

No. 725,382.

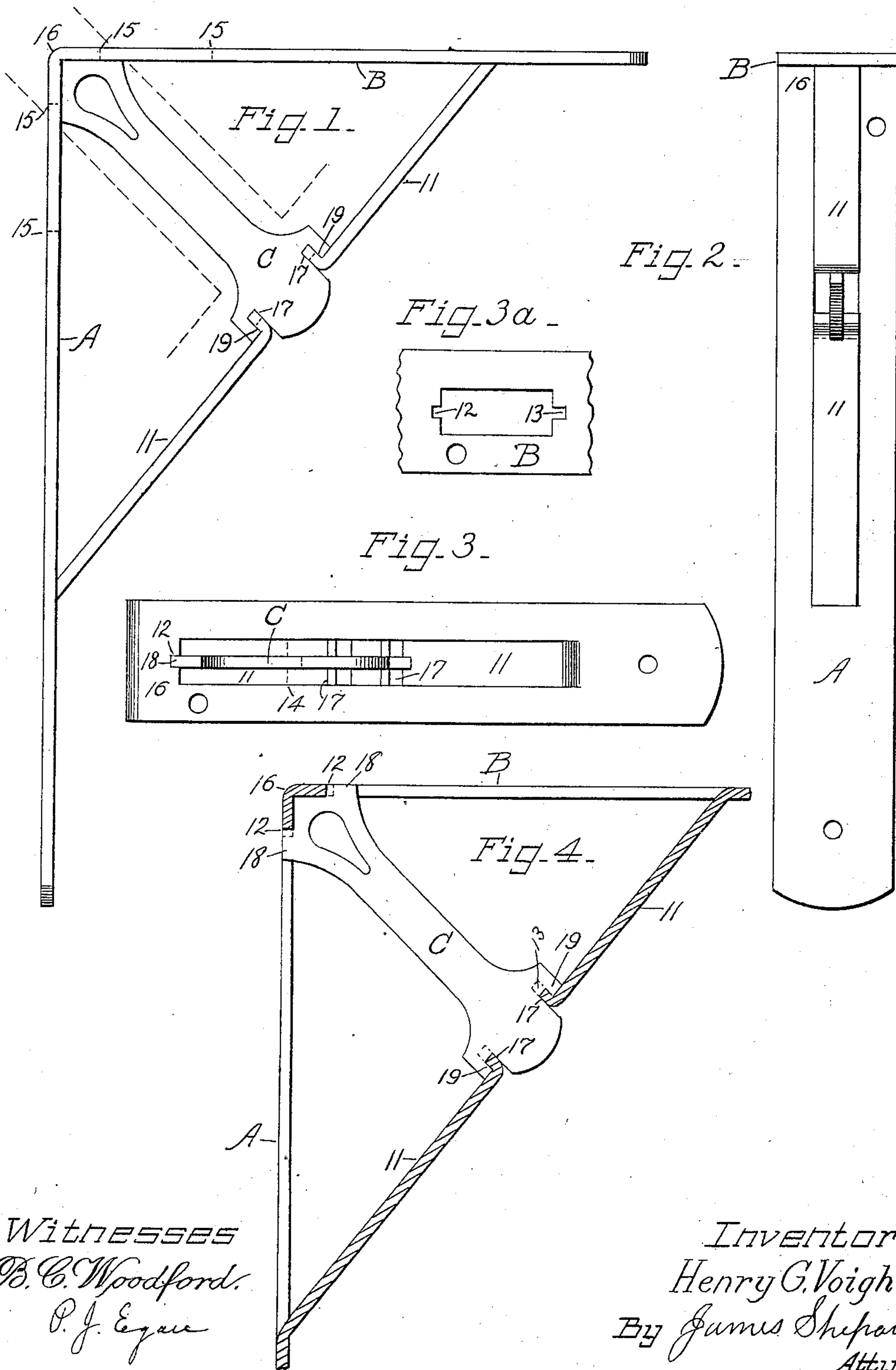
PATENTED APR. 14, 1903.

H. G. VOIGHT.
SHELF BRACKET.

APPLICATION FILED NOV. 6, 1900.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
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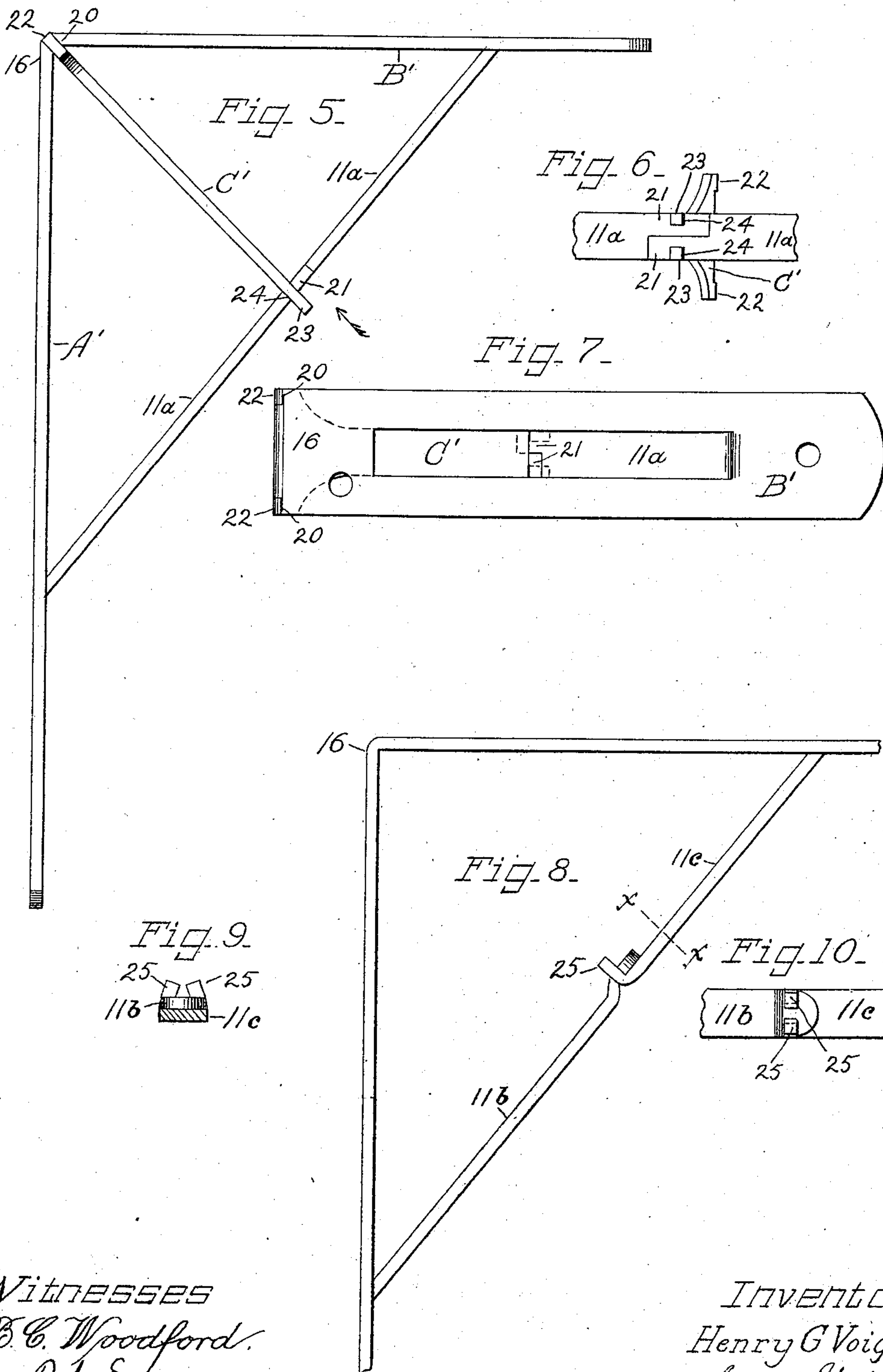
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UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE
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SHELF-BRACKET.

SPECIFICATION forming part of Letters Patent No. 725,382, dated April 14, 1903.

Application filed November 6, 1900. Serial No. 35,632. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Shelf-Brackets, of which the following is a specification.

My invention relates to improvements in shelf-brackets; and the main objects of my improvement are simplicity and economy in construction and efficiency in use.

In the accompanying drawings, Figure 1 is a side elevation of my bracket, together with a partial outline in broken lines of a punch, illustrative of the manner of making a part of the said bracket. Fig. 2 is a front elevation of my bracket. Fig. 3 is a plan view of the same. Fig. 3^a is a plan view of a portion of the shelf-plate as first blanked out. Fig. 4 is a sectional side elevation of the main portion of the said bracket, the wall and shelf plates and integral members of the brace being in section and the subbrace in side elevation. Fig. 5 is a side elevation of my bracket in a modified form. Fig. 6 is an under-side view of the middle portion of the brace and subbrace as viewed in the direction indicated by the dart in Fig. 5. Fig. 7 is a plan view of the bracket, Fig. 5. Fig. 8 is a side elevation of the main portion of my bracket in still another modified form. Fig. 9 is a transverse section of one brace portion on the line *xx* of Fig. 8, and Fig. 10 shows the upper side of the ends of the brace as viewed at right angles thereto.

My bracket is especially adapted for being made of sheet or plate metal and preferably without any riveting, whereby the bracket is produced at a small cost.

The preferred form of construction is illustrated by Figs. 1 to 4. A designates the wall-plate; B, the shelf-plate; 11, the brace portions integral with the said plates, and C the subbrace, which serves to secure the brace portions together and to span the space between their ends and also to stiffen the bracket. The wall and shelf plates constitute a strip of sheet metal bent at an angle, and they may be first blanked out or cut to the desired form and the several holes punched

while in the "flat;" but I do not then cut the brace portions from their respective plates. I prefer, however, to cut rectangular holes in each plate of a width equal to the width of the brace portions 11 and with central notches 12 and 13 at the respective ends of the said holes, as shown in Fig. 3^a and as illustrated in Fig. 3 by the broken line 14 and the full lines to the left of the said broken line. This hole in Fig. 3 is in the shelf-plate; but the hole in the wall-plate is of the same form, and their position in the respective plates is indicated by the broken lines 15 in Fig. 1. The position of that wall of the hole that is to form the end of the brace portion is determined by the length of the brace portions desired. After thus preparing the blank it is bent to bring the wall and shelf plates at or near right angles to each other, as shown, leaving a solid connection 16 of the metal extending to each side of the junction of the said plates. The said plates are then placed over a suitable die, and a double punch, as indicated by the right-angular broken lines in Fig. 1, is forced upon the plates in an oblique direction thereto. The confronting corners of this double punch pass through the rectangular openings before made in the respective plates, and as they reach the lower ends of the said openings they cut the metal for the brace portions out from the body of the plates, bend the said metal down into the proper position, and also bend up the confronting ends of the said brace portions to form the locking-lugs 17, as shown; the notches 13 of the rectangular hole in the plate now being transferred to or appearing in the upper ends of the said lugs 17 and with the ends of the brace portions separated from each other by a distance about equal to the width of the solid connection 16, measured obliquely from plate to plate.

The subbrace C is separately formed with its upper end shaped to fit the angle inside of the wall and shelf plates and with lugs 18 for entering the notches 12 in the wall and shelf plates. The lower end of the said subbrace is also provided with notches 19 to receive the solid portions of the lugs 17 of the brace portions, while the metal of the said subbrace just above the notches 19 is received

by the notches 13 in the said lugs 17. The overlapping or interlocking of the engaging portions of the subbrace and other parts of the bracket is indicated by broken lines in Fig. 4. When the two free ends of the brace portions 11 are thus secured together by means of interlocking with the subbrace, they are firmly united to form the brace.

In Figs. 5, 6, and 7 there are notches 20, formed on each edge of the bracket at the junction of the wall and shelf plates A' and B', and the brace portions 11^a lap each other with narrowed ends 21, rabbeted or halved together, as best shown in Fig. 6. The said narrowed ends 21 are provided with notches 24 at their outer edges. The subbrace C' is fitted to show its edge as the bracket is viewed in side elevation. Its upper end is provided with corner-lugs 22 for being received by the notches 20 at the junction of the wall and shelf plates, while the notch between the said lugs receives the solid connection 16 at the corner of the bracket. The lower end of the subbrace is merely notched to form the two lugs 23 for entering the notches 24 in the narrowed ends 21 of the brace portions, whereby the subbrace is not only secured in position by the interlocking of parts without riveting, but the two ends of the brace portions are also firmly locked together without riveting, and are thus firmly united to form the brace. I have not attempted to describe the particular manner of cutting out the parts, as they may be cut in any ordinary manner. The parts in the construction first described may also be made in any ordinary manner, although I have described briefly the preferred manner of making in order to illustrate the economy that may be attained by a bracket of my construction.

Figs. 8, 9, and 10 show my bracket without the subbrace, but with the brace portions cut from the wall and shelf plates and of a length to leave a solid connection 16 at the angle of the said plates, as in the construction before described, and with the ends of the brace portions mechanically interlocked. The lower brace portion 11^b has its end offset a distance equal to its thickness and provided with notches in its side edges, and the upper brace portion 11^c has its end turned at right angles to its length, said bent end being notched to form the two lugs 25, (the two brace portions being thus firmly united to form the brace,) that lock into the notched edge of the brace portion 11^b, and which lugs may, if desired, be bent toward each other, as best shown in Fig. 9, to prevent their disengagement.

I am aware that a prior patent shows and describes a bracket made from a single piece of sheet metal, the brace being formed by cutting it out from the body portion of the wall and shelf plates, including their angle, leaving a slot that extends through or around the angle at the corner of the bracket, both ends of the brace as first cut being left integral with the wall and shelf plates, but with a portion of the metal bent back upon one of

the said plates, whereby a seam is formed between one end of the finished brace and the plate upon which the metal is bent back; also, that a prior patent shows a bracket made in the same way, only the lower end of the said brace is severed from the wall-plate and then riveted thereto. All of the said prior art is hereby disclaimed. By my improvement there is no slot that severs or divides the wall and shelf plates at the angle of the bracket. On the contrary, a connection is left there to tie the metal together that lies on the opposite sides of the slots from which the brace portions are cut. The bracket is cheaply made and is very strong and durable.

Having shown my bracket in three different forms, but with certain features in common, it is apparent that some changes from the specific construction herein disclosed may be made, and therefore I do not wish to be understood as limiting myself to the precise form of construction shown and described, but desire the liberty to make such changes in working my invention as may fairly come within the spirit and scope of the same.

I claim as my invention—

1. A bracket comprising a strip of metal bent at an angle to form a wall-plate and a shelf-plate, and having two separate brace portions with the lower and outer end of one of the said brace portions formed integral with the said wall-plate and merging into the lower portion thereof, while the opposite upper and inner end of the said brace portion has a distinct termination free from the said wall-plate; the other one of the said separate brace portions having its upper and outer end formed integral with the said shelf-plate and merging into the outer end thereof, while its opposite lower and inner end has a distinct termination free from the said shelf-plate; the said free terminal ends of the said two brace portions extending inwardly from the said wall and shelf plates and united to form the brace, the said wall and shelf plates having each a longitudinal slot from which the said brace portions were cut, the confronting ends of the slots terminating in an uncut portion of the said strip of metal that forms a connecting-tie between the said confronting ends of the slots, substantially as described.

2. A bracket comprising a strip of metal bent at an angle to form the wall and shelf plates, two brace portions cut and bent from the body portions of said wall and shelf plates, a connection at the angle of the said wall and shelf plates to tie the metal on opposite sides of the brace-slots together, and means for mechanically securing the ends of the said brace portions together, substantially as described.

3. A bracket consisting of the wall and shelf plates, integral brace portions cut and bent from the said wall and shelf plates and a subbrace connected by one end to the said wall and shelf plates at the inner side of

their angle, and by its other end to the ends of the two integral brace portions, substantially as described.

4. A bracket consisting of the wall and
5 shelf plates, integral brace portions cut and bent therefrom, the subbrace and interlocking devices at the opposite ends of the said subbrace for securing it in place and also locking the ends of the two brace portions,
10 substantially as described.

5. The combination of the wall and shelf plates having the notches 12 and integral

brace portions, bent from the said plates, the ends of the said brace portions having the notched locking-lugs 17, and the subbrace 15 having lugs 18 for fitting the notches 12, and the notches 19 for engagement with the notched locking-lugs of the said brace portions, substantially as described.

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Witnesses:

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