

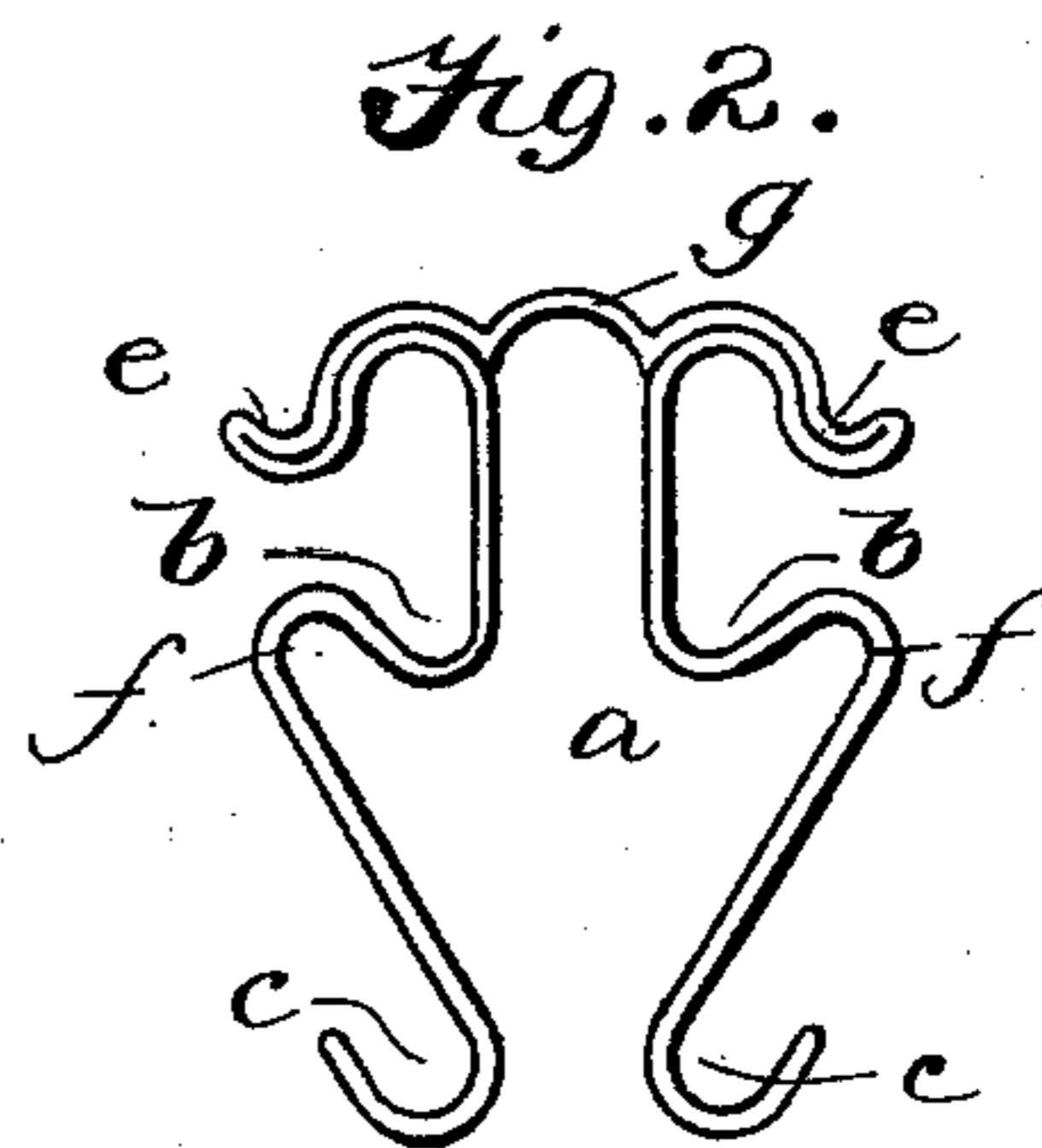
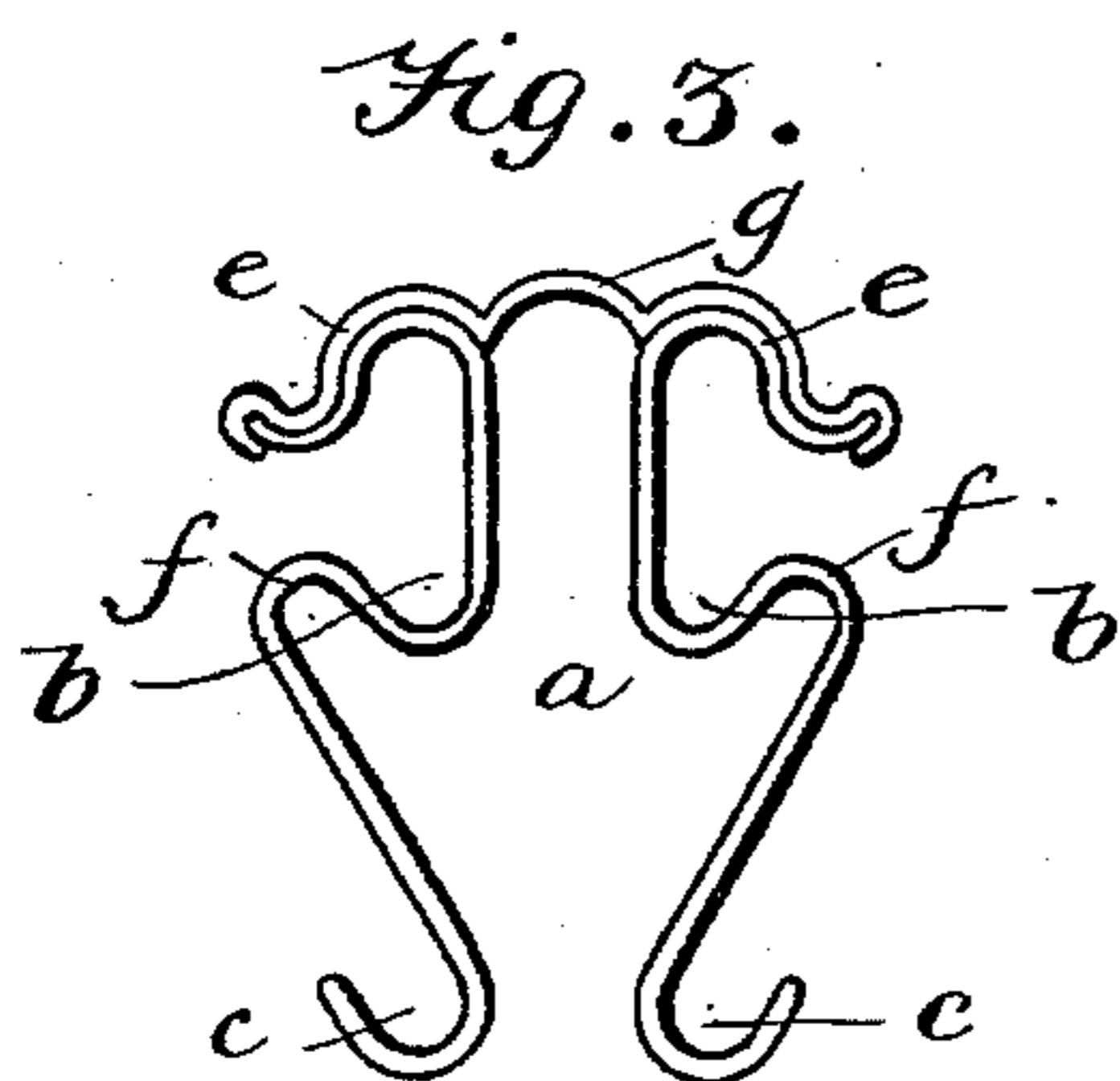
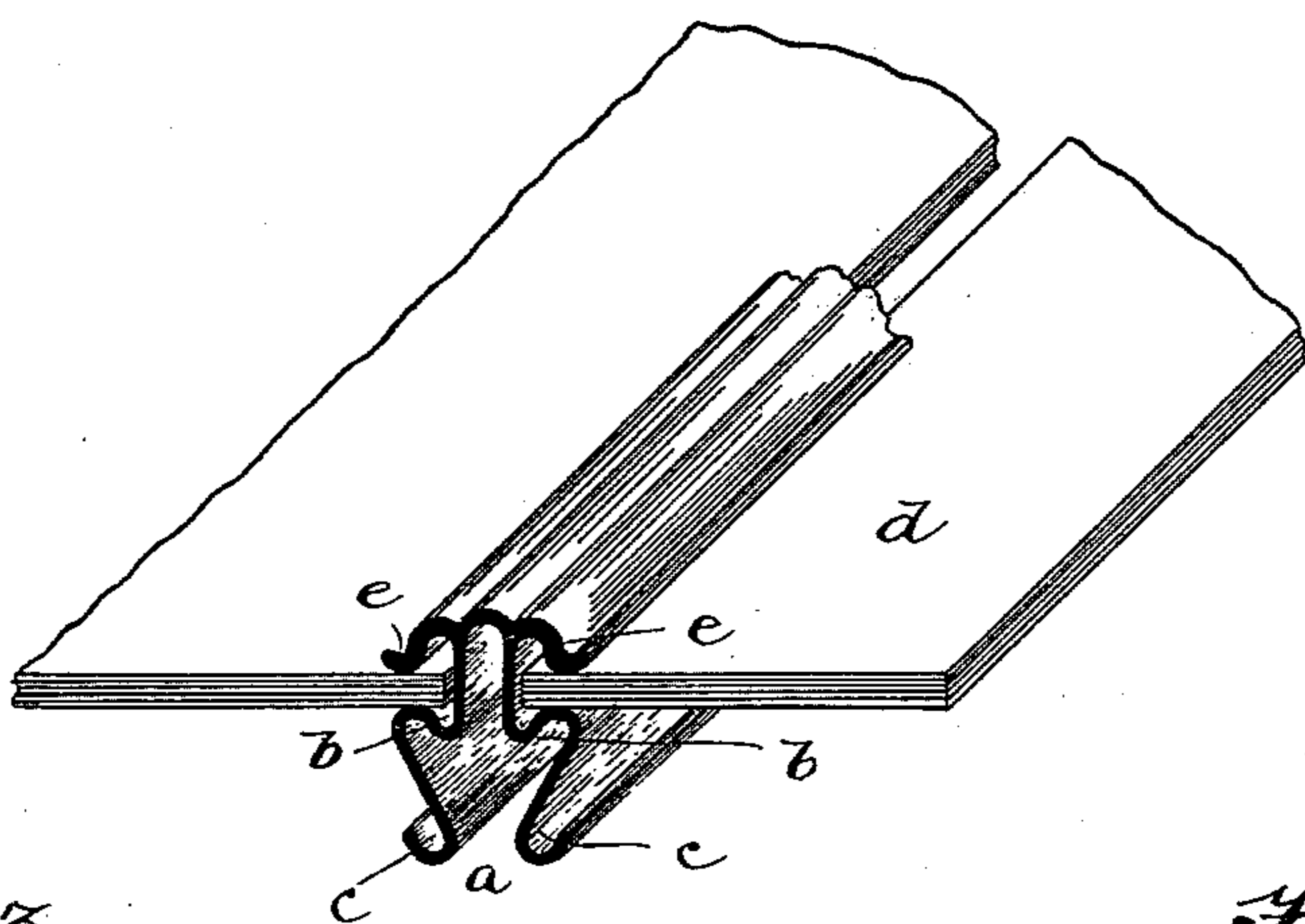
(No Model.)

T. W. HELLIWELL.
GLAZING BAR.

No. 439,066.

Patented Oct. 21, 1890.

Fig. 1.



WITNESSES:

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THOMAS WILLIAM HELLIWELL, OF BRIGHOUSE, ENGLAND.

GLAZING-BAR.

SPECIFICATION forming part of Letters Patent No. 439,066, dated October 21, 1890.

Application filed February 7, 1890. Serial No. 339,772. (No model.) Patented in England May 2, 1888, No. 6,548.

To all whom it may concern:

Be it known that I, THOMAS W. HELLIWELL, a subject of the Queen of Great Britain, residing at Brighouse, in the county of York, England, have invented a certain new and useful Glazing-Bar, of which the following is a specification.

The invention herein described was patented in England by me on the 2d day of May, 1888, No. 6,548.

The invention consists of a combined supporting-bar and cap-strip inseparable from each other and of peculiar construction, to be employed for supporting the edges of sheets of glass, slate, or other material in the construction of greenhouses, skylights, and the roofs and sides of buildings generally, or for any other suitable purpose.

In other United States patents granted to me, notably Patents No. 284,421 of September 4, 1883, and No. 355,079 of December 28, 1886, I have described glazing-bars formed of two or more pieces, usually a supporting-strip, upon which the sheets rest, and a cap-strip secured to the supporting-strip by bolts or otherwise in such a manner as to shed rain from the joint, and at the same time secure the sheets in place by resting upon their upper surfaces. The present invention differs from these constructions in that the supporting and cap strips are made in a single structure, thereby dispensing with the use of bolts.

In carrying out my invention I make by any convenient means a bar having supporting parts to receive the edges of the sheets of glass or other material, the bar also being formed on each side with two or more channels or gutters to convey away rain or condensed vapor, said supporting-bar being also made with an overhanging cap, the edges of which cap rest upon the upper surface of the sheets of glass, for the purpose of preventing the glass from lifting out of its position and for protecting the joint.

Referring to the accompanying drawings, Figure 1 is a perspective view of my combined glazing-bar and cap with the sheets of glass in position. Fig. 2 is an enlarged transverse section of the bar, and Fig. 3 is a similar section showing a slight modification in the construction of the bar.

a represents the glazing-bar entire. It con-

sists of sheet metal or other suitable material, made in the form shown. It is formed on each side with two channels or gutters *b* and *c*. The outer lips of the channels *b* serve as the resting-points for the edges of the sheets of glass or similar material *d*, which the bar supports. These channels collect and carry off rain-water and waters of condensation. The outer part of the bar or the cap consists of two overhanging ledges *e e*. These are located directly above the channels *b b*, and their lower sides bear with a yielding pressure upon the upper surface of the glass plate. The elasticity of the cap permits it to adjust itself to the glass and to allow for slight inaccuracies of construction, and so forth. This cap is formed in one piece with the other portion of the bar, and the sheets of material which the bars are designed to support are inserted between the edges of the cap and the lips of the gutters *b b*.

Although I have shown and described the cap and bars as being formed, preferably, from one piece of metal, it is evident that the upper covering of the cap may be formed separately from the bar and attached as shown in Fig. 3, or by any other suitable means, and still derive all the benefits of a bar made in a single piece. The separate cap-strip, however, is to be made irremovable from the supporting-strip.

In the form shown in Figs. 1 and 2 the sheet of metal is bent at one edge to form one channel or gutter *c*, then upward a short distance, then inward and downward, and again upward to form a second channel or gutter *b* above the gutter *c*, having a lip or shoulder *f* to support a plate *d*. The sheet is then bent outward and downward to form an elastic overhanging ledge *e* to press on the upper surface of the plate *d*, and is then bent or doubled back upon itself, and continuing, forms an arch or cap *g* of but a single thickness, and is then bent into form on the other side like that just described. This construction not only permits of the dispensing with bolts, but it renders the building of a roof simpler than when a separable cap is employed, and also leaves no parts to work loose and rattle.

The form shown in Fig. 3 is the same as that shown in Figs. 1 and 2, with the exception that the top plate is made separately from the sides

but has its edges bent over upon to firmly and permanently hold the upper outer edges of the side pieces. In both forms the cap is inseparable from the sides and has but a single
5 thickness at the center, while the wings or ledges *e e* are of double thickness where they press upon the panes of glass.

Having thus described my invention, I claim—

10 As an article of manufacture, a glazing-bar consisting of two side strips, each having two gutters or channels one above the other, and a cap-strip permanently uniting the two side strips, said cap-strip having a single thick-

ness over the space between the two side strips, 15 and having outwardly and downwardly bent elastic wings or ledges of double thickness, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing 20 witnesses.

THOMAS WILLIAM HELLIWELL.

Witnesses:

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ERNEST L. VARKIN,
His clerk.