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Albany Nurseries

(INCORPORATED)

Albany, Oregon

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ESTABLISHED 1888

INCORPORATED 1906

CAPITAL STOCK \$25,000.00 FULLY PAID

Descriptive Catalogue
OF THE
"OLD RELIABLE"
Albany Nurseries
(INCORPORATED)

G. W. PENNEBAKER, Manager

THIRTEENTH EDITION

HOME PHONE 454

BELL 164 R

Office: Rooms 1 and 2, Young-Goodwin Block
ALBANY, OREGON

MEADE, THE PRINTER
ORENCO, OREGON
1913

NOTICE!

All persons authorized to act as agents for us, are provided with a written certificate to that effect, and we request that they be required to show their certificates. Stock is not unfrequently sold by persons without authority, and not furnished from the places they represent, by which means many poor trees and plants are distributed, causing great dissatisfaction and disappointment.

Buy Good Stock of Reliable Men, and this may be avoided.

INTRODUCTION

In presenting you with this catalogue, our 13th edition, we desire to state to our old customers as well as the new ones, that it is now a quarter of a century since the "Old Reliable" Albany Nurseries started with a small plant and our business has gradually grown into an enormous size.

There are only two things to consider in business: one is to satisfy your customer and the other is to make a legitimate profit for yourself. There are small nurseries who start in business when times are good and when trees are in demand, who when reverses come "fold up their tents in the night time" and like the Arab "silently steal away," and years afterwards when the trees they have sold prove untrue to name they are not to be found. Perhaps they are operating in pastures green. But the standard nursery that is always doing business at the same old stand, charging a reasonable price, ever willing and able to make good, is the one that should be patronized, be it whom it may.

It becomes natural for anyone when contemplating planting to make inquiries where they can buy the best, and we regret to say that a great many wish to know where they can buy the cheapest. It costs just as much to prepare the ground to plant and to cultivate a cheap tree as it does a good one, and while sometimes the good standard nurseries may charge a little more than the questionable nurseries, this difference is, often, just what they need to make them strong and reliable. When you patronize a bank, you seek a good strong one, when you take insurance you look for a company in whom you can place perfect confidence and know that the future welfare of your widow and orphans will be protected. You do not expect to buy the fruit trees but once. Buy the best and be satisfied.

The Albany Nurseries interest with a planter does not necessarily end when we have sold him the trees but we are interested in seeing them grow, being properly pruned and cultivated and lastly the marketing of the fruit and will always cheerfully do what we can to assist our customers as we are generally in touch with the market.

Realizing that there are no boundaries of territory, no barriers of distance, race or creed to the Reliable nursery who has a code of honor and lives up to it with the confidence of our customers, we hope to continue to grow. We thank all of our customers for their patronage in the past and will feel grateful for all future business.

Soliciting your valued inquiries we beg to remain,

Yours truly,

ALBANY NURSERIES,

G. W. PENNEBAKER, Manager.

To Correspondents.

In the transaction of any business, a mutual desire for mutual satisfaction between parties should prevail. Let us, then, ask of our patrons an observance of the following requests:

That all orders to us be written out in a legible style, with the name in full on a separate sheet and not in the body of the letter, that no mistake may occur.

That particular and plain directions be given how they wish their packages marked, and by what route sent, and to whose care consigned. When no route is designated we will send by the one we deem most advisable; but let it be distinctly understood that we will, in no case, be responsible for any loss or damage that may occur after we have delivered them to the forwarders. They alone are responsible.

While we exercise the greatest care to have all our trees and plants true to name, well grown and packed in the best possible manner, and hold ourselves in readiness, on proper proof, to replace all trees or plants that may accidentally prove untrue to label, free of charge, or refund the amount paid therefor, it is mutually understood and agreed to between the purchaser and ourselves that our guarantee of genuineness shall in no case make us liable for any sum greater than that originally received for trees or plants that prove untrue. Our reputation for upright dealing, and the uniformly high standard of quality of our products, is our guarantee to our customers.

When orders are received specifying the kinds wanted, the purchaser will please say whether we shall fill up with other varieties, should some of those which he has ordered be exhausted. We will, so far as in our power, give him his choice; but when the varieties specified cannot all be furnished, or are known to be unworthy of cultivation, we will take the liberty of substituting others in their place, unless special orders are given to the contrary. When the purchaser is not well acquainted with the fruit by name, he would do well to leave the selection to us, briefly stating at what season he wishes the fruit to ripen; and in such cases we will exercise our best judgment in making a judicious and profitable selection of the standard sorts and good trees.

Prompt attention will be given to all letters requesting information, all of which should enclose a postage stamp.

It is expected that orders for trees from those with whom we have no acquaintance will be accompanied by the cash or a suitable reference.

Our terms are INVARIABLY CASH, or a negotiable note of short time, satisfactorily indorsed, made payable at bank.

From past experience we have learned that we cannot afford to delay collections, and must henceforth insist upon prompt payment. Our business is attended with heavy expenses, and we must have the cash to push it.

Trees, plants, etc., will be carefully taken up, each kind tied by itself and labeled, the roots packed so as to carry safely, and delivered to the transportation companies free of charge.

All communications should be addressed to

ALBANY NURSERIES, Inc.,
Albany, Oregon.

TO THE PLANTER or purchaser of nursery stock, at least three things are indispensable: First, varieties true to name; second, healthy, vigorous, well matured trees or plants; third, careful and judicious packing, without which all will be lost.

We give the most careful scrutiny to the propagation of varieties, endeavoring by all methods known to us to protect ourselves from error or imposition, and rejecting anything of which we may have reason to be suspicious. By careful and constant watching and attention, we are warranted in offering our stock as pure and absolutely true to name.

Our soil being of character best suited to produce the healthiest conditions of growth, that solid, firm texture of the wood, with abundant fibrous root, so necessary to successful transplanting, we are enabled to offer the product of our nurseries with entire confidence to planters in all sections of the country.

To still further protect our patrons, as well as ourselves against loss in this direction, we employ the most skilled and competent hands in our packing and shipping department.

We aim to keep fully abreast of enlightened and cultivated taste, in the introduction of new and valuable varieties of fruit and novelties and valuable acquisitions in ornamentals—accepting with pleasure everything that has real merit, we shall with equal readiness discard and discountenance the sale of worthless humbugs.

We grow all our trees on **whole root stocks**, and our one-year-old trees have the same age root as two-year-old piece root graft; but a much better root system, as can be readily seen by referring to our illustration showing trees grown by both systems.

Select thrifty young trees in preference to old or very large ones; the roots are more tender and fibrous, and they bear transplanting better and are far more apt to live; they can also be more easily trimmed and shaped to any desired form, and in the course of a few years will usually outstrip the older ones in growth.

Both fruits and flowers are more highly appreciated by the masses than formerly, and we regard it as a happy indication, not only in the effect it will have upon the health of the body, but also in the softening influence it will have on the harsher feelings of our nature.

PREPARATION FOR PLANTING.

Plow and subsoil repeatedly, so as to thoroughly pulverize to a depth of 12 to 18 inches. When planting upon the lawn or grass plots, remove the sod for a diameter of 4 or 5 feet, and keep this space well worked and free from weeds. Dig the hole deeper and larger than is necessary to admit all the roots in their natural position, keeping the surface and subsoil separate. Cut off broken and bruised roots and shorten the tops to half a dozen good buds. If not prepared to plant when your stock arrives, "heel in" by digging a trench deep enough to admit all the roots and setting the trees therein as they stand, carefully packing the earth about the roots, taking up when required. Never leave the roots exposed to the sun and air, and "puddle" before planting.

PLANTING.

Fill up the hole with surface soil, so that the tree will stand about as it did when in nursery after the earth has settled, except Dwarf Pears, which should be planted deep enough to cover the quince stock upon which they are budded two or three inches. Work the soil thoroughly among the roots, and when well covered tamp firmly. Set the tree firm as a post, but leave the surface filling (of poorer soil) light and loose. No staking will be required except with very tall trees. Never let manure come in contact with the roots.

PLANT YOUNG TREES.

We cannot too strongly recommend to our customers the procuring of young trees, especially for orchard planting, instead of selecting the largest that can be had, to secure more immediate effect. They can be taken up with more perfect roots, and will become sooner established in a new location. They can also be more readily trained to any desired shape. The largest and most successful planters invariably select young, thrifty trees as the surest in the end to give thorough satisfaction.

For small grounds or street planting, when it is necessary to make a show as soon as possible, large trees are often more desirable, and when handled with care should not fail to do well, but with the general planter the average of loss will be much less and both time and money will be saved if young trees are selected to commence with.

NUMBER OF PLANTS OR SHRUBS FOR AN ACRE.

Distance Apart.	No. of Plants.	Distance Apart.	No. of Plants.	Distance Apart.	No. of Plants.
3 x 6 inches . . .	696,960	4 x 4 feet . . .	2,722	13 x 13 feet . . .	257
4 x 4 " . . .	392,040	4½ x 4½ " . . .	2,151	14 x 14 " . . .	222
6 x 6 " . . .	174,240	5 x 1 " . . .	8,712	15 x 15 " . . .	193
9 x 9 " . . .	77,440	5 x 2 " . . .	4,356	16 x 16 " . . .	170
1 x 1 foot . . .	43,560	5 x 3 " . . .	2,904	16½ x 16½ " . . .	160
1½ x 1½ feet . . .	19,360	5 x 4 " . . .	2,178	17 x 17 " . . .	150
2 x 1 " . . .	21,680	5 x 5 " . . .	1,742	18 x 18 " . . .	134
2 x 2 " . . .	10,890	5½ x 5½ " . . .	1,417	19 x 19 " . . .	120
2½ x 2½ " . . .	6,960	6 x 6 " . . .	1,210	20 x 20 " . . .	108
3 x 1 " . . .	14,520	6½ x 6½ " . . .	1,031	25 x 25 " . . .	69
3 x 2 " . . .	7,260	7 x 7 " . . .	881	30 x 30 " . . .	48
3 x 3 " . . .	4,840	8 x 8 " . . .	680	33 x 33 " . . .	40
3½ x 3½ " . . .	3,555	9 x 9 " . . .	537	40 x 40 " . . .	27
4 x 1 " . . .	10,890	10 x 10 " . . .	435	50 x 50 " . . .	17
4 x 2 " . . .	5,445	11 x 11 " . . .	360	60 x 60 " . . .	12
4 x 3 " . . .	3,630	12 x 12 " . . .	302		

SUITABLE DISTANCES FOR PLANTING.

Apples—Standard . . .	25 to 30 feet apart each way	Nectarines . . .	16 to 18 feet apart each way
Pears—Standard . . .	16 to 20 " " " "	Quinces . . .	10 to 12 " " " "
Pears—Dwarf . . .	10 to 15 " " " "	Walnuts . . .	40 to 50 " " " "
Cherries—Standard . . .	20 to 25 " " " "	Currants . . .	3 to 4 " " " "
Cherries—Dukes and Morellos . . .	16 to 18 " " " "	Gooseberries . . .	3 to 4 " " " "
Plums—Standard . . .	16 to 20 " " " "	Raspberries . . .	3 to 5 " " " "
Peaches . . .	16 to 18 " " " "	Blackberries . . .	6 to 7 " " " "
Apricots . . .	16 to 18 " " " "	Grapes . . .	8 to 12 " " " "

Fruit Department

APPLES (*Pyrus Malus*)

The first fruit in importance is the Apple. It will thrive on any well-drained soil. Its period of ripening, unlike that of other fruits, extends nearly or quite through the year. By making judicious selection of Summer, Autumn and Winter sorts, a constant succession can be easily obtained of this indispensable fruit for family use.

Our descriptive list embraces the best and most popular varieties known. Of course, it runs in too great a variety for any one orchard for profit; besides there is probably not a spot in the country where they would not flourish—but the latitude of our trade not only admits of, but demands a large list to supply the wants of the different sections of the country. After a long experience in the nursery business, we have with great care made the following selections, from which we trust all our patrons can supply their wants:

SUMMER VARIETIES

American Summer Pearmain. Medium to large; skin red, spotted with yellow in the shade, and streaked with lively red in the sun, flesh yellow remarkably tender, juicy and rich; a good bearer. August.

Astrachan, Red. Large roundish; nearly covered with deep crimson, overspread with a thick bloom; juicy rich acid, beautiful. The tree is a vigorous grower, with large foliage and a good bearer.

Bough, Large Sweet, See Sweet Bough.

Carolina Red June. (Red June.) Medium size; red; flesh white, tender, juicy, subacid, and abundant bearer. June.

Early Colton. Entirely hardy in all parts of the country. Has stood the extreme cold of Minnesota, Wisconsin, New Hampshire. Annual and abundant bearer. Never in the history of over half a century has it been known to entirely fail of a crop. Very early, beginning to ripen so it is good to eat 10 days before Early Harvest, and continues to ripen for some time, making it very valuable

SUMMER APPLES, Continued.

for family use. Of beautiful appearance; fine quality.

Early Harvest. (Yellow Harvest.) Medium to large; pale yellow; fine flavor. Tree a moderate, erect grower, and a good bearer; a beautiful and excellent variety for both orchard and garden. Middle to end of August.

Early Strawberry. Medium; striped with deep red; tender, subacid and excellent. A poor grower, but productive. August.

Golden Sweet. Rather large; pale yellow; very sweet and good. Strong grower and good bearer. August.

Ideal. A new and promising variety; originated near Jefferson, Oregon. Above medium in size regularly formed, roundish oblate; greenish color, turning to a rich golden when fully ripe; firm, crisp, sub-acid. July and August.

Keswick Codlin. Large conical; tender, juicy acid; excellent for cooking. Tree erect, vigorous, exceedingly productive, and early in bearing. July to October.

Yearling Apple Trees

Showing wonderful growth of our trees
one year from bud, on 3-year-old roots

Red Russian. Early; very hardy; medium size, conical; red, slightly striped with deep red; flesh white, tender, juicy, sub-acid. Abundant bearer. Resembles the Red June, but flesh more solid and better shipper, and color not as solid a red, but slightly striped. July and August.

Summer Queen. Medium to large, roundish; surface yellow blotched and streaked with red; flesh yellow and tender, with an acid, aromatic flavor. July and August.

Sweet Bough. Large; pale greenish yellow; tender and sweet. Moderate grower and good bearer. August.

Sweet June. Medium, roundish, regular; light yellow; very sweet, pleasant and rich. August.

Tetofsky. A Russian Apple which has proven profitable for market growing. The tree is a spreading, upright grower, forming an open head; comes into bearing extremely early, usually the second year after transplanting, and bears every year. Hardy as a crab. Fruit good size, nearly round; yellow, beautifully striped with red; flesh white, juicy, pleasant, acid, aromatic. July and August.

White Astrachan. Very large, roundish; skin smooth and nearly white. A favorite market sort, where it always attracts attention and brings good prices. August.

Williams' Favorite. A large, handsome dessert Apple. Originated at Roxbury, Mass. Fruit medium size, roundish, oblong conical; long stem; skin smooth; color light red ground, but nearly covered with fine dark red; flesh yellowish white, of very mild agreeable flavor; abundant bearer. July to September.

Yellow Transparent. A new Russian variety imported in 1870, through the Agricultural Department. Pronounced by some who have seen it as the most valuable early Apple ever introduced. Tree an upright grower and a very early and abundant bearer. Fruit of good size; skin clear white, turning to a pale yellow; flavor acid and very good. Ripens from 10 days to two weeks earlier than Early Harvest.

AUTUMN VARIETIES

Alexander, (Emperor.) Of Russian origin. Large; deep red or crimson; flesh yellowish white, crisp; tender, with pleasant flavor. Tree hardy. October.

Autumn Strawberry. Medium; streaked; tender, juicy, subacid, fine. Vigorous and productive. September and October.

Duchess of Oldenburg. Of Russian origin, large size, roundish; streaked with red and yellow; flesh whitish, juicy; flavor sprightly, subacid. Tree a vigorous grower, very hardy; very early and abundant bearer. While it is indispensable in the North; it is almost equally so in the south. We confidently recommend it for the orchard as one of the most valuable sorts for market, or in the garden for domestic use. September.

Dutch Mignonne. A popular Apple introduced from Holland. Tree moderately vigorous, upright, spreading. Fruit medium, roundish, oblate, slightly conical; skin rather tough, yellow, shaded, striped and splashed with shades of light and dark, rich red, moderately sprinkled with light and brown dots; flesh yellowish and a little coarse,

A new Apple we are introducing. Positively no other nursery can furnish these trees. All rights protected.

GOAL

This tree bears a continuous ripening of delicious apples from early in July until December. Fruit large, striped and beautiful; tender, juicy and high flavored. The most remarkable Apple ever introduced. No orchard is complete without it.

(OVER)

This Apple "Goal" originated on a farm here in Linn County. The tree was a seedling which came up along the fence, but was destined to bring forth into the world a national apple. After hard talking we finally succeeded in buying this original tree for which we paid \$600.00, and last year we sent some of these apples, at intervals during the ripening period, to the Bureau of Plant Industry, Washington, D. C., and they have a record of this fruit if anyone should wish to make inquiry. Also you may refer to First National Bank; Gilbert Bros., grocers; J. S. Van Winkle, postmaster; F. P. Nutting, editor Albany Democrat; and others of Albany, Oregon, who have seen these apples.

This apple resembles the Gravenstein and is good for cooking, drying and eating—good for everything. Apples in all stages—from the size of marbles up to the delicious ripe ones—may be seen on the tree at once.

No orchard is complete without one of these trees, especially where room is limited as it takes the place of a dozen or more varieties. Only a limited number of trees this year.

Write to us for any other particulars.

ALBANY NURSERIES, Inc.,
ALBANY, OREGON.

AUTUMN VARIETIES, Continued.

tender, juicy, slightly subacid; core small. One of the best cooking varieties. Nov. to Feb.

Fall Pippin. Very large; yellow; tender, juicy and rich. Tree vigorous. Oct. to Dec.

Fall Jenetting. (Summer Jenetting.) Fruit large, oblate, slightly conical, almost ribbed; pale greenish yellow, with a blush; flesh whitish, tender, juicy brisk, subacid. Tree vigorous and productive. Sept. to Oct.

Fameuse. (Snow Apple.) Medium size, roundish, oblate, whitish ground, striped with deep red flesh very white, juicy and pleasant. Tree very hardy. One of the most valuable northern sorts. Nov. and Dec

Emperor. See Alexander.

Gloria Mundi. Very large; greenish yellow. Valuable for cooking and drying. Oct.

Goal. A new apple we are introducing. Positively no other nursery can furnish these trees. All rights protected. This tree bears a continuous ripening of delicious apples from early in July until December. Fruit large, striped and beautiful, tender, juicy and high flavored. The most remarkable apple ever introduced. No orchard is complete without it.

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Gravenstein. Large; striped and beautiful; tender, juicy and high flavored. Vigorous and productive. Sept. to Oct.

Haas. (Gros. Pommier, Fall Queen.) Medium to large, slightly conical and somewhat ribbed; pale greenish yellow, shaded and striped with red; flesh fine white, sometimes stained, tender, juicy, subacid, good. Tree vigorous and very hardy; upright grower, with well formed head, bears early and abundantly. Sept to Nov.

Hoover. (Wauttaupah.) Large, oblate; dark red; juicy, acid, crisp and of good flavor. Tree vigorous, short-jointed grower. Very distinct. Sept. and Oct.

Jefferis. Medium to large; yellow, striped, mostly red; flesh tender and delicious. One of the finest dessert Apples. Moderate growth; productive. Sept. to Nov.

YELLOW TRANSPARENT

AUTUMN VARIETIES, Continued.

Jersey Sweet. Medium size; striped red and green; tender, juicy and sweet. A free grower and good bearer. Very popular both for table and cooking. September and October.

King of Tompkins County. Large and handsome; striped red and yellow. Tree vigorous and productive. One of the best. November to May.

Maiden's Blush. Medium size, flat; quite smooth and fair; pale yellow, with beautiful red cheek. Tender, sprightly, pleasant acid flavor. Fair grower and good bearer. Sept. and Oct.

Rambo. Medium; yellowish, streaked with dull red and somewhat dotted; mild, tender and good. Fine grower, productive. More especially valuable in the West. October to December.

Red Bietigheimer. A rare German variety, recently introduced. Fruit large to very large; skin pale green, mostly covered with purplish crimson; flesh white, firm, subacid, with a brisk pleasant flavor. Tree a fine grower and abundant bearer. September and October.

Snow. See Fameuse.

St. Lawrence. Large, yellowish, striped and splashed with carmine; flesh white, slightly stained, crisp, juicy, tender and vinous. Tree hardy and productive. September.

Stump. Medium sized, conical; yellow, striped and shaded with light red; flesh juicy, tender, with sprightly subacid flavor; fruit very uniform in size and of fine appearance. Very prolific. September and October.

Twenty-Ounce. (Cayuga Red Streak.) Very large, nearly round; yellow, striped red; quality good. Vigorous and good bearer. Popular as a market variety. November and December.

Waldron Beauty. A new variety originated near Oregon City, Oregon. Medium size, roundish oblate; flesh white, resembling the McIntosh Red; color almost full red, underlaid with greenish yellow; skin smooth and takes a very high polish. A profuse bearer; quality good. A promising autumn variety. September to December.

Waxen. Medium; pale yellow, oily, sprinkled with a few dots; flesh whitish yellow, crisp, tender, juicy, sprightly, subacid, good. November.

WINTER VARIETIES

Akin. (Akin Red.) Size and color very much like Jonathan, but keeps three months longer; quality even better than the most excellent apple.

Illinois Horticultural Society: "The original Akin tree is 7 feet 3 inches in circumference, about 40 feet high and over 60 years old; a regular bearer; keeps until April or May. Of great beauty and excellent quality; fine-grained, crisp, spicy and mild. Its fine quality and beauty make it worthy of a general trial, for the time will come when such fruit will be in demand. So beautifully colored as to be almost irresistible to the eye, and of equally fine flavor. It is of good quality, medium size, red color, and a late keeper. Tree productive."

Antonovka, One of the true ironclads. Of

ALEXANDER

WINTER VARIETIES, Continued.

Russian origin and perfectly hardy, withstanding our coldest winters. Fruit large, slightly oblong, and when fully ripe of a light golden color. Good keeper.

Arkansas Beauty. Large; beautiful crimson; flavor rich, subacid; fine-grained. Free and good grower and enormous bearer. Nov. to March.

Arkansas Black. Large, round or slightly conical, regular, smooth, glossy yellow where not covered with deep crimson, almost black; flesh very yellow, firm, fine-grained, juicy; flavor subacid, pleasant, rich.

Babbitt. A strong, large grower; wood hard and tough; heavy bearer. Fruit one-third larger than Baldwin; brighter red; flesh fine-grained, juicy, crisp, rich and of a peculiarly fine acid; use—baking, stewing, pies or jelly, for each and all of which it is simply the best; in cooking it literally melts. Ready to cook as soon as grown, but it is so acid that few like to eat it uncooked until the latter part of the season, when it is a favorite eating apple.

Baldwin. Large, roundish; deep bright red; juicy, crisp, subacid, good flavor. Tree vigorous, upright and very productive of fair, handsome fruit; one of the best and most popular winter Apples. Originated on the farm of John Ball, Wilmington, Mass., about the middle of the 18th century. January to April.

Black Twig. See Mammoth Black Twig.

Bell de Boskoop. Large; bright yellow, washed with light red on the sunny side, and sometimes with a sprinkling of russet; flesh crisp, firm, juicy, sprightly, subacid; quality very good; a late keeper. Tree a vigorous grower.

Bellflower, Yellow. Large; yellow, with blush cheek; very tender, juicy, subacid. In use all winter. Very valuable. A moderate grower and good bearer.

Ben Davis. (New York Pippin, Kentucky Red Streak, etc.) A large, handsome, striped Apple of good quality; tree very hardy, vigorous and productive; a late keeper. Highly esteemed in the West and Southwest.

Benton County Beauty. Originated in Benton County, Arkansas. Tree is a good grower, early and abundant bearer. Fruit large size, fine-grained, juicy and crisp; color a bright red all over. One of the finest appearing Apples grown.

Bismark. In respect to its early fruiting habit, the most remarkable Apple ever introduced; one-year grafts frequently produce fruit and two-year ones seldom fail. Has fruited in many sections of the United States; we hear only words of commendation. A two-year single stem tree about 18 inches high, has been known to ripen a fine specimen. Originated in New Zealand; has been tested in nearly every apple-growing country, and promises to succeed wherever Apples can be grown, proving healthy, hardy, productive and without a rival in its early fruiting quality. Tree of short, stocky growth, thick, healthy foliage; makes beautiful specimens grown in pots for decorative purposes. Fruit large, handsome; yellow, sometimes shaded, red cheek; flesh tender, pleasant, subacid, good for dessert, superior for cooking. Will keep well into winter.

Blenheim Orange. Fruit large, roundish, oblate, conical; yellowish, becoming deep orange, stained

on the sunny side with dull and dark red stripes; flesh yellow, breaking, very sweet, pleasant, good. October to December.

Blue Pearmain. Very large; dark purplish red over dull ground, appearing bluish from white bloom; flesh yellowish, mild, aromatic. October to February.

British Columbia. New, Named by the Fruit Growers' Association of British Columbia. Originated by H. P. Cales, at Nicomen in the Fraser Valley. The tree is a vigorous grower and very hardy, annual and abundant bearer; fruit large; russet on yellow ground, sometimes striped with red; somewhat irregular; flavor mild, subacid of the highest quality. Mr. Cales has now 400 trees of this variety bearing. The original tree, when 34 years old, measured 60 inches in circumference, and is still in a perfectly healthy condition. Mr. Cales has picked 36 50-pound boxes of apples from it in one season, and always gets from 25 to 50 cents per box more for them than for other varieties. We consider this one of the most valuable apples to plant for commercial purposes. January to June.

Canada Reinette. Extra large size flattened and ribbed; greenish yellow, with russet dots and patches; flesh firm, rich, juicy and finely flavored; tree grows strongly and is a good bearer. November to March.

Coos River Beauty. From Douglas county, Oregon. First known as Geourney Seedling, later renamed by a Marshfield, Oregon, nurseryman, Coos River Beauty. Tree a good grower, an annual and prolific bearer; does not break or split, no matter how heavily loaded. Fruit large; red, turning to dark red on the sunny side; flesh white, firm, breaking crisp and juicy; flavor mild, subacid, spicy, something like Gravenstein. Season November to March at Coos Bay.

Cox's Orange Pippin. Medium size, roundish, ovate; color yellow, suffused with red streaks; flesh crisp, juicy, sweet, and best in quality. This is regarded by the English as the finest apple in cultivation, either as a dessert fruit or for culinary purposes. The tree is a moderate, stocky grower. October to April.

Cunningham. New. Form conical; size medium; smooth, deep red; very attractive; flesh yellow, fine-grained, pleasant, subacid, almost sweet; splendid keeper and good shipper. Annual and prolific bearer. March to May.

Delicious. Dark, brilliant red; large, irregular. Tree hardy. When grown in high altitudes the quality is very fine. October to February on the Pacific Coast.

Delaware Red Winter, (Lawver.) Large, roundish, flat, mild, subacid; very heavy and hard; beautiful dark red. Handsomest of all the extra late keepers, very valuable as a late market sort. Tree a vigorous grower and very hardy; bears well. December to May.

Fallwater. (Fornwalder, Tulpehocken.) Very large, globular; yellowish green, dull red cheek; juicy, crisp, pleasant, subacid flavor. Tree a strong grower; very productive even while young. November to March.

Gano. Originated in Missouri. Form conical, good size and smooth; deep red, shaded on sunny side to Mahogany; very attractive; flesh pale yel-

WINTER VARIETIES, Continued.

low, fine-grained, tender, pleasant, mild, subacid; is a good shipper and keeper. Tree healthy, vigorous and hardy. An annual and prolific bearer. February to May.

Gideon. Vigorous, early and prolific bearer. Medium; golden yellow; fine, juicy, subacid.

Grimes' Golden. (Grimes' Golden Pippin, Sheep-nose.) An apple of the highest quality. Medium to large size; yellow. Tree hardy, vigorous, productive. January to April.

Hubbardston Nonesuch. Large; striped yellow and red; tender, juicy and fine. Strong grower and good bearer. Nov. to May.

Hyde's King. Large to very large; handsome yellowish green; good quality; keeps all the year round.

Iowa Blush. Medium or less; finest tart flavor. Tree extremely vigorous and hardy; most excellent variety. Nov to Feb.

Isham Sweet. Large, dark red; juicier than its parent, Bailey Sweet, and a better keeper. Tree very scraggy but hardy.

Jonathan. Fruit medium or small, roundish; skin yellow, nearly covered with dark or lively red; fine-grained, very tender and finely flavored.

Tree slender and spreading, with light-colored shoots. Originated about 1828 at Woodsted, N. Y. Nov. to April.

Kentucky Red Streak. See Ben Davis.

Lady. A beautiful little dessert fruit. Quite small, flat, regularly formed; skin pale yellow or lemon color, with a brilliant red cheek; flesh crisp, juicy and excellent. Bears abundantly. Dec. to May.

Lawver. See Delaware Red Winter.

Longfield. A Russian variety, imported some years since. Tree a free, upright grower, early and abundant bearer. Medium to large; yellow with a blush on the sunny side like Maiden's Blush; rich, sprightly, subacid; quality as good as Fameuse and something like it. December to March.

McInosh Red. An exceedingly valuable, hardy, Canada sort. Medium size, nearly covered with dark red; flesh white, very tender, juicy and refreshing. A good annual bearer of fair, handsome fruit. Resembles the Fameuse, but larger and more hardy, and fully equal in quality to this standard sort. Nov. to Feb.

Marshall or Red Bellflower. Very large, shaped like Yellow Bellflower; deep crimson; of fine quality. Tree productive. Originated near

OREGON RED WINTER

WINTER VARIETIES, Continued.

Napa, by J. L. Marshall, being a cross between Yellow Bellflower and Red June. One of the most valuable market varieties.

Minkler. Fruit medium, roundish, oblate, slightly conical; pale greenish yellow, striped and splashed with two shades of red; flesh yellowish, compact, moderately juicy, mild, pleasant, subacid. Tree an irregular grower, and vigorous. January to April.

Missouri Pippin. Large; rich red, with darker red stripes; very handsome and of fair quality. Good grower; early and immense bearer, late keeper.

Mammoth Pippin. (Red Cheek Pippin.) Large; greenish yellow with a fine red cheek; juicy, tender and good. Tree erect, vigorous and productive. Keeps well till March or April.

Mammoth Black Twig. (Paragon.) A Tennessee seedling. The original tree, over 50 years old, is still vigorous and bearing, though broken by storms. Thought to be a cross between Winesap and Red Limber Twig; combines the good qualities of both. Excels Winesap in nearly every important point; better and much stronger grower, hardier, and the fruit much larger—often measures 12 inches in circumference; color even a darker red; flesh firmer, flavor milder, but fully equal. Remarkably heavy and a long keeper.

Mann. Fruit medium to large; roundish; oblate, nearly regular; skin deep yellow when fully ripe, flesh yellowish, half fine, half tender, juicy, mild, pleasant, subacid. The tree grows straight and symmetrical and makes a large tree in the orchard. It is an early and annual bearer.

Newtown Pippin. One of the very best Apples as to quality; tree light grower while young; very juicy, crisp, and highly delicious flavor; fine keeper. Does not succeed in all sections. Originated in early part of eighteenth century. The first American apple to attract attention in Europe. Dec. to May.

New York Pippin. See Ben Davis.

Northern Spy. Large, roundish, slightly conical, somewhat ribbed; striped, with the sunny side nearly covered with purplish red; flesh white and tender, with a mild subacid, rich and delicious flavor; in perfection in January and keeps till June. The tree is a strong, upright grower, and forms a very compact head; should be kept open by pruning, so as to admit the air and light freely. Originated about 1800, at East Bloomfield, N. Y.

Northwestern Greening. Hardy, yellow, rich; good size; extra long keeper.

Nonesuch. See Red Canada.

Okabena. A seedling of the Wealthy, fertilized by the Duchess. Fruit medium sized, slightly flattened. A native of Minnesota, first introduced in 1886. Very highly colored where exposed to the rays of the sun; resembling the Duchess. Flesh fine-grained; as an eating apple it is hard to excel.

Ontario. Fruit large, oblate, slightly conical, skin whitish yellow, nearly covered with bright, rich red; flesh whitish

yellow, fine, tender, juicy; subacid; refreshing, slightly aromatic; core small. January to April.

Opalescent. New. Probably the handsomest apple ever put on the market. Color light shading to very dark crimson with many yellow dots; skin smooth, susceptible of a very high polish reflecting objects like a mirror; flesh yellowish, tender, juicy and good. The original tree has never failed to produce from a moderate to a full crop. It is not only a beauty but all right for size, quality and productiveness, qualities rarely combined in one variety. Season, Dec. to March.

Oregon Red Winter. Fruit large, fine grained, crisp, juicy and rich. It could well be named the Winter Gravenstein, as its flavor so nearly resembles that variety. Color a bright red, with a dark, maroon-colored cheek. Tree healthy and a strong grower, holding its fruit well until late in the season. Season from January to May.

Orengo. This new claimant for public favor originated in the hills a few miles east of Oregon City, in Clackamas County, Oregon, probably half a mile distant from any other orchard or fruit tree, and as near as the old settlers of that section can remember, is now (1906) about 25 years old. It has borne a regular and annual crop of the most delicious apples for about 20 years. The tree is apparently just in its prime, as it is at this time hardy, vigorous and thrifty, although it has never received any attention or cultivation, yet it is a handsome and symmetrical tree, with sturdy branches that bear up the heaviest loads of fruit without breaking. In its general habit of growth the tree resembles the Northern Spy, and in the nursery row it is almost impossible to tell the two varieties apart. The foliage of the Orengo is darker and more luxuriant and is apparently even more hardy and vigorous than what popular variety. To describe the fruit of this beautiful ap-

ESOPUS SPITZENBERG

WINTER VARIETIES, Continued.

ple is not so easy, for it suggests an entirely new flavor in apples. Many who have tasted it express the idea that it has the flavor of a banana. In general terms it may be described as having a mild, subacid flavor, with a very pleasant aroma. The flesh is crisp, tender and juicy and pronounced by those who have tasted it as being the most delicious of dessert apples. The color is bright red, overspread with numerous light dots.

Ortley. See White Bellflower.

Palouse. Large, bright red, juicy, crisp and fine flavor. A vigorous-growing tree; the fruit somewhat resembling the Baldwin, but better keeper. January to May.

Paragon. See Mammoth Black Twig.

Peck's Pleasant. Large; pale yellow; very tender and rich, with a Newtown flavor. Tree erect and a fine bearer. November to March.

Peter. Another seedling which originated with Peter Gideon, the pioneer in apple culture in Minnesota. The tree is stout, erect, symmetrical, healthy, vigorous grower, an immensely productive tree. Fruit large, red, subacid and a long keeper. It possesses all the good qualities of the good sorts and none of the defects so common to many of them. It is harder than the hardiest. The Peter has endured 45 degrees below zero without the least injury, and in 1885, at Excelsior,

Minn., bore a crop of fruit when the Duchess and Wealthy killed to the ground. It is four to six weeks later than the Wealthy.

Pewaukee. A seedling from Duchess of Oldenburgh. Fruit medium to large, oblate; surface bright yellow, partially covered with dull red, striped and splashed, covered with a gray bloom and overspread with whitish dots; cavity small; basin shallow and slightly fluted; calyx rather large; stem variable in length, with a fleshy substance on one side from one-half to one inch long; core small; flesh yellowish white, breaking juicy; flavor subacid, rich, aromatic, spicy, something like the Jonathan; quality good to best. Tree a strong grower, heavy bearer and very hardy. January to June. New.

Pryor's Red. Medium, juicy, pleasant, very rich, subacid. January to March.

Rawle's Janet. Medium to large; yellow, stripes with red; flesh yellow, tender, juicy, with a pleasant vinous flavor. Prolific bearer. January to May.

Red Bellflower. See Marshall.

Red Canada. (Old Nonesuch, of Mass., Steele's Red Winter.) Medium, oblate; red, tender, crisp, rich, subacid, refreshing and delicious. Tree thrifty but a slender grower; productive. January to May.

Red-Cheek Pippin. See Mammoth Pippin.

ROME BEAUTY

WINTER VARIETIES, Continued.

Red Romanite. (Gilpin.) Size medium, roundish; smooth, handsome; streaked with deep red and yellow; flesh yellow, firm, rich, becoming tender in spring. An excellent cooking and dessert apple. Very prolific; holds on tree late. A fine winter apple and one of the best keepers. February to June.

Rhode Island Greening. Large; greenish yellow; tender, juicy and rich, with rather an acid flavor; grows strong and spreading, and an abundant bearer. December to April.

Ribston Pippin. Fruit of medium size, roundish; greenish yellow, mixed with a little russet near the stalk, and clouded with dull red on the sunny side. Stalk short, slender, planted in a rather wide cavity; calyx small, closed and set in an angular basin. Flesh deep yellow, firm, crisp, with a sharp, rich aromatic flavor; very good. The tree forms a spreading top. Nov. to April.

Rome Beauty. Large, yellow, shaded with bright red; flesh yellowish, tender, juicy, subacid. Moderate grower. November to February.

Russett, English. This is a most valuable, long keeping variety. Good the first of January and will keep till July, and no apple, to our taste, has a richer flavor. Medium size, but smooth, firm, crisp and rich, and never loses its richness to the last.

Russet, Golden. Medium size; dull russet, with a tinge of red on exposed side; flesh generally crisp, juicy and high flavored. Tree a vigorous grower and a great bearer. Very popular. November to April.

Russet, Roxberry or Boston. Medium to large; greenish or yellow; crisp, good, subacid flavor. Tree vigorous and productive. Very popular on account of its long keeping. June.

Salome. Long keeper; annual bearer. Medium and uniform size; good quality.

Scott Winter. Hardy and vigorous. Bright red; crisp, juicy and of a brisk acidity; long keeper.

Seek-no-Further. (Westfield.) Medium to large; slightly russeted with dull, red stripes; tender, rich, spicy and fine. Good grower and bearer. November to February.

Shackelford. Tree hardy, free grower and early and profuse bearer. Fruit large, well colored, purplish red in the sun, with a delicate bloom; flesh yellow; flavor mild, subacid; aromatic; long keeper.

Sierra Beauty. Originated at a high altitude in the Sierra Nevada Mountains, 30 miles east of Chico, Butte County, Cal. This beautiful crimson-red apple is certainly a great acquisition to the standard commercial sorts, and will pack better than four tier. The original tree is now (1906) 36 years old and is a regular annual bearer. The flesh is white, crisp and tender, with a delicious juicy flavor. The tree is a hardy, upright grower, resembling the Northern Spy. A splendid cooking and eating apple. Season January to May.

Smith Cider. A fine market apple. Large, handsome; yellow striped with red; flesh juicy, crisp, subacid; quality medium. Tree vigorous, abundant bearer. December to March.

Spitzenberg, Esopus. Medium to large; deep

red; flesh yellow, crisp, subacid, high flavored. Tree a light grower in the nursery, but bears and grows well transplanted in rich soil. November to April.

Spokane Beauty. Largest apple known, a prodigy for size; of extraordinary beauty; color greenish yellow, shaded and striped with deep red; flesh crisp, juicy, rich, with a delicious, high flavor. Unsurpassed for cooking and drying; a very long keeper, having kept until August 1. Was awarded first prize at the Spokane Fruit fair in 1895 and 1896.

Springdale. Color dark red; size medium to large; fine flavor and of good quality; a good keeper. Introduced in Kansas. Winner at 15 different apple shows for home and market use. Tree a strong grower.

Stark. Esteemed in Ohio as a long keeper and valuable market fruit. Fruit large, roundish; skin greenish yellow, much shaded with light and dark red, and sprinkled with brown dots; flesh yellowish, juicy, mild subacid. January.

Stayman's Winesap. Similar to Winesap, but very much larger and better flavored; oblate, conical; greenish yellow, mostly covered, striped and splashed with two shades of dark red, with numerous gray dots; flesh yellow, firm, tender, juicy, mild, subacid, aromatic; best quality. A seedling of the Winesap, originated in Kansas. Tree resembles the Winesap, but more vigorous in growth. December to April.

Steele's Red Winter. See Red Canada.

Sutton Beauty. Medium to large, roundish; handsome, waxen yellow, striped crimson; flesh tender, juicy, subacid; good quality; keeps well. Tree a free grower and productive. One of the most beautiful and valuable apples.

Swaar. Fruit medium size, yellow, tender, rich and spicy. One of the best and very productive. November to May.

Tolman's Sweeting. Medium pale yellow, slightly tinged with red; firm, rich and very sweet. The most valuable baking apple. Vigorous and productive. November to April.

Tulpehocken. See Fallawater.

Vanderpool Red. Originated in Benton County, Oregon. Size medium to large; color bright red; fine flavor and one of the best keepers. Specimens of this variety, in good condition, were shown at the Oregon State Fair one year after picking from tree.

Vandevere. (Newtown Spitzenberg of the West.) Medium size; waxen yellow, striped with red, and becoming deep crimson next the sun; flesh tender, yellow, rich and fine; rich and subacid flavor. Valuable cooking variety. Free grower and good bearer. Succeeds best in light, warm, dry soils. November to March.

Wagener. Medium to large; deep red in the sun; flesh firm, subacid and excellent. Very productive; bears very young. December to May.

Walbridge. Medium size, striped with red; handsome and of excellent quality. Vigorous grower and productive; very hardy and considered of great value in the North and Northwest. March to June.

Wealthy. A native of Minnesota where it has proven perfectly hardy, vigorous and productive.

WINTER VARIETIES, Continued.

Fruit of medium size, red, streaked with white; quality good. Dec. to Feb.

YELLOW NEWTOWN PIPPIN APPLE

White Bellflower. (Ortley). Fruit medium to large, roundish, oblong, conic; greenish yellow, becoming fine yellow at maturity, sometimes with a sunny cheek; flesh white, fine grained, tender, juicy and subacid, very pleasant. Nov. to Feb.

White Winter Pearmain. Large, roundish, oblong, conic; pale yellow, extra high flavor. One of the best. Dec. to Feb.

Winesap. Medium; dark red, subacid, excellent. Tree a moderate grower and abundant bearer. A favorite market variety in the West. Dec. to May.

Winter Banana. Fruit large, perfect in form; golden yellow and beautifully shaded and marbled with bright crimson-red; flesh lemon yellow, fine grained, subacid, rich aromatic flavor, and of the highest quality. A good keeper, tree remarkably strong grower, and on account of its great hardiness will thrive in any climate. Its early bearing is simply wonderful, generally producing a fine crop of fruit the second year. Foliage large and free from blight and mildew. A valuable market variety. Nov. to May.

Wisner's Dessert. Size medium to large; smooth, beautifully colored with yellow, shaded with bright red, in stripes and blotches, marked with russet dots. Exquisitely delicious flavor, juicy, melting, buttery, pear-like texture. Tree a strong grower and extremely hardy. Originated in northern Ontario, Canada. Nov. to April.

Wolf River. The tree is very hardy and productive. Fruit large and handsome, red color, flesh white and of exceedingly fine quality; subacid. One of the largest.

Y. N. Pippin. See Newtown Pippin.

York Imperial. Medium; whitish, shaded with crimson in the sun; firm, crisp, juicy and pleasant, mild subacid. Tree moderately vigorous and productive. A popular Pennsylvania variety. Nov. to Feb.

Crab Apples (*Pyrus prunifolia*)

Within the past few years much attention has been given to improving this class of fruit, because of their adaptability to cold sections where only a few varieties can be successfully grown. These efforts have been attended with marked success. Crab apples succeed equally well in all sections, and are valuable for cider, preserving, jelly, ornament, and some of the improved sorts are excellent for eating. Sent to the Eastern markets they command a very high price.

Alaska. Of northern origin. Fruit large, almost white; tree hardy, vigorous grower. Highly recommended.

Florence. Tree very hardy, a heavy bearer, but a poor grower. Fruit medium in size, good quality.

General Grant. Tree an erect, vigorous grower; fruit in dense clusters; quality equal to Duchess of Oldenburg. Oct. to Dec.

Hyslop. Almost as large as Early Strawberry apple; deep crimson; very popular on account of its large size, beauty and hardiness. Keeps well into the winter.

Large Red Russian. About an inch in diameter, grows in clusters; yellow, lively scarlet cheek.

Tree erect, vigorous; bears young and abundantly. Sept. to Oct.

Large Yellow Siberian. Nearly as large as the above, a fine amber or golden yellow color.

Martha. A new fruit raised from seed of Duchess of Oldenburg. Resembles the Transcendent, but is larger. Handsome, showy fruit; bears enormously; said to be equal, if not superior, to all others for sauce.

Minnesota. Hardy, a medium grower. Jan. to Feb.

Transcendent. All things considered, this is one of the most valuable varieties of Crab apples grown. Tree remarkably vigorous, growing to a good size and immensely productive. Comes

CRAB APPLES, Continued.

into bearing a little the second year from planting, bearing every year after, and producing good crops by the fourth year. Fruit very large, from 1½ to 2 inches in diameter, being large enough to quarter and core for preserving and drying. Excellent for sauce and pies, both green and dried. The best of its class for cider, being juicy and

crisp, and is also by many considered a good eating apple. Skin yellow, striped with red. Sept.

Whitney's Seedling. Large, averaging 1½ to 2 inches in diameter, skin smooth and glossy green, striped, splashed with carmine; flesh firm, juicy and rich. Said to be a great bearer and very hardy. Tree a vigorous, handsome grower. Has no superior.

PEARS (*Pyrus communis*, or *P. Sinensis*)

Our soil is especially adapted to the production of the finest and hardiest pear trees—those containing the most life, body and strength, and it is an admitted fact that they cannot be excelled.

THIN THE FRUIT—We cannot too strongly urge the following suggestion: When pear trees are heavy laden the fruit should be thinned when about one-third grown, else the fruit will be poor and the tree injured.

GATHERING PEARS—Most varieties of pears are greatly inferior in flavor when allowed to ripen on the tree. Gather when, on gently lifting the fruit, the stem will readily separate from the limb; this will be from one to two weeks before they are ripe.

Place in a cool, dark room until fully matured. Winter varieties should remain on the tree until time for the Fall rains or frosts.

The following list contains most of those that have been well tested and proven valuable:

SUMMER VARIETIES

Bartlett. Large size, often with a beautiful blush next the sun; buttery, very juicy and high flavored. Tree a strong grower, bearing early and abundantly; very popular. Last of August and first of Sept.

Clapp's Favorite. A large, new, fine pear, resembling the Bartlett, but without its musky flavor; pale lemon-yellow, with brown dots; fine texture, melting, buttery, juicy, with a rich, sweet, delicate, vinous flavor. Tree hardy and very productive. Very desirable in all sections, and especially so where other varieties fail. Aug. and Sept.

Doyenne d'Ete. Small; melting, sweet; yellowish. Tree vigorous and productive. August.

Koonce. Originated in southern Illinois. Has been largely planted; the most successful early market pear in that section. A strong, upright grower; hardy, magnificent foliage; has produced crops when all other varieties were killed by frost; fruit medium, yellow with carmine cheek; juicy, spicy, sweet and delicious quality. Ripens with the earliest. An excellent shipper; it comes into bearing young. July and August.

Lawson. Tree healthy, a strong grower, early bearer and profitable sort; of splendid quality for a very early pear. Red cheek with yellow shading.

Le Conte. Tree vigorous and productive, partaking of the nature of the Chinese Sand pear, of which it is a seedling. Large; skin smooth, pale yellow. Quality fair. Ripens about with Bartlett.

Madeline. Medium; yellowish green; very juicy,

melting, sweet. Fair grower, productive. Aug.

Souvenir du Congress. Recently imported from France and of great promise. Fruit large and exceedingly handsome; beautiful yellow, with bright red in the sun; melting and juicy, with a musky flavor; rather tender. Sept.

DOYENNE DU COMICE PEAR

SUMMER PEARS, Continued.

Wilder. Handsome, melting, sweet, pleasant and of the best quality for an early pear. One of the best keeping of early pears.

AUTUMN PEARS

Bessemianka. From Russia. Fruit of fair quality. Tree is extremely hardy. Valuable for the north, where other varieties cannot be grown. As hardy as a birch. Strong, vigorous grower.

Beurre Clairgeau. Very large, pyriform; yellow and red, nearly melting, high flavored. Tree a very good grower, and an abundant and early

bearer; a magnificent market fruit. One of the finest acquisitions. Oct. and Nov.

Beurre d'Anjou. A large, fine pear, buttery and melting with sprightly, vinous flavor. Tree a fine grower and good bearer. Oct. to Jan.

Beurre Bosc. A large, fine pear with long neck; cinnamon-russet, handsome, half melting, juicy, slightly perfumed and delicious. Tree a fine grower and productive. Sept.

Crocker Bartlett. Originated by L. L. Crocker, Loomis, Cal., who describes it as follows: "It is preferable to the standard Bartlett; better flavor, about the same size; very juicy and melting; high golden yellow color; a prolific bearer. Trees never overloaded, although they bear heavy every year. The Crocker-Bartlett pears are picked in October and laid away same as winter apples till about January, when they mellow up and are delicious; very hardy; will ship to England and back if necessary. It has proven to be blight-proof and has stood the test for the past ten years. Out of 3,000 young Crocker-Bartlett trees in my orchard, I offer a liberal reward for any sign of blight on them."

Dempsey. Originated in Northern Canada, where it has proven hardy. Fruit medium, excellent.

Doyenne du Comice. Large, yellow, with a crimson and fawn cheek and russet dots, melting, rich, perfumed and luscious. Tree vigorous and productive. A pear of much promise. Oct. and Nov.

Doyenne, White. (Fall Butter.) Medium, pale yellow, with a faint blush; fine flavor. Oct. to Nov.

Duchess d'Angoulême. Very large, greenish yellow, sometimes a little russeted. Makes a beautiful tree; does best on quince. One of the best. Oct. and Nov.

Fall Butter. See Doyenne White.

Flemish Beauty. Large, beautiful, juicy melting, rich and fine, a strong grower and

CROCKER BARTLETT PEAR

AUTUMN PEARS, Continued.

good bearer; hardy everywhere. Sept. and Oct.

Garber. Originated in Pennsylvania; is large and beautiful, bright yellow with red; juicy and good; delicious canned. Ready to pick with Le Conte, or a few days later, and much better, not only in fruit but in hardiness and health of trees. So far has never been blighted.

Howell. Large, light, waxen yellow, with a fine cheek; handsome, rich, sweet, melting, perfumed aromatic flavor. Tree an upright, free grower, an early and profuse bearer. Very hardy and valuable. Sept. and Oct.

Idaho. Size large, nearly globular, obtusely ribbed; color light, rich yellow surface, covered with many small dots; cavity very deep and narrow, and strongly furrowed; stem small and calyx closed; flesh white; fine grained, buttery, melting and rich. Sept. and Oct.

Keiffer's Hybrid. Tree a remarkable grower with so vigorous a constitution that it rarely, if ever, blights. Fruit of fine size, rich color and good quality. Brings high price in competition with other varieties. Best when picked at maturity and house ripened. Oct. and Nov.

Louise Bonne de Jersey. Rather large; greenish yellow, with a bright red cheek; juicy, buttery and melting; excellent; very productive; a fine grower on both pear and quince. Sept. and Oct.

Rossney A new and excellent pear raised from seed at Salt Lake City, Utah. In size medium to large; very fine grain; flesh melting and juicy, very sweet. Ripens two weeks after Bartlett. Is an excellent shipper and keeper. The tree is much stronger than Keiffer. Luther Burbank says, under date of Oct. 5, 1896: "The samples of Rossney pear arrived in due season. The large size, handsome form and creamy yellow skin with crimson blush, give the fruit a tempting appearance, and the tender, creamy flesh of just the right texture, with no hard spots and an unusually small core, with its superior flavor, makes it about the best pear so far seen. If the tree is vigorous, healthy and productive, would prefer it to any other, even the standards, Bartlett or Seckel." Sept.

Seckel. Small; rich, yellowish brown; one of the best and highest flavored pears known; productive. Sept. and Oct.

Tonkoviethka. Russian origin. Tree a good grower and very hardy. Fruit medium size, fair quality, like Bessemianka. Would advise planting in a northern country where other varieties fail.

Vermont Beauty. Tree hardy and vigorous, early and abundant bearer. Fruit medium, yellow, with red cheeks; rich, juicy, best quality. Oct.

Worden-Seckle. A seedling of the Seckle, which for many years has been conceded to be the standard of excellence. Equal in quality to its famous parent, which it much resembles in flavor; is equally luscious, more juicy, and with an aroma equally rich and inviting, while in size, color, form and appearance it is decidedly superior. In color, when well ripened, it closely resembles Clapp's Favorite, with a skin that is usually as smooth and waxy as if it had been varnished. Tree a more upright

and rapid grower than Seckle; hardy and enormous bearer; fruit keeps well, retaining its quality to the last.

WINTER PEARS

Beurre Easter. Large, pale yellow, sprinkled with round dots, often dull red cheek; quality good; one of the best winter pears. Keeps all winter.

Glout Morceau. Pale greenish-yellow, marked with small green dots, rather large; varying in form, but usually short pyriform; neck very short and obtuse; flesh white, fine grained, with a sugary flavor; fine shipper. Dec.

Kennedy. Originated by General John Bidwell, of Rancho Chico, Butte county, California. Superior to Bartlett or Winter Nelis. Would be classed as a winter variety in northern sections; hardy, vigorous growing tree; bears well. The most valuable new pear tree originated in California.

Lincoln Coreless. Large; green until thoroughly ripe, when it becomes a beautiful yellowish green; flesh rich yellow, juicy, melting, and of a very delicate aromatic flavor; no seeds or core. Feb. and March.

Mt. Vernon. Medium to large, of rich, russet color; flesh juicy, rich, melting, with a spicy flavor. New. Nov. to Jan.

Pound. A monstrous, very showy fruit, often weighing three pounds; yellow, red cheek. Tree very vigorous and productive.

P. Barry. This pear was originated by the late B. S. Fox, of San Jose, Cal., and is acknowledged by our best judges to possess qualities unequalled by any of our long keeping pears. It is large, deep yellow, nearly covered with a rich, golden russet; flesh whitish, firm, juicy, melting, sweet slightly vinous and rich; an early and prolific bearer. Dec. and Jan.

FLEMISH BEAUTY PEAR

WINTER PEARS, Continued.

Pratt's Seedling. Originated in Salem, Or., with Captain Pratt. A pear with all the good qualities of the Bartlett but will keep until March. In shade and color like the Sheldon, but larger. The tree is a fine grower with a more spreading top than the Bartlett. Has been shown at fruit conventions and is endorsed by all our fruit growers; a fine acquisition to our winter varieties.

Vicar of Winkfield. (Le Cure.) Large, long, not first quality but desirable for its productiveness. Best on quince. Nov. to Jan.

Winter Bartlett. This fine pear originated at Eugene, Or. The tree stands in a dooryard in

that city, bearing fine fruit, and has with possibly two or three exceptions, borne a good crop for over 20 years. Tree very vigorous, a foot in diameter and 40 feet high. Has had no pruning or care, yet it is as symmetrical and pretty shaped tree as one ever sees. Fruit large, closely resembling the Bartlett in shape and appearance; perfectly smooth, flesh tender, juicy and melting; flavor similar to the Winter Nelis, but season a little later, and as good as can be desired.

Winter Nelis. Medium in size; yellowish green and russet; fine grained, melting, rich and delicious; one of the best winter pears. Tree scraggly, slender grower, but very productive. Dec.

CHERRIES

Hearts and Bigarreus (*Cerasus Avium*); Dukes and Morellos (*C. Vulgaris*)

The cherry thrives best on a sandy or gravelly soil, and there attains its highest perfection, but will do very well in almost any situation except a wet one. It is one of the most ornamental of all fruit trees, which with its delicious and refreshing fruit, makes it very desirable for planting near dwellings, where beauty and shade as well as fruit are so desirable.

We divide them into two classes—Hearts and Bigarreus, and Dukes and Morellos. The first, being strong and vigorous growers, make large open, spreading heads or tops, are best suited for the purpose of shade, and produce large, heart-shape sweet fruit. The Dukes and Morellos are of slower growth and do not ever attain so large size, and are more hardy, less liable to get injured by bursting bark, and generally produce acid fruits, and make the most beautiful dwarfs. One and two-year-old trees are the most desirable for transplanting, and are usually from 4 to 6 feet high.

The Hearts and Bigarreus will successfully resist cold weather so as to be grown in most sections, except the extreme north, while the Dukes and Morellos, or acid sorts, are perfectly hardy and are starred (*) in this catalogue.

A Limb of Linn County Cherries

Allen. Has been fruiting for several years; tree a healthy grower, immensely productive. Fruit of excellent quality, large size and nearly heart shape, shiny and smooth; color, when ripe, nearly black; very meaty and firm; so far free from all rot and disease; ripens late. Good enough for any home use and we believe will prove one of the most profitable market varieties in all sections where the sweet cherries succeed.

***Baldwin.** This cherry is a seedling of the English Morello, and it was originally planted for an Early Richmond which had been budded on a seedling of the English Morello. The budded part was accidentally broken off and a sprout came from the root, which was so vigorous that it was allowed to grow. The tree is an upright grower more inclined to be round than otherwise. A very rank, vigorous grower; leaves rather broad; bloom pure white, which turns to pink color similar to the hydrangea; fruit very large, almost perfectly round, very dark, yet almost transparent; flavor slightly subacid, yet the sweetest and richest of the Morello type; stems rather large, of medium length, more inclined to grow in pairs than in clusters. It is remarkable for earliness, vigor, hardness, quality and productiveness. It is a tree to command attention and

CHERRIES, Continued.

is so distinct as to attract comments from many upon seeing it, without knowing its superior merit.

Bing. This grand new black cherry was originated by Seth Luelling, of Milwaukee, Or. Size very large; blackish purple. Flesh very solid, flavor of the highest quality. Tree thrifty, upright grower, very hardy and productive. A fine shipping and market variety.

Black Republican. (Luelling.) A native of Oregon. Fruit very large, shining black; flesh very solid and firm; fine; a good keeper and will bear transportation well. Tree a moderate grower and rather tender. An early and profuse bearer.

Black Tartarian. Very large; bright purplish black, half tender, juicy, very rich, excellent flavor. Tree a vigorous grower and productive. June.

Centennial. A new cherry, a seedling of Napoleon Bigarreau, raised by Mr. Henry Chapman, in Napa Valley, California. It is larger than its parent, more oblate in form and beautifully marbled and splashed with crimson on a pale yellow ground. Its sweetness is very marked. Its keeping qualities after being taken from the tree will undoubtedly render it the best for shipment, specimens having been carried to the Eastern States and Europe without apparent injury.

Chapman. This grand new cherry originated in Napa Valley, California, where it ripens about April 10. It is the earliest of all shipping varieties, bears early and immense crops of fine, luscious fruit, which grows somewhat more in clusters than Black Tartarian. Size very large, form roundish, stem long and slender, surface smooth, color purplish black; flesh half tender; stone small, flavor of the highest quality. On account of its great beauty, quality and earliness, it is a very profitable market variety. Said to be a seedling of the Black Tartarian.

***Dyehouse.** Partakes of both the Duke and Morello in wood and fruit; a very early and sure bearer. Ripens a week before Early Richmond; of better quality and quite as productive.

Deacon. This new cherry is supposed to have originated in Sacramento, Cal. Color black; flesh firmer than Luelling (Black Republican) and much larger. Ripens with Black Tartarians; flavor of the highest quality. It has been shipped from Sacramento to New York, arriving in prime condition.

***Early Richmond.** (Kentish, Virginian May.) Medium size, dark red; melting, juicy, sprightly acid flavor. This is one of the most valuable and popular of the acid cherries, and is unsurpassed for cooking purposes. Tree a slender grower, with a roundish, spreading head, and is exceedingly productive. The most hardy of all varieties, uninjured by the coldest winters when almost every other variety has been killed. Ripens through June.

***English Morello.** Medium to large, blackish red; rich, acid, juicy and good; very productive. August.

Early Purple Guigne. (Early Purple.) The earliest fine variety; medium size; heart shaped; tender, juicy and sweet. Tree a rather slender

grower but very hardy and productive. First to middle of June.

Elton. Large and fine flavor; pale yellow, light red next the sun; vigorous grower. Last of June.

Governor Wood. Large, rich; light yellow with red cheek; juicy and sweet. Last of June.

Hoskin. Originated by C. E. Hoskin, Newberg, Or. Very large, color black, flavor similar to Black Tartarian. A very promising variety.

Knight's Early Black. Large, blauk, tender, juicy, rich and excellent; good grower and productive. Middle to last of June.

***Kentish.** See Early Richmond.

Lambert. In size the largest known; smooth, glossy, color dark purplish red with numerous minute, indented, russet dots; flesh dark, purplish red with whitish veins, firm meaty texture, small oval stone, semi-cling; flavor sweet or very mild subacid, rich and of highest quality; form roundish, heart-shaped; long, slender stem. The finest shipping variety. Originated near Portland, Or., about 1837, and named after the originator. Tree thrifty, hardy and vigorous grower, and forms a beautiful head.

***Late Duke.** Large, light red; late and fine. Last of July.

Luelling. See Black Republican.

***Lutovka.** A Russian sort of the Morello type. Fruit firm, good quality, sprightly, acid, as large as English Morello, similar to that variety in color. Clings tenaciously to the long stem. Aug.

Major Francis.
See Oxheart.

***May Duke.**
Large, red, juicy and rich. An old, excellent variety. Vigorous, productive. June 15.

***Montmorency Large.** A large, red cherry, larger than Early Richmond and fully 10 days later.

***Montmorency Ordinaire.** A beautiful, large, red, acid cherry. Larger and finer than Early Richmond, and fully 10 days later. Being extraordinarily prolific and very hardy it can be highly recommended. Valuable for canning and preserving. Free grower.

Napoleon Bigarreau (Royal Ann.) A magnificent cherry of the largest size. Pale yellow with bright red cheek, flesh very

One-year-old Cherry trees on 3-year-old roots. 4 to 6 feet high.

CHERRIES, Continued

firm, juicy and sweet. One of the best for market and canning. Late.

***Olivet.** A new Duke of French origin. Unlike most others of this class, it is said to be very early, and to ripen over a long period. Fruit very large, globular, and of a deep shining red; tender, rich and vinous, with a sweet, subacidulous flavor.

Ostheim. A hardy cherry from Russia. It has been tested in the severest winters of Minnesota and has been found perfectly hardy. Fruit large, roundish ovate; skin red, dark at maturity; stalk long; flesh liver-colored, tender, juicy, almost sweet.

Oxheart (Major Francis.) Fruit large, obtuse, heart-shaped; skin dark red; half tender, with a pleasant juice, of second quality in point of flavor. Last of June.

Roe. The latest and firmest of all cherries, ripening fully six weeks after the Lambert and Royal Ann. Firmer than the Black Republican. Light yellow background, overspread with mot-

tled red, with light blush on sunny side; flavor very sweet; quality excellent.

Royal Ann. See Napoleon Biggarreau.

***Vladimir.** Russian variety. Very hardy; a strong grower, wonderfully prolific. Fruit size of Early Richmond; mild, subacid, juicy; excellent quality. July.

Windsor. New seedling, originated at Windsor, Canada. Fruit large, liver-colored, resembling the Elkhorn or Tradescant's Black Heart, nevertheless quite distinct. Ripens three or four days after that variety. Flesh remarkably firm and of fine quality. Tree hardy and prolific. Valuable for late market and for family use.

***Wragg.** Much like English Morello. More productive and excels in size, yield and quality. One of the hardiest cherries and has produced annual crops at the northernmost limit of cherry culture.

Yellow Spanish. Large, pale yellow, with red cheeks; firm, juicy and excellent. One of the best light-colored cherries. Vigorous and productive. Last of June.

PLUMS (*Prunus*)

The plum tree, like the pear and other finer fruits, attains its greatest perfection in our heavy soil, being entirely free from disease. Plums are hardy and grow vigorously in nearly all sections, succeeding best on heavy soils in which there is a mixture of clay.

The finer kinds of plums are beautiful dessert fruits, of rich and luscious flavor. For cooking and canning they are unsurpassed. For best flavor they should be allowed to remain on the tree until fully ripe; but for shipping to market, they must be gathered a few days earlier, when they may be shipped long distances, arriving in good condition. Overbearing should not be allowed.

Some varieties, especially of the native plums, are extremely hardy and will stand the climate of the extreme northwest.

Japanese or Oriental Plums.

These plums are as distinct from our native varieties as the Yellow Newtown is from the Baldwin apple. Many of these varieties are succeeding well in the northern and western states in many places where the European varieties cannot be depended upon; and for the southern states they open a new field in plum growing. They unite size, beauty, productiveness, and come into bearing at 2 to 4 years of age. Flesh firm and meaty, will keep for a long time in excellent condition. Their early blooming habit renders them unsafe in some sections and they never will take the place of our older varieties, but possess many valuable characteristics.

We group plums under the following divisions: *A*, American type, very hardy (Chickasaw types). *D*, Domestica, European types. *J*, Japanese type. *J** (starred) Japanese Hybrids, and crosses of the Japan plums introduced by Luther Burbank.

Abundance. *J.* (Botan.) One of the best Japan plums. The tree is a very rapid grower, healthy in limb and foliage, comes into bearing remarkably young and yields abundantly. The fruit is full medium size, color a rich, bright cherry-red, with a distinct bloom, and highly perfumed; flesh light yellow, very juicy and tender and of excellent quality. Vigorous, hardy. Mr. Geo. This-

sell, of Winters, Cal., says of this fruit: "I have fruited it three years, have found it very prolific. Fruit large to very large, exceedingly sweet, pit very small. Ripens at Winters, June 10. I consider this one of my best shipping plums."

America. *J.** Originated by Luther Burbank. Fruit large to very large; skin glossy, coral-red;

PLUMS, Continued.

flesh yellow, moderately firm and delicious. Said to be one of the most highly flavored plums.

Apple. J*. Another of Burbank's novelties, named from its close resemblance, form, color and rare keeping qualities; flesh firm, pale red with marblings and streaks of pink. A valuable acquisition to the list of Japanese plums. Ripens after Burbank.

Apricot Plum. See *Prunus Simoni*.

Bartlett. J*. One of the best of Burbank's recent introductions. Said to be wonderfully productive; a very ornamental tree, with glossy, green leaves resembling very closely the famous Bartlett in habit of growth, flavor and fragrance. Fruit oval, yellow, turning to deep crimson when fully ripe; flesh light salmon-colored, firm and juicy. Ripens before Burbank.

Blood Plum. See *Satsuma*.

Bradshaw. D. Fruit very large, dark violet-red; flesh yellowish-green, juicy and pleasant. Tree vigorous, erect and productive. Middle of Aug.

Burbank. J*. Very vigorous grower. Early and very heavy bearer, fruit very large, yellowish ground with red cheeks in the sun, flesh yellow, firm and very sweet when fully ripe; extremely small pit, which clings. Middle of June.

Chalco. J*. A cross between *Simoni* and Bur-

bank. Resembles the former variety very closely, but said by the originator, Luther Burbank, to be far superior to it. A tremendous grower and very prolific. A superior shipping plum, as it ripens and keeps well when picked green. Must eventually supplant *Simoni*, thriving and bearing where that variety is a failure.

Charles Downing. A. Vigorous, healthy tree; fruit large, round, red, handsome and excellent. One of the best of the Wild Goose type.

Climax. J*. This is well named the "King of Plums," as its extreme earliness, immense size, high color, delicious flavor and fragrance place it in the lead among early shipping plums. Fruit heart-shaped; color, deep, dark red; flesh yellow. Tree vigorous and remarkably productive.

Clyman. D. A beautiful plum, originated in the Napa Valley, California. A good bearer; fruit medium to large; mottled reddish purple, with beautiful blue; freestone; quality of flesh superior; valuable on account of its earliness and its excellent shipping qualities.

Coe's Golden Drop. D. Large and handsome; light yellow; firm, rich, sweet. One of the best of late plums. Last of Sept.

Columbia. D. Fruit of the largest size; 6 or 7 inches in circumference, nearly globular; skin brownish purple, dotted with numerous fawn-colored specks; flesh orange, not very juicy, but

MAYNARD PLUM.

PLUMS, Continued.

when at full maturity very rich, sugary and excellent. Last of August.

Combination. J*. New plum; early, regular and abundant bearer of large, nearly globular fruit of uniform size; flesh straw-color, extremely sweet with a pronounced pineapple flavor; stone small and nearly free when fully ripe. Luther Burbank, the originator, says: "An extremely handsome, large, early, light crimson plum of the very best quality, ripening at Santa Rosa July 12 before most of the earliest plums and about as early as the Climax. The trees, both old and young, are about the best and most symmetrical growers among the plums, making an early, rapid growth, ripening the wood perfectly hard to the tips early in the season, indicating unusual hardness. The bark, leaves and fruit are all unique. Bark dark, russet-bronze. The unusually large, broad, glossy coriaceous leave are bronze-crimson in the spring and fall. 'Combination' trees resemble no other tree in cultivation and are certain to please everyone."

Damson. D. Fruit small, oval; skin purple, covered with blue bloom; flesh melting and juicy, rather tart; separates partly from the stone. Sept.

De Soto. A. Medium size; resembles Miner in form and color, but is two weeks earlier; fine for eating or canning; a moderate grower; bears young and profusely; hardy and very desirable.

First. J*. New plum. Fruit of good medium size; pale amber, faint blush on sunny side, half transparent; flesh same color, moderately firm, sweet, juicy and good, especially so when just at the right stage of ripeness. Tree of medium growth, never fails to produce all it can hold. Luther Burbank, the originator, says: "Introducing this new plum, I confidently make the statement that it is the earliest of all plums, ripening at Santa Rosa June 15, fully three weeks earlier than the Red June; and also that it is the largest, handsomest and most productive of all very early plums. It should prove very hardy, and for home use and near markets will be the most useful of all very early plums. It is too soft and ripens too suddenly for shipping to distant markets, but its extreme earliness, large size and good quality make a combination of very unusual value."

Green Gage. D. Small; considered the standard of excellence; slow grower. Middle of August.

Forest Rose. A. A native of Pike County, Mo. Fruit round; larger than Wild Goose; skin rather thick and of a beautiful dark red color, covered with a delicate bloom; stone small; fine quality.

Gueii. D. Extensively grown for market. Tree a hardy, very strong, vigorous, upright grower, an early and very abundant bearer. Fruit large, roundish, oval; skin dark purple, covered with a thick, blue bloom; flesh pale yellow, a little coarse rather firm, juicy, sweet, sprightly, subacid; free-stone. Season last of August and first of September.

Hale. J*. Fruit medium to large, yellow, mottled and speckled red; flesh soft and juicy, yellow; cling; of good quality. Tree a moderately spreading, vigorous grower. Follows Burbank in ripening. Last of August.

Jefferson. D. Large; yellow, reddened in the

sun; juicy, rich and delicious; one of the best. Last of August.

Kelsey. J. Japanese; very large; rich, reddish purple on yellow ground; tree a prolific and early bearer; very largely planted for shipping East. The very largest of all plums.

Lombard. D. (Bleecker's Scarlet.) Medium, round, oval; violet-red; juicy, pleasant and good; adheres to the stone. Tree vigorous and productive. A valuable market variety; one of the most hardy and popular. Last of August.

Maynard. J*. Originated by Luther Burbank, that great master of modern horticulture. In size it is very large, often measuring 7½ inches in circumference. Form nearly round, slightly flattened at the ends; of richest crimson-purple, deepening to royal damask as full ripeness is reached. Tree hardy, vigorous and compact grower. Leaves dark glossy green. Bears immense crops of even-sized fruit while very young. Never fails. Surpasses all other varieties in keeping and carrying qualities. Flesh firm even when dead ripe, but melting and juicy with a deliciousness indescribable. Commands the highest price in home and foreign markets.

Miracle. Originated by Luther Burbank, of Santa Rosa, Cal. A cross between the French fruit, *Prunus Sans Noyeau*, and the French prune. In general form it resembles the French prune, its staminate parent, but is larger in size. The color is distinctly of the Damson type, a rich, dark purple with heavy blue bloom. Flesh of good quality, sweet, rich and juicy, with stone wholly eliminated.

Milton. Rather large; dark red; skin thin; flesh firm; good quality; ripens earlier than Wild Goose; its large size, good quality and extreme earliness make it very valuable; a strong grower; productive.

Miner. Medium size; oblong; skin dark, purplish red; flesh soft, juicy, vinous and adheres to the stone; excellent for canning and cooking and esteemed for market; productive.

Moore's Arctic. D. Size medium, purplish black, with a thin blue bloom; flesh greenish yellow, juicy, sweet, and of pleasant flavor. Charles Downing speaks of it as follows: "A new hardy plum, which originated in the highlands of Aroostook county, Maine, where, unprotected and exposed to cold, it has for many years borne enormous crops, and is claimed to be the hardiest plum grown, and so far free from black-knot." Tree healthy, vigorous. An early and abundant bearer.

October Purple. J*. Propagated by Luther Burbank, of California. Fruit large and uniform in size; color a dark, rich maroon; stone small; flavor fine. Tree a fine grower. This variety is pronounced by Mr. Burbank one of the best varieties he has produced. Ripens middle of Sept. Should be in every collection.

Peach. D. Very large and handsome; dull red; good; very productive. Last of August.

Pond's Seedling. See Hungarian Prune.

Pottawattamie. A. A cross of Chickasaw and Swedish Sloe. Quality excellent. Tree perfectly hardy, a strong, vigorous grower; an immense annual bearer; curculio-proof. One of the most profitable trees for the fruit grower. Four-year-

PLUMS, Continued.

old trees have borne a crop of two bushels to the tree.

Prunus Simoni. J. (Apricot plum.) A distinct species from China. Growth erect; flowers small, white, appearing early in the spring. Fruit flattened, of the size and appearance of a nectarine, and of a brick-red color; flesh yellow, with a peculiar aromatic flavor.

Red June. J. The best Japan, ripening before Abundance. Medium to large; deep vermilion red, with handsome bloom; flesh light lemon-yellow, firm; moderately juicy; fine quality. Tree upright, spreading, vigorous and hardy; productive. Ripens between Willard and Abundance. Highly recommended by Prof. Bailey, of Cornell University. Last of July or early August.

Reine Claude de Bayay. D. (Bavay's Green Gage.) Large; greenish-yellow, spotted with red; firm, juicy, sugary and of fine quality; very productive. Sept.

Satsuma. J*. (Blood plum.) Native of Japan. The tree looks much like the Wild Goose, and is likely to prove more hardy than Kelsey. The fruit has a pleasant flavor, and, unlike all others, has red flesh, with a remarkably small stone.

Shipper's Pride. D. Large, nearly round; dark purple; quite juicy, sweet; splendid shipper and marketer; moderate grower; productive. Originated in northwestern New York.

Shiro. J*. Originated by Luther Burbank. Fruit egg-shaped; medium size, smooth, bright yellow, thin bloom; flesh clings to the pit. Said to be more productive than the Burbank.

Sultan. J*. Said by the originator, Luther Burbank, to be one of the most attractive plums. Its huge size and deep purplish crimson color render it valuable for market. The flesh is very firm, fragrant, sweet, dark crimson, clouded and shaded with pink, salmon and light yellow. Very

rapid grower, with wood and leaves much like a Royal Ann cherry.

Tatge. D. Another new plum of the *Domestica* type that bids fair to rival all others in this class. It is of the Lombardy family. Originated in Iowa. A good grower. Comes early in bearing, and is immensely productive.

Washington. D. Large, green, somewhat reddened; juicy, sweet and fine; very productive. Last of August.

Wickson. J*. Originated by Mr. Burbank, who says: "Among the many thousand Japan plums I have fruited, so far, this one stands preeminent. A sturdy, upright grower, productive almost to a fault. Fruit remarkably handsome, deep maroon red, covered with white bloom; stone small; flesh fine texture, firm, sugary and delicious. Excellent keeper and shipper."

Weaver. A. This remarkable plum was found near Cedar Rapids, Iowa, growing in the old Indian camping ground. Flesh firm, with flavor resembling the apricot. As a substitute for the peach it has no rival. Curculio-proof.

Willard. J. Medium in size, spherical in general outline, but prominently cornered or angled, and never pointed; the sinus very light, but stem cavity deep; color dark, clear red, with minute yellow dots; flesh rather firm, yellow, sweet and of fair quality; freestone. A strong, vinous and hardy tree, productive and one of the earliest market Japan plums yet tested in the North.

Wild Goose. A. An improved variety of the Chickasaw, evident in the great vigor of the tree and increased size of the fruit, which is nearly as large as the Green Gage. Skin purple, with a bloom; flesh juicy, sweet and adheres to the stone. Last of July.

Yellow Egg. D. (Magnum Bonum, Yellow.) A very large and beautiful egg-shaped yellow plum. A little coarse but excellent for cooking. Tree a free grower and very productive. End of August.

PRUNES (*Prunus*)

The plum of history is the *Prunus domestica*. It also gives us the Prunes which are characterized by sweet, firm flesh, and capable of making a commercial dried product. They may be of any color, although blue-purple are best known. Any plum which can be successfully cured, without removing the pit, into a firm, long-keeping product, may be used for making prunes, the chief requisite being a large proportion of solids, more especially sugar.

To such proportions has the prune industry grown in the past dozen years that it may now be classed as one of the most important productions of the Pacific Coast, the exportations annually to the Eastern markets reaching hundreds of thousands of pounds of the finest prunes in the world.

Dosch. D. Introduced by Hon. H. E. Dosch, after whom it is named. Originated near Portland, Or., about 12 years ago. Color purple, very large; flesh juicy, delicious, sweeter than the Italian but not so sweet as the Petite; flavor excellent and for canning has no equal; dries very heavy. Tree hardy, thrifty grower, ten days to two weeks earlier than the Italian. Received a gold medal at Omaha Exposition in 1898, both in green and dried states.

Fellenberg. See Italian prune.

French. See Petite.

German Prune. D. A large, long, oval variety, much esteemed for drying; color dark purple; of very agreeable flavor. Sept.

Giant Prune. D. (California.) One of the largest prunes known, the fruit averaging 1½ to 2 ounces each. Its unequalled size, handsome appearance, rare keeping qualities and great productiveness

PRUNES, Continued.

make it desirable for home use or market. Sept.

Golden. D. A seedling of Italian prune. Originated in Oregon. Light golden color, good flavor and heavy drier; strong grower and abundant bearer; freestone. Sept.

Hungarian Prune. D. (Grosse Prune, or Pond's Seedling Plum.) Very large, dark red, juicy and very sweet. Its large size, bright color, productiveness and shipping qualities render it a profitable variety for home or distant markets. Sept.

Imperial. D. (Epineuse.) Large size; light or reddish purple color; thin skin; sweet and high flavor. Tree stout, stocky, rapid grower.

Italian. D. (Fellenberg.) A late prune; oval; purple; flesh juicy and delicious, parts from the stone; fine for drying. Tree very productive. Sept.

Petite d'Agen. D. (French Prune.) The well-known variety so extensively planted for drying. Medium size; reddish purple; juicy, sugary, rich and sweet. Bears immense crops. Sept.

Pacific. D. Originated at Mt. Tabor, Or. Tree hardy; borne abundantly since 3 years old. Fruit freestone, very large and handsome. Flavor the finest; rich, sugary and luscious. A good shipper. The best of drying prunes.

Robe de Sargent. D. A variety lately introduced from France. It is this which in a dried state forms the celebrated "Pruneau d'Agen." Fruit medium size, oval; skin deep purple, approaching to black and covered with a thick blue bloom; flesh greenish yellow, sweet and well flavored, sugary, rich and delicious, slightly adhering to the stone. A valuable drying and preserving variety. Ripens in Sept.

Silver. D. Originated in Oregon and said to be a seedling from Coe's Golden Drop, which it very much resembles; is much more productive and tree more vigorous. The fruit, on account of its large size, is ranked among the most valuable prunes and drying plums. Oct.

Splendor. D. Large; very long in shape; clear

even purple, turns quite purple in curing. Cooked has a slight acid flavor.

Sugar. Originated by Luther Burbank. Ripens 28 days earlier than French (Petite d'Angen.) Almost one-fourth sugar (analysis shows it to be 23.92% sugar.) Three times larger than French, of which it is a seedling. On account of its earliness, large size and high per cent of sugar, is sure to revolutionize the prune industry of the world. Tree vigorous, hardy and very productive; bears young. Color purple; good shipper. Aug.

Tennant. D. Originated in Whatcom county, Washington, where it has been tested for 20 years, and has never failed to produce a good crop of fruit. Large; dark purple; with a blue bloom; flavor of the highest quality; rich, sugary and delicious. Tree hardy and very productive. Bears transportation well. August.

Tragedy. D. This most valuable of all prunes for early eastern shipments appears to be a cross between the German prune and the Purple Duane; medium size, nearly as large as Duane; skin dark purple; flesh yellowish green, very rich and sweet, freestone. Ripens in July.

LINN COUNTY PRUNES COMPARED WITH A HALF DOLLAR.

¶ Our Trees and Plants
are Healthy, Vigorous,
Well Matured and Ab-
solutely True to Name--
thus we have established
our well-earned reputa-
tion as the
"OLD RELIABLE"

PEACHES (*Prunus Persica vulgaris*)

To secure healthy, vigorous and fruitful trees, the ground must be well drained and kept clean and mellow, and it should receive an occasional dressing of wood-ashes. It should be remembered that peaches are all borne on wood of the previous season's growth, and that this makes it absolutely necessary to prune the trees yearly, to remove dead branches and to let in light and air, and keep the trees in good shape to produce bearing wood. F., freestone; S. C., semi-cling, C., cling:

Admiral Dewey. F. Skin deep orange-yellow, with crimson cheek; flesh clear yellow, of uniform color and texture to the stone; juicy, melting, vinous; quality very good. Ripens with Triumph; has better form and brighter color on surface; equally hardy and productive; tree a strong and symmetrical grower. One of the best early freestones.

Alexander's Early. (Alexander.) C. Originated near Mt. Pulaski, Ill. Medium size; skin greenish white, nearly covered with rich red; flesh melting, juicy, sweet; tree vigorous and productive. Ripens two weeks earlier than Hale's Early.

Amsden's June. (Amsden.) C. Originated at Carthage, Mo., in 1882. Medium size; skin greenish white, nearly covered with purple in the sun. Ripens with the Alexander and closely resembles that variety, but some think it a little higher flavored.

Australian Saucer. F. Medium; flat, hollowed like a saucer on one side, hence the name; skin white, shaded crimson in sun; flesh white, sweet delicious flavor; pit very small, almost round. An oddity for home consumption only. July.

Banner. New. F. Originated at Woodslee, Ontario. The original trees have borne 16 crops several years bearing well when all other varieties in Ontario failed. Tree very hardy both in wood and bud, bears young and very productive, equaling the Prolific. Fruit large, deep yellow, with crimson cheek; flesh yellow to the pit; firm, rich and of excellent quality; pit small, free; equal to any as a shipper or keeper. Prof. W. W. Hilborn, Director of the Experimental station at Leamington, Ontario, has known it for many years, fruited it for several seasons in experimental orchard, and recommends it as the very best late market variety. Last of September and October.

Blood-leaf Peach. See Decidious Ornamentals.

Bokhara. F. A Russian variety, which is claimed to be the hardiest peach grown; in fact, it has withstood a temperature of 28 degrees below zero without injury. It is a beautiful yellow peach, with bright red cheek; perfect freestone; delicious flavor; its exceedingly tough skin makes it a splendid shipper.

Briggs' Red May. F. Originated with J. B. Briggs, of Marysville, Cal. Fruit medium to large; skin greenish white, with rich red cheek; flesh greenish white, melting and juicy. A standard early variety and one of the most extensively planted in California. Middle of June.

California Cling. C. Very large, round, regular; orange, nearly covered with dark rich red; flesh deep yellow; flavor delicate, rich, vinous. Middle of August.

Carman. F. Large, resembling the Elberta in

shape; creamy white or pale yellow, with deep blush; skin very tough; flesh tender and of fine flavor, juicy; prolific bearer. Profitable market variety. Ripe June 20.

Champion. F. A particularly hardy seedling of Old Mixon, from the West, which is noted for the hardiness of its blossoms, thus insuring a good yield in spite of heavy spring frosts. It is a very large, handsome Peach, with a creamy white skin and beautiful red cheek. In flavor it is exquisite, and is a true freestone. Ripens middle of July.

Chinese Cling. C. Large, globular; skin white, shaded with light red; flesh white, red at the stone; very juicy, melting and rich. July.

Crawford's Early. F. A magnificent large, yellow Peach, of good quality. Tree vigorous and very productive. Its fine size, beauty and productiveness make it one of the most popular sorts; no other variety has been so extensively planted.

Crawford's Late Melocoton. (Late Crawford.) F. Fruit of large size; skin yellow, or greenish yellow, with dull red cheek; flesh yellow; tree vigorous, moderately productive. One of the finest late sorts. Last of September.

Crosby. F. An iron-clad Peach. The tree is of low, spreading, willowy habit of growth, similar to Hill's Chili, Wager and others of that class of hardy Peaches. However, it is even more dwarf than these, and often the entire product of a tree, two bushels, or even more, can be picked by a man standing on the ground. The fruit is of medium size, roundish in form, slightly flattened, with a distinct seam on the blossom end; bright orange-yellow, splashed with streaks of carmine on the sunny side; of beautiful appearance, and not so acid as most yellow peaches of the Crawford class. It ripens between Early or Late Crawford or about with Old Mixon. A good family peach at all times, and, on account of its beautiful color, will command a ready sale alongside of the best standard sorts, in a season of abundance. However, when it is considered that its fruit-buds are so hardy as to withstand the frosts of winter and spring, that often kill all other good varieties, its special value is apparent; a fine yellow peach to supply the market when there are no others.

Dewey. See Admiral Dewey.

Early Charlotte. F. An improved seedling from Early Crawford, originated at Salem, Oregon, in 1878, by O. Dickenson, where it has attracted much attention among fruit-growers. This remarkable peach succeeds in Oregon, where many other varieties fail. Flesh yellow, melting and juicy, with a rich and excellent flavor. Freestone. Ripens ten days after Crawford's Early.

Early Imperial. F. Originated by W. W. Smith, Vacaville. Fruit large, deep yellow, with dark

PEACHES, Continued

red cheek; flesh rich, juicy and very firm. A very highly colored peach and remarkable for its firmness. Resembles Yellow St. John in form but earlier, larger and more highly colored. Ripens with Hale's Early, and its rich color and earliness combined will make it one of the most profitable varieties for early shipment.

Elberta. F. Introduced from Georgia. A cross between Crawford's Early and Chinese Cling; very large; bright yellow, with a beautifully mottled red cheek; flesh yellow, juicy, sweet; tree a uniform and regular bearer and strong grower. Fruit very showy and a perfect freestone. One of the best market varieties, often selling at double the quotations of other peaches. Ripens last of July.

Everbearing. F. A remarkable peach, having the peculiarity of ripening its fruit successfully over a period of eight weeks. Creamy white, mottled and striped; flesh white, with red veins; juicy, rich and fine.

Fitzgerald. F. An improved Early Crawford, being fully equal to it in size, quality and color. The tree commences bearing young, is productive and one of the hardiest. Fruit large, brilliant color, bright yellow, suffused with red; flesh deep yellow, best quality. Early September.

Foster. F. Originated in Medford, Mass. Large, deep orange-red, becoming very dark red on the sunny side; flesh yellow, very rich and juicy, with sub-acid flavor, ripening earlier than the Early Crawford and superior in many points; flesh is

firmer, without so much red at the stone, which is smaller; one of the very best for drying, market or canning.

Gillingham. F. Large yellow, resembling the Early Crawford in form and appearance, ripening a few days later; flavor excellent. Bears young and abundantly. A very promising new variety.

Globe. F. Large; flesh firm, juicy, yellow; quality good, pleasant, rich, vinous and luscious. October.

Greensboro, S. C. Origin, North Carolina. Ripens with Alexander, but much larger. Round; flesh white, very juicy, of good quality; bright red over yellow, highly colored in the sun. A promising market variety.

Hale's Early. S. C. Medium size; greenish white with red cheek; first quality. Tree healthy, good grower and productive. One of the earliest good peaches we have, and promises to be a leading orchard variety.

Heath Cling. C. A most delicious cling. Very large; skin downy, creamy white, with faint blush of red; flesh white, slightly red at the pit; very tender, juicy and sweet; valuable for canning; season early September.

Henrietta Cling. See Levy Late.

Imperial. See Early Imperial.

Indian Cling. (Indian Blood.) C. Large, deep claret color, with red veins; downy; flesh red, very juicy and refreshing. Highly valued by all lovers of Indian Peaches. Last of August.

Lemon Cling. C. A very large and beautiful

MUIR PEACHES.

PEACHES, Continued.

lemon-shaped variety; skin light yellow, reddened in the sun; flesh firm, yellow, rich, with a vinous, sub-acid flavor. Ripens first week in August.

Lemon Free. F. Originated in Ohio; very large; pale yellow; shaped a good deal like a lemon; of extra fine quality; tree very productive; ripens before Salway.

Levy's Late, or Henrietta Cling. C. A magnificent cling of large size; skin a deep yellow, a shade of rich brownish red in the sun; flesh deep yellow, firm, juicy, sweet, half-melting, slightly vinous. Latest of all clings and highly esteemed for canning and market. Middle of September.

Lovell. F. A California seedling; large, almost perfectly round; flesh yellow to the pit, firm and of excellent quality; a superb canning, shipping and drying peach; tree a good grower and bearer. Worthy of extensive cultivation; ripens a few days after Muir.

McDevitt's Cling. C. Originated with Neal McDevitt, of Placer County, Cal. Very large, rich, golden yellow, becoming quite red when ripe; flesh yellow, firm, and of superior flavor; excellent shipper. Last of August.

McKevitt's Cling. C. A California seedling, introduced by A. McKevitt, Vaca Valley. White; flesh firm, rich, sugary and highly flavored; white to the pit; excellent for shipping and canning. Tree a remarkably strong grower and not subject to curl. Early in September.

Mountain Rose. F. Large, handsome, red cheek; flesh white, juicy; one of the best. August.

Muir. F. Large; pale yellow; very firm flesh; very sweet. Best for drying.

Newhall. F. Originated with Sylvester Newhall, of San Jose. A superb peach, of very large size; skin yellow, with a dark red cheek; flesh deep yellow, juicy and rich, vinous flavor. Tree very hardy, healthy, vigorous and not affected by curl like Crawford's Late. Ripens about one week before Crawford's Late.

Orange Cling. See Runyon's Orange Cling.

Perfection. F. This new and valuable peach originated about three miles above Weston, Umatilla County, Oregon, near the timber line of the Blue Mountain Range, at a high altitude, which proves its hardiness. The fruit is of the largest size, yellow, with a beautiful blush cheek; the flesh is thick and very fine-grained; yellow, with red around the pit, which is nearly as small as a prune seed; its tough skin, firm flesh and good keeping qualities place it in the lead for a good shipping and market variety. We cannot recommend this new peach too highly to our friends and patrons, and it should be largely planted. Ripens from September 10 to 15.

Phillip's Cling. C. Fine, large; yellow; flesh firm, clear yellow to the pit, which is very small. Preferred by canners to any other variety of Cling. Its firmness, fine texture of flesh and lateness, not ripening until September, when other clings are practically harvested, makes a demand for this variety far beyond the supply.

Prolific (New.) F. Fruit large, attractive, firm; color yellow, crimson cheek; flesh yellow to pit, very firm; pit small. The tree is very productive, and one of the hardiest peaches known. Sept.

Runyon's Orange Cling. C. Originated with Mr. Sol. Runyon, on the Sacramento River. The fruit is very large, yellow, with a dark crimson cheek; flesh golden yellow, rich and sugary, with a vinous flavor. Tree an immense bearer, and not subject to mildew like the common sort. A splendid fruit for shipping, canning or drying. Ripens early in August.

Salway. F. Fruit large, roundish; deep yellow, with a rich, marbled, brownish red cheek; flesh yellow, firm, juicy, rich and sugary. A new English variety. Promises highly as a late, showy, market sort.

Sellers'. A variety of Orange Cling, of the largest size, raised by Mrs. Sellers, of Antioch. Skin fine yellow, with a dark red cheek; flesh yellow, firm, very juicy and rich. A very desirable sort for canning, ripening a few days after Runyon's.

Sneed. S. C. It is claimed for this peach that it is fully ten days earlier than the Alexander, of same size and appearance, but more yellow, the flesh is tender, juicy, melting and delicious; clings slightly to the pit. Said to be the first peach to ripen, which makes it a very desirable variety.

Strawberry. F. Medium size; white, marbled with dark red; flesh white, red near the pit; juicy, with a rich, delicious flavor. July.

Susquehanna. F. A large, handsome variety, nearly globular; skin rich yellow, with beautiful red cheek; flesh yellow, sweet, juicy, with a rich, vinous flavor.

Triumph. S. C. Above medium; skin downy, dark orange-yellow, nearly covered with dark carmine; flesh yellow half-way to the stone, where it changes to greenish white and adheres to the stone like Alexander; juicy, melting and slightly sub-acid; quality good. Maturity June 15. The great value of this peach for shipping purposes is its yellow color and attractive appearance, it being the earliest peach so far known, and has brought very high prices.

Tuskena Cling. (Tuscan, Yellow Tuscan.) C. A very large, yellow cling, the earliest fine cling; flesh juicy and of fine flavor and clear yellow to the stone. A good shipping and canning peach and very desirable on account of its earliness, ripening with the Early Crawford.

Twenty-Ounce Cling. C. A fine, very large cling peach, very desirable for canning. August.

Van Buren Dwarf. Tree very dwarf and ornamental, and on this account valuable for very small gardens; fruit medium size; skin yellow, shaded red; flesh yellow and of fine quality. Ripens middle of August.

Wager. F. Large, yellow, more or less color in the sun; juicy and of a fair flavor. While high quality and great beauty cannot be claimed for this fruit, the trees have such remarkable vigor and vitality that they not only produce fruit in great quantities, but produce it with a degree of certainty and regularity which is quite unusual. These facts commend it to all planters for market purposes. Last of August.

Waterloo. S. C. Originated at Waterloo, N. Y. Of medium to large size, color whitish green, marbled with red, deepening into dark purple-crimson in the sun; flesh greenish white, with an abundance of sweet, vinous juice, adheres some

PEACHES, Continued.

to the stone, like Amsden, Hale's Early, etc. Ripened at Waterloo, July 14, 1878; in 1879, three or four days ahead of Alexander. For so early a peach it is a remarkable keeper, ripe specimens having been kept in perfect condition for nearly a week. This makes it valuable for shipping.

Wheatland. F. Large, roundish; skin golden yellow, shaded with crimson on the sunny side; flesh yellow, rather firm, juicy, sweet and of fine

quality; tree vigorous. August.

Wonderful. F. A freestone; color rich golden yellow, overspread with carmine. It ripens after nearly all other varieties have disappeared, and is a remarkable keeper. The tree is wonderfully prolific.

Yellow St. John. F. Fully one week earlier than Early Crawford; a trifle smaller than latter, especially old trees; yellow, with deep red cheek; juicy, sweet and highly flavored; quite free.

APRICOTS (*Prunus Armeniaca*, or *Armeniaca vulgaris*)

Beautiful and delicious fruit. In quality and appearance is between the plum and the peach, combining qualities of both. Ripening early, together with its delightful flavor, makes it one of the most valuable fruits. Tree is as hardy as the peach. Requires about the same cultivation as the peach or plum. It ships well and commands a good price in the eastern market. For drying and canning it has no superior. The Russian varieties are quite distinct from the other European sorts; much hardier, earlier bearers and productive.

Alexander. Very hardy and immense bearer; fruit large; yellow, flecked with red; very beautiful, sweet and delicious. July.

Alexis. Very hardy and abundant bearer; yellow with red cheek; large to very large, slightly acid, rich and luscious. July.

Blenheim. Large, oval; flesh full to the pit; yellow, rich and juicy; ripens evenly and soon after the Royal; regular and prolific bearer; profitable for canning, drying and marketing.

Gibb. Tree hardy, grows symmetrical, productive. Fruit medium; yellowish, subacid, juicy and rich. The best early variety, ripening soon after strawberries. A great acquisition.

Hemskirk. Large, roundish, but considerably compressed or flattened on its sides; orange, with red cheek; flesh bright orange, tender; rather more juicy and sprightly than the Moorpark, with a rich and luscious plum-like flavor. July.

J. L. Budd. Tree a strong grower and profuse bearer. Fruit large, white, with red cheek, sweet, juicy, with a sweet kernel, as fine flavored as an almond. The best late variety and a decided acquisition. August.

Moorpark. One of the largest. Orange, with red cheek; firm, juicy, with a rich flavor; very productive. August.

Nicholas. Tree hardy and prolific. Fruit medium to large, white, sweet and melting. A handsome and valuable variety. July.

Peach. (Marysville Peach.) Very large, handsome and of delicious flavor; skin deep orange, mottled with dark brown; flesh of a fine saffron-yellow color; juicy, rich and high flavored. One of the best. August.

Royal. Large, oval, slightly compressed; yellow, with orange cheek, faintly tinged with red; flesh pale orange, firm and juicy, with a rich vinous flavor; exceedingly productive. July.

Tilton. New. We have pleasure in introducing this apricot to the public. Its large size, rich apricot color, high flavor, uniform ripening, sure and unusual productiveness, with frost-resisting qualities and vigorous growth, easily place it far in advance of all other varieties. For drying or canning it is much superior to any of these older varieties.

QUINCES (*Cydonia vulgaris*)

The quince is, of late, attracting a good deal of attention as a market fruit. Scarcely any fruit will pay better in the orchard. The tree is hardy and compact in growth, requiring but little space. Productive, gives regular crops and comes early into bearing. The fruit is much sought after for canning for winter use. When put up in the proportion of about one quart of quinces to four quarts of other fruit, it imparts a delicious flavor. Especially desirable for jellies and preserves.

It flourishes in any good garden soil, which should be kept mellow and well enriched. Prune off all the dead and surplus branches and thin out the fruit if bearing too freely.

Apple, or Orange. Large, roundish; bright golden yellow; cooks tender and is of very excellent flavor. Valuable for preserves or flavoring; very

productive. The most popular and extensively cultivated of the old varieties. October.

Angers. Somewhat later than the preceding.

QUINCES, Continued

Fruit rather more acid, but looks well. Tree a thrifty grower and abundant bearer.

Borgeat. A French variety. Very productive, healthy and thrifty. It grows in tree form, like pears or plums. It has almost perfect foliage, leaves green and fresh until the end of the season. The fruit is very large, smooth, golden yellow, of the best quality, tender; ripens just after the Orange and will keep past midwinter in perfect condition.

Champion. Fruit very large, fair and handsome. Tree very handsome, surpassing other varieties in this respect, bears abundantly while young; flesh cooks as tender as an apple and without hard spots and cores; flavor delicate, imparting an exquisite quince taste and odor to any

fruit with which it is cooked. One of the most valuable.

Orange. See Apple.

Pineapple. Originated by Luther Burbank. The name comes from the flavor, which is suggestive of the pineapple. The fruit in form and size resembles the Orange quince, but is smoother and more globular. Makes a superior jelly. Can be eaten raw and is said to cook as tender in five minutes as the best cooking apple, possessing a most exquisite and delicious flavor not equaled by any other quince.

Rea's Mammoth. A seedling of the Orange quince; one-third larger, of the same form and color; fair, handsome; equally good and said to be as productive. Tree a hardy and healthy grower.

NECTARINES (*Prunus Persica*, or *P. laevis*)

A most delicious, smooth-skinned fruit, which thrives wherever peaches will grow. Much superior to the peach as a dried fruit, and excellent for preserves. Commands a high price in the eastern market, as it is somewhat of a novelty.

Boston. Very large and handsome; deep yellow, with a bright blush and mottles of red; flesh yellow to the stone, sweet, with a pleasant and peculiar flavor; freestone. One of the most valuable sorts for market.

Early Violet. (Violet Hative.) Medium size; yellowish green, with a purple cheek; flesh pale green, melting, rich and highly flavored; freestone. August.

Lord Napier. Large; cream-color, dark red

cheek; flesh white, tender, juicy and sugary; freestone. July.

New White. Large, white, nearly round; flesh white, tender, very juicy, with a rich vinous flavor; stone small and separates freely. Aug.

Stanwick. Very large, often as large as a peach; skin pale greenish white, shaded into deep rich violet in the sun; flesh white, tender, juicy, rich, sugary and delicious. For drying and shipping not excelled by any other variety. August.

GRAPES [*Vitis*]

Too much cannot be said in praise of the grape. It is one of the best and most popular fruits, delicious for eating, especially desirable for cooking and preserving, and everywhere in large demand.

The vine comes quickly into bearing, yielding fruit usually the second year after planting; requires but little space, and when properly trained is an ornament to the yard, garden or vineyard.

Almost every one can find room for from six to a dozen or more grape vines. They can be trained up the side of any building or over a garden fence, but the best and cheapest way to grow them, either in small or large quantities, is on a wire trellis.

Work the ground deep for grape vines and plant a little deeper than they were in the nursery. Make the rows eight feet apart and plant vines six to eight feet apart in the rows. Some of the tender varieties would be benefited by laying the vine flat on the ground during winter, with a light covering of earth or litter.

B., black varieties; R., red or amber; W., white.

AMERICAN VARIETIES.

Brighton. R. A cross between Concord and Diana Hamburg. Resembles Catawba in color, size and form of bunch and berry; flesh rich, sweet and of the best quality. Ripens earlier than Delaware. Vine vigorous and very hardy. This variety has been thoroughly tested, and it

may now be truly said to be without an equal among early grapes.

Campbell's Early. B. Its strong, hardy, vigorous growth, thick, heavy, perfectly healthy foliage, very early ripening and abundant bearing of large and handsome clusters of excellent quality, combined with the most remarkable keeping and shipping qualities, form a combination unequaled by any other grape. Its period of full maturity is

AMERICAN GRAPES, Continued.

from the middle to the last of August, according to the season. Ripening with Moore's Early, but, unlike that variety, it has kept sound and perfect, both on and off the vine, for week's after Moore's Early has decayed and gone. In dessert quality it is unrivaled by any of our present list of first-early market grapes. It is, both as to cluster and berry, of large size, of a glossy black color, with a beautiful blue bloom; pulp sweet and juicy, free from foxiness; seeds small, few in number and part readily from the pulp.

Catawba. R. Well known as the great wine grape of Ohio, Kentucky, etc. Bunches large and loose; berries large, of a coppery red color, becoming purplish when well ripened; requires the most favorable soils and situations, good culture and warm seasons to mature perfectly. Last of September.

Concord. B. A large, handsome grape, ripening a week or two earlier than Isabella; very hardy and productive. Succeeds over a great extent of country, and, although not of the highest

quality, it is one of the most popular market grapes.

Delaware. R. Still holds its own as one of the finest grapes. Bunches small, compact, shouldered; berries rather small, round; skin thin, light red; flesh very juicy, without any hard pulp, with an exceedingly sweet, spicy and delicious flavor. Vine moderately vigorous, hardy and productive. Ripens two weeks before the Isabella.

Early Ohio. B. Very early, hardy and productive; strong, thrifty grower; good-sized bunch; berry smaller than Concord; adheres firmly to the stem. A profitable early market sort.

Eaton. B. Seedling of the Concord. Bunch and berries of largest size, showy and attractive; leaf large, thick and leathery; berries round, covered with heavy blue bloom; pulp tender, separating freely from the seeds.

Green Mountain. (Winchell.) W. This, the earliest white grape, has been thoroughly tested over a wide area, and has proved most satisfactory. It combines hardiness, fruitfulness, vigor, good size and excellent quality. Bunch medium to large, shouldered; berries medium; greenish white; skin, thin, tough; pulp tender, sweet, with few seeds; of excellent quality; free from foxiness, and the flavor is excellent, ranking in this respect as a grape of the first class. It is the first white grape to ripen, maturing even in the worst of seasons, a consideration which will be appreciated by all planters. Its habit of growth is vigorous and the foliage clean and healthy, while its bearing quality is all that can be desired. It is a most valuable white grape, either for the amateur or professional grower.

Hartford Prolific. B. Bunches rather large; berries large, globular; color almost black, covered with a beautiful bloom; of fair quality. Ripens three weeks before the Isabella; valuable for its abundant bearing and early maturity.

Isabella. B. An old standard sort, highly prized where it will thoroughly mature. Bunches long, large, loose; berries large, oval, sweet and musky. A good keeper.

McKinley Early. New. W. It is with intense satisfaction that we introduce a new early white grape, of the Niagara type, which bids fair to add millions to the wealth of the nation, and which will be hailed with delight by fruit growers, dealers and consumers throughout the world. Produced by Mr. Young near where the Niagara originated. It is fully ten days earlier than the Niagara, and as strong a grower, with very rich flavor. A strong, vigorous grower, with thick, healthy foliage and perfect self-fertilizing blossom. Bunches large and compact, usually shouldered; berries large, nearly round, very sweet, with no acid around the seeds, and no puckery taste in the skin; skin thin, green at first, then turning to yellow when fully ripe, very tenacious, bearing handling and shipping. It has remarkable keeping qualities for an early grape and will hang on the vine sound and perfect for six weeks or more after ripening, with no tendency to shell off or fall from the stems. As good a shipper as any of the American grapes.

Moore's Early. B. A comparatively new grape raised from seed by John B. Moore, Concord, Mass., in 1872. It is described as follows: Bunch

WYOMING GRAPE

McKinley Early

Twentieth Century Grape

A large EARLY WHITE GRAPE, as large as the Niagara and productive; strong grower, and robust foliage. It is a cross between a Niagara and Moore's Early. It was originated near where the Niagara Grape originated. It is fully ten days earlier side by side. Bunches very large and compact, very sweet with no acid around the seeds and no puckery taste in the skin. It is the coming Early Grape for Market.

CAMPBELL'S EARLY

A new grape of great promise. Should be in every yard.

AMERICAN GRAPES, Continued.

large; berry round (as large as the Wilder or Rogers' No. 4); color black, with a heavy blue bloom; quality better than the Concord; vine exceedingly hardy, has never been covered in the winter, and has been exposed to a temperature of more than 20 degrees below zero without injury to it; has been entirely exempt from mildew or disease. Its earliness makes it desirable for an early crop, and more particularly adapts it to New England and the northern portion of the United States, maturing, as it does, ten days before the Hartford and twenty days before the Concord.

Moore's Diamond. W. A vigorous grower, with dark, healthy foliage, entirely free from mildew. A prolific bearer; bunches large, handsome and compact, slightly shouldered; color delicate, greenish-white, with rich, yellow tinged when fully ripe; skin smooth and free from specks; pulp tender, juicy and nearly transparent, with very few seeds; berry about the size of Concord; quality best, rich, sprightly and sweet, resembling the foreign Chasselas. Ripens about two weeks before Concord.

Niagara. W. Occupies the same position among the white varieties as Concord among the black; the leading profitable market sort; bunch and berries large, greenish white, changing to pale yellow when fully ripe; skin thin, but tough; quality much like Concord.

Pocklington. W. Originated at Sandy Hill, N. Y. Vine very vigorous, hardy and productive; bunch and berry of good size; color a light lemon-

yellow; flesh moderately tender, sweet, with a peculiar aromatic flavor. The great vigor and hardiness of the vine, with the beauty and size of the clusters, place this in the front rank of the white grapes; ripens with Concord.

Salem. (Rogers' No. 22.) R. A strong, vigorous vine; berries large, Catawba color; thin skin; free from hard pulp, very sweet and sprightly; ripens first of September.

Wilder. (Rogers' No. 4.) B. Large and black; bunches generally shouldered; berry round and large; flesh buttery, with a somewhat fibrous center; sweet, rather sprightly.

Worden. B. This new variety is a seedling of the Concord, which it greatly resembles in appearance and flavor, but the berries are larger. The fruit is said to be better flavored and to ripen several days earlier.

Wyoming. R. Vines very hardy, healthy and robust, with thick, leathery foliage; color of berry similar to Delaware, but brighter, being one of the most beautiful of the amber or red grapes, and in size nearly double that of the Delaware; flesh tender, juicy, sweet, with a strong native aroma. Ripens before Delaware. Best early red for market.

FOREIGN VARIETIES.

For Table, Raisins, Shipping and Wine.

Black Hamburg. B. A fine tender grape, producing large, magnificent, compact bunches; berries black, very large and oblong. A great favorite everywhere, especially for table.

LUSCIOUS CLUSTERS OF LINN COUNTY GRAPES.

FOREIGN GRAPES. Continued.

Black Malvoise. B. Vine a strong grower; berries large, oblong, reddish black, with faint bloom; flesh juicy; flavor neutral. An immense bearer, an excellent table as well as a wine grape.

Black Prince. B. Bunches very long, tapering; berries medium, ovate, with thick bloom; juicy and sweet.

Chasselas de Fontainebleau. See White Sweetwater.

Chasselas Golden. R. Bunches medium, compact; berries of an amber color, sweet and watery. Ripe latter part of July.

Cornichon Black. B. Bunches long and loose; berries oval, tapering at both ends; skin thick and dark, covered with bloom; flesh firm, with pleasant flavor; a desirable variety for shipping and marketing; ripens late.

Emperor. R. Vine a strong grower and heavy bearer; bunches very large, long and loose-shouldered; berries large, oblong, deep rose-colored, resembles the Tokay, covered with light bloom, firm; skin thick; one of the most profitable late varieties to plant for market; its firmness, good keeping qualities and rich color cause it to be in great demand in Eastern markets every year. Withstands rain better than any other variety. Does well on granite soil of the foothills. Should be staked to get best results.

Feher Zagos. W. Vine a vigorous grower and immense bearer; very hardy and exceedingly productive in sandy and heavy soils; bunches large and compact; berries oval, yellowish green; good for wine or raisins.

Flame Tokay. R. Bunches very large and moderately compact; berries large; skin thick pale red, covered with bloom; flesh firm, sweet; an old standard variety, always commands a good price in the Eastern markets, and as a table grape is more extensively planted than any other variety.

Gordo Blanco. See Muscat.

Malaga. W. Vine a strong grower and immensely productive, thriving in almost any soil; bunches very large, often weighing ten pounds; compact, shouldered; berry very large, oval, yellowish green; skin thick, fleshy. One of the best shipping grapes, commanding a good price in the Eastern markets every season; makes a good quality raisin.

Mataro. B. One of the finest grapes for claret; good bearer and heavy grower. All the great French authorities agree in placing the Mataro as the finest red wine grape of the southern regions.

Mission or California. B. A well-known variety. A strong, sturdy grower, bearing large bunches of black, medium-sized berries. Valuable for wine.

Muscat of Alexandria (Gordo Blanco). W. Bunches long and loose, shouldered; berry oval, sometimes round; yellowish green; skin thick; flesh with a decided Muscat flavor. This is the variety so extensively planted for raisins. The distinctive feature between Alexandria and Gordo Blanco is supposed to be in the shape of the berries, the former being oblong and the latter round. On this coast, in most localities, the two varieties have been found to be so nearly identical, round and oblong being found on the same vine, that they are classed as Muscats, and no distinction is made by even the most experienced raisin vineyardists.

Rose of Peru. B. Vine a strong grower; bunch very large, shouldered, loose; fruit round, large, with firm and crackling flesh. A very handsome grape of fair quality, and highly esteemed as a market variety.

Seedless Sultana. W. Small, white grape, turning to amber; clusters large. It makes a fine wine grape. It is the only one we know of that is good for both raisins and wine.

Thompson's Seedless. W. This is a new variety of great merit. It is perfectly seedless, and will doubtless become the most popular sort for seedless raisins. It is very attractive, larger than the Seedless Sultana, more oblong, and in color greenish yellow; resembles the Muscat. It is of good quality, claimed to be superior to the Seedless Sultana. It dries rapidly and evenly, and, being so sweet, heavily. A strong grower and unusually productive.

Tokay. See Flame Tokay.

White Sweetwater. (Chasselas Fontainebleau.) W. Bunches large and compact; berries medium size, round; skin thin, transparent, greenish yellow; pulp tender, juicy, sweet and richly flavored. One of the best early grapes.

Binfandel. B. Bunches large, compact; berries round, dark purple. The most extensively planted grape in California for making claret.

STRAWBERRIES (*Fragaria*)

First of the small fruits comes the beautiful and wholesome strawberry, and the profit resulting from its wise cultivation will satisfy any reasonable expectation. They may be successfully grown on any soil adapted for garden purposes, or where good crops of grain or potatoes can be raised. The ground should be well prepared, thoroughly enriched and be kept mellow and free from weeds.

Admiral Dewey. New. Originated near Salem, Oregon. Larger than the Wilson; very firm; good shipper and unexcelled for canning. Color beautiful dark red, and, unlike other berries, the flesh is red to the center; no white core; shape conical, much like Clark's Seedling. Very early and

abundant bearer, continuing through the season, coming nearest to the everbearing berry of any in the vicinity. Flavor resembles that of the wild strawberry.

Clark's Seedling. (Hood River.) This new berry originated at Hood River, Oregon, where it is

STRAWBERRIES, Continued.

planted, to the exclusion of all others, for long-distance shipments. Larger than Wilson; very firm; beautiful dark red, and in quality unsurpassed.

Gold Dollar. One of the earliest berries on the market. Fruit good, medium size, and dark red all through; rather tart; fine flavor; foliage heavy, large and spreading, which protects the blooms from early frosts. Has a perfect bloom, and strong stem that hold the berries up from the ground, which helps to keep color and flavor during the early rainy season. A very heavy cropper for so early a berry.

Hood River. See Clark's Seedling.

Jessie. On rich soil and with good culture this is a valuable sort. Fairly productive; berries average large; of great beauty and high quality.

Magoon. Has proved to be a leader in hardiness, in addition to all of its other good qualities. The Magoon alone has come through the trying weather of hard winters without injury. It always brings top prices in the Portland market, and is a remarkable yielder.

New Oregon. (Improved.) One of the finest and most satisfactory strawberries ever introduced. Always looks bright, fresh and attractive. Berry is very large, firm and handsome; rich, dark red extending to the center. Flavor is rich, sweet and

delicious. For table use and canning it cannot be equaled. The "Oregon" ripens very early and continues in bearing until late in the season.

Oregon Everbearing. A vigorous grower, and adapted to all soils and locations. On the Pacific Coast it is a constant and abundant bearer of large, handsome berries of good quality, from early May until killed by frost.

Wilson's Albany. Medium to large, dark red; very hardy, vigorous and productive. The most widely known and universally successful strawberry.

STRAWBERRIES COMPARED TO SILVER DOLLAR.

RASPBERRIES (*Rubus*)

Coming immediately after Strawberries, when there is a dearth of other fresh fruits, Raspberries are equally desirable for planting in the garden for home use and in the field for market. They are easily cultivated. Beds seldom require renewing. Their season of ripening is long. The fruit bears transportation, and, aside from the demand for its immediate consumption, it brings highly remunerative prices for drying and canning.

RED AND YELLOW VARIETIES.

Brandywine. (Susqueco.) Large, bright red; very firm. Valuable for market on account of its fine shipping qualities.

Cuthbert. (The Queen of the Market.) Large, conical; deep, rich crimson; excellent quality. A vigorous grower, entirely hardy and immensely productive. "I regard it as the best raspberry for general culture."—Charles Downing. "Now regarded by careful and experienced horticulturists as the best raspberry in existence for general cultivation. I have it in a specimen bed with 25 other kinds, and it surpasses all others."—E. P. Roe.

Golden Queen. This variety is a seedling of the Cuthbert, but the color of the fruit is a rich golden yellow. The flavor is of the highest quality, pronounced by some superior to the old Brinkle's Orange, the finest flavored of all the raspberries. Equal to the Cuthbert in size; immensely productive. A very strong grower and hardy enough even for extreme northern latitudes, having stood uninjured even when the Cuthbert suffered. The desire

GOLDEN QUEEN RASPBERRY.

RASPBERRIES, Continued.

for a yellow raspberry of high quality, combined with vigorous growth and perfect hardiness, is believed to be fully met in this variety.

Herbert. A large early red raspberry, originated at Ottawa. In hardiness it easily takes first place, standing a lower temperature than any other kind. The cane is very strong and vigorous, slightly prickly. Fruit bright red, somewhat oblong, larger than Cuthbert or Loudon. Flavor very sweet and juicy, one of the very best for table use. Enormously productive. Season five to six days before Cuthbert. Holds its size well to end.

Japanese. (Wineberry.) Ornamental both in fruit and plant. Canes covered with purplish red hairs; leaves dark green, silvery gray beneath. Fruit in large clusters, and each berry at first tightly enveloped by the large calyx, forming a sort of bur, which is covered with purplish red hairs. These gradually open and turn back, exposing beautiful wine-colored fruit of medium size; brisk sub-acid, retaining flavor when cooked. Highly esteemed for canning, preserves, jellies.

Loudon. The best red midsummer berry. Its points of superiority are vigor of growth, large fruit, beautiful rich dark crimson color, good quality and marvelous productiveness and hardiness, enduring winters without protection and without injury to the very tips. It stands shipping the best of any variety, and will remain on bushes the longest without injury.

Marlboro. The largest early red raspberry, ripening only a few days after Hansell. Beautiful bright scarlet; of good but not high quality. Hardy and productive.

Miller's. Bright red color, which it holds after picking. Stout, healthy, vigorous grower; canes not so tall as Cuthbert, but well adapted to carrying their immense load of berries. Berries large and hold their size to the end of season; round, bright red; cores small, do not crumble; firmest and best shipper; rich fruity flavor. Commences to ripen with the earliest. We can highly recommend this for either home or market.

Queen of the Market. See Cuthbert.

Susqueco. See Brandywine.

Turner. (Southern.) Very desirable as an early sort for the home garden. Berries good size; bright crimson; sweet.

PURPLE CAPS.

Cardinal. New. This wonderful berry is a surprise in the fullness of its merits — its great growth, its extreme hardiness and the exceeding productiveness of its choice red, rich, pure flavored berries. It will pay. It is not a novelty, but a variety of great merit. The new Cardinal is claimed to grow ten feet high and bear in proportion. Leading horticulturists who have seen this berry say that it is one of the wonders of the century, so far exceeding all others as to put it entirely beyond comparison. Judge Wellhouse, president of the Kansas State Horticultural Society, said at a meeting of the society, that the introduction of the Cardinal raspberry would add millions to the wealth of the farmers of the country, because of its inherent great vigor and exceeding productiveness.

This most promising raspberry is another natural product of Kansas. It is not a hybrid, but a result where nature combined its best in one

MARLBORO RASPBERRY

THE NEW CARDINAL RASPBERRY

This wonderful berry is a surprise in the fullness of its merits—its great growth, extreme hardiness, and the exceeding productiveness of its choice red, rich, pure flavored berries. It will thrive where others fail; it will pay; it is not a novelty, but a variety of great merit.

HERBERT

A large early red Raspberry, originated at Ottawa. Very productive and hardy. Especially adapted for northern districts. A very strong grower and good cropper. Fruit large to very large and of good quality.

RASPBERRIES—Purple Caps, Continued.

little seed that produced the first Cardinal raspberry plant. It also germinated that seed in its own way, not under the pet care of an expert gardener who could control the temperature, moisture, sunshine and weeds, but came up in a neglected clump of Gregg raspberry bushes, and there showed its makeup by growing far above them and producing its great crop of red berries in contrast to the few Greggs beneath them. When first seen by the owner, the Greggs were dug and the Cardinals had the room.

Columbian. An improvement on Shaffer's, which it resembles, but the berry is finer, dark red, adheres to the bunch much longer, and retains its shape better, both on the market and for canning. Bush a stronger grower, attaining a very large size. One of the hardiest and wonderfully prolific. Unexcelled for productiveness, and stands at the head for canning, making jam, jelly, etc.

Haymaker. New. A purple cap, not so dark as Columbian or Shaffer, and much larger and firmer than either of those varieties, never crumbles and stands up well in shipping. Sample crates have been shipped to distant points with entire satisfaction. It is a berry to grow for either home use or market. The originator has found it the most profitable berry ever raised for market, and has never yet been able to supply the local demand. So much of a favorite has the Haymaker become that local growers have said that it ruined the sale of other varieties. Very popular as a canning berry. Many orders for this berry are placed a year in advance. One writer located near a canning factory has thus written: "If any one about here had several acres of it in bearing, he could dispose of the entire crop to good advantage to the canning factory."

Schaeffer Colossal. (Puthill.) A strong growing variety, producing berries of great size, excellent to dry and unsurpassed for canning; flavor peculiar and fine.

BLACKCAPS.

Cumberland. In size the fruit is simply enor-

mous, far surpassing any other sort. The berries run from $\frac{3}{4}$ to 15-16 of an inch in diameter, and are of such handsome appearance that the fruit has often sold for 10 cents per quart when other varieties were selling for from 5 to 7 cents per quart. The quality is very similar and fully equal to Gregg. In spite of its unusually large size, the fruit is possessed of great firmness and is thus well adapted for standing long shipments. Mid-season. The bush is exceedingly health and vigorous, throwing up stout, stock canes, well adapted for supporting their loads of large fruit.

Gregg. Of good size; fine quality; very productive and hardy. It takes the same position among blackcaps as Cuthberts do among the red sort. No one can afford to be without it. The standard blackcap by which others are judged.

Kansas. Strong, vigorous grower, standing extremes of drouth and cold, and bearing immense crops. Early, ripening just after Palmer. Berries size of Gregg; of better color; jet black, and almost free from bloom; firm, of best quality; presents a handsome appearance and brings highest price in market.

Mammoth Cluster. Large in size; next to Gregg. Canes of strong growth and very prolific. Berries large and of fine quality.

Munger. The fruit of Munger is black, and resembles Gregg very much. It is a better flavored berry than Gregg, tougher in texture, and therefore a better shipper. In size it excels Gregg by almost 25 per cent, being extra fine for canning and evaporating. In seasons when most others are dry and seedy, Munger ripens up sweet and juicy, and readily brings an advance of 50 cents per bushel over other kinds. The canes, too, resemble Gregg, are free from disease; upright in growth and extremely hardy.

Ohio. A very strong growing, hardy sort; fruit nearly as large as Mammoth Cluster; more productive than any other variety, and one of the most, if not the most, valuable sort for market.

Souhegan. (Tyler.) A new variety, commended very highly as a market sort by those who have grown it. The bush is said to be enormously productive, perfectly hardy and free from disease.

BLACKBERRIES (*Rubus*, or *Rubus villosus*)

These require the same kind of soil and treatment as raspberries, except that they should be planted in rows eight feet wide and four feet apart in rows. For self-sustaining bushes clip off the points of the growing canes as soon as the plants are about four feet high, and repeat the operation several times until they assume the form of a bush. Mulching is of great advantage to both raspberries and blackberries.

Early Harvest. A variety of great promise, being exceedingly early in time of ripening and is reliable. The canes are strong and upright in growth, branching stout and vigorously. Hardier than Kittatinny or Lawton; an enormous bearer. Berries sweet and of the highest quality, though not so large as some varieties.

Erie. Said to be the only large, productive, absolutely hardy blackberry yet introduced. Originated in northern Ohio. Free from rust and all

other diseases, and wonderfully productive (exceeding even the prolific Lawton), bending the robust canes to the ground with the weight of fruit. Fruit very large, excellent quality, handsome and firm, and ripens exceedingly early; fruit uniform both in size and shape.

Eldorado. A new seedling from Preble county, Ohio. The vines are very vigorous and hardy, enduring the winters of the far northwest without injury, and their yield is enormous. The ber-

BLACKBERRIES, Continued.

ries are large, jet-black, borne in large clusters, and ripen well together. They are very sweet, melting and pleasing to the taste, have no hard core, and keep eight or ten days after packing with quality unimpaired, combining nearly all the good qualities found in a blackberry.

Evergreen. Introduced from Oregon; origin unknown; beautiful cut-leaved foliage, which it retains during the winter; berries large, black, sweet, rich and delicious. It continues to ripen from July to November, which makes it one of the best berries for family use; an excellent trellis and arbor plant.

Himalaya Giant. New. Vigorous grower; canes sometimes reaching 30 to 40 feet; must be trained on a trellis. Fruit large, black; very abundant bearer and excellent shipper; shape more round than Kittatinny or Lawton, more juicy and smaller seed. Mr. Brodie, superintendent Experimental Station, Puyallup, Wash., states that it has yielded at the rate of 400 crates (9,600 quarts)

per acre, and thinks it might be made to yield 600 crates per acre on proper soil.

Iceberg. This wonderful berry is the origination of the far famed Luther Burbank, whose remarkable success in the production of valuable new plants has given him the title of the "Wizard of Horticulture." The fruit is white, transparent; the seeds, which are unusually small, can be seen in the ripe berries. The clusters are larger than those of Lawton; individual berries as large but earlier, sweeter and more melting than Lawton. Like all blackberries the Iceberg is slightly bitter when not thoroughly ripe.

Kittatinny. Large, black, sweet; soft when black; very hardy; ripens up gradually like Lawton. One of the best except in northern sections.

Lawton. (New Rochelle.) The well known market variety.

Mammoth. New. Supposed to be a cross between the wild blackberry of California and the Crandall's Early. Grows entirely unlike any other blackberry plant known. It is a rampant grower, trailing on the ground and under favorable conditions will grow 20 feet in a season. The canes are large, of deep red color when exposed to the sun; the foliage is large, thick, of a deep green color. Enormously productive and exceedingly early, ripening three weeks before other cultivated kinds. Fruit enormous, specimens measuring 2½ inches long; seed small, soft and abundant; core small, soft. In size and flavor said to surpass all other varieties of blackberries. We offer it to the public only after a most thorough test, covering a period of several years.

Mercereau. New. This early mammoth ironclad blackberry is by far the most valuable variety that has ever appeared since the advent of the Wilson, over thirty years ago. It originated in northwestern New York, where the mercury falls from 15 to 25 degrees below zero and where it has stood in open field culture for many years without the slightest protection, never being injured in the least. It has never had a leaf affected with orange rust, blight or other disease or produced a double or "rose" blossom.

In hardiness it is doubtless without an equal among blackberries, having endured a temperature of 20 degrees below zero without being injured in the least, even at the tips, although Snyder and Taylor's Prolific were much damaged. Just how low a temperature it will withstand uninjured is not known. The berries are brilliant, sparkling black throughout, and what adds great value to it as a market berry, it remains black under all conditions and circumstances, never turning red when gathered in hot, muggy weather, after the manner of Snyder, Lawton, Erie and many other varieties. In quality it is exceptionally sweet, rich, melting and luscious, being without core, the seedy character of Snyder and most other sorts is noticeably absent. As a shipper and keeper it is unsurpassed, remaining firm with-

HIMALAYA GIANT

BLACKBERRIES, Continued.

out bleeding in handling.

The canes are of exceedingly strong, upright habit, attaining upon fairly good soil a height of eight feet if permitted to grow unchecked, and are so stout as to always remain erect; foliage large, deep green, abundant and entirely free from rust or blight. The yield is simply enormous, producing double the quantity of fruit per acre of the Snyder, Kittatinny or Taylor's Prolific and affording heavy pickings from the first until the crop is all matured. Its season is early to mid-summer, ripening with the Snyder, in advance of the Kittatinny, Lawton, Taylor's Prolific or Erie, but not so early as Early Harvest or the Wilson.

Rathbun. Origin, western New York. A strong, erect grower with strong stem, branching freely;

will root from tip of branches like a raspberry. Hardy, having endured 20 degrees below zero and produced a good crop. Forms a neat, compact bush four to five feet high, producing its immense fruit abundantly. Fruit is sweet and luscious without hard core, of extra high flavor, jet-black, small seeds, firm enough to ship and handle well. Very large size, resembling the Wilson and fully equal to that grand variety, with the addition of hardiness.

Snyder. Extremely hardy, enormously productive; medium size, no hard, sour core; sweet and juicy. The leading variety where hardiness is the consideration. Ripens early.

Ward. New. It was found growing in the fence-row adjoining a plantation of Wilson's, on the Michael Ward farm in Mammoth county, New

The
LOGAN
HYBRID BERRY.

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PHILADELPHIA

BLACKBERRIES, Continued.

Jersey. Its fine fruit, healthy canes and very prolific bearing qualities attracted the attention of the owners. A few plants were removed to a position where it could be cultivated and planting extended yearly, as fast as the sucker plants allowed, where it has been fruiting for several years, canes never winter-killing, bearing a crop every year and the fruit coming into competition in the market with all other varieties, and always commanding the highest price and producing twice as many bushels per acre as the Wilson alongside (and as many bushels per acre as the Wilson when in its prime.) The Ward blackberry is undoubtedly a seedling of the Kittatinny, which it closely resembles, having all the good qualities of the parent with none of its defects. The Ward is a very strong grower, perfectly hardy (in New Jersey), the fruit black throughout and prolific.

BLACKBERRY-RASPBERRY (HYBRIDS)

Logan Berry. (Raspberry-Blackberry.) Judge J. H. Logan, of Santa Cruz, Cal., is the discoverer of this wonderful fruit. It is thought to be raised from a cross of the Auginbaugh blackberry and Red Antwerp raspberry. The vine grows entirely unlike the blackberry or raspberry; it trails upon the ground like a dewberry. The canes are very large, without the thorns of the blackberry, but have very fine spines like those found on the raspberry. Leaves resemble those of the raspberry more than of the blackberry, are of a deep green color, coarse and thick. An exceedingly strong grower and an enormous bearer. The fruit is as large as the largest sized blackberry, of the same form and shape, a dark bright red color when fully ripe, and combines the flower of both the raspberry and the blackberry, having a mild and very pleasant vinous flavor not found in any other fruit. Raw, it is excellent for the table, as also stewed, and for jelly and jam it is without an equal. Fruit ripens early, the bulk being gone before the blackberries or raspberries become plentiful. It is firm and a fine shipper.

The Phenomenal Berry. One of the most valuable of all Luther Burbank's novelties. It is the result of a cross between the Improved California Dewberry and the Cuthbert Raspberry. Mr. Burbank describes it as larger than the largest berry ever before known, bright crimson raspberry color, productive as could be desired and the most delicious of all berries for canning and drying. The berries grow in clusters, each having five to ten or more, and individual berries often measure 3 inches around one way by 4 the other and weigh one quarter ounce each. Even larger ones were weighed and measured last summer and when exhibited provoked the question: "Will they be sold by the dozen?"

DEWBERRIES (*Rubus Canadenis*)

Austin Improved. New. From Texas; has been tested several years. We note the following good points. Surpasses in productiveness anything ever seen in blackberry or dewberry. It is of a glossy, shining black color; its very appearance has a tempting effect on those who see it. Its flavor is most excellent. When fully ripe it will melt in your mouth most pleasantly. Has the hardy character common to the dewberry family.

Lucretia. One of the low-growing, trailing blackberries; in size and quality it equals any of the tallgrowing sorts. Perfectly hardy, healthy and remarkably productive, with large, showy flowers. The fruit, which ripens early, is often 1½ inches long by 1 inch in diameter; soft, sweet and luscious throughout, with no hard core, ripe before late raspberries are gone. Should be mulched to keep berries from the ground. We highly recommend this variety.

Premo. A new extra-early Dewberry; very large, jet-black, firm and good; ripens its crop very fast. The special points in this dewberry are: Ripens 7 to 10 days earlier than Lucretia, ripening the crop so fast that it is nearly all gone at the second picking of the Lucretia; better and firmer quality; foliage darker green and more healthy than Lucretia; not inclined to burn when the hot sun comes.

CURRANTS (*Rubus*)

Ripens just before raspberries are gone, and continuing in prime order for several weeks. There is no more useful fruit than the currant, and it is among the easiest to cultivate.

Plant in very fertile soil made so by liberal manuring. The tops should be cut back so only three or four branches will grow the first season. Thin out the old wood early, opening the bush considerably.

At the first appearance of currant worms they are easily destroyed by sprinkling with a can of water in which powdered white helio-bore is stirred (one ounce to three gal-

THE PERFECTION CURRANT

FAC-SIMILE OF ORIGINATOR'S LABEL, WHICH IS PLACED ON EACH PLANT

AWARDED THE
BARRY MEDAL.

The Fifty Dollar Gold Medal
of the
Western New York
Horticultural Society,
July, 1901,
after three years trial.

The first fruit to receive
this grand prize. Also re-
ceived **HIGHEST AWARD**
given any new fruit at the
PAN-AMERICAN EXPOSITION.

VREDENBURG & CO INC
ROCHESTER N. Y.

Fac Simile
Gold Medal
Louisiana
Purchase
Exposition

This grand new fruit was awarded the only **GOLD MEDAL** awarded to a Currant
at the Louisiana Purchase Exposition, St. Louis, 1904

THE PERFECTION CURRANT

Was originated by Charles G. Hooker, of Rochester, N. Y., by crossing the Fay's Prolific with the White Grape currant.

After a thorough trial by the originator, Perfection proved so satisfactory and superior in many respects, that it was decided to enter it for the \$50 Gold Barry Medal of the Western N. Y. Horticultural Society, which medal it received in 1901, this currant being the first fruit to capture this great prize.

Fac Simile

of

Barry

Medal

The \$50 Gold Medal of the Western N. Y. Horticultural Society

Perfection was thoroughly tested at the N. Y. State Agricultural Experiment Station at Geneva, N. Y., in competition with 60 varieties, and came out at the head on its general merits, as stated by Prof. S. A. Beach.

The Perfection also received in 1901, the highest award given any new fruit at the Pan-American Exposition.

Fac Simile

Pan-Am.

Medal

DESCRIPTION

The Color is a beautiful bright red. **Size** as large or larger than the Fay, the clusters averaging longer. The size of berry is well maintained to the end of the bunch. The Perfection has a long stem from point of attachment to the bush to the first berry, making it easy to pick without crushing any of the berries.

Productiveness. The Perfection is a great bearer, resembling its parent the White Grape in this respect, superior to the Fay or any other large sort with which we are acquainted.

The Season of Ripening is about the same as that of the Cherry or Fay.

Quality. Rich, mild, sub-acid, plenty of pulp with few seeds. Less acid and of better quality than any other large currant in cultivation. The White Grape has always been considered one of the best varieties for table use, and the effect of this strain is plainly seen in the very fine quality of Perfection.

Vigor and Healthfulness. In habit of growth it is intermediate between its parents Fay and White Grape, with remarkably large healthy foliage.

Albany Nurseries, Albany, Oregon

"THE OLD RELIABLE NURSERY."

**This New
Gooseberry
is a
Wonder**

Victoria Gooseberry

REGISTERED
-OF-LAW CO.-
REGISTERED

It is the strongest grower, the greatest cropper, the finest flavored of Red Gooseberries. It is superior to Industry in its growth, yielding larger crops of its delicious, high flavored fruit, which is superb in quality. Ripens ahead of Industry. We bespeak for it a great success.

CURRANTS, Continued.

lons.) Plant in rows five feet apart and three feet in rows.

Black Champion. Very productive; large bunch and berry; excellent quality; strong grower. The leading, well-tested black sort.

Black Naples. Very large; black; rich; tender, and excellent for jellies and wine. Very productive.

Cherry. Large; deep red; rather acid; bunches short; plants erect, stout, vigorous and productive.

Fay's Prolific. Originated in Chautauqua county, N. Y. A cross between Cherry and Victoria; of large size fine flavor and extremely productive.

La Versailles. Very large; red, bunch long; of great beauty; good quality. One of the finest and best. Should be in every collection. Productive.

Lee's Prolific Black. A new English variety. The fruit is large and of superior quality; the bush is a vigorous grower and enormously productive.

North Star. The strongest grower among the red varieties; should be given plenty of room and ground kept well enriched; bunches average 4 inches in length and are freely produced. Combines extreme hardiness, vigorous growth, extra quality and great productiveness.

Perfection. New. This grand fruit was originated by Charles G. Hooker, of Rochester, N. Y., by crossing the Fay's Prolific with the Wine Grape Currant, with the view of combining the large size and color of the Fay with the good quality and productiveness of the White Grape. From quite a number of plants of this cross, the Perfection was selected as the best, and after a thorough trial by the originator, proved so satisfactory and superior in many respects, combining, as it does, the good qualities of both parents, that it was decided to enter it for the \$50 Barry Gold Medal of the Western New York Horticultural Society. The Perfection currant was the fruit first to receive the Barry Medal. It also received the highest award given to any fruit at the Pan-American Exposition. Plants were also sent to the New York State Agricultural Experiment Station, at Geneva, N. Y., for testing there, in competition with about 60 varieties in

their trial block, including all the best varieties in cultivation. The result of the trial for four years at the station has been exceedingly satisfactory, Perfection coming out at the head of all introduced varieties on its general merits. The color is a beautiful bright red; size as large or larger than the Fay, the clusters averaging longer. The size of the berry is well maintained to the end of the bunch. The Perfection has a long stem, from point of attachment to the bush to the first berry, making it easy to pick without crushing the fruit. The Perfection is a great bearer, resembling its parent, the White Grape, in this respect, superior to the Fay or any other large sort with which we are acquainted. On account of this great productiveness the plants should be kept well cultivated and fertilized, as should all heavy bearers. Under these conditions they will regularly produce heavy crops of large fruit of the very best quality. The season of ripening is about the same as that of the Cherry or Fay. Rich, mild, subacid, plenty of pulp with few seeds. Less acid and of better quality than any other large currant in cultivation. The White Grape has always been considered one of the very best varieties for table use, and the effect of this strain is plainly seen in the very fine quality of Perfection. In habit of growth it is intermediate between its parents Fay and White Grape, with remarkably large, healthy foliage.

Pomona. While not the largest, is of good size. It is a beautiful, clear bright, almost transparent red; has but a few small seeds; easily picked; hangs a long time after ripe, and is one of the best to hold up in shipping or on the market. A vigorous grower, healthy and hardy; the most productive; one of the sweetest and best in quality; continues longest in profitable bearing; retains its foliage; hangs on bush in good condition the longest; comes into bearing early; is easily and cheaply picked. Holds an unparallel record for actual acreage yield in ordinary field culture.

Victoria. A splendid variety, ripening two or three weeks later than the others. Bunches extremely long; berries of medium size, brilliant red.

White Grape. Very large; yellowish white, sweet or very mild acid; excellent quality and valuable for the table. The finest of the white sorts. Very distinct from White Dutch, having a low, spreading habit and dark green foliage. Very productive.

GOOSEBERRIES (*Ribes*)

Gooseberries thrive well on a variety of soils if well drained and fertile. The cultivation should be thorough early in the season. European varieties are of large size and various colored. The green fruit is sent to the early markets and is profitable. The best American gooseberries are superior to European sorts in productiveness, hardiness, quality and freedom from mildew. The curse of the European varieties and their seedlings is mildew. Mildew may be kept under by frequently spraying with potassium sulphide. Bordeaux mixture is not recommended because it spots the fruit. After the fruit is gathered the Bordeaux mixture may be used against the leaf blight.

Crown Bob. Very large; thin skin; hairy; bright red; flavor very good.

Downing. Originated at Newburg, N. Y. Fruit much larger than Houghton; roundish; light green,

GOOSEBERRIES, Continued.

with distinct veins; skin smooth, flesh soft; juicy and very fine-flavored. Vigorous and productive.

Houghton's Seedling. Vigorous grower, abundant bearer; fruit of medium size; pale red, sweet and juicy. Free from mildew.

Industry. This is said to be the best English Gooseberry yet introduced. It is of vigorous, upright growth, and a great cropper. The berries are of the largest size, dark red, hairy, rich and agreeable. Mildews in Willamette Valley.

Josselyn. (Red Jacket.) An American seedling of large size; smooth, prolific and hardy; of best quality. Has been well tested over a wide extent of territory by the side of all the leading varieties, and so far the freest from mildew, both in leaf and fruit, of them all. A wonderful cropper, with bright, clean, healthy foliage. Originated by Professor Wm. Saunders, of Central Experimental Farm, Ottawa, Canada, and named

Red Jacket in memory of an old Indian chief, the introducer not being aware at the time, of the existence of another gooseberry (English) named "Red Jacket." The committee on Nomenclature of the Western New York Horticultural Society, at Rochester, Jan. 25, 1899, to hereafter prevent confusion in varieties, renamed the American Red Jacket Josselyn, in honor of the introducer.

Oregon Champion. A new variety introduced from Oregon, where it originated; fruit large, round; an immense bearer, and entirely free from mildew. One of the best yet introduced.

Victoria. New. The best gooseberry in England and the champion berry for the London market. Strong grower, making shoots 3 feet 9 inches in a season. Berries larger than Crown Bob or Lancashire Lad, pale red, of excellent flavor. A late bloomer and a sure cropper; hardy. A 3-year-old bush, bearing 28½ pounds of fine, large fruit, was shown in 1900. All around, it seems well suited for market purposes here.

ASPARAGUS

To make a good asparagus bed the plants may be set in the Fall or early Spring. Prepare a place of fine loamy soil, to which has been added a liberal dressing of good manure. Select 2-year or strong 1-year plants, and for a garden set in rows 18 to 20 inches apart, with plants 10 to 12 inches in the row. The roots should be spread and planted so that the crowns when covered shall be 3 inches below the surface of the ground. If planted in the Fall the whole bed should be covered before Winter sets in with two or three inches of stable manure, which may be lightly forked in between the rows as soon as the ground opens in the Spring.

Conover's Colossal. This variety is much superior in size and quality to any of the old common varieties, being remarkably tender and of very fine flavor.

Columbian Mammoth White. Produce shoots which are white and remain so as long as fit for use. In addition to the marvelous advantage of

its white color it is even more robust and vigorous in habit, and grows larger shoots and fully as many of them, as the Conover's Colossal. Market-gardeners, growers for canners and amateurs, should give this great acquisition a thorough trial.

Palmetto. A very early variety. Even, regular size; of excellent quality.

RHUBARB or PIE PLANT

This deserves to be ranked among the best early products of the garden. It affords the earliest material for fine pies and fresh table sauce, continues long in use and is valuable for canning. Make the ground rich and deep and thus secure a more tender growth. A deep, rich soil is indispensable to secure large, heavy stalks. Plant in rows four feet apart, with the plants three feet distant. See that the crowns are about an inch below the surface. Apply annually in the Fall top dressing with stable manure and fork under in the Spring.

Australian Crimson Winter. Introduced by Luther Burbank: "Fully six months earlier than any other Rhubarb. The stalk is of medium size, well-grown ones averaging 12 to 18 inches in length and about ¾ to 1 inch in diameter; they are a pale, greenish crimson color, turning, when cooked, to a light clear crimson, and of very best quality. The plants are somewhat more inclined to blossom than the other kinds, which is easily remedied by topping. Crimson Winter starts to grow vigorously by October and continues to produce stalks continuously until after the common varieties make their first appearance. If kept moist, will produce

stalks abundantly at any season in warmer districts."

Dodge Prolific. A valuable new variety; seedling from the Myatt's Linnaeus. Ripens between the Victoria and Linnaeus. Very large, stalks often 3 to 4 feet high; very tender. The best variety that has been introduced, unless it is the Australia Crimson Winter, which stands in a class by itself.

Linnaeus. Large, early, tender and fine. The very best of the old varieties.

Victoria. Very large and valuable for market. Early.

MULBERRIES (*Morus*)

The Mulberry is valuable as an ornamental shade tree, and the fruit is much liked in many sections. Plant in deep, rich, sandy loam. The tree requires little or no pruning, and is of easy culture.

Downing's Everbearing. The beauty of this as a lawn or a street tree is quite enough to commend it, but, in addition, it yields an abundant supply of its large, refreshing berries for about three months. Henry Ward Beecher says: "I regard it as an indispensable addition to every fruit garden; and I speak what I think when I say I had rather have one tree of Downing's Everbearing Mulberries than a bed of strawberries."

New American. Equal to Downing's in all respects, and a much hardier tree. Vigorous grower; very productive; the best variety for fruit. Ripe from middle of June to middle of September.

Noir de Spain. A new everbearing Mulberry of large size, larger than the Lawton blackberry, which it greatly resembles. Color black; flavor tart, like a blackberry, and not the insipid sweet of most of the *Morus* family, and preferred by many

to a blackberry. The tree is a sure bearer, strong grower, very hardy and has a tendency to weep, and could almost be classed as a weeping tree, making the fruit easily gathered. A very desirable ornamental tree, as well as one of the hardiest and most abundant bearers. By far the most desirable of the mulberries.

Russian. (*Morus Tatarica alba*.) A very hardy, rapid-growing timber tree of great value, especially of the West. Introduced by the Menonites. Foliage abundant and said to be very desirable in the culture of silkworms. Fruit good size and produced in great abundance.

White. (*M. alba*.) This has both white and black-fruited trees. It is also known under the names Moretti, Italca, etc. It forms a large, spreading tree, and, in addition to its fruit, its foliage makes good food for silkworms.

NUT TREES

The past few years has witnessed a remarkable development in the planting of nut-bearing trees. Probably no branch of tree cultivation pays larger profits or is as well assured of a profitable market for all products. The immense importation of foreign nuts every year gives some idea of the market to be supplied. But few farms contain land that, if planted to nut-bearing trees, would not pay better than anything else to which it could be devoted. The nuts in many cases pay better than farm crops or fruits, while most kinds are making a growth of valuable timber that will of itself pay a large percent on the investment. Our native nut-bearing trees are admirably adapted for planting in streets, farm lanes, pastures, etc., for shade, ornament and profitable returns.

ALMONDS. (*Prunus; Amygdalus*)

The Almond requires a light, warm soil.

Drake's Seedling. Originated with Mr. Drake, of Suisun, California. Of the Languedoc class. Bears abundantly and regularly where the Languedoc is a total failure.

Hard-shell. A fine hardy variety, with large, plump kernel. The tree is very ornamental when in bloom.

I. X. L. Large, generally single kernels; hulls easily; soft shell. Tree a strong, upright grower and bears heavily and regularly.

Jordan. Introduced from Spain about 1893. Origin of name, "Jordan," unknown. Nut very long, narrow, but very plump, with hard, smooth shell, truncated base and somewhat bent at apex, edge sharp and knife-like. Fruit thin-fleshed and covered with a heavy pubescence; kernel nearly fills the entire cavity and is covered with a most delicate papery skin, much thinner than on any other Almond, which is one of its most valuable qualities. In flavor and texture the flesh far surpasses in delicacy any other variety. The most valuable addition to the nut list that has been made for many years.

Nonpareil. Large, full kernel, thin shell. Tree of a weeping habit and a strong grower. One of the best varieties.

Ne Plus Ultra. Similar to above, but of different habit of growth.

Peerless. Originated near Davisville, California. A sure and heavy bearer; shell harder than I. X. L. and preferred by some to that excellent variety; single large kernel.

CHESTNUTS. (*Castanea*.)

American Sweet. (*Castanea Americana*.) The fruit of this variety is smaller than the European kinds, but very sweet and well flavored; highly esteemed in the eastern states.

Italian or Spanish. (*C. sativa* or *C. vesca*.) A highly ornamental tree of free growth, esteemed alike for its beautiful foliage and valuable timber. The nut is sweet and generally large, but, as the tree being raised from seed, the fruit often varies in size and quality.

Japan Mammoth. (*C. crenata*) A monstrous fruit larger than the European; and flavored like the American Sweet. Tree bears when quite young.

FILBERTS (*Corylus*.)

Barcelona. A magnificent variety of Spanish origin; nut large, round, first quality. Very

productive; trained as a low standard tree or as a bush.

Du Chilli. The largest filbert fruited on the Pacific Coast. Elongated oval, very broad; often more than an inch long by three-quarters of an inch wide. Nuts uniformly large, well formed, full fleshed and sweet.

English. This is of the easiest culture, growing 6 to 10 feet high, entirely hardy and one of the most profitable and satisfactory nuts to grow, succeeding well on almost all soils, bearing early and abundantly. Nut nearly round, rich and of excellent flavor. Admired by all for dessert. The Kentish Cob and Red Hazel are the two leading varieties.

Kentish Cob. Not very large, oblong, and somewhat compressed; shell pretty thick, of a brown color; kernel full and rich, and great bearer. The best of all the nuts.

Purple-leaved. (*C. Avellana*, var. *atropurpurea purpurea*.) A very conspicuous shrub, with large, dark purple leaves. Soon after the leaves expand they are almost black, but later on fade to a light purple. Valuable for planting in groups of large shrubs to secure color effect. Distinct and fine.

Red Hazel. Medium size; shell rather thick, kernel crimsonskin, with a peculiar excellent flavor.

HICKORY (*Carya*, or *Hicoria Pecan*)

Shellbark. (*Carya alba*.) To many, no other nut that grows, either foreign or native, is superior to this; in quality it possesses a peculiar rich nutty flavor, excelled by none. The tree is of a sturdy, lofty growth. The wood, on account of its great strength and elasticity, is highly prized for making agricultural implements and is unsurpassed for fuel.

WALNUTS (*Juglans*.)

Black American. (*Juglans nigra*.) This species of Walnut is a common and stately forest tree in the middle and western states. Makes a fine shade and ornamental tree. Produces large crops of rich and oily nuts.

Butternut, White Walnut. (*J. cinerea*.) A native of the eastern states. The cultivation of this sort, so highly prized in the eastern states, has been neglected here. It is a beautiful-growing tree, and yields large nuts with a rough, hard shell, within which are sweet, rich, white, oily kernels, of marked, though most delicate flavor. This variety does well in the coast countries and in well-watered regions of the foothills; not suited to the dry, hot valleys.

WALNUTS, continued

California Black Walnut. (*J. California*.) This species of Walnut is indigenous to California. The fruit is spherical, the nut hard but smooth, and not furrowed like the eastern black Walnut; the kernel is rich and oily. This Walnut is of a rapid growth, spreading out more than the eastern kind, and bears sooner.

PERSIAN WALNUTS. (*Juglans regia*)

Also known as English, Madeira and French Walnut

We would call special attention of the public to the following most valuable varieties of Walnuts. The varieties we recommend to plant for market are well tested varieties that cannot be surpassed for beauty, size of Walnut, quality of meat or hardness of tree. Commercial Walnut culture is concerned with *Juglans regia*, commonly known as English Walnut, but in reality the Persian, and sometimes known as the Maderia and French Walnut, as it was imported into England from France. It is, however, a native of Persia or Southern Asia.

FRENCH VARIETIES OF THE PERSIAN

These we grow from nuts secured in France, excepting the Franquette (see our 16-page Walnut Book), from grafted first-generation trees, thus making ours the second-generation tree. These should not be confused, or prices compared, with the common, tender varieties grown by most nurserymen as "English Walnuts," which are not hardy enough for Oregon or the northern states, and are very often barren, caused by the staminate (or male) blossom or catkin being out, while the pistillate (or female) blossom is yet in a dormant state; so that, when the latter are out, there are no male catkins to fertilize the nuts, which drop off after attaining about the size of a pea. Thousands of good healthy trees can be seen both in California and Oregon of this class which are worthless, except for shade.

Grafted Walnuts.—We are prepared to furnish grafted trees on American and California Black, also on English roots. Franquettes will be grafted directly from the Vrooman orchard and guaranteed to be first generation. Other French varieties are grown from best French types of their kind that we have been able to secure in France.

Chaberte. An old and most valuable variety; late in budding out. The nut is well-shaped, roundish oval, and of fair size, though it is not what is called a large nut; the kernel is of extra fine quality; a good bearer. The Chaberte was originated over a century ago by a man named Chaberte, hence its name.

Vrooman Franquette. An admirable and distinctive form of the Franquette Walnut having important and individual characteristics not found in the ordinary Franquette. It is especially adapted to the northwest, and is hardy, prolific and blight resisting to a marked degree. It is also an early bearer, which further commends it. We will gladly send special descriptive literature concerning the Vrooman Franquette, on request.

Franquette. Possesses distinctive character-

The Vrooman Franquette is generally recognized as the Highest Grade and Most Desirable Walnut on the Market today.

WALNUTS—French Varieties, continued

istics. The tree is very hardy, withstanding the cold winters of eastern France, where it originated. It is a clean, vigorous grower, has never been attacked by disease; a late bloomer, escaping late frosts; a regular and abundant bearer. The hull, or outside covering, is much thicker than in the soft-shelled varieties, and consequently the nuts do not sunburn during hot spells, when most other varieties burn very badly. The Franquette is the ideal nut for dessert and confectionery use; it is of large, uniform size, long in form, and has a smooth, well-filled shell of medium thickness, which insures its safe shipment to market. Being long in form, it carries one to two ounces more meat per pound of nuts than the round or chunky sorts. Its pellicle is pale yellow in color; meat of exquisitely rich, oily, nutty flavor.

The Franquette is the peer of all French varieties and the heaviest bearer; unlike the Mayette, which produces a nut of fair quality, but is a decidedly shy bearer; not like the Praeparturien or other early-blooming soft-shelled varieties, which only occasionally bear a crop of nuts of mixed sizes and inferior quality. The tender soft-shelled varieties that have been planted in southern California must be left severely alone in the North, in order to insure an annual and successful crop. First, because the tree of the soft-shelled kinds are not hardy enough to withstand our coldest winters; and, second, because they bloom too early, they are almost sure to be caught by the frost.

Mayette. This is a fine dessert nut; it is quite large, well shaped, with light-colored shell; the kernel is full-fleshed, sweet and nutty. It is said to be very late in budding out, enabling it to escape the disastrous effect of late frosts in the spring. This is the nut imported into the United States under the name of Grenoble, but on account of the duty of three cents per pound as the nut is a high priced nut in France, a common and cheaper grade is mixed with it, to the disgust of nut importers in New York and Chicago. The Mayette was originated by a man by the name of Mayet, over 125 years ago, the nut having ever since been a great favorite. Said to be a shy bearer.

Parisienne. This beautiful nut, also one of the finest for dessert and market, was originated in the southeast of France, and not in the neighborhood of Paris, as the name would imply; its beauty causes it to be called the "Parisienne," in honor of the capital of France. The nut is large, broader at the small end than the May-

ette and the Franquette, and has a very pretty shape. It is as late and hardy as Mayette.

Praeparturien. Perfect soft-shelled of first quality. One of the most productive kinds, but nuts are small.

CALIFORNIA SOFT SHELL VARIETIES

Placentia Perfection. The favorite soft-shell walnut in Southern California. Nut is large and of high quality. The tree is strong and vigorous and begins to bear young. An improved Santa Barbara soft-shell.

Santa Barbara Soft-shell. A variety originating with Joseph Sexton, of Santa Barbara, California. Tree a vigorous grower, early and abundant bearer. The nut is large; kernal white, sweet and readily extracted; shell thin, easily broken. One of the favorites in southern California.

JAPANESE VARIETIES

As the name indicates, they were introduced from Japan, and are sure to prove of great importance in nut-growing districts. Easily transplanted, hardy, abundant and early bearers, with little, if any, tap-root compared with other varieties, but abundantly supplied with laterals. Nuts superior to those of native species, and will probably become valuable where *J. regia* is too tender.

Cordiformis. (*J. cordiformis*). This, as the name indicates, is a heart-shaped nut. It differs from the *Sieboldi* in form of the nuts, which are broad, pointed, flattened, somewhat resembling the shell-bark Hickory; meat large, of best quality and easily removed, as the shell is thin and parts easily at the sutures, enabling one to get the kernel out whole. The flavor is something between that of an English Walnut and a Butternut. As a dessert nut it has few superiors; the meat, being very sweet, is used extensively for candied nuts. We recommend it as one of the very best Japanese varieties.

Sieboldi. (*J. Sieboldiana*) If it produced no nuts, it would be well worth cultivation for an ornamental tree. Grows with great vigor, surpassing all other nut trees, assuming a handsome form, needs no pruning; leaves large, charming shade of green. Nuts are borne in clusters of 12 or 15 each at tips of previous season's branches; have a smooth shell; thicker than the English, but not so thick as the Black Walnuts, much resembling Pecans; meat is sweet, of good quality, flavor like butternut but less oily. Commences bearing young; trees 3 to 4 years in nursery rows frequently producing nuts. Perfectly hardy, standing 21 degrees below zero without injuring a bud.

IN PORTLAND'S CITY PARK.

Ornamental Department

Pointers Relative to Beautifying Country Homes

— Fruit Trees Planted for Profit; —

What About Trees to Make the Home Attractive?

THERE HAS BEEN IN THE PAST, and is at the present time, much said about the planting of fruit trees for profit, but what about beautifying the homes where you live and your children are growing up? An artistic front yard with a green lawn and some choice flowers is restful to the weary eye. A shady arbor with its thick foliage may give rest to the tired body. Flowers bring out the depths of childhood's nature instead of emotions borne down by strife.

Remember the home of one's youth is looked back upon in many years afterwards, their memories will travel thousands of miles back to the old home where deep in the mossy green the morning dew lingered; back under the shadows of a friendly tree in the yard during noontide's heat, or later on the old rustic bench under the arbor in the evening twilight—a sacred vision unbanished will revive the most hallowed memory of a duty that was sacred and sweet.

UPRIGHT DECIDUOUS TREES

AILANTHUS. Tree of Heaven.

A. glandulosa. A distinct ornamental tree from Japan; rapid grower, with long, elegant feathery foliage; exempt from diseases and insects. One of the most distinct of ornamental trees with pinnate foliage. Useful to produce tropical effects. Is sometimes cut off every spring, when the young shoots form a foliage mass of tropical richness.

ACACIA. (False-acacia.) See Locust.

ALDER. *Alnus*.

European. (*A. glutinosa*.) A tree of rapid growth, attaining a height of 40 to 60 feet; foliage wavy, roundish, wedge-shaped; suitable for damp soils, but thriving well everywhere.

ARALIA.

Angelica Tree, or Hercules' Club.

All small trees with large, finely divided foliage and snowy heads of white flowers; very useful for lawn planting and subtropical effects. We recommend the two following varieties:

A. Japonica. (Angelica Tree.) A handsome, distinct, small tree from Japan; spreading habit of growth, with immense finely divided foliage and spiny stems. Flowers white, in large spikes; July.

A. Spinosa. (Hercules' Club.) A very showy sort. Broad, handsomely cut foliage, and immense clusters of small white flowers in July or August. A singular-looking, small-sized tree, with very prickly stems and pinnate leaves. It suckers occasionally from the roots, but not after well established.

FLOWERING CHESTNUT, see page 49.

ASH. *Fraxinus*.

European. (*F. excelsior*.) A lofty tree of rapid growth, with spreading head, pinnate leaves and black buds.

See also Weeping Trees.

BALM OF GILEAD. See Poplar.

BIRCH. *Betula*

European White. (*B. alba*.) A fine tree of moderate size, with silvery bark and slender branches.

See also Weeping Trees.

BEECH. *Fagus*.

European. (*S. sylvatica*.) A beautiful tree growing to the height of 60 or 80 feet.

Purple-leaved. (*F. purpurea*.) Discovered in a German forest. An elegant, vigorous tree, growing 45 to 50 feet high. Foliage deep purple, changing to crimson. Like all varieties of the Beech, this is difficult to transplant; hence small trees 3 feet high are preferable.

Rivers' Blood-leaved. (*F. purpurea Riversi*.) Smooth-leaved Purple Beech. This variety differs from the ordinary Purple-leaved by its compact, symmetrical growth and crimson foliage early in the spring, changing to dark purple in the summer. One of the finest of all purple-leaved trees.

See also Weeping Trees.

BILSTED. See Sweet Gum.

BOX ELDER. See Ash-leaved Maple.

BUCKEYE. See Horse-Chestnut.

BUTTONWOOD. See Sycamore.

CATALPA. *Catalpa*.

C. Bungei. (Umbrella Catalpa.) Grafted on stems 6 to 8 feet high, it makes an umbrella-shaped top without pruning. Perfectly hardy and flourishes in most all soils and climates. Leaves large, glossy, heart-shaped, deep green, lying like shingles on a roof; always makes a symmetrical head. One of the most unique trees. A valuable acquisition; desirable for lawn, park and cemetery planting.

C. Speciosa. One of the most rapid growers. Valuable for timber, fence-posts, railroad ties, etc., possessing wonderful durability. Large heart-shaped, downy leaves and compounded panicles of white flowers, tinged with violet and dotted with purple and yellow. Very ornamental and useful.

C. Syringaefolia. A native of the South. A rapid-growing, beautiful tree, with very large, heart-shaped leaves and pyramidal clusters of white and purple flowers. Late in July.

C. Teas' Japan Hybrid. Large luxuriant foliage, handsome white flowers with purple dots and a touch of yellow around the throat, with a pleasant, delicate fragrance. A tree in bloom not only produces a magnificent spectacle to the eye, but also fills the air quite a distance with its agreeable odor. In rapidity of growth it rivals the most luxuriant trees of temperate climates.

CHERRY. *Cerasus*.

Double-flowering (*C. alba flore pleno*). A tree of medium growth, producing clusters of double white flowers in May. Blooms so profusely as to completely hide the branches from view. 15 to 20 feet high when fully grown.

Rhexi fl. pl. Extra fine, double white-flowered variety. Its pure white flowers resemble small roses, and are freely produced at blossoming season.

Japanese Rose Flowering. (*C. Japonica rose*.) A Japanese cherry producing deep rose-pink double flowers early in Spring in great profusion. One of the most beautiful. We also have several varieties of Japanese flowering cherries of different colors. These are most desirable acquisitions to any collection.

Dwarf Rocky Mountain. See Shrubs.

Japanese Weeping. See Weeping Trees.

CRAB. *Pyrus*, or *Pyrus malus*.

Bechtel's Double-flowering. (*P. floribunda*). Makes a medium-sized ornamental tree of great beauty; perfectly hardy; succeeds well in all soils not extremely wet. When in bloom in early Spring this tree presents the appearance of being covered with perfect double, small pink roses of delicious fragrance. The only sweet scented double Crab; blooms quite young. Unlike many other trees, it does not bloom until the leaves are fully developed, which adds greatly to its beauty. Sure to become quite popular as soon as it is well known.

DOGWOOD. *Cornus*.

American White (*C. florida*.) A native tree of fine form and beautiful foliage, growing from 20 to 25 feet high, producing white flowers 3 inches in diameter, early in the Spring before the leaves appear. A very desirable tree. Foliage grayish green, turning deep red in autumn, making the tree one of the most beautiful at that season. One of the most desirable of ornamental trees.

See also Weeping Trees and Shrubs.

EMPRESS TREE. See Paulownia.

ELM, *Ulmus*.

American White (*U. Americana*.) The noble, spreading, drooping tree of our own woods. One of the grandest and hardiest of park or street trees.

Corkbark (*U. racemosa*). The bark is corky, the tree an upright, fast grower.

English (*U. campestris*) An erect, lofty tree, with rather small leaves.

Purple-leaved (*U. purpurea*). Erect in growth, with slender branches, densely clothed with dark purplish green foliage.

Camperdown. See Weeping Trees.

FRINGE. *Chionanthus*.

Purple (*Rhus cotinus*). A much-admired small tree or shrub for its curious fringe of hair-like flowers that cover the whole surface of the plants in midsummer.

White (*Chionanthus Virginica*). A small native tree or shrub, with dark glossy leaves and

drooping racemes of pure white flowers, having narrow fringe-like petals. Its foliage, as well as its flowers, make it one of the most desirable lawn trees.

GINKGO. See *Salisburea*.

GOLDEN CHAIN. See *Laburnum*.

GUM. See Sweet and Sour Gum.

HERCULES' CLUB. See *Aralia*.

HICKORY. See Nut Trees.

HONEY LOCUST. *Gleditschia*.

Three-thorned (*G. triacanthos*). A rapid-growing native tree, with powerful spines and delicate foliage, used especially for hedges.

HORSE-CHESTNUT. *Æsculus*.

Red-flowering (*Æ. rubicunda*). Not so rapid or so fine a grower as the white; foliage of a deep green and blooms later, with showy red flowers.

White-flowering (*Æ. Hippocastanum*). A very beautiful, well-known tree, with round, dense head, dark green foliage, and in early Spring an abundance of showy white flowers, slightly marked with red specks or panicles.

Ohio Buckeye (*Æ. flava*). Has pale green leaves and showy yellow flowers. A fine small tree. A very crooked and irregular grower.

JUDAS, or RED BUD. *Cercis*.

American (*C. Canadensis*). A medium-sized, native ornamental tree, covered with delicate pink flowers before the leaves appear. Heart-shaped, pure green leaves, with glossy surface; flowering about the same time as Chinese Magnolias, and planted with them, produce fine effect.

DOGWOOD TREE.

LABURNUM. *Cytisus*.

Golden Chain (*C. vulgare*). Bears long, pendant racemes of yellow flowers in June; showy and beautiful. Should be in every lawn.

LARCH. *Larix*.

A tree that should be in every collection, because of its beautiful green foliage, appearing early in the Spring. As it is one of our first trees to come into leaf in the Spring, it should be planted early. The American Larch is known as Tamarack and Hackmatack. We list only the following:

European (*L. Europæa*). An excellent, upright, rapid-growing, pyramidal-shaped tree, with drooping, slender branches; foliage light green, soft and graceful in the Spring, turning to golden yellow in the Autumn before falling. Unlike most conifers, it is deciduous after the first year; perfectly hardy and thrives in nearly all situations. Makes a very handsome specimen for ornamental planting and is very valuable for timber.

LINDEN. *Tilia*

Close, dense-headed, rapid-growing tree; excellent for shade, doing well in nearly all situations; well adapted to street, park and large lawns. Should be planted much more freely than they are.

American or Basswood. (*T. Americana*.) A rapid-growing, beautiful native tree, with very large leaves and fragrant flowers.

European (*T. Europæa*). A very fine pyramidal tree, with large leaves and fragrant flowers. A valuable tree for street and lawn planting, developing into beautiful specimens.

White or Silver-leaved (*T. argentea*). A handsome, vigorous-growing tree; pyramidal form; large leaves, whitish on the under side, and having a beautiful appearance when ruffled by the wind, its white color making it conspicuous among other trees. Blossoms very fragrant.

LIQUIDAMBAR. See Sweet Gum.

WHITE FRINGE BUSH

LOCUST, or False Acacia. *Robinia*

Black (*R. pseud-acacia*). 50 to 80 ft. Tree with feathery foliage and drooping racemes of very fragrant, pea-shaped flowers. Cut back when transplanting. This is the tree producing the "posts" and "pins" of commerce.

Rose, or Moss (*R. hispida*). A native species, of spreading, irregular growth; very long, elegant clusters of pea-shaped, rose-colored flowers in June, and at intervals through the season. Compound foliage of a pleasing shade of light green.

LOCUST, HONEY (*Gleditsia*). See page 55.

MACLURA. See Osage Orange.

MAGNOLIA. (Native Sorts)

It would be difficult to overpraise Magnolias; they make beautiful trees for ornamental planting, and the *Acuminata* and *Tripetela* are also valuable as street and avenue trees. The leaves are large, dark green; the flowers white or yellow white, and most of them sweet-scented. Nearly all bear large and conspicuous fruit-pods, *Tripetela* being especially handsome in this respect. They should be transplanted in the spring and closely pruned. Figures indicate size of grown tree.

M. Acuminata (Cucumber Tree). 60 to 70 ft. A beautiful pyramidal-growing native species, with large, glossy leaves; flowers yellow, tinted with bluish purple.

M. Tripetela (Umbrella Tree). Named from the whorled arrangement of its great, glossy leaves. The white flowers, also of great size, open in June and are followed by rose-colored fruit cones. Tree grows about 40 feet.

CHINESE AND JAPANESE MAGNOLIAS.

The Chinese and Japanese are not so large-growing as the native ones, their maximum height being about 20 to 30 feet. They can be trimmed up to a single stem—tree form—or allowed to grow bushy as shrubs, in which form they could be kept to any desired height.

Conspicua (Chinese White). A beautiful Chinese variety, with large white flowers that appear before the leaves. Tree of small size.

Purpurea (obovata). 6 to 10 feet. Bushy growth; flowers purple, after many others are over.

M. Soulangeana. 15 to 20 feet. Perhaps the most popular of all Magnolias, being of vigorous growth, and blooming profusely, even when quite small. The flowers are large, pink on the outside of petals and white inside. In average seasons the flowers open in the third week in April. It can be grown as a small tree or large shrub.

M. Stellata (Halleana). 5 to 6 feet. A dwarf, bush-growing, most valuable species. The flowers are white, tinted with pink in the bud, semi-double, fragrant, and appear as early as April 15. The earliest of all to flower. It is one of the best for massing, as well as for a specimen shrub.

MAIDENHAIR. See *Salisburea*.

MAPLE. *Acer*.

Silver Variegated (*A. argenteo-variegatum*). This we consider one of the most attractive or-

MAPLES, Continued.

ornamental trees grown; so much of the leaf is variegated that at a short distance it has the appearance of the whole leaf being a silver-white. The tree is as hardy as the ash-leaved, and like it inclined to be a crooked grower when young. A specimen should be in every lawn.

OREGON MAPLE

Ash-leaved (Box Elder, or Manitoba Maple; *A. Negundo*). A fine, rapid-growing variety, with handsome, light green pinnated foliage and spreading head; very hardy; desirable for street planting, and succeeds in many sections where other varieties do not thrive.

Golden Variegated. Foliage golden yellow; tree very hardy and attractive.

Norway (*A. platanoides*). A native of Europe. Its large, compact habit, broad, deep green shining foliage, and its stout, vigorous growth, render it one of the most desirable species for streets, parks and lawns; rather a rough, crooked grower when young, but soon develops into straight, magnificent specimens.

Oregon (*A. macrophyllum*). A most graceful tree, with wide-spreading branches and large foliage. Very rapid growth.

Purple-leaved Sycamore (*A. pseudo-platanus purpureum*). Leaves deep green on upper surface, purplish red beneath,

producing a beautiful color effect when leaves are in motion. Tree of robust habit; fine for lawns for grouping with other foliage trees.

Red, or Scarlet (*A. rubrum*). A native species of medium size and rounded head; produces deep red blossoms, which appear before the leaves. In autumn the foliage changes to a brilliant scarlet.

Schwedler's (*A. Schwedleri*). A beautiful variety, with young shoots and leaves of a bright purplish and crimson color, which changes to purplish green in the older leaves. A distinct and handsome sort.

Silver-leaved or Soft (*A. dasycarpum*). A well-known native tree of rapid growth, large size and irregular rounded form; foliage bright green above and silvery white beneath; tree very hardy and easily transplanted. One of the most useful trees.

Sugar or Rock (*A. saccharinum*). A popular American tree of excellent pyramidal form. Its upright habit of growth, dense shade and adaptability to different soils have rendered it one of the most extensively used. Valuable for sugar or timber, as well as ornament and shade.

Sycamore (*A. Pseudo-platanus*). A noble variety, with spacious head and large, deep green foliage; a rapid, upright, free grower; desirable for shade.

Wier's Cut-leaved Silver (*A. Wierii laciniatum*). This is one of the most remarkable and beautiful trees with cut or dissected foliage yet offered. Its growth is rapid; shoots slender and drooping, giving it a habit almost as graceful as the cut-leaved birch. The foliage is abundant, silvery underneath, and on the young wood especially deeply and delicately cut.

JAPANESE MAPLES.

The Japanese Maples are becoming more popular as they become better known. They are all of dwarf habit and are varied in their foliage. They are also shrub-like in growth, and many of them of such rich, bright hues and deep-cut leaves that we class them by themselves. On account of these characteristics they are much used for forming permanent beds, but are very effective

JAPANESE MAPLE

JAPANESE MAPLES, Continued.

whether planted singly or in groups. In groups they can be planted 4 to 6 feet apart. Though succeeding in sun, they prefer light shade at mid-day. The bright-hued leaves make a fine display, and the blood-leaf (*Atropurpureum*), Aureum and Purple cut-leaf are especially in demand. We include only those we can especially recommend.

Blood-Red Japan (*A. polymorphum sanguineum*) The brightest and most constant in color of the red-leaved sorts and one of the most popular.

Dark Purple-leaved (*A. polymorphum atropurpureum*). Forms a bushy shrub. Foliage dark purple and deeply cut; very ornamental. The hardest and altogether the best of the Japan Maples. One of the choicest small tree or shrubs. 12 to 15 feet.

Golden Japan (*A. palmatum aureum*). The leaves retain their light yellow color with little variation throughout the summer. One of the very best and most effective in a group. 8 to 10 feet when grown.

Cut-leaved Purple (*A. polymorphum dissectum atropurpureum*). One of the most striking and handsome varieties of the Japan Maples. Form dwarf and weeping. The leaves are of a beautiful rose-color when young and change to a deep and constant purple as they become older. They are also deeply and delicately cut, giving them an elegant fern-like appearance. 5 to 7 feet when grown.

Green Japanese (*A. polymorphum*). The blood-leaved variety has drawn deserved attention away from this beautiful plant. The most vigorous of the type. Forms a small shrubby tree with various shades of color in the young growth; foliage small, deeply lobed, coppery green, changing to the most brilliant and gorgeous tints in autumn. It is the parent form of many of the Japanese Maples. For planting singly on a lawn it is most handsome, its feathery green leaves making its

MAGNOLIA, see page 50.

appearance distinct from that of any other shrub-like tree. 12 to 15 feet.

MOUNTAIN ASH. *Pyrus Sorbus*

Very ornamental, especially when covered with bright scarlet berries.

American (*P. Americana*). A favorite, erect-growing tree of medium size, producing white flowers early in spring, followed by clusters of bright scarlet berries, which remain on the tree through the winter months.

European (*P. aucuparia*). Similar in appearance to the above, with finer foliage and smaller deeper colored berries, much more desirable than the American and everywhere popular. Erect stem, smooth bark, head dense and regular. When fully grown 20 to 35 feet.

Oak-leaved (*P. quercifolia*). A very distinct and desirable tree, with compact, pyramidal head and dark lobed leaves, downy underneath producing the same flowers and berries as the preceding. Very hardy and desirable for planting on lawns or in door yards. When fully grown, 20 to 25 ft.

See also Weeping Trees.

MULBERRY. See page 44, also Weeping Trees.

OAK. *Quercus*.

Pin (*Q. palustris*). The Pin Oak is undoubtedly the most valuable variety for all practical purposes. The foliage is dense, finely divided, of a beautiful shining green that colors to sparkling red and yellow in Fall. The tree is easily transplanted and grows well on wet or dry ground, is, in fact, the quickest growing of all the oaks. As an avenue and street tree it is unequalled, and it is one of the best for park planting.

Red (*Q. rubra*). A very well known rapid-growing native species. The leaves are large and bright green and take on a purplish scarlet hue in the fall. It becomes of large size, with a round and spreading head. One of the best sorts for street, avenue and ornamental purposes.

OSAGE ORANGE. *Machura aurantiaca*

A native tree of medium size and spreading habit. Leaves bright shining green, broad and sharp-pointed. Fruit resembles an orange. One of the very best defensive hedges. It is of vigorous habit and rapid, dense growth and when properly trimmed makes a very effective hedge and is also ornamental.

PAULOWNIA. *Paulownia*.

Empress Tree (*P. imperialis*). A magnificent tropical-looking tree from Japan. Of extremely rapid growth and surpassing all others in size of leaves, which are 12 to 14 inches in diameter. Blossoms trumpet-shaped, formed in large, upright panicles in May. Quite hardy here, but the flower-buds are apt to be killed during severe winter.

PEACH.

Blood-Leaf. Leaves blood-red; one of the finest colored leaf ornamentals. In the Spring it is covered with blossoms. It also bears good white fruit. Will do well any place where peaches will grow.

PLANE TREE. See Sycamore.

PLATANUS. See Sycamore.

AVENUE OF CAROLINA POPLARS.

POPLAR. *Populus*

Balm of Gilead [*P. candicans Ontariensis*]. A native species of remarkably rapid, luxuriant growth, with large glossy foliage.

Bolles' [*P. Bolleana*]. New, of pyramidal form; leaves dark green on upper side, brilliant silver beneath; very beautiful. A valuable tree for grouping on the lawn.

Carolina [*P. monilifera Carolinenis*]. One of, if not the most rapid-growing trees, with large, handsome, glossy, serrated, deep green leaves. Succeeds everywhere; especially adapted to large cities, where it makes unusually fast growth, and resists smoke and gas. Pyramidal form, making a spreading head and dense shade when properly trimmed. New growth should be cut well back in Spring for the first few seasons. It is unexcelled for quick growth and effect; makes a splendid wind-break or screen; is used in larger numbers than any other one tree for street planting. For new places and streets where the slower-growing are desired, plant the poplars between, securing an almost immediate effect, removing them as the other trees attain size.

Lombardy [*P. fastigiata*]. A well known, tall, erect-growing tree of rapid growth and spire-like outline; very essential in landscape gardening to give variety of form and destroy the appearance of sameness produced by other trees.

Silver-leaved [*P. alba*]. A tree of wonderfully rapid growth and spreading habit; leaves large, dark, rich green above and white as snow beneath.

See also Weeping Trees.

PRUNUS. *Plum*.

P. Pissardi [Purple-leaf Plum]. A new shrub of Persian origin. The tree is a decided contrast in itself. The leaves, as they first appear on the tips, are a beautiful orange color, and they ma-

ture to a rich purple, clear and distinct, growing darker as the season advances. The leaves remain until late in the Fall—a decided contrast to other shrubs. Its beautiful, shining bark and its pink flowers and bright red fruit altogether make it the most rich and beautiful ornamental tree possible. It is remarkably hardy; a very rapid grower, compact, symmetrical in proportion, and attains about the size of the peach.

Triloba [Double-flowering Plum]. A very desirable shrub, introduced from Japan. Flowers semi-double, of delicate pink, upward of an inch in diameter, thickly set. Hardy; flowers in May.

RED BUD. See Judas tree.

SALISBUREA. Maidenhair, or Ginkgo.

Adintifolia. A Japanese tree of large size and columnar growth. When full-grown it is more spreading. The leaves resemble those of the Maidenhair Fern. A valuable, ornamental tree, and useful for street and avenue planting. If pruned several times when young it will make a round, compact-headed tree. It seems to thrive well along sidewalks in the city, and to be generally free from insects and diseases.

SWEET GUM, or BILSTED.

[*Liquidambar styraciflua*]

One of the finest American trees. Of medium size and moderate growth; round-headed or tapering form; leaves resemble somewhat those of the maple, but are star-shaped and of a beautiful glossy green color in Summer, turning to a deep purplish crimson in Autumn; in this respect is equal to the Sour Gum; bark corky. Beautiful in all stages of growth, it is particularly handsome and striking in Autumn. It thrives in low, damp places, though growing equally well in higher ground. A beautiful tree for street or avenue planting. Prune closely when transplanted.

SYCAMORE. *Platanus*.

American Plane, Sycamore or Buttonwood [*P. occidentalis*]. A well-known, tall, rapid-growing native tree; leaves large, heart-shaped at the base; the lobes sharp-pointed.

European [*P. orientalis*]. **Oriental Plane.** A lofty, wide-spreading tree; heart-shaped leaves, more deeply cut than above species; valuable for its handsome foliage and free growth; not so subject to disease as our native species. Entirely free from worms or insects. One of the oldest cultivated trees known.

THORN. *Crataegus*

Double Scarlet [*C. coccinea fl. pl.*]. Flowers deep crimson with scarlet shade; very double, and considered larger than the double red; fine rich foliage.

Double White [*C. alba fl. pl.*]. Has small, double, white flowers.

Paul's Double Scarlet [*C. coccinea fl. pl. Paulii*]. Flowers large, deep carmine-scarlet. Superior to any other variety.

TREE OF HEAVEN. See *Ailanthus*.

TULIP TREE or WHITE WOOD

Liriodendron

***Liriodendron tulipifera*.** Magnificent native tree, of very rapid growth; broad, glossy and fiddle-shaped leaves. It is valuable for its clean smooth bark and handsome green foliage. The flowers appear the first week in June. They are large, greenish yellow, blotched orange, and have the shape of a tulip. It makes a very desirable tree for street planting, thriving in low as well as high ground. Plant only in spring and prune very closely. Allied to the Magnolias, and, like them, difficult to transplant, unless of small size.

WALNUT. See page 44.

WHITEWOOD. See Tulip Tree.

WILLOW. *Salix*

Golden [*S. vitellina*]. This is valued very much for its bright, golden-barked twigs in the winter season, for the effect of which it is much planted. It is especially showy when planted in large groups. To produce the best results, it should be severely trimmed every winter to induce a quantity of strong young growths.

See also Weeping, page 56.

Well-kept ornamentals beautify the home surroundings.

WEeping, DROOPING, or PENDULOUS TREES.

Much attention is now given to this interesting class of trees, and we therefore place them separate for the greater convenience of our friends. For the benefit of those unacquainted with their habits, we would say that they should be divided into two separate classes, namely: Those which are grafted where the top or head commences to form, as in the case of the Kilmarnock Willow, and those having long, slender branches which droop naturally, like the Cut-Leaved Birch; the first assume

CUT-LEAVED WEeping BIRCH

that conspicuous, umbrella-like form so well known, and so excellently adapted for planting in cemeteries, small yards and gardens. The latter have tall growing trunks, with long slender branches, and are really handsome. They are well adapted for large places where they can have sufficient room. In such situations, the elegance and grace of their branches in motion or at rest, are so graceful to the eye that among ornamental shrubbery they have few if any superiors.

In our list will be found all the choicest varieties, which we deem particularly attractive. Customers, however, will be saved from disappointment if they will realize that it is impossible to deliver them from the nursery with the graceful form to which they will attain with age. This could no more be done than to deliver fruit trees loaded with fruit.

BEECH. *Fagus*

F. sylvatica pendula. A remarkably vigorous, picturesque tree of large size. Its mode of growth is extremely curious. The trunk or stem is generally straight, with the branches tortuous and spreading; quite ungainly in appearance divested of their leaves, but, when covered with rich luxuriant foliage, of wonderful grace and beauty.

BIRCH *Betula*

Cut-leaved. [*B. laciniata pendula*]. Probably the most popular and desirable lawn tree in existence, and produces a beautiful effect on streets and avenues. Makes a vigorous growth and is perfectly hardy. Trunk straight, slender, and white as snow. The slim side branches droop in a most picturesque manner; foliage delicate and deeply cut, coloring finely in the Fall. The drooping branches and silvery bark form a most effective combination during the Winter months. Mr. Scott, in his "Suburban Home Grounds," says of it: "No engraving can do it justice; like the palm tree of the tropics, it must be seen in motion, swaying in the lightest breeze, its leaves trembling in the heated summer air, its white bark glistening through the bright foliage and sparkling in the sun, to enable us to form a true impression of its character."

Young's Weeping [*B. pendula Youngii*]. Originated near Milford, Eng., where it was found trailing upon the ground. Grafted into stems of some height, it forms pendulous heads, drooping to the ground in fine, thread-like shoots. Very beautiful.

CHERRY. *Cerasus*

Japan Weeping Rose-flower [*C. Japonica pendula rosea*]. Brought from Japan by Van Siebold, and is certainly one of the finest weeping trees for lawns or small grounds. The branches are slender and, when grafted on tall stems, fall gracefully to the ground. The flowers are rose-colored, appearing before the leaves. The finest weeping cherry, and one of the finest weeping trees in cultivation.

Japan Weeping, White [*C. Japonica pendula alba*]. Feathery and graceful; flowers single, white; fruit red. One of the finest of the small-headed pendent cherries. Resembles the *Pumila Pendula* somewhat, but much more feathery and graceful.

MOUNTAIN ASH. *Sorbus*.

Weeping (*S. Aucuparia pendula*). A beauti-

ful tree, with straggling, weeping branches; makes a fine tree for the lawn; suitable for covering arbors.

ELM. *Ulmus*.

Camperdown Weeping (*U. pendula*). A vigorous grower, and forms one of the most picturesque drooping trees. Leaves large, dark green and glossy, and cover the tree with a luxuriant mass of verdure; very desirable.

MULBERRY. *Morus*.

Teas' Weeping Russian (*M. Tatarica pendula*). A weeping variety of the now well-known Russian mulberry. One of the most graceful and hardy weeping trees in existence. Wholly unlike anything heretofore introduced. Forms a perfect umbrella-shaped head, with long, slender, willowy branches drooping to the ground. All who have seen it agree that in light, airy gracefulness, delicacy of form and motion, it is without a rival. It has beautiful foliage; is wonderfully vigorous and healthy; is one of the hardiest, enduring the cold of the North and the heat of the South; safe and easy to transplant. Admirably adapted for ornamenting small or large grounds, or for cemetery planting. A very happy use of it lately seen was in the form of a canopy or tent, making a most pleasant play-house for children, who set their table and enjoyed themselves in the cool shade of its foliage.

WILLOW. *Salix*.

American Weeping (*S. purpurea pendula*). An American dwarf slender-branched species; grafted 5 or 6 feet high, it makes one of the most ornamental of small weeping trees; more hardy than the *Babylonica*.

Babylonica, or Common Weeping (*S. Babylonica*). The well-known common Weeping Willow. A large tree covered with drooping branchlets.

Kilmarnock (*S. Caprea pendula*). A distinct variety, having reddish shoots and large, glossy foliage; grafted at a proper height, about five feet from the ground, it makes a very desirable small lawn tree, having a perfect umbrella-shaped head, with the branches drooping gracefully to the ground. It is well suited for planting in cemetery lots or other small enclosures. Extensively planted, and should be in every collection of ornamental shrubbery. Hardy and of vigorous growth.

EVERGREENS

(*Coniferae*)

Evergreens are very desirable as they retain their foliage throughout the Winter, and are now everywhere appreciated as

indispensable for variety, giving color and effect to lawn or landscape, and adding to the tone, warmth and verdure, especially in Winter. The constant green of the coniferæ is the quality most valuable in them; the prevailing color which they give to their surroundings is deep-toned, but if the bright-leaved sorts, now plentiful, are planted among the somber ones, they greatly enliven the effect. They are also very desirable for hedges, shelters or windbreaks, or for screening undesirable objects.

They should be judiciously planted in small lawns as well as large and should be given sufficient room to fully develop. The sap of most evergreens, being of a resinous nature, is not so active in early Spring as that of deciduous trees, and, as a rule, all evergreens and coniferous trees succeed better planted late in Spring and earlier in Autumn than deciduous trees. The latter part of April or during May and latter part of Summer, say August, are the best times in ordinary seasons for transplanting in this latitude. August planting is not recommended, however, unless the season be favorable.

ARAUCARIA

Imbricata (Chilli Pine, or Monkey Puzzle). A fine tree of regular pyramidal form. Leaves bright green, broad, thick, pointed and overlapping each other.

ARBORVITAE. *Thuja*, or *Thuja*

American (*T. occidentalis*). This is one of the very finest evergreens for hedges. It is very hardy and, if set at the proper time with care and without undue exposure, it may be relied upon to live; but small plants 12 to 18 inches high, which have been transplanted several times, are preferable. It bears shearing better than any other variety and may be made a very beautiful and dense hedge or screen to divide grounds or for

any purpose where it is not required to resist cattle or other animals.

Chinese (*Biota orientalis*). Of upright growth. slender and bright green foliage. Growth is flat on twigs, arranged mostly vertically.

Compact, Parsons' (*T. compacta*). Foliage bright light green; habit dwarf and compact.

Globe (*T. globosa*). Forms a natural evergreen globe or ball without any trimming; very pretty and hardy.

Golden (*T. aurea*). Free grower with fine golden yellow foliage; hardy. The most desirable Golden Arborvitae for the northern states.

Hovey's Golden (*T. hoveyi*). A seedling from the American. A perfectly hardy, distinct, com-

ARBORVITAE, Continued.

compact variety; leaves a bright green. A beautiful object either singly or in hedge.

Pyramidal (*T. pyramidalis*). This exceedingly beautiful Arborvitae is the most compact and erect of all the entire species, being in form almost a counterpart of the Irish Juniper. Foliage a deep green, retaining its color remarkably well through the entire season and perfectly hardy.

Siberian (*T. Sibirica*). One of the best of the genus of this country. Exceedingly hardy, keeping color well into winter; growth compact and pyramidal; makes an elegant lawn tree.

Tom Thumb (*T. Tom Thumb*). A dwarf variety of the American Arborvitae, which originated on grounds of Ellwanger & Barry. It is remarkable for its slow growth and compact symmetrical habit.

CALIFORNIA BIG TREE.**(*Sequoia gigantea*)**

The famous Big Tree of California. It makes a handsome pyramid when young. Very desirable for lawn decoration; a very attractive evergreen. Thrives well in this climate.

CEDAR. Cedrus

Himalayan, or Indian (*C. Deodara*). The Great Cedar of the Himalayan Mountains. Exceedingly handsome, with drooping branches and silvery green foliage; branches feathery and spreading, forming a dense net work. The finest, most rapid-growing of all Cedars, and worthy of a place in every garden.

CYPRESS. Cupressus

Lawson's (*Chamaecyparis Lawsoniana*, or False Cypress, also as *Cupressus Lawsoniana*). A fine evergreen, native of the Pacific Coast. One of the most graceful and beautiful of evergreens;

of fine, compact habit; delicate feathery foliage, varying from vivid green to a silvery or bluish tint, according to sub-varieties. 30 to 40 ft.

LAWSON CYPRESS**CRYPTOMERIA. Cedar**

Cryptomeria Japonica (Japan Cedar). A beautiful evergreen with delicate foliage and graceful habit. The color changes to a bronze or reddish brown in the fall, producing a pleasing contrast. When young resembles *Araucaria excelsa*. In time becomes a large pyramidal tree, with straight slender trunk, covered with reddish brown bark, with woiled spreading branches. Leaves spirally arranged. A very satisfactory evergreen for this latitude.

FIR. Abies

Colorado Silver (*A. concolor*). A stately and beautiful variety. One of the finest of Rocky Mountain evergreens. Graceful habit, broad, handsome foliage, bluish above, silvery beneath. A fairly rapid grower and a very desirable variety for the lawn. Extremely hardy and a fit companion for the Colorado Blue Spruce. Withstands heat and drought the best of Firs.

Silver, or Grand (*A. grandis*). A large stately tree of pyramidal growth; leaves thin, flexible, deeply grooved, very dark green above and silvery white beneath. A native of the Pacific Coast.

See also Spruce.

JUNIPER. Juniperus

Golden Variegated (*J. aurea variegata*). Pyramidal in form, somewhat like the Red Cedar, but the growth is much finer. Golden variegation throughout the year.

ARAUCARIA IMBRICATA

JUNIPER, Continued.

Irish (*J. Hibernica*). Very erect and tapering in its growth forming a column of deep green foliage. A pretty little tree or shrub, and for its beauty and hardiness is a general favorite.

Golden Japan (*J. Japonica aurea*). Foliage beautiful golden, of splendid dwarf form and spreading habit.

Swedish (*J. Suecica*). Similar to the Irish, though not so erect, with yellowish green foliage, of somewhat lighter color, forming a beautiful pyramidal small tree.

Red Cedar (*J. Virginica*). A well-known American tree, with deep green foliage; makes a fine ornamental hedge.

PINE. Pinus

Austrian, or Black (*P. Austriaca*). A remarkably robust, hardy, spreading tree; leaves long, stiff and dark green; growth rapid. Valuable for this country.

Mugho, Dwarf Mountain Pine (*P. Mughus, or Montana*). Of compact, spreading growth; it keeps below 4 feet in height for many years. Does not grow tall, but spreads over the ground, generally assuming a globular form; very dense. Ornamental and hardy.

Scotch (*P. sylvestris*). A fine, robust, rapid-growing tree, with stout, erect shoots and silver-green foliage.

White (*P. strobus*). The most ornamental of all our native Pines; foliage light, delicate, or silvery green. Flourishes in the poorest soils. Hardy and valuable.

PODOCARPUS. See Yew.

RED CEDAR. See Juniper.

RETINOSPORA.

Japanese Cypress, Retinospora, or Chamaecyparis

A genus very similar to Cupressus. It comprises many varieties of wonderful beauty. Botanists class all varieties under two species—*Obtusa* and *Pisifera*, but originating in Japan it is almost impossible to say for certain to which a variety belongs, and following most other nurserymen we list under the names as we received them. *R. plumosa*, *R. ericoides*, *R. filifera*, *R. squarrosa*, generally considered as forms of *R. pisifera*, also spelled *Retinospora*. They are very desirable for planting in groups, as they are of medium size. In the far north they must be protected in winter.

Ericoides. A dense, broadly pyramidal or round-headed bush, with upright branches and dull green foliage, changing to brownish green in winter. Leaves linear, soft, grayish green beneath. Very ornamental.

Filifera. Upright leader, main branches nearly horizontal, smaller branches of a graceful and weeping habit. One of the showiest.

Filifera aurea. A golden form of the preceding.

IRISH JUNIPER

Obtusa. A free growing evergreen, of bright green foliage.

Pisifera. An evergreen of tree-like character when matured. The underside of foliage is silvery.

Plumosa. An exceedingly handsome, small evergreen from Japan, with feathery, light green foliage.

Plumosa aurea. Like the preceding, a plant of great beauty; foliage soft, plume-like, of a golden color; close and compact habit; should be in every amateur collection.

Squarrosa. This valued sort has steel-colored foliage and makes a tufty, compact growth. It grows to large size, but by pruning can be kept down to almost any size, as, in fact, can all *Retinosporas*.

SEQUOIA. See California Big Tree.

SPRUCE. Picea.

The names *Abies* for Fir and *Picea* for Spruce are used just oppositely by different authors, Linnaeus employing *Abies* for Spruce and *Picea* for Fir. We have followed Gray, Bailey and most of the later botanists, who use the name the same as the ancients.

Colorado Blue (*P. pungens*). A rare, elegant tree, with foliage of a rich blue. One of the most distinct and striking of all the Spruce family. This variety of Spruce was found in the Rocky Mountains, and has always given the best satisfaction wherever planted. Considered as one of the most beautiful of all evergreens. A free grower; perfectly hardy.

Douglas (*P. Douglassii, or Pseudotsuga Douglasii*). Indigenous to Colorado. Of quite rapid growth and conical form; foliage delicate green, glaucous underneath; hardy and easily grown. See also *Abies*.

Norway (*P. excelsa*). A lofty, elegant tree, of perfect, pyramidal habit, remarkably elegant and rich, and as it gets age, has fine, graceful, pendulous branches; it is exceedingly picturesque and beautiful. Very popular, and should be largely planted. One of the best evergreens for hedges.

YEW. Taxus

English (*T. baccata*). A large bush or tree, 30 to 40 feet when fully grown. It is densely branched and can be trimmed into any shape.

Erect English (*T. erecta*). A very fine pyramidal variety of the English Yew, with dark green foliage. Hardy and desirable.

Elegantissima. One of the most valuable golden-leaved evergreens which we have. In June and July the leaves of the new growth are of a bright straw-color, rendering the plant highly effective, either by itself or in connection with other conifers. One of the hardiest of the Yews.

Irish (*T. Hibernica*). Of tall, slim growth and beautiful dark green foliage; it is of great use to planters. As with all Yews, it winters better when shaded from the sun during the cold months of winter.

PODOCARPUS

Japan Yews (*P. Japonica*). A peculiar, charming, erect tree from Japan, hardier and denser than the Irish Yew, eminently fitting it for cemetery purposes.

UPRIGHT DECIDUOUS SHRUBS

Our shrubs are all strong, well rooted, transplanted stock from open ground. Once carefully planted in suitable positions they increase in size and beauty from year to year, and require but little further care. The time 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.

ALTHAEA. *Hibiscus Syriacus*

Rose of Sharon. One of the most showy and beautiful shrubs. Flowers large, double, of many brilliant colors. Blooms freely in August and September when few other trees or shrubs are in blossom.

Double Red (*H. rubra flore pleno*).

Double Purple (*H. purpurea flore pleno*).

Double White (*H. alba flore pleno*).

Variegated Leaf (*H. variegata flore pleno*).

ALMOND. *Prunus*

Double Rose-flowering. (*P. Japonica rubra fl. pl.*). A beautiful small shrub, bearing in May before the leaves appear, small, double rose-like flowers, closely set upon the twigs.

Double White-flowering (*P. Japonica alba fl. pl.*) Produces beautiful white flowers in May.

AZALEA *Azalea*, or *Rhododendron Sinense*

A. Mollis. Showy, hardy plants, used extensively in parks and public grounds. The brilliancy of their flowers is not approached by anything in the line of hard shrubs. Excellent for the front of borders or clumps of taller growing shrubs.

BARBERRY. *Berberis*

Used as a hedge-plant quite extensively. Their showy orange and yellow flowers in May and June are followed by bright and various colored fruits, making them especially showy in autumn and winter.

Purple-leaved (*B. purpurea*). Foliage and fruit of violet-purple color, very striking; fine for single specimens; also a desirable ornamental hedge-plant, planted by itself or intermingled with the common.

B. Thunbergii. A very pretty variety from Japan; of dwarf, graceful habit; foliage small, changing to beautiful bright red in the fall; very showy.

BLUE SPIRAEA. See Verbena Shrub.

CALYCANTHUS

Sweet-scented shrub, or Carolina Allspice

Sweet-scented Shrub (*C. Floridus*). The wood is fragrant; foliage rich; flowers are of a chocolate color, having a peculiarly agreeable odor. The flowers appear in June and at intervals afterward. Very popular.

CAMELLIA

A very desirable evergreen shrub which comes from Japan. Suitable for either lawn or pot culture. In appearance it is somewhat similar to the *Rhododendron*, having smooth, glossy, dark green leaves. The flowers appear early in the spring (in the Willamette Valley about the middle to the close of March), and look like a medi-

um-sized full-blown rose. We carry in stock three colors—Red, White and Pink.

CORAL BERRY. See Snowberry.

CORNUS. See Dogwood, page 49.

CHERRY. *Cerasus*.

Dwarf Rocky Mountain. From the mountains of Colorado. Hardy as a Wyoming sage-bush. With its deep green, willow-like leaves, mass of pure white flowers in Spring and a load of fruit in summer, it is well worth cultivation for an ornamental shrub. Makes a bush 4 or 5 feet high, usually fruiting in two years, producing large quantities of jet-black fruit about the size of English Morello, and ripening after all other Cherries are gone. See also pages 49 and 56.

CORCHORUS. *Kerria Japonica*

A graceful, slender shrub, growing 4 to 5 feet high, covered with double yellow flowers from early summer till fall. As pretty as a rose in shape of flower and makes a very ornamental plant for the lawn.

CURRENT. *Ribes*

Crimson-flowering (*R. sanguineum*). Produces an abundance of crimson flowers in early spring.

Yellow-flowering (*R. aureum*). A native species with yellow flowers.

CYDONIA. See Quince, Japan.

DEUTZIA. *Deutzia*.

This valuable specie comes to us from Japan. Their hardness, luxuriant foliage and profusion of attractive flowers, render them deservedly among the most popular of flowering shrubs. The flowers are produced in June, in racemes 4 to 6 inches long.

Abel Carriere (*D. Hortensis Abel Carriere*). Bright rose-carmine; a choice sort. One of the best.

Double-flowering (*D. crenata flore pleno*). Flowers double, white, tinged with rose. One of the most desirable flowering shrubs in cultivation.

Slender-branched (*D. gracilis*). A very desirable dwarf-growing variety. Flowers pure white. A valuable plant for winter blooming.

Lemoine's (*D. Lemoinei*). Single white. A hardy hybrid, partaking to a great extent of the character of *Gracilis*, but of a stronger growth. Good for forcing.

Pride of Rochester. A new variety said to excel all others in size of the double white flower, length of panicle, profusion of bloom and vigorous habit. A charming acquisition, produced from the *Crenata*.

Watereri. A grand new variety with very large double white flowers, borne in large, loose racemes. Robust grower and very hardy.

DOGWOOD. *Cornus*

Red-branched (*C. sanguinea*). A native species, very conspicuous and ornamental in the winter, when the bark is blood-red.

Sanguinea, var. *elegantissima* variegated. One of the finest variegated shrubs; of rapid growth. The leaves are broadly margined with white; bark bright red in winter.

See also page 49.

ELAEAGNUS

Japanese Silver Thorn, or Oleaster (*E. longipes*). A remarkable new shrub from Japan. Foliage glossy, silvery tinge underneath; bark covered with peculiar brown spots which remain all winter. Flowers not large but the bush is covered in July with large bright red berries, which are edible and of a sprightly and agreeable flavor. Foliage remains good until late in autumn. A very desirable acquisition.

ELDER. *Sambucus*

Golden [*S. aurea*]. From Holland. New and rare. When the leaves first appear they are bright green, but, if planted where they will have plenty of sun, they soon change to a golden green. The blossom, which resembles the common Elder blossom, appears in July. The best effect is produced when they are planted with other shrubs,

thus rendering the foliage more conspicuous by the contrast.

EXOCHORDA.

Pearl Bush (*E. Grandiflora*). A vigorous-growing shrub from China, forming a compact bush 10 to 12 feet high; can be trimmed to any desired shape. The flowers are borne in slender racemes of eight to ten florets each, on light and wiry branches that bend beneath their load of bloom, just enough to be graceful. It is perfectly hardy; flower of a dazzling white. Very useful for cut-flowers. Thrives in any good soil.

FILBERT. *Corylus*.

Purple-leaved (*C. Avellana*, var. *atropurpurea*, or *purpurea*). A very conspicuous shrub, with large, dark purple leaves. Soon after the leaves expand they are almost black, but later on fade to a light purple. Valuable for planting in groups of large shrubs to secure color effect. Distinct and fine. See also page 44.

FORSYTHIA. Golden Bell.

F. Viridissima. A very singular and quite ornamental shrub. Its branches in the early Spring, before the leaves appear, are covered with bright golden yellow, pendulous flowers.

F. Fortunei. Similar to the above, but of more upright growth.

HYDRANGEA [PANICULATA GRANDIFLORA] Page 62.

F. suspensa [Weeping Forsythia]. Of drooping habit, resembling *Fortunei* in its flowers.

HEDYSARUM MULTIJUGUM.

Hardy perennial of recent introduction, of angular, straggling growth, 2 to 5 feet high; very showy and worthy of general culture; flowers all Summer, pea-shaped, violet or purplish magenta with yellow blotches in racemes, 8 to 18 inches long; leaves oval, grayish green. Fine for rock-work.

HONEYSUCKLE, UPRIGHT. *Lonicera*.

Red Tartarian [*L. Tatarica rubra*]. A beautiful flowering shrub, blooms early in Spring; flowers bright pink.

White Tartarian [*L. Tatarica alba*]. Similar to the preceding, with white flowers. See Climbing Honeysuckles.

HYDRANGEAS

Beautiful free-flowering shrubs, bearing immense panicles or trusses of flowers. *Paniculata* is perfectly hardy and requires no protection; the other varieties require protection in winter, and should be grown in pots or boxes and wintered in the cellar, except in the warmer sections.

The Japanese flat-headed flowers are the well known pink and blue variety and are worthy of special notice, being so distinctly different from all others. All are perfectly hardy along the sea-coast but usually require protection in the winter in cooler section, but are well worth the additional attention. The system of pruning is different, severe winter pruning being avoided, the aim being to preserve the wood, as it is on the old wood that the flowers appear.

H. arborescens grandiflora. Also known as "Hills of Snow," "Snowball Hydrangea" and "American Hydrangea." A magnificent new shrub destined to become one of the most popular hydrangeas. The pure snow white flowers come into full round heads of very large size commencing in

LILAC.

May or June according to locality and continuing until August or later—an unusual thing. One of its most valuable characteristics is its coming into bloom just after the passing of all the early spring shrubs, while its long season of bloom renders it doubly valuable to every owner of a garden. Makes a magnificent hedge.

H. paniculata grandiflora. This is one of the most valuable hardy shrubs. It attains a height of 3 to 5 feet, and is perfectly hardy in all parts of the country. The flowers are white, borne in immense panicles nearly a foot in length. It commences flowering in July and continues until November. The plant should be cut back every spring at least one half of last season's growth, as the flowers are borne on new wood and are much finer when the plant is treated in this way. An excellent shrub for cemetery planting.

H. Hortensia Japonica. [*coerulea*]. Blue Japanese [dwarf 2 to 3 ft]. Flat-heads of flowers which are blue in the center with singular sterile flowers on the margin. Requires winter protection in colder sections.

H. Hortensia Otaksa. Another Japanese variety known by its huge heads of pink or blue flowers as the individual case may be. The color is not constant in either case. Flowers very large, produce freely.

H. Thomas Hogg. This Japanese variety has immense trusses or flowers, at first slightly tinged with green, becoming of the purest white and remaining so a long time.

HYPERICUM. St. John's Wort

H. Moserianum. A grand variety, with large bright golden yellow flowers 2 inches in diameter. A continuous bloomer until cold weather.

INDIAN CURRANT. See Snowberry.

JAPAN SILVER THORN. See *Elaeagnus*.

JUNE BERRY. *Amelanchier*

Improved Dwarf [*A. Canadensis* var. *oblongifolia*]. The fruit is borne in clusters, reddish purple in color, changing to bluish black. In flavor it is mild, rich, subacid; excellent as a dessert fruit or canned. It is extremely hardy. In habit it is similar to the currant, the bushes attaining the same size. The blossoms are large and composed of fine white petals, which with its bright, glossy dark green foliage, renders it one of the handsomest of ornamental shrubs.

KERRIA. See *Corchorus*, page 65.

LILAC. *Syringa*.

Well-known shrubs that succeed everywhere. Few are aware of the wonderful improvement in the past few years. We offer a choice selection of the best new double varieties, remarkable for their large trusses and beautiful flowers. Should be in every collection.

Common Purple [*S. vulgaris*]. The well-known sort.

Belle de Nancy [Double]. Very large; brilliant satiny rose, white toward center. Very fine.

Charles X. A strong, rapid grower, with large shining leaves; large trusses of deep reddish-purple flowers. An old, well-known variety.

Common White [*S. vulgaris alba*].

LILAC, Continued.

Josikaea, or *Chionanthus-leaved* [*S. Josikæa*]. From Transylvania. A fine distinct species, of tree-like growth, with dark, shining leaves and purple flowers in June, after the other lilacs have done.

Madam Ludwig Spaeth. Panicle long; individual flowers large, single, dark purplish red, distinct; superb.

Madam Abel Chatenay [Double]. Large panicle; double white. Very fine.

President Grevy. A beautiful blue; individual flowers very double and very large, measuring three-quarters of an inch in diameter; the panicle is magnificent and often measures 11 inches in length and 5 inches across. One of the finest lilacs.

Senator Volland [Double]. Flowers rosy red.

Persian [*S. Persica*]. Medium size, with small leaves and bright purple flowers.

White Persian [*S. Persica alba*]. A fine sort, with flowers delicately tinged with rose-color.

MEADOW SWEET. See *Spiraea*.

MOCK ORANGE. See *Syringa Philadelphus*.

OLEASTER. See *Elaeagnus*.

PEARL BUSH. See *Exochorda*.

PLUM. (*Prunus*). See under Deciduous Trees.

PRIVET. *Ligustrum*

The Privet in all its varieties deserves attention as an ornamental plant. It is almost an evergreen, and grows freely in all soils; is compact and regular in its form, and bears shearing to any extent. The flowers appear in June and July. Makes fine ornamental single specimens and one of the most desirable hedge-plants; compact, free grower.

Common (*L. vulgare*). An English shrub with smooth, dark green leaves; showy white flowers; fruit purple. Hardy.

California (*L. ovalifolium* or *L. Japonicum*). A vigorous-growing variety, of fine habit, thick, glossy, nearly evergreen leaves. Of all ornamental hedge-plants this is the most highly prized. If cut to the ground one or two years after planting, it makes a very thick hedge right from the bottom, sending up many strong shoots. The leaves are a rich green, and will remain on the plants up to Christmas, and if they are a little sheltered they will keep green almost all winter. This is especially the case if the hedge has attained some age and has frequently been trimmed. Though it is a strong grower, it can be kept to a low size by frequent trimming. Leaves remain on all winter in the Willamette Valley.

QUINCE, JAPAN

Cydonia, or *Pyrus Japonica*

There are several flowering varieties, differing only in their color. Although of straggling growth they can be pruned to desirable shapes without injury. Their large, brilliant blossoms appear early in the Spring in great profusion; foliage bright green and glossy all through the Summer. It is sufficiently thorny and strong to make a valuable hedge, and its beautiful flowers make it very handsome for that purpose.

Scarlet [*C. Japonica*]. One of the best known, and a very handsome, hardy ornamental shrub. Has bright scarlet-crimson flowers in great profusion early in Spring. One of the hardy shrubs; makes a beautiful ornamental hedge.

Blush. A beautiful variety, with white and blush flowers.

ROCKY MOUNTAIN CHERRY. See Cherry.

ROSE OF SHARON. See *Althaea*.

SCOTCH BROOM. *Genista*

G. scoparia also known as *Cytisus scoparia*. [Scotch Broom]. The branches almost rush-like in appearance, bear lovely yellow flowers.

SILVER BELL or SNOWDROP TREE

Halesia

H. tetraptera. A fine, large shrub, with beautiful large white, bell-shaped flowers in May. Rare and desirable.

SNOWBALL. *Viburnum*.

Common [*V. sterile*]. A well-known favorite shrub of large size, with globular clusters of pure white flowers in the latter part of May.

V. opulus. [High Bush Cranberry]. Handsome and dense foliage; flowers white, in drooping flat cymes, followed by brilliant scarlet fruit in showy pendulous branches that remain on the plant all winter.

V. plicatum [Japan Snowball]. This Japanese variety of the old fashioned Snowball is one of the most valuable of our hardy shrubs. It forms an erect, compact shrub, 6 to 8 feet high; blooms in June and for a long time in a solid mass of white, the plants being completely covered from the ground to the top of the branches with large balls of flowers white as snow. The foliage in early summer is an olive-green, turning to very dark green later in the season.

JAPANESE SNOWBALL.

SNOWBERRY. *Symphoricarpus*.

S. vulgaris [Indian Currant, Coral Berry, St. Peter's Wort, or Waxberry]. Graceful small shrub; small flowers, followed by persistent deep red berries along the under side of branches.

S. racemosus. A well-known shrub with pink flowers and large white berries that remain on the plant through the winter.

SPIRAEA. Meadow Sweet

S. Anthony Waterer. A most beautiful variety of Bumalda. In habit of growth it is the same as its parent. The flowers are crimson in the bud when first open, fading afterwards to a deep pink. It blooms about the close of June, and, if the flowers are cut off as fast as they commence to decay, there will be a continuance of them throughout the season, to some extent.

S. aurea [Gold-leaved Spirea]. Flowers fine, white; foliage of a beautiful golden color, which gives variety to the lawn and renders it very desirable.

S. callosa alba. A white-flowering variety, of dwarf habit; very fine. Remains in flower all summer.

S. prunifolia flore pleno [Double-flowering Plum-leaved Spirea]. Very beautiful; its flowers are like white daisies. From Japan. Blossoms in May.

S. Thunbergii. Profusion of small white flowers in early spring. Forms a rounded, graceful, dwarf bush; branches slender and somewhat drooping.

S. Van Houttei. The habit of the plant is pendulous, yet upright, giving a most graceful appearance even when out of bloom. The flowers are pure white and borne in dense clusters along the whole length of the branches, often weighing them to the ground. One of the finest ornamental shrubs that we offer. Excellent as a single lawn plant, or for grouping with other shrubs; also a fine hedge-plant.

ST. JOHN'S WORT. See *Hypericum*.

ST. PETER'S WORT. See *Snowberry*.

SYRINGA, or MOCK ORANGE.

Syringa Philadelphus

Most all the species and varieties of the *Syringa Philadelphus* have white flowers, many of them quite fragrant.

Garland [*P. coronarius*]. A well-known shrub, with pure white, sweet-scented flowers.

Golden-leaved [*P. aurea*]. A very pretty plant of medium size, with golden yellow foliage. It

retains its color the entire season and is valuable for creating pleasing and striking contrasts with both green and purple-leaved shrubs.

Lemoine's Erect [*P. Lemoinei erectus*]. A charming variety of upright growth; flowers small, yellowish white, fragrant, more clustered than the older sorts, completely covering the bush.

SWEET-SCENTED SHRUB. See *Calycanthus*.

TAMARIX. Tamarisk.

African [*T. Africana*]. A very beautiful shrub, with very fine, feathery foliage somewhat like the Juniper. This sort has light pink flowers in small racemes, which appear toward the close of May or the first of June. A valuable shrub for near the seashore or in sandy soils where others do not do so well. They thrive in the very spray of the salt water.

VERBENA SHRUB, or BLUE SPIRAEA

Caryopteris Mastacanthus

A new shrub, which is planted because of its blossoming late in the Fall when but few shrubs are in flower. In the axil of each leafstalk is a bunch of bright blue flowers. It continues in flower from the middle of September until frost. An entire bed of this plant produces a striking effect. 2 to 3 feet high when grown. A valuable plant for bedding.

WAXBERRY. See *Snowberry*.

WEIGELA. Diervilla.

Candida [*D. Candida*]. This is the very best of all the white-flowering Weigelas. A strong, upright, erect grower; flowers pure white and produced in great profusion in June and continue to bloom during the entire Summer. One of the most satisfactory of shrubs.

D. Eva Rathke. A very fine variety 3 to 4 feet in height. Rich, deep, scarlet blossoms which follow a week after most other varieties. A beautiful, distinct, clear shade. Sometimes called a brilliant crimson.

Van Houtte. Clear, carmine flowers. Showy and handsome.

Rose-colored [*D. rosea*]. An elegant shrub, with fine rose-colored leaves. Introduced from China by Mr. Fortune and considered one of the finest plants he has discovered. Quite hardy. Blossoms in May.

Variegated-leaved [*D. nana foliis variegata*]. Leaves bordered with yellowish white, finely marked. Flowers bright pink, and borne in great profusion.

EVERGREEN SHRUBS

This class of shrubs should not be neglected when planting a lawn or park. They fill the same relative position to the flowering shrubs that evergreens (conifers) do to the deciduous trees. Nothing could be more ornamental than a fine bed of Rhododendrons.

AUCUBA JAPONICA

Japan Spotted Laurel; Gold Dust Tree.

A small, beautiful shrub, with curious gold-blotched leaves. Needs protection in winter. We list two varieties.

A. *J. maculata*. Leaves long and narrow, irregularly toothed. Color deep green.

A. *J. lanceolata*. A desirable variety with deep green, lance-shaped leaves.

ASHBERRY. See Mahonia.

ADAM'S NEEDLE. See Yucca.

BOX. Buxus.

Dwarf (*B. nana*). Used principally for borders and edgings, for which purpose it is the best plant in cultivation.

Tree (*B. sempervirens aborescens*). A very desirable small tree in the yard or garden; well adapted to small places; prefers a shady situation. It can be made to assume any form.

B. *Variegata*. A variety of Tree Box, forming a beautiful small bush, blotched with white.

BURNING BUSH. See Euonymus.

CALICO BUSH. See Mountain Laurel.

EUONYMUS.

Spindle Tree, Strawberry Tree, or Burning Bush.

E. *Japonicas radicans variegatas*. A neat trailing variety with small, glossy green leaves, broadly margined with white. Valuable for rock work or borders of beds, also for vases or baskets. This variety is hardy in the North.

GOLD DUST TREE. See Aucuba.

HOLLY. Ilex

American (*I. opaca* or *I. quercifolia*, Meerb). A tree with spreading short branches, sometimes reaching to 50 feet in height, forming a narrow, pyramidal head. Leaves have large remote spiny teeth, rarely entire. Fruit dull scarlet, usually solitary. Hardier than the aquifolium but less handsome.

English or European [*I. aquifolium*]. A beautiful medium growing evergreen tree, with shining, dark, green leaves with spiny teeth, short, spreading branches, forming an oblong or pyramidal head. In winter it is covered with bright red berries. Much used for Christmas decorations. While in time it will attain a height of 30 to 40 feet, it is slow growing and usually classed as a shrub or small tree.

Pyramidalis [*I. aquifolium pyramidalis*]. Pyramidal or sometimes known as "Dutch" Holly. A variety of the European Holly with many of the leaves spineless. Grows to a more pyramidal form than the "English." Berries grow more in clusters and the berries are borne in large quantities at a much earlier age. A fine decorative variety.

Golden Variegated [*I. aquifolium golden variegated*]. Leaves having a large blotch of creamy yellow, surrounded by a green border.

Silver Variegated [*I. aquifolium silver variegated*]. Similar to the Golden variegated except that the leaves are blotched and tinted with silvery white in place of creamy yellow.

KALMIA. See Mountain Laurel.

Lauro-cerasus

CHERRY LAUREL or ENGLISH LAUREL [*Prunus lauro-cerasus*]. A bush or small tree reaching about 10 ft. in height with handsome evergreen foliage. Its glossy evergreen leaves makes it very popular for both summer and winter. Flowers small, white, in axillary or terminal short racemes in spring. Single specimens make fine plantings or in pairs for driveways or entrances, also very fine for hedges.

LAURUSTINUS. (*Viburnum Tinus*)

A well-known winter-flowering shrub of great beauty, producing an abundance of white flowers; well adapted for hedges.

Rotundifolia. Far superior to the common variety; leaves rounded, deep glossy green; flowers much larger; better adapted to the Willamette Valley; never sun-scalds.

Variegata. Leaves blotched with silvery white. Very fine.

LIGUSTRUM. See Privet.

MAHONIA, (Ashberry) or Holly-leaved Barberry

[*Mahonia aquifolium* (Berberis)] Oregon Grape.

A handsome shrub with foliage similar to the Holly, bright glossy green in the growing season, turning in the autumn to rich red and bronze shades. Persistent throughout the winter. The yellow blossoms in April are very attractive, and a profusion of blue berries in autumn. Does best where the ground is deep, rich and shaded. Usual height from 4 to 6 feet. The beautiful evergreen foliage is shipped east at Christmas time, taking the place of Holly. One of our most attractive evergreen shrubs, for decorative planting.

MOUNTAIN, or AMERICAN LAUREL

Calico Bush [*Kalmia latifolia*]

Broad, glossy green, shining foliage; flowers in large and showy clusters of elegant shape, and most beautiful colored, mostly pink or white. Few broad-leaved evergreens are as beautiful in foliage, and none can excel the beauty and delicate forms of its flowers. Requires about the same treatment as the Rhododendron.

OREGON GRAPE. See Mahonia.

PRIVET. See Deciduous Shrubs.

RHODODENDRON, or ROSEBAY.

This, wherever known, is universally acknowledged to be the most showy, magnificent, hardy evergreen shrub that grows. It will thrive in any good soil without any special preparation, and in the full blaze of the sun. But it is more luxuriant in good, well prepared soil of leaf-mold, or leaf-mold and muck and peat mixed, and in partial shade, and does especially well near the sea coast. It is abundantly supplied with numerous fibrous roots that retain a quantity of earth in lifting, so that it can safely be removed at any season of the year, except the short period of their rapid growth, covering a portion of June and July. The broad, thick evergreen foliage, with its glossy richness, would alone entitle it to a place foremost in the rank of evergreen shrubs, but when in June this mass of luxuriant foliage is almost hidden by the magnificent array of beautiful flowers in clusters and each cluster large enough for a lady's bouquet, it gives it a pre-eminence that our pen must fail to portray. Planted singly, in the flower garden or upon the lawn, they are objects of interest; but their greatest beauty, as in many other plants, can only be fully developed by artistically massing

RHODODENDRONS

them in beds upon the lawn, when the different varieties of white, blue, purple, cherry, lilac, mauve and crimson can be made to blend or contrast at will, producing an effect unrivaled by any other hardy plant in existence. We have a considerable list of hardy grafted varieties that are of higher price and much more desirable than the seedlings of the Catawbiense, as they compass in the different sorts the entire range of colors, and each in itself distinct and definite, while the seedlings, as a rule, vary but little from the original type. When soils are too strongly impregnated with lime, the original soil should be removed to a good depth and width where the Rhododendrons are to be planted and the space filled in with leaf-mold and peat or muck mixed, or some other soil tolerably free from lime. They will repay all care that may be bestowed in preparing a bed suitable to their wants.

SPINDLE or Strawberry Tree. See Euonymus.

YUCCA.

Spanish Bayonet, or Adam's Needle.

Has a fine appearance; the stem is two feet above the ground, covered with large, bell-shaped flowers on laterals, forming a perfect pyramid; valuable for rock work. We list two varieties.

Y. aloifolia. Slender, simple trunk; dagger-shaped leaves 1 to 2 inches wide; very stiff; flowers white, often tinged with green or purple; panicle compact, close to leaves.

Y. filamentosa. The well-known garden variety, thread-leaved, creamy white; 2 to 4 feet. The best known and most largely planted of the Yuccas. July.

HEDGES

Nothing could be more beautiful than a neatly trimmed hedge of evergreens, and they are useful for boundary fences, screens, etc. We give below some of the best varieties for ornamental hedges, screens, wind-breaks or boundaries.

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American Arborvitae—Evergreen	57
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DEFENSIVE HEDGES.

Honey Locust	49
Osage Orange	52
Both Deciduous.	

All described in appropriate places in this Catalogue; make beautiful ornamental hedges.

PURPLE (JAPANESE) WISTARIA.

HARDY CLIMBING VINES

It seems unnecessary to speak at length of the value of the climbing plants in our gardens and pleasure grounds. They are equally ornamental on the walls and terraces of the stable, mansion, and on the humblest cottage, over whose low roof a mantle of rose or clematis sheds such a transforming cloud of beauty. They grace the garden walls and take from stiff and hard lines their ugliness by fresh foliage, pretty flowers and, often, pleasing fruit. Invaluable for covering trellises, walls, cottages, etc.

AKEBIA

A. quinata. A very beautiful, perfectly hardy, fast-growing Japan vine, with magnificent foliage; produces flowers in large clusters of chocolate-purplish color, possessing a most delicious perfume; unsurpassed for covering trellises and verandas, the foliage never being attacked by insects.

AMPELOPSIS

A. Veitchii (Japan Ivy, or Boston Ivy). A beautiful, hardy climbing plant, of Japanese origin. Leaves a little smaller and more ivy-like than the American. This is one of the finest climbers we have for covering walls, as it clings firmly to the smoothest surface, covering it smoothly with the over-lapping leaves, which form a perfect mass of foliage. The color is a fresh deep green in summer, changing to the brightest shade of crimson and yellow in autumn. It is quite hardy and becomes more popular every year. For

covering walls, stumps, etc., no plant is more beautiful.

A. quinquefolia (Virginia Creeper, or American Ivy). A native vine of rapid growth, with large, luxuriant foliage, which, in autumn, assumes the most gorgeous and magnificent coloring. The blossoms, which are inconspicuous, are succeeded by handsome dark blue berries. Like the bigonia and ivy, it throws out tendrils at the joints, by which it fastens itself to anything it touches.

ARISTOLOCHIA. See Dutchman's Pipe.

BIGNONIA, or TRUMPET FLOWER

Tecoma

T. radicans. A splendid climber; vigorous and hardy, with clusters of large, trumpet-shaped scarlet flowers in August.

T. grandiflora. New. Leaves thick and shining, and immense blossoms of gorgeous crimson and yellow.

CLEMATIS. *Virgin's Bower*

Clematis plants of the improved sorts are exceedingly hardy, slender-branched, climbing shrubs of marvelously rapid growth and handsome foliage, which produce beautiful large flowers of various colors in great abundance, and during a long period. In the several species and varieties of it, the Clematis surpasses all other hardy climbers in its adaptation to many uses and locations. They do best in a rich soil, in a sunny situation.

Duchess of Edinburg. Without doubt the best of the double pure whites. Deliciously scented.

Henryi. This is the finest of all white Clematises, and should find a place in every collection. It is not only a vigorous grower, but is a remarkably free and continuous bloomer, beginning with the earliest and holding on with the latest. Flowers large, beautiful creamy white, with reddish chocolate anthers. Art cannot produce a picture corresponding in any degree to the wealth of beauty found in the flowers of this variety. June to October.

Jackmani. This is perhaps the best known of the fine perpetual Clematises, and should have credit for the great popularity now attending this family of beautiful climbers. The plant is free in its form of growth, and an abundant and successful bloomer, producing flowers until frozen up. The flowers are large, and of an intense violet-purple, remarkable for its velvety richness. Introduced in 1862,—since which time many new varieties have been brought forward. July to October.

Jackmani alba. A strong, vigorous grower, perfectly hardy, and a most prolific bloomer; fine, large, pure white flowers.

Madam Edouard Andre. This is the nearest approach to a bright red Clematis, and has been

HARDY PERPETUAL CLEMATIS

called the **Crimson Jackmini.** The plant is a strong, vigorous grower and very free in bloom. Color a distinct crimson-red; a very pleasing shade and entirely distinct from all other varieties.

Paniculata (Sweet-scented Japan Clematis). A Japanese plant possessing unusually attractive merits. A vine of very rapid growth, quickly covering trellises and arbors with handsome, clean, glossy green foliage. The flowers are of medium size, pure white, borne in immense sheets, and of a most delicious and penetrating fragrance. The flowers appear in September, at a season when very few other vines are in blossom.

Ramona. A strong, rampant grower and a true perpetual bloomer; flowers appear on the last year's growth and on the new shoots, giving an abundance of blossoms all through the season; color deep, rich lavender.

CINNAMON VINE

Dioscorea divaricata

A fine hardy climber, and well known in some parts of the country as Chinese Yam. The tubers grow very large, and are edible like a sweet potato. The vine is a beautiful rapid grower, producing sweet-scented flowers.

CHINESE MATRIMONY VINE

Lycium Chinense, or vulgare

A neat, half-climbing plant, bearing small, light pink flowers in summer, followed by berries which turn to a beautiful scarlet in the fall, when it is very ornamental.

DUTCHMAN'S PIPE. *Aristolochia Sipho*

A magnificent hardy native vine of rapid growth, with very large, heart-shaped leaves and brownish flowers, resembling in shape a miniature pipe. Splendid for archways or verandas.

EULALIA

Zebra Grass.

Japonica Zebrina. One of the most striking and distinct plants. Unlike most plants of variegated foliage, the striping or marking is across the leaves instead of longitudinally, the leaves being striped every 2 or 3 inches by a band of yellow $\frac{1}{2}$ inch wide.

HONEYSUCKLE. *Lonicera*

Chinese Twining (*L. Japonica, or L. Sinensis*). A well-known vine holding its foliage nearly all winter. Blooms in July and September; very sweet.

Hall's Japan (*L. Halliana*). A strong, vigorous evergreen variety, with pure white flowers, changing to yellow; very fragrant. Covered with flowers from June to November.

Japan Golden-leaved (*L. aurea reticulata*). A handsome variety, having foliage beautifully netted or variegated with yellow. Flowers yellow; fragrant.

Monthly Fragrant (*L. Belgica*). Blossoms all summer; flowers red and yellow; very sweet. Rapid grower.

Scarlet Trumpet (*L. sempervirens*). A strong

HONEYSUCKLE, continued

grower, and produces bright scarlet, inodorous flowers all summer.

See also Upright Honeysuckle

IVY. Hedera

Evergreen Ivies often suffer in winter if exposed to the sun, and should therefore be planted on the north side of a wall or building.

American, Japan, Boston. See Ampelopsis.

English (*H. Helix*). A well-known old and popular sort.

Variegated-leaved (*H. folia variegata*). With smaller leaves than the preceding, variegated with white.

Irish (*H. Canariensis*, or *Hibernica*). The well-known old sort.

JASMINE. Jasminum

Hardy Yellow (*J. nudiflorum*). Bright yellow, fragrant blossoms.

Hardy White (*J. officinale*). Very sweet-scented and highly desirable.

KUDZU VINE

Kudzu Vine (*Pueraria Thunbergiana* or *Dolichos Japonica*, also called *Pachyrhizus Thunbergiana*). A magnificent climbing vine for all purposes, well established vines growing 40 to 50 feet in a season; especially adapted to covering pergolas or to secure a dense shade. Leaves resemble those of lima bean in shape and are dark green and woolly, often changing during the season to green with cream or yellow along the veins. Flowers rosy-purple, pea shaped, borne in long, handsome racemes.

SILVERY-SWEET VINE

Actinidia polygama

A new hardy climber from Japan, of remarkable beauty. The foliage on the ends of the flowering shoots is of a glistening silvery white color, giving the whole vine, from a little distance, the appearance of being covered with large white flowers blossoming among its bright green leaves. The effect is very marked and beautiful. The flowers, which appear in this latitude about the middle of June, lasting from two to three weeks, are creamy white with purple centers, having numerous stamens and bright yellow anthers; remarkably sweet, resembling the Lily-of-the-Valley in fragrance.

TRUMPET VINE. See Bignonia.

WISTARIA

Chinese Purple (*W. Sinensis*). A most beautiful climber of rapid growth, and producing long, pendulous clusters of pale blue flowers. When well established, makes an enormous growth. It is very hardy and one of the most superb vines ever introduced.

Chinese White (*W. Sinensis alba*) Introduced by Mr. Fortune, from China, and regarded as one of the greatest acquisitions. Rather tender.

PAMPAS GRASS. *Gynierium digertium*

Half-hardy perennial. A native of South America. Very beautiful. Roots require winter protection in cold climates.

Elegans (*G. elegans*). Plumes silvery white, upon long stems; blooms early. A graceful new variety that is bound to become popular. The large plumes when dried make a splendid addition to a bouquet of dried grasses.

CHINESE WISTARIA

BULBOUS AND TUBEROUS-ROOTED PLANTS**PÆONIA. Peony**

Plant in deep, rich, well prepared soil, covering the buds but an inch or two. Do not expect too much the first year as they are a little slow in establishing themselves but will make up in attractiveness later. They may be planted singly or in beds or along borders, a large bed making a fine show, surpassing even the Rhododendron and Rose. It is the flower for the millions, coming into blossom early—May or June.

Herbaceous. This splendid class contains the largest, most showy and attractive flowers in cultivation, almost rivaling the rose in color and blossom, and it is to be regretted that they have been so much neglected. They are of stately growth, very hardy and delightful when in blossom. At the present time the public is beginning to appreciate the many fine varieties of recent introduction, ranging from pure white through the different shades of pink, rose, variegated, purple, white, etc. They increase in

PAEONIA, continued

beauty with age and may be planted in almost any situation. We recommend fall planting. They succeed best in rich soil and will be benefited by a mulch of rotten manure during the winter, which may be lightly spaded into the soil in the spring. Many of them are very double and have a delicate and refreshing fragrance. They are easily cultivated and require but little protection. Blossoms from 4 to 8 inches in diameter. Foliage rich, glossy, deep green color.

Adolph Rousseau. Very large; deep, brilliant pink. One of the best red varieties and is a free bloomer.

Delicatissima. A late flowering variety of rare beauty. Full, double immense blossoms, delicate, clear pink, passing to bluish white center. Very fragrant, blooms freely.

Eduis superba. Bright violet-rose, silvery reflex. Fragrant and early.

Festiva maxima. Extra large, in clusters, fragrant, the finest early white. It is pure white, except for a few flakes of crimson on some of the center petals. Full double flower, as near a perfect paeony as one could desire.

Felix Crousse. Very bright red; large ball-shaped flower.

Marie Lemoine (Calot). Large, sulphur white, creamy center; double, massive flowers; strong stems; one of the finest, very late.

Modeste Guerin. Deep cherry rose, bright, showy; very large, distinct and fine shaped; fragrant, one of the best.

Rubra triumphans (Delache). Bright carmine.

Also other choice named varieties.

AMARYLLIS

A beautiful class of plants with large, drooping, bell-shaped, lily-like flowers, varying in color from the richest crimson to pure white striped with crimson or scarlet.

CANNA

Indian Shot Plant. Stately and highly ornamental plants, for both flowers and foliage. They attain a height of 2 to 5 feet and may be grown singly or in masses. Leaves green or brownish red; flowers scarlet, crimson, yellow, cream, etc., variously marked.

New Large-flowering French and American. Not so tall as the old-fashioned sorts, but with flowers of great beauty; everywhere popular. These seedlings vary in color, ranging through all shades of yellow and orange to richest crimson, scarlet and vermillion. Some are plain and some spotted.

CROCUS

A universal favorite and one of the earliest garden ornaments. Should be planted about 2 inches deep. Colors blue, white, yellow and striped.

DAHLIAS

Through interest aroused by Dahlia Shows and Dahlia Societies and by the introduction of a number of new varieties, both elegant and exquisite, the cultivation of the Dahlia is again being given the attention it deserves. There is

nothing that, with the same amount of money invested, will give more show of stately and brilliant autumn flowers than the Dahlia. It is especially fine for borders, and makes fine beds. No flowering plant produces a finer display for a continuous period. Early in the eighties the introduction of the original Cactus Dahlia Juarezi founded a new race known as the Cactus varieties.

Within a few years the new Paeony flowered Dahlia has made its appearance. Its immense flowers and graceful forms are a great improvement over the old single varieties. They are valuable for cut flowers, and make a splendid show for decorative work in the garden. We have the following:

Cactus Dahlias
Paeonia Flowered Dahlias
Decorative Dahlias
Show Dahlias
Pompon Dahlias

GLADIOLUS

The Gladiolus is the most attractive of all the summer flowering bulbs and deserves a place in every garden, as it is sure to flower and do well with little care. They are the easiest thing to grow imaginable, but they do appreciate full sunshine.

Set bulbs about four to six inches deep when early garden is made, and additional plantings two weeks apart will give a long period of bloom, from July to November.

Cut when first flowers on the spikes are opening, and then place in water indoors, buds open to the end of the spike, affording beautifully decorative bouquet for ten days. No other flower is more lasting, or more satisfy in its rich coloring.

We list the following Oregon grown:

America. Exquisite soft pink with lavender tints. Robust grower and splendid spike of flowers. We specially recommend this.

Attraction. Presents a most charming contrast with its deep crimson flowers and white throat.

Augusta. Pure white, throat delicately shaded with lavender. Splendid as a cut-flower.

Baron Hulot. A rich velvety blue, greatly admired, and a decided novelty.

Glory. Unique in having flowers with daintily ruffled petals. The color a rich cream with mingled apricot and red markings in throat. Absolutely distinct. A vigorous grower.

Klondyke. Primrose yellow, set off by a striking maroon blotch.

Madam Monneret. Fine spikes of a delicate rose. Valuable as a late bloomer.

Mrs. Francis King. A beautiful light scarlet, with pencillings of a deeper shade. Flowers unusually large—individual blooms, sometimes six inches in diameter. We recommend this one.

Pink Augusta. New but already tremendously popular. Clear pink, early blooming in the garden and excellent for florists' forcing.

Princes. Brilliant crimson with white blotches on lower petals. An open flower of immense size. No finer gladiolus grown.

We also carry a good line of imported Gladiolus both named and in general assortment.

HYACINTHS

The most beautiful and fragrant of early spring-flowering bulbs, much used for winter forcing. Too well known to need description. Large assortment of colors and varieties.

IRIS

Germanica (German Iris). The true "Fleur de Lis," the national flower of France. They are perfectly hardy, thrive anywhere, grow and blossom luxuriantly, particularly if plentifully supplied with water or if planted in moist situations, as on banks of ponds, etc. Plants well established produce from 50 to 100 spikes of bloom, deliciously fragrant and fine for cutting. In beauty the flowers rival the finest orchids, colors ranging through richest yellows, intense purples, delicate blues, soft mauves, beautiful claret-reds, white, primrose and bronzes of every imaginable shade.

Kaempferi (Japan Iris). Finest of all the Iris family. The flowers are of immense size, from 6 to 8 inches in diameter, and of the most beautiful and delicate shades. They are perfectly hardy, and flower in great profusion during June and July. A well-established plant gives a dozen or more flower-stalks 2 to 3 feet high, each stalk producing 2 to 4 enormous blooms. The Iris thrives best if planted in a moist soil; if this cannot be had, should be plentifully supplied with water while growing and flowering.

JONQUILS. *Narcissi*

Pretty varieties of the *Narcissus*, having a very agreeable fragrance; adapted to either pots or out-door culture. The bulbs being small, six or eight may be put in a 6-inch pot.

LILLY-OF-THE-VALLEY

(*Convallaria majalis*)

The Lily-of-the-Valley is as hardy as any plant can possibly be, and when planted in the open ground will increase rapidly. For the house we have what are called "pips"—young roots with flowering stems, that will bloom in a few weeks after planting, and will flower well in baskets of damp moss, or potted. For the garden we can ship either in the spring or autumn.

LILIES. *Lilium*

No class of plants capable of being cultivated out-of-doors possesses so many charms; rich and varied in color, stately and handsome in habit, profuse in variety, and of delicious fragrance, they stand prominently out from all other hardy plants. They thrive best in a dry, rich, well-drained soil where water will not stand in winter. After planting they require very little care, and should not be disturbed for several years; established plants blossom more freely than if taken up annually.

Auratum (Gold-banded Lily of Japan). Flowers very large, of a delicate ivory-white color, thickly dotted with rich chocolate-crimson spots, with a bright golden band through the center of each petal. The finest of all Lilies.

Elegans atrosanguineum. Dark blood-red. Erect.

Harrisii (the Bermuda Easter Lily). Flowers large, trumpet-shaped, pure waxy white, gracefully formed and delightfully fragrant. The ease with which it can be forced into flower in winter has made it wonderfully popular as a winter flower. Tens of thousands of it are grown every year for church decorations at Easter.

Longiflorum. A well-known beautiful variety, with snow-white trumpet-shaped flowers that are very fragrant. It is quite hardy and blossoms freely in the open ground in June or July. Is also used largely for forcing for the Easter holidays; the flowers having more substance and lasting longer than the Bermuda Lily.

Tigrinum fl. pl. (Double Tiger Lily). Bright orange-scarlet, with dark spots; a strong-growing showy variety, and entirely hardy. Succeeds well everywhere.

Speciosum rubrum. White, beautifully spotted red; flowers in August. This is one of the most useful of the Lily family, perfectly hardy, and flowering well under all circumstances.

Speciosum album. Very fragrant, large flowers; pure white, with a green band running through the center of each petal. One of the best.

NARCISSI

We have a choice collection of these fragrant winter-blooming plants.

TIGRIDIA

One of the most showy of all summer bulbs, and blooms from midsummer until frost, growing 3 feet high, with large wide-open triangular blooms, 4 to 6 inches across. The colors and markings are very brilliant and peculiarly odd and attractive, and clumps of them in the border have a most gorgeous effect. It is difficult to name a flower of such unique and exquisite beauty as a *Tigridia*, the superb spotting being so distinctive and handsome. They are easily grown and always more than satisfactory.

TUBEROSE

(*Polyanthus tuberosa*)

These deliciously fragrant, white, wax-like plants should be in every garden. This valley is particularly adapted to their successful culture.

TULIPS

Owing to the late spring frosts in the colder sections, bedding plants cannot be safely planted in such localities before the early spring-flowering bulbs are through blossoming. Without these bulbs, for one or two months of beautiful spring weather, our garden would present a bare appearance. We know of nothing that for the money invested will give a more gorgeous show during early spring, and there is nothing more easily grown than the Tulip. They thrive well in almost any soil. Should be planted in October and November.

ROSES

Roses are the most beautiful of flowers, and are among the easiest to raise to perfection. Even from earliest history it has been the favorite of all cultivated plants and still holds its undisputed sway as Queen of Flowers. We have given great care and attention to their culture, and are constantly adding new varieties, after thoroughly testing them, and dropping old ones that for any reason do not give satisfaction, our idea being to keep down the list of varieties to the fewest number possible, and still have those that will do well in every section. Not all varieties listed will do well in every district, as we cover every part of the country West of the Rocky Mountains and many parts east of these Mountains each year in our business. We try to keep up to date, but before placing them on the market, we always test them, as many varieties are not worthy of general distribution. *For this reason if you do not find in our list what is wanted write us direct as we may have it in our experimental grounds in small numbers.*

PLANTING—Roses thrive best when they have plenty of warmth and free air circulation. For this reason give them a sunny situation, and if possible well removed from buildings. It is inadvisable to plant them in even partial shade as this induces mildew in dull spring weather. However, they will endure severe exposure, and one need not hesitate to plant even if the situation is less favorable. Almost any good garden soil is suitable, but one with a good loamy subsoil is the best. Spade the ground to a depth of eighteen inches, at least, and pulverize well, mixing in plenty of well rotted manure. Spread the roots out carefully and place fine soil among and over them, *treading it around them firmly*; do not allow the manure to come into contact with the roots, fill in balance of the dirt, leaving the top soil loose and fine so as to form a dust mulch.

MANURE—Roses require plenty of manure and good cultivation. *Cow manure* is the best fertilizer for Roses and after they are established they are great feeders. One of the best plans is to drench the roots occasionally with liquid manure and in the fall when the ground is dry apply a heavy surface dressing of manure, which should remain during the winter and be spaded under in the spring. In dry climates spade under in winter.

PRUNING—Old and decayed branches, and about one half the previous season's growth, should be cut away early in the spring, while they are still dormant, and a little cutting back after the first bloom, usually about the middle of September will insure late flowers. As a rule prune close for size and quality, or what is known as exhibition flowers. For quantity or garden decoration follow same course with weak, old or unripe wood but do not cut back the strong thrifty shoots so severely. In shortening always prune to an "eye" pointing away from the center of the plant.

When planting prune all roses severely. In Fall planting prune the following spring, and when planted in the spring prune at time of planting.

PESTS AND DISEASES

Roses are not badly afflicted with diseases and pests in most sections, the two giving most trouble being green aphids and mildew. For the *aphids* use a strong solution of tobacco water or Phytophiline, on a quiet evening with a spray pump. For *mildew* one of the best remedies is flour of sulphur dusted over the affected parts as soon as it makes its appearance. A weak solution of Bordeaux sprayed over the bushes early in the winter and early spring will often prevent these ills to which the rose is subject. Another effective remedy is to take two ounces of slacked lime, mix with one pound of sulphur, place in a pot, add two gallons of water, boil for three or four minutes, until the sulphur, which is insoluble in water, enters into solution through action of the lime, forming a lime sulphur solution. When cold, dilute one part of this solution to five parts water and spray affected parts thoroughly.

For the convenience of our customers we have arranged most of our roses in alphabetical order, designating the *class* to which they belong by abbreviations.

ABBREVIATIONS

H. P.—*Hybrid Perpetual or Remontant Roses.*

H. T.—*Hybrid Tea Roses.*

T.—*Tea Roses.*

N.—*Noisette Roses.*

H. N.—*Hybrid Noisette Roses.*

Cl.—*Climbing Roses.*

B.—*Bourbon Roses.*

Poly—*Polyanthus.*

H. P.—*Hybrid Perpetual or Remontant Roses.* The May and June Roses, so admirably suited for garden culture, the formation of rose beds, hedges, and permanent plantings, where hardy roses are desired. Although called perpetual, they are not so much so as the Teas, but bloom only at special times during the summer and fall. With the exception of the Teas and Hybrid Teas, no class of rose is so popular and widely known as the Hybrid Perpetual. In May and June these hardy Roses are brilliant with large, perfumed flowers of richest colors, far excelling the Everblooming class in size and effects. They embrace some of the most beautiful, and delightfully fragrant and richly colored varieties. Many of those offered in this list give occasional flowers during the summer, and again in the fall perfect and even finer flowers than those which were the glory of the garden in June—the month of roses.

H. T.—*Hybrid Tea Roses.* These differ but little in general characteristics from the Hybrid Perpetuals. They are a beautiful class of half-hardy roses, combining to some extent the hardiness of the Hybrid Perpetuals and the free blooming qualities of the Teas and Noisettes. Hybrid Teas or Hybrid Noisettes should be in every collection. The Hybrid Teas originated from crosses of the Teas or Noisettes with the Hybrid Perpetuals and many have the fragrance of the former with the hardiness of the latter.

Most of these are hardy, and free bloomers and are becoming more popular each year.

TEAS, CHINA, NOISETTE and BOURBON VARIETIES

The Hardest Everblooming Roses

These are the roses that really bloom constantly. They begin early in the season, or almost as soon as planted and continue all through the summer and autumn months, until stopped by cold weather or freezing. They flourish luxuriantly from Canada to Mexico. The flowers are beautiful in form and fullness, and embrace all the lovely shades and colors that the rose assumes. Being natives of a more genial climate, they require protection in the North, and must not be expected to survive in the open ground where the temperature falls much below zero. By cutting off all the un-ripened wood and removing the leaves, and covering the bushes with 2 to 4 inches of dirt, and over this placing 4 to 6 inches of leaves after the cold weather sets in and bushes are well ripened, they will usually go through unharmed even in the colder sections. These coverings must be carefully removed in the Spring. In sections west of the Cascade and Sierra Mountains this protection is usually unnecessary as the temperature seldom falls low enough to damage them.

ROSES—Teas, China, Noisette and Bourbon Varieties, continued

T.—Tea Roses. These are easily distinguished by their foliage, delicate fragrance and exquisite shades of color. They are continuous bloomers.

N.—Noisette Roses—or Champney Rose. Of American origin from seed of the White Musk Rose fertilized by the blush China (Bengal). John Champney of Charlston, S. C., raised a variety called Champney's Pink Cluster. A few years later Phillipe Noisette, a florist also of Charlston, raised from seed of this variety a blush variety which he sent to his brother in Paris, France, under name of Noisette, without giving Champney credit. Many fine roses are found among the Tea-Noisettes. Noisettes are mostly vigorous climbers; bright green foliage; delicate-tinted flowers, which have a tendency to grow in clusters.

Cl.—Climbing Roses

H. N.—Hybrid Noisette Roses.

B.—Bourbon Roses. This original type was introduced from the Isle of Bourbon about 1825 and said to be a cross between a China and Damask rose. Very fine autumn bloomers.

Moss.—Strong, vigorous growers, much admired for their moss-covered buds; hardy. Most varieties bloom but once in a season, but remain for a long time and are very handsome.

NEWEST ROSES

George Dickson (H. T.) Alex Dickson & Sons, 1912. Messrs. Dickson says: "We, with no little pride, issue it as the best Exhibition Rose ever raised by us; a statement the responsibility of which we gladly accept. The rose is named after the senior member of our firm, who is now approaching his 80th birthday, and hope he will have attained it when we begin to send this rose over the world. It is a rose that is always there, let the weather be what it may. Its vigorous growth, its thick, leathery beech-green cordate foliage, bespeak rare constitution; produces huge blooms, quite five inches across, that give an exhibitor invariably a top-row-corner bloom. It never blues, browns or seals, and its huge leathery shell-shaped lemon-white-based petals have wonderfully lasting qualities. The color is velvety black scarlet crimson with brilliant scarlet reflexed tips. This description is in no way overdrawn, the facts are beyond question."

RECENT INTRODUCTIONS

Duchess of Wellington (H. T.) Alex Dickson & Sons, 1909. "Color saffron yellow, stained with rich crimson, a shade of color hitherto unknown among roses, free flowering, vigorous."

Edward Mawley (H. T.) (Gold Medal N. R. S.) McGredy, 1911. "A remarkably distinctive and effective rose." "Among the many good new

roses we have to offer our customers for this season, this variety stands out pre-eminently as one of the very best. It outdistances any other dark velvety crimson rose in our collection from any point of view from which one might wish to take. It is a great big bloom composed of immense cupped petals, and is by all odds the richest and darkest color yet produced in the hybrid tea section. The plants are of vigorous growth and almost constantly in bloom. We feel no hesitancy in recommending it as the best rose of its color in cultivation today."

Jonkheer J. L. Mock (H. T.) Leenders, 1909. A mixture of bright red and salmon pink, sweet scented and vigorous. Was awarded a gold medal at the Jardin Bagatelle, Paris, in 1911. We have found it a satisfactory and beautiful variety, somewhat like *Farbenkonigin*.

Juliet (H. B.) Wm. Paul & Sons, 1910. "A distinct and very attractive novelty." "Of all the sensational novelties in roses which have appeared during recent years, particularly as applied to roses of hitherto unknown colors, we believe this new variety will easily head the list. To give an adequate color description is a most difficult thing to do, the coloring being absolutely unique. The outside of the petals over their entire surface are a deep old gold, while the reverse or interior is an exquisite shade of deep rosy red or scarlet in the opening bud, which gradually changes to orange pink as the blossoms mature. While we are telling you the good points of this rose we also desire to tell you some of its faults. The only one it possesses is the fact that it is a cropper, it flowers in masses principally during the spring and late autumn, and is usually devoid of bloom during the summer, but even with this fault admitted if it only threw one flower to a plant during the year, it ought to find a place in the finest rose gardens, for there is nothing in existence to equal its glorious color. The foliage is mildew proof in most sections and the plants are of unusually vigorous growth; buds and blooms very large, beautifully formed and intensely fragrant."

Lady Hillingdon (H. T.) Lowe & Sawyer, 1909. (Gold Medal) An ideal yellow tea rose with a splendid long bud. It blooms continuously throughout a long season and is unsurpassed as a cut flower. Its deep apricot yellow is of an especially rich tone. This new variety hails from England, where it received numerous first prizes. The open bloom is only fairly full but cut in the bud state is of superlative beauty.

Sunburst (H. T.) J. Pernet-Ducher, 1912. "A grand new orange yellow rose which may well be regarded as the acme perfection in roses of this color. The plant is of strong vigorous growth, sending up strong stout canes heavily clothed with handsome foliage. Another good feature of this rose is the fact that the blooms are usually formed singly at the ends of the shoots. This allows a full sap flow to individual blooms and accounts for their large size."

NEW OR SCARCE VARIETIES

Betty (H. T.) Dickson & Sons, 1905. (Gold Medal) "A rose of great merit; decidedly good as a long-stemmed rose for house decoration."—*Gardeners' Chronicle*. A superb variety, with

blooms of the most exquisite coloring imaginable; copper rose of lively tint, shaded with golden yellow at the base. The growth is strong and vigorous and well furnished with thick

ROSES—New or Scarce Varieties, continued

leathery foliage. Buds long and pointed.

Countess of Gosford (H. T.) McGredy, 1905. (Gold Medal.) Clear salmon-pink; base of petals suffused with saffron yellow, large, full and free; a delightful garden and bedding rose; free and very perpetual. It is a splendid rose of comparatively recent introduction, with long pointed buds and fairly full expanded blooms. A grand variety for cutting, with color which appeals to every one.

Dean Hole (H. T.) (Gold Medal) Dickson, 1904. A superb rose for any purpose; blooms very large, of great substance, of fine elongated form with high center; color silvery carmine, shaded salmon; absolutely distinct.

Dorothy Page Roberts (H. T.) Alex Dickson & Sons, 1907. A grand novelty in every sense of the word, and one of the most vigorous growers in the entire section of Hybrid Tea Roses. It is distinctly a cut flower Rose, for it is at its best in the bud state. The buds are of magnificent size and form. Color, an entrancing shade of deep coppery pink.

Harry Kirk (H. T.) (Gold Medal) Alex Dickson & Sons, 1907. A magnificent addition to the none-too-long list of yellow roses. The flower is of much the same form as the well known Kilarney, but of lovely deep sulphur yellow, becoming lighter at the edges of the petals. The buds are simply perfection in form. Petals very broad, smooth and rounded.

Hugh Dickson (H. P.) Hugh Dickson, 1904. This magnificent rose received the Gold Medal of the National Rose Society of England, a much coveted but difficult award to obtain. Awarded the Nickerson prize as the best red rose in ex-

istence for general garden purposes. Brilliant crimson, shaded with scarlet; good size and form, petals slightly cupped and reflexed, very fragrant.

J. B. Clark (H. T.) (Gold Medal.) Hugh Dickson, 1905. One of the most vigorous growing of all red hybrid Tea Roses, often throwing out canes six feet high. Color deep blackish crimson, with scarlet shadings. It is a specially fine fall bloomer; blooms very large, beautifully formed, having a high pointed center. Foliage dark green, with thick leathery leaves, which on the young growth it is a beautiful rich bronze.

Jean Note (H. T.) Pernet-Ducher, 1908. A splendid addition to the list of yellows. It reminds one of Franz Deegan, but is several shades deeper in color; center of bloom chrome yellow, passing to creamy yellow in the outer petals. Flowers full and globular; constantly in bloom.

Joseph Hill (H. T.) Pernet-Ducher, 1904. A rose which is as yet but little known, and one of simply indescribable beauty. The interior of the bloom is an exquisite shade of golden copper, merging at the edges of the petals to salmon pink. It is a strong, vigorous grower, throwing heavy canes and an abundance of flowers, and buds of uniformly fine quality. In the young growth the foliage is a rich bronze; during the cooler autumn months the blooms often come pure copper. Deliciously scented, and of unsurpassed effect as a cut flower.

Lyon Rose (H. T.) Pernet Ducher, 1907. Has been awarded prizes and honors wherever exhibited. "Without any question the grandest introduction in roses for many years; an entirely new color, and combining all the good qualities to be sought for in a rose. It is a strong, vigorous grower, with every shoot crowned with

CLIMBING ROSES

ROSES—New or Scarce Varieties, continued

magnificent blooms. In general form the bloom might be likened to a highly perfected Madame Caroline Testout, with a more double make up of flower. The color is simply superb, being a delightful shrimp pink shaded with coral pink, and gradually merging to deep golden yellow at the base of the petals. Stock of this rose is exceedingly scarce, but we predict when it becomes well known it will be accorded first place in rose gardens where hybrid teas are grown."

Mad. Abel Chatenay (H. T.) Pernet-Ducher, 1895. Produces a mass of salmon pink blooms and is especially useful as a winter bloomer. Fine either in the bud or open state, and lasts a long time after being cut. A favorite with cut flower buyers.

Mad. Constant Soupert (T) Soupert & Notting, 1906. Deep rich yellow in the interior of the bloom, edged and shaded with peach pink in the outer portion of the petals; very double, with long handsome buds.

Mad. Leon Pain (H. T.) Guillot, 1906. Lovely silvery pink, shaded with salmon. Buds much after the appearance of Prince Bulgarie, but showing a much more delicate color arrangement. Growth exceedingly vigorous. It produces lavish quantities of flowers throughout the entire season. We consider it an indispensable variety to any collection of roses.

Mad. Melaine Soupert (H. T.) J. Pernet-Ducher, 1905. One of the most highly prized points in a good rose is a long pointed bud. We believe it would be difficult to find one which surpassed this exquisite variety. It is not only of the highest quality in this respect, but also in its lovely color, deep yellow toned with salmon. The open bloom has much the appearance of a semi-double paeony. When fully expanded it loses the deeper bud tints and becomes quite light.

Mad. Ravary (H. T.) Pernet-Ducher, 1900. Deep yellow, often golden orange; free and continuous bloomer. A fine rose.

Mrs. Arthur Robert Waddell (H. T.) Pernet-Ducher, 1908. A lovely new color; deep reddish apricot toned with salmon. This rose is not a perfectly double form, being rather after the style of Papa Gontier, but with much longer buds. It should be cut in the bud where used for cut flowers. It is a vigorous grower and a

constant bloomer, and incidently a wonderful advance in roses approaching this color.

Mrs. Aaron Ward (H. T.) Pernet-Ducher, 1907. Deep rich Indian Yellow, occasionally tinted with salmon. A splendid novelty in every sense of the word. It is a constant bloomer, with buds and open bloom of most refined form and finish. For cut flowers it will fill a long felt want, as good yellows are scarce.

My Maryland (H. T.) John Cook, 1909. A grand American raised seedling from that veteran rose grower, Mr. John Cook, Maryland, and representing one of the loveliest shades of intense pink to be found among roses. Its tone of color is so clean and decided that it catches the eye at once. Its beautiful color, coupled with its vigorous growth and elegant form, mark it as a rose of lasting popularity.

Pharisaer (T.) Hinner, 1901. An introduction from Europe a few seasons ago, and a rose which, although as yet but little known, is going to find a place in all first class collections. Aside from its magnificent salmon pink color, it has one of the loveliest bud forms to be found amongst roses. Its exquisite shape, delicious odor and unsurpassed color will appeal to everyone capable of appreciating the beauty of a highly perfected modern type of the rose.

Prince de Bulgarie (H. T.) Pernet-Ducher, 1901. A recent introduction which has grown in favor, as it has many good points to recommend it. Petals very broad and heavy. In color a superb rosy flesh shaded with salmon. Free blooming and a strong grower.

Reine Karola de Saxe (H. T.) Lovely soft pink well displayed in the full rounded blooms. It is a strong grower, with handsome leathery foliage; a grand rose for cutting purposes. The pearly pink tones of the flower are of exquisite effect.

Rhea Reid (H. T.) Hill & Co., 1908. This rose bids fair to be one of our finest crimson scarlet garden roses. It was at first supposed to be principally a greenhouse forcing variety, but whatever its values may be in this respect it certainly is a superb variety planted outside. It is a constant sheet of magnificent blooms, sending up fine, strong canes in great profusion. It is many shades darker than Gen. MacArthur, and has a far more beautiful bud.

GENERAL ASSORTMENT

Aglaia. (See Yellow Rambler.)

Alfred Colomb (H.P.) Brilliant carmine-crimson; very large, full, and of fine globular form. Extremely fragrant, and in all respects a fine sort.

American Beauty (H.P.) Flowers very large, of beautiful form and very double; color a deep rich rose. The fragrance is delightful, resembling La France or the old-fashioned Damask Rose; it is truly an everbloomer, each shoot producing a bud.

Augustine Guinoiseau. (See White La France.)

Baby Rambler (Poly.) A dwarf perpetual Crimson Rambler. Everblooming from June until late frosts. One hundred and twenty individual flowers have been counted on a single panicle. Origin-

ated at Orleans, France, and is a hybrid produced by the crossing of Crimson Rambles and Gloire des Polyanthus. It preserves the prolific flowering quality of the latter, but is clear brilliant ruby-rose.

The foliage is of a fine, dark green, and is never attacked by insects of fungus. It blooms in clusters and very continuously. The period of blooming is not interrupted until after severe frosts. Cluster formation is similar to that of the Crimson Rambler, more particularly because the bush is covered with flowers the whole summer. Especially valuable for culture in pots. During the most severe winter experienced in many years, the plants stood outside without any protection whatever, and spring found the

ROSES—General Assortment, continued

bushes alive to the tips of their branches. We have no hesitation in saying that the bushes of the Dwarf Perpetual Crimson Rambler are perfectly hardy. The plants grow 24 to 30 inches high.

Baldwin. (See Helen Gould.)

Baltimore Belle (Cl.-Prairie). Pale blush, nearly white; double. The best white climbing rose.

Banksia. (See White Banksia.)

Beaute Inconstante (T.) (the rose of many colors.) A single plant bears flowers ranging in color from coppery yellow, bluish pink, carmine and apricot to light crimson. The bud is especially fine, being a coppery orange-scarlet, all the variations of coloring appearing in the open flower. A strong healthy grower, and a prolific bloomer.

Beauty of Glazenwood (Cl.-Banksia) (Fortune's Double Yellow). Hardy. Bronzed yellow or copper and fawn-color.

Blue Rambler (Veilchenblau) (Cl.-Poly.) "This superb creation, a genuine cornflower-blue, is a seedling of the Crimson Rambler. The massed blossoms are semi-double, and the color, on first unfolding, is a reddish or purplish pink, turning to amethyst, and finally to a steel-blue, or the color of a certain class of violets, the yellow stamens appearing in sharp contrast to the blue petals. Plant vigorous; shining foliage; few thorns, and considered perfectly hardy."

Bon Silene (T.) Rose-carmine, shaded with salmon; fragrant and very free-flowering. Valuable for the buds.

Bride. (T) An ever-blooming pure white Tea Rose of large size and most perfect form. The buds are pointed and the ends of the petals are slightly curved back. It is a very free-blooming variety, and has the most delicious tea fragrance.

Bridesmaid (T.) In this exquisite Tea Rose we have an improved Catherine Mermet, from which it is a sport. Mermet, on account of its exquisite shape, large, solid, firm buds, with long, stiff stems, has long been considered one of the best cut-flower varieties; its only defect has been that in dark, cloudy weather it becomes a washy dull color. Bridesmaid, at all seasons, is a clear, delicate pink, in all respects a counterpart of Mermet, with large, handsome, pointed buds on long, stiff stems.

Burbank (a perfectly hardy, new everblooming Bourbon Rose.) This lovely rose was raised by Mr. Luther Burbank, of California, known the world over as the "Wizard of Horticulture," who says: "The color is cherry-crimson—it is, in other words, the very deepest and brightest pink rose in cultivation. It is peculiarly adapted for both outdoor planting and for blooming in pots in the house during the winter. It is a strong, vigorous grower, making well-rounded bushy plants. The Burbank rose is perfectly hardy, and will stand our most severe weather. The Burbank is, without doubt, the freest-flowering Hybrid Perpetual Rose in cultivation. It commences to bloom when only a few inches high, and blooms throughout the season until stopped by freezing weather. The flowers are double, 3 inches across. The whole flower is

most pleasing in its rich beauty, and is delightfully fragrant."

Carolina Goodrich, or Running General Jacqueminot (Cl.-H. T.) This rose is finely formed, very double flowers, fragrance most delicious. A hardy climbing Tea and should not be classed with the hardy climbers that bloom but once a year. Color the same as that of General Jacqueminot.

Catherine Mermet (T.) Bright flesh-color, with the same peculiar luster possessed by La France. Large, full and beautiful. One of the finest Tea Roses.

Cherokee, Single. (Cl.) A distinct and beautiful climbing rose of rare merit. A most vigorous and clean grower, entirely free from disease. Flowers large, clear white and single, full of bright yellow stamens in the center, making a very attractive appearance; foliage distinct, very rich, dark, glossy green, and one of the most valuable features of the plant; surface smooth, always bright and shining and free from dust. Will cover a porch quickly. Valuable for screens, fences, arbors, etc.

Chromatella (Cloth of Gold) (Cl.-N.) Clear, bright yellow, very full and double; beautifully formed buds and flowers; very fragrant.

Clio. The finest flesh-colored Hybrid Perpetual. The flowers are simply perfection in form, with fine, broad petals, and are beautiful at all stages of development, from the small bud to the full, open flower; color delicate satin-blush, with a light shading of rosy pink at the center. Very free-blooming, and strong healthy grower.

Cloth of Gold. (See Chromatella.)

Coquette des Alpes (H.N.) White, tinged with carmine; very fine; a free bloomer.

Crested Moss (Moss.) Deep pink buds, surrounded with mossy fringe. Very beautiful; free from mildew.

Crimson Rambler (Cl.-Poly.) Introduced from Japan, the land of wonders. Another season's trial fully justifies all the praise that has been given it in the past. During nearly the entire summer it has a mass of rich, glowing crimson, and every one who has it is delighted with it. Perfectly hardy; wonderfully free-flowering; intensely bright and vivid in color. The plant is a strong, rampant grower, making shoots 10 to 12 feet long in a season when well established. The flowers are produced in long trusses and panicles, often measuring 8 or 9 inches long and 6 or 8 inches across, pyramidal in shape, often 35 to 40 in a cluster, fairly covering the plant from the ground to the top with a mass of bright glowing crimson. The color is simply superb and is retained unfaded or without showing any of the purplish tinge so often seen in dark roses, for an unusual length of time. For walls, pillars and porches, or any other place where a hardy climbing rose is wanted, nothing can be more desirable or beautiful. If grown in beds and pegged down, it makes a brilliant display with its profusion of bloom, large clusters shooting out from each joint. As many as 300 blooms have been counted on a single branch; subject to mildew.

Dorothy Perkins (Cl.-Wich.) New. "This is a splendid new shell-pink climbing rose. It attracted much attention at the Pan-

ROSES—General Assortment, continued

American Exposition, where a bed of 14-month-old plants produced a show of bloom unequalled by any other variety, unless it was the famous Crimson Rambler. The new rose is of the same strong habit of growth as Crimson Rambler, and the flowers are borne in clusters of 30 or 40, and sometimes even 50 to 60. The flowers are large for a rose of this class, very double, sweet-scented and of a beautiful shell-pink, a color that is almost impossible to accurately represent by lithography. Raised from seed of *Rosa Wichuriana*, crossed with that grand old Rose Mme. Gabriel Luizet. Absolutely hardy. Mr. Wm. Scott, the Assistant Superintendent of Horticulture at the Pan-American, says regarding Dorothy Perkins: "This has exactly the habit of well-known Crimson Rambler. It has flowered splendidly and been very brilliant. This seems to me to be a great acquisition, and I believe it to be a good forcing rose. The individual flower is larger than the Crimson Rambler, but it is a beautiful shell-pink in color."

Duchess de Brabant (T.) Soft, rosy flesh, changing to deep rose, edged with silver; beautiful in bud and highly fragrant.

Earl of Dufferin (H.P.) A strong, healthy growing sort and a splendid autumn bloomer. Flowers

large, very full and finely formed. Color deep velvety crimson, shaded with maroon.

Empress of China (Cl.-H. P.) A very hardy, free-flowering, climbing rose, of good size, blooming in clusters; bright pink flowers; very attractive. It is practically everblooming, for on good-sized plants, when well established in the ground, flowers may be expected the whole season.

Etoile de Lyon (T.) This is considered one of the finest yellow bedding rose for outside planting. It is, moreover, one of the hardiest in the Tea section. It blooms freely, and every flower is a gem. It equals Marechal Niel in size; strong bushes. Very sweet-scented; the color is a rich golden yellow.

Fisher Holmes (H.P.) Shaded crimson-scarlet; large, globular, with pointed center; vigorous and free-flowering.

Fortunes Yellow (See Beauty of Glazenwood, Climb.)

Francisca Kruger (T.) This rose has taken a foremost position as a rose for general culture; and its striking color and free growth give it popularity wherever grown. It is a beautiful coppery yellow with large flowers. Unlike any other rose in our list.

Franz Deegan (H. T.) Welter, 1903. One of the best yellow roses. A seedling of the K. A. Victoria. Superb in form and beautiful in color. Deep orange-yellow center, merging to a cream outer petals. Throws out very strong well foliated canes, surmounted by flowers of glorious size.

Frau Karl Druschki (H.P.) Has been well named White American Beauty. A wonderful rose, such as our people have long been waiting for—fine, large, free-flowering, hardy, white. Extraordinarily strong-growing, branching freely, and has the vigor and hardness of an oak. Foliage large, of heavy texture, but the glory is in its flowers, which are immense, and produced with great freedom, during the whole season—hundreds of magnificent blooms, full, very deep, and double, and of splendid substance; petals broad, long and saucer-shaped. Buds egg-shaped long and pointed. Pure, snow-white, without a tinge of yellow, pink or any other color. This great rose has won more prizes in Europe than any other variety sent out in years.

General Jacqueminot (H.P.) Brilliant velvety crimson; large, showy and a fine grower. A magnificent variety.

Gen. Jacqueminot (Cl.) See Caroline Goodrich.

Gen. MacArthur (H. T.) Hill, 1905. Dark velvety scarlet, large, full and free bloomer; very fragrant.

General Washington (H. P.) Scarlet-crimson; very large and fine; not quite so vigorous as General Jacqueminot.

Giant of Battles (H.P.) This is still esteemed as a very fine rich, red rose. Very large, double, full and sweet.

Gloire de Dijon (Cl. H.T.) A combination of salmon, orange and buff; flowers large and of good globular form. Hardy.

Glore de Yonnaise (H. P.) This is the nearest approach to a yellow in this class. A pale shade of salmon-yellow, with deeper center, changing to creamy white,

MADAME CAROLINE TESTOUT

ROSES—General Assortment, continued

Glore de Margottin (H. P.) A most valuable hardy rose; of splendid, symmetrical, upright growth, liberal dark green foliage. One of the best bloomers in the Hybrid family; color extremely brilliant scarlet—live and lasting; flowers large, reasonably full, globular, of good shape; pretty in bud, extremely beautiful, distinct and attractive when open. borne on very long stems.

Glory of Mosses. (Moss) A moderate grower. Flowers very large, appearing to best advantage when full; color pale rose.

Gold of Ophir (Ophire). (Cl.-N) Salmon-yellow, shaded with coppery red. One of the most beautiful of the climbing roses.

Golden Sun. (See Soliel d'Or.)

Gruss an Teplitz (H. T.) "As a bedding rose this is one of the finest and most useful varieties ever sent out. It will take rank with *Hermosa* or *Souper*. The color is brightest scarlet, shading to deep, rich, velvety crimson. It is very fragrant, the freest grower and most profuse bloomer of any ever-bloomer. The mass of color produced is wonderful, and the foliage is extremely beautiful, all the younger growth being a bronzy plum-color. A queen among scarlet bedders. It is a perfect sheet of richest crimson-scarlet all summer. It will undoubtedly supersede *Agrippina*, *Queen's Scarlet* and others of this class."

Harrison's Yellow (Austrian). Golden yellow; medium size, semi-double. A freer bloomer than *Persian*. Very hardy.

Helen Gould or Balduin (H. T.) Claimed by the introducers of *Helen Gould* to be a different rose from *Balduin*. "While the identity of this rose is in dispute, it has proved so satisfactory that we have planted it largely. This is probably one of the most beautiful and satisfactory rose for general planting ever introduced in America. It has proved itself to be the strongest-growing, free-blooming, largest-flowering and hardiest rose in existence. It is a better rose for general planting than *American Beauty*—the dream and hope of every rose-grower for years past. The flowers are full and perfectly double, the buds beautifully made, long and pointed. The color is a warm, rosy crimson, like the color of a ripe red watermelon. It is as hardy as *La France*, and one of the best, if not the very best, roses for winter blooming."

Hermosa (Bengal-Bourbon). Always in bloom and always beautiful. The flower is cupped, finely formed and full; color the most pleasing shade of pink, very fragrant. A favorite with every one.

Her Majesty (H. P.) This hybrid rose is of immense size, perfect symmetry and exquisite color, being a delicate pink, and as large as *Paul Neyron*.

Jubilee (H. P.) In this rose we have a grand addition to the list of dark-colored Hybrid Perpetuals. It has been thoroughly tested and found to possess most excellent qualities. Of vigorous growth, yet short jointed and compact, it takes a place in the front rank of hardy garden roses. Color pure red, shading to crimson and maroon at the base of petal, forming a coloring equaled to that of no other rose. The buds are long,

held up by long, stout flower-stems, making it valuable for cut-flowers.

Kaiserin (Cl.) See Mrs. Robert Perry.

Kaiserin Augusta Victoria (H. T.) A beautiful rose, with elegant, large-pointed buds and very large, full double flowers; color delicate creamy white, deliciously fragrant. The plant is a strong, healthy grower and a constant bloomer. The flowers are on strong, stiff stems, with rich, glossy foliage, making it one of the finest roses for corsage wear or any other use to which cut-flowers can be put.

Killarney (H. T.) Dickson, 1898. A vigorous growing hybrid Tea of recent introduction, with so many good points in its favor that it has become a standard variety. Its long pointed buds excellent substance and delicious odor recommend it to every lover of the rose. Color flesh pink, shaded with white and suffused pale pink.

Killarney, White. (See under White Killarney.)

La France. (H. T.) Delicate silvery rose; very large, full; an almost constant bloomer, equal in delicacy to a Tea Rose; the most pleasing fragrance of all roses. Only a moderate grower. A very popular variety.

La Marque (Cl.-N.) Pure white buds, open flower, tinged light canary-yellow; large and full.

Liberty (H. T.) This rose marks the limit of glorious deep, yet bright coloration in a family by no means deficient in warm, rich hues of crimson red. Most nearly approached by *Meteor* in color, this newcomer surpasses that standard variety in purity, being without the tendency to blacken that *Meteor* exhibits; and the blue cast sometimes seen on the fully expanded petals of *Meteor*, has not been detected in any degree whatever, upon a single one of many critically examined blossoms of *Liberty*. This novelty does not exact a temperature in excess of that generally accorded to other roses when grown under glass. *Liberty* is destined to become one of the best dark-flowered rose for both commercial and private use.

Louis Van Houtte (H. P.) Bright rose-carmine; full; very large; fine globular form; deliciously perfumed.

Mabel Morrison (H. P.) Pure white petals, thick and waxy; a hybrid of *Baroness Rothschild*; habit good.

Mad. Alfred Carriere (Cl.-H. N.) Flesh white, white salmon-yellow at the base of petals; full and well formed; vigorous grower.

Madame Caroline Testout (H. T.) Clear pink in color—there is nothing in the rose line that can approach it in color—and the flower is as large as *Baroness Rothschild*, and as free as *La France*. If our judgment is not mistaken, it will make a sensation in the cut-flower market when brought in in good shape, and will command such prices that it will be a most profitable rose to grow.

Mad. de Watteville (T.) A strong, vigorous, grower, with handsome foliage. Color whites shaded with salmon; outer petals feathered with bright rose; very fragrant; flowers large and of beautiful shape.

Mad. Hoste. (T.) Ivory-white, changing during the heat of midsummer to canary-yellow, with amber center; a strong, healthy grower

ROSES—General Assortment, continued

and very free bloomer. Flowers and buds of large size, and can always be cut with long stems. Highly prized for cut-flowers on account of its superb buds and long stems. One of the finest for bedding out or for forcing for winter flowers.

Magna Charta. A general favorite, prized on account of its strong, upright growth and bright healthy foliage, as well as for its magnificent bloom. The color is a beautiful bright pink, suffused with carmine.

Maman Cochet (T.) In bud it resembles the Mermet family, being long and shapely, borne on long, stiff stems. It is of the largest size, and the flower is built up or rounded, and very double. The color is a deep rose-pink, the inner sides of the petals being a silvery-rose, shaded and touched with golden yellow. We pronounce this one of the finest roses that has been introduced from France in the past few years. We can with full confidence recommend this rose.

Maman Cochet, White, or Priscilla (T.) The charming new white Tea Rose. Another new American Rose. It belongs to the Tea class, being a child of that grandest of bedding or outdoor roses, Maman Cochet. Its habit is exceedingly strong and upright, like its parents, and it possesses the same large beautiful, healthy foliage, and is a most profuse and constant bloomer. The flowers are of enormous size, remarkably round and full, pure, clear, snowy white throughout, and are delightfully tea-scented. It is by far the finest and most reliable white bedding rose yet produced. Any one can have the very finest roses for cutting all summer and autumn by planting a few bushes of it. It is one of the largest white roses, both in bud and flower.

Marchioness of Londonderry. A new white Hybrid Perpetual, and one of the best flowers; of great size, often measuring 7 inches across, perfectly

formed and carried on stout stems. Color ivory-white; petals of great substance, shell-shaped and reflexed; free-flowering; highly perfumed; growth vigorous, and foliage very handsome. One of the finest roses. Awarded the gold medal of the National Rose Society of England. We have had this variety in flower for several seasons, and regard it as a decided acquisition to the list of hardy white roses. Requires some protection in winter in cold climates.

Marechal Niel (Cl.-N.) Beautiful deep yellow; large, full and of globular form. Very sweet.

Marechal Niel White. (See White Marechal Niel.)

Margaret Dickson (H. P.) Of magnificent form; white with pale flesh center; petal very large, shell-shaped and of great substance; fragrant. Foliage very large, dark green. A very promising variety.

Marie Van Houtte (T.) White, slightly tinged with yellow. One of the handsomest Tea Roses. Free grower and fine bloomer.

Marshall P. Wilder. (H. P.) Color bright cherry-carmine; fragrant; of good growth, with fine foliage. One of the freest of the Hybrid Perpetuals to bloom. We can recommend this rose without hesitation.

Meteor (H. T.) As a dark crimson perpetual-blooming rose, this ranks as one of the best yet introduced of any class. It is especially valuable for summer and fall, blooming either in the greenhouse or in open ground, and, where there is a demand for fine roses in summer, will become a great favorite.

Meteor (Cl.-H. T.) One of the finest crimson ever-blooming climbing rose in cultivation. It is a rich, velvety crimson, much like the forcing Rose Meteor, of which it is a sport. An extremely strong-growing variety, making shoots 12 to 15 feet long in a single season, under favorable circumstances.

Mrs. John Laing (H. P.) New. As a bedding rose this is undoubtedly one of the best varieties yet introduced, being hardly ever out of bloom during the summer. Color a beautiful shade of delicate pink; of large size and very fragrant. It is also a good forcer from January.

Mrs. Robert Garrett (H. T.) A beautiful large rose of exquisite shape, finish and blending of colors. It was raised by Mr. John Cook, of Baltimore, Md., the result of a cross between Sombreuil and Madame Caroline Testout. It partakes largely of the latter variety in habit of growth, in foliage, spines and stems, and in shape of flowers show a complete blending of both parents. The flowers are very large, on strong stems, clothed with clean, heavy foliage and strong spines. The buds are long and pointed in shape, and open up beautifully into a full, rounded flower. In shape of bud and half-open flower it very much resembles Souvenir du President Carnot, but is very much larger; color a glowing shell-pink, very deep in the center; the fragrance is delicate and pleasing. A correspondent of the "American Florist," in commenting on the rose in 1898, says:

ROSES—General Assortment, continued

"The exhibit of Mr. Cook was a departure from the rest, as it was a vase of roses. But such roses! They towered above the carnations, on strong stems clothed with heavy foliage, and were as large as American Beauties, but of a beautiful clear pink, almost light enough to be called a shell-pink."

Mrs. Robert Perry (H. T.) (Cl. Kaiserin Augusta Victoria). A sport from that grand hardy ever-blooming rose, Kaiserin Augusta Victoria. It has the same beautiful creamy white flowers and splendidly shaped buds and, in addition, has a remarkably strong climbing habit of growth, sending up shoots 10 to 12 feet high.

Niphetos (T.) Pale yellowish white; often snowy white. Long, large buds. Very beautiful.

Ophire. (See Gold of Ophir.)

Papa Gontier (T.) A grand red Tea, of fine, crimson shade and silken texture (as distinct from velvety texture.) The bud is of fine size and graceful form, on good-length stem. Desirable for cut flowers.

Paul Neyron. (H. P.) Deep rose-color; splendid foliage and habit; with very large flower.

Perle des Jardins (T.) Fine straw-yellow, sometimes deep canary-yellow; very large and full, and of the most perfect form. One of the finest roses grown. Steps at once into fame as one of the finest dwarf yellow roses we have. Distinct from all other Tea Roses and probably one of the best known yellow roses.

Perle des Jardins (Cl.-T.) Identical with Perle des Jardins, except that it is a vigorous climber. A grand addition to our roses. It will rank with the very best.

Perpetual White Moss (Moss). Pure white. Produces very few flowers.

Persian Yellow (Austrian.) Bright yellow; small; nearly full. It is desirable to grow more than one plant, and by pruning one this year in the usual way, and the other plant the next year, annual crops of flowers may be had. Very hardy.

Philadelphia Rambler (Poly.-Climb). Walsh, 1903. Very vigorous, glowing crimson, flowers in large clusters, which do not fade quickly.

Pink Rambler (Euphrosyne) (Cl.-Poly.) What is said of White Rambler applies equally to this except the color of the flower is pure shiny rose, the partially open buds being bright light carmine, thus producing a strong and pleasing contrast. The flowers often change to creamy white when fully matured. The numerous yellow stamens lend an additional charm to the flower. In hardness, freedom of bloom, form and color of flowers, and vigorous climbing habit, this variety is fully the equal of the Crimson Rambler.

Prince Camille de Rohan. (H. P.) One of the darkest colored roses; very dark velvety crimson, changing to intense maroon. There is no rose in all this collection that attracts more favorable comment. A very prolific bloomer and the blooms are of excellent form and size.

Priscilla. (See Maman Cochet White.)

Queen of the Prairie (Cl.-Prairie.) Bright rosy red, frequently striped with white; large, compact and globular.

Rainbow (T.) An elegant new striped Tea Rose, of strong, healthy growth and exceedingly free-flowering habit. The buds are large, on strong, stiff stems. Color a beautiful shade of deep pink, distinctly striped and mottled with bright crimson, elegantly shaded and toned with rich amber. It makes beautiful buds and flowers of large size, with thick, heavy petals; very fragrant. A useful variety for cut-flowers.

Reine Marie Henriette (Cl.-T.) A strong-growing red climbing rose. It is a grand pillar rose in the South. Flowers full and well formed.

Reve d'Or (Cl.-N.) One of the grandest climbing roses. A splendid robust climber, with the very best of foliage. A good plant will soon go to the top of a two-story house and cover space proportionately large the other way. Such a plant in full bloom, with its graceful flowers of delicate coloring, is a charming sight. Color apricot-yellow, with orange and fawn tints; petals of superb and delicate texture; flowers moderately full, always pretty and graceful, whether in bud or full open; a very profuse bloomer.

Richmond (H. T.) E. G. Hill, 1905. A pure red, fragrant, a good grower, continuous bloomer and altogether one of the best reds for the garden ever introduced. Long pointed buds, on good stem. Keeps its color even in hot weather.

Safrano (T.) Bright apricot-yellow, changing to orange and fawn, sometimes tinted with rose. Valued highly for its beautiful buds; fragrant.

Salet. (Moss) A vigorous grower and free bloomer. Light rose, large, full. The best of all the mosses.

Soleil d'Or (H. P.) New hardy yellow rose. "The goal for which many of the world's greatest rose hybridizers have been striving has at last been reached, and we have double-flowered yellow rose, hardy enough to withstand the winters of our northern states. Has blossomed all summer on the coast. Soleil d'Or is the result of a cross between Persian Yellow and Antoine Ducher, retaining many characteristics of Persian Yellow, the bark being much the same and foliage resembling that of its parent, but produced more plentifully, while in growth it is more branching and more vigorous. The flower is perfection in form with conical buds, expanding into a large and full globular flower, with incurved inner petals. The buds are a marvelous shade of rich chrome-yellow, with just a tinting of coppery rose in the center. The fully expanded flower is beautiful in its blendings of orange-yellow, reddish gold and nasturtium-red, forming a coloring impossible to satisfactorily describe. This grand seedling has been shown at all the large rose exhibitions in Europe, and has received the highest awards possible to grant at every display."

Souv. du President Carnot (H. T.) An excellent rose of recent introduction that has already become a great favorite. The flower is of large size and exquisite shape, with heavy, thick, shell-like petals; buds long and pointed, similar to Niphetos, but very much larger and borne on stiff, erect stems; color delicate rosy flesh.

Sunset (T.) The flowers are of large size, fine, full form, very double and deliciously perfumed. Color a remarkable shade of rich golden

ROSES—General Assortment, continued

amber, elegantly tinged and shaded with deep ruddy copper.

Thalia. (See White Rambler.)

Ulrich Brunner (H. P.) Splendid upright grower, with bright, healthy foliage. The flowers are good sized and of fine form, with shell-shaped petals. One of the most abundant bloomers; color cherry red.

Veilchenblau. (See White Rambler.)

White Banksia (Cl.-Banksia) White and yellow; thornless.

White Killarney (H. T.) Waban Rose Co. "A white sport from Killarney, that well known variety; should prove a great acquisition for general culture." Is identical in every respect to Killarney save in color, which is creamy white.

White La France (Augustine Guinoiseau) (H. T.) This beautiful variety, with flowers of pure white, shading to a center of light rose, is a great favorite on account of its great freedom of bloom, fragrance and large flowers. A vigorous grower, producing a great number of buds and flowers; excellent for planting in cemeteries.

White Maman Cochet. (See Maman Cochet White.)

White Marechal Niel (T.) This rose is an exact counterpart of Marechal Niel in every respect except the color of flowers. Identical in growth, foliage, climbing habits, etc. The flowers are white.

White Rambler (Thalia) (Cl.-Poly.) A worthy

companion for the Crimson Rambler. In habit of growth, foliage, manner of blooming and shape of flower, this is identical with Crimson Rambler, differing only in color, which in Thalia is pure, clear white. Flowers quite fragrant and lasts for a long time after cutting.

Wm. Allen Richardson (Cl.-N.) Orange-yellow, center coppery yellow. Very rich.

Wootton (Cl.-H. T.) A fine double flower, bright cherry-crimson. A beautiful free-flowering rose that is completely covered with bloom the entire season. Will make shoots 10 to 15 feet long in one year.

Yellow Rambler (Aglaia) (Cl.-Poly.) The only yellow, hardy climbing rose. It has been thoroughly tested and found to successfully withstand, without protection, a continued temperature of zero and below. It is similar to Crimson Rambler in manner of blooming, the flowers being in immense clusters, and having the same lasting qualities, remaining in bloom three to four weeks. The plant is even freer in growth than Crimson Rambler, and soon makes a fine, showy specimen.

TREE ROSES

The Tree Roses are grafted on hardy rose stalks 4 to 5 feet high, are tree shaped and when in full bloom are objects of beauty, making handsome plants for the lawn or rose border. In this shape we offer only the Hybrid Perpetual or hardy class. We have them in white, the different shades of pink, red and crimson.

VARIETIES NOT LISTED

If you do not find in this catalogue the variety wanted write us stating what you want and we will quote prices if in stock. We have many varieties in lots of from 25 to 50, too small a number to list in the catalogue. Some of these are old well-known varieties, others are newer ones which we are testing before cataloguing.

SHASTA DAISIES

(*Chrysanthemum leucanthemum hybridum*)

Originated by Luther Burbank, from whom we secured our supply. Too well advertised by this time to need any long description. A marvelous combination of size, grace, abundance and general effectiveness of flowers, which are borne on long, clean, strong stems; flowers snowy white or cream-colored, 4 to 5 inches across.

Alaska. (New). The whole plant, roots, stems, leaves, buds and flowers are gigantic, but compact and graceful in every respect. The marvelous combinations of size, grace, glistening whiteness, abundance and general effectiveness of the flowers, which are borne on long, clean strong stems, will place it at once far ahead of all others of its class.

Under the ordinary field cultivation given *Chrysanthemums*, the flowers average 4½ to 5 inches across on stems 2 or 3 feet long; with 38 to 42 wide petals and a very small disk; with proper disbudding are produced perpetually, though more abundantly at the usual blooming season.

California (New). Another giant in growth, and in most respects similar to Alaska, but the buds and half-opened flowers are of a most pleasing clear, pale lemon-yellow, with two rows of

petals. When a day or two old these gradually change to pure white. The combination is exceedingly pleasing. The flowers average 4 to 5 inches across, and, with ordinary care, are produced perpetually. The common varieties of *Chrysanthemum maximum* are as weeds when compared with these.

Westralia (New). This is distinguished by its branching habit, which is a strong characteristic in one of the parents of the whole Shasta Daisy Family—the Japanese Field Daisy (*Chrysanthemum leucanthemum Nipponicum*.)

Well-grown plants are 3 to 4 feet high and nearly as much through; buds and nearly opened flowers are of a pleasing cream-color, semi-double, 3 to 4 inches across and are produced on fairly long stems on bewildering profusion.

RUDBECKIA

"Golden Glow" or "Cone Flower." Among the most valuable hardy plants, growing from 1½ to 7 ft. in height, producing showy golden yellow flowers. Very free flowering; useful for cut flowers.

R. laciniata. "Golden Glow." A distinct, tall-growing, hardy perennial, from 6 to 7 ft. high. Foliage deeply cut, handsome bright green; flowers very double, rich golden yellow, 2 to 3 inches in diameter, borne on long, smooth stems, forming for the tall plant a solid head of bloom. Excellent for cutting.

SPRAY CALENDAR.

Spraying Schedule for the Year	Orchard Practice with Spraying	Kind of Sprays Used	Time to Do the Spraying	Notes
FALL— Anthracnose	Cut out badly diseased and dead branches	Use 4-4-50 Bordeaux mixture before the fruit is gathered, or 6-4-50 Bordeaux or lime-sulphur (winter strength) immediately after fruit is gathered.	Before the fall rains begin. When the diseases are abundant two applications three weeks should be made	Anthracnose and apple scab fungus both cause disease of the fruit held in storage. Spraying the fruit before picking apparently controls the disease in the orchard and prevents the spread of the fungi in stored fruit.
Apple scab (fungus)	Destroy diseased and fallen leaves by burning or cover them up by plowing.			
San Jose scale	Cut down and burn all infested plants of no economic value	Lime-sulphur (winter strength.)	After the leaves have fallen	Every portion of the plant must be coated, even the smallest twigs.
LATE WINTER— Annual House Cleaning Powdery mildew Red Spider Brown mite Codling moth Woolly aphis Aphides—Eggs of Green and brown San Jose scale	Prune the trees, removing all dead and diseased parts of tree. Clean out all wounds, and scrape the flakes of bark from trunks of all trees. Burn the rubbish at once. This work should precede spraying.	Lime-sulphur (winter strength)	Do the spraying as the buds begin to open.	Removing all diseased and dead parts and scraping the flakes off from the trunk and larger branches, exposing all hibernating pests so that the spray will reach them, should be practiced. Every portion of the plant must be coated, even the smallest twigs.
SPRING— Apple scab (fungus)		Bordeaux 4-4-50 or lime-sulphur 1-32.	Apply while the terminal buds of flower clusters are opening.	Bordeaux gives the better results, but only controls the fungus. High pressure and a driving spray are required to thoroughly wet every portion of the plant. Careful work in applying the spray is the only practice that will give the desired results.
Leaf hopper		Black Leaf 40 1 gallon, whale oil soap 40 lbs., water 1000 gallons	Follow the calyx spray for the codling moth.	[2] Controls both apple scab and insect pests.
Thrips	Band the trees with tangle-foot.	(2) Black Leaf 40 1 gallon, lime-sulphur 32 gal. water 1000 gal.	Follows application of Bordeaux but cannot be mixed with it.	
Red spider			(2) Before the flower buds open.	
Brown mite				
Aphides—Green, brown, black and woolly			Before the calyx closes	
Codling moth	Remove bands to catch codling worms and destroy the worms.	Arsenate of lead 1-50 or 2-50		
SUMMER— Codling moth		Arsenate of lead 2-50	[1] Spray June 1-10 [2] Spray Aug. 1 to 10.	The June spraying may be omitted under the most favorable conditions, but is recommended since the application is the cheapest form of insurance. Use a good pattern mist spray nozzle.
Apple scab		Lime-sulphur 1-32 or Bordeaux 4-4-50	After the apples become smooth.	Spray lower sides of the leaves. Requires a high pressure and very careful work. Wet every leaf.
San Jose scale		Black Leaf 40 1 gal., whale oil soap 40 lbs., water 1000 gallons.	As soon as insects appear and before web becomes too thick (red spider), or adults become winged [hopper]	Thorough spraying and usually two or three applications necessary where disease is abundant.
Red spider and leaf hopper				
Powdery mildew		Sulphide of iron 8-100	As soon as the disease appears.	

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INSECT PEST REMEDIES

Apple Tree Aphis

QUASSIA CHIPS SOLUTION

8 pounds quassia chips; 7 pounds of whale-oil soap

The quassia chips are boiled in about 1 gallon of water to each pound of chips for 5 hours. The soap is added while hot and allowed to dissolve. This solution is then diluted with 100 gallons of water. Use with sprayer when warm.

Woolly Aphis

4 pounds resin; 3 pounds sal-soda

The following remedy is taken from the Secretary's report, California State Board of Horticulture: "Four pounds of resin, 3 pounds of sal-soda, water to make 4½ gallons; dissolve the sal-soda in a few pints of water; when thoroughly dissolved, add the resin, heat until dissolved, and add water finally. Use 1½ pints of this solution to the gallon of water. Use at a temperature of 100 degrees Fahrenheit."

Tent Caterpillar

3 pounds whale-oil soap; 3 pounds sulphur; 1 can lye; 1 gallon kerosene

The egg clusters must be sought for during the winter months when, the trees being leafless, the eye will readily detect them; after being hatched out, their nests are so conspicuous that there can be no excuse for neglecting to destroy them, and where any of these pests appeared last season, thorough search must be made for these rings of eggs (which are generally found on the small branches), collecting and destroying by pouring boiling water on them or by burning them.

The following solution, if properly applied, will destroy the young larvae: Three pounds soap, (whale-oil or good home-made soap), 3 pounds sulphur, 1 can lye, boil one hour in 4 gallons water; add 1 gallon kerosene oil, boil slowly 20 minutes, then add 25 gallons of water. Use with spray pump. Do not use copper kettle in preparing solution Nos. 1 and 2, but use kettle made of iron or some other metal.

Winter Spray for San Jose Scale and Curl-Leaf

50 pounds lime; 50 pounds sulphur

This will make 150 gallons of wash. Use in fall as soon as leaves have dropped and again in early spring before the buds begin to swell. Slake 50 pounds of lime, then add the 50 pounds of sulphur; boil it over a brisk fire for one hour, then place all the salt with it in the boiler and boil for 15 minutes more, then add the necessary amount of water to make 150 gallons. This solution should be used at a temperature of at least 100 degrees. Before using, strain it. The utility of this wash depends a great deal upon the strength of the sulphur. It is, therefore, recommended that those who use this wash have a Beaumes scale for acid. When it shows about 8 degrees when cold it is of proper strength. These scales can be obtained through any druggist.

For Woolly Aphis and San Jose Scale

100 lbs. lime; 100 lbs. sulphur; 15 lbs. blue vitriol

Take 100 pounds of sulphur and put into a 40-gallon kettle, add about 4 gallons of water and stir until thoroughly mixed, then add about 20 gallons of water and start your fire under the kettle. Take 100 pounds of good, fresh lime and slake it in a box, keeping the lime covered with water while it is slaking; add this slowly to the sulphur; while boiling stir all the while to prevent burning; boil 4 hours and finish about night. Dissolve 15 pounds blue vitriol in hot water, which pour into the compound slowly, keep boiling until smooth, then let it settle for about 15 minutes, after which pour into a barrel and see that you have 30 gallons and no more. Cover your barrel up tight until morning, then open it and, as it begins to cool, keep stirring to prevent a crust from forming. When cool no crust will form and it will keep any length of time.

Take one gallon of the compound to 19 gallons of water. Use about 8 gallons of boiling water to 1 gallon of the compound, making up the difference in cold water. Never spray unless the bark on tree is dry.

Summer Spray for San Jose Scale or Greedy Scale

2 gallons water; 1 lb. sulphur; 1 lb. concentrated lye; one-half gallon fish-oil; one-half gallon kerosene

For summer spraying, take 2 gallons water; put into this 1 pound of sulphur, 1 pound concentrated lye; boil for two hours, then add ½ gallon fish-oil; boil until it makes a hard soap; add ½ gallon kerosene oil, stir well and boil a few minutes. Add to this 25 gallons cold water. For winter spraying, double all the ingredients for the amount of water used. About 1 pound of whale-oil soap can be substituted for the fish-oil.

D. M. Jessee, Washington State Pest Inspector, says he has tried this solution to his entire satisfaction, and is assured that it will destroy these insects more effectually than any other remedy he has used. Notice what is stated as to strength of summer and winter spraying.

Currant and Gooseberry Slug or Worm

Hellebore is the best of known remedies, and a perfectly effectual one. Properly applied, no harm can possibly result from it. It should, according to Professor Lintner, be used in the following manner: Early in the spring, as soon as the leaves of the currants have fully put forth, watch for the first indications of the hatching and commencement of the young larvae. You have only to look for these on the lowest leaves of the bushes near the ground. The indications will be numerous small holes eaten into the leaves. Sprinkle powdered hellebore over these leaves, renewing it if washed away by rain, and the desired end is accomplished. If the hellebore remains upon the leaves during the time that larvae are hatching, all will be killed and none will remain for subsequent spreading over the leaves and for the need of future attention. If the first brood of worms is thus destroyed, there will be few, if any, to form a second brood in June.

The Oyster-shell Bark-louse

Use the same solution as for the San Jose scale heretofore described, at intervals of 10 to 15 days from May 10 to June 10. The same solution for winter.

For Powdery Mildew or Other Fungus

Diseases

BORDEAUX MIXTURE

6 pounds copper sulphate; 6 pounds fresh lime; 45 gallons water

Dissolve the copper sulphate in a wooden or earthen vessel, using 4 or 5 gallons of water, which, if hot, will act quicker. In a separate vessel slake the lime and rub until lumps are broken. Then stir and strain into the copper solution. Dilute and use as soon as possible. The mixture should not stand over 20 hours, as it tends to spoil. Where a good quality of lime is used, 4 pounds will satisfy 6 pounds of blue-stone, but it is best to use plenty of lime, as any free sulphate will burn the foliage. Four ounces of Paris green may be added to each 45 gallons of this liquid for all except the peach and other stoned fruits. For these use only two ounces. This makes the best and safest combined insecticide and fungicide for general use.

For Codlin Moths, Caterpillars and Slugs

First Application, 2 pounds lime, 40 gallons water; later applications, 4 ounces Paris green, 1 pound lime, 50 gallons water.

Slake the lime; make a paste of Paris green, mix thoroughly, and then add water to make the required amount; stir thoroughly while using, and should be thrown on the leaves and fruit in a fine spray. Or, use arsenate of soda spray when fruit has attained size of a hazelnut.

Pear- and Cherry-tree Slug

1 ounce London purple or Paris green; 6 gallons water

The Oregon Bulletin recommends the following remedy: London purple or Paris green mixed with water in the proportion of 1 ounce to 6 gallons, and apply to the foliage with a syringe or spray pump, as promptly destroying this slug.

Woolly Aphis

KEROSENE EMULSION (Government Formula)
2 gallons kerosene, 1 gallon water, $\frac{1}{2}$ -lb. hard soap

Make a suds of the soap and water and pour boiling hot into the kerosene; churn with a force pump or a syringe, pumping into a bucket or barrel through a nozzle until thoroughly emulsified. If the mixture is sufficiently hot it will thicken in 5 to 10 minutes, and will be, when cold, of the consistency of butter or soft soap. Dilute with 7 to 12 parts of water to one of emulsion, as occasion requires, and this will kill almost anything in the form of plant lice. Be careful in using not to burn the foliage.

Arsenate of Soda Spray

2 pounds of commercial white arsenic, 4 pounds carbonate of soda, 2 gallons water

Use $1\frac{1}{2}$ pints to 50 gallons Bordeaux mixture. Dissolve 2 pounds of commercial white arsenic and 4 pounds carbonate of soda (washing soda) in 2 gallons water, and use $1\frac{1}{2}$ pints to 50 gallons Bordeaux mixture. The easiest way to make the solution is to put both the arsenic and soda in a gallon of boiling water and keep boiling about 15 minutes, or until a clear liquid is formed, then dilute to 2 gallons. If used without Bordeaux mixture or lime, it is liable to burn the foliage.

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Cl, Climbing. Poly, Polyanthus.

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