

F. J. MORAN.

BRACKET.

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934,414.

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Fig. 1.

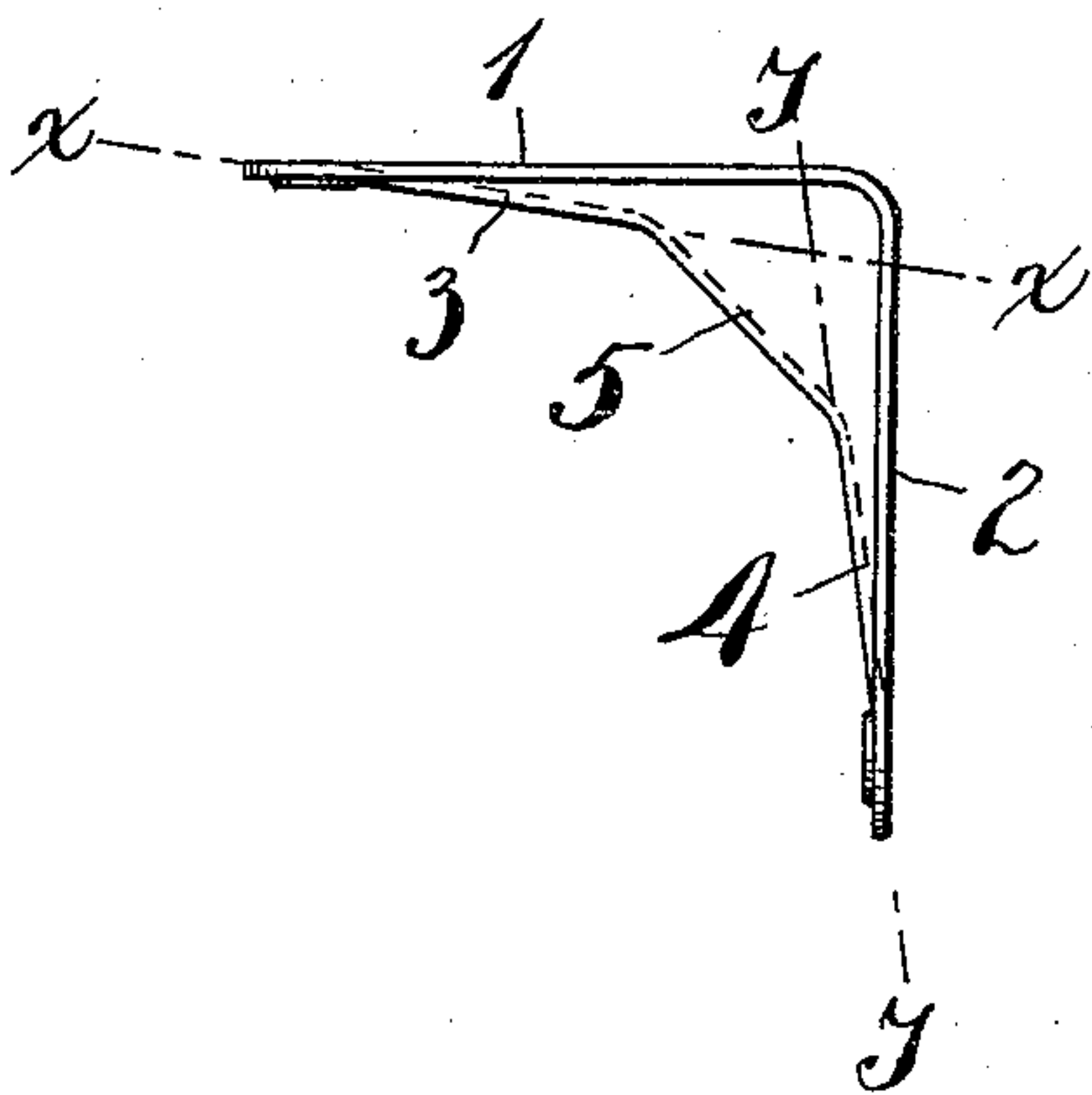


Fig. 2.

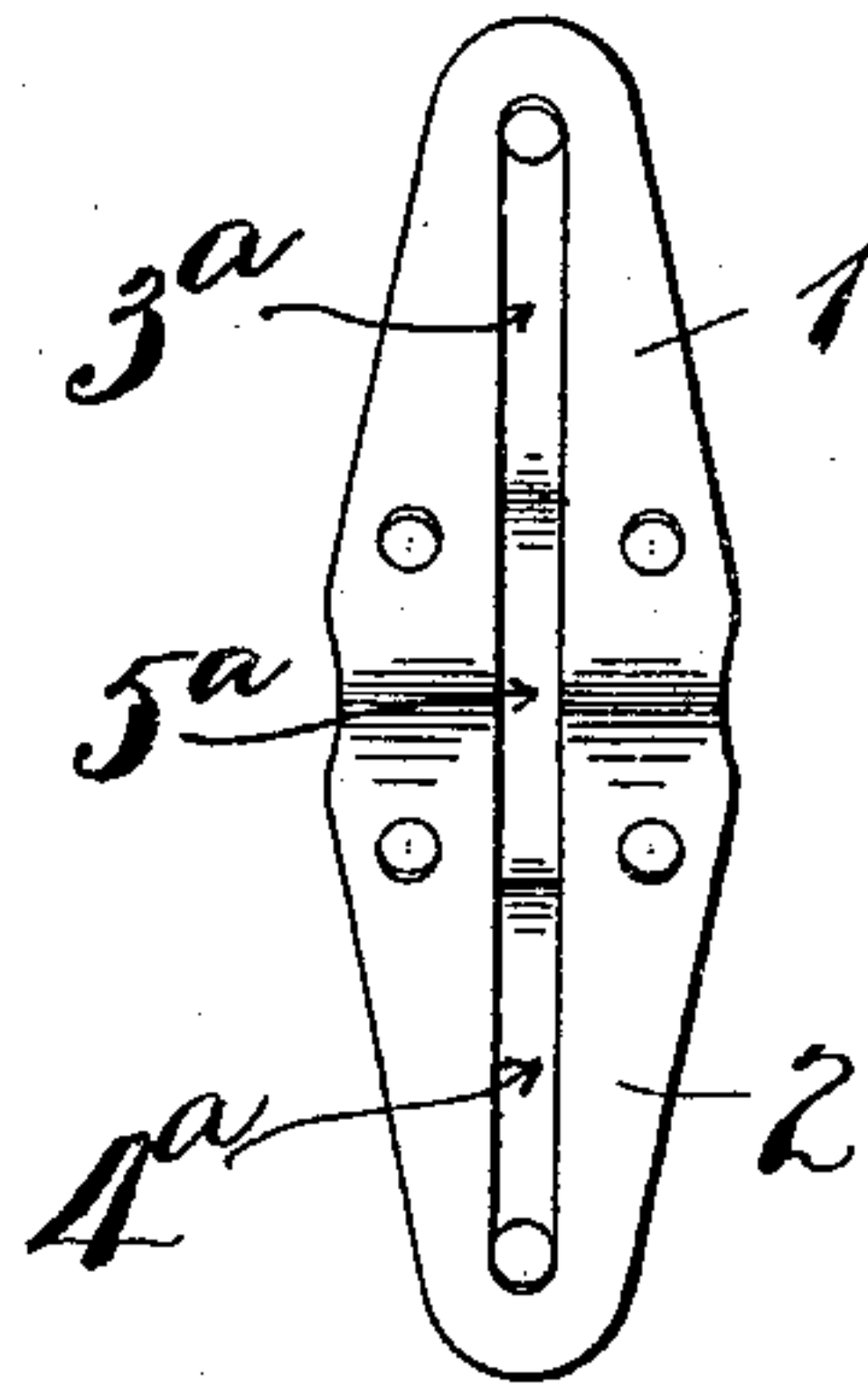


Fig. 4.

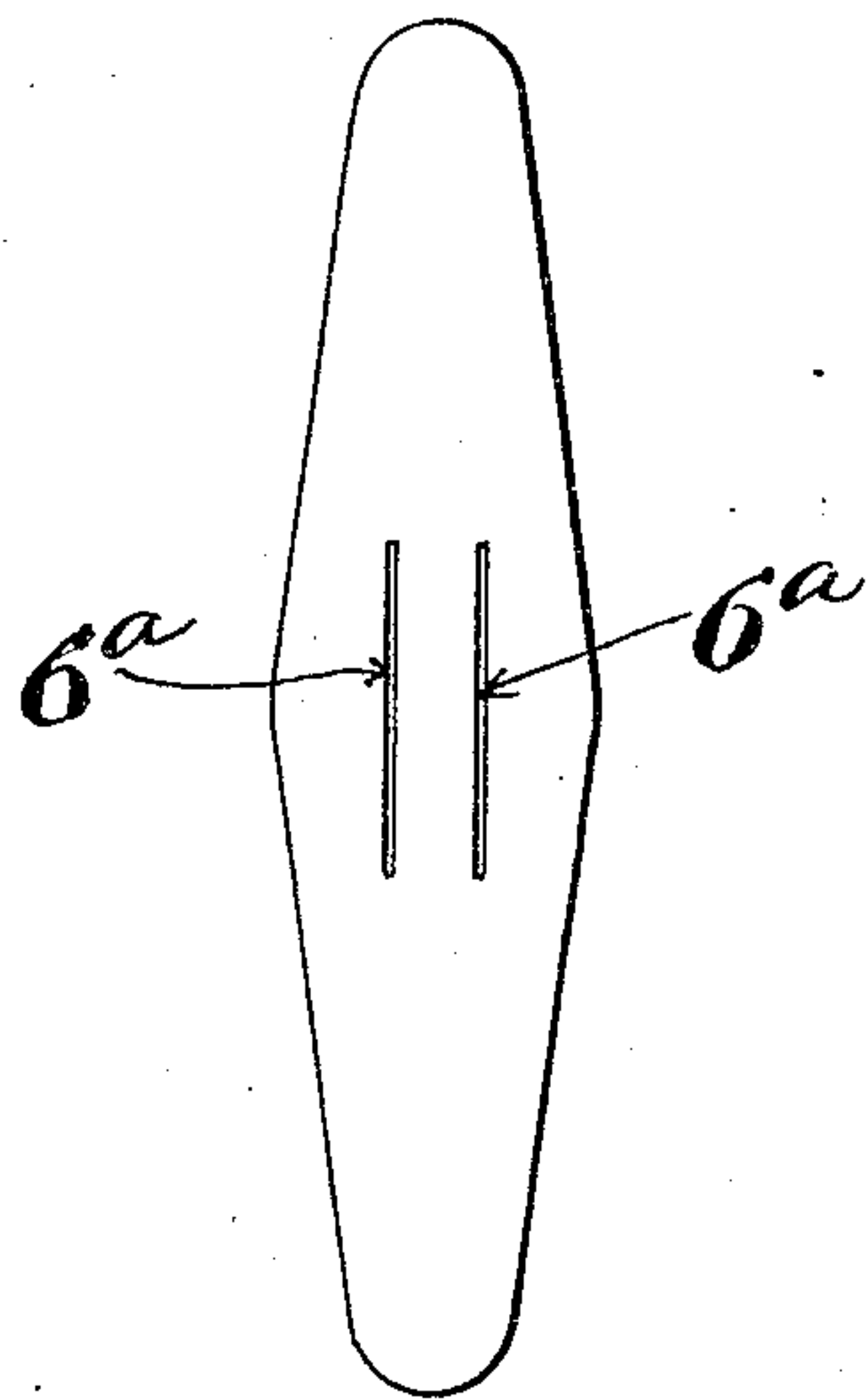
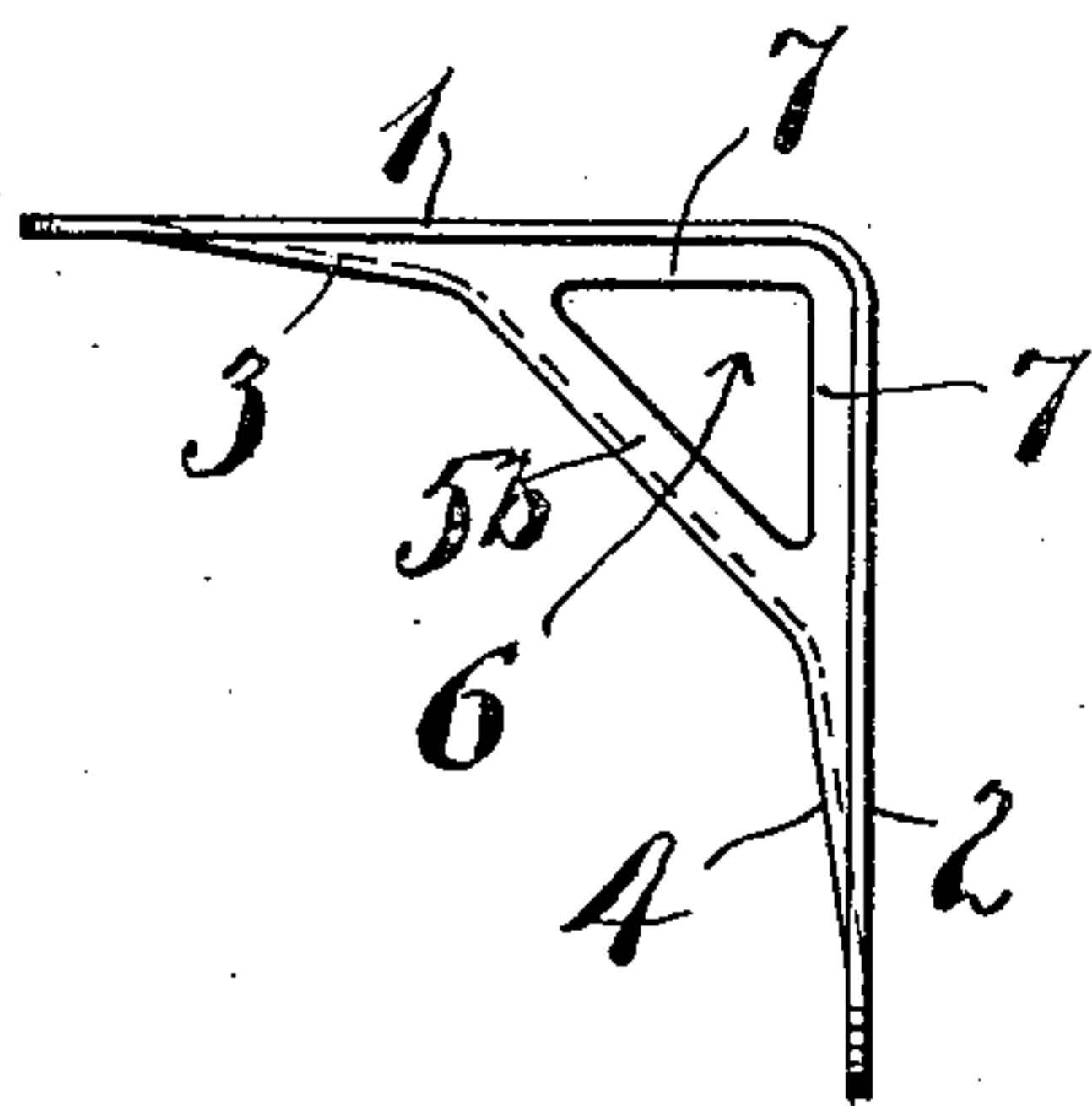


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK J. MORAN, OF NEW BRITAIN, CONNECTICUT.

BRACKET.

934,414.

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To all whom it may concern:

Be it known that I, F. J. MORAN, 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 Brackets, of which the following is a specification.

My invention relates to shelf brackets and the like, the object being to provide an integral, or one-piece, device of this character, which may be rapidly and economically produced; which shall contain a minimum of stock without sacrifice of strength and durability.

In the accompanying drawings Figure 1 is a side elevation on a small scale of my improved bracket. Fig. 2 is a rear perspective view thereof. Fig. 3 is a side elevation of the bracket, showing a slight modification. Fig. 4 is a plan view of a blank of an outline suitable for the production of a bracket similar to those shown in the previous views, but which is specially formed with reference to producing a bracket like that particularly shown in Fig. 3.

Referring first to the bracket shown in Figs. 1 and 2, it will be seen that said bracket is of angular form, comprising two main arms 1 and 2 bent at substantially right angles. At the inner side of the arms 1 and 2 and integral therewith are two strengthening ribs 3 and 4, serving to stiffen the arms, said ribs being formed respectively from the metal of the arms 1 and 2 by channeling the rear side of each arm, as at 3^a—4^a, Fig. 2. At the meeting angle of the arms 1 and 2 an abnormally deep recess 5^a (Fig. 2) is formed, which produces an abnormal development or extension of the ribbed portion at a corresponding point on the opposite side, forming in effect a powerful diagonal cross-brace 5, of U-shaped cross section substantially straight for a portion of its length. Each rib 3 and 4 in its normal development follows substantially an even incline, as indicated by the dotted lines *x—x* and *y—y* respectively (Fig. 1). These ribs 3 and 4 serve merely to stiffen the arms 1 and 2, while the abnormally developed portion 5 constitutes, as distinguished from each rib, a cross-brace connecting and supporting the two arms 1 and 2, thus vastly strengthening the bracket at its vulnerable point, to wit, at the angle. In producing these brackets,

a single blank of lozenge or diamond-shaped outline (see the outline of Fig. 4) may be treated so as to produce a device of the conformation and appearance illustrated in Fig. 1. In Fig. 4, however, I have shown two longitudinal slots 6^a—6^a, so that when such a blank is employed and treated by suitable dies to form the metal up as a bracket, the bracket will have the appearance of that indicated in Fig. 3, in which the side arms 1 and 2 and the end ribs 3 and 4 correspond to similar parts shown in Figs. 1 and 2. In Fig. 3, the cross-brace is indicated at 5^b, the same being separated at its rear edge from the arms 1 and 2 at the meeting angle by the space 6. In this respect only is the device of Fig. 3 different from the device shown in Figs. 1 and 2.

Where it is desired to use unusually heavy stock, the form illustrated in Fig. 3 may be adopted with much success. In this instance, it relieves wear and tear upon the dies, since it is unnecessary to stretch the metal to that extent which would otherwise be necessary in offsetting the cross-brace 5^b to secure substantial results. By this arrangement it is also possible to offset the cross-brace to practically any desired extent with comparatively little effort. In the forming of the slots 6^a—6^a, Fig. 4, it is preferable that the same be so spaced that portions of the metal adjacent the meeting angle of the side arms 1 and 2 will be turned down to form stiffening flanges 7—7 (Fig. 3) in line with the sides of the ribs 3 and 4 and operating to continue said ribs from their outer ends directly up to the meeting angle of the side arms 1 and 2 of the bracket in its finished state.

I am aware that heretofore one-piece brackets have been made of sheet metal with mere corrugations in the two arms thereof for the purpose of giving rigidity to the arms, and I lay no claim thereto, since the important feature of my invention is the production of a bracket in which the arms thereof are connected by a unique cross-brace. By this arrangement all occasion for border corrugations around the edge of the arms 1 and 2 is eliminated, and hence said arms may take a broad flat bearing or seat upon the surface of the parts to which the brackets are to be connected. While, of course, such border corrugations

might be employed, they are not essential to the invention or to the production of a practical article.

What I claim is:

5 1. A sheet metal bracket comprising two arms arranged at an angle, a recess at the rear of each of said arms forming a longitudinal stiffening rib on the front of each arm, a diagonal cross-brace having a substantially straight portion of U-shaped cross
10 section integrally connecting said arms and stiffening said bracket at the corner, said cross-brace being formed by abnormally deepening the recessed portion at the meet-
15 ing angle of the arms.

2. A sheet metal bracket comprising two arms arranged at an angle, a recess at the rear of each of said arms forming a longitudinal stiffening rib on the front of each
20 arm, a diagonal cross-brace connecting said arms and stiffening said bracket at the corner, said cross-brace being formed by abnormally deepening the recessed portion at

the meeting angle of the arms, said cross-brace being separated at its rear from said
25 arms at the corner of the bracket.

3. A sheet metal bracket comprising two arms arranged at an angle, a recess at the rear of each of said arms forming a longitudinal stiffening rib on the front of each
30 arm, a diagonal cross-brace connecting said arms and stiffening said bracket at the corner, said cross-brace being formed by abnormally deepening the recessed portion at the meeting angle of the arms, said cross-
35 brace being separated at its rear from said arms at the corner of the bracket, and stiffening flanges on said arms within the angle of the bracket to the rear of said cross-brace.

In testimony whereof I affix my signature
40 in presence of two witnesses.

FRANK J. MORAN.

Witnesses:

ANNA A. BOLGER,
GEO. B. WARD.