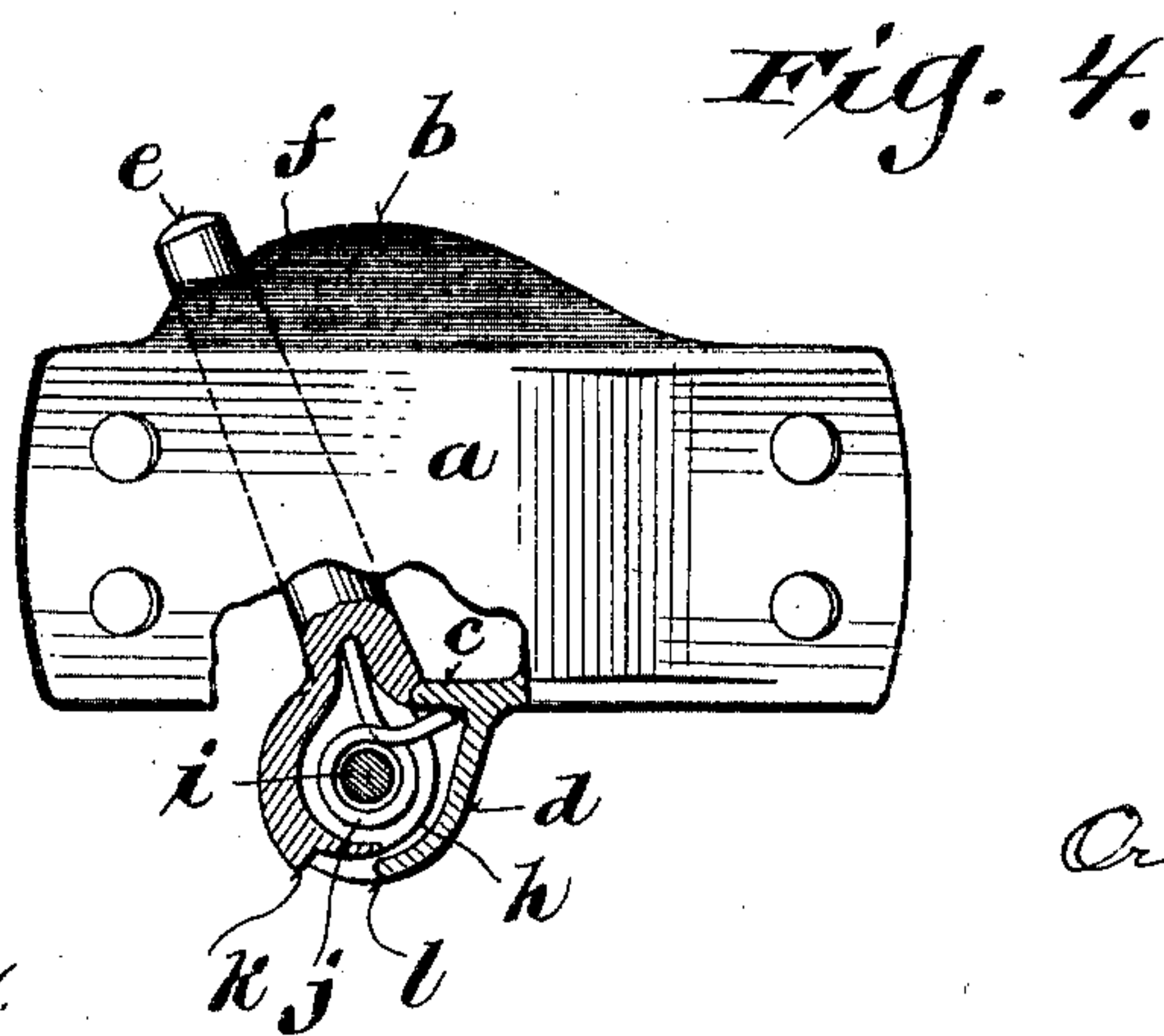
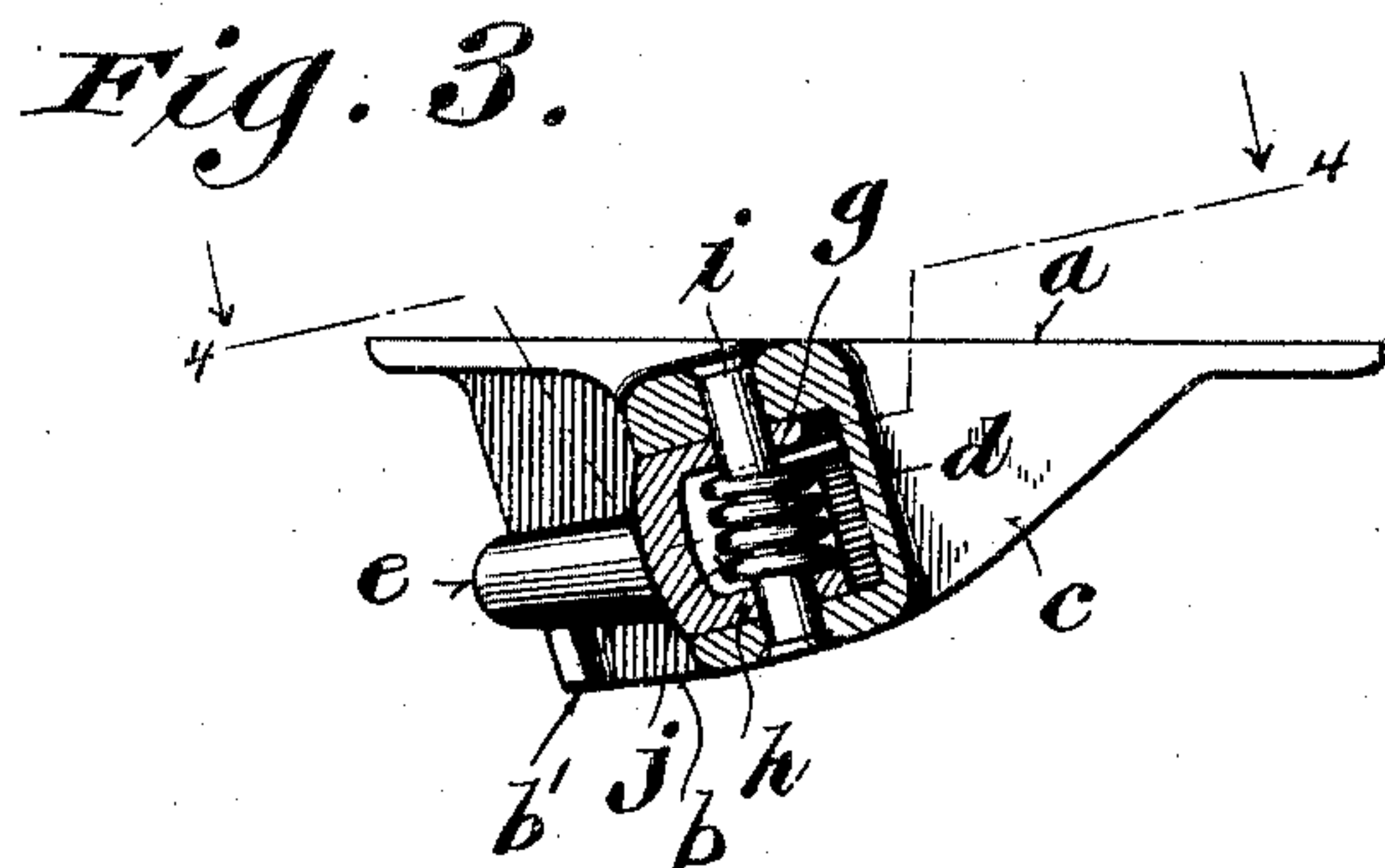
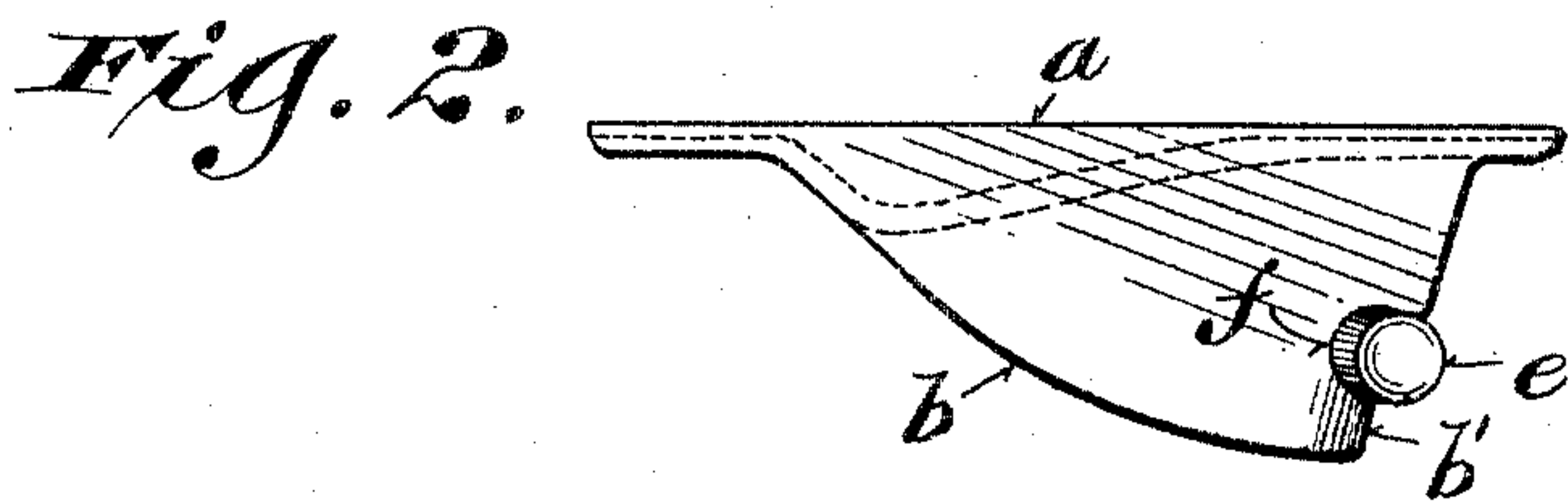
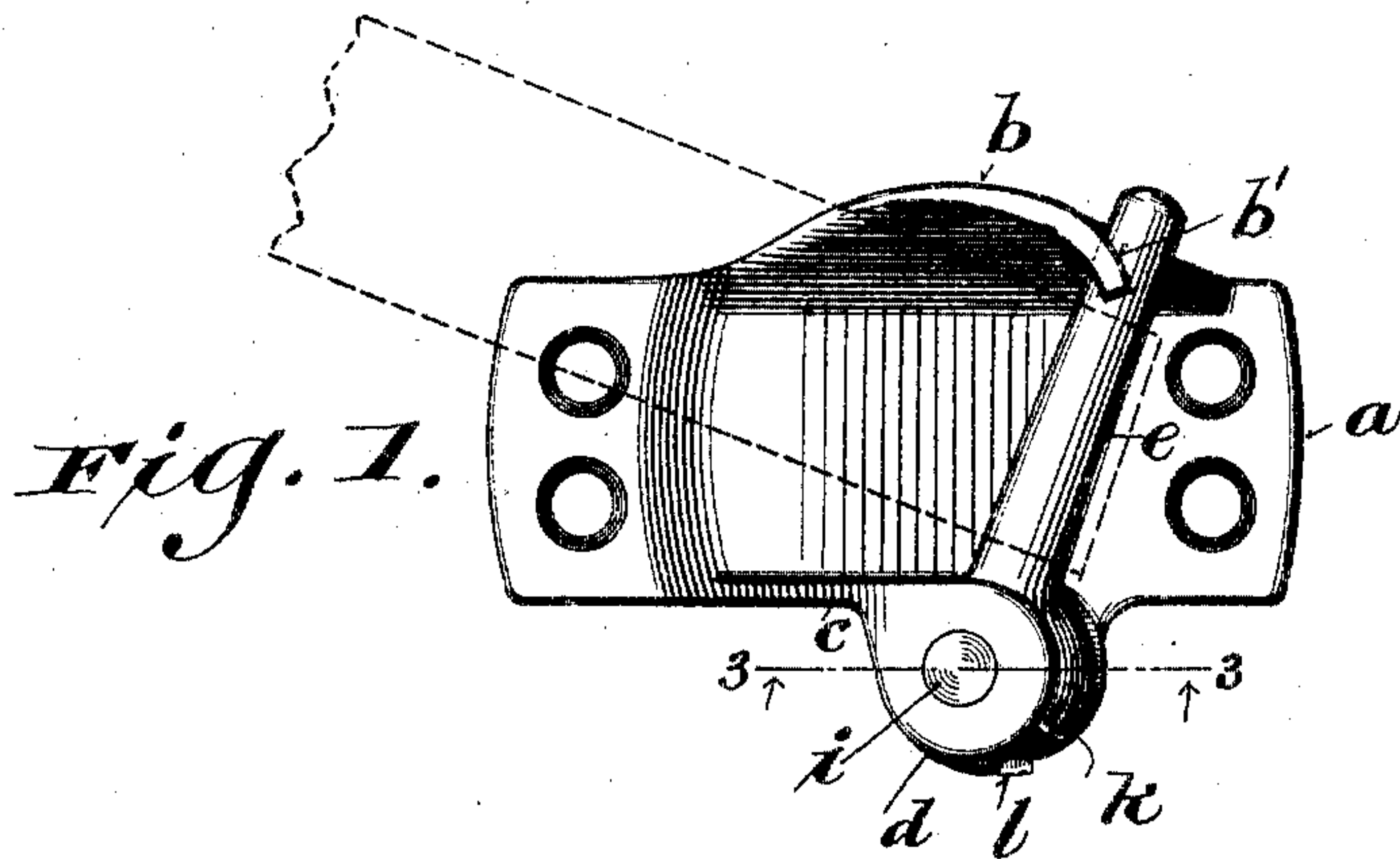


No. 776,583.

PATENTED DEC. 6, 1904.

O. C. DAVIS.
HOLDBACK FASTENING.
APPLICATION FILED APR. 9, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

ORIN C. DAVIS, OF MANISTEE, MICHIGAN, ASSIGNOR OF ONE-HALF TO
JAMES M. RAMSDELL, OF MANISTEE, MICHIGAN.

HOLDBACK-FASTENING.

SPECIFICATION forming part of Letters Patent No. 776,583, dated December 6, 1904.

Application filed April 9, 1903. Serial No. 151,754. (No model.)

To all whom it may concern:

Be it known that I, ORIN C. DAVIS, a citizen of the United States, residing at Manistee, in the county of Manistee and State of Michigan, have invented certain new and useful Improvements in Holdback-Fastenings, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to self-releasing holdback-fastenings of the class shown in Letters Patent of the United States No. 473,569, issued April 26, 1892, to Thomas Smurthwaite and myself. Its main objects are to prevent accidental detachment of the holdbacks from the shafts under ordinary conditions except when the tugs or traces are detached from the whiffletree or the horse is otherwise released from the vehicle, to avoid rattling and wear, and generally to improve the construction and operation of fastenings of this kind.

It consists in certain novel features of construction and in the arrangement and combinations of parts hereinafter particularly described, and pointed out in the claims.

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

Figure 1 is an inverted plan view of the fastening. Fig. 2 is a side elevation of the same looking toward the free end of the cross-bar. Fig. 3 is an elevation of the opposite side of the fastening and a vertical section on the line 3 3, Fig. 1, and Fig. 4 is a top or plan view and partial section on the line 4 4, Fig. 3.

The fastening consists generally of a plate *a*, which is adapted to be attached to the under or upper side (preferably the under side) of a vehicle-shaft and formed on one side with a guard *b* and on the other side with a flange *c*, enlarged at its front end into a recessed boss *d*, and a cross-bar *e*, pivoted at one end in said recessed boss and having a seat *f* at the opposite end in the front end of said guard. The plate *a* is preferably slightly concave, as shown, to fit snugly against the shaft and is formed with countersunk screw-holes at the ends for attaching it to the shaft.

The guard *b* is curved from a point near the

rear end of the plate downwardly and inwardly, as shown, so as to prevent the accidental detachment of the holdback-strap (indicated by dotted lines in Fig. 1) from the cross-bar *e* under any conditions, as when the horse moves laterally away from the fastening in turning or otherwise. The guard, extending, as above stated, in an inwardly and downwardly curved direction below and behind the seat *f*, in which the free end of the cross-bar *e* is normally held, and terminating at its front end *b'* below said seat in a sharp outward bend, prevents the holdback-strap in any position which the animal may assume when hitched to the vehicle from pulling the cross-bar open and detaching itself therefrom. The free end of the cross-bar normally projects inward beyond the guard *b*, so that it may be readily grasped by the thumb and finger or caught with the looped end of the holdback-strap and opened for the purpose of connecting said strap with the fastening. The opposite end of the cross-bar is enlarged and fitted at the top and bottom in the recessed boss *d*, as shown in Fig. 3. It has a laterally-opening recess between its bearings *g* and *h*, which are perforated and fitted on a pin *i*, passing through said boss and secured at its ends in the upper and lower ends thereof. This construction affords, in effect, a long pivot-bearing for the cross-bar and prevents wear, play, and rattling, which have been found by experience to be objections to the construction of the pivot-joint in the device shown and described in the patent hereinbefore mentioned.

A spiral spring *j*, surrounding the pivot-pin *i* within the recess in the enlarged end of the cross-bar and bent outwardly at its ends to engage opposing offsets in said cross-bar and in the boss *d*, tends to turn said cross-bar toward and to hold it normally in engagement with its seat *f* in the guard *b*. The construction shown avoids sharp bends in the ends of the spring, which tend to weaken it and render it liable to break, and facilitates the assemblage of parts, besides admitting of longer ends and a more certain engagement thereof

with the cross-bar and recessed boss than in the construction shown in the patent above referred to.

The boss *d* and the pivot-pin *i*, passing through it, are preferably inclined forward at their upper ends, as shown, so that they will be approximately at right angles to the direction of the ordinary pull on the holdback-strap. The spring *j* is completely enclosed and protected by the boss *d* and the enlarged end of the cross-bar *e*, which together form a housing therefor.

A shoulder *k* on the enlarged end of the cross-bar is arranged to limit the opening of the cross-bar by engaging with an opposing shoulder or edge *l* of the boss *d*. In case the spring *j* is broken or becomes weak it can be readily removed and replaced with another spring by driving out the pivot-pin *i*, which needs to be but slightly upset at the ends to securely hold it in place.

I claim—

1. A holdback-fastening comprising a plate having a downwardly and inwardly curved guard on one side, and a cross-bar pivoted to a depending flange on the opposite side of said plate and having a seat in the front end of said guard above its lower edge, substantially as described.

2. A holdback-fastening consisting of a plate having a downwardly-curved guard on one side and a depending flange with a recessed boss on the other side, a cross-bar pivoted on a vertically-disposed pin in said boss and having a recess and bearings above and below it fitted on said pin, and a spiral spring surrounding the pivot-pin within said recess and bent outwardly and engaged at its ends with opposing offsets in said recessed boss and cross-bar, substantially as described.

3. A holdback-fastening consisting of a plate having a downwardly and inwardly curved guard on one side and a depending flange with a recessed boss on the other, a cross-bar pivoted at one end in said recessed boss on a vertically-disposed pin and having a seat at the other end in the front end of said guard beyond which it normally projects a short distance, and a spring tending to hold the free end of said cross-bar against its seat, substantially as described.

4. A holdback-fastening consisting of a plate having on one side a downwardly and inwardly curved guard with a notched seat in its front end above its lower edge and on the other side a depending flange with a laterally-recessed boss, a cross-bar fitted at one end in said boss and having a laterally-opening recess between two bearings which are fitted on a pivot-pin passing vertically through and secured at its ends in said boss, and a spiral spring surrounding said pivot-pin within said recess and having its ends bent outwardly into engagement with offsets in said boss and cross-bar, substantially as described.

5. A holdback-fastening comprising a plate having a downwardly and inwardly curved guard on the inner side and terminating at its front end in a recessed seat below which it is more sharply curved outward, and a cross-bar pivoted to a depending flange on the outer side of said plate and adapted to be swung inwardly at its free end into engagement with said recessed seat, substantially as described.

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

ORIN C. DAVIS.

Witnesses:

CHAS. L. GOSS,
ALICE E. GOSS.