

No. 616,781.

Patented Dec. 27, 1898.

G. M. GARLAND.
GUTTER FOR GREENHOUSES.

(Application filed May 28, 1898.)

(No Model.)

Fig 1

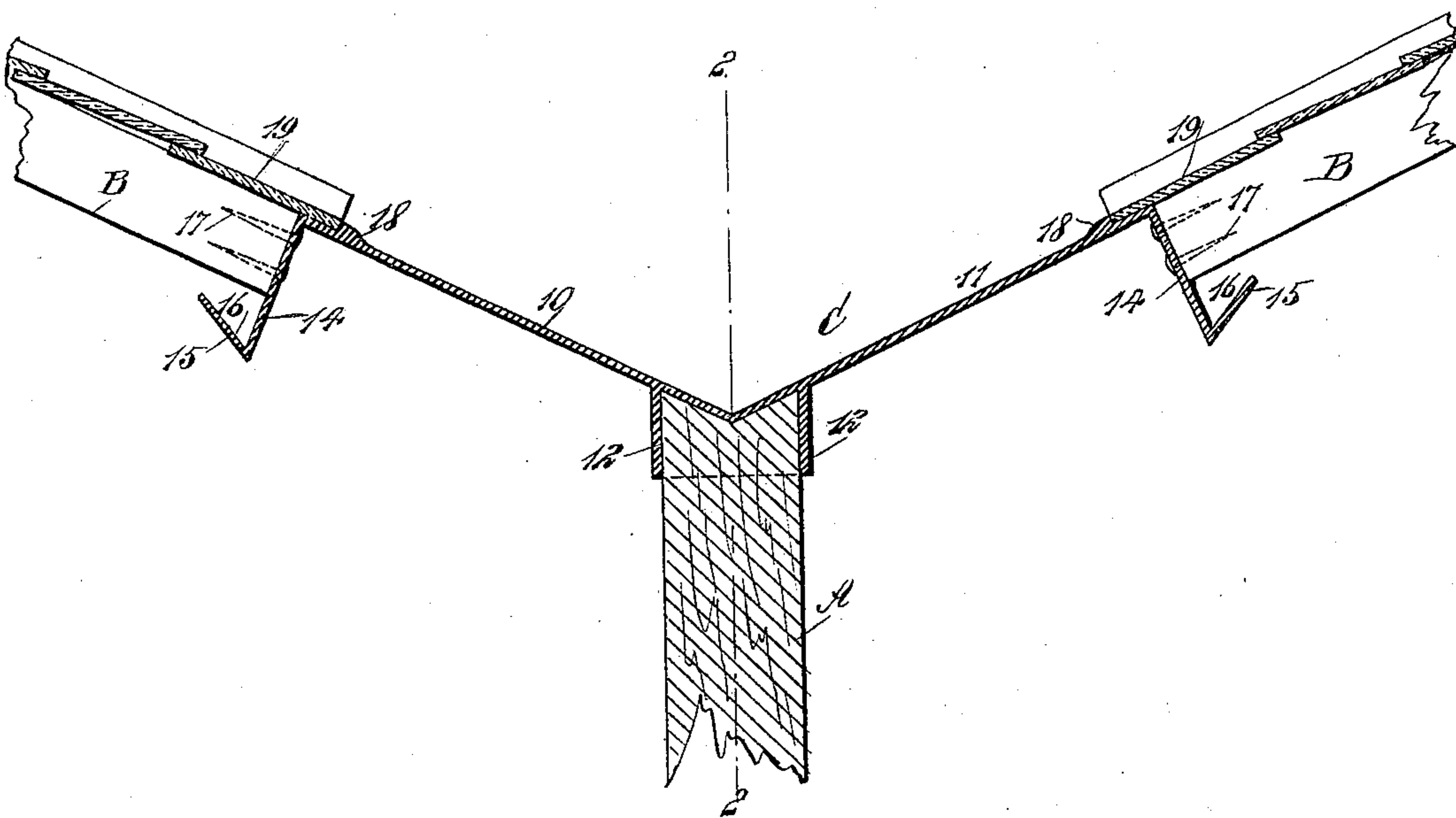
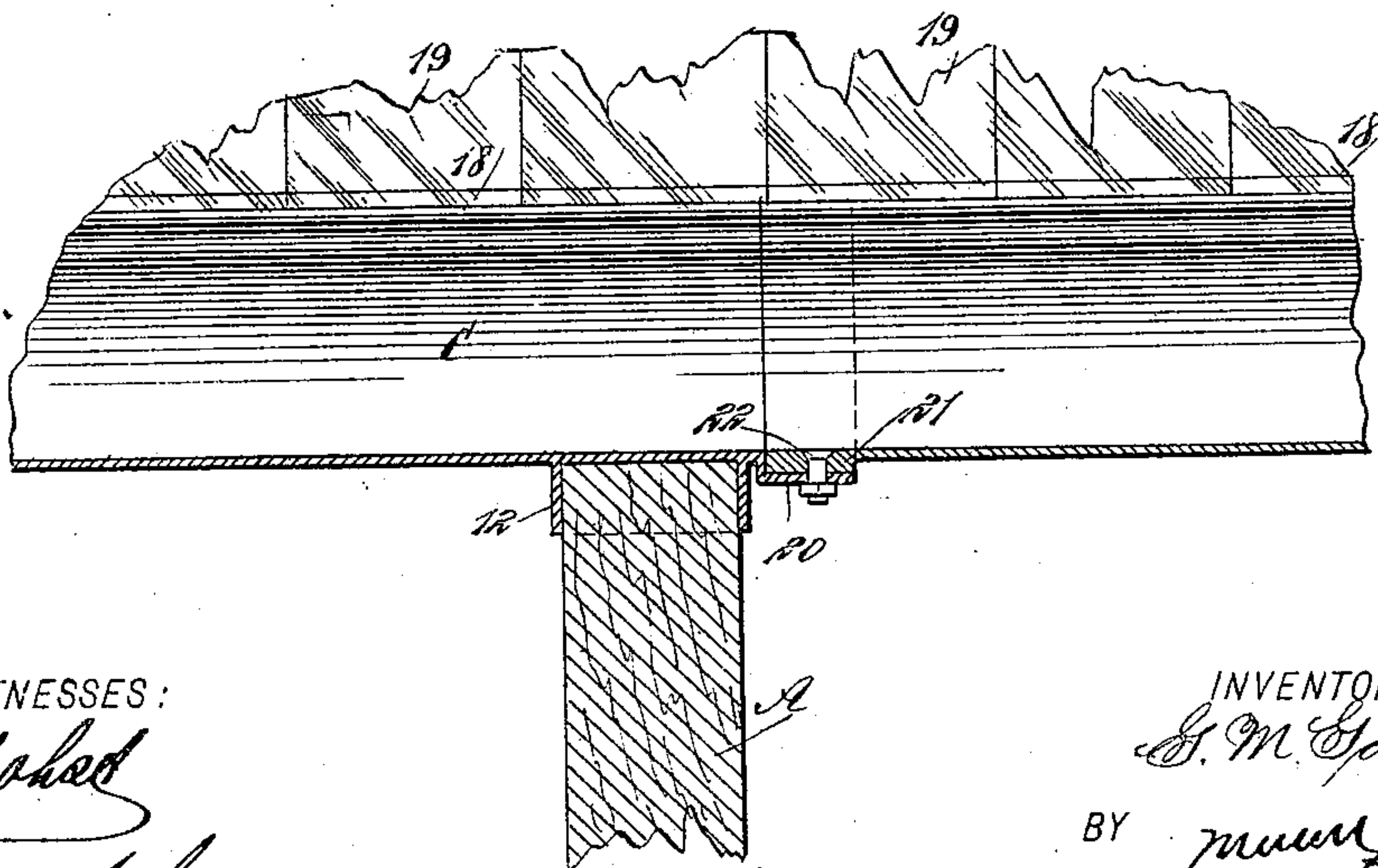


Fig 2



WITNESSES:

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GUTTER FOR GREENHOUSES.

SPECIFICATION forming part of Letters Patent No. 616,781, dated December 27, 1898.

Application filed May 28, 1898. Serial No. 682,047. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. GARLAND, of Des Plaines, in the county of Cook and State of Illinois, have invented a new and Improved Gutter for Greenhouses, of which the following is a full, clear, and exact description.

The object of the invention is to provide a valley-gutter for greenhouses which will be so constructed as to combine a stop for the glass and a drip-conductor.

Another object of the invention is to so construct the gutter that the devices for fastening the gutter to supports will be below the weather-face of the gutter, thus avoiding perforations of the weather-face and consequent liability to leakage.

A further object of the invention is to provide a means of connecting the gutter-sections which will be waterproof and reinforcing.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts both figures.

Figure 1 is a transverse section through the improved gutter and parts of the greenhouse structure with which it is connected, and Fig. 2 is a vertical section taken substantially on the line 2 2 of Fig. 1.

A represents a center post of a greenhouse structure, and B the roof-beams, C representing the improved valley-gutter, which is made of metal and connects with the glass roofing. The valley-gutter is substantially V-shaped, its members being integral, and since the gutter is made of metal the snow falling on the gutter will rapidly melt and permit the snow on the glass to slide down to the gutter and expose the glass to the action of the light.

At the intersection of the members of the gutter C box-collars 12 are formed, which are adapted to be passed over the center posts A of the frame of the greenhouse, and at the end of each member of the gutter C a downwardly-extending flange 14 is formed, adapted to engage with the inner or lower ends of the roof-

beams B; but the flanges 14 are of sufficient width to extend below the roof-beams, and at their lower ends upwardly and outwardly extending members 15 are produced, forming auxiliary gutters 16, which serve as drip-conductors and act to carry off the condensations of steam from the glass of the roof. The nails, screws, or other fastening devices 17 are passed through the drop-flanges 14 and into the lower ends of the roof-beams, so that these fastening devices for connecting the valley-gutter to the roof structure are below the weather-faces of the valley-gutter, and consequently the weather-faces of the valley-gutter need not be perforated, insuring against leakage.

Upon the weather-face of the valley-gutter C, near the outer ends of its members, longitudinal shoulders 18 are formed, against which the lower panes of glass 19 abut. The shoulders or ribs 18 serve as rests for the glass and retain the putty, effectually preventing the glass from sliding.

When a valley-gutter is to be of considerable length, it is usually made in sections, and these sections are connected, as shown in Fig. 2, in which one section of the gutter is provided with a drop member or depression 20 at one end, adapted to receive an offset or enlargement 21, formed at the opposing end of the abutting section of the gutter, and the depressed portion of one section of the gutter is connected with the enlarged portion 21 of the opposing section of the gutter by means of rivets or screws 22 or equivalent forms of fastening devices. In this manner it will be observed that a water-tight connection is made between the various sections of the valley-gutter and that the sections of the gutter may be connected in a simple, durable, and economic manner.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a greenhouse structure, a valley-gutter having pendent longitudinal flanges at the outer ends of its members, said flanges being arranged for attachment to the lower ends of the roof-beams, as and for the purpose specified.

2. In a greenhouse structure, a valley-gutter having pendent longitudinal flanges at the

outer ends of its members and drip-conductors carried by the flanges, as and for the purpose specified.

3. In a greenhouse structure, a metallic valley-gutter provided with longitudinal pendent flanges at the outer edges of its members, the said flanges being adapted to receive the fastening devices employed for securing the gutter to the frame of the greenhouse structure, and drip-conductors carried by the said flanges, as and for the purpose specified.

4. In a greenhouse structure, a valley-gutter constructed of metal, provided with longitudinal shoulders near the outer edges of its members, the said shoulders being adapted to support the lowermost panes of glass,

flanges projected downward from the outer longitudinal edges of the members of the gutter, said flanges being adapted to receive the fastening devices for the gutter, and drip-conductors located at the lower ends of the said flanges, for the purpose specified.

5. In a greenhouse structure, a metallic valley-gutter provided with longitudinally-extending shoulders on its upper surface which are adapted to support the lowermost panes of glass, as and for the purpose specified.

GEORGE M. GARLAND.

Witnesses:

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