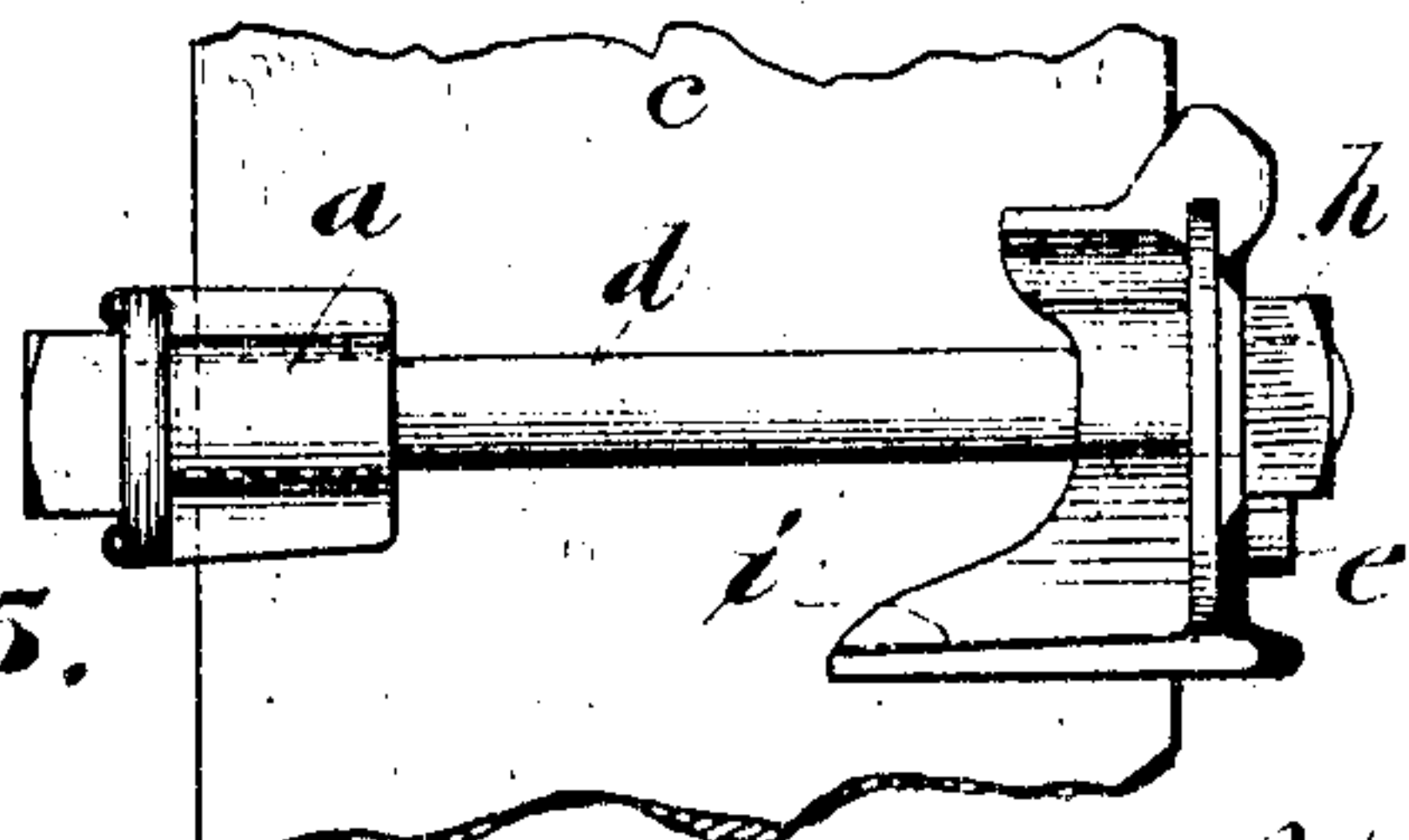
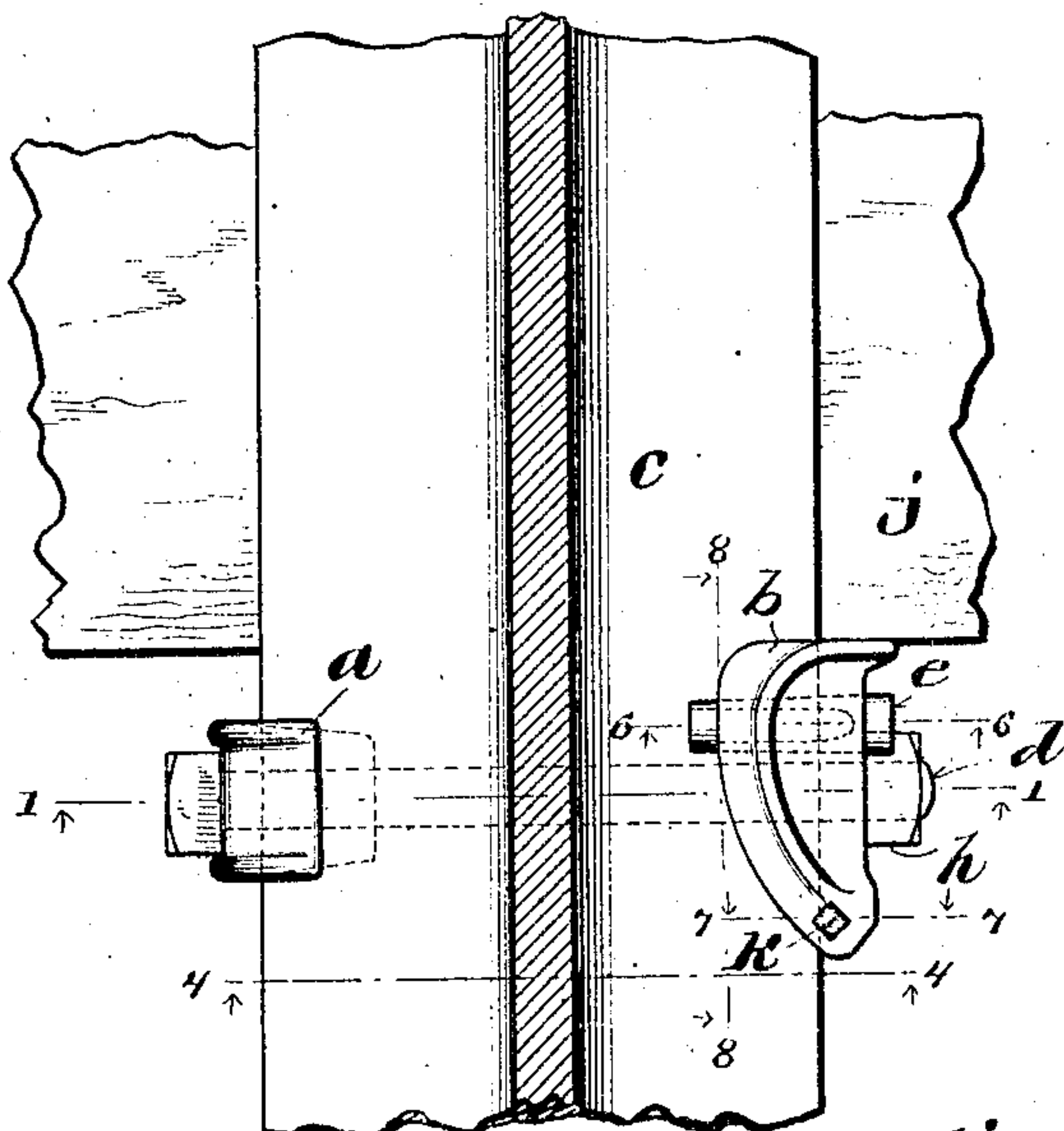
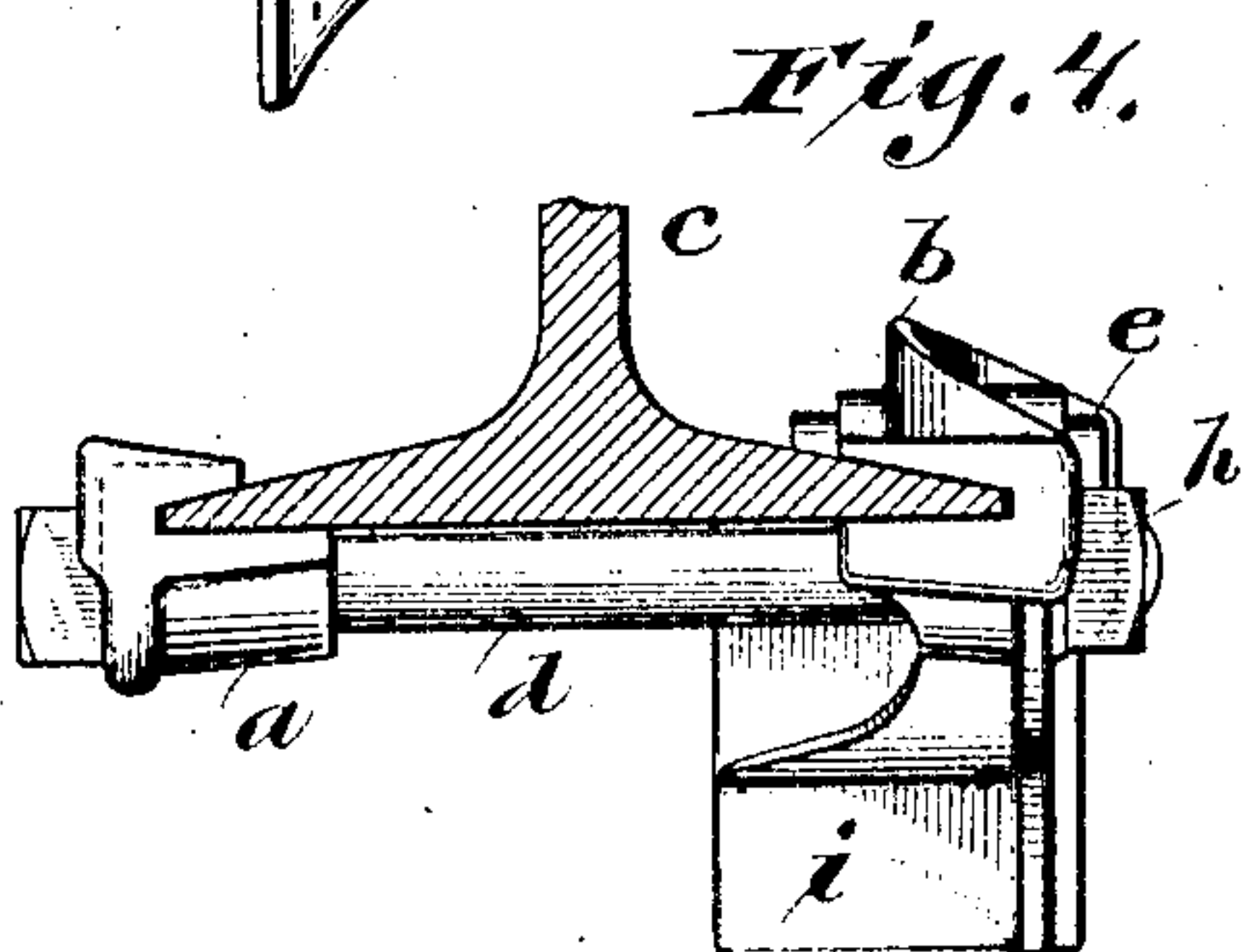
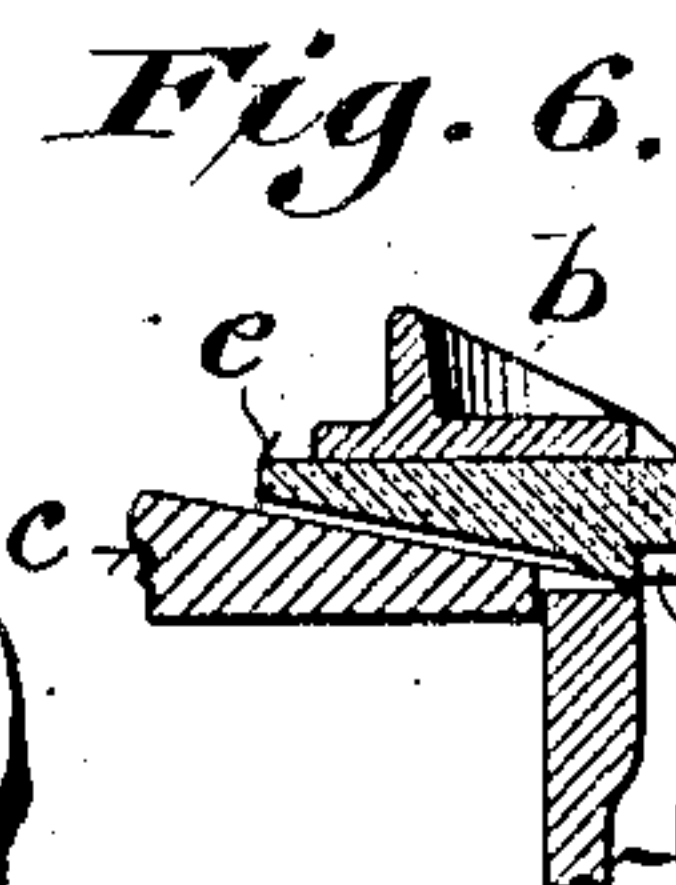
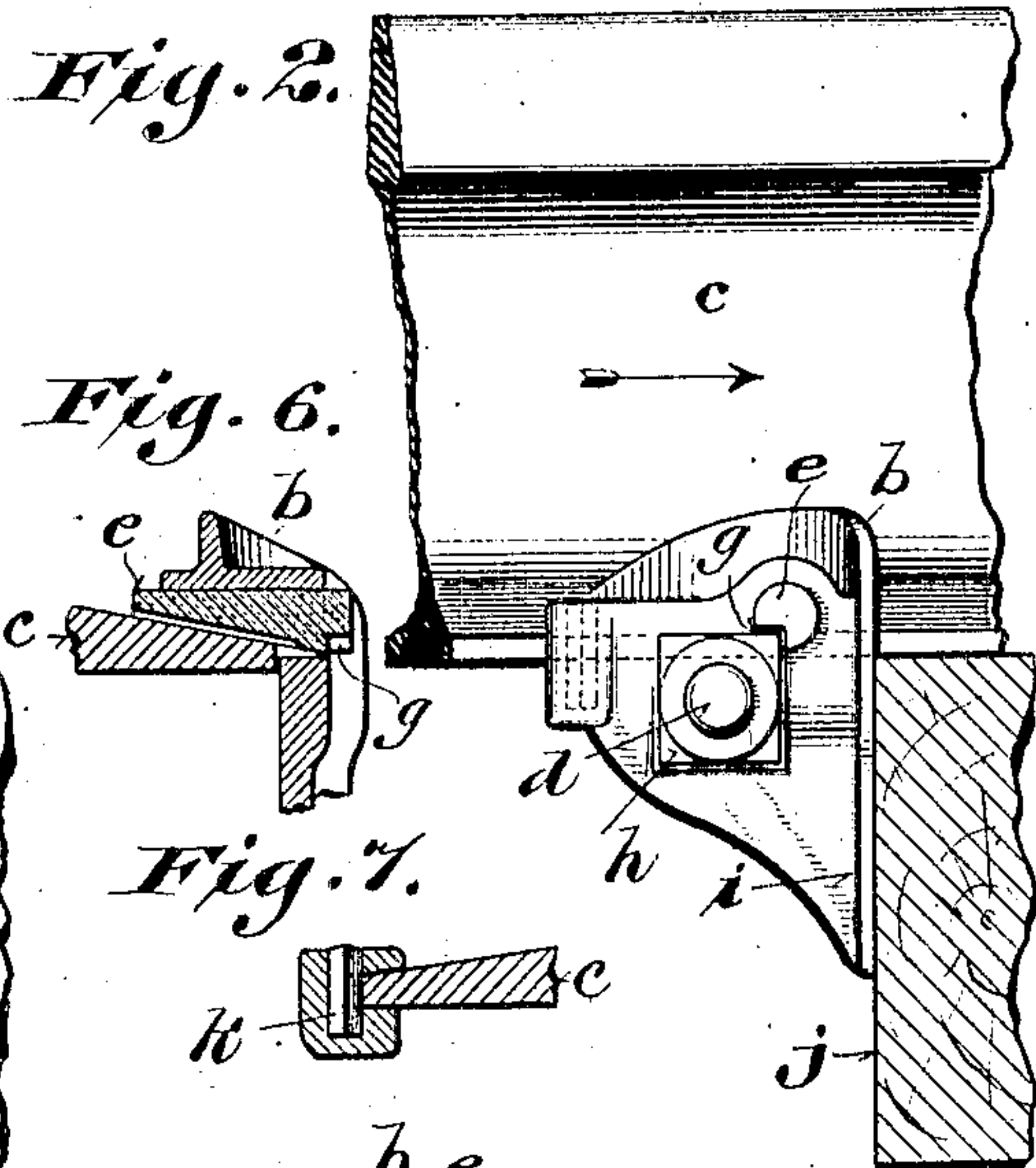
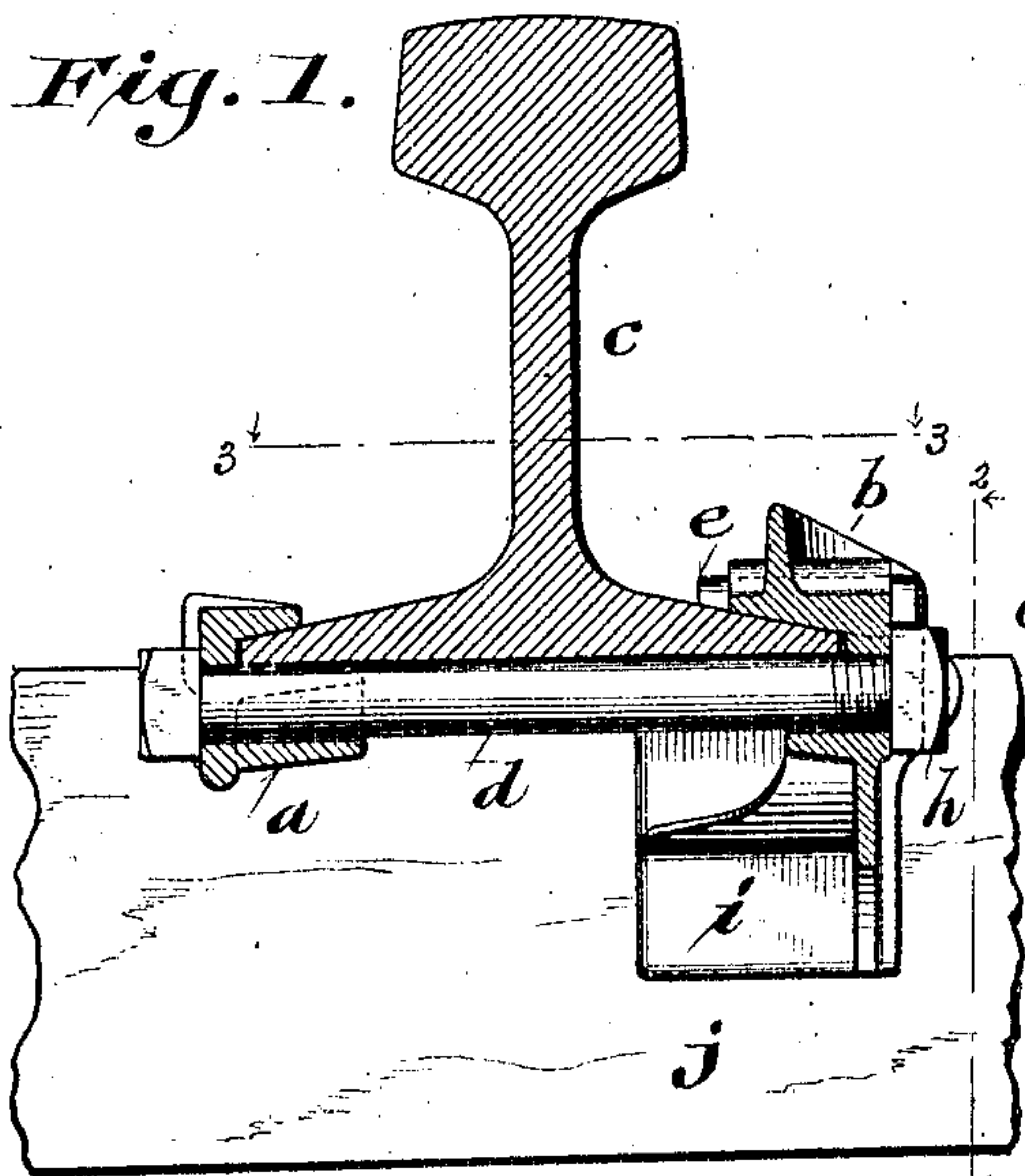


No. 815,383.

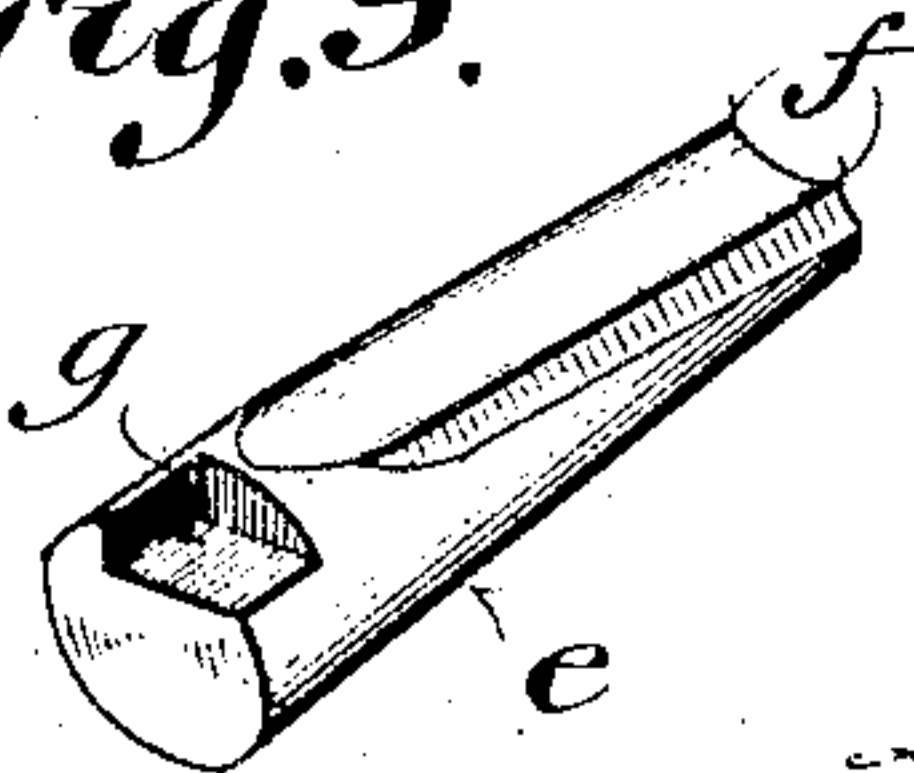
PATENTED MAR. 20, 1906.

J. M. SCOTT.  
RAIL ANCHOR.

APPLICATION FILED DEC. 29, 1905.



Witnesses:  
Fred Palm.  
Chas. L. Goss.



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Attorneys.



# UNITED STATES PATENT OFFICE.

JOHN M. SCOTT, OF RACINE, WISCONSIN.

## RAIL-ANCHOR.

No. 815,383.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed December 29, 1905. Serial No. 293,732.

*To all whom it may concern:*

Be it known that I, JOHN M. SCOTT, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Rail-Anchors, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The main objects of this invention are to prevent railway-rails from creeping or moving lengthwise upon the ties on which they are laid, to securely hold the anchors on the rails, and prevent the rails from slipping therein, to reduce the weight, and generally simplify and improve the construction and operation of devices of this class:

It consists in certain novel features of construction and in the peculiar arrangement and combinations of parts, as hereinafter described, and defined in the claims.

In the accompanying drawings like characters designate the same parts in the several figures.

Figure 1 is a vertical cross-section on the line 1 1, Fig. 3, of a rail-anchor embodying the present invention as applied to a railway rail and tie. Fig. 2 is a side elevation of the anchor and of the rail to which it is applied as viewed from the right with reference to Fig. 1, the tie being shown in cross-section on the line 2 2, Fig. 1. Fig. 3 is a plan view of the anchor as applied to a rail-base, the rail being shown in horizontal section on the line 3 3, Fig. 1. Fig. 4 is an elevation of the anchor as viewed from the left with reference to Fig. 2, the rail to which it is applied being shown in cross-section on the line 4 4, Fig. 3. Fig. 5 is an inverted plan view of the anchor and of the rail-base to which it is attached. Figs. 6, 7, and 8 are detail views showing sections on the lines 6 6, 7 7, and 8 8, respectively, Fig. 3. Fig. 9 is a perspective view of the toothed conical wedge, and Fig. 10 is a cross-section of the wedge about midway between its ends.

The anchor comprises two jaws *a* and *b*, which are grooved or recessed to fit over the opposite flanges of the base of a railway-rail *c* and a bolt *d* for adjustably connecting said jaws and clamping them upon the rail-base. One jaw, *a*, may be forged or made integral with the bolt *d* in the form of a hook, or it may be made, as shown, separate from the bolt. The other jaw *b* is formed with a transverse cylindrical opening cutting the groove or re-

cess for the rail-base flange parallel with and adjacent to the bolt-hole, which lies just below said groove or recess. In this opening a wedge *e*, of semicylindrical form, is fitted and adapted to turn on its upper side, the under side of the wedge being formed with one or more longitudinal teeth *f*, which are adapted to bite into or to be embedded in the upper side of the rail-base flange held in the jaw *b*. The outer and larger end of the wedge is formed, as shown in Figs. 2, 6, and 9, with a notch or angular recess *g*, with which a corner of the nut *h* on the adjacent end of the bolt *d* is turned into engagement and by which the wedge is held in place in the jaw and the nut is prevented from turning back and working loose upon the bolt. One of the jaws—as, for example, the jaw *b*—is formed with a transverse vertical bearing *i*, which is adapted to abut against one side of a tie *j*, as shown in Figs. 1, 2, and 3, and thus prevent longitudinal movement of the rail to which the anchor is attached without carrying the tie with it. The wedge *e* and the opening in which it is fitted in the jaw *b* are so formed that end thrust on the rail in the direction indicated by the arrow on Fig. 2 tends to turn the wedge in the jaw and to increase its bite and tighten the grip of the jaw on the base-flange of the rail. Under ordinary circumstances this alone will serve to prevent the rail from slipping in the anchor; but as a further safeguard the jaw *b* is provided, as shown in Figs. 3 and 7, with an angular key *k*, which is inserted in a vertical socket of corresponding shape cutting the groove or recess for the rail-base flange, a sharp angle or corner of the key being presented toward and adapted to bite into or to be embedded in the edge of the rail-base flange held in said jaw. This key may be made of quadrangular shape, as shown, or of any other form in cross-section which will present a sharp angle or corner to the edge of the rail-base.

While both jaws of the anchor may be made to correspond with the jaw *b*, one right and the other left, to fit upon opposite edges or flanges of the rail-base, an effective anchor is made by connecting a jaw, such as *a*, of simpler and lighter construction with a single jaw *b*, thereby materially reducing the total weight and cost of the anchor without correspondingly reducing its strength and efficiency.

In applying the anchor to a rail the jaws



*a* and *b* are placed on opposite edges or flanges of the rail-base and drawn together and clamped thereon by the bolt *d*, the nut after it has been screwed tightly against the outer face of the jaw *b* being turned in advance sufficiently to clear the opening for the wedge *e*, which is then inserted and driven into place therein. The nut is then turned back slightly, so as to carry one corner thereof into the notch or angular recess *g* in the outer protruding end of the wedge, which is thereby locked and held in place in the jaw, while the nut itself is held against turning farther backward and working loose on the bolt. Before the nut is finally tightened the key *k* may be embedded in the edge of the rail base or flange by striking the outer face of the jaw a blow or two with a hammer.

The anchor may be as readily removed from a rail as it is applied thereto by turning the nut *h* up or forward sufficiently to clear the wedge *e* and then prying the wedge out of the jaw *b* by placing the end of a bar against the inner smaller end of the wedge and forcing the upper part of the bar against the rail-head, which serves as a fulcrum. After the wedge *e* has been removed the nut *h* can be turned backward with a wrench and removed from the bolt, thereby releasing the jaws.

Various changes in the details of construction and in the arrangement of parts may be made without affecting the principle and operation of the anchor and without departing from the intended scope of the invention.

I claim—

1. A rail-anchor comprising a recessed jaw adapted to be clamped on a rail-flange and having a transverse opening cutting the recess for the rail-flange, and a wedge fitting said opening and having one or more longitudinal teeth adapted to bite into the rail-flange, substantially as described.

2. A rail-anchor comprising a recessed jaw adapted to be clamped on a rail-flange and having a transverse cylindrical opening cutting the recess for the rail-flange, and a semicylindrical wedge fitted and adapted to turn in said opening and formed on one side with a tooth which is adapted to bite into the rail-flange, end thrust on the rail tending to turn said wedge and to increase its bite on the rail-flange, substantially as described.

3. A rail-anchor comprising a pair of jaws and a connecting-bolt for clamping them on a rail-base, one of said jaws having a recess

for the rail-base, a transverse bolt-hole below said recess, and a transverse cylindrical opening cutting said recess adjacent to the bolt-hole, and a semicylindrical wedge fitted and adapted to turn in said opening and having a notch in its larger end arranged to engage with a nut on the adjacent end of the bolt and a longitudinal tooth on one side adapted to bite into the rail-base, substantially as described.

4. A rail-anchor comprising a recessed jaw adapted to be clamped on a rail-base flange and having a transverse cylindrical opening cutting said recess, and a semicylindrical wedge fitted and adapted to turn in said opening and formed on one side with longitudinal teeth which are adapted to bite into the rail-base flange, substantially as described.

5. In a rail-anchor the combination of a pair of recessed jaws, a bolt connecting said jaws and adapted to clamp them upon the base-flanges of a rail, one of the jaws having a transverse bolt-hole, and a transverse cylindrical opening cutting the recess for the rail-base flange adjacent to the bolt-hole, and a semicylindrical wedge fitted to turn in said opening and having longitudinal teeth on one side to bite into said flange and a notch or recess in the larger end arranged to engage with a nut on the adjacent end of the bolt, to hold the wedge in place and prevent the nut from turning, substantially as described.

6. A rail-anchor comprising a jaw recessed to receive and fit over a rail-base flange and having a vertical socket intersecting the recess for said flange and an angular key inserted in said socket and adapted to bite into the edge of the rail-flange, substantially as described.

7. A rail-anchor comprising a jaw recessed to receive and fit over a rail-base flange and having a vertical socket and a transverse opening each cutting the recess for said base-flange, an angular key fitted in said socket and adapted to bite into the edge of the rail-flange, and a toothed wedge fitted in said opening and adapted to bite into the top of the base-flange, substantially as described.

In witness whereof I hereto affix my signature in presence of two witnesses.

JOHN M. SCOTT.

Witnesses:

MATTIE E. PALMER.  
W. SONWEY.