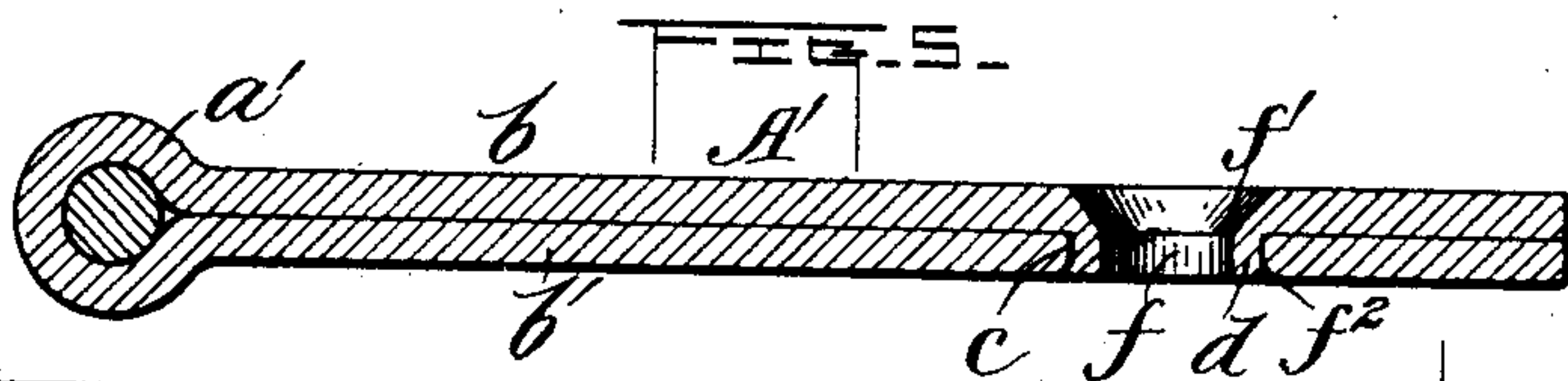
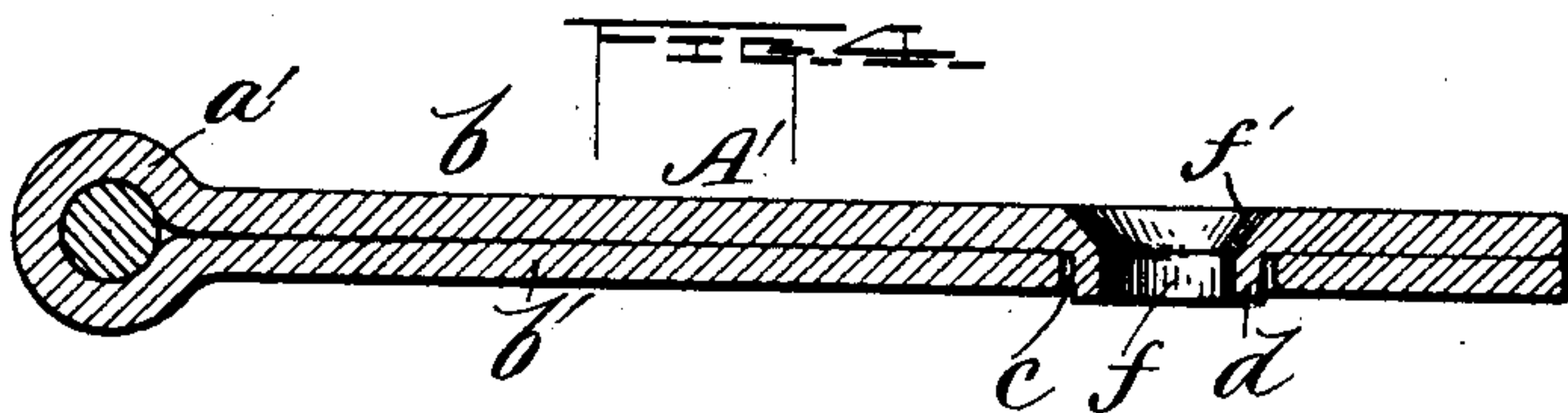
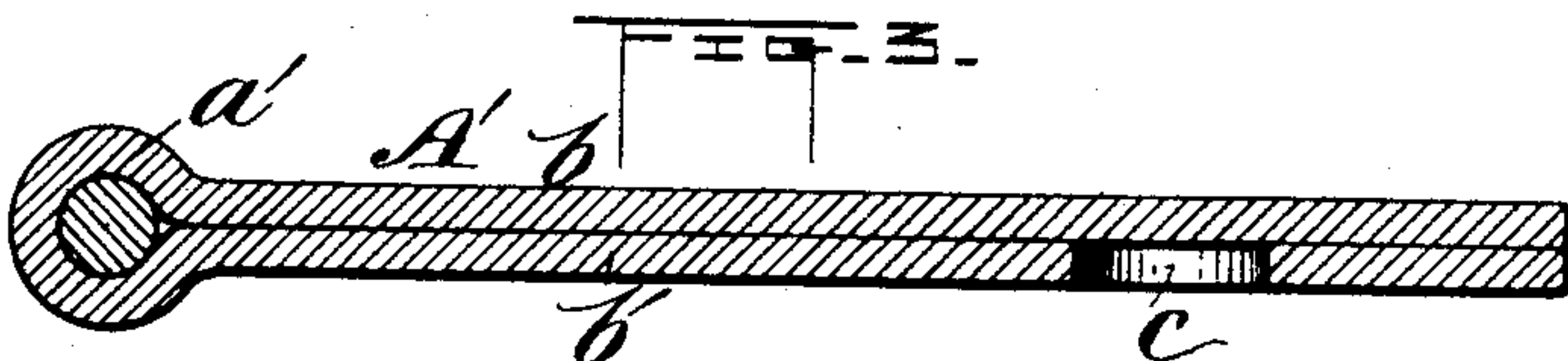
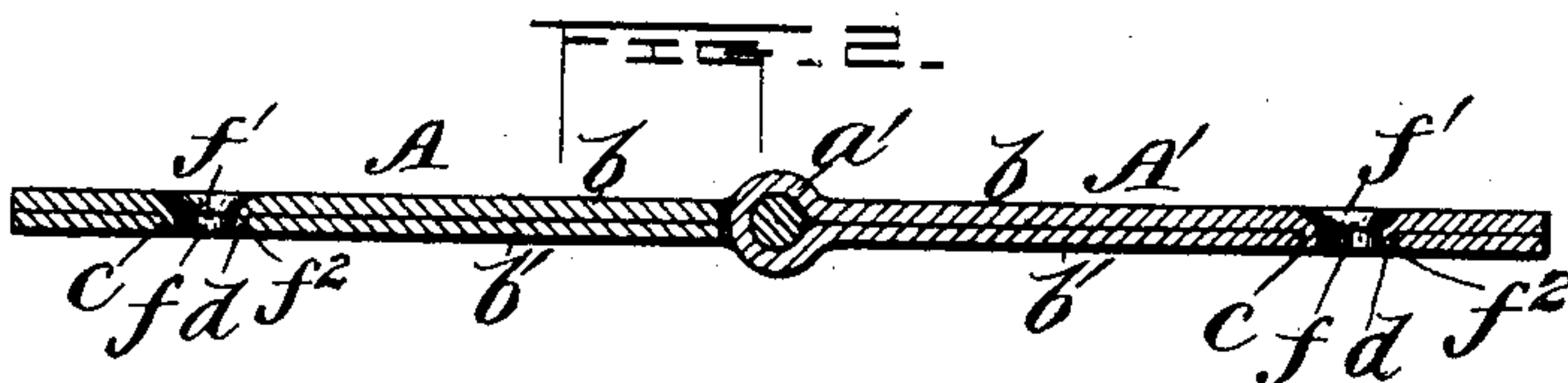
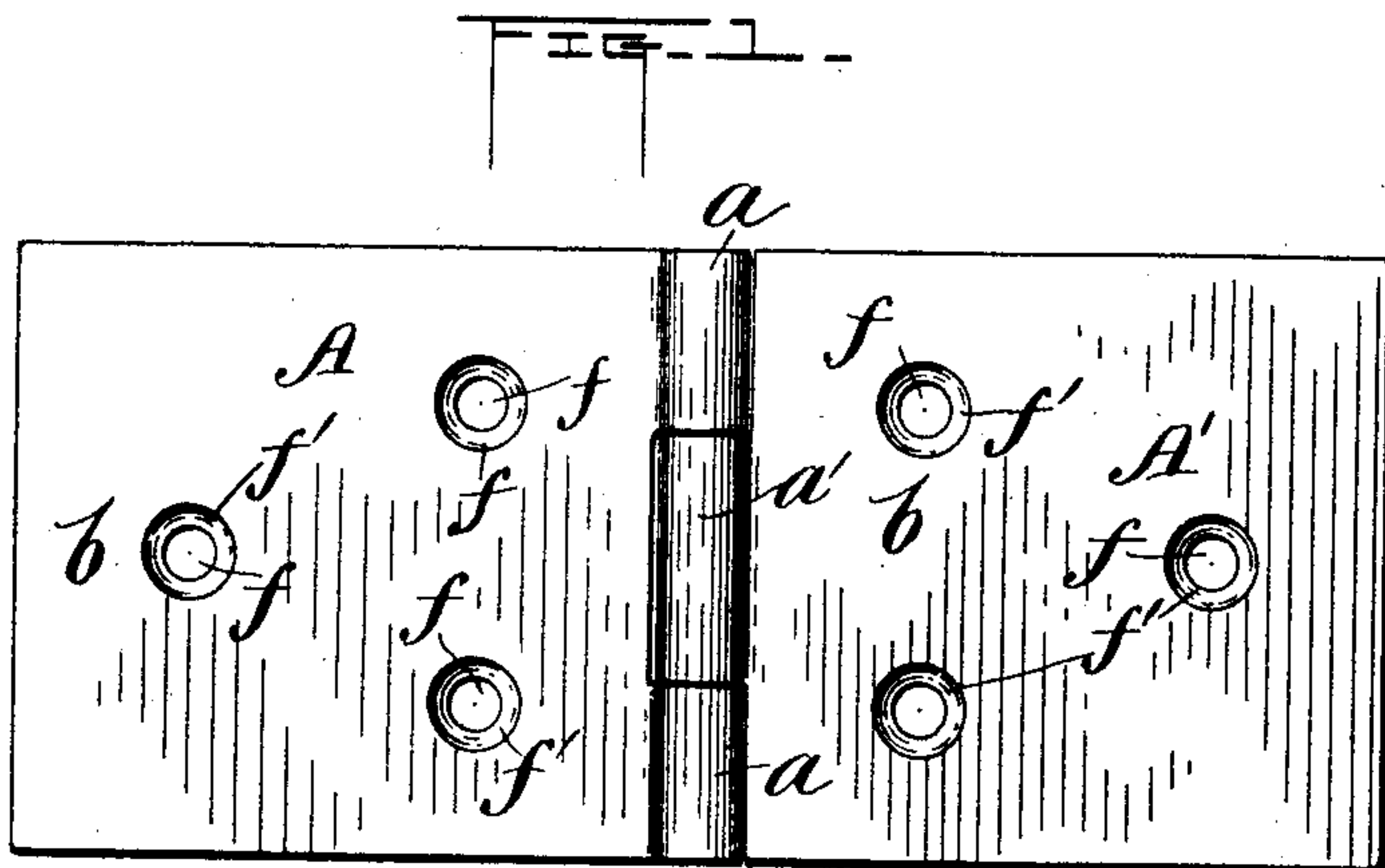


(No Model.)

R. T. SMITH.
BUTT HINGE.

No. 477,465.

Patented June 21, 1892.



WITNESSES:

Everance
C. L. Fennick

INVENTOR:

Roswell S. Smith
by his Attorney
Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

ROSWELL T. SMITH, OF NASHUA, NEW HAMPSHIRE.

BUTT-HINGE.

SPECIFICATION forming part of Letters Patent No. 477,465, dated June 21, 1892.

Application filed February 29, 1892. Serial No. 423,250. (No model.)

To all whom it may concern:

Be it known that I, ROSWELL T. SMITH, a citizen of the United States, residing at Nashua, in the county of Hillsborough, State of New Hampshire, have invented certain new and useful Improvements in Butt-Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel and improved construction of that type of butt-hinge wherein the halves are formed of sheet or plate metal by cutting and shaping the sheet metal so as to form the pintle-eyes and then folding the metal away from the eyes, one part upon the other; and my invention consists in a hinge having one of the folded portions of each of its halves formed with a countersink and a hole or holes for the reception of the fastening screw or screws, and said portion formed with a hollow spur or spurs of homogeneous metal extended into an aperture or apertures of the other portion, and said portions solidly united by the said spur or spurs, which spur or spurs, when riveted, presenting a smooth flat surface or surfaces on the half through which it or they pass, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a face view of a butt-hinge made in accordance with my invention. Fig. 2 is a horizontal section of the hinge shown in Fig. 1. Fig. 3 is a horizontal section on an enlarged scale of one-half of the hinge, showing the lower folding portion of the metal of which it is formed, as it is perforated preparatory to folding it, to permit the punching of the screw-hole, forming a countersink and riveting-spur or to admit of the passage through it of a riveting-spur formed on the upper folded portion previously to folding the metal. Fig. 4 is a similar section to Fig. 3 with the upper portion in position and condition for the riveting operation; and Fig. 5 is a section similar to Fig. 4, showing the riveting completed, as in Fig. 2.

A A' in the drawings designate two halves of a butt-hinge, each being formed of a single piece of sheet or plate metal by punching and folding the metal and shaping it with pintle-

eyes *a a'* after a well-known method. In the sheet of metal thus punched and preparatory to shaping it with the pintle-eye portion and also preparatory to folding one portion upon the other, a round aperture *c* is cut through the under folding portion *b'*, and, if preferred, the countersunk screw-hole and riveting-spur may be formed before folding the upper portion upon the under portion, as will be hereinafter more fully explained. If simply the aperture *c'* is cut or punched preparatory to shaping and folding, the sheet is next shaped to form the pintle-eyes and the upper folded portion folded upon the lower portion, and thereupon the upper portion is subjected to the action of a cutting-punch at a point directly in line with the round aperture *c*, said punch being adapted for forming a cylindrical screw-hole *f* and a countersink *f'*, and also displacing the metal at the point where the screw-hole and countersink are formed, and forcing it in the form of a cylindrical hollow spur *f''* through said hole *c* in the lower portion of the metal, and thereafter by means of this spur the parts are securely riveted together, the lower end of the spur, when the riveting is completed, lying flush with the surface of the under side of the hinge half. The lower edge of the round hole, being slightly flared in the operation of punching it, admits of the rivet edge being so depressed into the body of the metal as not to present an extending projection beyond the surface of the hinge. If preferred, the countersink may be formed by a separate punch after the screw-hole is punched. The respective halves of the hinge are made alike, except one-half has a plurality of the pintle-eye portions and the other a single eye portion. This, however, may be in accordance with any known modes of hinging the parts together. If preferred, the hinge-halves may be riveted at any time after the punching and countersinking are performed, but generally the operation will be a continuous one. It will be understood that when a series of holes are used the construction of all of the holes will be the same as herein described.

By my invention I am enabled to furnish the trade with folded or doubled plate, wrought, or malleable iron hinges, which are very strong, and the folded portions thereof firmly

riveted together by rivets, which are of homogeneous metal and in line with the holes through which the fastening-screws pass, and the said hinges present a nice finish and are
5 cheaply manufactured.

What I claim as my invention is—

A hinge having each of its halves formed of folded or doubled metal, one of the folded portions being provided with a countersunk
10 hole for the reception of a fastening-screw and with a homogeneous riveting-spur and

the other folded portion with a rivet-hole which is occupied with the riveting-spur, so that the end of the spur presents a smooth flat surface, flush with the hinge, substantially as and for the purpose described. 15

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

ROSWELL T. SMITH.

Witnesses:

S. J. M. SMITH,

H. C. SMITH.