

No. 717,321.

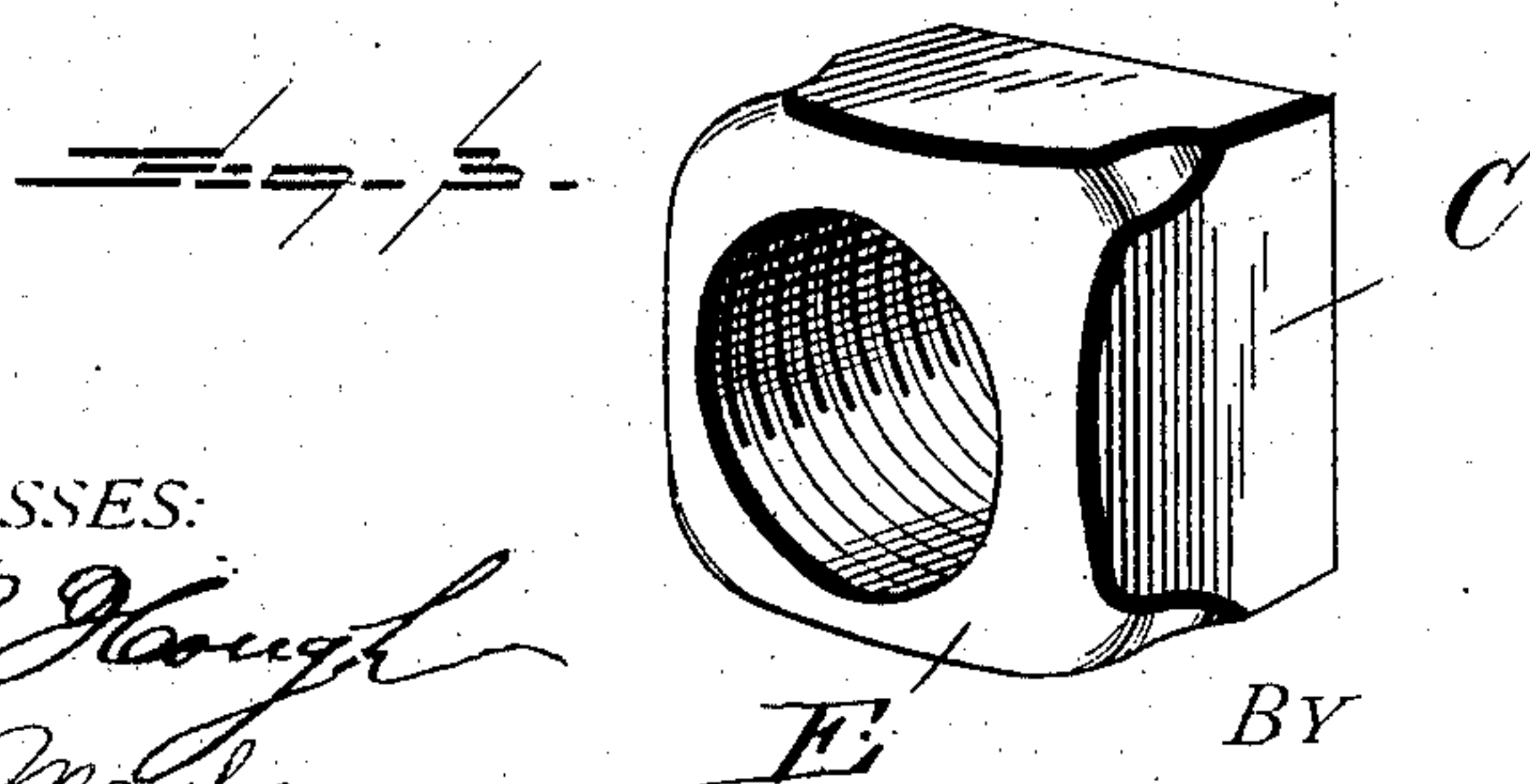
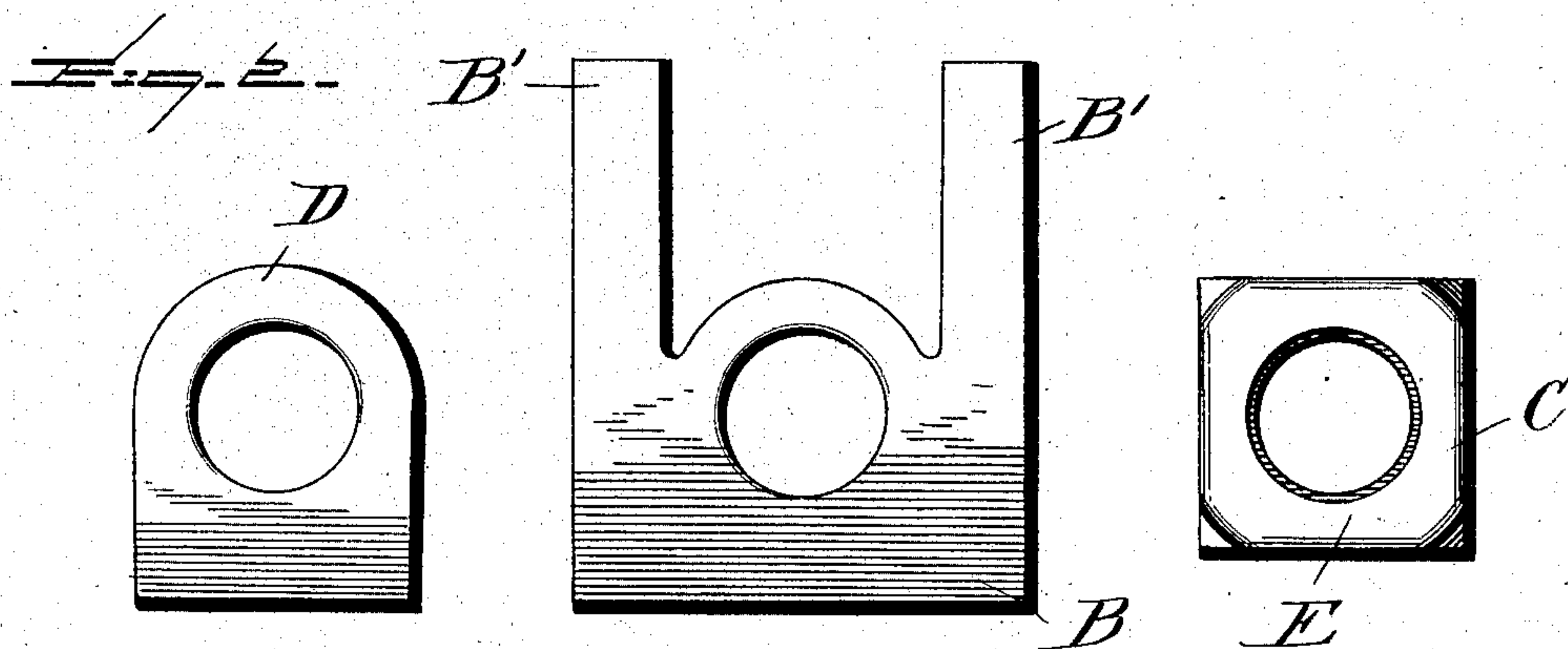
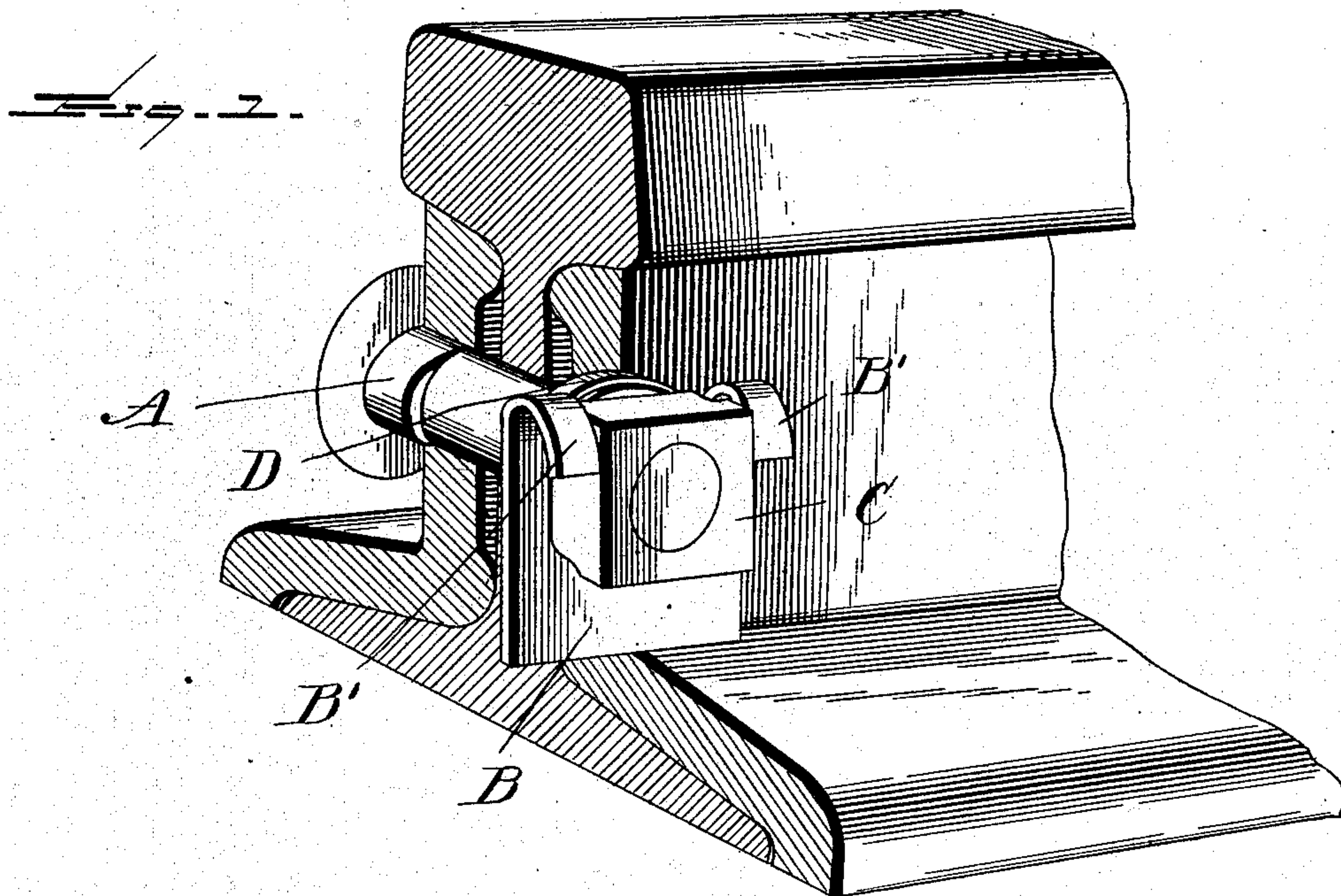
Patented Dec. 30, 1902.

W. E. BALL.

NUT LOCK.

(Application filed Sept. 25, 1902.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 717,321, dated December 30, 1902.

Application filed September 25, 1902. Serial No. 124,846. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. BALL, a citizen of the United States, residing at Zanesville, in the county of Muskingum and State of Ohio, have invented certain new and useful Improvements in Nut-Locks; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in nut-locks, and especially to a base-washer lock in which the washer is recessed out on one edge to form two arms, which are bent on opposite sides of the nut, there being interposed between the washer-plate and the locking-arms a second washer to reinforce the washer having the locking-arms, and in the provision of a nut having one edge slightly convexed and adapted to bear against the auxiliary or second washer-plate, thus lessening the frictional contact-surface between the nut and washer.

The invention consists, further, in various details of construction and in combinations of parts, which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings—

Figure 1 is a perspective view showing my nut-lock as applied to a fish-plate. Fig. 2 is a view showing the parts disassembled, and Fig. 3 is a base end perspective view of the nut.

Reference now being had to the details of the drawings by letter, A designates a bolt, which may be of the usual construction employed upon railways, and B is a washer-plate which is cut out or recessed on one end, forming two locking-arms B' and between which the nut C is adapted to be disposed when screwed in place after said arms, which have been bent, are curved up against the op-

posite edge of the nut, as shown. The inner marginal edge of the recess of said washer-plate is convexed slightly, and D is an auxiliary washer having one edge rounded, while its opposite edge is straight, and is adapted to be held by the nut against the inner washer. Said nut, it will be observed, has one face convexed, as at E, and has its corners cut away for a short distance, as illustrated.

In applying the locking device the washer next to the fish-plate is inserted in place, with its square edge preferably adjacent to the fish-plate, after which the auxiliary washer, having a rounded edge which is of thicker metal than the inner washer, is placed upon the bolt, and the nut with the convexed surface screwed against the outer face of the auxiliary washer. By having the inner face of the nut convexed it will be noted that the pressure will be thrown on a small area of the auxiliary washer adjacent to the aperture therein, rendering it possible to screw the nut tightly against the washer and securely bind the fish-plate to the rail. After the nut has been securely screwed down the arms of the inner washer are curved up on opposite edges of the nut in the manner shown, thereby producing a secure locking device to hold the parts in place. When it is desired to unscrew the nut, the arms of the washer are bent out of the path of the nut and the bolt may be readily removed.

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

1. A nut-lock comprising in combination with the bolt, a fish-plate, a locking-washer which is recessed out to form locking-arms on either side thereof, a reinforcing-washer mounted on the bolt and against the locking-washer, and a nut having a convexed face screwed against said reinforcing-washer, the locking-arms on the washer adapted to be bent up on opposite edges of the nut, as set forth.

2. A nut-lock comprising in combination with the threaded bolt and fish-plate, a locking-washer which is recessed out at one edge to form locking-arms, the inner marginal edge of said recess being convexed, a rein-

forcing-washer, with one end rounded and the other straight, fitted over said bolt, a nut having a convexed face, the corners of the nut being rounded and merging into the convexed face of the nut, the locking-arms of the washer adapted to be bent up against opposite sides of the nut, as set forth.

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

WILLIAM E. BALL.

Witnesses:

A. A. GEORGE,
J. H. WHARTENBY.