fragrant.
Reine Maria Henrietta, crimson.
Setina, rose. *Solfatarre*, saffron yellow.
Washington, white; can be wintered out doors with but little protection; profuse bloomer.

Salvia.

Sedum.

Salvia, 20 cents each; \$2.00 per dozen.
Splendens flower spike of the most intense scarlet; ever blooming.

Marmorata nana, a neat, dwarf variety; flowers evenly marbled scarlet and white; very striking.

Saxifraga, sarmentosa, basket plant. 20 cents

Sedum, 25 cents each.

Carnica var., white striped foliage.

Sieboldii var., leaves margined with yellow.

Sempervirens, a succulent plant allied to the Sedums; good for rock work. 20 cents.

Smilax, Myrsiphyllum asparagoides, there is no climbing plant in cultivation that surpasses this in the graceful beauty of its foliage. For a parlor or window plant it is indispensable. 20 to 50 cents.

Solanum, 20 cents each.

Jasminoides variegated.

Fed. var., dwarf varieties.

Thyme, *golden lemon*, leaves margined yellow. 15c.

Tradescantia, 15 cents each.

Vulgaris, a drooping sort, with bright, glossy green leaves.

Zebrina, leaves striped with silver white.

Repens, leaves bright green, striped white.

Tropaeolum, double scarlet, fine for baskets or vases. 20 cents.

Ball of Fire, single; dark, rich scarlet. 20 cents.

Vallota.

Verbena.

Vallota, purpurea, a beautiful, scarlet, summer flowering bulb of the amaryllis class. 25 to 50 cents.

Verbena, for years the cultivation of the Verbena has been made a specialty by many leading florists. We offer thirty varieties this season. In making up this collection, we have kept two objects in view: good bedding qualities and finest flowers. It has been our aim to grow no other, and our customers may rest assured that this set comprises all the positive colors to be found in any collection of verbenas, together with the best striped and mottled ones grown. A collection of the finest sorts. 10 cents each; \$1.00 per dozen; \$6.00 per 100, by express.

Veronica, a beautiful class of plants, blooming during the fall months. Spikes of flowers from four to six inches long, produced in great abundance. 20 cents.

Imperialis, amaranth red, changing to carmine.

Triumph de Meaux, deep lilac.

Andersonii, variegated foliage, marked white.

Vinca, elegantissima, evergreen creeper, creamy white marking. 25 cents.

Sweet Violet.

Violet, hardy, double, sweet scented varieties. 20 cents each.

Belle de Chatenay, flowers double and imbricated; color white, sometimes tinged purple; immense size.

Double White.

Double Blue.

Maria Louise, double blue.

Yucca, or Adam's Needle, for a cemetery, we doubt if a more appropriate plant can be found than the Yucca. The immense clusters of pure white blossoms render it very attractive. The leaves are narrow and long, and from their edges depend long threads. The flower stalk arises from the center of the plant to a height of three or four feet, and the bell shaped, white blossoms are produced in abundance. The plant is perfectly hardy and can be set out where required, either in autumn or spring, and it will require no further care.

Filamentosa. 25 cents to \$1.00.

FRUIT TREES, GRAPE VINES, SMALL FRUITS,

Hardy Ornamental Shrubs, Climbing Vines, &c.,

OF SUITABLE SIZE TO BE FORWARDED BY MAIL.

We receive many letters from our customers who purchase their supply of seeds and plants from us, asking if we cannot also supply them with Fruit Trees, Grape Vines, Small Fruits, &c. In order to accommodate *all* our customers, we have completed an arrangement with one of the largest and most reliable nurseries, by which all orders for this class of goods can be sent directly to us, and they will be promptly and faithfully executed with the very best of stocks, and forwarded by mail, securely packed, and postage prepaid. This will be a very great convenience to those who live at considerable distances from us, and we hope to be favored with very large orders.

Order direct from us.—By so doing, you are sure of getting *just what you order*, every article *true to name*, and you also make a *great saving*, as no agent or dealer can afford to spend time and money traveling through the country, without adequate remuneration.

Terms.—Our terms are strictly *cash with the order*. Do not ask us to send *C. O. D.*, as the cost of collecting return charges is quite an unnecessary item of expense; and the prices being given, we can conceive of no necessity to warrant goods being so sent.

How to Send Money.—The money must always accompany the order, and we prefer a P. O. order, payable to our order. These cost 10 cents on orders up to \$15, and 25 cents on \$30, and can be had at almost any post office. The next best thing is a draft on New York or Chicago, and where neither of the above is convenient, the money should be sent by registered letter, costing ten cents. Money can also be sent safely by express, but the charges must be prepaid by the sender. Do not send private checks on local banks, as it costs us too much to collect.

Orders must amount to One Dollar.—We cannot afford to give our attention to orders of less amount than one dollar, unless in addition to the amount wanted, ten cents is sent. The office work on a small order is the same as on a larger one, and it also requires nearly as much material and time to pack it, and takes almost as much postage as an order double or triple the size.

Packing and Packages Free.—At prices in this list, we make no charge for packing, or for material used in packing, such as baskets, boxes, &c.

Safe Arrival Guaranteed.—We prepay postage, and guarantee their safe arrival in good condition at any post office in the United States. If not received in good condition, notice should be immediately returned to us, naming the number and kinds dead, so that there may be no delay in replacing them.

In Corresponding, always sign your name alike each time. Ladies frequently write in their husbands' name sending an order, and then again in their own name, perhaps making inquiry about it. This gives us a great deal of trouble in looking through our long files.

Lost Orders.—It is very important in writing us relating to lost orders, that you state the time the order was sent, the amount of the order, how the remittance was made, whether by post office order, draft on New York, or registered letter, duplicating your order in full, so that it may be filled immediately, and not be delayed until we correspond back and forth for the duplicate order.

Rare Evergreens, Grape Vines, &c.—Persons desiring to stock up in fruit trees, grape vines, small fruits, evergreens, &c., will find it far the cheapest to order direct of us; by doing so they can secure a full supply at half the cost that traveling dealers can afford to supply at.

The Best Time for Forwarding Plants is from the first of October to the first of June. They are less liable to suffer from frost than extreme heat. We have extensive cellars in which we store a full assortment for winter shipment.

Should our stock of any variety become exhausted before the close of the season, we shall substitute others equally as good.

Mail Clubbing Rates.—Postage prepaid by us:

Persons sending \$2.00 may select articles valued at \$2.20	
" " 4.00 " " " 4.50	
" " 6.00 " " " 7.00	
" " 8.00 " " " 9.50	

Persons sending \$10.00 may select articles valued at \$12.00	
" " 15.00 " " " 18.50	
" " 20.00 " " " 25.00	

And for all amounts remitted above \$20, twenty-five per cent. may be added to order, purchaser's choice from catalogue or dollar collections. These special rates apply **only** to fruit trees, small fruits, &c.

Express Clubbing Rates.—Transportation charges paid by the purchaser:

Persons sending \$1.00 may select articles valued at \$2.40	
" " 4.00 " " " 5.00	
" " 6.00 " " " 8.00	
" " 8.00 " " " 11.00	

Persons sending \$10.00 may select articles valued at \$14.00	
" " 15.00 " " " 22.00	
" " 20.00 " " " 30.00	

And for all amounts remitted above \$20, fifty per cent. may be added to order, purchaser's choice from catalogue or dollar collections. These special rates apply **only** to fruit trees, small fruits, &c.

Individual orders for any of the preceding amounts, will be entitled to the same premiums as club orders.

DOLLAR COLLECTIONS of trees and plants of suitable size to be sent by mail, *postage prepaid by us*. Our selection of sorts all labeled. Persons wishing their choice of sorts, will please order at the single rates which accompany the descriptions.

It will be seen that where persons are not well acquainted with different varieties, so as to enable them to make judicious selections, these sets offer great advantages for cheapness, and parties will usually get as good selections as they could make themselves, our aim being, as far as possible, to satisfy every customer that favors us with an order.

The choice of varieties in these sets must be left entirely to us, as we positively cannot afford, at these collection prices, to permit customers to name the plants; but all who prefer their own selection of varieties, can make them at the price of single plants, which in all cases accompany the descriptions. These collections are subject to the following conditions: That persons ordering are only to name the numbers designating the collection or collections wanted, as it takes too much valuable time to read long letters giving detailed lists of plants in each collection desired. Simply the number of the collection or set is all sufficient.

- Set 41—8 Apple trees, 4 sorts, \$1.00.
 " 42—3 Pear trees, 3 sorts, \$1.00.
 " 43—3 Cherry trees, 3 sorts, \$1.00.
 " 44—2 Pear, 2 sorts; 2 Quince, 2 sorts, \$1.00.
 " 45—5 Peach trees, 5 sorts, \$1.00.
 " 46—1 Pear, 2 Peach, 2 Apple, \$1.00.
 " 47—1 Apple, 1 Pear, 1 Cherry, 1 Quince, \$1.00.
 " 48—8 Grape vines: 2 each of Concord, Hartford, Ives and Rogers' Hybrids, \$1.00.
 " 49—10 Grape vines: 5 sorts, entirely our choice, \$1.00.
 " 50—20 Raspberries: 4 each of Mammoth Cluster, Doodittle's Improved, Brandywine, Cuthbert and Turner, \$1.00.
 " 51—25 Raspberries: 5 sorts, our choice exclusively, \$1.00.
 " 52—8 Currants: 2 Cherry, 3 La Versailles and 3 White Grape, \$1.00.

We have frequent letters of inquiry similar to the following: "In your set of 10 Grape vines for \$1.00, please let me know what sorts you send; also, in your set of 25 Raspberry plants for \$1.00, what varieties do you send?" In reply to all such inquiries, permit us to say, that we are only enabled to offer so large a number for a dollar by retaining the privilege of selecting the varieties when we fill the order, and this excludes the possibility of naming in advance of filling the orders, what varieties will be used. But all sets will be filled with good sorts, such as are named in our catalogue. In sets where the varieties are named, those of course will always be sent.

APPLES—Standard.

Plant 30 feet apart each way, 48 trees to the acre. One year grafts finely rooted, cut back suitable for mailing. 15 cents each, 8 for \$1.00; 4 sorts, two each, our choice of the following:

SUMMER.

Benoni,	Red Astrachan,
Early Harvest,	Red June,
Early Strawberry,	Sops of Wine,
Golden Sweet,	Sweet Bough,
Holland Pippin,	Tetofsky,
Keswick Codlin,	Western Beauty.
L. S. Pearmain,	

AUTUMN.

Autumn Swaar,	Flora Bellflower,
Autumn Strawberry,	Gravenstein,
Buckingham,	Lowell,
Colvert,	Maiden's Blush,
Cayuga Red Streak,	Munson Sweet,
Duchesse of Oldenburg,	Sherwood's Favorite,
Fall Jenetting,	St. Lawrence,
Fall Pippin,	Trumbull Sweet.

WINTER.

Ben. Davis,	Green Sweet,
Bailey's Sweet,	• Haas,
Belmont,	H. Nonsuch,
Baldwin,	King (of Tompkins Co.)
Bellflower Yellow,	Limber Twig,
Cogswell,	Monmouth Pippin,
D. W. Sweet,	Northern Spy,
Dominie,	Peck's Pleasant,
Dutch Mignonne,	Rome Beauty,
Fallawater,	Russet Roxbury,
Fameuse,	R. I. Greening,
Grimes' Golden,	Rawle's Janet,
Golden Russet,	Rambo,

- Set 53—18 choice Strawberry plants: 5 Jas. Vick, 5 Old Iron Clad, 5 Jersey Queen, 3 Big Bob, \$1.00.
 " 54—42 choice Strawberry plants: 2 Jas. Vick, 5 Bidwell, 5 Satin Gloss, 5 Manchester, 25 Sharpless, \$1.00.
 " 55—75 Strawberry plants: 25 each Sharpless, Crescent and Wilson's, \$1.00.
 " 56—2 Grapes, 2 Currants, 4 Raspberry and 20 Strawberry plants, \$1.00.
 " 57—5 Sweet Chestnut, 1 Spanish Chestnut, 1 Butternut, 1 Black Walnut and 1 Madeira Nut, \$1.00.
 " 58—75 Catalpa, Speciosa, perfectly hardy, rapid grower, very durable timber, \$1.00.
 " 59—40 Sweet Chestnut trees, \$1.00.
 " 60—1 Spruce, 1 American Arbor Vitae, 1 Pyramid-alis, 1 Irish Juniper, 1 Retinospora, \$1.00.

Ribston Pippin,	Vandevere,
Seek-no-Further,	White Pippin,
Smith's Cider,	Wagner,
Stark,	Wine Sap.
Talman Sweet,	

APPLES—Russian and others of Special Merit.

One year grafts cut back for mailing. Except where noted, 25 cents each; 5, five sorts, \$1.00.

Alexander, Emperor Alexander, Russian Emperor, &c.—A large, beautiful, red apple. September.

Arnold's Beauty.—This fine, new apple is a seedling of the Northern Spy, crossed with the Wagener and Spitzenburg. Tree hardy; an excellent, upright grower, and abundant bearer; fruit bright yellow, occasional shade of red; flesh firm, juicy, rich, aromatic. January to May. 50 cents.

Bottle Greening.—Fruit medium; greenish yellow, shaded with dull crimson; sub-acid, almost melting. January and February.

Canada Sweet.—Fruit medium; bright crimson cheek; flesh yellow, juicy, crisp, tender, very sweet and rich. September and October.

Huntsman's Favorite.—Large, pale yellow, sometimes shade of pale red or deep yellow in the sun; flesh pale yellow, crisp, tender, juicy, mild, rich, sub-acid. December to March.

Lawver.—Large; dark, bright red; flesh white, crisp, sprightly, aromatic, sub-acid. January to May.

Lady Apple.—A beautiful little dessert fruit; pale yellow, with a brilliant red cheek; flesh crisp, juicy and pleasant.

McIntosh Red.—A new, hardy variety, of Canadian origin. Fruit medium, dark red; very handsome; fine grained, juicy, tender and mild. January.

Mann.—A good sized apple of the Greening type, keeping until June or July.

Missouri Pippin.—Medium to large; pale, whitish yellow, splashed with light and dark red; flesh whitish, crisp, moderately juicy, sub-acid. January to April.

Ontario.—This handsome and excellent apple was originated by Charles Arnold, Paris, Ontario. Fruit large; skin whitish yellow, nearly covered with bright, rich red; flesh fine, tender, juicy, sub-acid, refreshing, slightly aromatic. January to April. 50 cents.

Pewaukee.—Medium size; bright yellow, splashed and striped dull red; sub-acid, with rich, aromatic flavor; perfectly hardy. December to March.

Red Canada.—This is the old Richfield Nonsuch. A handsome, red, winter apple, but difficult to propagate.

Seedless.—Medium size, greenish yellow, dark carmine cheek in the sun; entirely seedless. November and December.

Stump.—Medium, roundish, conical, smooth, white, shaded with bright red, splashed and striped with crimson; flesh white, tender, juicy and pleasantly sub-acid. September and October.

Shiawassee Beauty.—Fruit medium, white marbled, striped and splashed with red; flesh firm, very white, tender, juicy, brisk, refreshing, sub-acid. October to January.

Wealthy.—A native of Minnesota; perfectly hardy; fruit large, red, sub-acid. December to February.

Walbridge.—Medium size; handsome, striped red; one of the hardiest. March to June.

Yellow Transparent.—A new Russian variety imported in 1870, by the Department of Agriculture, and promises to be valuable as an early fruit, ripening a week or two before Tetofsky; skin clear white, changing to pale yellow when fully ripe; flesh white, tender, juicy, sprightly, sub-acid; good to very good. 50 cts.

HYDE'S KING OF THE WEST.—Large to very large; handsome yellowish green; good quality; a remarkable keeper. Apples of 1880 and 1881 were exhibited side by side at the winter meeting of the Ohio State Horticultural Society, held at Warren, in December of 1881, and attracted great attention. Time of keeping all the year round. One year trees, suitable for mailing, 40 cents each; 3 for \$1.

APPLES—Crab.

One year grafts cut back for mailing, 25 cents each; 3 for \$1.00.

Briar's Sweet,
General Grant,
Golden Beauty,
Hyslop,
Montreal Beauty,
Power's Large Red,

Red Siberian,
Transcendent,
Van Wyck's Sweet,
Whitney's No. 20,
Yellow Siberian,

PEARS.

STANDARD and DWARF.

All can be supplied as standards, and those standard can also be supplied as dwarfs, at same price as standards. Plant 20 feet apart each way, 108 to the acre. One year grafts cut back for mailing. 40 cents each; 3 for \$1.00.

SUMMER.

Bartlett,
*Brandywine,
*Clapp's Favorite,

*Osbund's Summer,
*Tyson.

AUTUMN.

*Buffam,
*Belle Lucrative,
*Beurre Anjou,
*Beurre Clairgeau,
*Duchess d'Angouleme,
Doyenne Boussock,

Flemish Beauty,
*Howell,
*Louise Bonne de Jersey,
Sheldon,
*Seckel.

WINTER.

Beurre Easter,
*Lawrence,

*Mt. Vernon,
*Vicar of Wakefield.

PEARS—New.

50 cents each, except where noted.

Beurre de l'Assumption.—Fruit large and melting, ripening early in August.

Brockworth Park.—Large, pale yellow, flushed, streaked with red on the sunny side; flesh white, buttery, melting; very juicy, vinous and rich. September.

Duchesse de Bordeaux.—Medium to large; sweet and pleasant. December to February.

Frederick Clapp.—Above medium size; clear lemon yellow; fine grained; juicy, melting, sprightly, rich and aromatic; very good to best. October. 75 cents.

Souvenir du Congress.—A seedling of the Bartlett, ripening before it, and larger. The fruit is very fine and of immense size, but unfortunately the tree blights badly.

Goodale.—Fruit large; light yellow, with a blush in the sun; juicy, melting, vinous. October.

Kieffer's Hybrid.—This new and unique pear was raised from seed of the Chinese Sand Pear, accidentally crossed with the Bartlett or some other kind grown near it. Tree has large, dark green, glossy leaves, and is of itself very ornamental; an early and very prolific bearer. The fruit is of good quality, wonderfully showy, and is valuable for the table, canning and market. Standard trees, \$1.00; dwarf \$1.00.

Le Conte.—This is another seedling of the Chinese Sand Pear and some one of our standard varieties; resembles the Bartlett somewhat in fruit and time of ripening; considered very promising. Has proved very profitable at the south. Standard trees \$1.00.

ORIENTAL PEARS

Are remarkable for their vigorous growth, luxuriant foliage, extreme hardness and freedom from disease, and, although their fruit is not of the best quality, it has a peculiar quince like flavor, which, combined with firmness, makes their hybrids superior for canning purposes. One year trees cut back, suitable for mailing, 75 cents each.

Daimyo,
Mikado,
Madam von Siebold,

Sha Lee,
Smith's Hybrid,
Garber.

CHERRIES.

Plant Hearts and Bigarreus twenty feet apart each way; 108 trees to the acre. Plant Dukes and Morellos ten to twelve feet apart; 363 trees to the acre. One year from bud, cut back for convenience in mailing, to about one foot. 40 cents each; 3 for \$1.00.

LEADING SORTS.

Black Eagle,
Belle Magnifique,
Black Tartarian,
Carnation,
Early Richmond,
Early Purple Guigne,
Elton,
English Morello,

Gov. Wood,
May Duke,
Napoleon,
Ohio Beauty,
Rockport,
Reine Hortense,
Yellow Spanish.

NEWER CHERRIES.

Empress Eugenie.—A new variety from France, of great excellence; a profuse bearer. 50 cents.

Montmorency Ordinaire.—A sort of quite recent introduction of the Early Richmond class, but larger and later, and a prodigious bearer. 50 cents.

Olivet.—Large, globular; a shiny, deep red sort; tender, rich and vinous; one of the largest of its class. 50 cents.

Louis Phillipe.—Large; dark red, almost black; sprightly, mild acid; stone small; tree vigorous and very productive; ripens middle to last of July. 50 cts.

Dyehouse.—This variety partakes of both the Morello and Duke in wood and fruit; a very early and sure bearer; ripens a week before the Early Richmond; of better quality and quite as productive. 50 cents.

Leib.—A newly introduced Morello; one week later than Early Richmond, and claimed to be very superior. 50 cents.

Lady of the Lake.—Medium to large; light yellow, shaded and marbled with rich, dark crimson; flesh half tender, juicy, sweet. Middle to last of June. 50 cents.

Nancy.—Large, heart shape; pale yellow, shaded and mottled with crimson; tender, juicy, rich and sweet. Last of June. 50 cents.

PLUMS.

One year buds cut back for convenience in mailing. 40 cents each; 3 for \$1.00.

German Prune,

General Hand,

Italian Prune,

Lombard,

Shropshire Damson,

Smith's Orleans.

Magnum Bonum Y'll'w,

Pond's Seedling,

Prince's Imperial Gage.

Reagle's Union Purple,

Reine Claude.

Geuii.—Very large, dark purple, hardy, strong grower; an early and abundant bearer; ripens last of September. 50 cents.

Improved Varieties of American Plums on Peach Stocks.

Bassett.—A new American seedling said to be almost Curculio proof.

DeSoto.—A very hardy native variety, originating in Wisconsin; extremely productive and very profitable.

De Caradeuc.—Medium, round, slightly flattened; skin yellow, nearly covered with red; flesh melting, sweet and vinous. End of June and first of July.

Newman.—Medium oblong, skin a beautiful glossy red with delicate purple bloom; flesh somewhat coarse but juicy. August and September.

Wild Goose.—Well adapted to peach stocks; an improved variety of the Chickasaw, large deep red, with purplish bloom; flesh melting and good.

Weaver.—Fruit large, purple, very prolific; regular bearer. This tree is very hardy and will thrive in the very northern limits of the United States. Ripens in August.

Moore's Arctic.—A new hardy plum which originated in the Highlands of Aroostook county, Maine, where unprotected and exposed to arctic colds it has borne enormous crops. Skin purplish black, with a thin blue bloom; flesh greenish yellow, juicy, sweet, pleasant. September. 75 cents.

PEACHES.

One year buds cut back for mailing. 25 cents each; 5 sorts, our choice. \$1.00.

Amstden's June,
Alexander's Early,
Bernard's Yellow Rare-ripe,

Beer's Smock,
Bilyeu's Late October,
Conklin,

Crawford's Early,
Crawford's Late,
Coolidge's Favorite,
Chinese Cling,

Early Beatrice,
Early Louise,
Early Rivers,
Foster,

Hale's Early,
Hill's Chili,
Honeywell,
Jacque's Rareripe,
Large Early York,
Lemon Cling,
Marshall's Late,

Mountain Rose.

Old Mixon Cling,

Old Mixon Free,

Red Cheek Melocoton,

Salway,

Saunders,

Scott's Nonpareil,

Smock's Free,

Smock's Cling,

Steadley,

Stump the World,

Susquehanna,

Yellow Rareripe.

PEACHES—Newer Varieties.

Price, except noted, 35 cents each; 3 for \$1.00.

Mrs. Brett.—A white peach shaded with dark rich red when fully exposed; flesh white, red at the pit; juicy, melting, rich and sweet.

Prince of Wales.—Large and beautiful cream colored with a rosy cheek; melting and rich. Ripens with Late Crawford.

Wheatland.—This valuable new peach somewhat resembles Crawford's Late, but tree is more sturdy and strong with larger foliage. It bears large crops of fruit of large size and showy appearance; skin deep golden yellow, shaded crimson on the sunny side; flesh yellow, juicy, sweet and of fine quality. Ripens between the Early and Late Crawfords. 50 cents.

Wager.—A valuable new peach, being very hardy and productive, frequently bearing large crops when other varieties fail. Fruit medium, of a light golden yellow when fully matured; flesh bright yellow, moderately juicy, sweet and slightly vinous; follows Crawford's Early in ripening. 50 cents.

Waterloo.—Medium size, excellent quality; flesh white; skin greenish white, purplish red in the sun. Ripens about with Alexander.

APRICOTS.

There is no fruit that is more beautiful or desirable than the Apricot. 50 cents each except noted.

Breda, Purple, or Black,
Early Golden, Royal.
Moorkark.

NECTARINES.

These are in appearance the most wax-like and exquisite of all fruits for the dessert. 50 cents each.

Boston. Pitmaston's Orange.

MULBERRIES.

Downing's Everbearing.—Very large, handsome, sweet, rich and excellent. 75 cents.

New American.—This we consider equal to Downing's in all respects, continuing in bearing fully as long, and a hardier tree. 75 cents.

Russian.—Fruit large, about the size of Kittatiny blackberries; mostly jet black, about one tree in twenty producing flesh-colored berries; sub-acid to sweet, with a fine aromatic flavor; immensely productive. Perfectly hardy. The original trees were imported from Western Russia as far north as the forty-ninth degree of latitude, assuring their success to the very northern limits of the United States. 12 to 18 inches 25 cents each; 6 for \$1.00; 6 to 10 inches 15 cents each; 10 for \$1.00; 100 for \$6.00.

White Morus Alba.—The common variety. Valued more for feeding silk worms than for its fruit. 15 cents each; 12 for \$1.00; 100 for \$4.00.

QUINCES.

Angers.—A free bearer, of good-sized fruit, which keeps well but not equal in quality to the following sorts. 30 cents.

Champion.—A new variety, originated in Connecticut. The tree is a prolific and constant bearer; fruit averaging larger than the orange; more oval in shape, quality equally fine and a longer keeper; bears extremely young, producing fine fruit on two year trees in nursery rows. We anticipate that this will supersede all other kinds. 75 cents.

English Walnut.

each; 40 cents per 10; \$2.50 per 100.

Spanish Chestnuts.—25 cents each.

Butternut.—20 cents each; 6 for \$1.00.

Black Walnut.—20 cents each; 6 for \$1.00.

English Walnuts.—25 cents each.

Almonds.—Hard and soft shell. 50 cents each.

Pecans.—30 cents each.

Hickory Nuts.—Shell bark. 25 cents each.

Orange.—Fruit large; bright yellow; of excellent flavor. 50 cents.

Rea's Mammoth.—A seedling of the orange. Superior in size and equally as good in quality. 50 cents.

NUTS.

Trees suitable size for mailing.

American Sweet Chestnut.—10 cts.

Japan Chestnut.

Japan Chestnut.—Of the novelties recently from Japan nothing is more deserving of cultivation than the Japanese Sweet Chestnut. It is quite distinct from the European varieties, being more hardy and the fruit is of superior flavor and sweetness; the leaf is long and narrow like a peach leaf, deeply serrated at the edge; comes in bearing very young, the first in this country bearing at four years from seed; fruit larger than the largest of European sorts; shape, flavor and color like our best native. The enormous size and good quality of the fruit will undoubtedly make it a valuable article of commerce, while the ornamental character of the tree will recommend it for lawn planting. Apparently perfectly hardy. One year trees about 1 foot high, 50 cts.

GRAPES.

NEWER VARIETIES.

75 cents each, unless noted.

Alma.—Mr. J. H. Ricket's, the originator, says of it: In presenting this new seedling grape to the grape and wine growers of America, I feel confident that it will meet their approval when it becomes known. Inasmuch as it is a very pleasant dessert grape, and makes a splendid banqueting wine, with a rose and wintergreen flav-

or most delicately blended. Vine vigorous and healthy; bunch medium, compact, seldom shouldered; berry medium black, with blue bloom; spicy and very sweet.

Bacchus.—Bunch medium, compact, shouldered; berry below medium, black with blue bloom; half tender, sprightly, juicy; an excellent wine grape. 50 cents.

Duchess.—Bunch medium to large, shouldered, compact; berries medium, pale greenish yellow with a whitish bloom; flesh tender; juicy, sweet, spicy, rich and of excellent quality, lasting a long time after being gathered. Ripens soon after Concord.

Eldorado.—Clear golden yellow; of the highest flavor with a decided aroma resembling pineapple. One of the very handsomest grapes grown.

Early Dawn.—An extremely early black grape of superior quality; berry medium round; flesh tender, juicy, sweet; slightly vinous; ripens a week before Hartford; hangs on well and is a good keeper. 50 cts.

Golden Pocklington.—A seedling of Concord, from Washington county, N. Y.—an elevated, cold, late locality, where it has always proved to be thoroughly hardy. Vine a strong grower; in appearance, almost identical with Concord, and has never been known to mildew, either in foliage or fruit. Color, light golden yellow, covered with a fine bloom; bunches very large, sometimes shouldered; berries round, very large; quality fully equal to or better than the Concord in its best state; ripens with Concord, and like that well known variety, it is believed will prove to be **THE GRAPE FOR THE MILLION**. The best of its color both for market and home use. The *American Agriculturist* says of it: "Of much better quality than Concord; intensely sweet, and has less of the Labruska quality in the taste than in the smell." 75 cents each; \$7.50 per dozen.

Highland.—Bunch large, long, compact; berry large, round, black; flesh soft, juicy, sweet, somewhat vinous; ripens between Concord and Catawba.

Jefferson.—A pure native. A cross between Concord and Iona; resembling Concord in growth, vigor and

Lady Washington.

hardness; with fruit much like Iona in color, texture and quality; ripening about with Concord.

Lady Washington.—A showy and beautiful white grape; bunch and berry large; skin pale yellow, with a tinge of delicate pink; flesh soft, tender, juicy, sweet, very slightly vinous, of good quality. Ripens about with Concord, and continues a long time in use. A very promising variety for table or market

Moore's Early.

Monroe.—Bunch medium to large; berry large, black; flesh juicy, sweet, vinous and sprightly. Ripens with Hartford.

Naomi.—The originator, Mr. J. H. Ricketts, says: I take great pride in offering this splendid table grape to the fruit growers of the country, as one of my very best seedling grapes. It is only excelled by one in my collection; very beautiful in all respects. A hybrid of Clinton and one of the muscats; a strong and vigorous grower; hardy. I have fruited it for eleven years, and pronounce it one of the most magnificent grapes for the market. The following description is by Chas. Downing, Esq.: Vine very vigorous, very productive, long jointed; leaves very large, deeply lobed, coarsely serrated; bunch large, shouldered; berry medium, roundish, oval, often with a tinge of red in the sun, covered with a thin, whitish bloom; flesh tender, juicy, melting, rather crisp, sweet and sprightly, and with a trace of muscat flavor; quality very good. Ripens with Concord. One year vines \$1.00.

Rochester.—Bunch large; berry medium to large; dark purple; flesh very sweet, vinous and aromatic. Ripens first of September \$1.00.

Vergennes.—This fine grape originated in Vergennes, Vermont, and is undoubtedly one of the best grapes of recent introduction. A strong grower, wonderfully productive, ripening its fruit with Hartford Prolific, and notwithstanding its early maturity, will keep all winter in an ordinary cellar or cool room, and can be dried into a perfect raisin. The flavor is delicious, and so like the Iona that any familiar with that variety at once notices the same rich, vinous, sprightly taste. The

Prentiss.

pulp entirely dissolves in the mouth. The seeds are few and small. \$1.00.

Prentiss.—Bunch large, not often shouldered, compact; berry medium to large, yellowish green, sometimes with a rosy tint on side next to sun; skin thin but very firm; flesh tender, sweet, melting, juicy, with a very pleasant and musky aroma, free from foxiness; little if any pulp. Ripens with Concord.

GENERAL COLLECTION. BLACK.

Plant rows 8 feet apart, and 6 to 10 feet in rows.

The following prices are for first class, one year vines, two year vines being too heavy to forward by mail. 25 cents each, unless otherwise noted.

Clinton.—Bunches small and compact; berries round, black, pulpy, juicy, of medium quality; valuable for wine and culinary purposes. 15 cents.

Concord.—A large, purplish black grape, ripening about the middle of September; vine remarkably vigorous and free from disease. It is now being planted over a greater extent of country than any other one variety. 15 cents.

Eumelan.—Medium size, deep purplish black, covered with a fine bloom; fine quality, hardy, productive and early. 30 cents.

Hartford Prolific.—Bunches large; berries large, round and dark, of medium quality. Ripens some three weeks earlier than the Isabella. Hardy and prolific. 15 cents.

Ives' Seedling.—Bunches medium to large, compact, often shouldered; berries medium, slightly oblong, of a dark purple color. 15 cents.

Isabella.—Bunches large, long and loose; berries large, oval, dark purple or black; pulp tender, juicy, sweet and rich when fully ripe. Ripens first of October. 15 cents.

Merrimac (Rogers' No. 19).—Black; bunches large; berries very large, round; one of the most reliable varieties, ripening from the 10th to 15th of September.

Moore's Early.—Bunch large; berry large, round; color black, with heavy, blue bloom; vine exceedingly hardy, entirely exempt from mildew or disease. Its earliness makes it desirable for an early crop, and its hardness particularly adapts it to Canada and northern portions of the United States. 50 cents.

Senesqua.—Bunch large, often shouldered, compact; berry large, round; flesh firm but tender, juicy, sweet, rich. Ripens about with the Concord. 50 cents.

Wilder.—(Rogers' No. 4.) Bunch and berry very large, black, round; flesh tolerably tender; sprightly, sweet and agreeable. One of the best of Mr. Rogers' Hybrids, ripening quite early.

Worden.—A splendid large, black grape, of the Concord type, but earlier; larger in bunch and berry, and of decidedly better quality; and every way as healthy.

RED OR AMBER.

Agawam.—(Rogers' No. 15.) Bunches large, compact; berries very large with thick skin, pulp soft, sweet, sprightly; vine very vigorous; ripens early.

Brighton.—An excellent grape; bunch large, well formed; berries above medium to large, round, Catawba color; excellent flavor and quality; one of the earliest in ripening. 35 cents.

Catawba.—Bunches of good size, rather loose; berries large, round; when fully ripe of a dark copper color with a sweet, rich musky flavor. Requires a long season to arrive at full maturity. Excellent both for table and and wine. 15 cents.

Delaware.—This is undoubtedly the best table grape, ranking pre-eminently above all others in its pure, rich, sugary, wine-like juice. Bunches small, compact, shouldered; berries medium size, fine wine color, translucent; vines hardy, moderately vigorous and very productive. Ripens 15th of September.

Gæthe.—(Rogers' Hybrid No. 1.)—A strong, healthy vine, producing large crops of beautiful bunches; berries very large, yellowish green; flesh tender and melting; ripens late; very valuable at the South.

Lindley.—(Rogers' No. 9.) Vine vigorous; berries medium to large, reddish in color; flesh tender, sweet and aromatic; ripens early.

Massasoit.—(Rogers' Hybrid No. 3.) A vigorous vine, berries medium in size, brownish red; flesh tender and sweet; ripens early.

Salem.—(Rogers' No. 53.) A strong, vigorous vine, a Hybrid between the native and Black Hamburg; berries large, Catawba color, thin skin, free from hard pulp, very sweet and sprightly; ripens as early as Hartford.

WHITE.

Croton.—Vine moderately strong; berries medium size, yellowish green; flesh melting and sweet; ripens early. 50 cents.

Elvira.—Very vigorous, strong, healthy grower. White. Bunch and berries medium size, very compact and very productive, often growing four or five clusters on a single cane. Ripens about with Catawba. Very hardy.

Lady.—A white grape; a seedling of the Concord, possessing all the vigor of the parent vine; berries large, light, greenish-yellow, skin thin, pulp tender, sweet and rich; ripens earlier than Hartford; worthy of trial in all sections. 40 cents.

Martha.—Bunches and berries of medium size; greenish white, with a thin bloom; flesh tender with very little pulp; juicy, sweet and rich; hardy and productive. Ripens with Concord.

STRAWBERRIES.

For field culture plant 1 by 4 feet apart, 10,000 to the acre. For garden culture plant 1 by 2 feet apart. Any rich soil that will produce good corn or potatoes is suitable for the strawberry. Early in the winter cover the entire surface with litter of some kind to keep the plants from being injured by freezing. There is no danger of putting on too much between the rows, but the plants

themselves must not be covered too deep; from two to three inches of coarse straw is probably the best covering. When growth commences remove the covering from directly over the plants and leave it between them for a mulch.

The blossoms of those marked with a letter (p) are destitute of stamens and are termed pistillate; and unless a row of the perfect flowered variety is planted at intervals not exceeding about a rod, they will produce imperfect fruit, and but little of it; but when properly fertilized, as a rule, they are more prolific than those with perfect flowers. We give representations of the Bi-Sexual, or perfect flowered, and also of the pistillate or imperfect.

BI-SEXUAL OR PERFECT. PISTILLATE OR IMPERFECT.

NEWER VARIETIES.

James Vick.—This promising new variety we procured last season, and find it a very vigorous grower with large dark green foliage. Fruit bright scarlet, uniformly large, and very productive; it will stand after ripe a long time on the vine without becoming soft. It is very firm, of good form and quality. 15 cents each; \$1.00 per 10; \$5.00 per 100.

Old Iron Clad.—Fruit resembles the Sharpless greatly in size and shape; color bright scarlet; ripening four or five days before the Wilson. Plant very vigorous and hardy. 10 cents each; 15 for \$1.00; \$3.00 per 100.

Big Bob (P).—Originated in Miami Co., Ohio, and is highly esteemed in that locality for its size, productiveness and quality. Foliage large and healthy; fruit stalks long and stout; berries very large, nearly round, regular in shape; dark crimson; quite firm, of excellent quality. Making big berries to the very end of the season. 15 cents each; \$1.00 per 10; \$5.00 per 100.

Jersey Queen (P).—This is one of the very best late strawberries and is claimed by many to be the nearest approach to the ideal strawberry yet introduced. It is very productive, the fruit being large, broadly conical and of a fine shade of scarlet; the flesh is firm and melting, and is full of a rich vinous juice, with a delicious aroma. 10 cents each; \$1.00 for 15; \$3.00 per 100.

Manchester (P).—This variety has received many favorable encomiums from leading fruit growers; it has many desirable qualities; for family use as well as for market it stands pre-eminent. It is a strong grower and is wonderfully productive, bearing uniformly, large fruit of a bright, glossy scarlet color; in quality richer than any other productive variety, while for shipping it is unsurpassed. 10 cents each; \$1.00 for 20; per 100 \$2.50.

Satin Gloss.—Medium to large, bright, glossy vermilion; very regular in size and form, firm; plant large and vigorous; exceedingly prolific, holding its size well to the end of the season. 10 cents each; \$1.00 per 20; \$2.50 per 100.

Bidwell.—Bright glossy crimson, averaging as large as the Sharpless and more productive than the Wilson or Crescent; very firm and meaty in texture, and delicious in flavor. 10 cents each; \$1.00 per 20; \$3.00 per 100.

Finch's Prolific.—Supposed to be a cross between Russell's Prolific and Wilson, and has great merits

Bidwell.

claimed for it as a market berry; said to be larger than Wilson, of better quality; bright scarlet in color; fully as firm and equally as prolific. Plant a strong grower, with long, strong fruit stalks that hold the fruit well up from the ground. 10 cents each; \$1.00 per 20; \$2.50 per 100.

GENERAL COLLECTION.

Unless noted, 10 cents each; 25 cents per 10; \$1.50 per 100.

Crystal City.—The earliest variety in cultivation. Fruit of medium size, conical; color deep red; flesh moderately firm, good quality; very desirable for early home use.

Cetawayo (p.).—Berries large, irregular in shape and wonderfully productive.

Crescent Seedling (p.).—Medium size, bright, light scarlet, not very firm; continues a long time in fruit; plant very vigorous and hardy, and will produce good crops under greater neglect than any other strawberry, and is a good paying variety for both family use and market.

Captain Jack.—A most vigorous grower, healthy and productive. Berries large, handsome and solid.

Cumberland Triumph.—A magnificent variety; berries immense, fine, perfect form, and of fine flavor; plant very vigorous and productive.

Chas. Downing.—Fruit medium to large, conical; deep scarlet, fine flavor, productive.

Col. Cheney (p.).—Large, roundish ovate, bright scarlet; flesh rather firm, fine quality.

Cinderella.—Large, conical, regularly formed; bright, glossy scarlet; mild, rich, aromatic, vigorous and productive; very fine for home use.

Glendale.—So far the best late market berry that has been tested; plant very thrifty, with tall, rank foliage, and very productive; succeeds well on both light and heavy soils; fruit of large size, regular, uniform, conical, bright scarlet color, fair quality; very firm, being fully equal to Wilson in shipping and keeping qualities.

Golden Defiance.—Large, beautiful, bright scarlet; of good quality, very productive; late to very late.

Huddleston's Favorite.—Large size, beautiful shape; bright, glossy crimson; firm, with a rich, spicy flavor. An excellent shipping berry.

Hervey Davis.—Fruit very large, holding its size well to the last. Deep, glossy red, ripening perfectly, and of the highest flavor.

Jucunda.—A strawberry of the largest size; high

color, holding its fruit well up on the vines, bringing the highest price in market, 10 cents each; 30 cents per 10; \$2.00 per 100.

Kentucky.—A strong, vigorous, productive variety, bearing its berries well up from the ground. Fruit large, bright scarlet; firm, juicy, rich and sweet.

Mt. Vernon.—A large, late, very productive variety; a strong, healthy grower, with strong fruit stalks; fruit conical, bright red, uniformly large and of excellent quality.

Longfellow.—A variety from Kentucky, producing large, late, firm berries.

Marvin.—A cross of Jucunda with Wilson, resembling to a certain extent both, although distinct from either. A berry of extraordinary promise, being one of the very latest in ripening.

Monarch of the West.—This is a well tested and truly worthy variety; will grow on almost any good soil; stands drought and wet; berry very large, firm, and of most delicious quality.

Pioneer.—Very early; of large size, bright red; flesh firm and of excellent quality.

Seneca Chief.—Very large, conical; dark crimson; firm, very good, late; productive and vigorous.

Sharpless.—The largest berry of the entire collection, and has maintained its high reputation for vigor of plant, size of berry, flavor and productiveness; flesh

Longfellow.

Sharpless.

firm, sweet, with a delicate aroma; of first quality; color clear light red, with a smooth, shining surface.

Sucker State.—Fruit medium to large, regular shape, conical but not pointed; color somewhat like Cumberland Triumph, but darker.

Springdale.—Very dark crimson; of excellent quality, exceedingly productive and vigorous.

Triomphe de Gand.—An old, well established favorite; large, firm, sweet, rich; continues a long time in bearing, almost covering the strawberry season.

Windsor Chief (p.)—A vigorous grower, with healthy foliage and immensely productive; the fruit of large size to the end of the season.

Wilson's seedling.—One of the most productive and profitable varieties for market culture.

RASPBERRIES.

The Raspberry should be placed in good, rich soil, in rows five feet apart, and three feet apart in the rows, with three or five canes to the hill. As soon as they have done bearing, cut out the old wood to give more vigor to the young canes.

Superb.—A magnificent, large berry; rich, dark scarlet; flavor remarkably spicy, with a refreshing tartness unequalled in any other raspberry. Vine vigorous and hardy; commences to ripen about the middle of June, and continues four to six weeks. The most remarkable berry we have ever fruited, and we predict for it a brilliant future. 15 cents each; \$1.00 per 8; \$10.00 per 100.

A. M. Purdy's *Fruit Recorder*, Rochester, N. Y.:—"With us the *Superb* is perfectly splendid—largest size, bright color, firm as the *Brandywine*—is wonderfully productive; in fact, taking everything into consideration, the finest market red raspberry we have ever seen, judging from fall set plants."

Hansell.—*The earliest of all raspberries.* Medium to large; color of the brightest crimson; quality best, rich and refreshing, possessing a powerful aroma, imparting a delightful perfume and flavor; canes vigorous, productive and entirely hardy, having thus far withstood the summer heat and winter cold equal to the old iron clad Turner. 15 cents each; \$1.00 per 8; \$10.00 per 100.

[From the *Gardener's Monthly*.]

THE HANSELL RASPBERRY.—This is represented as an accidental seedling, found on the farm of Hansell Bros., near Beverly, N. J. It was brought into notice by Mr. J. T. Lovett. Last season the first berries were gathered on the 20th of June; the picking for market

was made on the 26th of June. A company of several dozen of the most eminent fruit growers of New Jersey, met on the farm and examined the fruit on the 27th of June, and unanimously agreed that in addition to many good points as a market fruit, it was the earliest red raspberry known.

Shaffer's Colossal.—This is a cap variety, propagating from the tip, and so far has proved itself hardy and wonderfully productive, and of immense size. Flesh quite firm; color dark purplish red; flavor sprightly, sub-acid; season late, ripening with Gregg, and holding out till early blackberries come. The canes are truly colossal, growing eight to ten feet high, if not cut back. 15 cents each; \$1.00 per 10; \$8.00 per 100.

Sonhegan.—This fine black cap has distinguished itself for earliness, productiveness, size, quality and in vigorous, healthy growth. The color is a bright, jet black, without bloom. The berries remain on a long time after ripening, without becoming soft. The most profitable variety known for early market. 15 cents each; \$1.00 per 10; \$8.00 per 100.

GENERAL COLLECTIONS.

Price, unless noted, 10 cents each; 50 cents per 10; \$3.00 per 100.

Amazon.—A very large and fine flavored berry, and one of the most vigorous growers.

Antwerp Red.—An old variety originally from Antwerp. Fruit large, conical, dull red; flavor rich and sweet; leaves large and plaited. 10 cents each; 75 cents per 10; \$4.00 per 100.

Antwerp Yellow.—This is a large, light-colored berry, canes vigorous and productive. 10 cents each; 75 cents per 10; \$4.00 per 100.

Brandywine.—A large and bright red berry of very beautiful appearance, which makes it a favorite market variety, although not of the highest quality. It does well on nearly all soils and endures the drouth and heat of the South better than most varieties.

Caroline.—A seedling from Brinckle's Orange that needs no winter protection; the fruit somewhat resembles its parent in appearance, and as the plant is vigorous and hardy it bids fair to supplant that old favorite variety. 10 cents each; 75 cents per 10; \$4.00 per 100.

Clark.—Large, conical, bright crimson, juicy, sweet, and excellent, but rather soft for long shipments.

Cuthbert, or Queen of the Market.—A remarkably strong, hardy variety, said to stand the northern winters and southern summers better than any other variety. Berries very large, measuring three inches around; conical; rich crimson; very handsome, and so firm they can be shipped hundreds of miles by rail in good condition; flavor is sweet, rich and luscious.

Delaware.—Medium size, bright red; originated in New Jersey, where it is spoken of as one of the most delicious of berries.

Davidson's Thornless.—One of the earliest and best of the Black Caps, and nearly exempt from spines.

Hansell.

Gregg.

Doolittle's Improved Black Cap.—Although one of the first introduced, it still holds its place as one of the most valuable.

Gregg.—This is decidedly the largest and most prolific Black Cap that we have ever seen, far surpassing in size the famous Mammoth Cluster; averaging when grown side by side, with the same treatment, from one-third to one-half larger.

Kirtland.—An excellent red variety; perfectly hardy.

Mammoth Cluster.—One of the largest, latest and best of the Black Caps, juicy and sweet.

Ohio Black Cap.—A very hardy and productive variety ripening between the earliest and latest; it is a good shipper, and the most profitable of all for drying, taking but two and a half quarts to make a pound of dried fruit.

Philadelphia.—Dark red, good size, flesh moderate-firm; plants hardy and enormously productive. Valuable for market.

Seneca Black Cap.—Larger than Doolittle, a week later in ripening, firm, sweet and rich, hardy and very productive.

Turner.—A beautiful red berry of fine size and excellent quality; said to be the hardest and most productive throughout the entire west.

New Rochelle.—Large, brownish red; flesh quite firm; juicy, with a rich, sub-acid flavor; valuable for table, culinary purposes, or canning. Continues a long time in use.

Thwack.—This variety appears to be gaining favor. The canes are short, $3\frac{1}{2}$ to 4 feet, are as hardy as the hardest, producing large crops of beautiful fruit; very firm, rendering it one of the best for shipping.

Sweet Home.—A Black Cap of superior quality, nearly as large as the Gregg and more uniform, and so hardy as to have withstood 30 degrees below zero uninjured. Ripens 10 days later than Doolittle.

BLACKBERRIES.

Plant three to eight feet apart.

Lawton, Kittatinny, Snyder and Early Wilson. 10 cents each; 3 sorts for 25 cents; 15 for \$1.00.

Missouri Mammoth.—15 cents each; 10 plants for \$1.00.

Taylor's Prolific.
large crops. A hardy variety, free from thorns. 15 cents each; 8 for \$1.00.

Newman's Thornless.—This old variety still maintains its reputation as one of the best of spineless. 15 cents each; eight for \$1.00.

Taylor's Prolific.—A new variety said to be perfectly hardy. A very vigorous grower and exceedingly productive. Fruit large and of good quality. 15 cents each; 8 for \$1.00.

Wachusett Thornless.—Medium size, oblong oval, sweet and good. A good keeper, rendering it valuable for market. Succeeds well on both light and heavy soils, bearing

CURRENTS.

The currant has not hitherto received the attention its merit demands. It presents to us its annual offering of grateful refreshing fruit, just at the time it is most needed. Unless noted, 15 cents each; 8 for \$1.00.

Black Naples.—Very large. Fine for wine and jellies.

Cherry.—One of the largest of all red currants.

La Versaille.—Very large. long bunches, deep red; productive.

Lee's Prolific (Black).—Larger than Black Naples in berry and bunch, better in quality and vastly more productive. 25 cents.

Red Dutch.—An old, well known, thrifty, upright sort; very productive.

Victoria.—Large bright red, with very long bunches; late; a good bearer.

White Grape.—An early and immense bearer. Very valuable.

White Goindoin.—A large, light colored sort; sweet vigorous and productive.

Lee's New Prolific.

Fay's New Prolific.—Originated with Lincoln Fay, of Portland, N. Y., thirteen years ago, from a seedling of Cherry and Victoria currants, and offered for the first time last season. The following is claimed for it: "Color red. As compared with the Cherry Currant, Fay's Prolific is equal in size, better in flavor, much less acid, and five times as prolific, and from its peculiar stem, less expensive to pick." 75 cents each; \$7.50 per dozen.

BOSTON, July 10, 1880.

DEAR SIR:—The currants arrived in good order. I infer from your note that the variety was raised from the Cherry Currant. If so, the bunches are longer and its bearing qualities seem to be great, and its flavor in advance of its parent. With many thanks.

Yours truly,

MARSHAL P. WILDER,
Pres't Am. Pomological Society.

UNION SPRINGS, N. Y., July 9, 1880.

DEAR SIR—I received last evening by express, a basket of Fay's Currants in fine condition, and forming one of the finest displays of the kind I have ever seen. So far as I can judge, I think it promises to excel any other sort for market. The bunches appear to be as long as those of the Victoria, and the berries as large as the Cherry Currant. Very truly, J. J. THOMAS.

DEAR SIR—It certainly gives me great pleasure to add my estimation of the value and excellence of Fay's Prolific Currant, as far ahead of any fruit of the kind I have ever seen.

Four years ago I saw it fruiting on the originator's ground, and was so impressed with its appearance, quality and productiveness, that I offered Mr. Fay (which

he declined) five dollars for a single cutting for my individual use, I agreeing not to propagate.

Yours truly, DR. A. P. PHILLIPS,
Fredonia, N. Y.

White Dutch.—Milder flavor than the common red, and preferable for the dessert.

GOOSEBERRIES.

AMERICAN SORTS.

Downing.—Very large, handsome, pale green, and of splendid quality for both cooking and table use; bush a vigorous grower, and usually free from mildew. 25 cents each; \$2.00 per 10.

Houghton Seedling.—Small to medium, roundish

oval, pale red, sweet, tender, very good; plants spreading, shoots slender; enormously productive. 15 cents each; \$1.00 per 10.

Mountain Seedling.—Large, roundish oval; pale red skin, thick, medium quality; plant a free grower and very productive. 25 cents each; \$2.00 per 10.

Smith's Improved.—Large, pale greenish yellow; skin thin, of excellent quality, being unsurpassed by any other variety for table use or cooking; bush moderately vigorous, and excessively productive. 25 cents each; \$2.00 per 10.

ENGLISH VARIETIES.

Fifteen leading sorts, strong, three year plants, 40 cents each.

Hardy Ornamental Shrubs

No garden should be without a good selection of these permanent ornaments. Once carefully planted in suitable positions, they increase in size and beauty from year to year, and require but little further care. The season of bloom of the different sorts extends over nearly the whole season, though the greatest show is to be expected in spring and early summer.

Althea Frutex (Rose of Sharon).—This is really one of the most showy and beautiful flowering shrubs; the flowers are of large size, very double and full, and of various brilliant and striking colors. It blooms freely during August and September, when scarcely any other tree or shrub is in bloom.

Double Rose. 25 cents.

Double Variegated, pink and white. 25 cents.

Folia Variegata, leaves conspicuously margined creamy white, flowers double purple. 35 cents.

Azalea Pontica.—A fine, hardy shrub, producing an abundance of bright yellow flowers in early spring. 50 cents.

Cornus Sanguinea.—A strong growing shrub with clusters of fine, white flowers; the stem and branches turn blood red in winter. 25 cents.

Calycanthus (Sweet Scented Shrub).—Flowers purple, very double, and deliciously fragrant; remains in bloom for a long time; a very desirable shrub. 25c.

Corcorus Japonica, variegata.—A slender shrub four or five feet high, with beautiful, double yellow blossoms from July to October. Foliage variegated green and white. 25 cents.

Deutzia, Crenata, fl. pl.—Flowers double white, tinged with pink. 25 cents.

Gracilis (Slender Branched).—A very desirable dwarf growing variety. Flowers pure white. A valuable plant for winter blooming. 25 cents.

Crenata Leaved (Crenata).—Strong grower, profuse bloomer. 25 cents.

Crenata flore alba pleno.—A very valuable variety, of strong growth, producing its pure white, double flowers in abundance. 25 cents.

Exochordia grandiflora.—A very beautiful and rare shrub, with large and distinct, pure white flowers in May. 50 cents.

Forsythia Viridissima.—Produces beautiful, yellow flowers early in spring; leaves deep green. 25 cts.

Forsythia Fortuni.—An upright growing shrub with bright green foliage; flowers bright yellow, dropping before the leaves appear. A fine early flowering shrub. 25 cents.

Upright Honeysuckle, Red Tartarian.—Beautiful pink and rose colored blossoms in June. 25 cents.

White Tartarian.—Flowers white; blooms in May and June. 25 cents.

Hydrangea, Paniculata Grandiflora.—The finest

Hydrangea.

white flowering, hardy shrub in cultivation; 6 to 10 inches, 25 cents; 15 to 18 inches, 40 cents.

Hawthorns.—A well known family of moderate sized trees bearing a profusion of flowers in May. The double flowering varieties are especially beautiful.

Double Scarlet.—Flowers deep crimson, with scarlet shade; very double. 75 cents.

Double White.—Small, double, daisy like flowers in clusters. 75 cents.

Double Pink.—Double pink or rose flowers with white tips. 75 cents.

High, or Bush Cranberry.—A large, native shrub with Hydrangea like flowers; the fruit is red and acid, and esteemed by many for culinary purposes. 35 cents.

Lilac, white and purple. 25 cents each.

Pyrus Japonica (Scarlet Japan Quince).—Blossoms early in spring; flowers bright scarlet; very hardy. 25c.

Pyrus Japonica Alba (Blush Japan Quince).—A very beautiful variety of the Pyrus, with delicate white and blush flowers. 25 cents.

Purple Fringe.—A beautiful, distinct, large shrub, much admired for its long, feathery flower stalks, which give the tree the appearance of being covered with a cloud of smoke. 25 cents.

Philadelphus, or Mock Orange, Grandiflora.—A large growing shrub; flowers snow white, in great profusion. June to July. 25 cents.

Philadelphus, flore pleno.—A dwarf variety, with double, cream colored flowers. 50 cents.

Philadelphus, or Mock Orange.

Rhododendron, or Rose Bay.—The most magnificent hardy evergreen shrub that grows, with broad, thick evergreen foliage of glossy richness which is almost hidden in May and June by a splendid array of beautiful flowers in clusters, each cluster large enough for a lady's bouquet.

Catawbiensis Seedlings, 9 to 10 inches, \$1.00.
Choice named sorts, 9 to 10 inches, \$2.00.

Rhododendron.

Spireas.—Beautiful shrubs of the easiest culture; very desirable for shrubberies or the flower garden.

Billardii, rose colored flowers in spikes. 25 cents.

Callosa Alba, a white flowering variety, of dwarf habit; very fine. 25 cents.

Chamaedrifolia, one of the most desirable of the spireas, with small wiry branches covered in June with clusters of white flowers. 25 cents.

Eximia, spikes of bright rose colored flowers; very free blooming. 25 cents.

Grandiflora, a very desirable variety, having large rose colored flowers. 25 cents.

Profuse Flowering, flowers white; a great bloomer. 25 cents.

Prunifolia, a beautiful spirea; its flowers are like double, small white daisies; blooms early. 25 cts.

Reevesii (*f. fl.*), double white flowers in clusters; very fine. 25 cents.

Thunbergia, a pretty white flowering variety with narrow linear leaves, valuable for forcing. 25 cents.

Van Houtte, a strong grower; flowers pure white, in clusters; fine. 25 cents.

Viburnum Opulus (Snow Ball).—A well known shrub, attains the height of 8 or 10 feet; produces its snowy white flowers in large balls or masses in June. 25 cents.

Viburnum Plicatum, (Japan Snow Ball).—A beautiful shrub of moderate upright growth, with crinkled or plicated rich green leaves. The flowers are white, and are larger and more solid than those of the common snow ball. 50 cents.

White Fringe.—A tall growing shrub with large, deep green foliage, pure white drooping fringe-like flowers; extremely desirable. 35 cents.

Weigelas, *Hortensis Nivea*, flowers pure white; foliage large. habit vigorous; a very profuse bloomer. 50 cents.

Hortensis Rubra, flowers deep red when in bud, and nearly white inside when fully open. 25 cents.

Hendersoni, flowers rose color; fine. 25 cents.

Rosea, a beautiful shrub with rose colored flowers, in May and June. 25 cents.

Weigela Rosea Nana Variegata.

Rosea, Nana Variegata, one of the most conspicuous shrubs that we cultivate; leaves beautifully margined creamy white; flowers pink. It is a dwarf grower and admirably adapted to small lawns or gardens. 35 cents.

Verschaffeltii, a strong, upright grower; foliage and flowers very much resembling rosea. 25 cents.

We will send six shrubs, each labeled, our selection of varieties, for \$1.00.

Hardy Ornamental Climbing Vines.

Ampelopsis, Quinquifolia (American Ivy), a perfectly hardy climber, of rapid growth; fine for covering walls or unsightly objects. 25 cents.

Tricolor, a variety with leaves beautifully mottled creamy white. 25 cents.

Veitchii, a hardy climbing plant from Japan; it is a splendid plant for covering unsightly objects, as it clings to stone work, etc., with the greatest tenacity. The foliage is a bright glossy green, shaded with purple, changing in fall to the brightest tints of scarlet, crimson and orange. 35 cents.

Akebia Quinata.—A very beautiful, perfectly hardy, fast growing Japan vine, with magnificent foliage; producing flowers in large clusters of chocolate purple color, possessing a most delicious perfume; unsurpassed for covering trellises and verandas, the foliage never being attacked by insects. 25 cents.

Clematis.—Within the past few years great attention has been given to the cultivation of these valuable plants and a large number of elegant varieties have been obtained, bearing numerous magnificent, showy flowers of large size and superb coloring. For garden and conservatory decoration, either as climbers on walls, trellises, or ornamental wire work of any kind, verandas, arches, rustic poles and pillars, old trees or ruins or as specimens on the lawn or in borders, or for massing in large beds on lawn, or in flower plats, they have scarcely an equal, certainly no superior as they embrace nearly every shade of color. The following contains a most desirable collection in every respect.

Clematis.

American White (Virginica), a very rapid growing and hardy plant; seeds furnished with long, plumose downy tufts; flowers small, white. 25 cents.

Alexandra, large flower; color reddish violet; blooms freely through the summer. 75 cents.

Duchess of Edinburgh, finest double white; very fragrant. \$1.00.

Duchess of Teck, flowers pure white, six sepaled, with a faint, delicate mauve bar down the center when first open. \$1.00.

Flammula, a rapid growing vine; flowers small, white and very fragrant; fine for cemetery decoration. 35 cents.

Gipsy Queen, an extremely rich, bright, dark velvety variety of the Jackanii type; very free, late flowering. \$1.00.

Jackmanii. The flowers, when fully expanded, are from four to six inches in diameter, intense violet purple, with a rich velvety appearance, distinctly veined; perfectly hardy. It flowers continually from July until cut off by frosts. 60 cents.

Lady Caroline Neville, fine flowers from six to seven inches in diameter; color delicate bluish white, with a broad, purplish lilac band in the center of each sepal. 75 cents.

Lady Londesborough, a robust constitution, producing its elegant flowers in great abundance; color a delicate silvery lavender, with a white stripe down the center of each sepal. 60 cents.

Miss Bateman, a magnificent plant, both in growth and flower; the blooms are large, of good shape, and pure white banded with creamy white down the center of each sepal. 75 cents.

Prince of Wales, large flowers, of a deep, rich violet purple, with red bars down the center of each petal; a beautiful variety. 75 cents.

Rubra Violacea, rich velvety claret. 75 cents.

Star of India, rich violet purple, with a rosy purple band in the center of each sepal; flowers of good shape, four to five inches in diameter. 60 cents.

Viticella, small purple flowers, blooming summer and autumn. 35 cents.

Dutchman's Pipe.—A magnificent, hardy vine of rapid growth, with very large, heart shaped leaves, and brownish flowers, resembling in shape a miniature pipe; splendid for archways or verandas. Strong plants \$1.00.

Honeysuckle, Aurea Reticulata, a variety with beautifully variegated foliage; the leaves are netted and veined with clear yellow; flowers yellow and fragrant. 20 cents.

Chinese Twining, blooms at intervals through the summer, and retains its foliage late in winter; flowers nearly white, quite distinct. 20 cents.

Halliana, color white, changing to yellow; very fragrant; blooms from June to November. 25 cents.

Magnevillea, flowers yellowish white; fragrant, evergreen in winter. 20 cents.

Monthly Fragrant, a fine, rapid growing variety; flowers large and very fragrant; color red and yellow; a constant bloomer. 25 cents.

Scarlet Trumpet, a strong, rapid grower; blooms very freely the entire season; bright red, trumpet shaped flowers. 20 cents.

Bignonia

Wistaria.

Bignonia, Radicans (Trumpet Flower).—A rapid growing climber, with large, scarlet, trumpet shaped flowers. 25 cents.

Wistaria.—This is one of the most popular of our hardy vines, growing very rapidly, climbing to a height of fifty feet or more, and when in bloom is truly magnificent. It flowers in early spring, in long, drooping racemes, resembling in size and shape a bunch of grapes. *Brachybotria rubra*, flowers reddish purple. 25 cents. *Chinese* (Sinensis), flowers in clusters; pale blue; sometimes gives a second crop of flowers in the fall. 25c. *Sinensis alba*, flowers borne in long, drooping clusters, as in the blue variety; pure white in color, making a most striking and elegant contrast. \$1.00.

Hardy Border Plants.

Eulalia, Japonica.—A hardy perennial from Japan, with long, narrow leaves striped with green and white, throwing up stocks four to six feet high, terminating with a cluster of flower spikes on which the individual flowers are arranged; the flowers are surrounded with long, silky threads, which, when fully ripe, or when placed in a warm room, expand, giving the whole head a most graceful and beautiful appearance, not unlike that of an ostrich feather curled. These dried flowers are valuable as parlor ornaments, as they retain their beauty for a long time. 25 cents.

Eulalia, Japonica Zebrina.—This is one of the most striking and distinct plants in cultivation. Unlike most plants with variegated foliage, the striping or marking is across the leaves instead of longitudinally, the leaves being striped every two or three inches by a band of yellow one-half inch wide. Late in the fall it is covered with flower spikes that resemble ostrich plumes in shape, which, when cut and dried, make handsome ornaments for the house in winter. It is perfectly hardy, and when once planted, will increase in beauty from year to year. Should be in every collection. 50 cents.

Tritoma Uvaria.—A splendid, half-hardy, summer and autumn flowering plant, producing magnificent spikes of rich orange red flowers. They may be left in the ground during winter with good protection, or can

Hardy Ornamental Trees.

EVERGREENS.

In the following list we only quote such sizes of Evergreens as can be sent by mail:

Norway Spruce.—When planted alone on the lawn makes a majestic pyramid of living green from base to summit; perfectly hardy to withstand the severest cold of our northern winters or the greatest heat of summer. Unrivalled as a screen or wind-break. No evergreen excels it in safety of transplanting, in close, compact habit of growth, and in endurance of close pruning from year to year without injury. 2 years, 3 to 4 inches, 15 cents each; 50 cents per 10; \$3.00 per 100; 4 years, 4 to 6 inches, 20 cents each; 75 cents per 10; \$6.00 per 100.

American Arbor Vitæ.—A hardy pyramidal tree; when grown singly and properly sheared, a handsome object; planted closely, it makes a compact and beautiful hedge of light green. 4 to 6 inches, 15 cents each; 75 cents per 10; \$6.00 per 100.

Arbor Vitæ, Golden.—A beautiful variety of the Chinese, compact and globular in form; color a lively yellowish green; not quite hardy at the north; should be planted in a shaded situation. 4 to 6 inches, 75 cts.

Arbor Vitæ, Semper Aurea.—A variety of the Aurea of dwarf habit, but free growth, retaining its golden tint all the year round. One of the very best golden variegated evergreens. 75 cents.

Magnifica, flowers in dense, drooping racemes of pale lilac; of the same size as the Chinese; vigorous and perfectly hardy. 25 cents.

We will send six climbing vines, each labeled, our selection of varieties, for \$1.00.

Hydrangea, New Climbing, Schizophragma Hydrangeoides.—A new variety from Japan. Mr. Thos. Hogg describes it as growing in its native wilds to the height of fifty feet, producing corymbs of white flowers similar to the ordinary Hydrangea. It climbs exactly like Ivy, and one can imagine the effect of a wall or a tree so covered, while in full bloom. Reported to be perfectly hardy. 25 cents.

be taken up in the fall and potted, and kept from frost. 25 cents.

Yucca.

Yucca, Filamentosa (Adam's Needle).—A tropical looking plant, with long, narrow leaves that remain green the entire year. It throws up a strong flower stem in summer three to four feet high, bearing a large spike of creamy white, bell shaped flowers, which retain their beauty a long time; hardy. 25 cents.

Arbor Vitæ Ericoides, Heath Leaved Arbor Vitæ.—A very pretty, dense, little shrub of the Tom Thumb type. 25 cents.

Arbor Vitæ, Pumilla.—A little dwarf; very fine, both in color and form. 5 to 6 inches 35 cents each.

Arbor Vitæ, Pyramidalis.—An exceedingly beautiful, bright variety, resembling the Irish Juniper in form; foliage deep green; color well retained in winter; perfectly hardy. Should have a place in every collection. 6 to 8 inches, 35 cents each.

Arbor Vitæ, Tom Thumb.—A very small, compact, little evergreen; very fine foliage. Makes a beautiful ornament for a small yard or cemetery lot; fine for low hedges. 4 to 6 inches, 25 cents each.

Arbor Vitæ, Hoveyi.—A small tree, globular in form; foliage light green and very compact; hardy. 4 to 5 inches, 35 cents each.

Cupressus Nutkænsis.—A very fine evergreen from Nootka Sound. One of the best; foliage dark green; perfectly hardy. 6 to 8 inches, 50 cents.

Holly, English.—Deep green, glossy, shining leaves, with bright red berries through the winter. Largely used in Christmas decorations. 50 cents.

Lawson's Cypress.—A most desirable tree from California, with elegant, drooping branches, and feathery foliage; of a dark, glossy green hue. 5 to 6 inches, 50c.

Irish Juniper.—Erect and formal in habit; foliage deep green and very compact, making a splendid column,

sometimes 15 or 20 feet high. Much used in cemeteries. 6 to 8 inches, 35 cents each.

Swedish Juniper.—Not quite as erect in growth as the Irish; foliage light yellowish green. It attains a height of 10 or 15 feet; perfectly hardy. 4 to 5 inches, 35 cents each.

Juniperus Suecica Nana.—A dwarf variety, compact habit of growth; foliage light, not changing in winter; perfectly hardy. 4 to 5 inches, 35 cents each.

Pine, Austrian.—A strong, hardy grower, fine for wind-breaks; grows rapidly on light, sandy soils; hardy. 4 to 6 inches, 25 cents each.

Pine, Scotch.—Like the preceding, its quick, strong growth, makes it valuable for protective screens; very hardy. 4 to 6 inches, 25 cents each.

Podocarpus Nubigenis.—A rare evergreen from Japan; erect like the Irish Yew, with heavier and denser foliage. 4 to 5 inches, 50 cents each.

Retinospora Plumosa.—An exceedingly handsome small evergreen, from Japan, with feathery, light green foliage. 4 to 5 inches, 35 cents each.

Retinospora Plumosa Aurea.—Like the preceding, a plant of great beauty; soft, plume like foliage of a golden color; close and compact habit; should be in every amateur collection. 4 to 5 inches, 35 cents.

Yew, Elegantisima.—An erect, little tree with variegated leaves; valuable at the south. 4 to 5 inches, 50 cents each.

Yew, Irish.—Upright in growth, with dense foliage of a dark, somber hue; not quite hardy here; valuable at the south for cemeteries or small yards. 3 to 4 inches, 35 cents each.

Box.—A fine, small evergreen, with pale green leaves. Can be trained in any desired form by shearing. 3 to 4 inches, 20 cents; 4 to 6 inches, 25 cents.

DECIDUOUS.

Catalpa Speciosa, Hardy, or Western Catalpa.—This early blooming, upright growing variety appears to be much harder than the common *Syringafolia*, having proved itself capable of enduring the severe winters of Wisconsin and Iowa, making, when planted in groves, straight, symmetrical trees, suitable for posts or railway ties, for which purposes it is one of the most durable timbers known, lasting, in many instances, nearly or

quite a century. It appears to thrive as far north as Dakota. Mr. W. H. Hubbard, of Fairview, Dakota, writes under date of October 26th, 1881: "The *Catalpa Speciosa* that I bought of you two years ago (nearly) are doing finely." 6 to 8 inches, 10 cents each (nearly) per 10; \$1.00 per 75.

Ash Leaved Maple.—A distinct variety, making a handsome lawn tree. 6 to 10 inches, 25 cents.

Norway Maple.—A native of Europe. A large, handsome tree, with broad, deep green shining foliage; very desirable for street, park or lawn. 10 to 12 inches, 25 cents.

Sycamore Maple.—A handsome tree from Europe, of rapid, upright growth, and large foliage. 10 to 12 inches, 25 cents.

Silver Leaved Maple.—A hardy, rapid growing, native tree, of large size. Valuable for producing a quick shade. Excellent for street planting. 25 cents.

American Linden, or Basswood.—A rapid growing, beautiful tree, with very large leaves and fragrant flowers. 10 to 12 inches, 25 cents.

European Linden.—A very fine pyramidal tree, with large leaves and fragrant flowers. 10 to 12 inches, 25 cents.

Mountain Ash, European.—A fine, hardy tree; head dense and regular; covered from July till winter with great clusters of bright red berries. 8 to 12 inches, 25 cents.

Magnolia Acuminata, Cucumber Magnolia.—A beautiful, pyramidal tree, attaining a height of from 50 to 80 feet; has bluish green leaves 6 to 9 inches long. 4 to 6 inches, 25 cents each.

White Flowering Horse Chestnut.—The well known European species; very handsome; has magnificent spikes of white flowers. As a lawn tree, or for the street, it has no superior. One year trees, 25 cents.

Tulip Tree, Whitewood.—One of our largest native trees, with broad, glossy, fiddle shaped leaves, and beautiful, tulip like flowers. 25 cents.

White Ash.—A rapid growing, native tree, of fine, symmetrical outline. A valuable street or park tree, and should be extensively planted for timber, as the demand for it is very great for the manufacture of agricultural implements, railway cars, &c. One year trees, 8 to 10 inches 25 cents each.

For TREE SEEDS see pages 46 and 47 and the prices at the end of this book.

BULBS FOR SUMMER AND AUTUMN BLOOMING.

The following Bulbs will be sent by mail or express, charges prepaid, when ordered at single or dozen rates; at the 100 or 1,000 rate they will be sent by express or freight, the purchaser paying the charges. No less than 6 will be sent at the dozen rate; no less than 50 at the 100 rate, and no less than 500 at the 1,000 rate. Orders, with money, should be forwarded as early as possible, and they will be filled in rotation. The tender Bulbs, that are injured by frost, will not be sent until such danger is over in the spring.

DIELYTRA—Bleeding Heart.

Tuberous rooted plants, blooming in the spring, favorably known almost everywhere. They require only the ordinary culture of border plants. Roots planted in autumn will flower freely. The roots should be divided every third year. The flowers are delicate pink color, very graceful, produced continuously from May till July. Ready for shipment about April 1st.

	EACH.	DOZ.
<i>Dielytra, Spectabilis</i>	25	2 50

GLADIOLUS.

The Gladiolus may, perhaps, be placed at the head of summer flowering bulbs. The improvements in this flower have been marked and rapid, and the varieties now embrace nearly all shades of color, and some of them are marvels of beauty.

MIXED GLADIOLUS.

This mixture must not be compared nor confounded with the common mixed sorts, often the refuse of cheap, unsalable kinds. It is composed only of named varieties of the best sorts, and represents over 150 kinds, among which is a good proportion of white, yellow, striped and blotched varieties. We feel certain that no one will be disappointed in purchasing this stock, and we recommend it with the greatest confidence.

	PER 1000.	PER 100.	DOZ.
<i>Choice mixed</i>	35 00	4 00	75

NAMED GLADIOLUS.

The following named varieties are selected with special reference to beauty of flower, range of color, and habit of plant. There is not one in the list that is not desirable, and every bulb has flowered the past

Gladiolus.

Lillium, Harrissi.

season, and is known to be true to color and description. Ready for shipment about April 1st.

	EACH.	DOZ.
<i>Addison</i> , fine, large flowers, dark amaranth with white lines...	15	1 50
<i>Agatha</i> , rose, suffused with lake, flamed with carmine amaranth, clear yellow spots...	15	1 50
<i>Amalthie</i> , pure white, large violet-red blotch, ground of the corolla velvety violet, the lower petals slightly tinged with lilac...	20	2 00
<i>Angele</i> , white, slightly flesh, light carmine blotches...	15	1 50
<i>Brenckleyensis</i> , rich, dark scarlet, very brilliant...	10	1 00
<i>Ceres</i> , pure white, flamed lilac, desirable...	10	1 00
<i>Eugene Scribe</i> , tender rose, blazed with carminate red, beautiful...	10	1 00
<i>Felicien David</i> , cherry, light carmine feathered, white blotch...	15	1 50
<i>Isaac Buchanan</i> , new seedling, the best yellow variety yet introduced...	20	2 00
<i>John Bull</i> , white, tinged with sulphur...	10	1 00
<i>LeCandeur</i> , white, lightly striped with carmine violet, perfection...	15	1 50
<i>Lamarck</i> , cherry colored, slightly tinted with orange, blazed with red, center very well lighted, very large, white stain...	20	2 00
<i>Laura</i> , orange red, flamed carmine, pure white blotch...	10	1 00
<i>LePhare</i> , brilliant and fiery red, very showy...	15	1 50
<i>LePoussin</i> , light red, white blotch, handsome...	15	1 50
<i>Madame Monneret</i> , rose, white stripe and carmine blotch...	10	1 00
<i>Madame de Vetry</i> , French white, purple carmine blotch...	20	2 00
<i>Meteor</i> , brilliant dark red, large, pure white blotch...	15	1 50
<i>Meyerbeer</i> , brilliant scarlet, blazed with vermilion, very fine spike...	15	1 50
<i>Napoleon III</i> , bright scarlet, the center of the petals white striped, extra fine...	15	1 50
<i>Norma</i> , pure white, sometimes tinted with pale lilac...	25	2 50
<i>Penelope</i> , white, slightly tinged pink...	15	1 50
<i>Phoebus</i> , fine spike of large flowers, of a striking fire-red color, with a large, white stain...	25	2 50
<i>Princess of Wales</i> , white, flaked carmine...	10	1 00
<i>Romulus</i> , intense dark red, blotched pure white...	15	1 50
<i>Schiller</i> , sulphur color, with large, carmine stains...	20	2 00
<i>Shakespeare</i> , white or blush white, blazed with rosy carmine, large, rose colored stain...	40	4 00
<i>Sylphide</i> , long spike with fine white flowers, blazed with carmine...	15	1 50
<i>Van Dyck</i> , crimson amaranth, striped with white...	15	1 50

LILIAM.

The Lily has been, with eminent propriety, styled the "Queen of Flowers," and truly no flower conveys so adequate an idea of queenly beauty, majestic grandeur, and faultless purity, as the Lily. Their culture is simple, and with a little care, failure is impossible. Select a deep, rich soil, enrich it well with thoroughly decomposed manure, and set the bulbs from three to six inches deep according to size. In the autumn the bed should be protected by a liberal covering of leaves or litter, and care should be taken that the bulbs have proper drainage, no water being allowed to stand around the roots. The bulbs can be transplanted either in spring or autumn, but should be kept out of ground the shortest possible time. Once firmly established, they should not be disturbed oftener than once in

five years. Many of the varieties force well in greenhouse, and are desirable for parlor culture.

	EACH.	DOZ.
<i>Auratum</i> , new, golden Japan lily, large bulbs	35	3 50
<i>Lancifolium</i> , <i>album</i> , white Japan lily.....	50	5 00
" <i>roseum</i> , rose spotted Japan lily.....	25	2 50
" <i>rubrum</i> , white and red spotted.....	25	2 50
<i>Candidum</i> , white single.....	20	2 00
" spotted.....	30	3 00
" variegated foliage.....	50	5 00
<i>Chalcedonicum</i> , brilliant scarlet, recurved blossoms.....	75	7 50
<i>Longiflorum</i> , pure white, very fragrant.....	15	1 50
<i>Tigrinum</i> (Tiger Lily), orange, spotted black.....	15	1 50
" <i>flore pleno</i> (Double Tiger Lily), extra large bulbs, giving from 25 to 30 flowers.....	40	4 00
<i>Jacobeum</i> (<i>Amayllis Formosissima</i>), deep scarlet.....	20	2 00
<i>Harrissi</i> (Bermuda Easter Lily) large, pure, waxy white, very early, blooms with great freedom, especially desirable for forcing for winter flowers.....	50	5 00

MADEIRA VINE.

Tuberous rooted climber, with glossy, green leaves, and delightfully fragrant, white blossoms. Sometimes called "Mignonette Vine." It is of rapid growth, and from a few tubers, vines will be produced sufficient to cover one side of a cottage. The tubers are tender, and must be protected from frost during winter.

	EACH.	DOZ.
Madeira Vine, tubers.....	10	75

Tritoma uvaria.

Tuberose.

TRITOMA.

Sometimes called "Red Hot Poker." It is really a fine plant, quite hardy, though requiring some protection through winter. The flowers are produced in large spikes of rich, orange-red tinted flower tubes. Plant two feet apart, and in November, cut the plants back near the ground, and cover the bulbs with dry litter, which remove in the spring.

	EACH.	DOZ.
<i>Tritoma uvaria</i>	30	3 00

TUBEROSE.

Of all the summer flowering, bulbous plants, we think the Tuberose the most desirable. The flowers are waxy white, double, and so fragrant as to perfume the whole atmosphere for some distance around. They are useful for forming button hole bouquets, in large bouquets, or as single specimens. Each bulb flowers but once, but the smaller bulbs can be set out for future flowering, when their growth is completed. A good way to grow tuberose, is to fill five inch pots half full of cow manure, and the remainder with good, rich earth, mixed with sand. Plant the bulbs in this in April, water moderately, and hasten growth by putting in a warm, light place. When weather has become warm, plunge the pots in the earth out of doors. They will usually flower before cold weather in autumn; if they do not, the pots can be brought in, and they will bloom in the house. The bulbs cannot be safely sent by mail before April 1.

ALL FLOWERING BULBS.

	EACH.	DOZ.	100.	1000.
<i>Double White</i> , tall.....	10	75	4 00	35 00
<i>Pearl</i> , double dwarf white....	10	75	4 00	35 00

About September 1st next, we shall issue our Annual Catalogue of Holland Bulbs for fall planting. It will be sent free to all customers, and to others who apply for it.

EARLY MAYFLOWER POTATO.

From WYOMING—A Fredrickson writes: Yields nearly three times as many as other varieties. Tubers very EVEN in size; no small ones. No signs of rot

From IOWA—Henry Green writes: $\frac{3}{4}$ bushel from two small potatoes; yielded better than any other kind, White Star alone excepted. Medium and EVEN in size. No indications of rot. Considers them as early as any, and a SLENDID variety.

FARM and GARDEN IMPLEMENTS

Never so Cheap before. Notice the

REDUCED PRICES.

OUR LIST IS COMPLETE. IT CONTAINS ALL THE BEST IMPLEMENTS OF ALL MAKERS, AND NOT A SINGLE UNDESIRABLE TOOL.

MATTHEWS' GARDEN SEED DRILLS AND CULTIVATORS.

Matthews' Garden Seed Drill.—We know of no hand Garden Drill, for sowing vegetable seeds, &c., which has met with the popularity of the Matthews' Garden Seed Drill among leading seedsmen and market gardeners everywhere, and therefore heartily recommend it to our customers. It has been many years in use, and its largely increasing sale is the best evidence of its merit.

It is designed for use in field and garden. When in operation, it opens the furrow, drops the seed accurately at the desired depth, covers it, and lightly rolls the earth down over it, and at the same time marks the next row. It will sow *Beet, Carrot, Onion, Turnip, Parsnip, Sage, Spinage, Sorghum,*

Peas, Beans, Fodder Corn, Broom Corn, &c., with a certainty, regularity and rapidity, impossible for the most skillful hand to do.

A valuable feature in this Drill is its patent INDICATOR, with names of different seeds on it, for adjusting the Drill to sow different kinds of seed, which is done by simply turning the Indicator until the name of the seed you want to sow comes to the top. No other Drill is furnished with this ingenious device.

The Drill is complete in all its arrangements, it is made of the best material throughout, and is constructed with such care and nicety of finish, that it will last many years,

Matthews' Garden Seed Drill.

and do a vast amount of work without any repairs.

Price, Boxed and Delivered at Depot or Express Office, \$11.00.

Matthews' Improved Drill and Cultivator Combined.

Matthews' Improved Drill and Cultivator Combined.—The Matthews Drill and Cultivator Combined has been greatly changed and improved. It has a larger wheel with a wider flange to it, a new conductor and a new cover, so that as a drill it now possesses all the features of the Matthews Garden Seed Drill of a smaller size. It has the same patent Indicator as that. The Cultivator attachment has also been greatly improved by providing it with a new set of teeth of an improved pattern, with STEEL BLADES of the best quality, so that as a Cultivator it is now similar to the Matthews Improved Hand Cultivator. Therefore, as now constructed, this machine cannot fail to prove very efficient for use, either as a Drill or a Cultivator, and will be found to be adapted to any kind of soil.

Price, Boxed and Delivered at Depot or Express Office, \$13.00.

We can furnish for the Matthews Improved Drill and Cultivator Combined, if desired, a pair of superior style *Hoes, with long, Steel Blades*, for use in exchange with the cultivator teeth, which are easily and quickly adjusted. Price per pair, complete, delivered at Depot or Express Office, \$1.50.

Matthews' Improved Hand Cultivator,
with two extra Hoes.

Matthews' Improved Hand Cultivator.—

The Matthews' Hand Cultivator has been greatly changed and improved. It is now made with a larger wheel, and with a larger flange to it. It is also provided with a new set of teeth of an improved pattern, having STEEL BLADES of the best quality, and as now constructed will, we think, prove greatly superior to what it was before, and be found to be perfectly adapted for use in any kind of soil.

It is thoroughly constructed throughout, very durable and easy to operate. A boy can do as much with it as six men with hoes. It spreads from six to fourteen inches, and will cut all the ground covered, even when spread to its greatest extent. The depth of cultivation may be accurately gauged by raising or lowering the wheel, which is quickly done.

Price, Boxed and Delivered at Depot or Express Office, \$6.00.

We can furnish for the Matthews Improved Hand Cultivator, if desired, a pair of superior style *Hoes, with long, Steel Blades*, for use in exchange with the cultivator teeth, which are easily and quickly adjusted. Price per pair, complete, delivered at Depot or Express Office, \$1.50.

THE NEW YORK SEED DRILL.

The New York Seed Drill (Matthews' Patent).—

This machine is the result of many years experience in the manufacture of such implements. It is very perfect in every respect, and wherever sold gives good satisfaction. It possesses a number of special advantages, a few of which we enumerate: marker bar under the frame, held by clamps and easily adjusted to any width; an adjustable plow which opens a wide furrow; open seed conductor showing seed dropping; bars in seed conductor for scattering seed in wide furrow; prevents disturbing strong plants when thinning out—an important feature; dial plate set on fulcrum and hence holds up, preventing seed from spilling; a large seed box. The machine is very compact, and easily handled.

Price, Boxed and Delivered at Depot or Express Office, \$10.00.

New York Seed Drill.

RUHLMAN'S HAND CULTIVATOR.

One of the best, simplest and most durable machines we have ever seen for working among onions, carrots, beets, beans, peas, &c. It is strong, easily adjusted, having but two bolts, can be adjusted to work from seven to sixteen inches, handles can be regulated to any height, and will do the work of eight men with hoes. The cast steel knife (A) corrugated so as to be set at any required angle, is provided with prongs as shown in cut, which lift and stir up the weeds and expose their roots to the air and sun. Knives of best cast steel. Weight, boxed, 35 lbs.

Price, Boxed and Delivered at Depot or Express Office, \$4.50.

Ruhlman's Hand Cultivator.

THE "PLANET, JR." AND "FIRE FLY" GARDEN DRILLS, WHEEL HOES AND WHEEL CULTIVATORS.

These machines well merit the general favor they have won, and with the recent improvements are even more perfect in their workings than formerly. *A Complete, Descriptive Catalogue of these goods, illustrated with over 40 engravings, showing the tools at work, and containing practical instruction in the cultivation of garden and field crops, invaluable to beginners, and useful to every tiller of the soil, will be mailed free on application to us.*

The Planet, Jr. No. 2 Drill.—Holds $2\frac{1}{2}$ quarts. It will sow with equal ease and accuracy, a single paper of seed or a full hopper, covering evenly at any exact depth, and will roll down and mark the next row perfectly, all at a single passage. It has no cams, levers, brushes, cogs, springs or shakers. It is *noiseless, automatic, self-cleaning, and always reliable.* It is remarkable for simplicity strength and beauty, and for ease and perfection of work in the field, and no one having use for such a tool can afford to buy any without such advantages; it is the latest improved and best.

The Planet, Jr. Combined Drill, Wheel Hoe, Wheel Cultivator and Wheel Plow.—Every reader of our catalogue having a vegetable garden, large or small, should own this delightful labor saving tool. As a *Drill*, it is exactly similar and equal to the No. 2 except in size. It holds one quart. As a *Plow*, it opens furrows, covers them, hills, plows to and from, &c. As a *Hoe*, it works safely and closely to and from both sides of the row at once, at the critical time when plants are small and weeds abundant or between rows as plants become larger, working all rows from eight to sixteen inches wide, at one passage. As a *Cultivator*, it is admirably adapted to deep mellowing of the soil. The blades are tempered and polished steel.

Planet, Jr. Combined Drill, Wheel Hoe, Wheel Cultivator and Wheel Plow.

It has a finely adjustable *Spring Brass Seed Reservoir*, an *Adjustable Plow* between the carrying and covering wheels, the *new, permanent Seed Index*, the *Cleaner and Marker*, all combining to make a perfect tool. It sows all garden seeds accurately at any desired thickness or depth, opening, dropping, covering, rolling down and marking the next row, all at one passage, in the most reliable and perfect manner. Each machine is sent out with all the tools shown in the cut, and by removing the roller and one bolt, it is ready to be used as a wheel hoe, a cultivator or a garden plow.

The Planet, Jr. Double Wheel Hoe, Wheel Cultivator and Wheel Plow.

—Will do the work of from six to ten men with the common hoe among market garden and root crops, nursery stock, &c., and it is especially adapted to onion culture. It is light, firm, strong, quickly set and easily managed; each one is sent out with all the tools shown in the cut. All the blades are tempered and polished steel. The tool is light and graceful, made of the best material, and nothing can exceed the perfection and variety of work it performs, nor equal the enthusiasm of its many admirers. The wheels are adjustable in height, and can be set from seven to ten inches apart, or for working between rows as a single wheel hoe, at four inches apart.

Planet, Jr. Double Wheel Hoe, Wheel Cultivator and Wheel Plow.

Fire Fly Single Wheel Hoe, Cultivator and Plow.

The Fire Fly Single Wheel Hoe, Cultivator and Plow.—This is a new claimant for public favor, and is sure to receive a large share of it, for it combines lightness and strength with the greatest adjustability, while its highly polished and tempered steel tools, make gardening comparatively a pleasure. The tools are all made after the most perfect models, and are first, a pair of admirable hoes which can be set to work to or from the row, and to any desired depth; next, a set of three reversible cultivator teeth to be used singly, together or in conjunction with the hoes; third, a large and excellent garden plow. The handle is made of stiff iron, and the whole tool is light and strong, attractive in appearance, and capable of standing hard usage for years, while its low price is its final recommendation.

The Fire Fly Wheel Garden Plow.—Makes the care of a vegetable garden a pleasure, and 10,000 families who could not find time to keep a garden, if attempting its cultivation with the ordinary hand hoe, can raise their own vegetables successfully with this tool.

PRICES OF PLANET, JR. GOODS, PACKED OR BOXED READY FOR SHIPMENT, AND DELIVERED AT EXPRESS OFFICE OR DEPOT.

No. 2 Drill	\$10 00	Double Wheel Hoe, Cultivator and Plow..	\$9 00
Combined Drill, Wheel Hoe, Cultivator and Plow.....	13 00	Fire Fly Single Wheel Hoe, Cultivator & Plow	4 50
		Fire Fly Plow.....	3 00

Improved Horse Hoe and Cultivator Combined, with Wheel.—This popular implement is made in the most thorough manner of the best materials, and well finished, and while light and easy of draught, it is very strong. It works equally well as a Horse Hoe or Cultivator. The frame and teeth are adjustable, and the teeth have reversible points. It has come into common use for general work, and is largely used in the culture of corn and cotton. It is invaluable for crops requiring to be hoed by hand, preceding the hoe and doing nearly all the work, or for crops that require hilling.

Price, complete (including wheel), Delivered at Depot or Express Office, \$10.00.

ONION HOE.—To supply the demand for a tool exactly adapted to Onion culture we have placed in stock this year the same hoe that we use on our own grounds, we have a large number in use, and consider them far superior to anything we have ever seen for the purpose. The blade is seven inches long and one and three-quarters broad, and can be used either to cut forward or backward. The hoe is light and easy to work with, and is constructed of the best steel. Price: Hoe (with handle) delivered at Express Office, 75 cents, the purchaser paying express charges; Hoe (without handle) by mail, postage paid, 75 cents.

Excelsior Weeding Hook.

The latest and best hand weeder for use either in the flower or vegetable garden. For Onions and Strawberries, it is simply indispensable. It is rapid, easy and thorough in its work. The blade is $\frac{7}{8}$ inch wide, $\frac{1}{4}$ inch thick, solid steel, oil tempered, and has five sharp edges. The cut is one-sixth full size. Price, post paid, 50 cents.

EXCELSIOR WEEDING HOOK.

For weeding flower beds or vegetable gardens. It will work well among rows or seedlings, among ornamental plants, or in any place where freedom from weeds is desired. It removes the weeds with far greater rapidity than in the usual manner, without injury to the plants, and will pay for itself in one day's use. Price, 25 cents each, by mail, prepaid.

The Hazeltine Hand Weeder and Scraper.

Hazeltine Hand Weeder

PHILADELPHIA BROADCAST SEED SOWER.

For sowing Wheat, Clover, Timothy, Oats, Barley, Rye, Buckwheat, Millet, Rice, Flaxseed, and all varieties of Grain and Grass Seeds. ONE OF THE GREATEST LABOR-
SAVING MACHINES INVENTED FOR AGRICULTURAL PURPOSES

Broadcasting.—The Philadelphia has been TRIED AND PROVEN, not in one section only, but in nearly every State and Territory in the Union. In a few plain words we will mention some points of superiority: It is easily adjusted: the quantity sown per acre readily regulated; the ground requires no preparation excepting plowing; the seed is evenly distributed, and the breadth of cast is as great or greater than any other sower, and consequently it can do a greater amount of work in a given time. It sows readily four to six acres an hour. The principle of sowing is to follow closely the action of broadcasting by hand, casting the seed horizontally and within prescribed limits, not wildly distributing it in the air, as some sowers do; this means a saving of seed, and consequently of money.

With our machines, the following distances can be sown with uniformity: Wheat, 25 feet; Barley, 25 feet; Clover, 20 feet; Timothy, 18 feet; Rye, 25 feet; Orchard Grass, 12 feet. The following is the report of Mr. I. Carter, Superintendent of the Eastern Experimental Farm, Pa., on experiments made in seeding wheat for harvest of 1877:

	LBS. STRAW.	BUS. WHEAT PR ACRE.
1. Two bushels seed broadcast (harrowed).....	3,332	35.48
2. Two bushels drilled in.....	2,715	24.04

Difference in favor of Broadcasting..... 617

11.44

Seed Sowers can only be sent by express, the purchaser paying charges. Price, delivered at express office, \$5.50 each.

Price, small size box, for testing, by mail, post paid	15c.
" " larger " containing five times the quantity, by mail, prepaid	4cc.

OUR TERMS ARE STRICTLY CASH WITH THE ORDER.

GUARANTEE.—Complaints made that seeds are not good, may quite as often be attributed to other causes as to the quality of the seeds. There are hundreds of contingencies continually arising to prevent the best seeds always giving satisfaction, such as sowing too deep, too shallow, in too wet or too dry soil; insects of all descriptions destroying the plants as soon as, or before they appear; wet weather, cold weather, frosts, chemical changes in the properties of seeds induced by temperature, &c. For the above reasons, it is impracticable to guarantee seeds under all circumstances, and *while we exercise the greatest care to supply every article true to name, and of the very best quality, and believe our seeds to be the purest and best to be found, we wish it to be distinctly understood that we sell no seeds with any warranty, express or implied, and we will not be in any way responsible for the crop.*

RETAIL PRICE LIST.

All varieties in heavy face type are of superior quality.

ARTICHOKE—See page 13.

Large Globe	Pkt. 10	Oz. 30	2 Oz. 55	¼ Lb. 1 00	Lb. 3 00
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ASPARAGUS—See page 13.

Giant	5	10	15	25	60
Conover's Colossal	5	10	15	25	75
Roots, one year old, by mail, prepaid				per 100,	1 00
" two				"	2 00
" by express, not prepaid				"	1 00

BEANS, Dwarf—See pages 13-15.

D. M. Ferry & Co's New Golden Wax	Pkt. 10	½ Pt. 15	Pt. 25	Qt. 40	4 Qt. 1 50	Bu. 8 00
German Wax, black seeded	10	15	25	40	1 50	7 50
Ivory Pod Wax	10	15	25	40	1 50	8 00
German Wax, white seeded	10	15	25	40	1 50	7 50
Crystal White Wax	10	15	25	40	1 50	8 00
Lemon Pod Wax	10	15	25	40	1 50	8 00
Early China Red Eye	10	15	25	35	1 25	7 00
Early Round Yellow Six Weeks	10	15	25	35	1 25	7 00
Early Yellow Kidney Six Weeks	10	15	25	35	1 25	7 00
Early Red Valentine	10	15	25	35	1 25	7 00
Early Mohawk	10	15	25	35	1 25	7 00
Dwarf Horticultural	10	15	25	35	1 25	7 00
Royal Dwarf Kidney	10	15	20	30	1 00	6 00
Large White Marrow, or Mountain	10	15	20	30	1 00	5 50
White Corn Hill	10	15	20	30	1 00	5 50
Early Marrow Pea, or Dwarf White Navy	10	15	20	25	75	5 00
Prolific Tree Bean	10	15	25	40	1 50	8 00

BEANS, Pole, or Running—See pages 15-16.

London Horticultural	10	20	30	50	1 75	10 00
Dutch Case Knife	10	20	30	50	1 75	10 00
Indian Chief, or Tall Wax	10	20	35	60	2 00	11 00
Southern Prolific	10	20	30	50	1 75	10 00
Extra Early Lima	10	20	35	60	2 00	12 00
Small White Lima, Carolina, or Sieva	10	20	30	50	1 75	10 00
Dreer's Improved Lima	10	20	30	50	1 75	10 00
Large White Lima	10	20	30	50	1 75	10 00
White Runner	10	20	30	50	1 75	10 00
Scarlet Runner	10	20	30	50	1 75	10 00

BEEF—See pages 16-17.

Extra Early Egyptian Blood Turnip, true	5	10	15	25	¼ Lb. 75	Lb. 75
Early Blood Turnip, improved	5	10	15	25	75	75
Dewey's Early Blood Turnip	5	10	15	25	65	65
Bastian's Early Blood Turnip	5	10	15	25	75	75
Early Blood Turnip	5	10	15	25	60	60
Early Turnip Bassano, true	5	10	15	25	65	65
Henderson's Pine Apple	5	15	25	40	1 25	1 25
Half Long, Dark Blood, Rough Skinned	5	10	15	25	1 00	1 00
Long Dark Blood, improved	5	10	15	25	75	75
Long Dark Blood	5	10	15	25	60	60
French White Sugar	5	10	15	20	50	50
Swiss Chard, or Sea Kale Beet	5	10	15	25	60	60
French Yellow Sugar	5	10	15	20	50	50
Vilmorin's Improved Imperial Sugar	5	10	15	25	75	75
Lane's Improved Imperial Sugar	5	10	15	25	60	60
Long Red Mangel Wurzel	5	10	15	20	50	50
D. M. Ferry & Co's Improved Mammoth Long Red Mangel Wurzel	5	10	15	25	60	60
Norbitan Giant Long Red Mangel Wurzel	5	10	15	25	60	60
Yellow Globe Mangel Wurzel	5	10	15	20	50	50
Carter's Warden Prize Yellow Globe Mangel Wurzel	5	10	15	25	60	60
Yellow Ovoid	5	10	15	25	60	60
Red Globe Mangel Wurzel	5	10	15	20	50	50

BROCOLI—See page 17.

Early Purple Cape	5	40	75	1 25	4 00
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BRUSSELS SPROUTS—See page 17.

Best Imported	5	15	25	40	1 50
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Add 30 Cents per Quart for Postage.

CABBAGE—See pages 17-19.

FIRST EARLY SORTS.

	Pkt.	Oz.	2 Oz.	¼ Lb	Lb.
Early Jersey Wakefield, <i>best American</i>	5	35	60	1 00	3 50
Very Early Etampes, <i>catalogued by some as "EARLIEST"</i>	5	25	40	75	2 50
Early York	5	15	25	40	1 50
Early Large York	5	15	25	40	1 50
Early Sugar Loaf	5	25	35	60	1 75
Little Pixie	5	20	35	60	2 00
Henderson's Early Summer, <i>true</i>	5	30	55	1 00	3 00

SECOND EARLY, OR SUMMER SORTS.

Newark Early Flat Dutch	5	30	55	1 00	3 00
Early Dwarf Flat Dutch, <i>American</i>	5	30	55	1 00	3 00
Early Winnigstadt, <i>true</i>	5	20	35	60	2 00
German Filderkraut	5	25	40	75	2 50
Fottler's Early Drumhead, or Brunswick Short Stem, <i>true American</i>	5	30	55	1 00	3 00
Fottler's Early Drumhead, or Brunswick Short Stem, <i>best French</i>	5	20	35	60	2 00
Early Drumhead, <i>best French</i>	5	20	35	60	2 00
Early Large Schweinfurt	5	25	40	75	2 50
Imperial French Ox Heart	5	20	35	60	1 75

LATE, OR AUTUMN AND WINTER SORTS.

Fine Blood Red, <i>for pickling</i>	5	20	35	60	2 00
Stone Mason Marlehead	5	30	55	1 00	3 00
Late Flat Dutch, <i>best French</i>	5	15	25	40	1 50
D. M. Ferry & Co's Premium Flat Dutch	5	30	55	1 00	3 00
Large Drumhead, <i>best French</i>	5	15	25	40	1 50
D. M. Ferry & Co's Premium Drumhead	5	30	55	1 00	3 00
Marlehead Mammoth Drumhead, <i>true</i>	5	30	55	1 00	3 00
Quintal Drumhead, <i>true French</i>	5	20	35	60	2 00
Green Glazed	5	25	40	75	2 50
Savoy Dwarf Elm	5	20	35	60	2 00
Savoy Green Globe	5	20	35	60	2 00
Savoy, Improved American	5	30	55	1 00	3 00
Savoy Drumhead	5	20	35	60	2 00

CARROT—See pages 19-20.

Earliest Short Horn, <i>for forcing</i>	5	10	15	25	1 00
Early Scarlet Horn	5	10	15	25	50
Early Half Long Scarlet, Stump Rooted	5	10	15	25	50
Half Long Scarlet Nantes, Stump Rooted	5	10	15	25	50
Danvers	5	10	15	25	50
Long Orange, <i>improved</i>	5	10	15	25	50
Large White Belgian	5	10	15	25	60

CAULIFLOWER—See page 20.

Extra Early Dwarf Erfurt ... Per pkt. 25c, ¼ oz. \$1.75; per 1 oz. \$6.00 ...					
Early Snowball	5	25c	1.75	6.00	
Extra Early Paris	5	75	1 25	2 00	
Early Erfurt	5	1 50	2 50	4 00	
Early London	5	60	1 00	1 75	
Early Paris, or Nonpareil	5	1 00	1 75	2 00	
LeNormand's Short Stem	5	1 00	1 75	3 00	
Large Algiers	5	1 25	2 50	4 50	
Late London	5	50	85	50	
Veitch's Autumn Giant	5	1 00	1 75	3 00	

CELERY—See pages 20-21.

New Golden Heart	5	25	45	75	2 50
Crawford's Half Dwarf	5	25	40	75	2 50
Dwarf White Solid, <i>self blanching</i>	5	20	35	60	2 00
Boston Market	5	25	40	75	2 50
Seymour's White Solid	5	20	30	50	1 75
Incomparable Dwarf Crimson	5	25	40	75	2 50
Celeriac, or Turnip Rooted	5	20	30	50	1 75
Celery Seed, <i>for flavoring</i>		10	15	20	50

CHICORY—See page 21.

Large Rooted, or Coffee	5	10	15	25	1 00
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COLLARDS—See page 22.

Georgia, Southern, or Creole	5	15	25	40	1 50
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CORN—See pages 22-23.

SWEET, OR SUGAR VARIETIES.

	Pkt.	½ Pt.	Pt.	Qt.	4 Qt.	Bu.
Extra Early Marlehead	10	15	20	30	1 00	6 00
Dolly Dutton, or Tom Thumb	10	15	20	30	1 00	6 00
Early Minnesota, <i>very early</i>	10	15	20	25	75	5 00
Early Red Naragansett	10	15	20	30	1 00	6 00
Crosby's Early	10	15	20	25	75	5 00
Russell's Early Prolific	10	15	20	25	75	5 00
Early Sweet, or Sugar	10	15	20	25	75	5 00

Add 30 Cents per Qt. for Postage.

CORN—Continued.

	Pkt.	½ Pt.	Pt.	Qt.	4 Qt.	Bu
Moore's Early Concord.....	10	15	20	25	75	5 00
Black Mexican	10	15	20	30	1 00	6 00
Excelsior	10	15	20	30	1 00	6 00
Amber Cream	10	15	20	30	1 00	6 00
Triumph	10	15	20	30	1 00	6 00
Egyptian	10	15	20	25	75	5 00
Mammoth	10	15	20	30	1 00	6 00
Stowell's Evergreen	10	15	20	30	1 00	6 00

FIELD VARIETIES.

Extra Early Adams, for table use south	10	15	20	30	1 00	6 00
Early Adams, or Burlington	10	15	20	25	75	5 00
Compton's Early	10	15	25	25	75	4 00
Lackawaxen	10	15	25	25	75	4 00
Early Dent	10	15	25	25	75	4 00
Large Yellow, Eight Rowed	10	15	20	60	3 00	
Large Red Blazed	10	15	20	60	3 00	
Rice, for parching (bushel lots in ears)	10	15	25	40	..	3 00

Add 30 cts. per Quart for Postage.

CORN, BROOM—See page 23.

Dwarf Evergreen					Lb.	Bu
Improved Evergreen					60	6 00

	Pkt	Oz.	2 Oz.	¼ Lb.	Lb.
CORN SALAD, or Feticus, large seeded, large leaved—See page 23	5	10	15	25	1 00

CRESS, or Peppergrass—See pages 23-24.

Curled	5	10	15	20	50
True Water	10	40	75	1 25	4 00

CUCUMBER—See page 24.

Early Russian	5	15	25	40	1 50
Early Cluster	5	15	25	40	1 50
Early Short Green, or Early Frame	5	15	25	40	1 50
Early White Spine	5	15	25	40	1 50
Bismark, long, light green	5	20	35	60	1 75
Improved Long Green	5	20	35	60	1 75
D. M. F. & Co's Perfection Pickling, best pickling	5	20	35	60	2 00
Boston Pickling, or Green Prolific	5	20	35	60	1 75
Small Gherkin, for pickles	5	25	40	75	2 50

EGG PLANT—See pages 24-25.

Early Long Purple	5	25	40	75	2 50
Black Pekin, extra early, and very large	5	60	1 00	1 75	6 00
Large New York Purple	5	60	1 00	1 75	6 00
D. M. F. & Co's Improved Purple, extra large	5	75	1 25	2 00	7 50

ENDIVE—See page 25.

Green Curled	5	20	35	60	1 75
Broad Leaved Batavian	5	20	35	60	1 75

GARLIC, Bulbs—See page 25.

GOURD—See page 25.	..	..	20	50	
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Sugar Trough	10	30	55	1 30	3 00
Japanese Nest Egg	10	50	..	..	..

Other varieties, see Flower Seeds.

HORSE RADISH, Small Roots—By mail, prepaid, each 10c; per doz. 50c....	..	..	..	..	..
“ “ By frt. or exp. not prepaid, per 100, \$1.00....	..	..	..	..	..

KALE, or Borecole—See pages 25-26.

Tall Green Curled Scotch	5	10	15	25	1 00
German Dwarf Green	5	10	15	25	90
German Dwarf Purple	5	15	25	40	1 25

KOHL RABI—See page 26.

Early White Vienna	5	25	40	75	2 25
Early Purple Vienna	5	20	35	60	2 00
Large Green	5	15	25	40	1 50

LEEK—See page 26.

London Flag	5	15	25	40	1 25
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LETTUCE—See pages 26-27.

Early Tennis Ball, true black seeded, for forcing	5	15	25	40	1 25
Black Seeded Simpson	5	15	25	40	1 25
Simpson's Early Curled	5	15	25	40	1 25
Early Boston Curled	5	15	25	40	1 25
Ferry's Early Prize Head	5	20	35	60	1 75
Hanson	5	15	25	40	1 25
Deacon Hine, or Ice	5	25	40	75	2 50
Early Curled Silesia	5	10	15	25	1 00
Frankfort Head	5	15	25	40	1 25
Large Drumhead, or Victoria Cabbage	5	10	15	25	1 00

	Pkt.	Oz.	2 Oz.	¼ Lb.	Lb.
LETTUCE—Continued.					
Philadelphia Butter, or Early White Head	5	15	25	40	1 25
Brown Dutch	5	20	35	60	1 75
Green Fringed	5	15	25	40	1 50
White Paris Cos	5	20	35	60	1 75
MARTYNA—See page 27.					
Pickling	5	30	55	1 25	2 00
MELON, MUSK—See page 28					
Jenny Lind	5	15	25	40	1 25
Surprise	5	15	25	40	1 25
Skillman's Fine Netted	5	15	25	25	1 25
Improved Large Green Nutmeg	5	15	25	40	1 25
Pine Apple	5	10	15	25	1 00
Green Nutmeg	5	10	15	25	1 00
Bay View	5	15	25	40	1 25
Improved Canteloupe, green fleshed	5	15	25	40	1 25
Casaba, or Green Persian	5	15	25	40	1 25
Long Yellow	5	10	15	25	1 00
MELON, WATER—See pages 28-29					
Early Jersey	5	15	25	40	1 50
Phinney's Early	5	15	25	40	1 25
D. M. Ferry & Co's Peerless the best	5	15	25	40	1 50
Black Spanish	5	10	15	25	1 00
Gypsy, or Georgia Rattlesnake	5	15	25	40	1 25
Cuban Queen	5	15	25	40	1 50
Scaly Bark	5	20	35	60	2 00
Iceing, or Ice Rind	5	15	25	40	1 25
Mountain Sweet	5	10	15	25	80
Mountain Sprout	5	10	15	25	1 00
Orange, the flesh separates easily from the rind	5	15	25	40	1 25
Ice Cream, true white seeded	5	15	25	40	1 25
Citron for preserving	5	15	25	40	1 25
MUSHROOM SPAWN—See page 29					
English, by mail, prepaid					30
French, by mail, prepaid, 3-lb. boxes, \$2.00 each.					
MUSTARD—See page 29.					
White English	5	10	15	20	50
Brown Italian	5	10	15	20	50
Southern Giant Curled	5	10	15	25	1 00
NASTURTIUM—See page 29.					
Tall Mixed	5	15	25	40	1 50
OKRA—See pages 29-30.					
Tall White	5	10	15	25	75
Dwarf White	5	10	15	25	75
ONION—See pages 30-32. All prime new stock, and mostly our own growth, on our own Seed Farms. See page 30 for directions for growing Onions.					
Extra Early Red	5	15	25	40	1 25
Early Red Globe	5	15	25	40	1 25
Large Red Wethersfield	5	10	15	25	75
Large Red Wethersfield, Extra, our own growth	5	10	15	25	1 00
Large Yellow, or Yellow Dutch	5	10	15	25	75
Yellow Danvers	5	10	15	25	75
Yellow Globe Danvers, Extra	5	10	15	25	1 00
White Portugal (American Silverskin)	5	25	40	75	2 50
White Globe	5	25	40	75	2 50
El Paso, or Large Mexican	5	30	55	1 00	3 00
IMPORTED VARIETIES.					
White Silverskin, for pickling	5	25	35	60	2 00
New Giant Rocca	5	25	40	75	2 50
Early Neapolitan Marzajola	5	25	40	75	2 50
Giant White Italian Tripoli	5	25	40	75	2 50
New Queen, true, best keeper	5	30	55	1 00	3 00
BULBS.					
Yellow Bottom Sets				Qt.	Bu.
Red				25	about 5 00
White				25	5 00
				30	6 00
Above are approximate prices per bushel, subject to variations of the market, and our ability to procure stock. The price per quart, will hold good through the season, or as long as our stock lasts.					
PARSNIP—See pages 32-33.					
	Pkt.	Oz.	2 Oz.	¼ Lb.	Lb.
Long White Dutch, or Sugar	5	10	15	25	60
Hollow Crown	5	10	15	25	60

PARSLY—See page 33.

	Pkt.	Oz.	2 Oz.	½ Lb.	Lb.
Carter's Fern Leaved.....	5	10	15	25	1 00
Fine Triple Curled, or Myatt's Garnishing.....	5	10	15	25	75

PEAS—See pages 33-35. Our lot of Peas embraces every desirable kind yet offered, and our stocks can be entirely depended upon by the most exact gardeners, as true to name, carefully screened and hand picked, and certain to give complete satisfaction.

EXTRA EARLY SORTS.

	Pkt.	½ Pt.	Pt.	Qt.	4 Qt.	Bu.
Ferry's First and Best	10	15	20	30	1 00	6 00
D. M. F. & Co.'s Extra Early.....	10	15	20	30	1 00	5 50
Improved Early Daniel O'Rourke.....	10	15	20	30	1 00	5 50
Bliss' American Wonder, true.....	10	15	25	40	1 50	8 00
Kentish Invicta.....	10	15	20	30	1 00	6 00
Laxton's Alpha.....	10	15	20	30	1 00	6 00
William L.....	10	15	20	30	1 00	6 00
Ferry's Extra Early Tom Thumb.....	10	15	25	35	1 25	7 00
Blue Peter, or Blue Tom Thumb.....	10	15	20	30	1 00	6 00

EARLY SORTS.

	Pkt.	½ Pt.	Pt.	Qt.	4 Qt.	Bu.
Premium Gem	10	15	20	30	1 00	6 00
McLean's Little Gem	10	15	20	30	1 00	6 00
Extra Early Kent, true.....	10	15	25	25	75	4 75
Carter's Little Wonder.....	10	15	25	40	1 50	8 00
Dwarf Champion.....	10	15	20	30	1 00	6 00
McLean's Advancer.....	10	15	20	30	1 00	6 00
Bishop's Early Dwarf.....	10	15	20	30	1 00	6 00
Bishop's Long Pod Dwarf.....	10	15	20	30	1 00	6 00

LATE SORTS.

	Pkt.	½ Pt.	Pt.	Qt.	4 Qt.	Bu.
Bliss' Everbearing 5 pkts. for \$1.00.....	25	..	..	..	..	..
Yorkshire Hero.....	10	15	20	25	1 75	4 50
Champion of England, choice	10	15	20	30	1 00	5 50
Large Blue Imperial, choice.....	10	15	20	25	75	4 75
Large White Marrowfat.....	10	15	20	25	50	2 75
Large Black Eye Marrowfat.....	10	15	20	25	50	2 75
Dwarf Sugar, Edible Pods, grey seed.....	10	20	30	50	1 75	10 00
Tall Sugar, Edible Pods, grey seed.....	10	20	30	50	1 75	10 00

FIELD SORTS.

	Pkt.	½ Pt.	Pt.	Qt.	4 Qt.	Bu.
Common White Field.....	about	10	15	20	40	1 50
Common Blue Field.....	"	10	15	20	40	1 75
Golden Vine, White Field.....	"	10	15	20	40	1 75
Creper, White Field.....	"	10	15	20	40	1 75
Early Crown, White Field.....	"	10	15	20	40	1 75
Blue Prussian, Field.....	"	10	15	25	50	2 50

PEPPER—See page 35.

	Pkt.	Oz.	2 Oz.	¼ Lb.	Lb.
Chili.....	5	30	55	1 00	3 00
Long Red Cayenne.....	5	25	40	75	2 50
Large Squash.....	5	25	40	75	2 50
Large Bell, or Bull Nose.....	5	25	40	75	2 50
Sweet Mountain.....	5	25	40	75	2 50
Monstrous or Grossum.....	5	30	55	1 00	3 00

POTATOES—See pages 35-36. Please notice that our barrel quotations contemplate 3 bushels of Potatoes. Beware of "Full-sized barrels" holding only 150 to 165 pounds of Potatoes. Bbl. of

	1 Lb.	2 Lb.	3 Lb.	¼ Bu.	½ Bu.	1 Bu.	3 Bu.
Early Mayflower, the best early Potato ever introduced. See colored plate	75	1 25	1 50	1 75	2 50	4 50	12 00
Early Telephone, second early; fine quality; good keeper	50	75	1 00	1 00	1 50	2 25	6 00
White Star, combines more good qualities than any other sort	40	65	90	1 00	1 25	1 75	4 50
Brownell's Best.....	40	65	90	1 00	1 25	1 75	4 50
Early Ohio.....	40	65	90	1 00	1 25	1 50	4 00
Early Beauty of Hebron.....	40	65	90	1 00	1 25	1 50	4 00
Clark's Seedling No. 1.....	40	65	90	1 00	1 25	1 50	4 00
Early Rose, true.....	30	55	80	75	1 00	1 25	3 50
Mammoth Pearl.....	30	55	80	75	1 00	1 25	3 50
St Patrick.....	30	55	80	75	1 00	1 25	3 50
Burbank's Seedling.....	30	55	80	75	1 00	1 25	3 50
Pride of America.....	30	55	80	75	1 00	1 25	3 50

Prices quoted are subject to fluctuations of the market and our ability to obtain stock. We send by express or mail, prepaid, at lb. quotations. Quarter bushels and upwards sent by express or freight, the purchaser paying charges. We cannot become responsible for changes in weather, by which they may become injured en route. All orders for Potatoes must be accompanied with the money. They will be registered and filled in rotation, as soon as weather will permit in spring. Orders from the South will, however, be executed early enough for early spring planting.

PUMPKIN—See page 36.

	Pkt.	Oz.	2 Oz.	¼ Lb.	Lb.
Large Yellow..... (per bu., \$4.00).....	5	10	15	20	40
Cushaw.....	5	15	25	40	1 25
Sweet Cheese, or Kentucky Field..... (per bu., \$6.00).....	5	10	15	25	60

	Pkt.	Oz.	2 Oz.	¼ Lb.	Lb.
RADISH —See pages 36-37.					
Early Long Scarlet, Short Top, improved.....	5	10	15	25	65
Wood's Early Frame	5	10	15	25	75
Early Round Deep Scarlet.....	5	10	15	25	75
Early Scarlet, Turnip Rooted.....	5	10	15	25	65
Early Scarlet Turnip, White Tipped	5	10	15	25	75
Early White, Turnip Rooted	5	10	15	25	65
Golden Globe, best summer variety.....	5	10	15	25	80
Grey Summer, Turnip Rooted	5	10	15	25	1 00
Early Scarlet, Olive Shaped	5	10	15	25	75
French Breakfast	5	10	15	25	80
Long White Naples.....	5	10	15	25	1 00
WINTER VARIETIES.					
Dayton	10	15	25	40	1 50
Scarlet China.....	5	10	15	25	1 00
White China	5	10	15	25	1 00
Long Black Spanish	5	10	15	25	65
Long White Spanish	5	10	15	25	75
California Mammoth White China	5	15	25	40	1 50
RAPE —See page 38.					
Dwarf Essex, for sowing	per bu., \$6.00..	..	..	15	40
RHUBARB, or PIE PLANT —See page 38.					
Victoria	5	15	25	40	1 50
Giant	5	15	25	40	1 50
Linnaeus	5	15	25	40	1 50
Rhubarb Roots	25 cents each	\$2.00 per doz..	..	..	..
“ “ by mail, prepaid 40 cents each	4.00 “	..	..	..	..
ROUETTE —See page 38					
SALSIFY, or VEGETABLE OYSTER —See page 38.....	5	20	35	60	2 00
SPINAGE —See page 38.	5	15	25	40	1 25
Round Summer	5	10	15	20	40
Improved Thick Leaved	5	10	15	20	40
Savoy Leaved	5	10	15	20	40
Prickly Winter	5	10	15	20	40
Long Standing	5	10	15	20	40
SQUASH —See pages 38-39.					
Perfect Gem, not worthy of cultivation	..	..	..	..	..
Early Yellow Bush Scallop	5	10	15	25	1 00
Early White Bush Scallop	5	10	15	25	1 00
Summer Crookneck.....	5	10	15	25	1 00
AUTUMN, OR WINTER SORTS.					
Improved American Turban	5	15	25	40	1 25
Marblehead	5	15	25	40	1 25
Butman	5	15	25	40	1 25
Boston Marrow.....	5	15	25	40	1 25
Winter Crookneck.....	5	15	25	40	1 25
Hubbard, true.....	5	15	25	40	1 25
SUGAR CANE —See pages 39-40.					
Early Amber	\$4.00 per bu..	..	..	15	40
Early Orange	\$4.00 “	..	..	15	40
SUNFLOWER —See page 40.					
Large Russian	5	10	15	25	60
TOBACCO —See page 40.					
Connecticut Seed Leaf	5	25	40	75	2 50
White Burley	5	40	75	1 25	4 00
Virginia	5	40	75	1 25	4 00
Maryland Broad Leaf.....	5	40	75	1 25	4 00
Havana	5	50	85	1 50	5 00
Yellow Oronoco	5	40	75	1 25	4 00
Silky Pryor	5	40	75	1 25	4 00
TOMATO —See pages 40-41.					
Livingston's Favorite, new, best, see page 41	10	50	85	1 50	5 00
Livingston's Perfection	5	30	55	1 00	3 00
Essex Early Hybrid, extra selected stock.....	5	30	55	1 00	3 00
Hundred Day	5	30	55	1 00	3 00
Hubbard's Early Curled Leaf.....	5	25	40	75	2 50
Queen	5	30	55	1 00	3 00
Early Conqueror	5	25	40	75	2 50
Canada Victor.....	5	25	40	75	2 50
Paragon	5	30	55	1 00	3 00
Acme	5	30	55	1 00	3 00
Hathaway's Excelsior	5	25	40	75	2 50
Trophy, extra selected	5	40	75	1 25	4 00
Large Red	5	25	40	75	2 50

TURNIP—See pages 41-44.

WHITE FLESHED SORTS.

	Pkt.	Oz.	2 Oz.	¼ Lb.	Lb.
Early Purple Top Munich, <i>very early</i>	5	10	15	25	80
White Egg	5	10	15	25	75
Early White Stone	5	10	15	20	50
Jersey Navet	5	10	15	25	75
Early White Flat Dutch	5	10	15	20	50
Early White Flat Dutch, Strap Leaved	5	10	15	25	60
Early Purple Top, Strap Leaved, <i>improved</i>	5	10	15	25	60
Cow Horn, or Long White	5	10	15	25	60
Improved Purple Top Mammoth	5	10	15	25	60
Large White Flat Norfolk	5	10	15	20	50
Large Red Top Flat Norfolk	5	10	15	20	50
Pomeranian White Globe	5	10	15	20	50
Pomeranian White Globe, Strap Leaved	5	10	15	25	60
Purple Top White Globe	5	10	15	25	75
Sweet German	5	10	15	25	75
Seven Top	5	10	15	20	50

YELLOW FLESHED SORTS.

Early Yellow Montmagny	5	10	15	25	80
Large Amber Globe	5	10	15	25	60
Orange Jelly, or Robertson's Golden Ball	5	10	15	25	60
Purple Top Yellow Aberdeen	5	10	15	20	50
Early Yellow Finland	5	10	15	25	75
Early Yellow Malta	5	10	15	25	75

RUTA BAGAS, OR SWEDES.

Yellow Swede, or Ruta Baga	5	10	15	20	50
Carter's Imperial Purple Top Ruta Baga	5	10	15	20	50
D. M. Ferry & Co's Improved Purple Top Yellow Ruta Baga	5	10	15	25	60
Large Ovoid Purple Top Yellow Ruta Baga	5	10	15	25	60
Bangholm Swede	5	10	15	20	50
Sweet Russian, or White Ruta Baga	5	10	15	25	60

SWEET HERBS—See pages 44-45.

Anise	5	10	15	25	1 00
Balm	5	40	75	1 25	4 00
Basil, Sweet	5	25	40	75	2 50
Bene	5	20	35	60	2 00
Borage	5	15	25	40	1 50
Caraway, for sowing	5	10	15	25	75
Caraway, for flavoring	5	..	..	..	50
Catnip, <i>makes an excellent bee pasture</i>	5	40	75	1 25	4 00
Coriander, for sowing	5	10	15	25	75
Coriander, for flavoring	5	..	..	..	50
Dandelion, Improved Thick Leaved	5	60	1 00	1 75	6 00
Dill	5	10	15	25	1 00
Fennel, Sweet	5	10	15	25	1 00
Hoarhound	5	40	75	1 25	4 00
Hyssop	5	25	40	75	2 50
Lavender	5	20	35	60	2 00
Marjoram, Sweet	5	20	35	60	2 00
Rosemary	5	30	55	1 00	3 00
Rue	5	15	25	40	1 50
Saffron	5	15	25	40	1 50
Sage, Broad Leaf	5	20	35	60	2 00
Savory, Summer	5	15	25	40	1 50
Tansy	5	40	75	1 25	4 00
Tarragon	25	5 00	..	..	..
Thyme	5	40	75	1 25	4 00
Wormwood	5	30	55	1 00	3 00

FRUIT SEEDS—See page 46.

Apple Seeds	Oz.	¼ Lb.	Lb.	Bu.	
Cherry Stones, <i>mahaleb</i>	10	25	75	..	10 00
Cherry Stones, <i>mazzard</i>	..	..	40	..	..
Peach Stones, <i>Natural Virginia</i>	..	..	30	1 50	..
Pear Seed	35	1 00	3 50	..	..
Plum Stones	..	..	40	..	..
Quince Seed	35	1 00	3 50	..	..

FOREST TREE AND HEDGE SEEDS—See pages 46-48.

	Oz.	2 Oz.	¼ Lb.	Lb.
EVERGREEN.				
Arbor Vitæ, American, (<i>Thuja occidentalis</i>)	25	40	75	2 50
Fir, Silver (<i>Abies pectinata</i>)	15	25	40	1 50
Hemlock (<i>Tsuga Canadensis</i>)	50	85	1 50	5 00

FOREST TREE AND HEDGE SEEDS—Continued.

	Oz.	2 Oz	½ Lb.	Lb
Pine Scotch (<i>Pinus sylvestris</i>)	20	35	60	2 00
Pine, Weymouth, or White (<i>Pinus Strobus</i>)	25	40	75	2 50
Spruce Norway (<i>Abies excelsa</i>)	10	15	25	1 00
DECIDUOUS.				
Ash, White (<i>Fraxinus Americana</i>)	20	35	60	1 75
Ash, European (<i>Fraxinus excelsior</i>)	15	25	40	1 50
Barberry (<i>Berberis vulgaris</i>)	20	35	60	1 75
Birch, White (<i>Betula alba</i>)	15	25	40	1 50
Catalpa, hardy (<i>Catalpa speciosa</i>)	20	35	60	2 00
Hawthorn (<i>Crataegus oxyacantha</i>)	15	25	40	1 25
Larch (<i>Larix Europea</i>)	20	35	60	2 00
Linden, European (<i>Tilia Europea</i>)	15	25	40	1 50
Locust, Honey (<i>Gleditschia tricanthos</i>)	10	15	25	60
Locust, Yellow (<i>Robinia pseudo-acacia</i>)	10	15	25	60
Maple, Sugar, or Hard (<i>Acer saccharinum</i>)	15	25	40	1 25
Mulberry, White (<i>Morus alba</i>)	25	40	75	2 25
Mulberry, Russian	1 50	2 50	4 00	15 00
Osage Orange (<i>Maclura aurantiaca</i>)	per bu. of 33 lbs. not prepaid, \$6.00	10	15	20 50

BIRD SEEDS—See page 52.

Canary	Add 16 Cents per Pound for Postage				10
Hemp	"	"	"	"	10
Rape	"	"	"	"	10
Maw	"	"	"	"	10
Millet	"	"	"	"	10
Lettuce	"	"	"	"	10
Cuttie Bone	"	"	"	"	10
Mixed Bird Seed	"	"	"	"	10

CLOVER SEEDS—See pages 48-49.

Mammoth, or Large Red	per bushel, Market price	..	..	..
Medium Red, or June	per bushel of 60 lbs. \$20.00	10	15	20 60
Alsike, or Swedish	per bushel of 60 lbs. \$20.00	10	15	20 50
Bokhara, Sweet Clover, <i>Melilotus alba</i>	per bushel of 60 lbs. \$20.00	10	15	20 50
Crimson Trefoil, or Scarlet Italian	per bushel of 60 lbs. \$20.00	10	15	20 50
White Dutch	per bushel of 60 lbs. \$20.00	10	15	20 60
Lucerne, or Alfalfa	per bushel of 60 lbs. \$20.00	10	15	20 40

GRASS SEEDS—See pages 49-51.

Timothy	per lb. 25c., per bu. Market price	..	..	..
Orchard Grass	per lb. 6 c., per bu. of 14 lbs	3 50		
Red Top	30c.	14	25	
Fowl Meadow or False Red Top	50c.	12	3 00	
Blue Grass, Kentucky, extra clean	40c.	14	2 25	
Blue Grass, Kentucky fancy clean	40c.	14	2 50	
Johnson Grass	60c.	25	6 00	
Perennial Rye Grass	40c.	20	3 00	
Wood Meadow Grass	60c.	14	4 00	
Sweet Vernal Grass, the true perennial sort	80c.			
Hungarian Grass	30c.	48	1 50	
Millet, common	30c.	50	1 50	
German, true, southern grown	30c.	50	2 00	
Fine Mixed Lawn	40c.	15	4 00	
Extra Fine Mixed, Central Park mixture	50c.	15	5 00	

MISCELLANEOUS FARM SEEDS—See pages 51-52.

Wheat, Martin s Amber	Winter, 3 lbs. by mail, post paid \$1.00; per bu. of 60 lbs.	5 00		
Michigan Bronze, or Mediterranean Hybrid	3	1.00;	60	4 00
Valley	3	1.00;	60	3 50
Democrat	3	75;	60	3 00
Fultz	3	75;	60	2 00
Wheat, French Imperial, Spring	3	1.00;	60	3 00
Barley, Mansury	3	1.00;	48	2 00
common	3	1.00;	48	1 75
Naked, or Hulless	3	1.00;	48	3 00
Rye, Fall, or Winter	3	1.00;	56	1 75
Buckwheat, common	3	1.00;	48	2 25
Silver Hull	3	1.00;	48	2 25
Flax Seed, for sowing	per lb.	25;	56	3 00
Hemp Seed	"	25;	44	4 00
Spring Vetches, or Tares	"	30;	60	3 50
Wild Rice (<i>Zizania aquatica</i>)	"	1.00;	15	5 00

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American Weeds and Useful Plants.....	1 75	Onion Culture.....	paper 20
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Fuller's Grape Culturist.....	1 50	Silos and Ensilage.....	50
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