

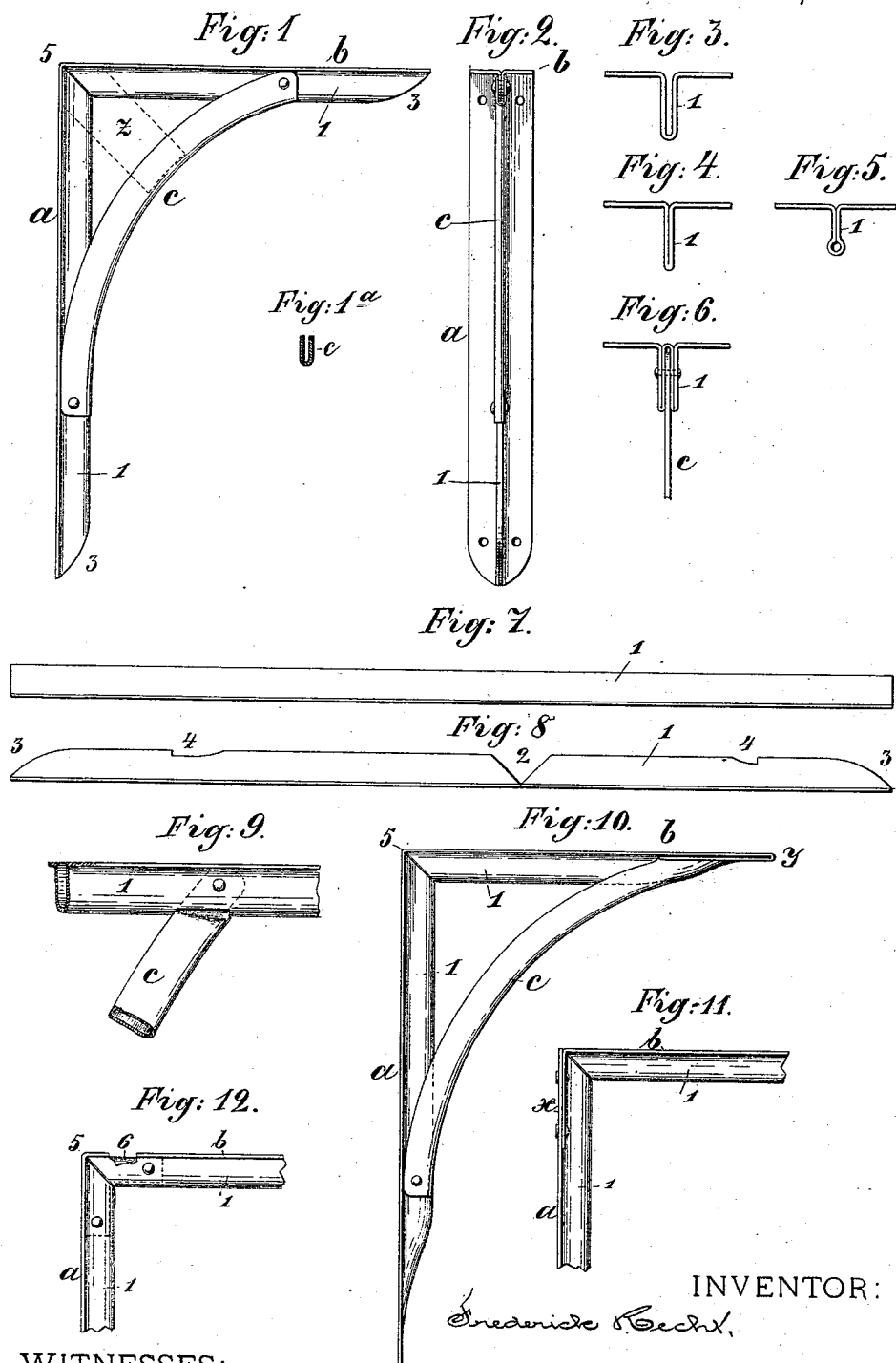
(No Model.)

F. RECHT.

METAL BRACKET AND ITS MANUFACTURE.

No. 488,741.

Patented Dec. 27, 1892.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK RECHT, OF BROOKLYN, NEW YORK.

METAL BRACKET AND ITS MANUFACTURE.

SPECIFICATION forming part of Letters Patent No. 488,741, dated December 27, 1892.

Application filed March 2, 1891. Serial No. 383,465. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK RECHT, a citizen of the United States, and a resident of Brooklyn, Kings county, New York, have invented certain Improvements in Metal Brackets and their Manufacture, of which the following is a specification.

My invention relates to brackets such as are employed for supporting shelves and the like, and it consists partly in a corrugated sheet metal bracket, as hereinafter described and partly in the method of making the same.

The invention also consists in other less important features of construction.

In the accompanying drawings serving to illustrate my invention—Figure 1 is a side elevation of a bracket, which embodies the principal features of my invention, and Fig. 1^a is a transverse section of the preferred form of brace employed therein. Fig. 2 is a front elevation of the bracket. Figs. 3, 4, 5 and 6 are cross sections, on a larger scale, of one of the members of a bracket constructed according to my invention. These views show slightly different forms of the web-corrugation. Fig. 7 is a side view of the longitudinally corrugated strip from which the bracket is to be formed, and Fig. 8 shows said strip after it has been properly notched and cut. Fig. 9 is a fragmentary view illustrating one mode of securing the brace to the members of the bracket. Fig. 10 is a side view of a bracket constructed according to my invention, wherein the brace is constructed integrally with one of the members of the bracket. Fig. 11 is a fragmentary view illustrating a non-integral construction of the members of the bracket. Fig. 12 shows a mode of re-inforcing the angle of the bracket.

My bracket is constructed of sheet metal, so far at least as the upright and horizontal members thereof are concerned; and I prefer to make the brace also of sheet metal.

a is the upright member, and *b*, the horizontal member of the bracket. *c* is the diagonal brace which connects these parts.

In carrying out my invention, I first take a strip of sheet metal, as sheet iron, for example, and corrugate it longitudinally throughout its length, thus forming a fold of double thickness on one of its faces, which may be along the median line of the strip, as seen in

Fig. 3. This fold or corrugation forms the web 1. This fold may be left somewhat open, as in Fig. 3, or it may be closed as in Fig. 4. Or it may be closed in the main and have a tubular bead along its edge, as in Fig. 5. The strip, when corrugated as described, will present the appearance seen in Fig. 7.

The next step is to cut in the web 1, a notch 2, (seen in Fig. 8) at the point where the member *a* joins the member *b*. At this time the web may be rounded or eased off at its extremities, as represented at 3, and the slight notches 4 be cut in it to receive the ends of the brace. The purpose of these notches 4 will be hereinafter explained. The strip is now bent at the notch 2 to form the angle 5 of the bracket; this will usually be a right angle, as seen in Fig. 1. After the strip has been bent to form as above described, the brace *c* will be applied and secured to the web. As represented in Figs. 1, 1^a and 2, this brace is of sheet metal, folded along its median line to give its cross section a U-shape. Its ends embrace the web of the bracket and are secured thereto by rivets. The slight notches 4 in the web at the points where the ends of the brace are situated, serve a double purpose; they form shoulders against which the respective ends of the brace abut, and they let the brace in flush with the edge of the web, so as to improve the finish of the bracket. The bracket thus completed may be joggled in the way usually practiced with metal wares. Where the web is formed by two corrugations, as in Fig. 6, the brace *c* may be conveniently made from a plain flat plate or thick sheet. Or, in lieu of arranging the two plies of the folded metal of the brace to embrace the web, as in Fig. 1, the crown of the web may be cut open, and the flattened extremity of the end of the brace inserted therein, as seen in Fig. 9. This construction is best adapted for use with the open web seen in Fig. 3. The brace *c* may be made integral with the members *a* and *b* of the bracket, as seen in Fig. 10, the brace being joined to the member *b* by the fold *y*. I prefer to make the members *a* and *b* from one piece, but a good bracket may be produced by joining the two members at the angle 5, as seen in Fig. 11, the flat portion of one member be-

ing made to overlap the flat portion of the other member, and the two united by rivets, as seen at *x* in this figure. The angle 5 of the bracket may be strengthened by the insertion into the hollow of the web at that point of an L-shaped plate of metal, and securing it by rivets through the web. This construction is illustrated in Fig. 12, where the metal of the member is broken away to disclose the re-inforcing piece 6.

I would say that I am fully aware that brackets of cast metal, having a form similar to mine, are well known, and these I do not claim. My object is to construct a bracket from sheet metal, with the rib formed from a fold of the metal, whereby I attain strength, stiffness and lightness to a degree not attainable with cast metal.

Having thus described my invention, I claim:—

1. As an improved article of manufacture, a sheet metal bracket having a flattened, projecting fold of the metal longitudinally of the inner faces of its members, said fold having a miter joint at the junction of the two members, as set forth.

2. As an improved article of manufacture, a sheet metal bracket having a flattened projecting fold of the metal extending longitudinally of the inner faces of its members, and provided with a sheet metal brace *c*, which has a U-shaped cross-section, said brace being secured at its ends to the said projecting folds on the respective members, as set forth.

3. As an improved article of manufacture, a sheet metal bracket having a longitudinal corrugation forming a web 1, on the inner faces of its members, provided with notches 4 at the points where the brace is secured thereto, and having a brace *c*, secured at its extremities to said web, the respective ends of said brace abutting against the shoulders formed by said notches, and its extremities entering into the hollow of the web substantially as set forth.

4. As an improved article of manufacture, a sheet metal bracket having a longitudinal corrugation forming a web 1 on the inner faces of its members, a brace *c*, secured at its respective extremities to the said web, and an L-shaped re-inforcing plate 6, in the hollow of the web at the angle of the bracket, said plate being secured to the web, substantially as set forth.

5. A sheet metal bracket having shelf and wall plates formed each with a strengthening bead on the inner face thereof, and a non-integral brace connecting said wall and shelf plates and secured at its ends to the respective beads on the same.

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

FREDERICK RECHT.

Witnesses:

HENRY CONNETT,
JOHN D. CAPLINGER.