

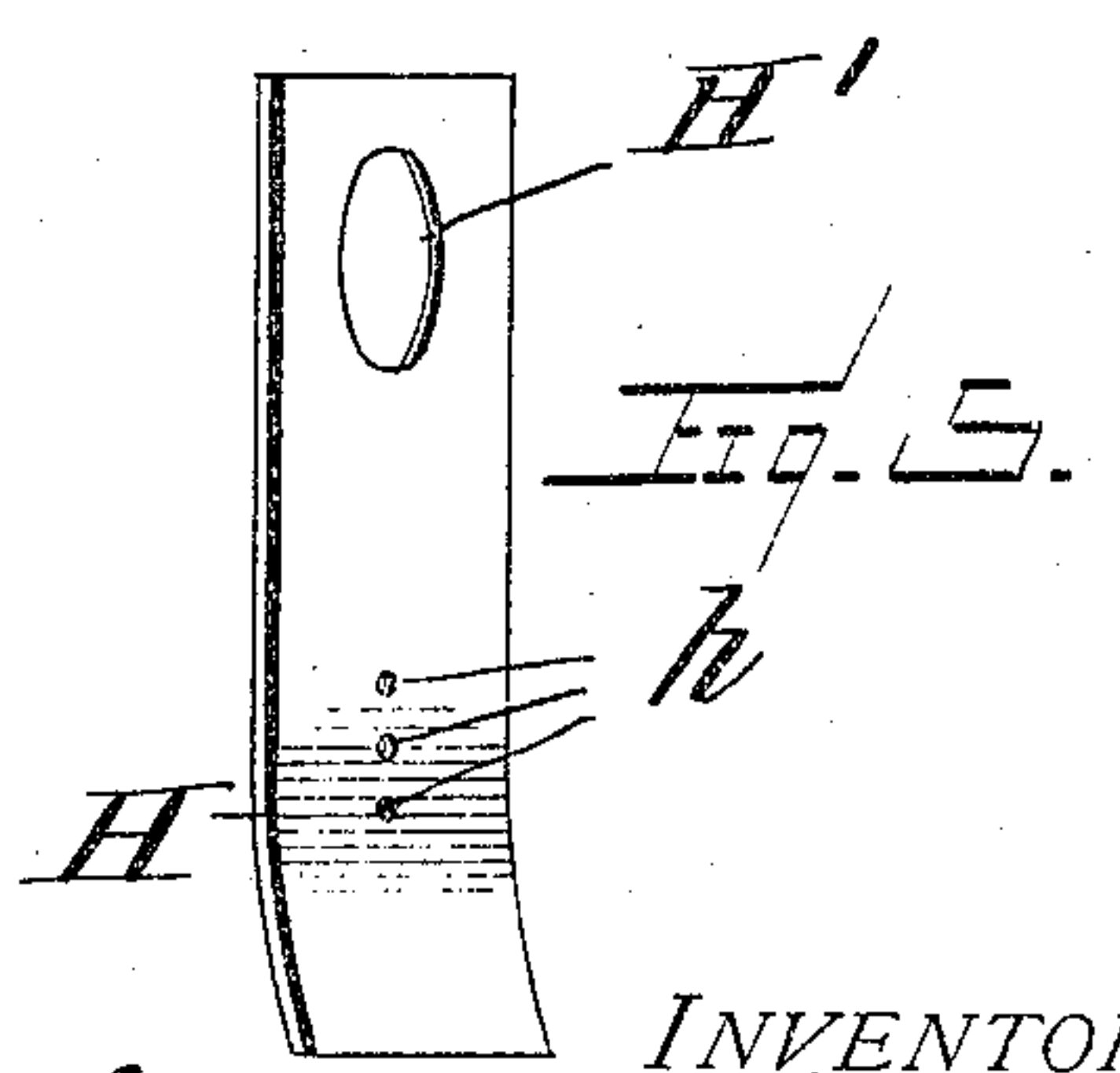
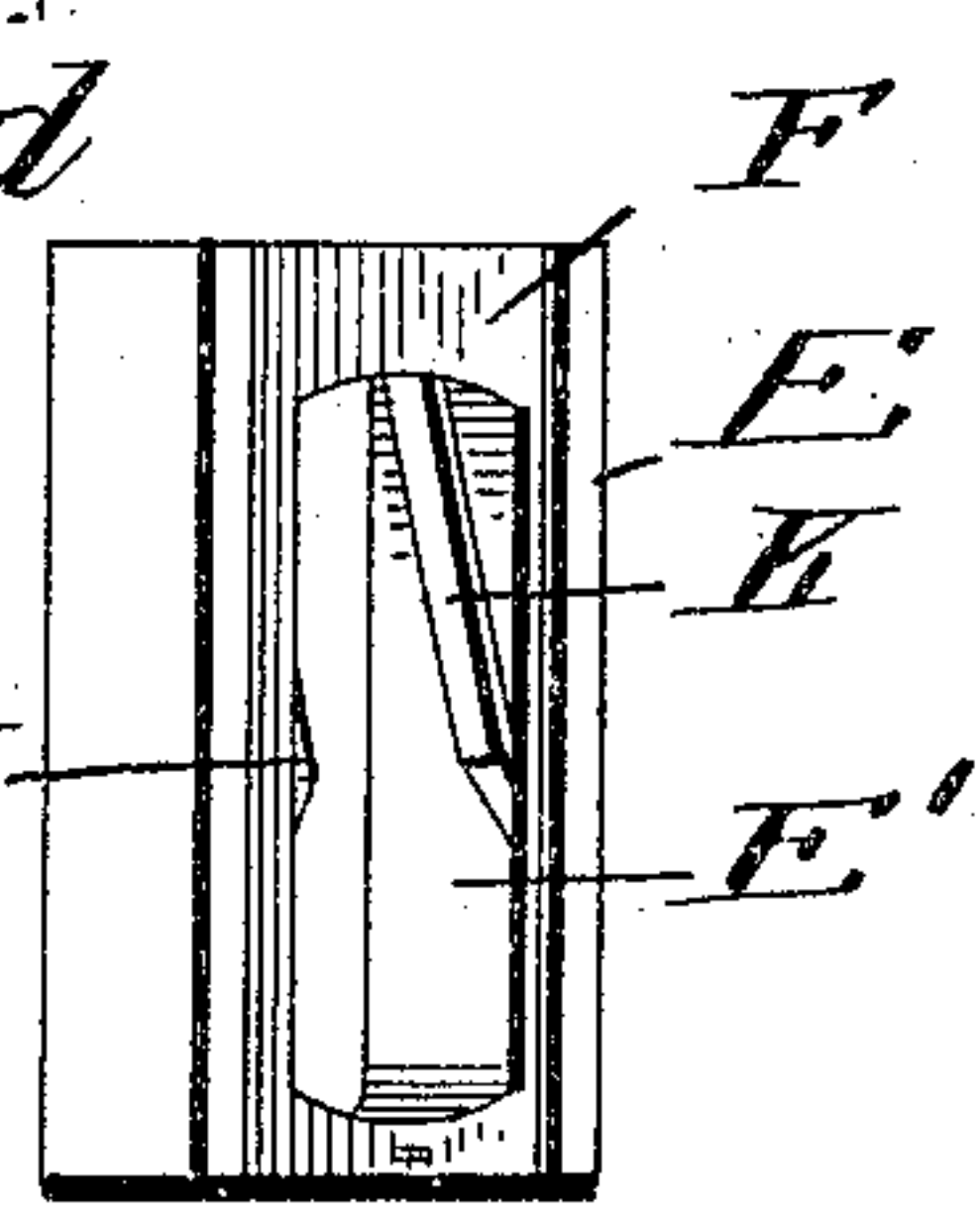
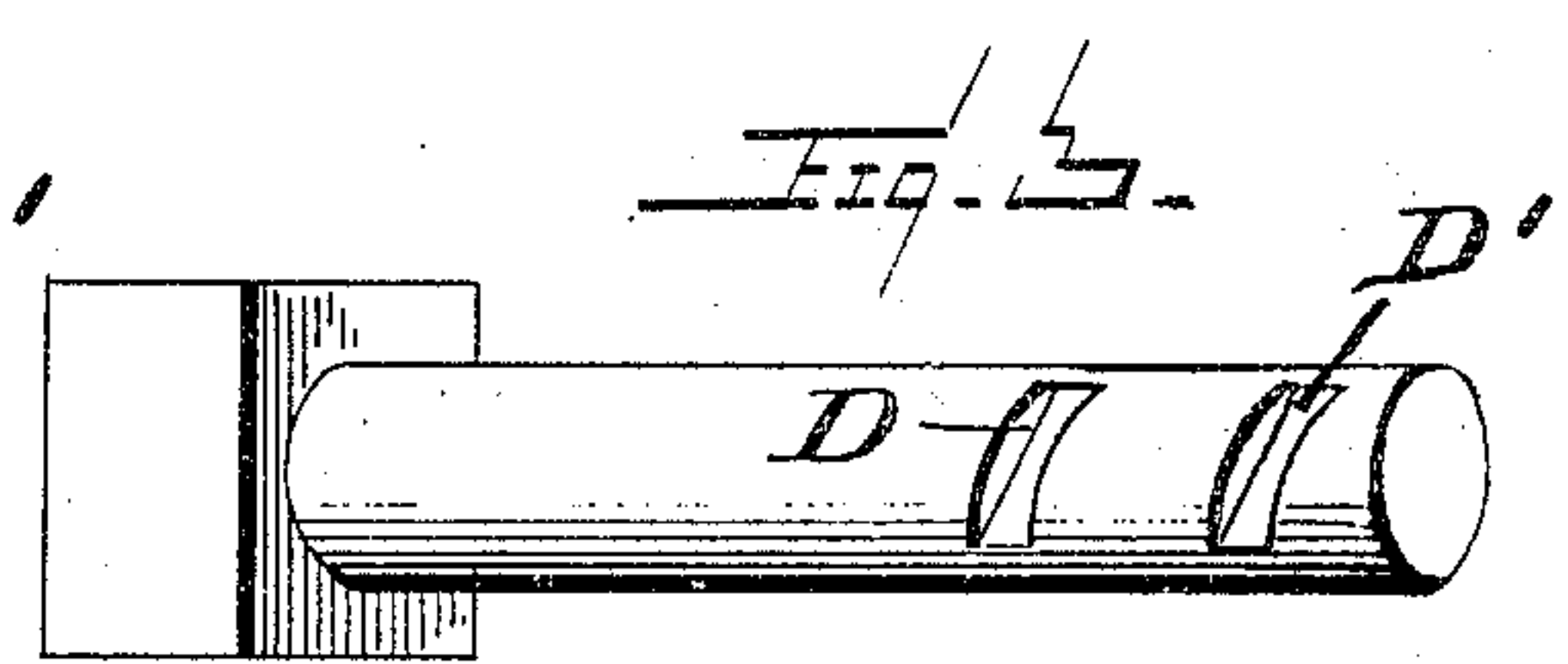
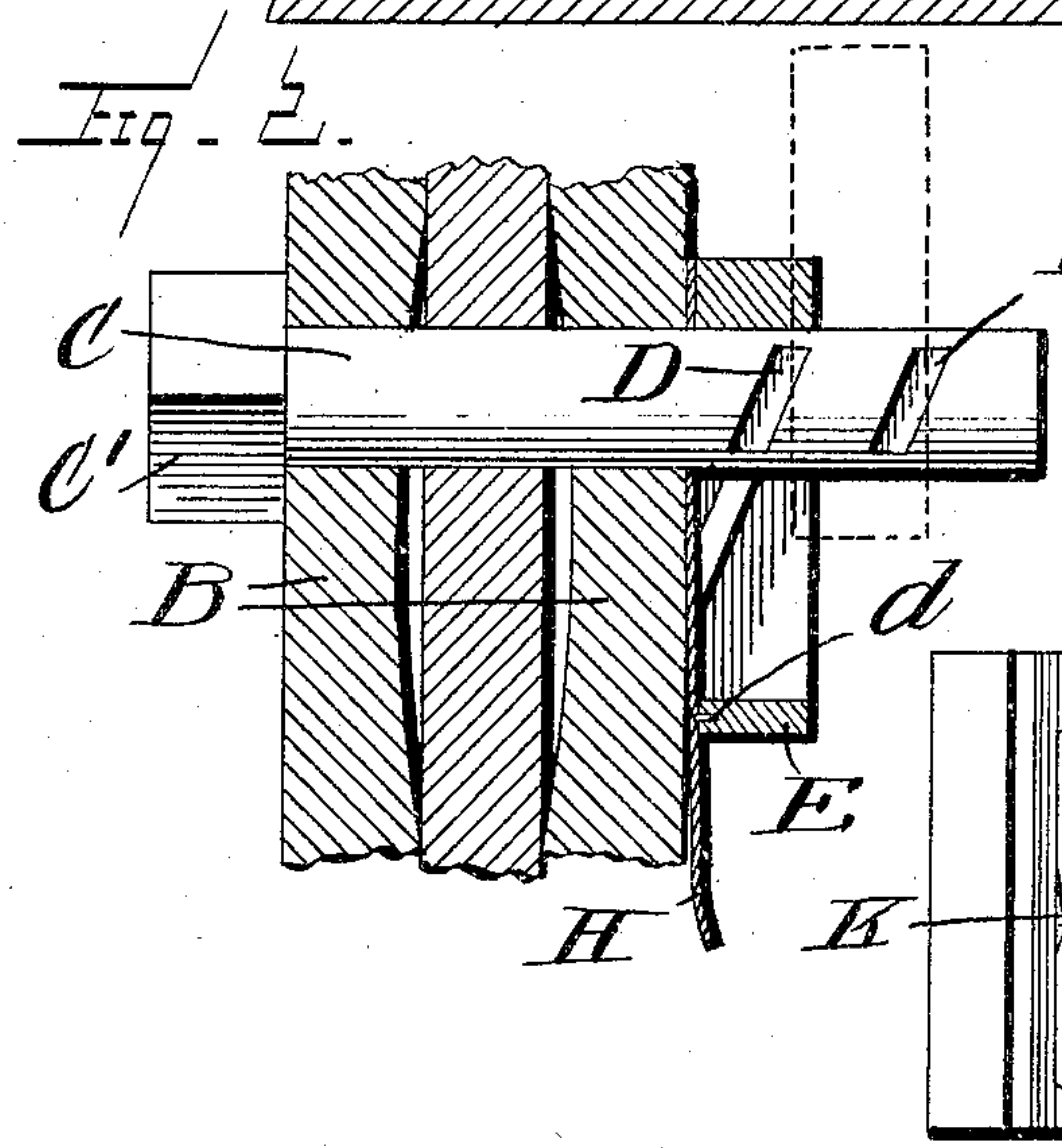
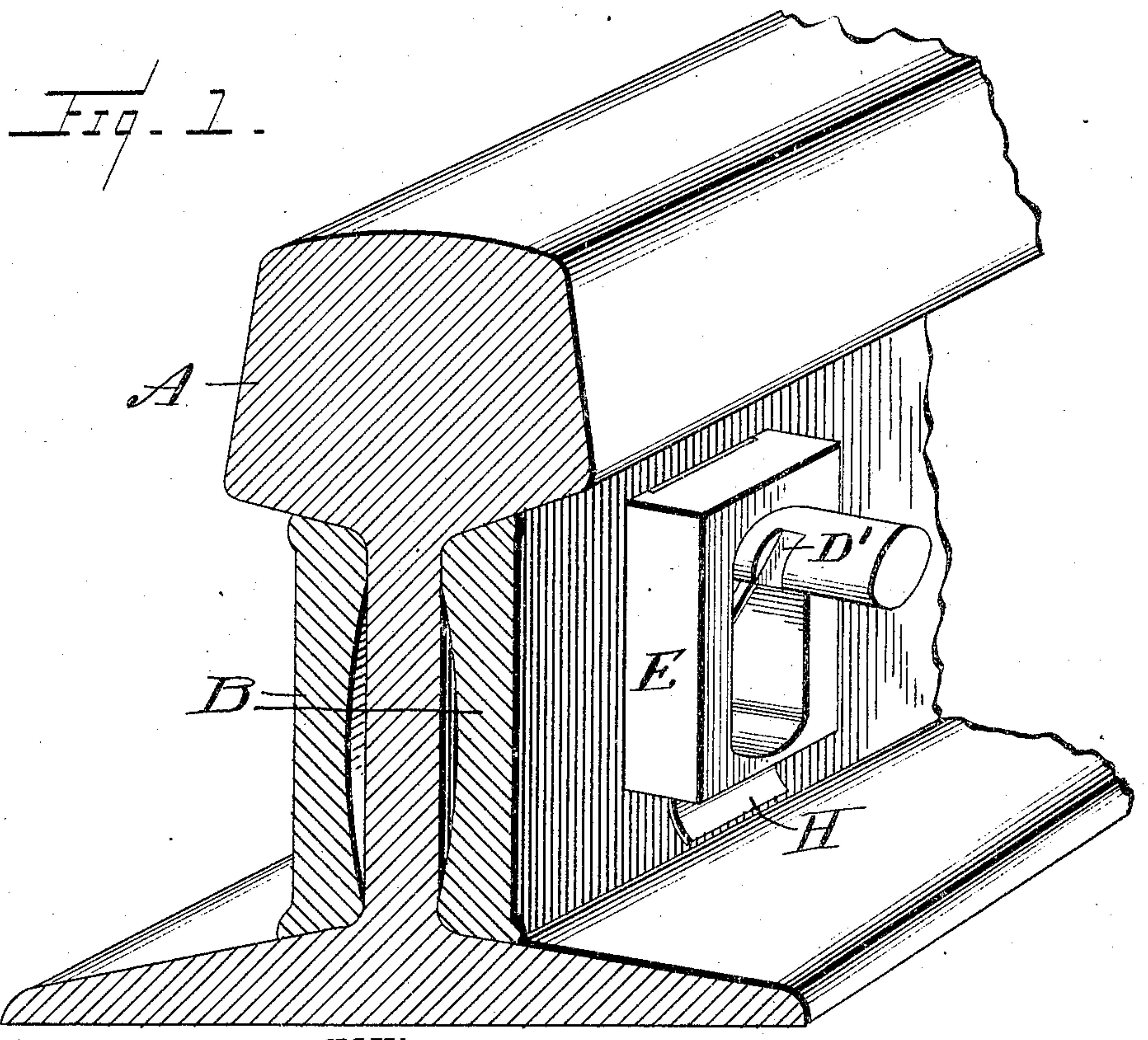
No. 789,209.

PATENTED MAY 9, 1905.

C. G. DANIELSON & G. R. ZEIGLER.

THREADLESS NUT LOCK.

APPLICATION FILED SEPT. 17, 1904.



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UNITED STATES PATENT OFFICE.

CARL G. DANIELSON, OF LOOKOUT, AND GEORGE R. ZEIGLER, OF
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THREADLESS-NUT LOCK.

SPECIFICATION forming part of Letters Patent No. 789,209, dated May 9, 1905.

Application filed September 17, 1904. Serial No. 224,886.

To all whom it may concern:

Be it known that we, CARL G. DANIELSON, residing at Lookout, and GEORGE R. ZEIGLER, residing at Freedom, in the county of Woodward and Territory of Oklahoma, citizens of the United States, have invented certain new and useful Improvements in Threadless-Nut Locks; and we 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 threadless nut and bolt locks; and the object of the invention is to produce a simple and efficient means of this character whereby a nut may be held upon a bolt without the use of threads.

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

Our 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 our nut-lock as applied to a fish-plate upon a rail. Fig. 2 is a sectional view through the web of a rail and fish-plates, showing the manner of locking the same. Fig. 3 is a detail view of the bolt. Fig. 4 is a detail perspective view of the locking-nut, and Fig. 5 is a detail view of the plate which is engaged by the locking-nut.

Reference now being had to the details of the drawings by letter, A designates a railway-rail, and B the fish-plates, and C designates a bolt having a head C', and diagonally-disposed slots D and D' are formed in said bolt at positions diametrically opposite in pairs.

E designates a locking-bolt having an elongated slot E' therein, and one face of said bolt is recessed, as at F, for the reception of a flexible plate H, which has an aperture H' at

one end and is designed to fit over the shank portion of the bolt in the manner illustrated in Fig. 2 of the drawings, while the other end of the plate is slightly curved and has series of three perforations *h* (shown clearly in Fig. 5 of the drawings) for the reception of a pin *d*, which projects from the inner edge of the nut E. Upon reference to Fig. 2 of the drawings it will be seen that the curved end of the plate H is adapted to yield slightly, the flexibility of said curved end being adapted to hold one of the perforations in engagement with said pin.

On the inner wall of the elongated slot E' of the nut are two diagonally-disposed ribs K K, which are adapted to wedge in either of the sets of diagonal slots D and D', accordingly as the rail and fish-plates are narrower or thicker. There may be a series of diagonal slots at intervals in order to adapt the lock for use in connection with various thicknesses of plates.

In adjusting the lock the bolts are passed through the shank portion of the rail and the fish-plates and the flexible plate H is fitted over the bolt in the manner shown in Fig. 2, after which the slotted portion of the nut E is passed over the shank of the bolt and crowded against the plate H, and when the diagonally-disposed ribs K come opposite the diagonal slots in the shank portion of the bolt a longitudinal movement is imparted to the nut, which will cause the ribs to wedge into said slots and securely bind and hold the nut against the fish-plates. When the ribs on the nut have been forced in as far as possible, one of the perforations in the plate H is caused to engage the pin to hold the nut from longitudinal movement.

When it is desired to remove the bolt, the curved end of the plate H is pushed toward the fish-plate to release the pin from the perforation, after which the nut may be moved longitudinally and removed from the bolt.

From the foregoing it will be observed that by the provision of the apparatus shown and described, a threadless-nut lock is produced which may be easily and quickly applied to a bolt and removed therefrom, thus dispensing with complicated features and affording means

for holding the nut without the rotation of the same as would be necessary upon threaded bolts.

While we have shown a particular detailed construction of nut-lock embodying the features of our invention, it will be understood that we may vary the details of the same, if desired, without in any way departing from the spirit of the invention.

10 Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

15 A threadless bolt having diagonally-disposed slots at positions diametrically opposite, in combination with a nut having an elongated slot, diagonally-disposed ribs project-

ing from the opposite inner faces of said slots and designed to engage said slots, a plate seated in a recess in one face of said nut and apertured to receive said bolt, said plate having a curved flexible end with perforations therein, and a pin projecting from the recessed face of the nut and designed to engage said perforations, as set forth.

In testimony whereof we hereunto affix our signatures in presence of two witnesses.

CARL G. DANIELSON.
GEORGE R. ZEIGLER.

Witnesses:

J. C. BROMHAM,
ISAAC MCHUGH.