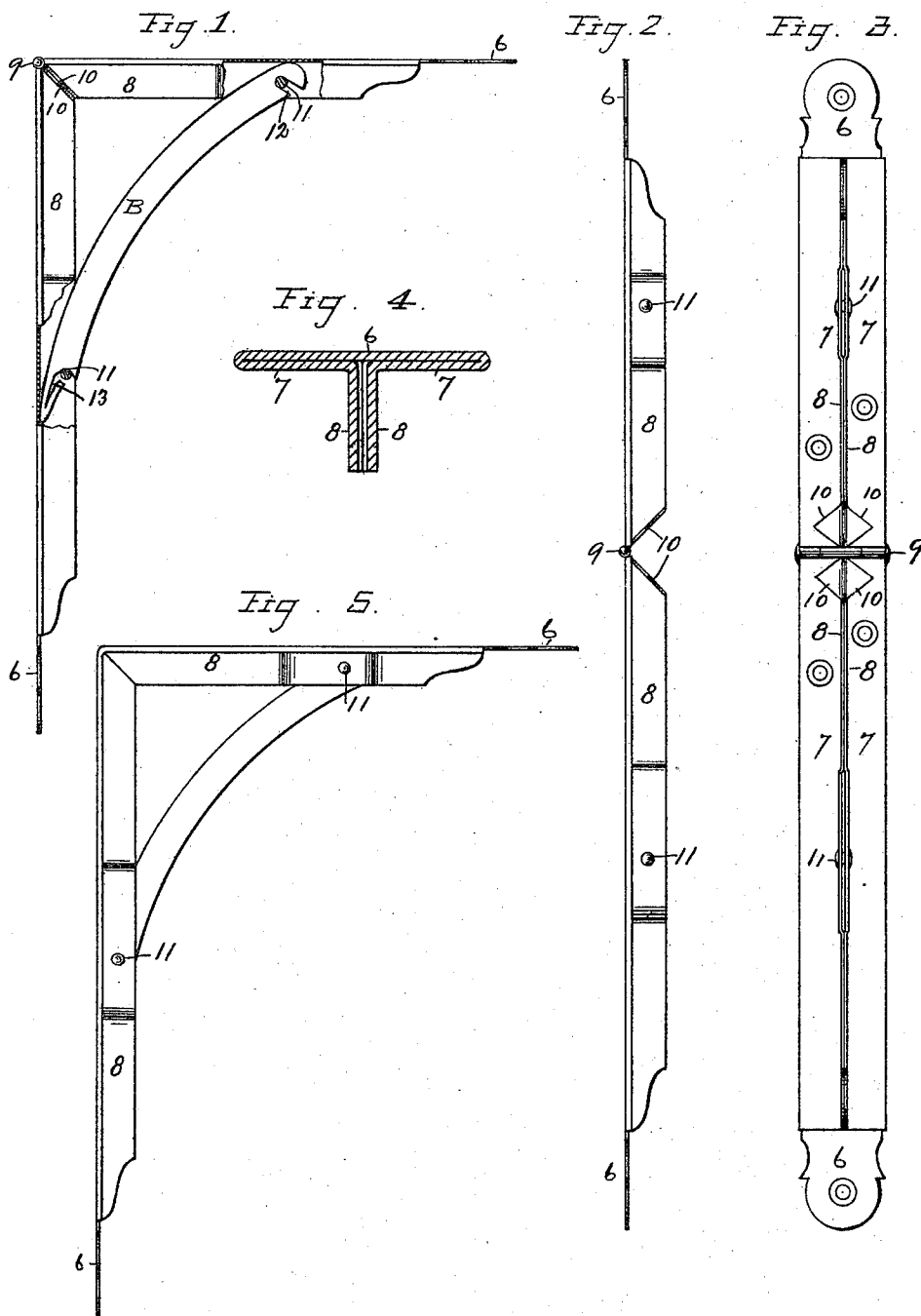


(No Model)

E. BURNS.
SHEET METAL BRACKET.

No. 585,427.

Patented June 29, 1897.



Witnesses

W. J. Steyer
C. D. Loomis Jr.

Inventor

Edward Burns
By *James Shepard*
Att'y.

UNITED STATES PATENT OFFICE.

EDWARD BURNS, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE
STANLEY WORKS, OF SAME PLACE.

SHEET-METAL BRACKET.

SPECIFICATION forming part of Letters Patent No. 585,427, dated June 23, 1897.

Application filed March 20, 1895. Serial No. 542,514. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BURNS, a citizen of the United States, residing at New Britain, in the county of Hartford and State
5 of Connecticut, have invented certain new and useful Improvements in Sheet-Metal Brackets, of which the following is a specification.

My invention relates to improvements in
10 sheet-metal shelf-brackets; and the objects of my improvements are to make a strong bracket of thinner metal than is generally employed for such brackets, to make a folded metal bracket with wall and shelf plates that
15 have seamless backs and ends, to hinge the wall and shelf plates together for unfolding in transportation, and to lock the separable brace to said hinged plates against being withdrawn under an upward force tending to lift
20 the shelf-plate.

In the accompanying drawings, Figure 1 is a side elevation of my bracket, partly in section, with portions broken out in order to show the ends of the brace. Fig. 2 is a side
25 elevation of the wall and shelf plates as unfolded for transportation. Fig. 3 is a front elevation of the same. Fig. 4 is an enlarged transverse section of one of the wall or shelf plates at a point where the strengthening-
30 webs are separated to receive the ends of the brace, and Fig. 5 is a side elevation of my bracket in a modified form and on the same scale as the first three figures.

I form the body of each wall and shelf plate
35 from sheet metal by doubling the metal upon itself with a longitudinal fold at each edge of said plates and bending the folded-over portions at right angles to said double thickness with the projecting flanges near the middle
40 of said plates, as best shown in Fig. 4, in which 6 designates the solid back of the plate, 7 7 the portions folded thereon, and 8 8 the right-angular flanges that project at the front and form the longitudinal central strengthening-
45 ing-rib. At the outer end of each plate the back 6 is allowed to project farther than the folded-over portions 7, thereby leaving a seamless portion at said ends to improve the appearance of the article. So little strain comes

upon these ends that a single thickness of 50 metal furnishes ample strength.

I prefer to connect the inner ends of the wall and shelf plates by hinge-knuckles and pintle 9, so that while they are permanently connected they may be folded to stand at
55 right angles to each other, as shown in Fig. 1, or unfolded, so as to lie straight, as shown in Figs. 2 and 3.

The outer ends of the right-angular flanges that form the central web may be cut off in
60 any desired form, and their inner ends may be cut off on a miter; but I prefer to bend over the corners 10 on a miter-line, so as to form broad abutting faces at the junction of the wall and shelf plates when they are in the
65 position shown in Fig. 1.

In the flanges 8 8 I insert transverse pins 11, leaving at said points an opening or space between said flanges of a sufficient thickness to receive the ends of the separable brace B.
70 (See Fig. 4.) This brace should be provided with means for locking its ends to the wall and shelf plates in such manner that the brace may be attached and detached for folding and unfolding the wall and shelf plates.
75 I prefer to so lock the brace by a notch 12 at the upper end of the brace B, which notched end can be hooked over the transverse pin 11 of the horizontal shelf-plate before the lower end of the brace is attached to the vertical or wall plate. The lower end of the brace is inserted last and has a notch to rest upon the cross-pin 11, and its lower end may be slit to form a spring-latch, as at 13, which
80 may be compressed in crowding it down inside of the pin 11, and after passing said pin the elasticity of the metal will cause said latch to spring forward underneath the pin and prevent the brace from being accidentally withdrawn in case the shelf or the shelf-plate
85 is pushed upwardly. The spring-latch can, however, be readily pushed inwardly whenever it is desired to separate the brace from the wall-plate. I have only shown the spring-latch to show one way in which the brace may
90 be more securely held in place, but it is evident that the brace would support the shelf without the employment of said latch.

In Fig. 5 I show a bracket with the wall and shelf plates made of one piece with the central web cut out on a miter and the wall and shelf plates bent at their junction instead of being hinged, but these wall and shelf plates are folded in the same manner as the wall and shelf plates first described, and Fig. 4 is as applicable to Fig. 5 as it is to the other figures. The brace C of Fig. 5 has its ends inserted between the flanges 8 8, and is firmly secured thereto by rivets, so that the brace is not separable.

I claim as my invention—

1. A sheet-metal shelf-bracket, the wall and shelf plates each of which consists of a back, two integral folded-over portions doubled closely upon said back, the longitudinal lines of fold constituting the edges of said plates and two integral projecting flanges forming the central rib on that side of the plate which is opposite said back, substantially as described and for the purpose specified.

2. In a bracket having wall and shelf plates and a separable brace, the strengthening-ribs of said wall and shelf plates comprising two flanges arranged closely side by side for the main portion of their length and spread apart at places to form narrow brace-receiving openings, the cross-pins 11 extending from flange to flange across the said brace-receiving openings inside the outer edge of said ribs, the ends of said cross-pins being secured in said flanges, and the brace ends fitted to have their sides bear upon the opposing sides of said flanges within the said brace-receiving openings, the said brace ends also having open notches in their edges for being locked with the said cross-pins, substantially as described.

3. A bracket having wall and shelf plates and a separable brace, the said wall and shelf plates and ends of the said separable brace being provided with interlocking devices for normally holding them together and with a self-acting latching device to prevent the withdrawal of the brace ends, substantially as described.

4. A sheet-metal bracket having wall and shelf plates each provided with a central strengthening-web, and with the said web and the portion of the plates by the sides of said web all formed of two thicknesses of metal, the front edge of said web being formed with a seam while each side edge of the wall

and shelf plates have a folded seamless form substantially as described and for the purpose specified.

5. A sheet-metal bracket having its wall-plate folded to form a central longitudinal web, and having a seamless back on the side which is opposite said web, substantially as described and for the purpose specified.

6. A bracket the wall and shelf plates of which have the metal doubled upon itself at the longitudinal side edges of both of said members and provided with a central longitudinal rib formed on the metal that is folded over from the outer portions of the blank strip into the space between said edges substantially as described.

7. A bracket the wall and shelf plates of which have a seamless back and a central longitudinal seam at their front or outer face substantially as described.

8. A bracket the wall and shelf plates of which have two thicknesses of metal for the major portion of their length and only one thickness at the outer ends, and a central longitudinal strengthening-rib consisting of two separate edges folded together and extending over the portion of said plates that consists of two thicknesses, substantially as described.

9. A bracket having wall and shelf plates composed of two thicknesses of metal for the major portion of their length, a central longitudinal rib formed thereon with the former edge portions of the metal blank meeting in said rib, end pieces formed of a single thickness only extending beyond said ribs, and a brace with its ends secured to said rib substantially as described.

10. A bracket the wall and shelf plates of which are composed of two thicknesses of metal and a central longitudinal rib which is also composed of two thicknesses of metal the whole being formed in one continuous sheet therewith, substantially as described.

11. A bracket the wall and shelf plates of which are composed of two thicknesses of sheet metal and a central longitudinal rib all formed in one continuous sheet therewith, and a separable brace with its ends secured to said rib substantially as described.

EDWARD BURNS.

Witnesses:

JAMES SHEPARD,
A. W. STIPEK.