

(No Model.)

W. W. CRAWFORD.  
LOCK WEDGE.

No. 572,291.

Patented Dec. 1, 1896.

Fig - 1 -

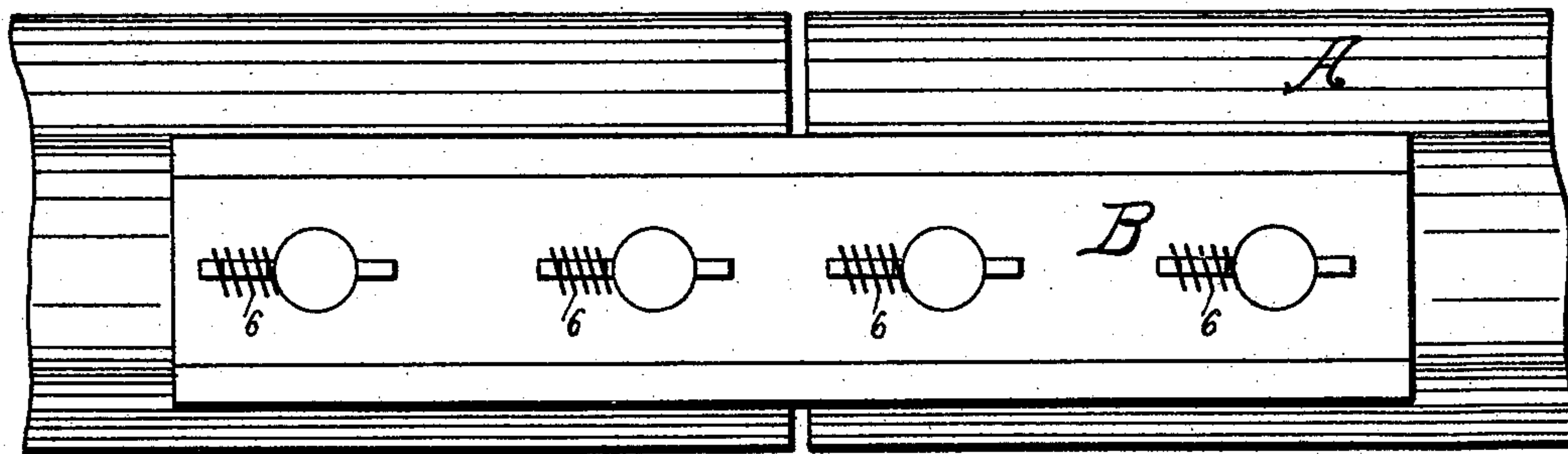


Fig - 2 -

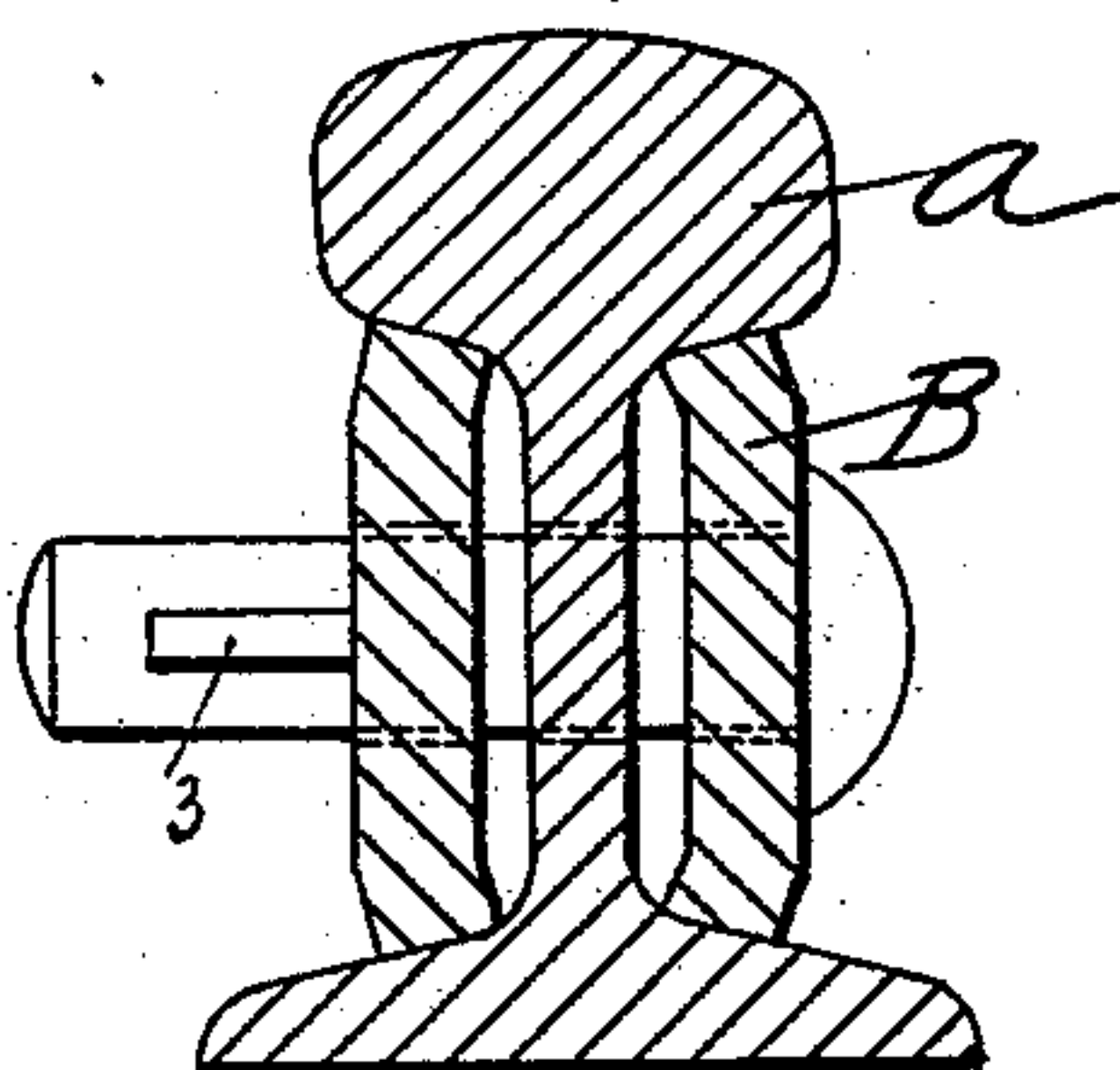


Fig - 3 -

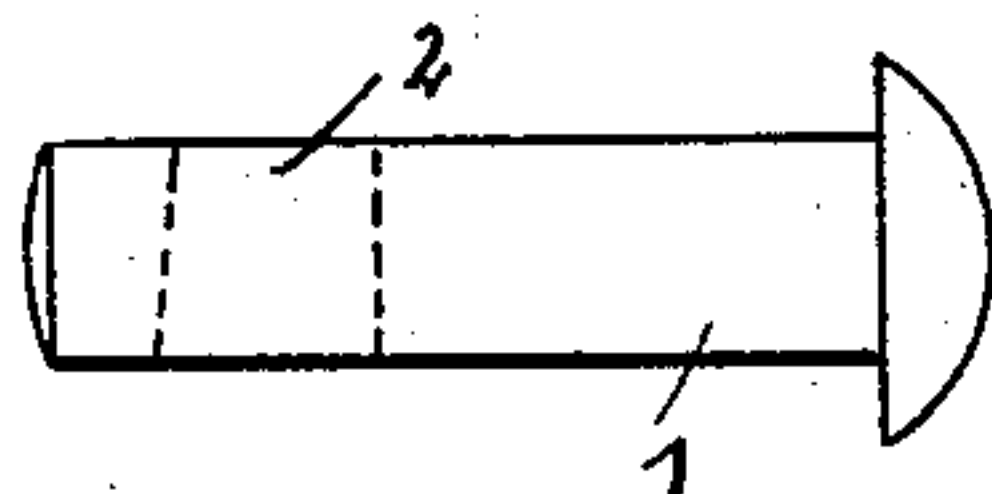


Fig - 5 -

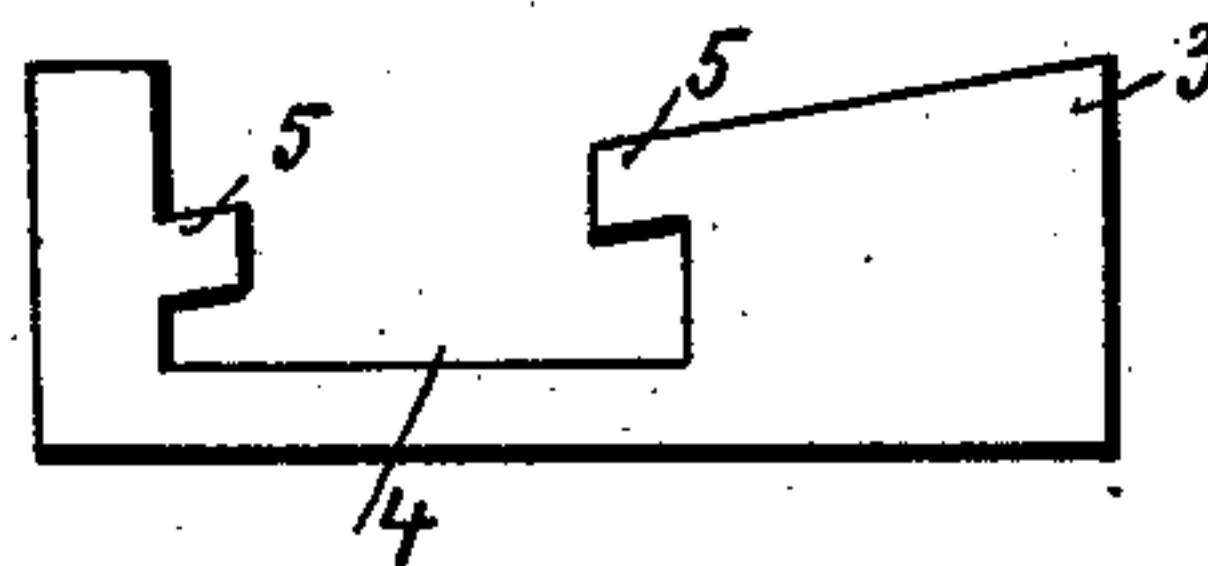


Fig - 4 -

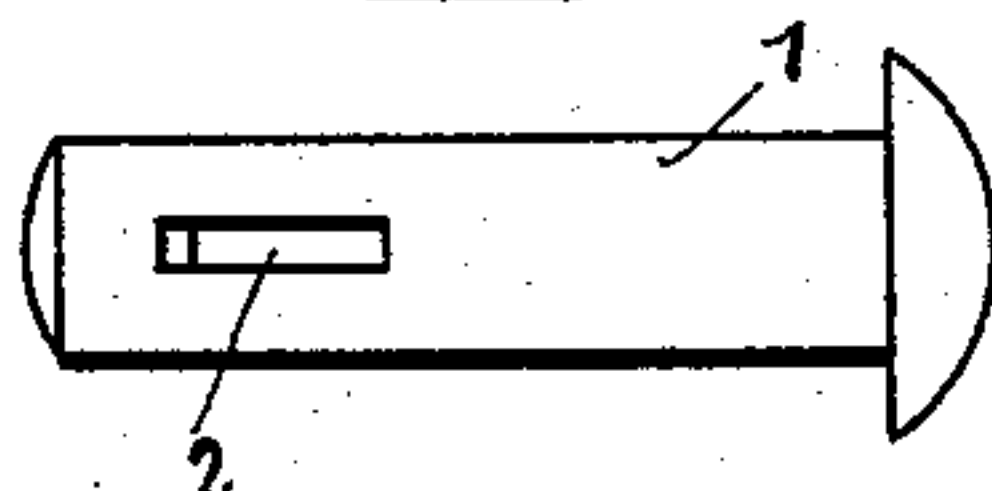


Fig - 6 -

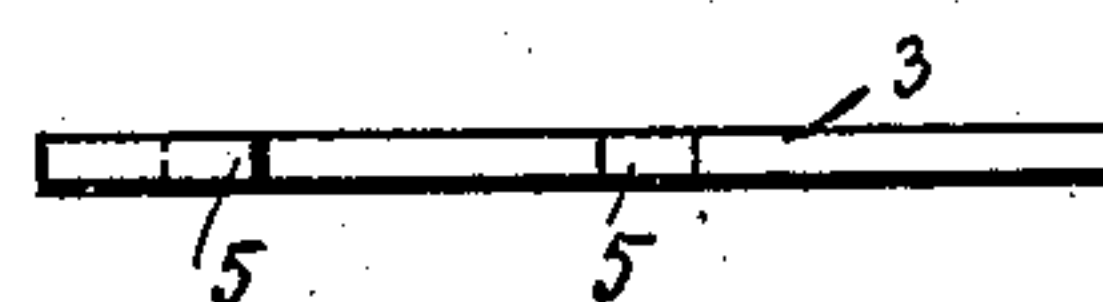


Fig - 7 -

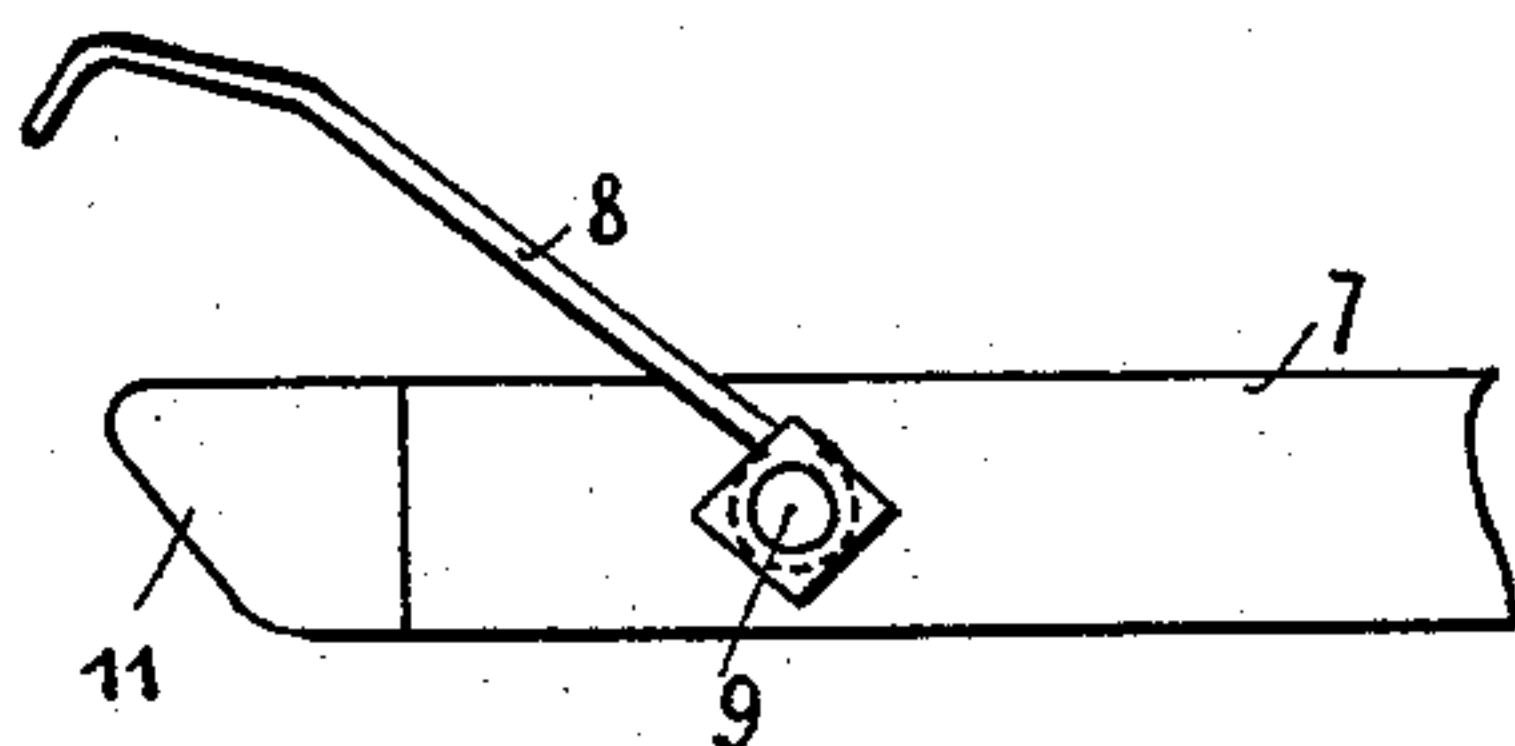
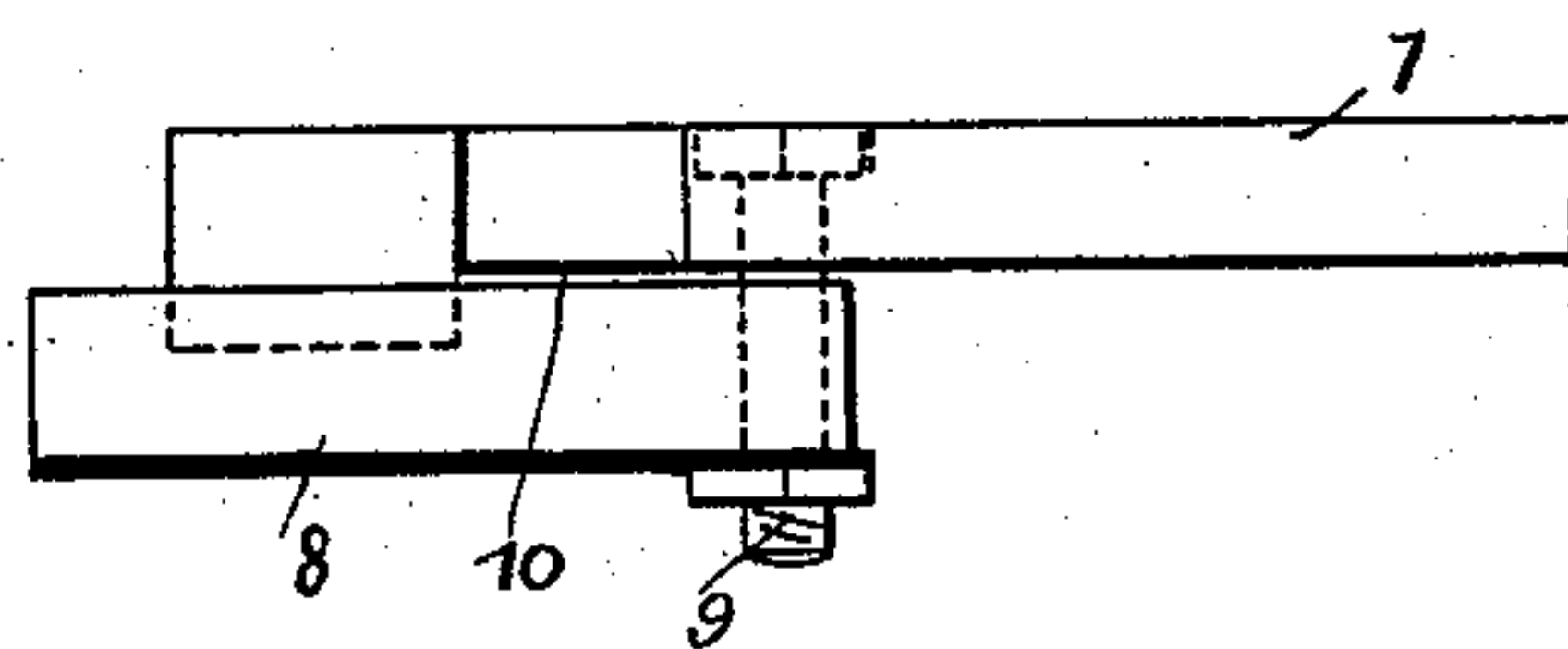


Fig - 8 -



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM WOODS CRAWFORD, OF WILMERDING, PENNSYLVANIA, ASSIGNOR  
TO GEORGE E. KUHN, OF SAME PLACE, AND WESLEY S. GUFFEY, OF  
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## LOCK-WEDGE.

SPECIFICATION forming part of Letters Patent No. 572,291, dated December 1, 1896.

Application filed December 27, 1895. Serial No. 573,447. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM WOODS CRAWFORD, a citizen of the United States, residing at Wilmerding, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Lock-Wedges; and I 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 figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in bolt-fastenings in general, and relates more particularly to that class used for securing-bolts such as are used by railroads, but may be used for any purpose desired.

The invention has for its object the provision of new and novel means whereby a bolt may be securely fastened and retained in its desired position.

A further object of the invention is to provide a bolt-fastening of the above-described class that will require no alteration in the fish-plates when used on railroads, but may be adapted to the fish-plate of the ordinary and well-known construction.

A still further object of the invention is to provide a bolt-fastening that will be simple in its construction, strong, durable, and effectual in its operation.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like figures of reference indicate similar parts throughout the several views, in which—

Figure 1 is a side elevation of my improved bolt-fastening. Fig. 2 is a vertical section of the same. Fig. 3 is a side view of the bolt. Fig. 4 is a plan view of the bolt. Fig. 5 is a side view of the securing pin or lock. Fig. 6 is a plan view of the same. Fig. 7 is a side view of the lever used for releasing the spring. Fig. 8 is a plan view of the same.

In the drawings, 1 represents the bolt, provided near its end with a conical slot 2 for the reception of the securing pin or lock 3.

Said securing pin or bolt is formed with a straight edge next the fish-plate and is inclined on the other edge, which will permit its being tightened when inserted in the conical slot 2 of the bolt 1. The securing pin or lock is provided near the smaller end with a partly-open conical slot 4, constructed so as to form lugs 5 5, which retain the spring 6 when it is inserted in the slot 4. The said spring 6 serves to retain the securing pin or lock rigidly in its place in the conical slot of the bolt.

The reference-figure 7 represents the lever used for releasing the spring from engagement when it is desired to remove the bolt. Said lever is provided with a suitable catch 8, secured near the lower end of the lever by a bolt 9, and is further provided with a groove 10 near its lower end and an inclined surface 11 on the same end, thus providing all the leverage that may be required to release the spring.

Operation: When it is desired to use my improved bolt-fastening, the bolt is inserted through the rail and fish-plates in the ordinary and well-known manner. The securing pin or lock 3 is then inserted through the conical slot 2 of the bolt 1 as far as the inclined edge of the pin 3 will permit. The end of the retaining-spring 6 is then inserted over the inner lug 5, formed by the partly-open conical slot 4, and compressed until it passes the inner lug 5 and forced downward into the slot 4. When in this position the spring is released, and it will be noted that the lugs 5 5 will retain same securely in its position. It will be observed that when this operation has been performed it will be impossible for the bolt to become loose until the spring is released from its engagement, thus retaining the bolt securely in position.

When it is desired to remove the bolt, the catch of the lever is attached to the end of the spring, and it will readily be observed that by means of the lever the spring will be compressed until released from engagement with the lugs, when the securing pin or lock can be displaced and the bolt removed from its position.

It will be noted that various changes may

be made in the details of construction of my improved bolt-fastening without departing from the general spirit of my invention.

Having fully described my invention, what  
5 I claim as new, and desire to secure by Letters Patent, is—

1. A bolt-fastening, consisting of a bolt having a conical slot near its securing end, a securing pin or lock provided with an upper  
10 inclined edge, said securing-pin being provided with a partly-open conical slot forming lugs, substantially as described and set forth.

2. In a bolt-fastening, a bolt with a conical slot, a securing pin or lock having an upper inclined edge and partly-open conical slot 15 forming lugs, and spring for retaining the securing pin or lock in position, substantially as described and set forth.

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

WILLIAM WOODS CRAWFORD.

Witnesses:

ALBERT J. WALKER,  
MACAULAY HUNTER.