

(No Model.)

E. F. BESSE.
NUT LOCK.

No. 438,748.

Patented Oct. 21, 1890.

Fig 1.

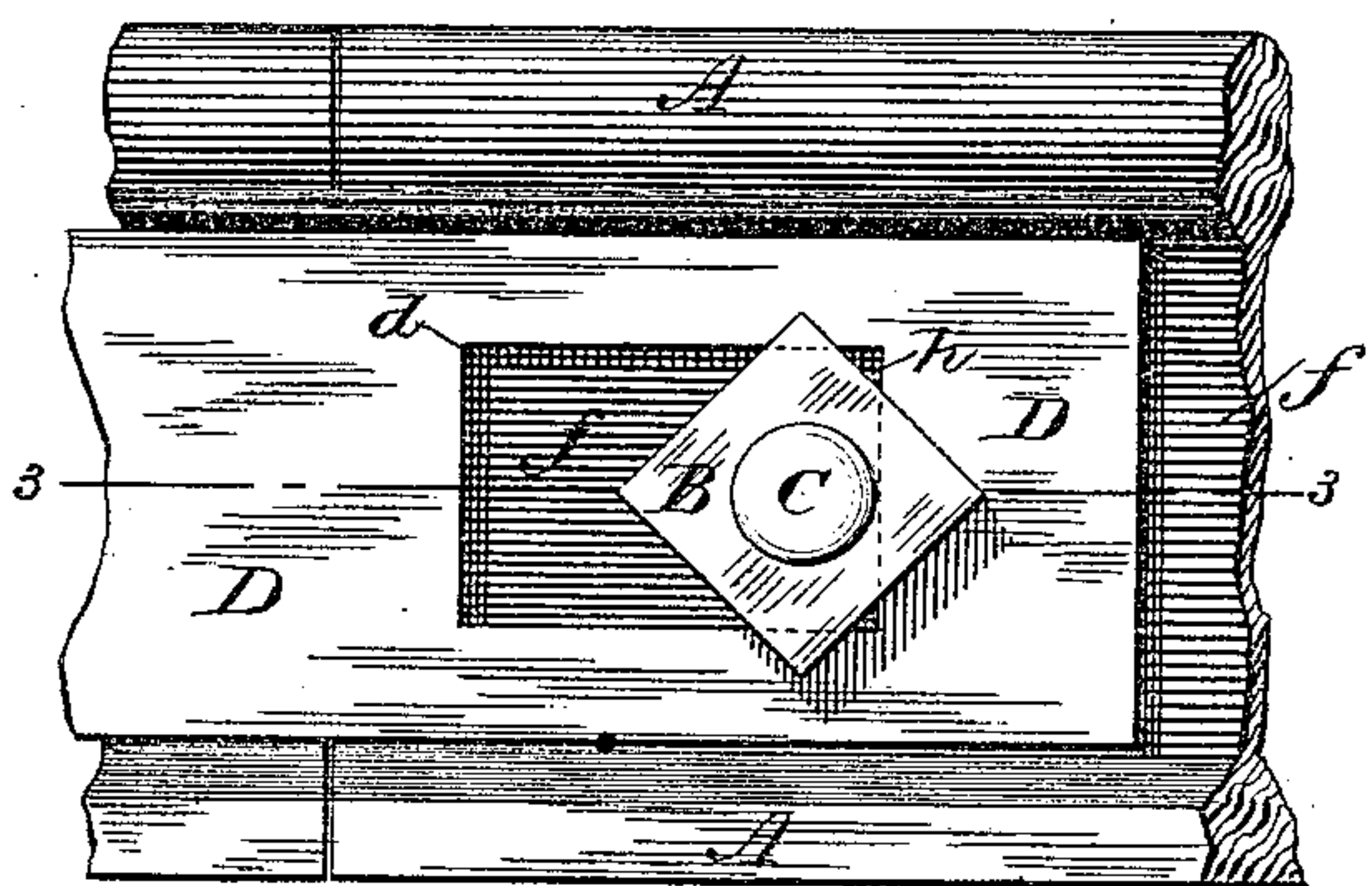


Fig 2.

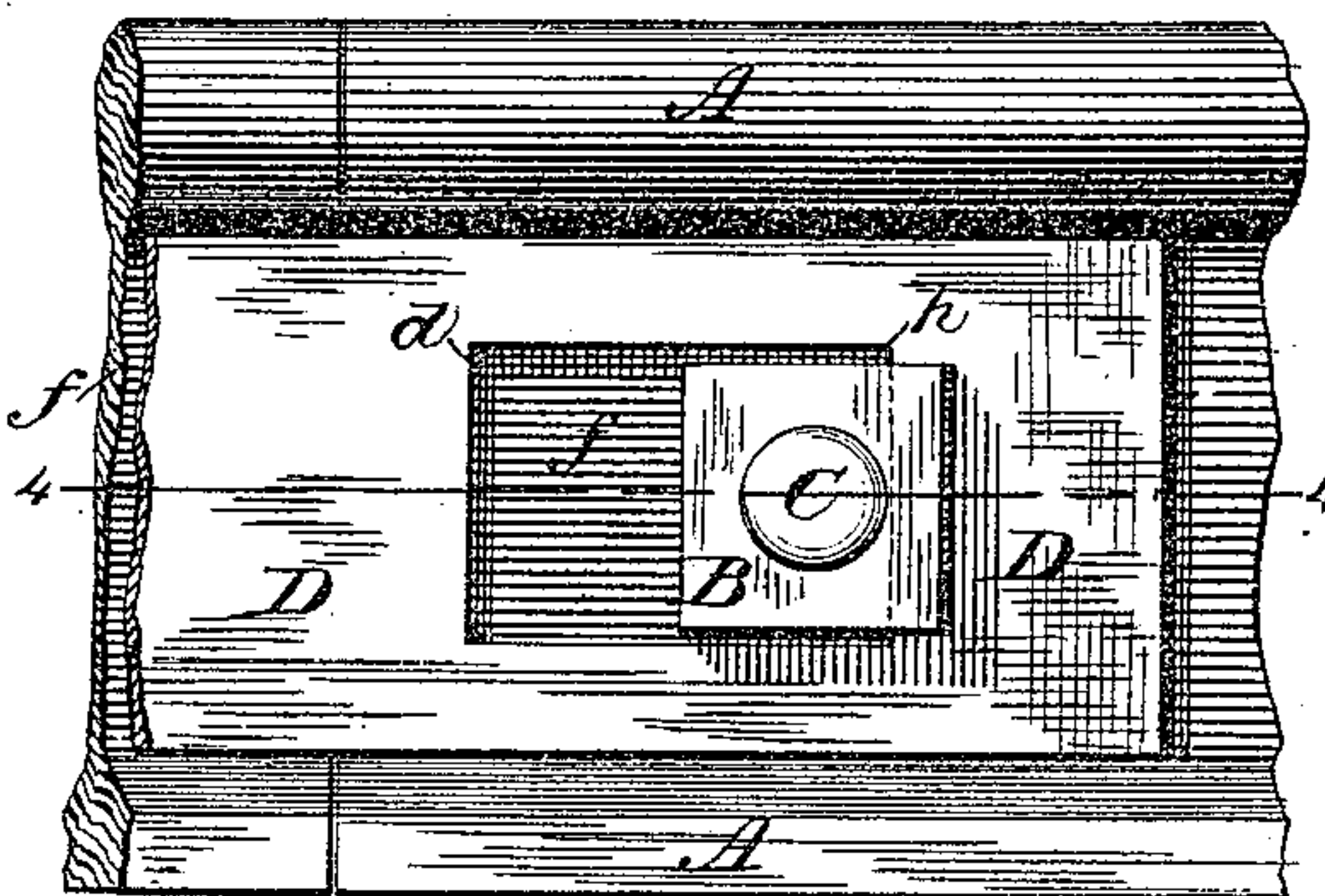


Fig 3.

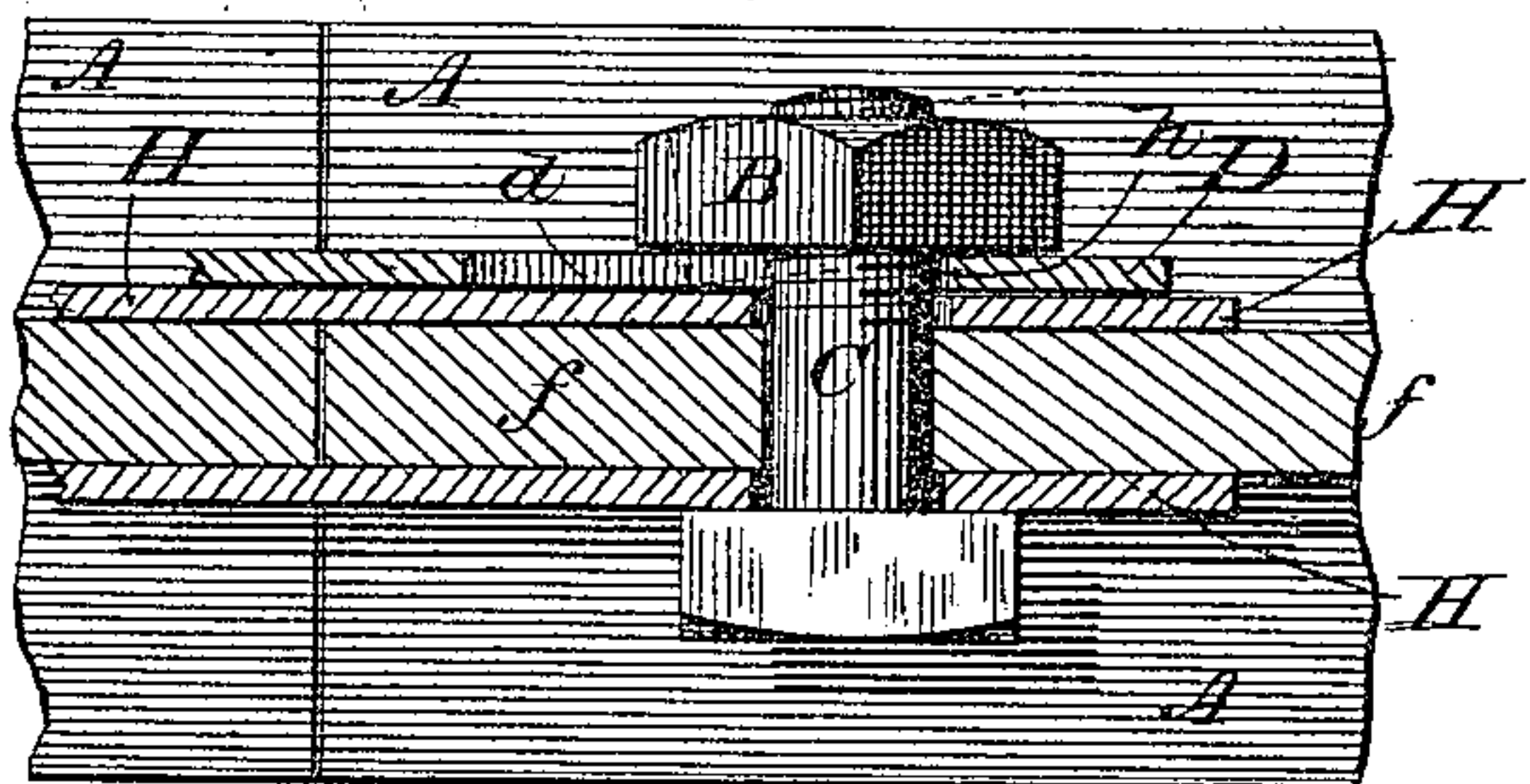


Fig 4.

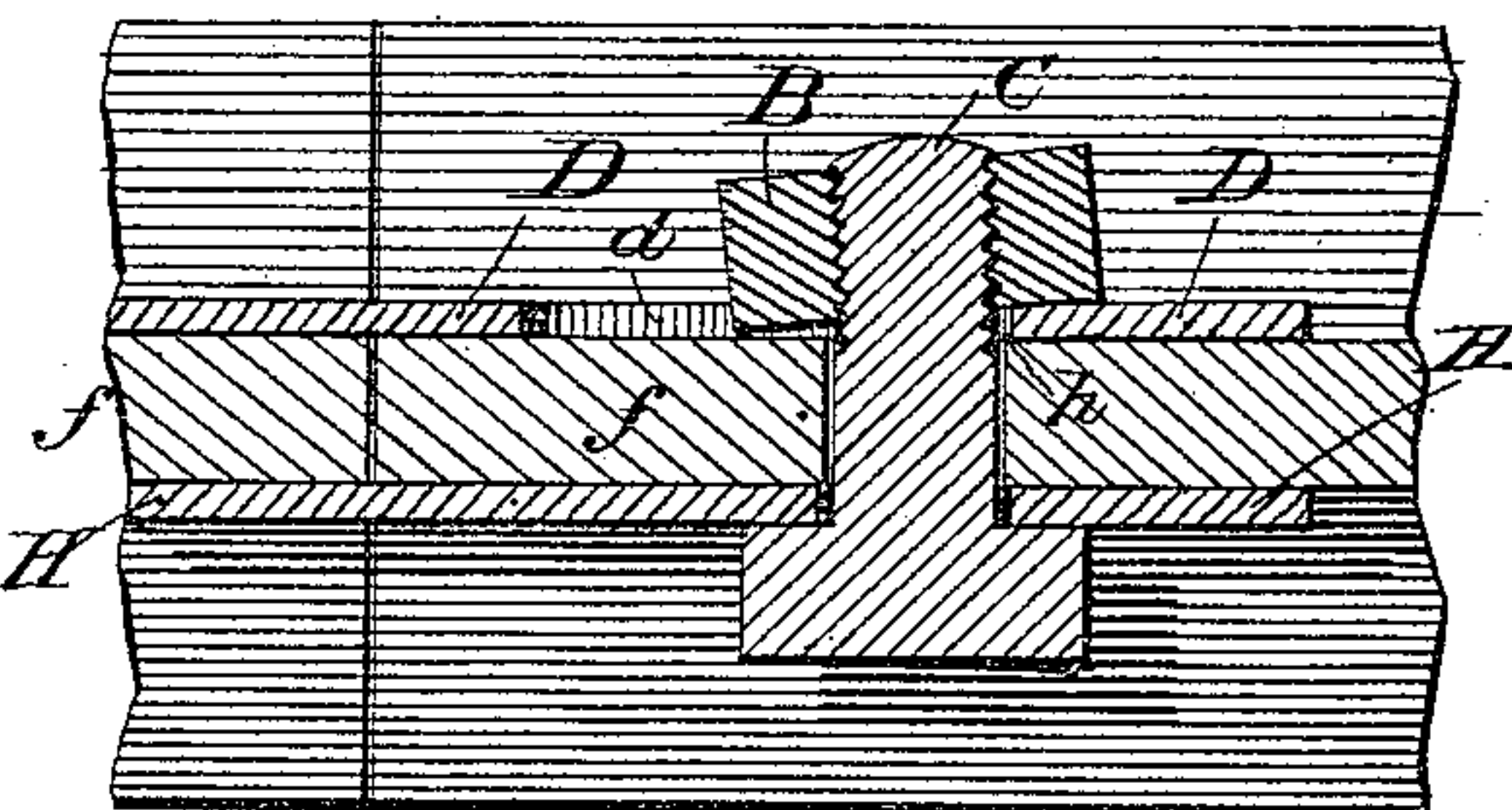


Fig 5.

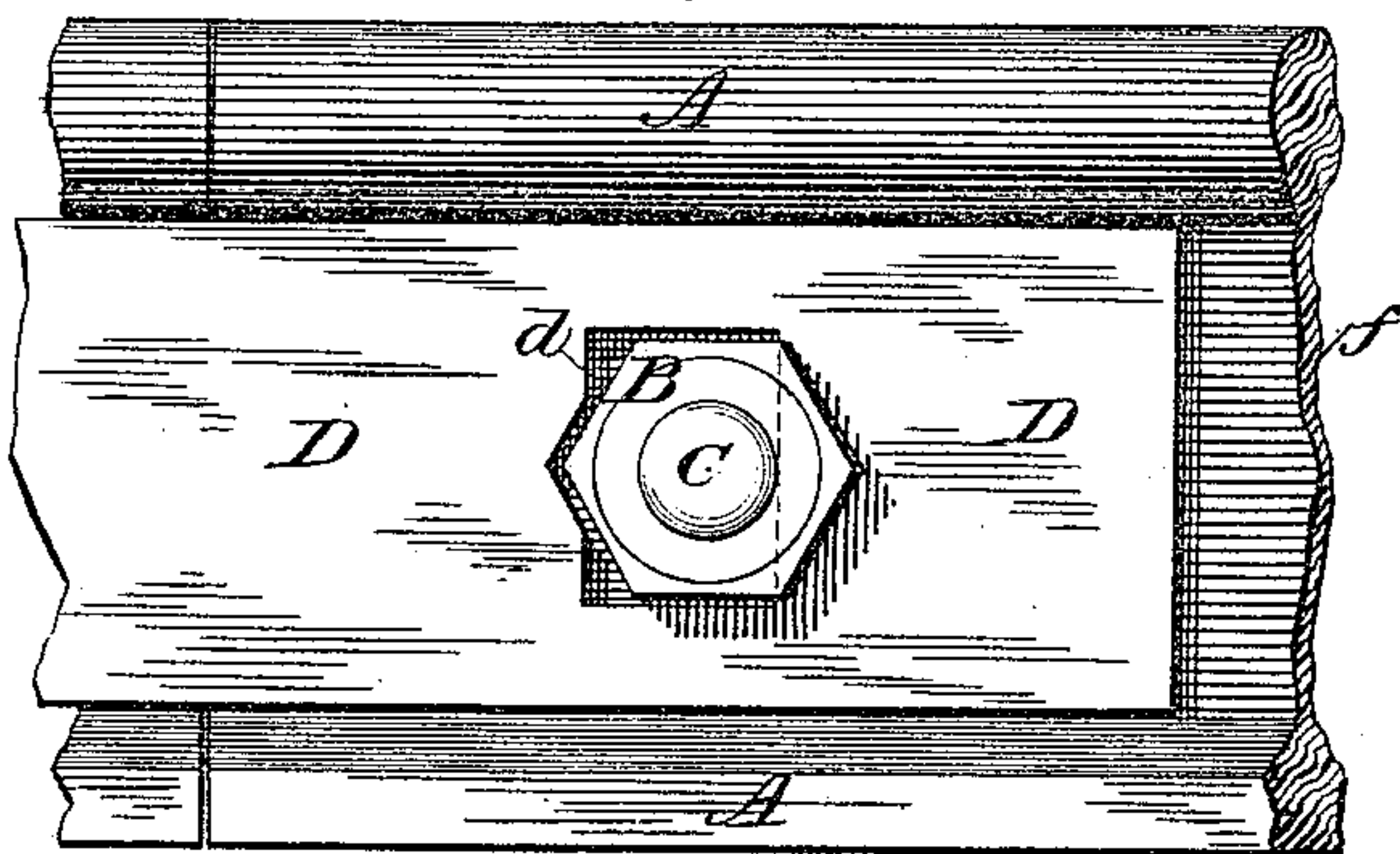
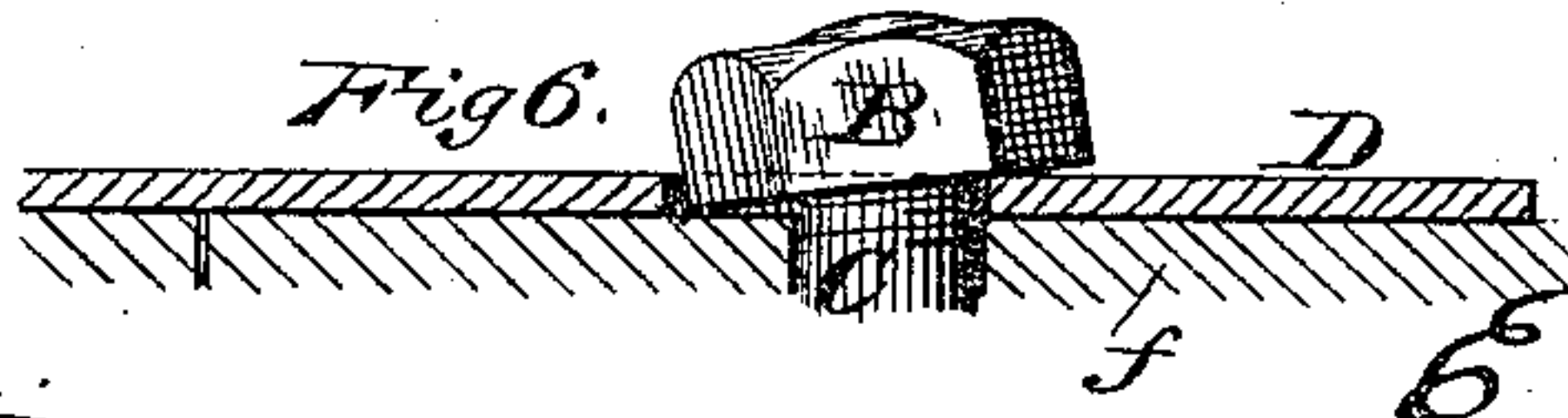


Fig 6.



WITNESSES

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EDGAR F. BESSE, OF HANSON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO
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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 438,748, dated October 21, 1890.

Application filed February 14, 1889. Serial No. 299,891. (No model.)

To all whom it may concern:

Be it known that I, EDGAR F. BESSE, of Hanson, in the county of Plymouth, State of Massachusetts, have invented a certain new and useful Improvement in Nut-Locks, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of a rail-joint provided with this improved nut-lock, the nut being shown as screwed against the locking-plate preparatory to being screwed home, said locking-plate serving also as a fish-plate. Fig. 2 is a side elevation of a rail-joint provided with this improved nut-lock, the nut being shown in its normal locked position on the locking-plate. Fig. 3 represents a horizontal section on line 3 3 of Fig. 1, except that an ordinary fish-plate is interposed between the locking-plate and the rail. Fig. 4 is a horizontal section on line 4 4 of Fig. 2, showing the nut as canted into the slot of the locking-plate, whereby it is held in locked position. Fig. 5 is a side elevation of a rail-joint provided with this improved nut-lock, adapted for a hexagonal nut. Fig. 6 represents a horizontal section of Fig. 5.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to means for locking nuts on screw-bolts when employed in securing parts subject to continual jarring; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the railway-rails; C, the bolt; B, the nut thereon, and D the locking-plate.

The nut-lock D consists of a plate con-

structed of hardened metal, preferably about one-quarter inch in thickness and provided with a series of rectangular slots or openings d . The plates D are disposed longitudinally on the web f of the rails A A, and may take the place of the ordinary fish-plates, if desired. The bolts C, being disposed in the bolt-holes of the rail-web, pass through the slots d in the plates D, said plates being arranged so that an edge h of each slot engages the bolt, as best seen in Fig. 2. One side of the nut B is shorter than the width of the slot d in the locking-plate D; but the length of the nut from one corner to the extreme opposite corner is sufficient to span said slot.

The operation is as follows: The parts being in the position indicated in dotted lines in Fig. 1, the edge h of the plate D at one end of the slot d abuts against the bolt C, and the nut B spans the said slot and rests at three of its corners on said plate, the other corner being over the slot. In this position the nut is supposed to be screwed against the plate D. A quarter-turn is then given the nut, whereby it is screwed home, and two opposite sides thereof are swung parallel with the sides of the slot d . At the beginning of the quarter-turn the lower corner of the nut slides off the plate D and leaves the nut unsupported, except for about one-fourth of its length at the right-hand side of the bolt. The pressure of the edge h of the plate D between the nut and said plate causes the opposite side of the nut to tilt into the slot of the plate, as shown in Figs. 2 and 4, and the upper and lower edges of the slot serve as locking-faces and prevent the turning of the nut. Moreover, the tilting of the nut on the thread of the bolt causes said thread to jam, and if the nut be turned back the thread will split or partially cross and serve to further lock the nut in position on the bolt.

As shown in Fig. 4, an ordinary fish-plate H is shown on one side of the web f , the plate D serving the purpose of a fish-plate on the opposite side of the web; but it will be understood that a fish-plate may be used on both sides of the rail and the plate D disposed thereon, if desired, as illustrated in Fig. 3.

When a hexagonal nut B is used, as shown

in Fig. 5, the slot d is constructed shorter than when the square nut is employed, and a V-shaped notch t is formed centrally in the edge v of the slot opposite the edge h , which is in
5 contact with the threads of the bolt, as above specified.

A point or corner m of the nut is thrown into the notch t when said nut comes into contact with the plate and is thereby prevented
10 from turning on the bolt.

Having thus explained my invention, what I claim is—

1. The combination of a bolt, a locking-plate provided with a slot through which said
15 bolt passes, one side of said slot resting against the bolt and a nut narrower than the slot in

said plate, said nut in locked position bearing against said plate at one side of said bolt and being depressed at the other side into said slot, substantially as described. 20

2. The combination of a bolt, a nut, and a locking-plate provided with a rectangular slot having a V-shaped notch, said nut at one side of the bolt resting upon said plate and at the other side being depressed into the slot there- 25 of, one corner of said nut engaging said V-shaped notch, substantially as described.

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Witnesses:

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