

(No Model.)

M. C. HARNEY.

CAR AXLE BOX.

No. 315,278.

Patented Apr. 7, 1885.

Fig. 1.

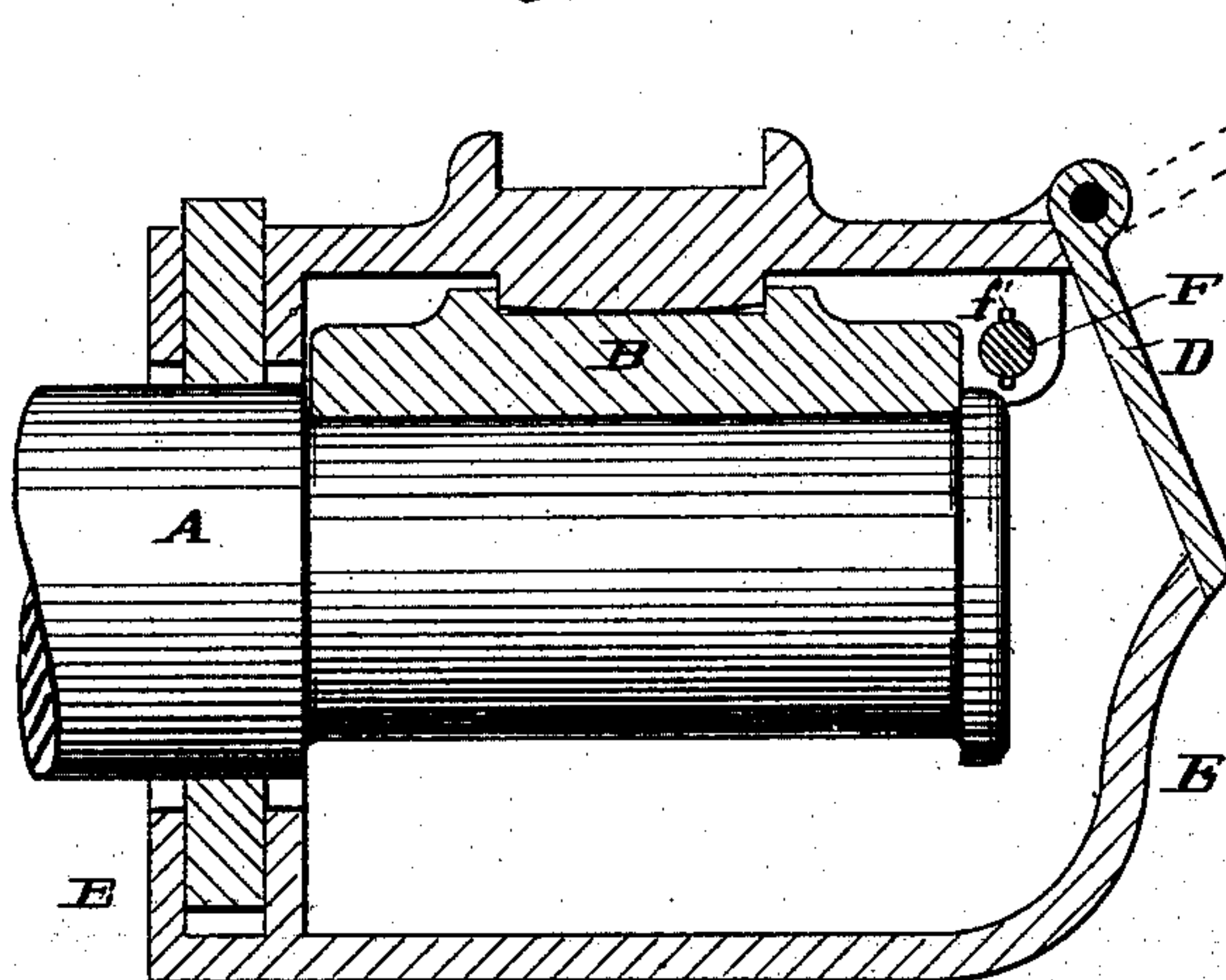


Fig. 2.

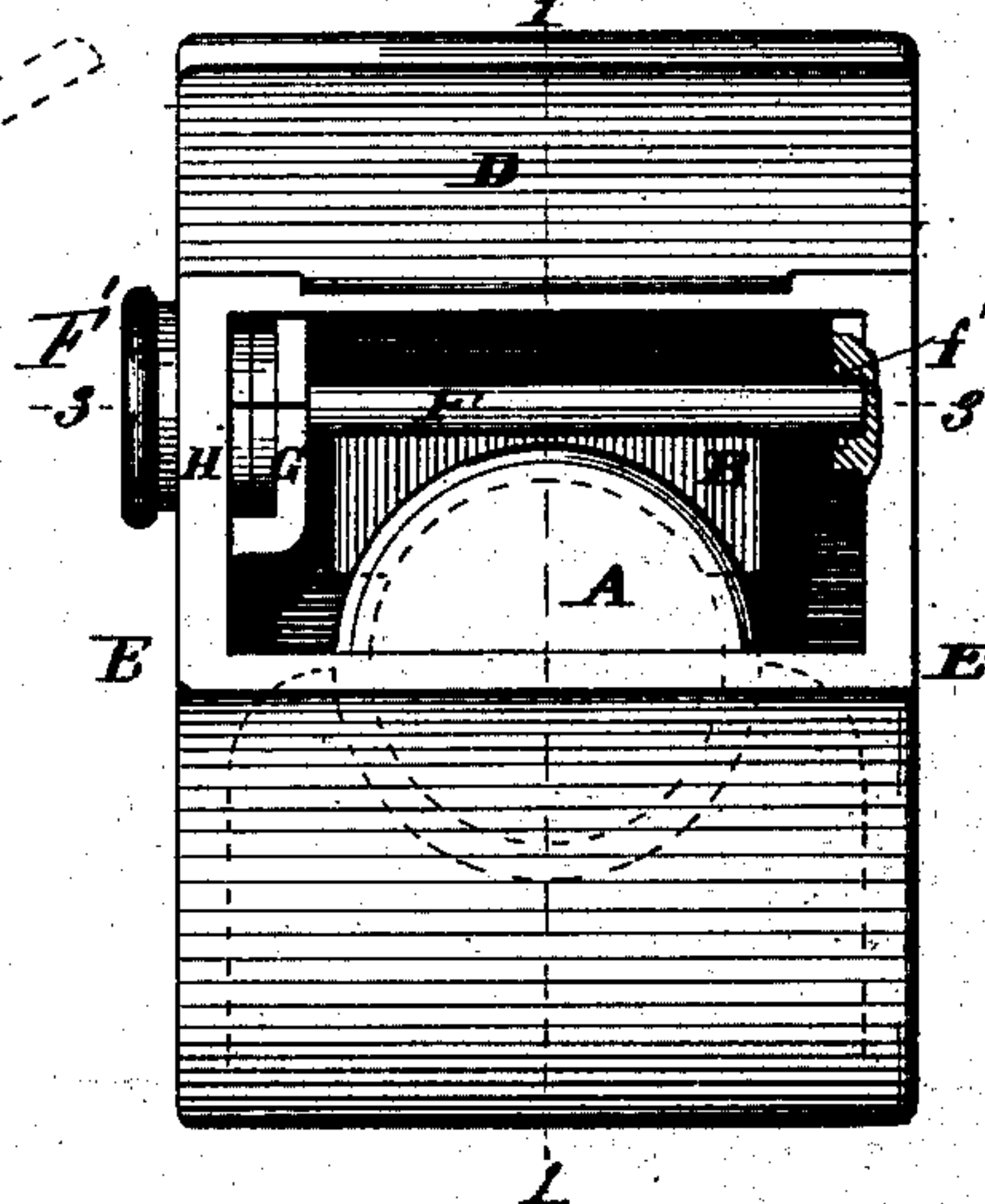


Fig. 3.

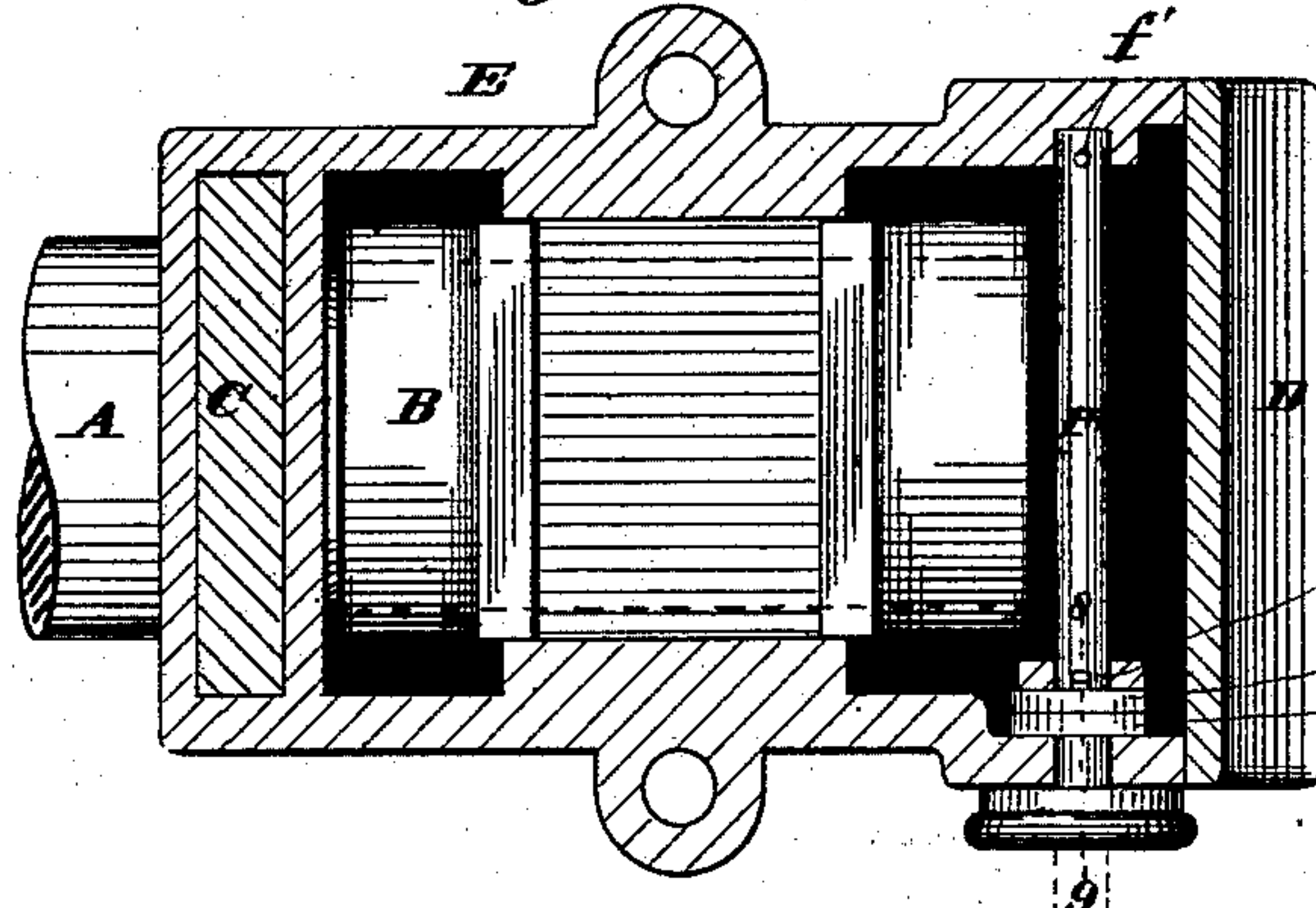


Fig. 6.

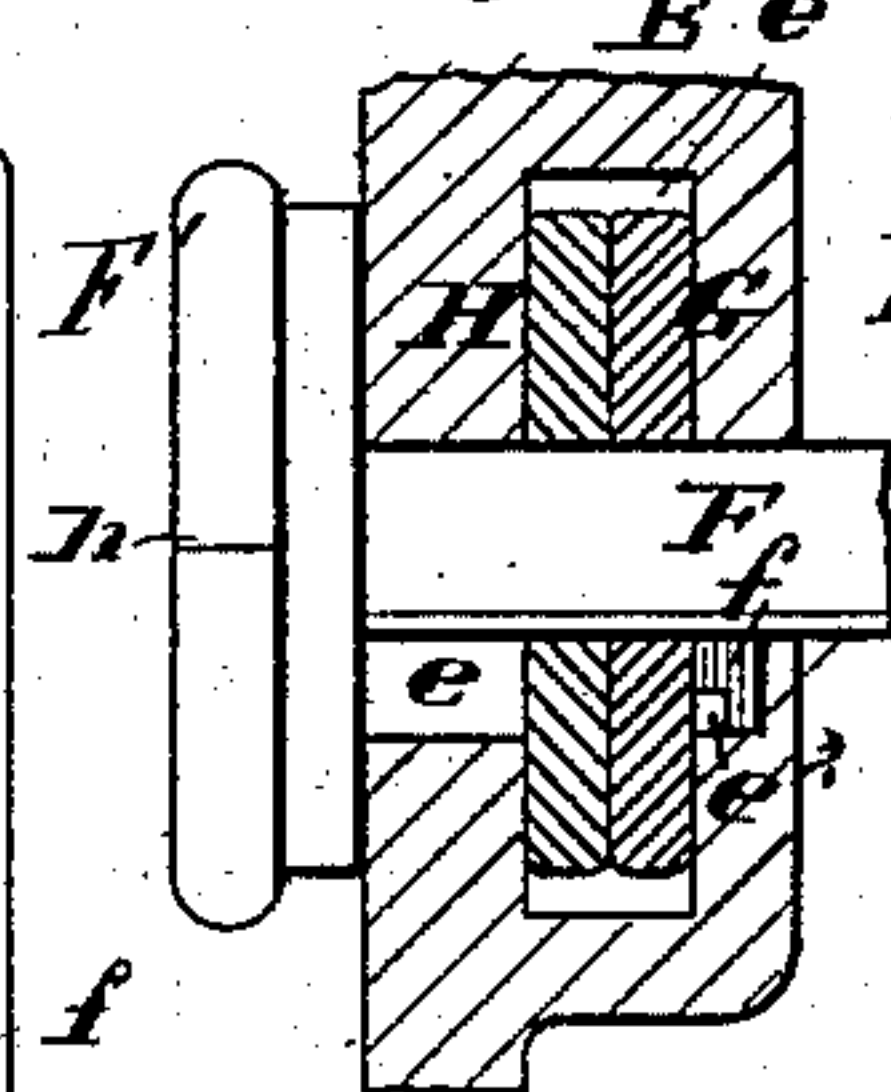


Fig. 7.

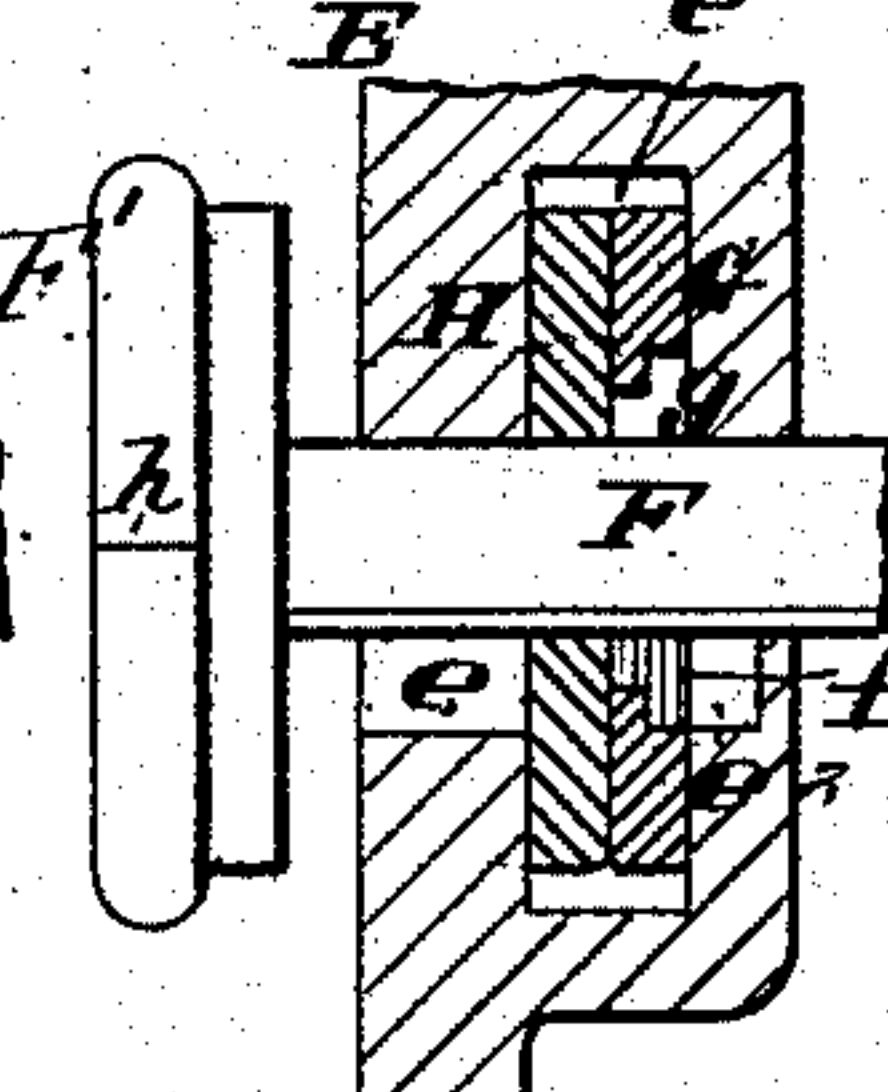


Fig. 8.

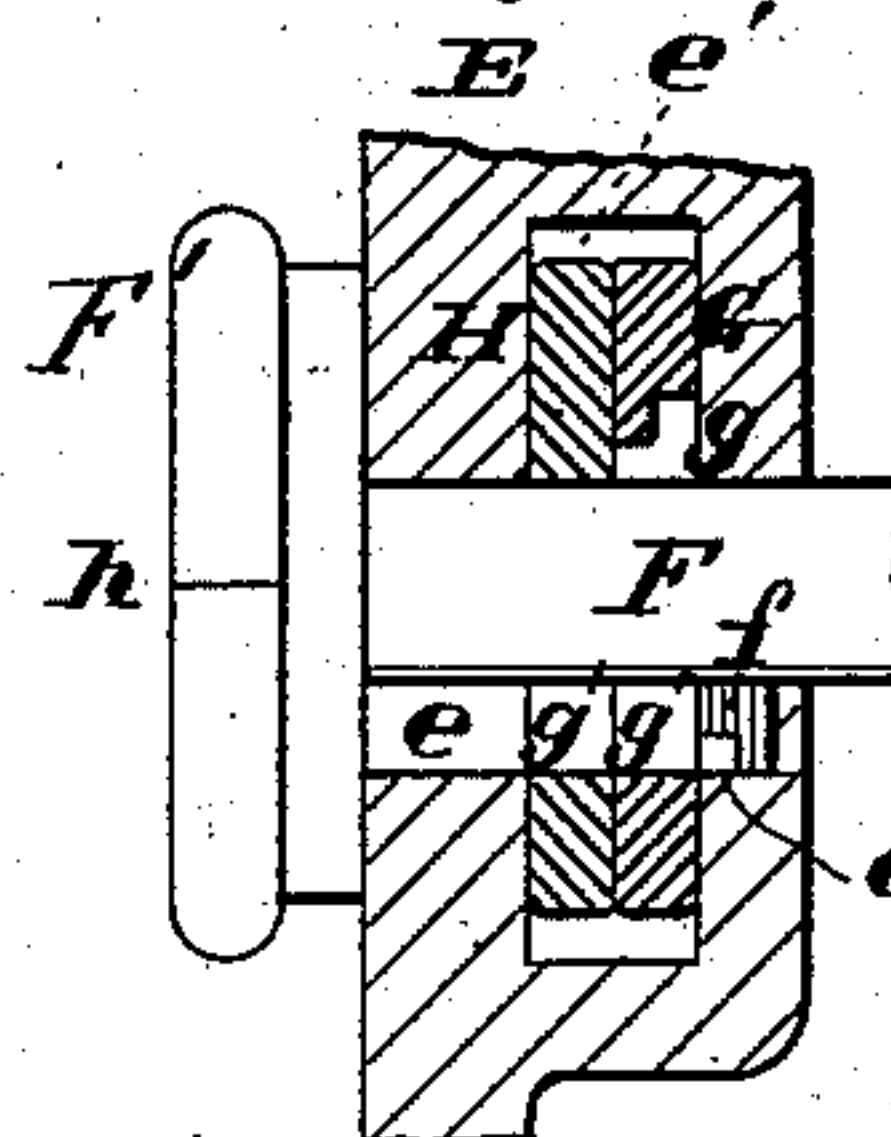


Fig. 9.

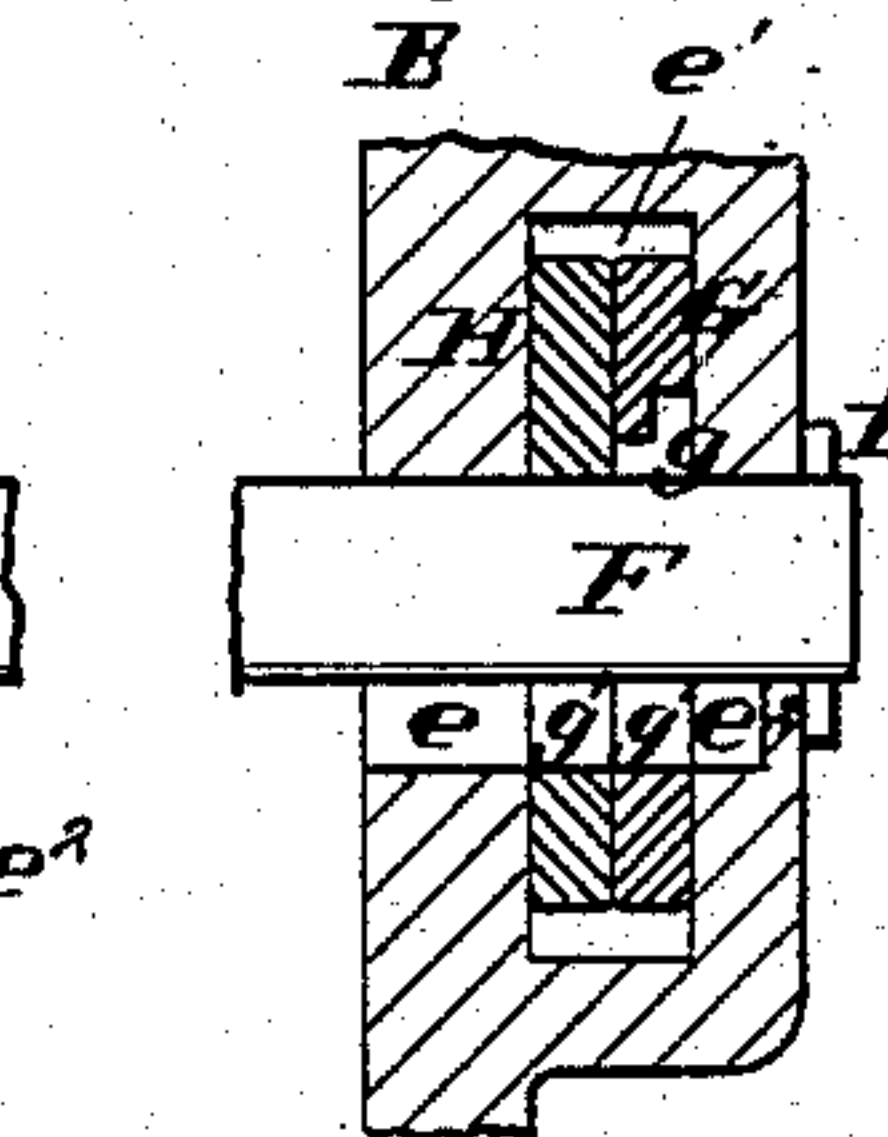


Fig. 4.

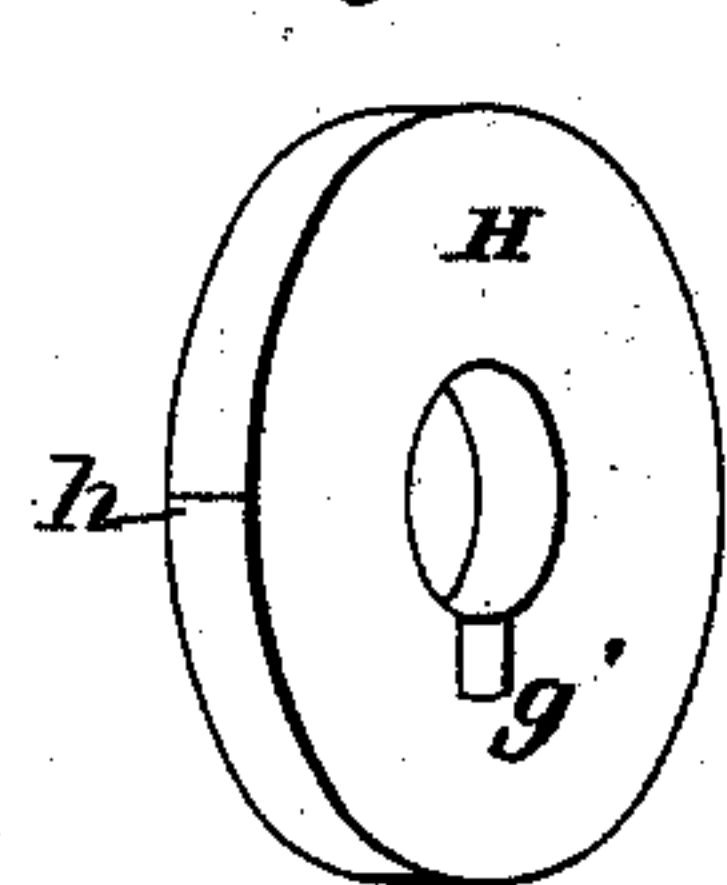
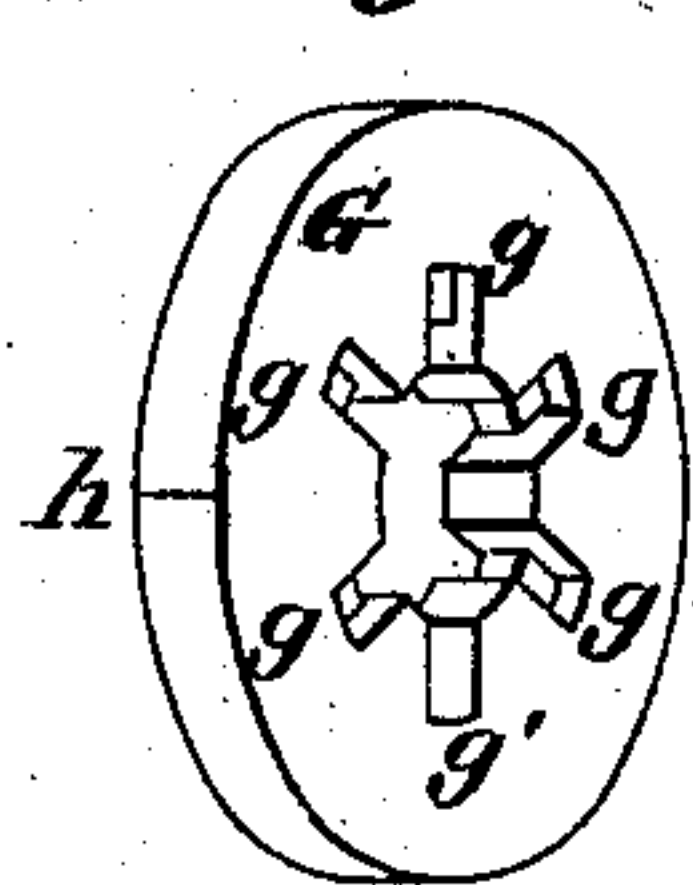


Fig. 5.



Inventor:

M. C. Harney  
By Knight Bros  
Attys

Attest:

H. C. Knight

*[Signature]*



# UNITED STATES PATENT OFFICE.

MICHAEL CLARMONT HARNEY, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO WILLIAM N. BRENNAN, OF SAME PLACE.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 315,278, dated April 7, 1885.

Application filed August 30, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL C. HARNEY, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Axle Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The improvement relates to a device to prevent the pilfering of the brasses, which is done by jacking up the truck and then pulling out the loose brass.

Figure 1 is a longitudinal vertical section at 1 1, Fig. 2. Fig. 2 is an end view with the cover of the axle-box elevated. Fig. 3 is a horizontal section at 3 3, Fig. 2. Figs. 4 and 5 are perspective views of the two tumblers enlarged. Figs. 6, 7, 8, and 9 are enlarged detail sections, showing different positions of the tumblers and the lock-pin.

A is the axle, B the bearing-brass, and C the dust-shield. No novelty is claimed for these, nor for the cap or cover D, which closes the aperture through which the lubricating material is introduced. This aperture is also used for the removal of worn brasses and the introduction of new ones. When the brasses are to be changed, the truck is jacked up at that part so as to lift the axle-box (or grease-box) E, (relatively to the axle,) and thus loosen the brass B, which may be then drawn out. Many brasses are stolen in this way after night, and to prevent this I extend a lock-pin, F, across the axle-box before the end of the brass, so that the brass cannot be taken out while the pin is in this position.

To enable the removal of the brass B, the pin is drawn endwise into the position shown in dotted lines in Fig. 3. To allow this, however, the pin and both the tumblers G and H must be placed in a certain position, which can only be done after night by the use of a light. The tumblers are rings, like a thick washer, which turn freely on the pin, and through which the pin may be freely slipped when they are all in the proper position therefor. At other times a tooth, *f*, on the side of the pin comes in contact with the tumblers.

*f'* is a cross-pin at the point of the lock-pin, which prevents its withdrawal from the axle-

box. One of the tumblers, G, has a number of indentations, *g*, at one side around its central bore. The tooth *f* may enter either of these recesses, and in this case the tumbler and the pin turn together, and the pin cannot be retracted to allow the removal of the brass. Both tumblers have a notch, *g'*, through which the tooth can pass. There is also a notch, *e*, at one side of the pin-hole in the axle-box, so that when the pin is turned with its tooth *f* in line with the notch *e*, and the two tumblers are turned so that their notches *g* are in the same line, the pin can be drawn out sufficiently to allow the removal of the brass. The tumblers are in a recess, *e'*. The inner wall of this has a small recess, *e''*, in which the tooth *f* rests when the pin is in its inner position, and thus the pin is restrained from turning. The tooth is held in the recess by the tumbler G, except when either of the recesses *g* or notch *g'* are made to coincide with the recess *e''*, when the tooth can be drawn from the recess *e'* into the recess or notch *g* or *g'*, as the case may be. The recess *e''* is shown in line with the notch *e*; but this is not necessary, as it may be located in any other position at the side of the pin-hole. The tumblers have upon their periphery a mark or marks, *h*, to indicate to any person, by the use of a light, if after night, when they are in position to allow the withdrawal of the pin, and the head of the pin may also have a mark or marks, *h*, for the same purpose. These peripheral marks may be made all around the tumblers and pin-head *F'*, and distinguished by figures, letters, or other marks, as found in permutation-locks, and for a similar purpose. The head *F'* of the pin extends over and hides the notch *e* when the pin is in its inner position, and when in this position the point of the pin enters a recess in the opposite side of the grease-box E. (See Figs. 2 and 3.) When the pin is in this position, the tooth *f* is in the recess *e''*. (See Figs. 6 and 8.) As long as the tumbler G remains in the position shown in Fig. 6 the tooth cannot be removed from the recess *e''*; but if this tumbler is turned into the position shown in Fig. 7—that is, if one of the recesses *g* is brought in line with the tooth—the pin *F* may be drawn out a short distance and the tooth drawn into



the recess *g*. The pin cannot now be drawn out any farther, although it can be turned around. On the other hand, if the two tumblers are set in the position shown in Figs. 8 and 9, the tooth *f* can be drawn from the recess *e*<sup>2</sup> through the notches *g'* of the tumblers and *e* of the grease-box, and the pin drawn out into the position shown in dotted lines in Fig. 3, and in full lines in Fig. 9, allowing the removal of the brass B. It will thus be seen that after night a light will be needed in the removal of the pin, and thus any attempt to steal the brasses will be detected by a watchman.

I claim—

15 1. A movable pin or bar in front of the bearing-brass of a car-axle box, for the purpose set forth.

20 2. A movable pin or bar in front of the bearing-brass of a car-axle box working endwise of the pin in the wall of the grease-box and having a tooth thereon, and one or more tumblers upon the pin, substantially as and for the purpose set forth.

3. A movable pin or bar in front of the bearing-brass of a car-axle box working endwise of the pin in the wall of the grease-box and having a tooth thereon, and a tumbler turning on the pin and having recess or recesses to receive the tooth of the pin, and a notch allowing the tooth to be drawn through the tumbler, substantially as set forth. 25 30

4. The combination, in a car-axle box, of a movable pin or bar in front of the bearing-brass working endwise in the wall of the grease-box and having a tooth on the side, two or more tumblers loose upon the pin, having each a notch, allowing the passage of the tooth, the wall of the grease-box through which the pin works having a notch at one side of the pin-socket, allowing the passage of the pin-tooth when the pin is in a certain position. 35 40

MICHAEL CLARMONT HARNEY.

Witnesses:

SAML. KNIGHT,  
GEO. H. KNIGHT.