

No. 749,532.

PATENTED JAN. 12, 1904.

W. H. CRAWFORD.
HATCH FASTENER.

APPLICATION FILED MAY 7, 1903.

NO MODEL.

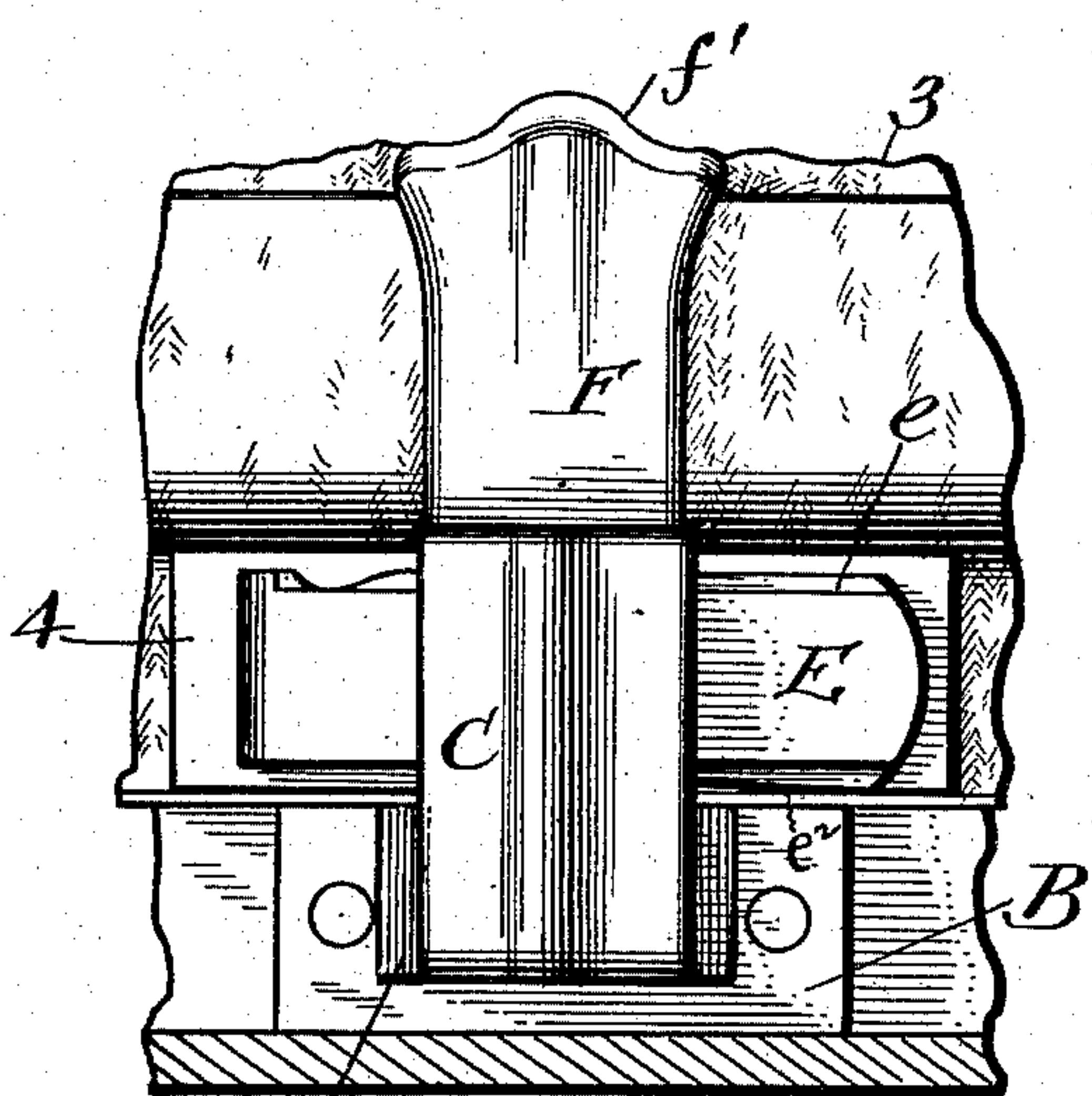


Fig. 1.

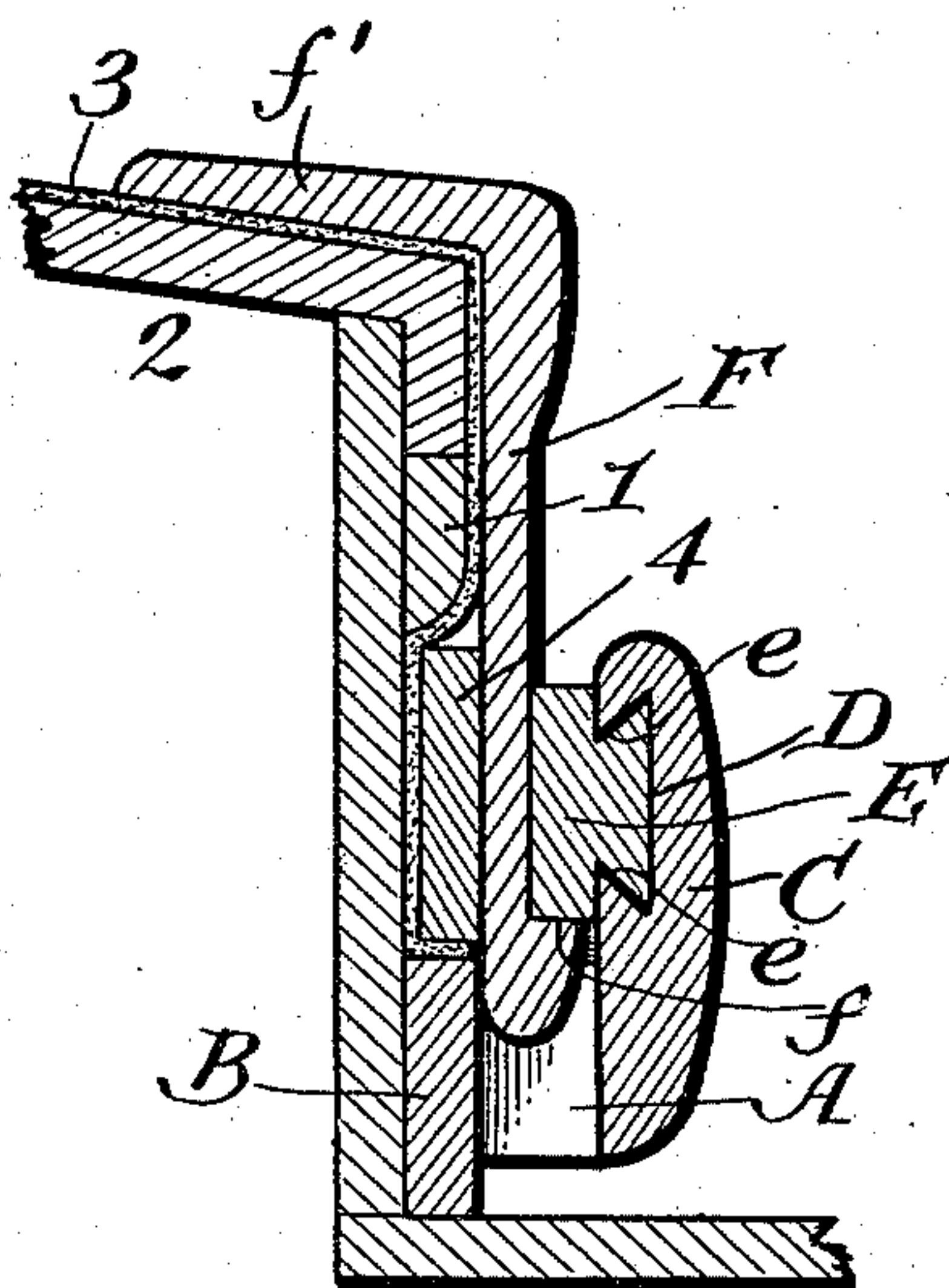


Fig. 2.

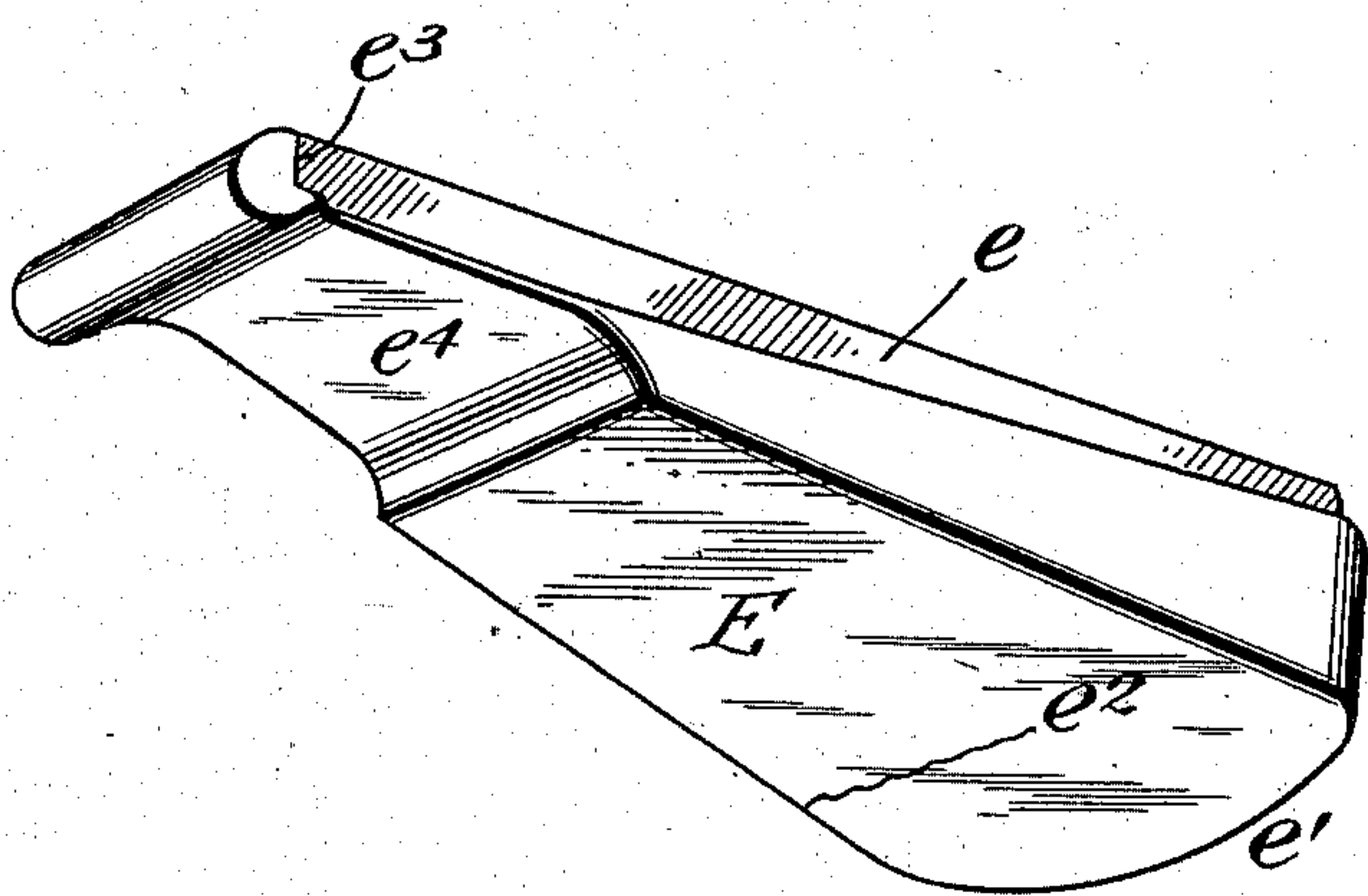


Fig. 3.

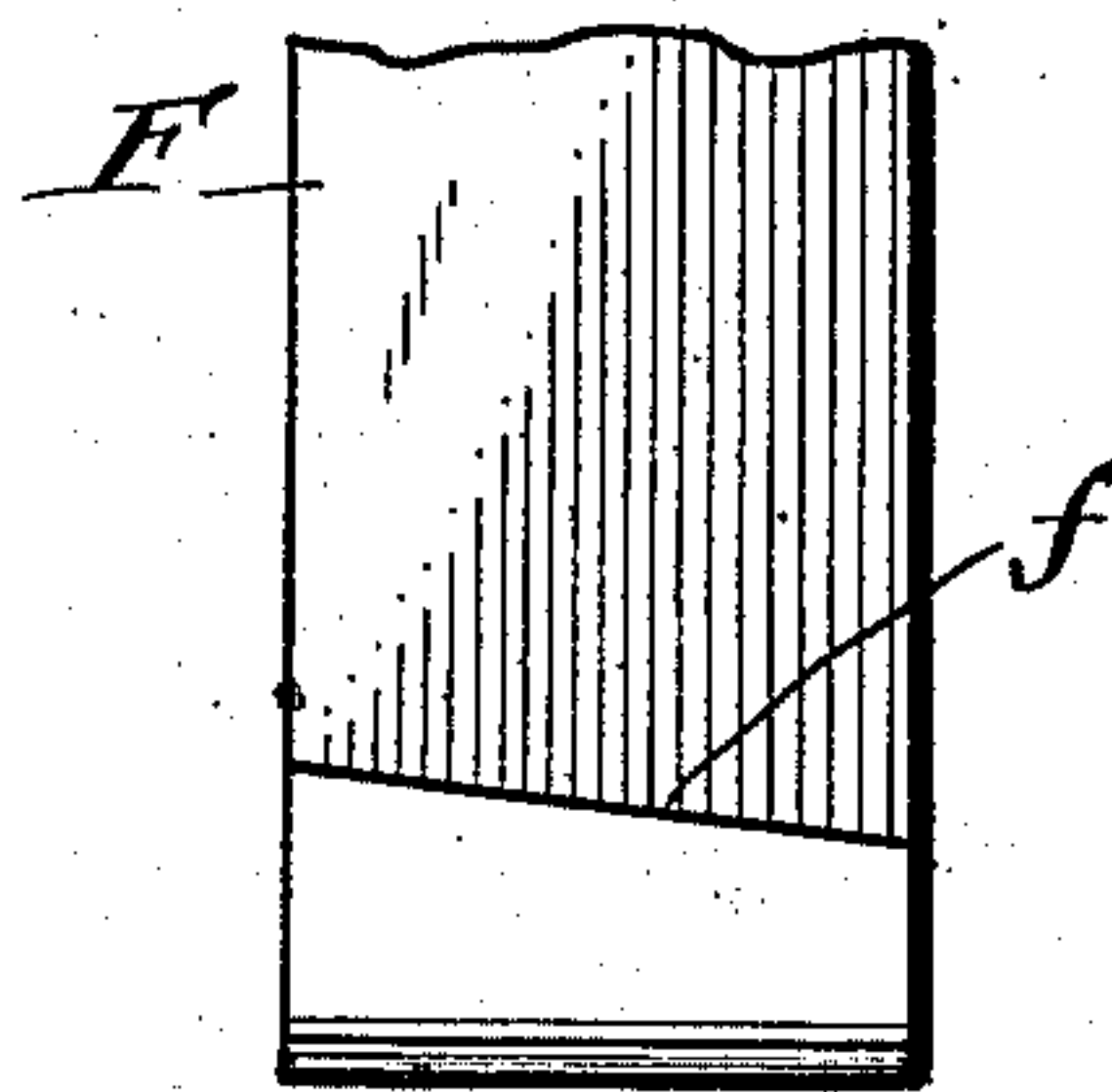


Fig. 4.

Witnesses
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By

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UNITED STATES PATENT OFFICE.

WILLIAM H. CRAWFORD, OF PORT HURON, MICHIGAN.

HATCH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 749,532, dated January 12, 1904.

Application filed May 7, 1903. Serial No. 156,057. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CRAWFORD, a citizen of the United States of America, residing at Port Huron, in the county of St. Clair and State of Michigan, have invented certain new and useful Improvements in Ship-Hatch Fasteners, of which the following is a specification.

This invention relates to ships, and particularly to that class thereunder known as "decks" and "hatches."

The objects of the invention are, first, to produce a novel clamp for retaining a tarpaulin over a hatch, whereby pressure is exerted against the surface of the hatch and also against the batten, the tarpaulin being interposed between the clamp and the hatch and the batten and coaming; second, to produce novel means for drawing the clamp down and combining therewith a device for pressing the batten against the tarpaulin; third, to produce a hatch-cover retainer which is readily assembled and dismantled without the exercise of undue skill.

Furthermore, an object of the invention is to produce a clamp of the character noted which will possess advantages in points of simplicity, efficiency, and durability, proving at the same time comparatively inexpensive.

With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of the specification, wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a portion of a hatch with a clamp embodying the invention applied. Fig. 2 is a vertical sectional view. Fig. 3 is a perspective view of the wedge. Fig. 4 is a view in elevation of a fragment of the clamp.

In the drawings, 1 indicates the coaming of a hatchway, which may be of any material.

2 indicates the hatch; 3, the tarpaulin, which is spread over the hatch and has its sides extending down over the sides of the coaming, against which it is clamped. The batten 4

may preferably extend along the entire surface of the coaming, though there may be a series of them, one for each clamp; but their size may be varied to suit particular requirements.

The means for clamping the tarpaulin in place comprise a bracket A, having a base B, which is secured to the coaming, and an arm C, which stands out from the base a suitable distance and extends upwardly. The under surface of the arm has a dovetail slot D extending transversely of said arm, and a wedge E has its sides provided with grooves e in order that said wedge may travel in the groove of the arm and be interlocked with said arm. The wedge is of increased width toward the end e ; but the upper edge is approximately straight, while the under edge flares, as shown, to form a camming-surface e^2 for a purpose to be hereinafter explained. The wedge has increased thickness toward the end e' , and as it is driven in the groove of the arm its pressure increases. The grooves e terminate near the tapered end of the wedge in shoulders e^3 , which are designed to abut the side of the arm and prevent the removal of the wedge. The under surface of the wedge is recessed, as at e^4 , in order that the surface of the wedge at this point may appear on approximately the same plane as the lower surface of the arm when the said recessed portion of the wedge is brought into alinement with the arm. A clamping member coacts with the wedge, and it comprises an arm F, having a shoulder f on its outer surface, the said shoulder being obliquely disposed with relation to the width of the arm. The arm has an integral end f' , which is so disposed with relation to the arm as to conform with the contour of a hatch to which it is to be applied. For instance, if the upper surface of the hatch is curved the end f' may be similarly curved, or if the hatch is perfectly flat the end may extend at a right angle from the arm; but as that is a matter of detail construction it will be apparent that it may be variously modified.

In assembling the parts for use the recess in the under surface of the wedge is brought to aline with the arm, in which it is slidable, at which position the arm F may be inserted

between the wedge and the batten, with the shoulder *f* just below the lower edge of the wedge. By driving the wedge transversely of the arm the camming lower edge of the wedge will engage the shoulder of the arm and draw the said arm downwardly, thus causing the end of the arm to press against the tarpaulin on the hatch and hold it against displacement. At the same time that the clamp is being acted upon by the wedge the batten is being acted upon by the lower surface of the arm, said wedge being of increased thickness toward the rear end, as stated, will bind against said arm and press it against the batten, thereby binding the tarpaulin, which is interposed between the batten and the coaming. Thus by a single movement of the wedge the clamp is actuated to retain the hatch in place and the batten is pressed to retain the tarpaulin.

The construction, operation, and advantages will, it is thought, be understood from the foregoing description, it being noted that changes in the proportions and other details of construction may be resorted to for successfully carrying the invention into practice.

Having fully described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hatch-fastener, a base secured to a coaming, an arm supported by the base, having a dovetail groove in its inner surface, a wedge slidable in the groove of the arm, a clamp-arm, a batten engaged by the arm, the said wedge having a flare to move the arm longitudinally and to bind it against the batten.

2. In a hatch-fastener, an arm suitably sup-

ported at the side of the coaming, said arm having a transverse groove, a wedge in the groove, a clamp-arm, means whereby the wedge actuates the clamp-arm, a batten and means whereby the wedge causes a binding of the batten.

3. In a hatch-fastener, an arm suitably supported at the side of the coaming, said arm having a groove, a wedge having a camming edge slidable in the groove, a clamp-arm actuated by the wedge, a batten and means whereby the wedge causes the arm to bind the batten.

4. In a hatch-fastener, an arm secured to a coaming, said arm having a groove, a wedge therein having a recess in its surface, a clamp-arm slidable in the recess of the wedge, means on the arm for engaging the wedge, when said wedge is moved, a batten and means whereby the clamp-arm is pressed against the batten when the wedge is moved.

5. In a hatch-fastener, an arm secured to a coaming, said arm having a groove in its under surface, a wedge with a camming lower edge slidable therein, said wedge having a recess, a clamp-arm slidable over the batten in the recess of the wedge and means on the clamp-arm for engaging the camming edge of the wedge and means whereby said wedge causes the clamp-arm to bind against the batten.

In testimony whereof I affix my signature, in the presence of two witnesses, this 4th day of May, 1903.

WM. H. CRAWFORD.

Witnesses:

M. J. MADDEN,
HENRY A. CLARK.