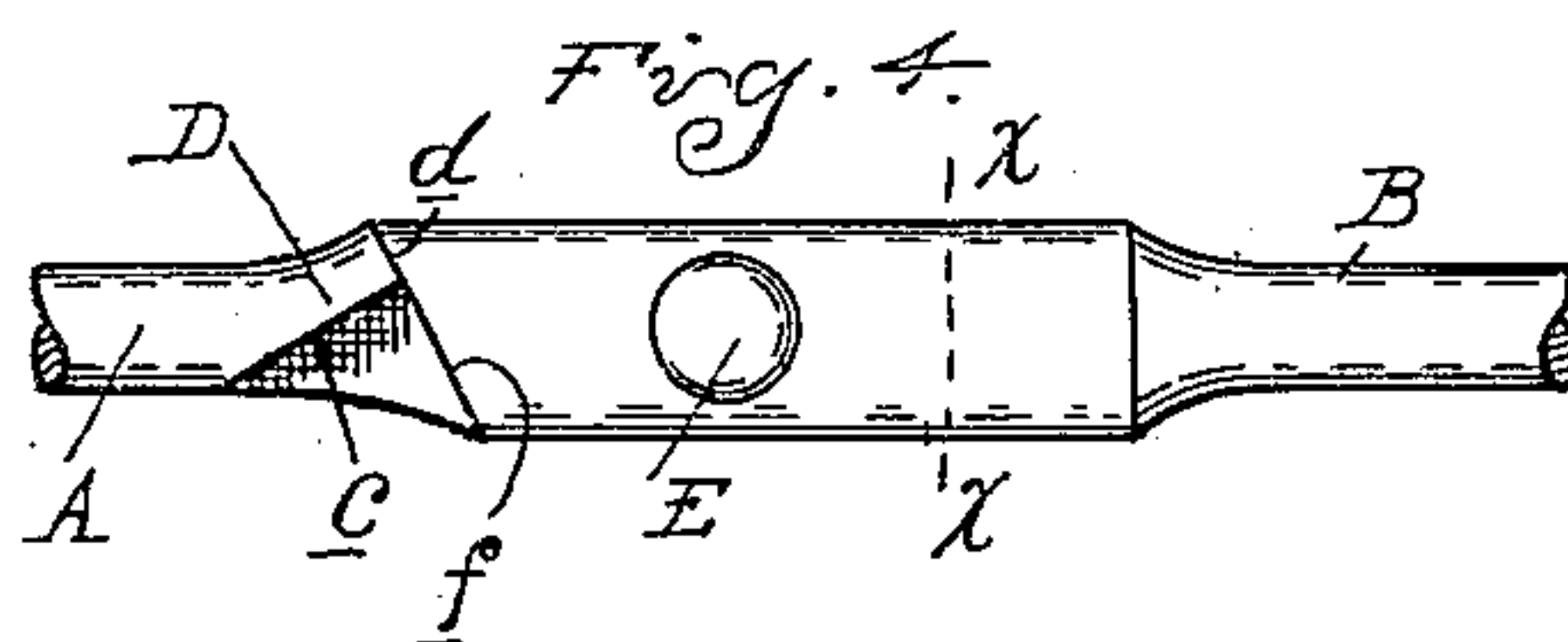
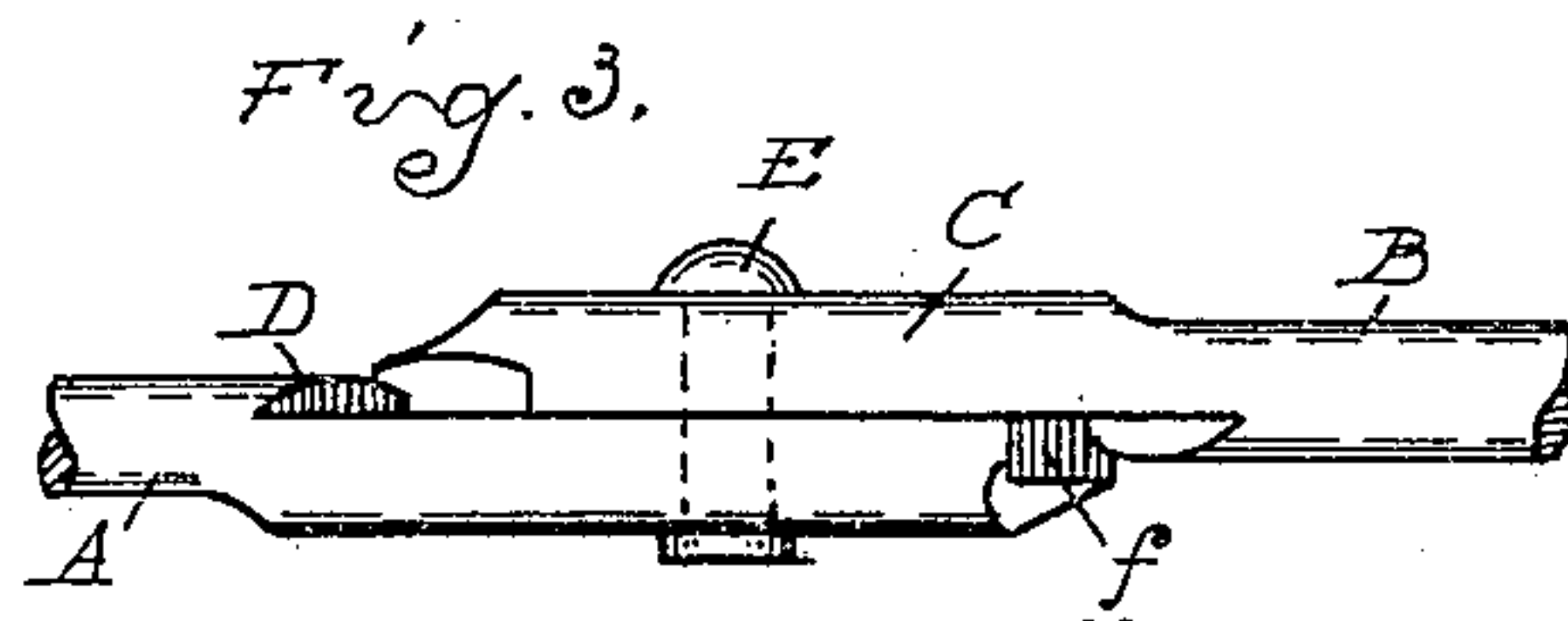
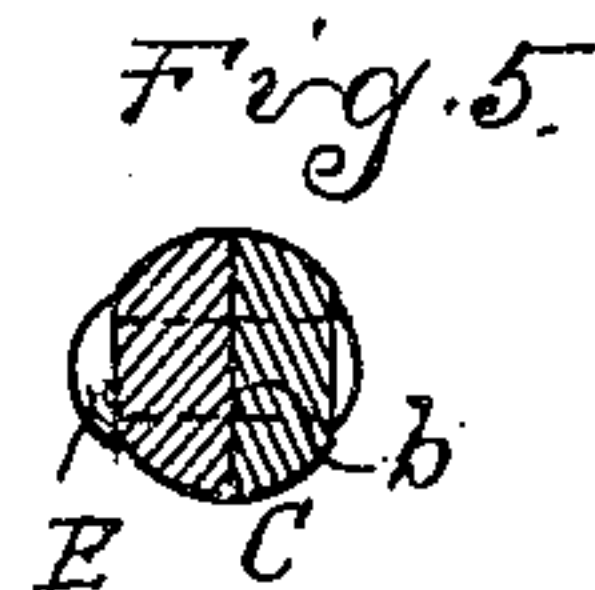
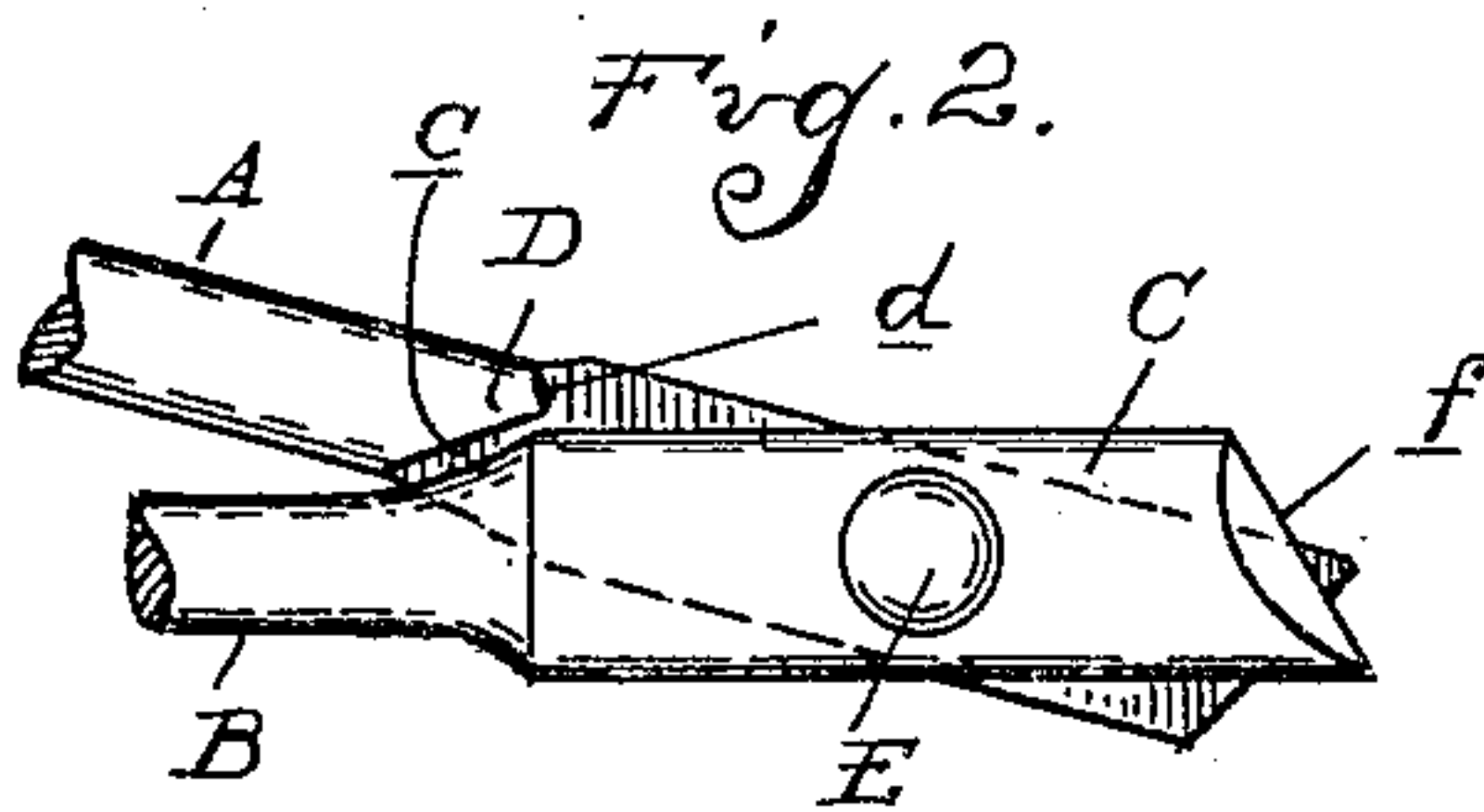
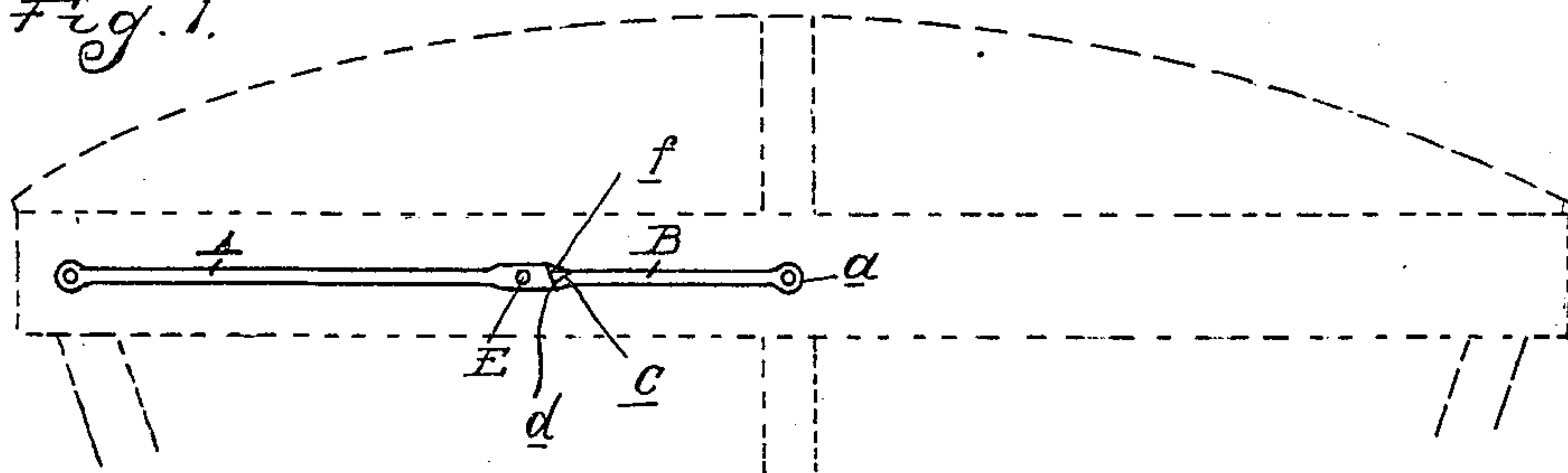


No. 792,045.

PATENTED JUNE 13, 1905.

J. P. JOHNSON.
BREAK JOINTED BRACE ROD.
APPLICATION FILED SEPT. 27, 1904.

Fig. 1.



Witnesses
A. L. Hobby
Geo. H. Gower

Inventor
Jeremiah P. Johnson

By James Whittington
att'y.

UNITED STATES PATENT OFFICE.

JEREMIAH P. JOHNSON, OF DETROIT, MICHIGAN.

BREAK-JOINTED BRACE-ROD.

SPECIFICATION forming part of Letters Patent No. 792,045, dated June 13, 1905.

Application filed September 27, 1904. Serial No. 226,207.

To all whom it may concern:

Be it known that I, JEREMIAH P. JOHNSON, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Break-Jointed Brace-Rods, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to brace-rods particularly designed for use in the construction of collapsible carriage-tops; and the invention further consists in the peculiar construction, as hereinafter set forth.

In the drawings, Figure 1 is a diagrammatic view of a portion of the carriage-top, illustrating the arrangement of the brace-rod in relation thereto. Fig. 2 is an enlarged view of a joint in the brace-rod, illustrating the brace thereof in folded position. Fig. 3 is a plan view of the joint in extended position. Fig. 4 is a side elevation thereof, and Fig. 5 is a cross-section on line *x x* of Fig. 4.

In the present state of the art collapsible carriage-tops are provided with break-jointed brace-rods extending between the several bows of the frame. One of these braces is usually located in a position where it is concealed by the valance of the top and is therefore commonly called the "concealed joint," this term not merely designating the joint in the rod, but the entire brace-rod.

My present invention is more particularly designed for use as a concealed joint, but may also be applicable to other uses.

As commonly constructed the brace-rods of carriage-tops are formed of malleable castings and as a consequence are not as strong as if made from wrought metal. My present construction is one in which steel or other wrought-metal bars may be used in place of malleable castings, and the construction is such as to secure not only increased strength, but also to cheapen the cost of manufacture and to diminish the size.

In particular my improved construction comprises two members A and B, each of which is formed of a wrought bar, preferably of steel, of round cross-section, the outer ends of each member being flattened and formed into an eye

a for pivotally connecting with the carriage-frame. The inner or adjacent ends of these members are also flattened and are formed in dies into the cross-section illustrated in Fig. 5, the adjacent faces *b* being flat and the outer surface being rounded. Thus the two members when placed together will form a cross-section substantially round, but of greater diameter than the cross-section of the original bar. In forming these inner ends C of the members A and B the dies are so shaped as to produce the angle-shoulder D at a point where the flattened portion merges into the shank, these shoulders D having angling faces *c* and *d*, preferably substantially at right angles to each other, the former providing clearance to permit of the folding of the rod and the latter forming an abutment for holding the rod straight in bracing position. The members C are perforated for the passage of the rivet E, which connects the two sections of the rod together, and the end of each section C is angled at *f*, so as to bear against the face *d* of the shoulder D.

The construction just described is one which is exceedingly simple to produce, the ends C, including the shoulder D, being formed by a single stamping operation of the dies. When riveted together, the two members may be either folded or straightened, and in the straightened position the beveled end *f* will abut against the face *d*, as shown in Fig. 4, so as to prevent further movement of the sections, the adjustment being preferably such as to slightly pass beyond the center, so that any strain upon the rod will tend to fold it into extended position rather than to collapse it. At the same time the members may be folded at any time by a sufficient lateral movement of the break-joint.

What I claim as my invention is—

1. A break-jointed brace-rod comprising two members formed of wrought metallic bars of rounded cross-section, the adjacent ends of said members being flattened to form parallel faces and projecting shoulders at the point of merging into the rounded section, a pivot engaging central apertures in said flattened portions and securing the same together, the ends of said flattened portions being fashioned to

abut against the shoulder of the opposite member in the extended position of the members.

2. A break-jointed brace-rod comprising two members, each formed of a wrought metallic bar of rounded cross-section, the inner ends of said members being flattened to form parallel faces extending longitudinally of the members and beveled shoulders at the point of merger into the shank, the ends of said flattened portions being also beveled, and a pin engaging central apertures in said flattened portions connecting the same together, whereby when said brace is extended the beveled end of one member will engage with the beveled shoulder of the opposite member to prevent further movement.

3. A break-jointed brace-rod comprising two members each formed of a metallic bar of rounded cross-section, the inner ends of said members being flattened to form parallel longitudinal faces and double angling shoulders at the point of merger into the rounded cross-section, and a pivot-pin connecting said members to each other and engaging central aper-

tures therein, the ends of said flattened portions being beveled to abut against one of said angling faces in the extended position of the members, the opposite angling face permitting of the further folding of the members.

4. A break-jointed brace-rod comprising two members, each formed of a wrought metallic bar of rounded cross-section the adjacent ends of said members being flattened to form parallel longitudinal faces and the shoulders D having the oppositely-beveled faces *c* and *d*, the end of each flattened portion being beveled as at *f* and a pivot-pin connecting said members and engaging central apertures therein and so arranged that in the extended position of the members, the beveled end *f* will abut against the beveled faces *d*.

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

JEREMIAH P. JOHNSON.

Witnesses:

JAS. P. BARRY,

ED. D. AULT.