THE POLEY GREENHOUSE MFG. CO.
POLEY
GREENHOUSES

THE POLEY GREENHOUSE MFG. CO.
FOREST PARK, ALABAMA
at the heart of the South

National Trust for
Historic Preservation
Library
of the
University of Maryland,
College Park

New Daylighted Factory at Forest Park, Ill.

Building Better Greenhouses

TO QUOTE from the U. S. Dept. of Agriculture, "It is always desirable to secure greenhouse material from concerns making a specialty of their manufacture, as practically all parts of a greenhouse are of special character and have been evolved through many years of experience in building such structures."*

For over 25 years we have been designing and building greenhouses, and supplying material for their erection. The superiority of Foley Houses is recognized from coast to coast. Among the hundreds of structures which carry the Foley name are the establishments of our most prominent commercial growers and the private houses of the country's best known men, as well as many of the largest institutional buildings.

Many of the leading improvements in design and construction of greenhouses were originated by us.

Founded on the idea of building greenhouses that would give the greatest service with the smallest cost of maintenance, this company has, by faithfully living up to this ideal, established a reputation for quality that usually makes price a secondary consideration. Foley Better-Built Greenhouses are today standards of comparison in design, quality and dependability.

**Bulletin 1318 U. S. Dept. of Ag.*

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The Foley Greenhouse Mfg. Company
Designers and Builders of Greenhouses
Heating Systems

FOREST PARK :: ILLINOIS
(A Suburb of Chicago)

What the Foley Organization Means to You

THE building of greenhouses is a complicated, highly specialized process that must be done right, else the resulting structure is a source of constant expense and dissatisfaction to the owner.

Philip (Phil) J. Foley

When Philip J. Foley founded this business a great number of greenhouses were built with wood supports and frames. To this work Mr. Foley brought his years of previous experience in the wood-working, milling, and general construction business. Because of this he quickly stepped to the forefront in many improvements in the design of greenhouses.

With the introduction of metal members, the wood construction was lightened, but other structural problems were increased. Now, there are more different elements to be considered in the making, erection, and

fitting of a greenhouse than in most other structures. And usually one concern is entrusted with all the work; therefore, that firm should be selected which has proven its ability to design, fabricate, erect, fit and heat the house most economically and satisfactorily.

The Foley Greenhouse Mfg. Company have proven this beyond all question by the thousands of commercial ranges, and private and institutional houses they have built.

Architectural Department

While standardized forms, units, and parts are used in all Foley greenhouses, we feel that every job is a special installation. Each owner has his own problems of location, use,

Architectural Department

Woodworking Shop

bench arrangement, exposure, and shape. We accordingly maintain a full architectural drafting force to plan the layout and construction.

For those who buy their materials and do their own erecting, there is a special satisfaction in knowing that every piece is designed and fabricated to exactly fit its place—and that it is adequate for the task it is to perform.

Heating Department

The biggest problem of the greenhouse is the heat. The system must be ample for the type of flowers or vegetables to be grown, yet it must not be so large that it is a fuel waster.

Heating experts with years of experience plan every installation. The result is that Foley Greenhouse Heating has the reputation for the most satisfactory and most economical operation of any in the country today. In many cases we have been called upon to

replace heating that was unsatisfactorily designed by others.

Foley's Facilities

The new Foley plant—erected since our big fire—is a model of arrangement and daylighting. Work produced is of the highest type because working conditions are ideal.

Woodworking Shop

In this big daylighted shop are found special machines for shaping and molding the various types of wood members. Many of these machines are of our own design, unlike any in use elsewhere. They are used in the manufacture of the improved Foley woodwork patterns that are far superior to the ordinary type of mill work found in most greenhouses.

Looking East Through Iron Shop

The Iron Shop

Housed in a special building is the iron and pipe shop. Here are fabricated all metal parts now so necessary in the modern greenhouse—from cutting the pipe that support the sides of a ten foot house to the completion of all structural members for the most up-to-date iron frame range. From drill press to bending block, this complete equipment enables us to manufacture all the parts for every type of greenhouse construction.

Steel and Pipe Storage

Our Mammoth Warehouse

The Warehouses

These are a revelation to visiting greenhouse men, for here are stored, under ideal conditions, our great stock of woodwork, steel, pipe, glass, etc.

Our private switch serves our warehouses and shops, giving direct shipping connections to all parts of the country. Shipments from our plant carry Chicago freight rates, as we are located in the Chicago Switching District.

The Lumber Yard

The big acreage of our new plant gives us extensive space for storing

and curing lumber before it is sent to the woodworking shop. Each piece must be exactly right before it is used.

Materials

In our different Bulletins on the various types of houses, we treat fully on the kinds of material we use, and the great care exercised in their selection and inspection.

The best of materials, fabricated by skilled men, under ideal conditions, from plans and designs by experienced greenhouse builders, make Foley Greenhouses—in every sense of the word—**Better Built and Heated Greenhouses.**

South End of Lumber Yard

A Few Regular Buyers of Foley Better Built Greenhouses

Frank Oechslin, Chicago, Ill.
Bassett & Washburn, Chicago, Ill.
Forest Home Cemetery Co. Forest Park, Ill.
Geo. Souster, Elgin, Ill.

Smith, The Florist, Danville, Ill.
W. F. Dunteman, Bensenville, Ill.
W. H. Ludeke, Glen Ellyn, Ill.
Poehlmann Bros. Co., Morton Grove, Ill.
Vaughan's Greenhouses, Western Springs, Ill.
Baur, Steinkamp & Co., Indianapolis, Ind.

Bertermann Bros., Indianapolis, Ind.
H. C. Bohne, Indianapolis, Ind.
Doswell Floral Co., Ft. Wayne, Ind.
Lanternier, Florists, Ft. Wayne, Ind.
Kemble-Smith Co., Boone, Iowa.
J. C. Rennison Co., Sioux City, Iowa.
James Matthewson, Sheboygan, Wis.
The Miles Co., Oshkosh, Wis.
C. Merkel & Sons, Mentor, Ohio.
Altimo Culture Co., Canfield, Ohio.
Kirchner, the Florist, Cleveland, Ohio.
Cook & Neubert Co., Cleveland, Ohio.
A. G. Heinrichs, Cleveland, Ohio.
Fred Kuhfeld, Cleveland, Ohio.
Bebb Floral Co., Muskogee, Okla.

John Brown Floral Co., Gates Mill, Ohio.
Rocky River Ghse. Co., Rocky River, Ohio.
Ohio Greenhouse Co., Rocky River, Ohio.
Goldwood Ghse Co., Rocky River, Ohio.
Walker Floral Co., Youngstown, Ohio.
Great Northern Railway Co., St. Paul, Minn.
Merriam Park Floral Co., Merriam Park, Minn.
Mazey, the Florist, Minneapolis, Minn.
W. J. Rodgers, Blair, Neb.
Joseph Thomas, Greensburg, Pa.
Samuel Stamm, Freeport, Pa.
Chas. H. Plumb Co., Detroit, Mich.
Breitmeyer's, Detroit, Mich.
Englemann Bros., Maryville, Mo.
Jas. D. Ragan, Hickman Mills, Mo.
Bourdet Floral Co., St. Louis, Mo.
Johnson Bros., Inc., Memphis, Tenn.
Maxwell & Co., Tulsa, Okla.
R. C. Kerr Co., Houston, Texas.
J. P. Russell & Sons, Atlanta, Ga.
Jno. B. Murray, East Point, Ga.

Immense Stocks of Finished Wood Work

Foley Better Built Greenhouses

Pipe Frame and Semi-Iron Frame

OF the types of greenhouse construction now recognized as satisfactory, the more popular are those known as the "Pipe Frame" and "Semi-Iron Frame." This is probably due to the fact that they are of lower cost; are better adapted to smaller houses; and can be erected by ordinary labor.

The Pipe and Semi-Iron Frame houses derive their names from the fact that the roof bars, while an integral part of the structure, are carried on pipe purlins, and purlin supports, also of pipe.

The Foley Construction

In FOLEY Pipe or Semi-Iron Frame greenhouses

there are many exclusive features—improvements—all of advantage to the grower. Some of these are essentials of construction, others are in details, but all make for a better greenhouse: one that will have a longer life and less operating and upkeep cost.

There are several variations in our Pipe Frame construction. Each has its advantages and its friends among the growers.

On the following pages we illustrate and describe, in detail, the different types of side-walls, eave, and gutter construction, of purlins and supports, of ridges and roof bar connections.

To determine the form or type best suited to your needs, the following points must be taken into consideration.

Size of greenhouse.

Location, both in connection with existing buildings and contour of the land.

Use, whether for vegetables or flowers, or fruit.

Style — detached or connected house.

Future Additions.

Interior of 43' Semi-Iron Frame Greenhouse built for Paul M. Halbrooks, Newark, O. Clear California redwood roof bars, 24' long—in one piece, not spliced. Two rows of vents, hinged at ridge; side vents with stationary glass below.

If you want any advice call on our Engineering and Service Departments for help. There is no charge for this service.

Whether you want to purchase the material and erect your own house, or prefer to have us build the house complete, with heating installed and benches built, we are always glad to submit estimates of cost. Call on us any time.

The Foley Greenhouse Mfg. Co.

*Designers and Builders of Greenhouses
Heating Systems*

FOREST PARK, ILLINOIS
(A Suburb of Chicago)

SPECIFICATIONS

and

DETAILS

Fig. 500

Cross Section Detail of Wall and Roof of Foley Semi-Iron Frame House with Crowned Channel Gutter, Side Vents; and Stationary Glass and Wood Wall below. Concrete wall can be used if desired.

FOUNDATION—On the firmness of the foundation depends the solidity of the house. Sidewall posts should be set in concrete piers or footings extending three feet below grade line. If concrete sidewalls are used, piers should have this same depth, but the wall itself need not go so deep.

Piers or footings for purlin posts should be set at least two feet deep.

CAUTION—Where ground has been filled in, care should be taken to extend all piers or footings through fill into solid ground below.

IRON WORK—The iron work consists of gutter or eave posts, channel gutters and angle eaves, purlin supports, purlins, trusses, gable braces, and tie rods together with the fittings and brackets and clamps to hold the various members in place.

GUTTER OR EAVE POSTS—2-inch pipe, either black or galvanized, accurately cut so that the brackets fit perfectly.

GALVANIZED CHANNEL GUTTERS—7-inch galvanized steel channels of our special shape. (See details on page 4.) This design is patented.

GALVANIZED ANGLE EAVES—3x2x1/4-inch galvanized steel angles, carefully machined. (See page 5 for details.)

GALVANIZED ANGLE DRIP CONDUCTOR—2x2x1/8-inch galvanized angles; amply large to take care of all condensation and provided with sufficient down spouts; can easily be removed for cleaning.

PURLINS—Usually 1 1/4-inch pipe connected to the purlin supports and braces with split tees, bolted directly through the supports and braces. There are sufficient purlins supplied to prevent sagging of the roof bars which are attached to purlins by galvanized purlin pipe straps.

PURLIN SUPPORTS—Pipe set in concrete footings and attached to the purlins by Foley bolted-through split tees.

BRACES—Pipe held securely by the Foley bolted-through fittings.

GABLE BRACING—Steel flats, angles, pipe, and pipe back-bracing are furnished where necessary to insure absolute rigidity. We exercise the utmost care in the design of all Foley gables.

TIE RODS—Usually 3/8-inch round steel and wherever possible extending through gutter posts, and drawn tight with nut on opposite side. Where impossible to run through posts, they are attached with suitable lugs to the underside of the gutter.

WOODWORK—Foley woodwork is noted for its high quality. From sill to ridge, clear California Redwood is used—absolutely free from sap, knots, and other defects. All of our lumber is thoroughly air dried before being manufactured, insuring perfect, smooth milling. This makes painting a pleasure, and gives a finished, moisture proof surface to the completed job. See Bulletin WW24 for details.

Where we furnish the complete house, or complete list of woodwork, roof bars are manufactured with screw holes bored at the factory, top and bottom, for attaching at ridge and gutter; no nails needed, thus eliminating every possibility of splitting the bars. No splits mean no rot. The bars are carefully beveled for the ridge and cut accurately for the gutter, making assembly on the job an easy matter.

Foley side bars are cut to exact length and fitted for sill, and bored at sill and at

FOLEY BETTER BUILT AND HEATED GREENHOUSES

top for nails. The gable bars are cut on bottom for gable plate, and are bored at bottom for nails.

A very distinctive feature about Foley woodwork is the fact that on houses up to 43 feet in width, the roof bars are furnished in one piece—NOT SPLICED.

We have made a feature of this because splices weaken the roof, are expensive to erect, and cause drip in the house, as well as glass breakage. Ask for Bulletin WW24, which gives full details and cross sections of all Foley California Redwood Millwork.

Fig. 501

Cross Section Detail of Foley Crowned Channel Gutter Used in Valley.

Fig. 502

Cross Section of Foley Angle Eave with Concrete Wall and Stationary Glass. Wood wall can be used if desired.

Fig. 503

Cross Section of Foley Angle Eave with Side Vents, Stationary Glass and Wood Wall below. Concrete wall can be used if desired.

Do Not Cut This Book. Refer to Illustrations by Figure Number When Writing.

The Foley Crowned Channel Gutter

"GALVANIZED"

Patent No. 1,472,120

THE Foley Crowned Steel Gutter (Patented) is made of a 7-inch structural steel channel, arched or crowned at the center approximately $\frac{3}{8}$ of an inch, while the sides remain upright—an exclusive Foley feature.

This construction is of great advantage. On the outside of the house, because of its breadth and the vertical sides, it is the easiest gutter made to walk in and work from, for the upright sides give more room than gutters with angle sides. The broad, deep gutter has a larger water carrying capacity than is ordinarily found.

The primary value of the Foley Crowned Gutter is its freedom from the troublesome drip and sweat falling on walks, benches, and stock, as is the case with the old-fashioned gutters. Due to the crowning, the edges are lowered and the center of the bottom is raised, giving the underside a concave surface. As water always flows to the lowest point, not only the drip and the condensation from roof bars, but also the sweat from the gutter itself, naturally flows to the edges, the lowest point, and drops into the drip conductors. With ordinary types of gutters, the drip and condensation travel all over the undersurface of the gutter, dripping on walks, benches and stock, instead of into the drip conductor. The Foley Gutter is drip-proof, because all moisture goes into the drip conductors.

The gutter is placed in the Foley Malleable Iron Gutter Bracket, which, fitted securely to the gutter posts, holds both the gutter and the ends of the roof bars at the bracket. Through holes in the channel, galvanized car-

riage bolts fasten the gutter to the bracket, using Foley gutter cement, making an extremely rigid and watertight construction, and yet one very easily erected.

Fig. 504

Foley Crowned Channel Steel Gutter, Showing Intermediate Bar Brackets, etc.

The intermediate roof bars are attached to the sides of the gutters by the Foley Patented Malleable Bar Brackets. See illustration and description on opposite page.

When the gutter is used on an outside wall, a galvanized steel angle lintel is securely bolted to the underside of the gutter to which the wood attaches—making a positive wind break.

The gutter and drip conductors are galvanized by the hot process *after being fabricated*.

As far as possible and practicable, the steel gutter, angle eaves and drip conductors are furnished so that 6 lengths will cover 100 feet; meaning fewer joints, fewer splices, fewer bolts, and a saving of labor in erection.

Foley Crowned Channel Gutter

(Patented)

Arch or Crown in Gutter Insures Perfect Disposal of Drip Within the House.

Roof Bars Screwed to Bar Bracket. Open End Permits Easy Painting.

Galvanized Angle Drip Conductor Easily Removed for Cleaning.

Fig. 505
Foley Crowned Channel Gutter, Bolted to Each Gutter Bracket with 4 Carriage Bolts.

Malleable Gutter Bracket Securely Set Screwed to Pipe Gutter Posts; or Can Be Bolted Through if Desired.

ABOVE ILLUSTRATION LESS THAN HALF ACTUAL SIZE.

The Foley Angle Iron Eave

"GALVANIZED"

THIS eave plate, because exposed to the heat of the interior of the house, rapidly thaws any ice, snow or sleet; it is self clearing.

A 3x2x1/4-inch steel angle is cut to exact length and punched for post bracket bolts. Eave plate is mounted on

Fig. 506

*Foley Galvanized
Angle Iron Eave
Showing Roof Bar
Brackets.*

the Foley Improved Eave Brackets which are bolted securely to the eave posts. The shape of this bracket is such that it fits into the inside of the angle and is bolted to the 2-inch side, thus holding it absolutely firm and rigid.

Galvanized sash hinges, where side ventilation is used, are bolted directly to the underside of the 3-inch leg of

the angle. One leg of the galvanized angle Drip Conductor snugly sets up under the 2-inch leg of the eave plate and catches all condensation and drip.

Another big advantage of the Foley Improved Angle Eave is the "close coupled" construction, bringing all shadow producing members close together, thus reducing the shade line to a minimum.

Roof bars are connected to the angle-eave by the Foley Patented Roof Bar Brackets which attach without bolts or nuts.

The Angle Iron Eave and Drip Conductors are galvanized by the hot process *after fabrication*, insuring complete galvanization.

The Foley Roof Bar Bracket

Patented

Fig. 507

*Foley Roof Bar Brackets for
Crowned Channel Gutter
Between Gutter Posts.*

Fig. 508

*Foley Roof Bar Brackets for
Angle Eave Throughout.*

NO DRILLING—NO BOLTS.

ALL SCREWS GALVANIZED
SCREW HOLES IN ROOF BARS BORED AT FACTORY

Fig. 509

*Section Thru Foley Angle Eave, Showing Close Coupled
Construction.*

THIS is one of the most valuable improvements in greenhouse construction ever made. By the Foley patented design, the roof bars are securely attached to the brackets and held in place by galvanized screws. The bracket is of skeleton design, allowing air to circulate to every part of the end of the roof bar. By keeping the bar away from the gutter or eave plate, the end of a Foley roof bar is always dry, and easy to keep painted. Roof bars held by the Foley Brackets do not rot out on the ends.

These brackets, made of malleable iron, attach to the side of the Channel Gutter, and the Foley Improved Angle Eave, *without drilling and without the use of bolts*. Simply set in place and drive to seat with a hammer. They hold so securely and firmly that they "stay put"—being of malleable iron, they will not break. Zinc glazing strips fit inside of, and are held rigidly by the bar brackets, which are designed especially for this purpose. These zinc strips hold the glass firmly in place, making a weathertight joint. Each Eave Bar Bracket and Gutter Bar Bracket is specially molded with glass stops which, together with zinc strips, make glass slipping absolutely impossible—a FOLEY feature.

FOLEY BETTER BUILT AND HEATED GREENHOUSES

The Foley Wood Gutter and Eave

FOR those growers who prefer the wood gutter and eave construction we have improved the original designs until the ones we offer are, we believe, absolutely free of faults. Set on the pipe supports with broad bearing brackets bolted to the pipe posts and securely screwed from below with galvanized screws, they form a very rigid, strong construction. See detail, Fig. 516.

Bringing to this construction nearly two score years of experience in wood working, we have given such careful thought to every detail of design and assembly that growers prefer Foley perfect woodwork. And in manufacture and fitting they are so accurately milled and cut that erection is exceedingly simple. See Bulletin WW24 for full woodwork details and description.

Fig. 510

Cross Section Wood Gutter with Side Sash and Stationary Glass and Wood Wall below. Concrete wall can be used if desired.

Fig. 511

Cross Section Wood Gutter, Stationary Side Glass and Wood Wall below. Concrete wall can be used if desired.

Fig. 512

Cross Section Wood Eave Plate, Stationary Side Glass and Wood Wall below. Concrete wall can be used if desired.

Fig. 513

Cross Section Wood Eave Plate, Side Sash and Stationary Bors below. Concrete wall can be used if desired.

Details of Foley Wood Eave and Gutter

All Foley woodwork, from sill to ridge, is of everlasting California Redwood; the wood that knows no rot.

Fig. 514

WOOD GUTTER WITH CONCENTRIC SILLS AND DRIP CONDUCTORS
SHOWING GALVANIZED SILL AND BAR TIES
ALL SCREWS GALVANIZED
SCREW HOLES IN ROOF BARS BORED AT FACTORY

Narrow Houses Built with Gutter Bottoms, Cut from 2x8"; Wider Houses, Cut from 2x10".

IN the scientific design of the Foley Wood Gutter, every possible element was considered—the principal ones were tight joints and the rapid disposal of water.

First: The gutter bottom is so molded on the outer or upper surface that it is slightly dished, instead of being flat, as in the old types. This permits quite an accumulation of water to be carried off without its even touching the joint between sill and gutter. This means that chances of decay in this joint are practically eliminated.

A Decided Foley Advantage

Note the detail of the Foley gutter sill construction. You will see that it has a perfectly round top. This we term the "Foley Concentric Sill." Its advantages are many.

The hundreds of growers and builders who have either seen or used this construction during the past quarter century all agree that it is far in the lead of the bevel sill, both in ease of erection and strength of structure as well as disposal of condensation drip.

And all this advantage at no greater cost than the less desirable bevel sill, for it cuts from the same size lumber.

With the sill perfectly round, the ends of the roof bars are cut in the same circular manner so that at the bearing point they absolutely fit with a full contact at whatever angle they are attached to the sill. Thus, in the erection of your house, should the gutter be slightly out of

Fig. 516

Split-Top Flange Post Bracket. Wood Gutter or Eave Plate.

Details of
FOLEY
WOOD-
WORK
Shown in
Bulletin
WW 24.

The second big advantage of the Foley Concentric Sill construction is the disposal of all condensation drip in a scientific manner.

At the bottom of the eave or gutter is attached an ample drip gutter to carry off all drip. The end of the roof bar is cut back at the heel as far as the condensation groove so that as the condensation flows down this groove, it runs out the end and drops directly into the drip conductor, absolutely free of the sill, or bar.

Fig. 515

With the bevel sill, ordinarily the drip grooves fill up at the lower end of the bar until they overflow and drizzle down the side of the sill or bar, or soak in between the sill and end of the bar, where it is bound to cause rot. At this point absolute dryness and strength are essential, for here the greater part of the roof load and snow load are carried.

However, if bevel sill is preferred, we can supply it at the same price.

On orders for cut and fitted woodwork, screw holes in roof bars at ridge and gutter are bored at factory; every piece is accurately cut, making erection easy.

In all Foley Houses with wood gutters and wood eaves, as far as practicable, we space posts on 5'-7" centers, to prevent sagging, because we have found that wider spacing allows gutters to sag.

Do Not Cut This Book. Use Figure Number When Writing.

Foley Ridge Construction

THE distinctive features of Foley Ridge Construction are its strength, its firmness, and its tightness. Due to the fact that all parts are cut and fitted accurately—at the factory—each piece sets snugly in its place and bars are held firmly by galvanized screws instead of nails. And all screw holes in bars are factory bored so that there is no chance of end splits.

Added to this, the bars on both sides of the ridge are firmly held together and to the ridge by the Foley Improved Ridge and Bar Tie (galvanized).

Of the several forms of ridge construction, the four types illustrated below give the details of the most popular.

RIDGE WITH CAP SHOWING VENT SASH AND GALVANIZED RIDGE AND BAR TIES

Type "T"

With ventilation both sides, hinged at the ridge, it is the most practical for it can be opened for considerable ventilation without admitting rain. And either side can be opened "with the wind" for ventilation without draft.

RIDGE WITH GALVANIZED RIDGE AND BAR TIES SHOWING VENT SASH HINGED TO RIDGE FOR VENTS ONE SIDE OR ALTERNATING VENTS.

Type "R"

The single ventilator, hinged at the ridge, is designed for narrow houses or for alternating vents.

RIDGE WITH GALVANIZED RIDGE AND BAR TIES SHOWING VENT SASH HINGED TO HEADER FOR VENTS ON BOTH SIDES

Type "H"

With ventilation both sides, hinged at the header or seat strip.

RIDGE WITH GALVANIZED RIDGE AND BAR TIES SHOWING VENT SASH WITH CAP USED WHERE VENT SASH ARE HINGED TO HEADER FOR VENTS ONE SIDE OR ALTERNATING VENTS

Type "U"

With ventilation one side, hinged at the header or seat strip; for narrow houses and alternate ventilation. Note the vent sash cap that eliminates all chance of drip when vents are closed.

Vent sash for roof and side walls are bored at factory to receive bolts which attach ventilator arms.

FOLEY BETTER BUILT
AND HEATED GREENHOUSES

Foley Bar Ties

"GALVANIZED"

IN the Foley roof construction every bar is attached to the ridge and to the sill with galvanized screws, set in drilled holes in the bar. A big added feature is the galvanized steel bar tie that reinforces these vital spots.

Note, from the illustration at ridge, the firm, tight connection this makes. On the top, the long screws driven through the bar and on the underside, the tie securely fastening the bar to its mate on the opposite side as well as to the ridge; this combination makes a joint that has no chance to loosen, pull or spread under heavy snow or wind loads.

Fig. 529
Foley Galvanized Ridge Tie.

And the same is true of the connection between the bar and the gutter sill; the screw through the top of the bar holds it firmly to the concentric sill, and the galvanized steel tie on the underside reinforces the joint and makes it very

Fig. 530
Foley Galvanized Sill Tie.

rigid. These are but evidences of the superiority in detail of Foley Greenhouse Construction.

Where bars are bored for screws, and our galvanized ties are used, there are no split ends as is often the case where bars are nailed.

Foley Painting Service

In the new Foley daylighted factory, every facility is provided for painting. Here we can paint, at a great saving in cost, all the material for your new house. When we do this work, every piece is taken, dry, from the warehouse, cut to fit, and painted, and then carefully piled with separating strips between material until paint is dry enough to ship.

Partial View of Interior of Foley 36' Pipe Frame House with High Gutters and Side Ventilation Built for Frank Oechslin, Chicago, Ill.

Typical and Standard Widths of Foley Pipe Frame Greenhouses

IT is often a problem for a man erecting his first greenhouse, or even to the "old timer" who wants an addition, to determine the size and bench arrangement best suited to his needs. We are, therefore, showing here the twelve standard widths of greenhouses, in cross section. In these, we indicate the usual and most economical arrangements of walks and benches to get the greatest growing area with the easiest method of caring for the plants. However, we can give you almost any arrangement, size, or width of bench or walks that you desire or need.

From these illustrations you may be able to determine just the one you want; if not, our service department will be glad to help you on your request. We have built so many greenhouses for so many different purposes that we have a breadth of experience to guide us in our suggestions to you.

The measurements shown on these sketches show to outside of walls of detached houses. Built in a range, or with angle eaves, the dimensions will vary slightly. Either wood or steel gutters or eaves can be used.

House No. 1—A small propagating house or for the growing of specialties. Steel tie rods recommended, through the gutter posts of the outside houses, to prevent sagging and spreading. In bench arrangement this house accommodates two 3' side benches with a 4' 8" center bench and two 20" walks. For vegetables we advise high gutters. Can be built with two rows of ventilators, though cut shows only one row.

Two Purlin Houses

Houses 2-3-4 are all popular small houses. Growers like them because they can be adapted to so many different uses. In fact, they are excellent general purpose houses. The men who grow on benches will note the high brace between the purlin posts. This gives ample head room for wheeling soil on benches. And the tie rods from the purlin supports to the eaves or gutters are nearly parallel with the roof.

The Foley construction uses tie rods, instead of wires. It has been our observation that the wire may stretch and permit the house to spread, pulling loose the ends of the roof bars and causing the roof to sag. With these rods, put through the gutter posts and tightened with a nut, the house is "tight as a drum."

Sketches show houses built with gutters, and stationary glass in side walls. Either angle iron or wood eaves or steel gutters may be substituted; and side ventilation can be installed in outside walls of detached houses, or in the outside houses of a range. Walls may be of any height or of any materials desired, although they show here as of concrete, with gutters 7 ft. high.

We strongly urge and recommend that houses be built with gutters at least 7 ft. high.

Ridge ventilation may be single or double and hinged at ridge or header. We advise vents hinged at ridge as in Type T or R.

Bench and walk arrangement can be varied to suit the grower.

Range of 12 Foley Pipe Frame Houses Built for The Dunbar-Hopkins Co., Ashtabula, O., in 1923.

In view of the fact that their former houses were iron frame by another builder, this letter is interesting: "We are satisfied that we made no mistake in giving you the contract last spring for our new range of twelve houses, 17x450'. The material was, without exception, No. 1 stuff. It all came—cut to fit—ready for erection, and the machine work was the best and most accurate we have ever seen. The entire job showed a high order of executive ability and attention to detail that the builder appreciates when he assembles the material. We recommend you highly to prospective greenhouse builders." (Signed) The Dunbar-Hopkins Co., Dated, Nov. 21, 1923.

Four Purlin Houses

House No. 5—This is a popular Foley "Y" brace house. Of good average width for general service. Vegetable growers who grow on the ground have found this one of the best all-around houses. It should be built with gutters over 7 ft. high if stock is grown on benches because the low cross brace and tie rods make wheeling on the benches difficult, if low gutters are used.

House No. 6—The Foley Truss Type House. A popular average width house. Strong, rigid, with extraordinary bench room for width of house. The high brace, between the purlin supports, and the tie rods—practically parallel to the roof—gives sufficient head room.

House No. 7—An economical Truss Type House. If the grower has the space, this is even more economical than the No. 6, because it gives considerably more growing space at very little additional building expense, as all fittings, posts, gutter, and ridges are the same. The only additions are the longer braces, roof bars, and the extra glass.

House No. 8—An excellent house for miscellaneous stock or for vegetables grown without benches. This is practically the same as the No. 5 house, except that it is wider, meaning that it is cheaper per square foot of ground covered.

Ventilation in any of these houses can be arranged in the side walls where detached, or in outside houses of ranges, and the roof vents can be hinged at either ridge or header.

Bench and walk arrangements can be altered to suit the desires of the purchaser.

FOLEY IRON FRAME GREENHOUSES

Detailed and Described in Bulletin I.F.24

FOLEY WOODWORK

Details Shown in Bulletin WW24

FOLEY HOTBED SASH

Bulletin HB24

Do Not Cut This Book. All Illustrations Are Numbered or Lettered. Refer to These When Writing.

Foley Better Built Angle Iron Eave Houses built for Jos. H. Hill Co., Richmond, Ind.

FOLEY BETTER BUILT AND HEATED GREENHOUSES

House No. 9—A three-support "Y" brace house. Unusually strong and very rigid. Built especially for high wind and heavy snow countries. With all its superior strength—due to the scientific arrangement of the braces—the construction is light, with but little shade. Cross braces are high, giving full free head room. An altogether very practical and very attractive house.

Roof bars 20 ft. long in one piece—not spliced. Adds strength and prevents drip.

House No. 10—A two-support "Y" brace house. Very popular with all growers because its width and freedom of supports makes possible a great variety of bench arrangements. Probably one of the best known houses for growing roses as well as other cut flowers, potted plants, and vegetables.

Like house No. 5, gutters over 7 ft. high if bench is used. Roof bars are 20 ft. long—in one piece, not spliced. Adds strength and prevents drip.

Six Purlin Houses

House No. 11—An exceedingly strong, rigid house with four direct supports as well as "Y" braces. Will withstand severe wind or snow load. The strong pipe bracing, with the heavy tie rods, make this a "stay together" house. Glass breakage through vibration is practically unknown.

Roof bars are 22 ft. long—not spliced, which adds to the strength; prevents drip.

House No. 12—The Famous "Foley Forty-Three." Originated and popularized by Foley. In fact, we recommend this house over the No. 11 if a grower has the space for it. The same bracing, same fittings, and same gutter or eave plates, same ridge—yet the grower gets more growing space or bench room. His cost, per square foot of ground covered, is less than in No. 11.

Roof bars are 24 ft. long in one piece, not spliced. If you want a perfect roof, insist on one-piece bars. They are standard construction in all these Foley Houses.

Roof vents on any of these houses can be hinged at ridge or at header, but we recommend those hinged at ridge—our Type T construction.

Bench arrangements can be made to suit any grower's needs or plans. Those shown are but suggestions.

Foley Pipe Frame Greenhouses built for John Breitmeier's Sons, Mack Ave., Detroit, Mich.

Suggested Gable Arrangements

THE selection of the proper gable arrangement for your needs should be a matter of careful study on your part. The arrangement that suits your needs today, may not fit if you should change your growing program. It is therefore best to plan for any possible change by building in plenty of doors and wheeling sash.

The cost of wheeling sash is so little more than bars that we advise their installation, even if you are growing potted plants. Their advantage as ventilators in hot weather makes their installation more than worth while.

The Foley Gable Construction is one of the strongest ever built. In all of the wider houses the gables are supplied with steel flats which are set next to the door jambs and gable posts and extend from the concrete footings, below grade, to the gable rafters. Ample angle iron, pipe, and pipe back bracing carried back and bolted to the purlins and purlin supports insure absolute rigidity.

We suggest the following arrangement of gables:

For propagating houses—Gables A, B, or C.

For roses, carnations, and general cut stock—Gables E, G, or K.

For growing vegetables on the ground—Gables F, H, or J.

For pot plants—Gable G, with extra doors at each walk.

NOTE—WHEN WRITING FOR ESTIMATES BE SURE TO STATE BY LETTER AS DESIGNATED ABOVE, THE TYPE OF GABLE YOU DESIRE.

Eleven Foley Pipe Frame Greenhouses Built for A. G. Heinrichs, Schoaf Road, Brooklyn Sta., Cleveland, Ohio.

FOLEY BETTER BUILT
AND HEATED GREENHOUSES

Fittings and Hardware

Here are shown only a few of the standard shapes and sizes of Foley greenhouse fittings. In our extensive stocks we have fittings for many special uses, to meet any condition.

Fig. 517

Arrangement of fittings used in truss type construction, shown in cross sections 6 and 7 on page 11.

Fig. 518

Typical Y Brace construction, showing 2 braces and tie rod.

Shown in cross sections 5-8-10-11-12, on pages 11 and 12.

Note extra heavy construction of all fittings. Fittings are all "recessed" to prevent slipping.

Fig. 524 Galv. "U" Bolt

Fig. 519

No. Y16—Y Brace Split Clamp, $1\frac{1}{4}$ ", 4 Bolts and Set Screw
No. Y17—Y Brace Split Clamp, $1\frac{1}{2}$ ", 4 Bolts and Set Screw

Fig. 520

No. Y15—Y Brace Split Clamp, 1", 2 Bolts and Set Screw
No. Y14—Y Brace Split Clamp, $1\frac{1}{4}$ ", 2 Bolts and Set Screw

Fig. 521

Y Brace Fittings all Bolted thru.
No. Y19—Y Brace Split Cups, 1"
No. Y20—Y Brace Split Cups, $1\frac{1}{4}$ "

Fig. 522

No. 17—Purlin End Bearer, Bolted to Wood Gable Rafter— $1\frac{1}{4}$ " Pipe.

Fig. 523 Non Slip Split Tees

Size	Bolted Thru Pipe	Not Bolted Thru Pipe
$\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{4}$ "	...	T14
1 x1 x1"	T15	T1
$1\frac{1}{4}$ x $1\frac{1}{4}$ x1"	T17	T4
$1\frac{1}{4}$ x $1\frac{1}{4}$ x $1\frac{1}{4}$ "	T18	T12
1 x1 x $1\frac{1}{4}$ "	...	T2
$1\frac{1}{4}$ x $1\frac{1}{4}$ x $1\frac{1}{2}$ "	T19	...

All Fittings and Hardware Furnished with Bolts, Screws, etc.

Fig. 525

Galv. Special Hinge for Types H and U Vents.

Fig. 526

Galv. Door Hinge. Loose Brass Pin.

Fig. 527

Galv. Vent Hinge for Types T and R roof Vents, Side Vent and Wheeling Sash.

Fig. 528

Galv. Pipe Purlin Strap.

Do Not Cut This Book. Refer to Parts Wanted by Number.

FOLEY BETTER BUILT
AND HEATED GREENHOUSES

Foley Triumph Ventilating Machine Ball Bearing

Fig. 531

Foley Triumph Ventilating Machine Operating Side Sash at Frank Oechlin's Harlem Avenue Range.

WITHOUT doubt or question the Foley Triumph Ventilating Machine is the most completely satisfactory device offered the greenhouse man for operating his ventilators—both ridge and side.

In the first place, the Foley Triumph is the easiest operating machine. The top head which carries the pipe shafting is fitted with cold rolled steel roller bearings, revolving on fixed steel pins.

Two complete sets of Thrust Ball Bearings are placed on the worm and handwheel shaft, thereby eliminating end thrust on the worm case. Actual tests have proven that this machine is without an equal.

The large handwheel, the worm gear, the small sprocket driving the large top head sprocket, all combine for ease of operation. Because the Foley Triumph works easily and is at the same time powerful, it is a great favorite.

Our thousands of customers will, and do, testify that the Foley Triumph is a very

rapid acting machine. Sudden temperature changes, or storms, or wind shifts, are taken care of quickly by Foley Triumph Ventilating Machines. The largest growers in the country are unanimous in their praise of this machine—praise of the most practical sort, repeat orders.

These Foley Cast Iron Sectional Boilers in Battery Heating John Breitmeyer's Sons, Mack Avenue, Greenhouses.

Just a Few of the Many Users

Poehlmann Bros. Co.
Morton Grove, Ill.
Frank Schramm,
Crystal Lake, Ill.
Hans Jepsen,
Maywood, Ill.
J. C. Rennison Co.,
Sioux City, Ia.
Lanternier,
Fort Wayne, Ind.
The Miles Co.,
Oshkosh, Wis.
Chas. H. Plumb Co.
Detroit, Mich.
Bourdet Floral Co.,
St. Louis, Mo.
Jno. B. Murray
Decatur, Ga.
John R. Hellenthal,
Columbus, Ohio

Fig. 532

Foley Triumph Ventilating Machine.

Foley Heating Systems

FOLEY GREENHOUSE HEATING SYSTEMS have been said—by growers who have several types with which to make comparisons—to be the most efficient, most economical, and easiest to control and handle.

With coal at its present high price—and mighty little chance for it to go down—it is important to your profits that you get a system that will heat your houses at the minimum of cost. And that is what a Foley Heating System will do.

In heating, the cheapest system you can install is not the lowest priced—it is the one that is the most efficient and which heats the house at the lowest fuel cost. This is a Foley Heating System.

Write us for estimates of cost on an efficient Foley Heating System in either your new or old houses. Ask for Bulletin H24 which gives full descriptions of Foley Better Heating Systems.

FOLEY BETTER BUILT
AND HEATED GREENHOUSES

Foley Pecky Cypress

Genuine Tidewater Gulf Red

AUTHORITIES agree that Pecky Cypress is unexcelled for benches, flats, or plant boxes. But to be of long life it must be from the tidewater belt, the kind of pecky that grows in the swamps.

Foley Pecky all comes from the tidewater belt—right from the heart of the swamps. Not a stick of upland Peck is handled by us, and we strongly advise against its use. The superiority of our Gulf Red Pecky is attested to by the repeat orders we receive from hundreds of old time growers.

Large stocks constantly on hand at our Forest Park yard for carload or small orders.

Shipments on carload orders are usually made directly from our mills in the South, thereby saving you freight and handling

charges. Thirteen thousand feet or more will make a car for direct shipment or we can ship from Forest Park combining the Pecky with your other greenhouse material, insuring delivery in better condition, as well as a saving in freight.

Foley Benches

The selection of both bench design and construction is of the utmost importance. First to be considered is the growing program—both present and future, for a bench built for potted plants is not satisfactory for roses, etc.

We show here four of the most efficient and economical constructions—constructions that will give the longest life of satisfactory service.

—Immediate Shipments—Write us for Prices.—

Bench No. 800

Bench No. 801

Top View - of Foley Special Built-up Wood Cross Pieces - Showing Wood Spacers

The Foley Special. With concrete legs. This design was originated by us and has proven its superiority over years of use. Two cross pieces of 1x4" or 1x5" (depending on the width of the bench), are nailed together with a 1" spacer between, as shown above. This built up cross piece not only outlasts the solid piece by allowing circulation of air around the legs and under bottom boards, but it lengthens the life of the bottom as well. Cross pieces and spacers cut to size at factory.

Legs spaced 40 to 48 inches. For sideboards see description of Bench 801. Steel molds for concrete legs always in stock.

Concrete legs with 2x4" stringers and 2x4" cross pieces. This stringer type of bench gives great bottom support when wheeling on the benches. While the legs are spaced from 40 to 48" apart, the cross pieces are set but 24" apart. The Foley Special Built-up Cross Piece can be used in place of the 2x4" cross members.

Side boards in this bench, as in benches 800 and 802, are held securely by steel Sideboard Bench Brackets. These are attached to the cross pieces and to the sideboards at regular intervals and where boards are spliced. Thus the sides are independent of the bottom.

Bench No. 802

Bench No. 803

All wood bench. On the Foley special cut 2x4" bench legs, are nailed the Foley Special Built-up Cross Pieces. These legs are accurately cut at the factory to receive the 1" boards of the cross pieces. By notching the bench legs to hold the cross pieces, the load of the bench is carried as securely as though on top of the legs. Nailed-on cross pieces unless legs are notched depend solely on the nails for strength. See diagram above. Height of sideboards optional to the grower. See description under Bench No. 801.

Bench bottoms in all of these three benches are 1" Pecky Cypress, in standard widths and lengths.

Foley Galvanized Pipe Frame Bench. For showhouses or private conservatories. Legs are connected to the stringers at the top with a special combination bracket, to which the sideboards are screwed. Cross braces are attached to legs with split "T"s. The corners of the benches are rounded and fitted with the Foley Galvanized Cast Iron Round Corner pieces which make an attractive and strong construction, as they are screwed to the sideboards. Sideboards are capped and are usually of Barn Grade Cypress.

In writing for estimates, state by number which style of bench you prefer.

Foley Greenhouse Woodwork

Made of Everlasting Clear California Redwood

"The Wood That Knows No Rot"

Foley Greenhouse Woodwork is perfect woodwork, made of absolutely clear California Redwood. Nearly two score years' experience in the handling and milling of lumber gives us a knowledge and ability to design and produce perfect wood members for greenhouses.

Greenhouse Woodwork, in order to give years of satisfactory service—first, must be of the proper timber—second, must be free of sap—third, must be properly seasoned before being machined—fourth, must be designed and machined carefully.

The Advantages of Redwood Lumber

From our years of experience we have chosen Redwood—the clear heart-wood—as the most perfect wood found for greenhouse construction, based on the following facts:

Clear Heart Redwood

- 1st. Is absolutely free from rot.
- 2nd. Least liable to warp or shrink.
- 3rd. Has a long straight grain.
- 4th. Is light in weight but strong.
- 5th. Mills to a smooth, glass-like surface.
- 6th. Takes and holds paint perfectly.

Redwood trees—the *Sequoia Sempervirens* (meaning always living) are of immense size, yielding boards of almost any width and length within the bounds of workability. Some of these wonderful trees reach a diameter of thirty feet at a point ten feet above the ground. They extend straight up for two hundred feet or more, with practically no branches for the first hundred feet, insuring a long, straight, even grain to the wood.

In addition to their immense size, the Redwood yields the largest amount of good usable heart-wood in proportion to the amount of sap-wood of any known tree. And all authorities agree that the sap-wood of any tree makes mighty poor lumber because it will not resist decay when subject to moisture. Because of the decided red color of the heart of the Redwood—from which the tree takes its common name—and the clearly defined white ring of sapwood, it is easy to distinguish them and be sure of getting only the perfect heart-wood without any sap. You are assured of sap free lumber when you buy from Foley.

The United States Department of Agriculture in their "Silvical Leaflet No. 18" says, "The Redwood has many valuable qualities that set it apart from other lumbers of the world. Its resistance to fungi (rot) and insects; its ease of working; its lightness; its straight even grain and slowness of burning; make it particularly adapted to house construction."

The peculiar acid-like heart-wood repels all rot spores, both in the living tree and seasoned lumber, and prevents their growth. Therefore sap free *Redwood never rots* under any condition. This makes it the ideal wood for greenhouse construction.

John Muir, the great naturalist, in his book, "Forests of the World" tells of California Redwood trees which have lain on the ground for over 800 years being taken in and milled and found to be 95% perfect. This is corroborated by the U. S. Department of Agriculture in their "Forest Service Bulletin No. 193" in which they tell of fallen trees that have lain in the woods for over 500 years and then producing perfect lumber.

The Giant Forests where Foley Redwood Grows

FOLEY BETTER BUILT AND HEATED GREENHOUSES

In our own experience, Mr. John Dupee gave us the contract to build a Foley Orchid Greenhouse for him at Coronado Beach, San Diego, California, because we use Redwood exclusively. Although he had owned several greenhouses of cypress, he wanted nothing but Redwood. He told us of finding perfectly fresh appearing, sound Redwood chips in a forest where there had been no cutting for 75 years, proving that the wood is practically everlasting and therefore desirable for greenhouse construction.

The grower who buys a Foley Redwood Greenhouse never need worry about the wood decaying or rotting out. It will outlast his lifetime by many years.

Properly seasoned heart Redwood does not warp, nor does it end shrink as other woods are prone to do. When thoroughly seasoned and milled, the Redwood lumber stays accurately to size. A greenhouse built of Redwood does not pull its joints loose or tear itself apart. This is particularly valuable in the light construction of a greenhouse.

In Foley construction, the long straight grain of the Redwood is of the greatest advantage to the grower. Due to the available sizes of the lumber we make *all* our roof bars up to 24 feet long, *in one piece*, without joints or splices. This insures you against a weak roof, glass breakage, troublesome drip and effects a saving in erection costs.

Redwood is light in weight, but at the same time it is very strong. According to the tests made by the U. S. Forest Products Laboratory, Redwood is 86% as strong as white oak.

When milled, Redwood has an exceedingly smooth, glass-like surface. This makes it a pleasure to handle, and the completed structure has a very clean, finished appearance.

Many years ago when we were investigating the comparative merits of California Redwood and Gulf Heart Cypress for greenhouse construction,

we wrote to Washington for technical data on the subject, and in reply received the following letter, dated November 14, 1911:

UNITED STATES DEPARTMENT OF AGRICULTURE
Forest Service

FOREST PRODUCTS LABORATORY—Washington, D. C.

"California Redwood is a very durable species, and would doubtless last fully as long, if not longer than heart cypress of the South. I understand that it is also less subject to shrinkage than any other wood, and it would seem therefore, that it would give very efficient service in greenhouse construction."

Just a Suggestion of the Size of California Redwoods

Foley Redwood

All Foley Redwood is clear heart-wood, absolutely free of all sap. As the Forest Products Laboratory at Madison, Wisconsin, says, "In considering durability, a clear distinction must be made between heart-wood and sap-wood, since the sap-wood of most species decays very rapidly in comparison with the heart-wood."

In the redwood it is very easy to distinguish the heart from the sap-wood—far more so than in any other wood. The narrow ring of sap-wood, just under the bark is white and the great mass of the heart-wood is red. You will find all Foley Redwood to be red—perfectly selected heart-wood—everlasting.

From sill to ridge all wood in a Foley Better-Built Greenhouse is clear California heart Redwood—"the wood that knows no rot."

Range of Foley Curved Eave Iron Frame Greenhouses, built for G. Gunby Jordan, Columbus, Ga., Clear California Redwood used throughout

Full Size Cross Sections—Foley Perfect Woodwork

—Foley Woodwork Members—

CONCENTRIC
GUTTER SILL
MADE FROM 2"x4"

38

USED WITH
No. 53-57-60

MADE FROM
1½" x 3"

67B

DRIP CONDUCTOR
USED FOR SPECIAL GUTTERS

MADE FROM
1½" x 2½"
USED FOR HOUSES
OVER 20'-0"

67A

DRIP CONDUCTOR

MADE FROM
1¼" x 2"

67

DRIP
CONDUCTOR

WOOD EAVE PLATE

60

MADE FROM 2"x6"
USED WITH SILLS No. 38-39 AND 40

WOOD GUTTER BOTTOM

57

MADE FROM 2"x8"
USED WITH GUTTER SILLS No. 38-39-40-45 & 102

WOOD GUTTER BOTTOM

53

MADE FROM 2"x10"
USED WITH GUTTER SILLS No. 38-39-40-45 AND 102

BEVELED
GUTTER
SILL

40

MADE FROM
2"x4"
USED
WITH
No. 53-57-60

Do not cut book; refer to parts by name and number

Full Size Cross Sections

FOLEY BETTER BUILT AND HEATED GREENHOUSES

Full Size Cross Sections

RIDGE
AND
GUTTER
SILL

(102)

MADE FROM
2"x5"

USED WITH
Nº 53-57.

AND 96

WHERE LEANTO
ATTACHES TO
SIDE OF HOUSE

(39s)

GLAZING
STRIP
MADE
FROM
1"x2½"
USE WITH
Nº 39

GLASS SILL (179) MADE FROM
2"x4"
FOR WOOD OR CONCRETE WALL

SASH SILL (158) MADE FROM
2"x4"
FOR WOOD OR CONCRETE WALL

WEATHER
STRIP

(68)

(120) DOOR
STOP

SEAT
STRIP

(69)

MADE
FROM
1¼"x2"

(29) SASH
HANGING RAIL
MADE FROM 2"x2"

GASSER
GUTTER SILL

MADE FROM 2"x5"
USED WITH
Nº 53-57-60

GUTTER ASSEMBLED

(39)

ORNAMENTAL
GUTTER SILL
MADE FROM
2"x4"

USE
WITH
Nº 53-57

FOR
OUTSIDE
GUTTERS OF
RANGE OR
FOR
SHOW HOUSES

(45)

SASH SILL (151) MADE FROM
2"x4"
FOR SASH WITH STA. GLASS BELOW

DOOR & WHEELING SASH HEAD

(124)

MADE FROM 2"x6"

Foley Wood Members

On this and the preceding pages we show cross sections of the wood members used in the construction of the various sizes and types of Foley Better-Built Pipe and Semi-Iron Frame Greenhouses. Each bears both a name and number to make identification easy. In the case of the "built up" members, such as gutters and ridges, we show sketches of the complete assembly and indicate by number the

members that are to be fitted and erected together. We show as many as possible of these actual size. All cross section details on pages 19, 20, 21 and 22 are actual size. Those on this page—23—reduced to half size.

Because every detail is numbered and named you need not cut this bulletin when referring to different members. When writing simply use number and name.

These sections shown HALF actual size

FOLEY BETTER BUILT
AND HEATED GREENHOUSES

Partial View of the Noted Range of Frank Oechsle, Harlem Avenue, near Chicago. The completed range now consists of 30 Foley Better-Built Greenhouses and a very novel steel frame service building 36' x 300'

Foley Facilities

For Service and Quality

At our big daylight plant at Forest Park, Illinois, we have facilities for the storing of vast quantities of Redwood lumber. Foley Redwood is thoroughly seasoned before being taken to our big mill adjoining the storage yard and warehouse. In this mill are specially designed machines for the milling of the many shapes of woodwork needed in greenhouse construction. These machines insure absolute accuracy of shape and size of the members, making Foley woodwork the most completely cut and fitted greenhouse woodwork offered to the grower.

The finished materials of the various sizes are stored in our mammoth warehouse enabling us to give you prompt service. By keeping a vast quantity of material always on hand, completely milled, we are able to guarantee that each and every piece is perfect.

All material is loaded into cars, under cover, so that it is never exposed till it reaches the job.

There is a vital part of the preparation of our woodwork for a Foley Better-Built Greenhouse that cannot be measured, except by the quality of the finished product. That is the care, personal attention and intelligence with which every order is handled.

It is because of this that Foley service meets with such favor

with the growers. It is because of this that growers voluntarily write us letters like that shown in the center of this page; it is because of this that Foley Greenhouses are called by growers everywhere, *Better Built and Heated Greenhouses*.

BROADWAY GARDENS, Inc.

Vegetables, Plants and Flowers
PRINCETON, IND.

The Foley Greenhouse Mfg. Co.,
Forest Park, Ill.
Gentlemen:

It is with a feeling of decided satisfaction that the Broadway Gardens, Inc., notifies you that the two houses recently purchased from you are now ready for occupancy.

We cannot say too much in regard to the condition in which the material was packed in the car and shipped, nor as to its fabrication. Nothing short and every piece cut to fit perfectly.

No skilled labor in greenhouse construction was employed, and yet not the least difficulty was experienced in reading your plans. We believe we have two of the very best houses in this district and feel that the least we can do is to thank you for the excellent service you have rendered. The filling of a contract over which not a letter of adjustment is necessary is certainly worthy of commendation and it is our pleasure to state that we are strong for Foley houses, not only as to design of construction but as to material and service as well.

With best wishes for your continued success, we are,

Yours very truly,

BROADWAY GARDENS, INC.

(Signed) By Will Blair, President.

A Word About Painting

For several years many growers have found that it pays to have Foley do their painting. Consider that we have a force of painters who are expert in this line, together with every facility in the way of racks and storage space for drying. If we do the painting the material reaches you ready for erection. This saves you the annoyance and expense of having to make room in crowded quarters and providing temporary covering to protect material from the weather. If painted by us you can haul your material to the building site and store same there until ready to erect. *Important*—Bear in mind we use only the best of painting materials

and that all woodwork, structural pipe, and steel is hand brushed; *Not Dipped*. Let us quote you.

Foley Bench Lumber

On Page 16 of our Bulletin P. F. 24, we describe our bench constructions and our facilities for supplying Pecky cypress. Be sure to get this if interested.

The Foley Greenhouse Mfg. Co.

Designers and Builders of Greenhouses—Heating Systems

FOREST PARK, ILLINOIS

(A Suburb of Chicago)

FOLEY BULLETINS OF BETTER-BUILT GREENHOUSES

Pipe Frame Greenhouses	P. F. 24	Hot Bed Sash and Supplies	H. B. 24
Iron Frame Greenhouses	I. F. 24	Wood Work Details	W. W. 24
Heating Systems	H. 24		

Foley

Hot Bed Sash

Fig. 1011
3' x 6' Foley Hot Bed Sash.
Open and Unpainted.
3 Rows of 10" Glass.

Hot Bed Sash may, as the old grower knows, be either a constant profitable investment, or they may be a source of expense and annoyance. The difference depends entirely on the quality—material, design, and workmanship.

Because of their use, because of the handling, because of the exposure, yes—and because of the neglect, the hot bed sash have a hard life. Therefore, the better the material and workmanship, the longer they will give satisfactory service.

Foley Hot Bed Sash, we firmly believe, are the finest that can be

made. We put into them the best of materials milled and assembled by experienced workmen.

Foley Materials

All Foley Hot Bed Sash are made—like Foley Better-Built Greenhouses—of everlasting clear California Redwood—the wood that does not rot, warp, shrink, or swell. It contains no knots, checks, or sap, for we use only the perfect clear wood, fully seasoned. Those who have used Foley Redwood Hot Bed Sash know their superiority. For those who have not, let us outline some of their advantages.

As we tell in our Bulletin WW 24, California Redwood is, in every way, the best wood for greenhouses and Hot Bed Sash.

U. S. Government tests show the redwood has an extremely long life. Being a light wood, it makes the sash easy to handle. And because redwood does not shrink or swell as much as other woods, the sash can be fitted closer to prevent leaky joints and loss of warmth. The grain is perfectly straight, and the wood machines to a fine smooth finish; readily taking paint and holding it well.

But its greatest advantage is its freedom from rot and its resistance to rot producing fungi. Sash made of the quality heart redwood we use will give a lifetime of service.

Foley Sash Design

Foley Hot Bed Sash are made in the standard 6-foot lengths in two widths; 3-foot, made for 3 rows of 10-inch glass, and 3-foot 2 inches, made for 4 rows of 8-inch glass.

To meet the needs of growers in different sections, we make Foley Hot Bed Sash — both widths — in two thicknesses, either dressed from 1½" lumber, or dressed from 2" lumber.

As some manufacturers make sash only from 1½" lumber, dressed thinner, you should be careful when making comparisons and selections, and note that we quote both ways.

Fig. 1012
3'-2" x 6' Foley Hot Bed Sash.
Open and Unpainted. 4 Rows of 8" Glass.

The Foley Greenhouse Mfg. Company
Designers and Builders of Greenhouses Heating Systems
FOREST PARK, ILLINOIS
(A Suburb of Chicago)

Foley Blind Mortise

While we use clear California redwood—the wood that knows no rot—in all our sash,

we take every precaution to prevent and avoid all chance of decay.

All joints in every Foley Sash are blind mortised.

set in white lead. Every joint is firmly secured by galvanized steel dowel pins, and the center of the sash is reinforced with a galvanized steel rod through the center muntins and blind mortised into the side stiles. This makes a very strong, rigid sash with practically no shade line at the center.

The superiority of the blind mortise over the old fashioned open mortise, is marked in many ways:

First—The blind mortise joint, as made by us, is stronger and more rigid than the open mortise and other types of blind mortise. With the mortise accurately cut and the tenon a perfect fit for the mortise, there are five bearing sides—as well as the shoulder of the top and bottom rails to make the joint rigid. After the tenons are dipped in white lead, the sash is assembled and

Fig. 1013

Illustrating
Foley Blind
Mortise Joint

firmly clamped together into perfect shape and size by powerful clamps. Then the galvanized steel dowel pins are driven through the joints and all is tight, secure, and very rigid.

Second—With the blind mortise joint, the end of the tenon is not exposed to the sun and weather, thus eliminating the chance of moisture entering the joint, causing decay and weakening the tenon.

Third—While we make all our hot bed sash with extended stiles or "horns," because many like to use these as handles or to keep the sash off the ground when storing, still they are unnecessary to the strength of the sash, as with open mortised joints. Anyone can saw off the "horns" without spoiling the sash or opening the top of the mortise—a thing impossible with the old type of mortising.

The sash bars or muntins are accurately spaced by mortising machines so that the glass always fits. These bars are heavy enough to hold the glazing points securely, yet they cast the minimum of shade. Joints at the top and bottom rails are blind mortised.

Glazed or Open

Foley Hot Bed Sash are sold either open or glazed, as ordered. For safety in shipping when glazed, they are bundled and carefully crated both sides to prevent glass breakage. When sold glazed, unless otherwise ordered, they are **painted two coats** of Foley White Greenhouse Paint. When shipped open, they are either painted or unpainted, as ordered, and bundled, with the ends carefully cleated.

Chickasha, Okla.

The Foley Greenhouse Mfg. Co.,
Forest Park, Ill.

Gentlemen:

Enclosed find check in payment on car of hot bed sash which we have just unloaded.

We wish to thank you for your promptness in handling this order. The number of sash checked O. K., and they came up to our expectations in every way. The workmanship is perfect; we did not find one defective sash in the 800 shipped.

Yours very truly,

(Signed) Bitsche Seed House.

Frames

Foley Hot Bed Frames are made to receive as many sash as you desire. These frames are made of 1-inch Gennine Tidewater Gulf Red Pecky Cypress cut to exact size, ready for assembly. The sash dividing bars are grooved to carry off the drip. These are set in notches in the front and back of the frames. Side guides for sash are attached and come flush with top of sash.

Fig. 1014

Foley Standard 3-Sash Frame, Cut and Fitted, Ready for Bolting Together with Angle Iron Corners

FOLEY BETTER BUILT AND HEATED GREENHOUSES

Lafayette, Ind.

The Foley Greenhouse Mfg.
Co.,

Forest Park, Ill.

Dear Sirs:

Enclosed find freight receipt
for Car Lumber shipped us.
This is the best car of Pecky
Cypress we have ever bought.

Yours truly,

(Signed)

F. Dorner & Sons Co.

Fig. 1016

Typical Boards of Foley Genuine Tidewater Gulf Red Pecky

Flats

Selected Pecky Cypress Flats, our standard size
15" x 22" x 2½" inside measurements, 16" x 24" x
3" outside measurements. Sides and bottoms made
of 1" Pecky resawed to approximately ¾" thick.
Ends made of 1". Flats are carefully cut to size
and bundled for shipment, in the knock-down.

NOTE—We can readily furnish any special size
flat or plant box you desire.

Fig. 1017

Foley Pecky Flat.

Glass

Immediate Shipments--Write Us for Prices

In our large glass warehouse we carry at all times a
full and complete stock of glass for standard hot bed
sash and greenhouses as well as odd sizes for special
uses. All of our glass is guaranteed to be of stand-
ard quality. Through our factory connections, we
are in position to ship direct cars of glass from our
factories to your town, thus saving you freight and
handling costs, instead of having to ship carloads
from our warehouse.

**BULLETIN P. F.-24 Gives Full Details of
FOLEY PIPE FRAME GREENHOUSES**

Foley Pecky Cypress Genuine Tidewater Gulf Red

Authorities agree that Pecky Cypress is unex-
celled for benches, flats, or plant boxes. But to
be of long life it must be from the tidewater belt,
the kind of pecky that grows in the swamps.

Foley Pecky all comes from the tidewater belt—
right from the heart of the swamps. Not a stick
of upland Pecky is handled by us, and we strongly
advise against its use. The superiority of our
Gulf Red Pecky is attested by the repeat orders
from hundreds of old time growers.

Large stocks constantly on hand at our Forest
Park yard for carload or small orders.

Shipments on carload orders are usually made
directly from our mills in the South, thereby sav-
ing you freight and handling charges. 13,000 ft.
or more will make a car for direct shipment or
we can ship from Forest Park combining the
Pecky with your other greenhouse material in-
suring quicker delivery in better condition, as
well as a saving in freight.

Fig. 1018

Glass Ready for Shipment.

FOLEY BETTER BUILT AND HEATED GREENHOUSES

Fig. 1019

Foley Greenhouse Paint

We are very particular, of course, about the quality of our paint. After having manufactured material as carefully as we do, and of such selected stock, it would be poor policy to use any but the very best of paint. After many years of experience, we honestly believe we are offering the trade an unsurpassed paint for general greenhouse use. Shipped in 1-gal.—5-gal.—10-gal. cans— $\frac{1}{2}$ -bbl. and barrels.

Fig. 1020

Linseed Oil (Boiled)

Foley guaranteed pure linseed oil is furnished for thinning Foley White Greenhouse Paint for the priming coat on all woodwork. We wish to warn our customers against the use of substitute oils instead of the use of pure linseed oil for this purpose.

Shipped in 1-gal.—5-gal.—10-gal. cans—half-bbl. and full barrels.

Fig. 1021

Foley Metal Paint

Our metal paint is to be used as first coat paint on all metal parts which are not galvanized. It is a very elastic, durable and rust preventing paint. Makes an excellent foundation for Foley Greenhouse White Paint. Shipped in 1-gal.—5-gal.—10-gal. cans— $\frac{1}{2}$ -bbl. and full barrels.

Fig. 1022

Foley Putty

Foley Pure Whiting and Linseed Oil Dough Putty to be used on all new greenhouse and hotbed sash work. This putty is suitable and highly recommended for bedding glass. It is unlike the ordinary putty obtainable at local paint stores, for being made of pure whiting and linseed oil, it will outlast ordinary putty many years.

Fig. 1024

Fig. 1025

Fig. 1023

Packages of Foley Zinc Glazing Points, Peerless Points, and Galvanized Brads.

Glazing Points

We carry full and complete stock of generally accepted glazing points. We recommend the Foley pure zinc glazing point shown in Figure No. 1023. Made especially for greenhouse glazing, but used in all our work, either greenhouse or hotbed. Being of pure zinc, they will never rust out; easily handled; hold glass firmly and securely. For hotbed sash and Foley Iron Frame Houses, we use $\frac{5}{8}$ " points. On Pipe and Semi-Iron Frame, $\frac{7}{8}$ " points. We also handle the Peerless glazing staples and galvanized brads. Packed as follows:

Foley Pure Zinc—Both $\frac{5}{8}$ " and $\frac{7}{8}$ " in 1-lb. pkgs.
Galvanized Brads— $\frac{3}{4}$ " in 1-lb. pkgs.
Peerless Points—Pkgs. of 1,000 Points.

Foley ^{Better Built} Greenhouses

For Every Service

SOME examples of our designing, manufacturing and erecting are shown in the following illustrations.

By a careful study of these views, you may readily gain an idea of the varying nature of our installations, the extent of our operations, the precision with which our structures are designed, manufactured and erected, as well as the representative customers who have recognized the advantages of Foley methods.

Work done for the United States Government, Municipal Governments, Park Boards, Cemeteries, Private Estate Owners, Commercial Flower and Vegetable Growers is shown here.

The commercial grower will, in the commercial types shown, instantly recognize the practical

layouts from the viewpoint of ease and economy in operation.

Those seeking the ornate will be attracted by the graceful, clean-cut lines, as well as the neat construction expressed in the Foley Greenhouse Beautiful.

The particular requirements of each owner are given personal and scrutinizing attention, working out in detail their desires in a most satisfactory manner.

Our Commercial Catalogue offers much interesting data for the grower. "The Greenhouse Beautiful" is our handsomely illustrated book in colors showing private estate and institutional layouts.

The Foley Greenhouse Mfg. Co.

Designers and Builders of Greenhouses — Heating Systems

FOREST PARK, ILLINOIS

(A Suburb of Chicago)

Interior of Curved Eave Show House, designed and built for Charles Warnke Greenhouses, Detroit, Mich.

FOLEY BETTER BUILT AND HEATED GREENHOUSES

Part of Range of Private Houses built for Mr. F. E. Drury, Cedar Hill Farm, Gates Mill (Cleveland), Ohio.

Two Full Iron Frame Greenhouses, 40 by 300 Feet, built for Loyal Order of Moose, Mooseheart, Ill.

*Palm House and Growing Houses built on Grounds of French Lick Springs Hotel, French Lick, Ind.
"The Home of Pluto Water."*

Range of Three Semi-Iron Frame Greenhouses and Service Building, built for U. S. National Home for Disabled Volunteer Soldiers, near Milwaukee, Wis. Foley Patented Galvanized Crowned Steel Gutters Installed.

FOLEY BETTER BUILT AND HEATED GREENHOUSES

Semi-Iron Frame Greenhouses built at Sinnissippi Park for Board of Commissioners, Rockford Park District, Rockford, Ill. Foley Patented Galvanized Crowned Steel Gutters Installed.

Full-Iron Frame Greenhouse at the Southeastern Hospital for the Insane, Madison, Ind. Foley Patented Galvanized Crowned Steel Gutters Installed.

Interior of One of Eight Full Iron Frame Greenhouses and Connecting Lean-to across ends, built for Forest Home Cemetery Co., Forest Park, Ill. Foley Patented Galvanized Crowned Steel Gutters Installed.

FOLEY BETTER BUILT AND HEATED GREENHOUSES

Twelve Vegetable Houses, 225 feet long, for Gallup Bros., Ashtabula, Ohio, who say, "Built eight times in twenty years. Foley Houses are the best we have ever built."

Curved Eave Private Greenhouse and Connecting House, built for Mr. H. Coulby, Wickliffe, Ohio.

Interior of House of Hydrangeas. One of 36 Foley Greenhouses, various widths, built for Mr. Frank Oechslin, Harlem Ave., Cicero, Ill.