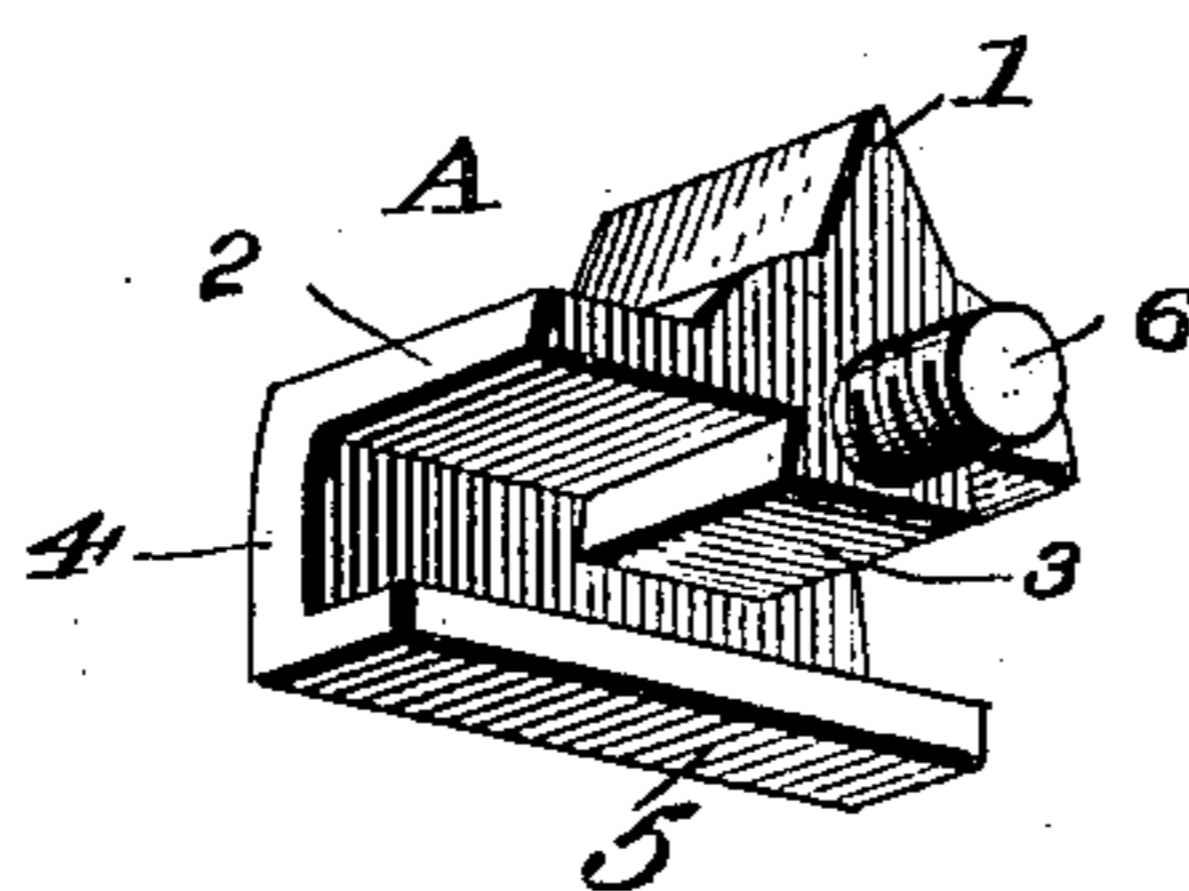
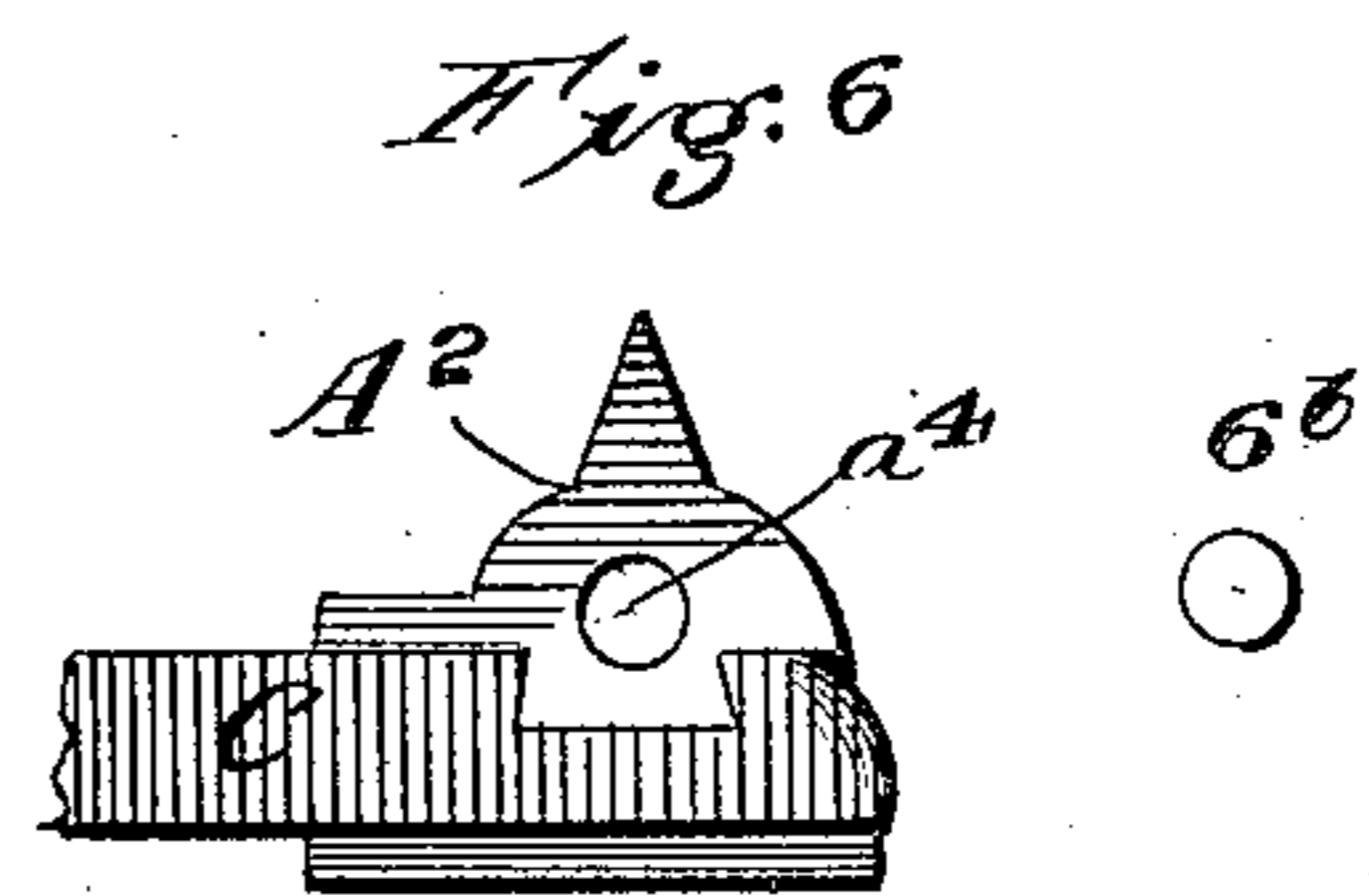
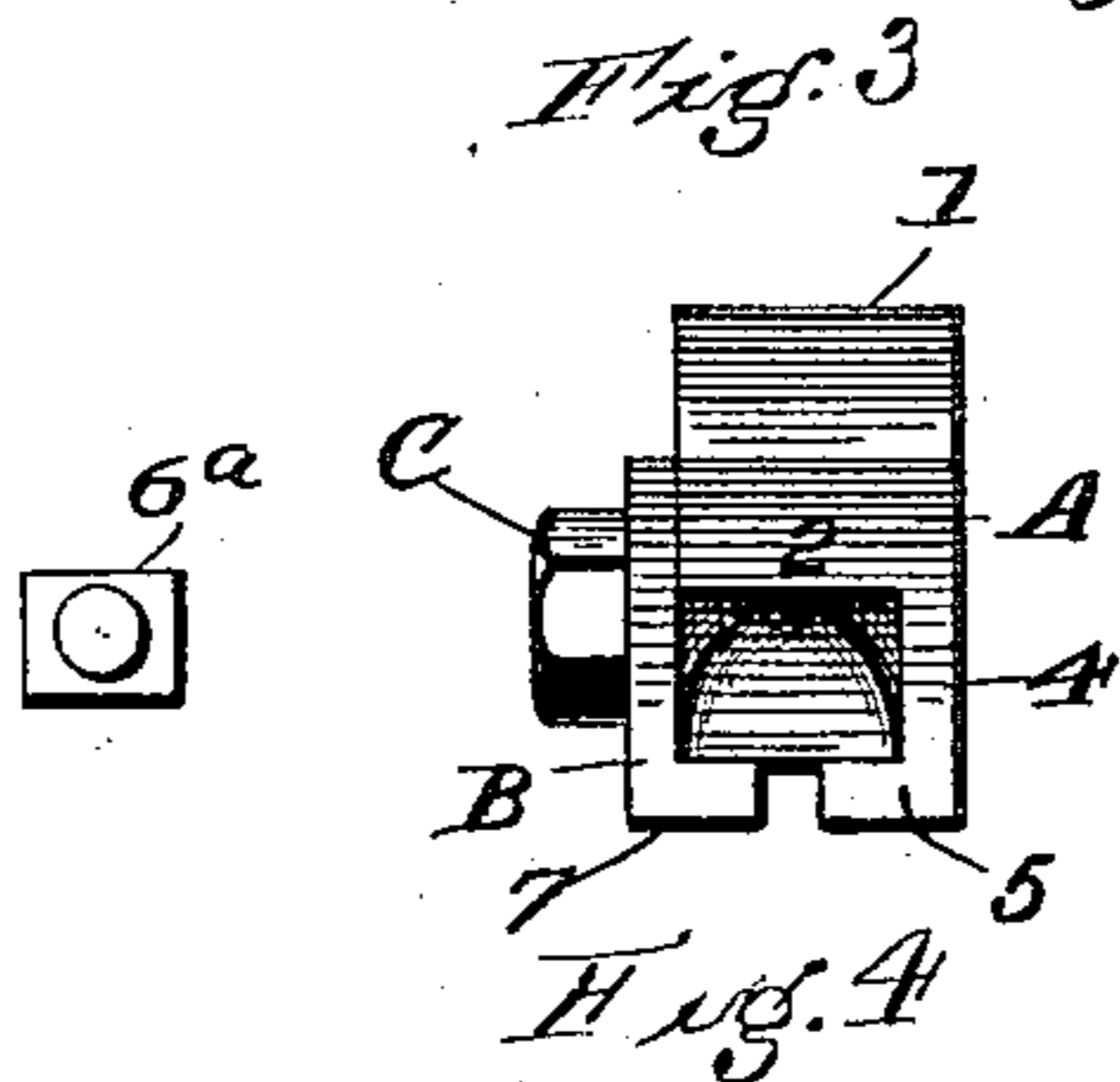
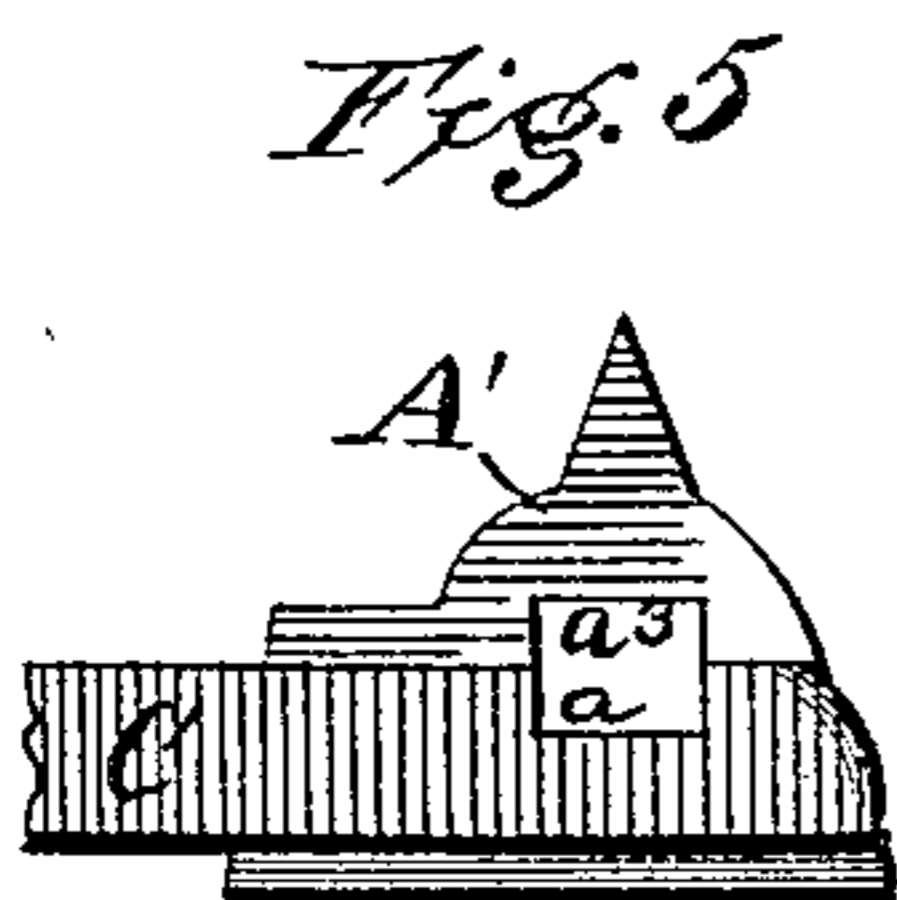
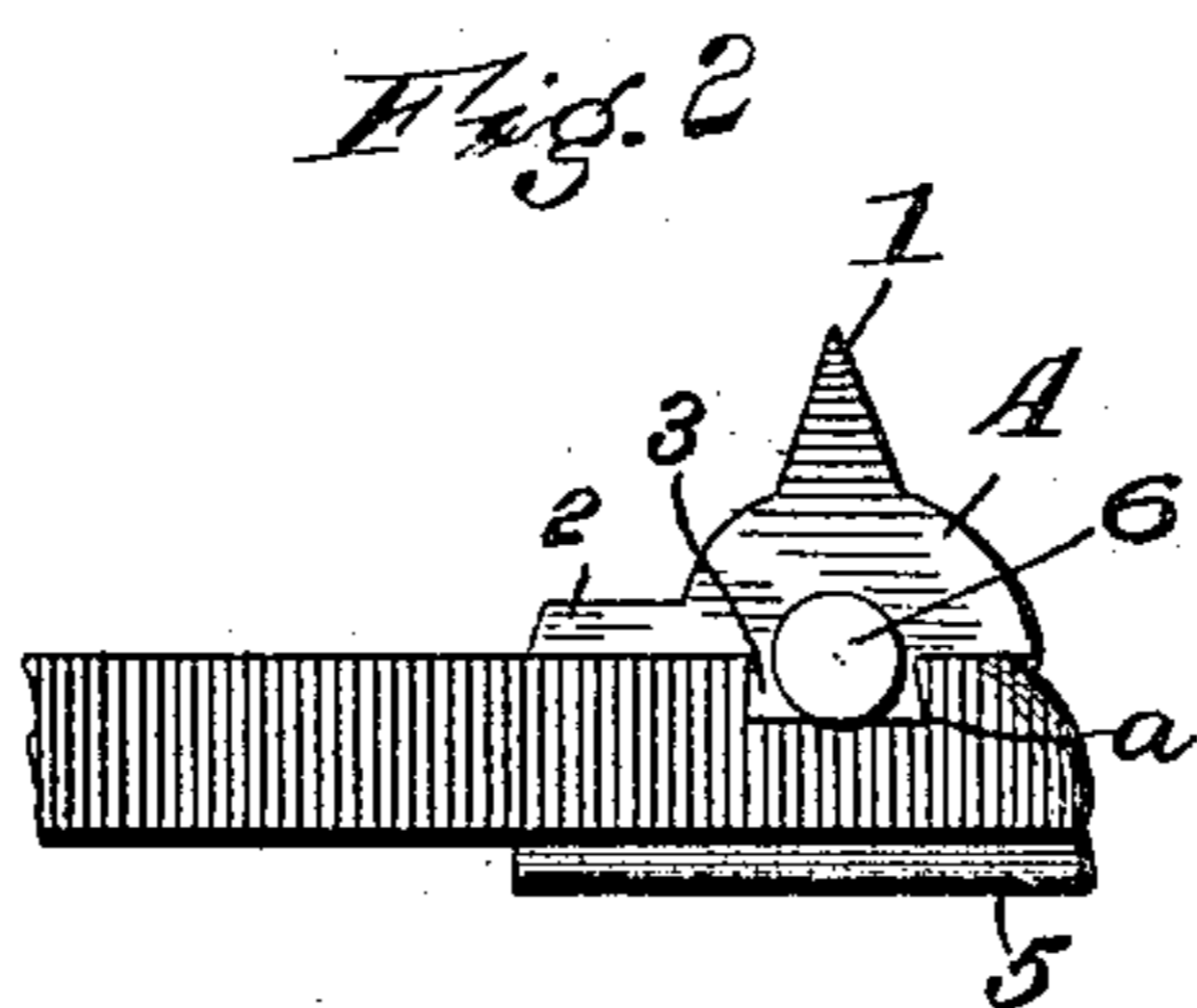
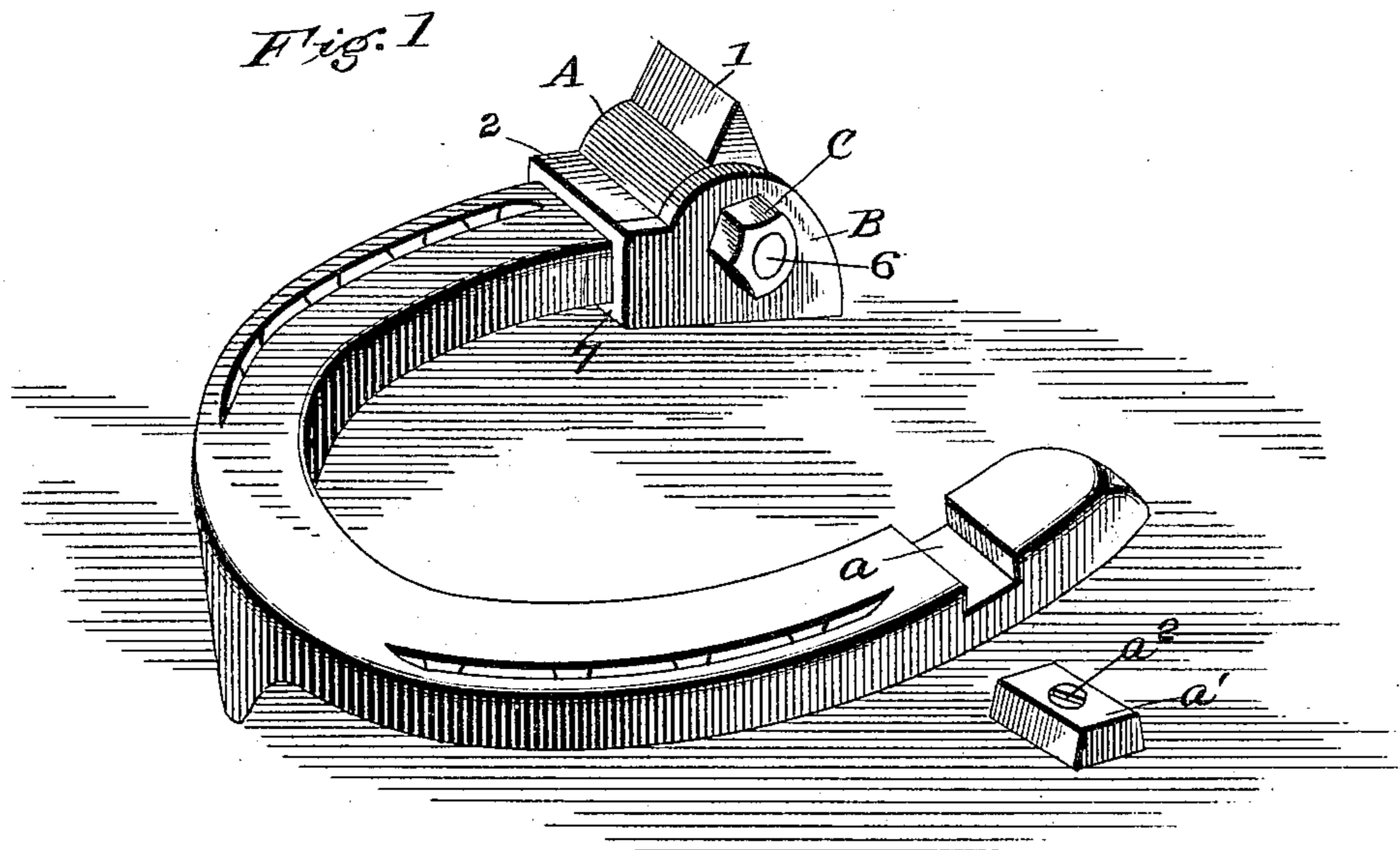


No. 817,581.

PATENTED APR. 10, 1906.

T. W. J. MCGANN.  
DETACHABLE HEEL CALK FOR HORSESHOES.

APPLICATION FILED DEC. 12, 1905.



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# UNITED STATES PATENT OFFICE.

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## DETACHABLE HEEL-CALK FOR HORSESHOES.

No. 817,581.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed December 12, 1905. Serial No. 291,456.

*To all whom it may concern:*

Be it known that I, THOMAS W. J. MCGANN, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented a new and useful Improvement in Detachable Heel-Calks for Horseshoes, of which the following is a specification.

My invention relates to detachable heel-calks for the ordinary flat or plain horseshoe; and it is designed to supply a detachable calk which may be easily and quickly applied to or removed from the shoe while on the horse's hoof, so as to give a plain shoe the quality of a roughshod-shoe.

Detachable heel-calks have heretofore been provided in which the calk was formed in separable sections connected by screws, bolts, rivets, or keys. The difficulty with such devices has been in securing a strong connection which will not break off under the draft strain or a sudden jump of the horse, which always involves a strain far in excess of the weight of the horse. When such strain is brought upon bolts or keys it is liable to bend and break them, or at least to so loosen them as to allow them to come off.

My invention is directed to providing such a firm and lasting connection for a detachable calk that these difficulties are avoided and while preserving the value of the detachable calk will also make its connection safe and permanent against all contingencies until worn out.

Figure 1 is a perspective view of a flat horseshoe with my improved calk applied to one heel and with the other heel prepared to receive it. Fig. 2 is a side view of one calk with the detachable clamp-plate removed. Fig. 3 is an end view. Fig. 4 is a detail in perspective of the main part of the calk, and Figs. 5 and 6 are modifications.

To prepare the shoe to receive my calk, an undercut or dovetail transverse recess is cut across the face of the shoe near the heel, as shown at *a*. This groove or recess may be cut across the heel of the shoe without removing the latter from the horse's hoof by a small portable milling-machine applied to the exterior face of the shoe.

A is the main part of the calk, and B is the detachable clamp-plate that holds it in place on the shoe. The part A of the calk is cast or forged in one piece with a chisel-shape

edge or calk proper, 1, an outer plate 2, that rests flat against the outside face of the shoe, a dovetail lug 3 below plate 2, that slips endwise into the recess *a* in the shoe, a side plate 4, a flange 5 along the edge of the side plate, and a screw-threaded stem 6, extending laterally from lug 3. The heel portion of the shoe is seated in the space between the outer plate 2, side plate 4, and flange 5, and receives in its recess *a* the dovetail lug 3.

The detachable clamp-plate B has along one edge a flange 7, corresponding to flange 5 of the other section, and has also a hole to receive the screw-threaded stem 6, and on which screw-threaded stem outside the clamp-plate a nut C is secured, which when turned up tight brings the two sections A and B tightly together. These sections house or inclose the heel portion of the shoe on its sides, and the dovetail lug 3, seated in recess *a*, prevents all longitudinal or slipping movement.

With the above construction it will be seen that the weight or pulling strain of the horse on the calk does not come on any bolt or key, but finds a flat abutment and broad bearing on the face of the shoe, which also braces the calk against all turning or rocking strains due to contact with hard objects in the road-bed.

These detachable calks are quickly applied or removed by any unskilled person, and after the groove or recess *a* is once cut in the shoe the horse need not have the attention of the blacksmith.

When the detachable calks are removed, the transverse groove *a* in each heel of the shoe is designed to be closed by a corresponding dovetail or undercut filling-block *a'*, of steel, which fits snugly in place and is secured therein by a set-screw *a''* until a calk is again required.

In Figs 5 and 6 I show two modifications of my invention. In Fig. 5 the calk-piece A' has a recess *a'''*, that registers with the recess *a* of the horseshoe, while a bolt having the cross-section at 6<sup>a</sup> in Fig. 5 fits in these two registering recesses. In Fig. 6 a round hole *a''''* is formed through the calk and receives a separate bolt 6<sup>b</sup>.

In all these forms the bolt is outside the shoe and does not weaken it by passing through the same.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A horseshoe-calk comprising a calk with a flat bearing fitting the top of the shoe and a side plate with a marginal flange, a perforated clamping - plate, a horizontal bolt passing outside the shoe and connecting the two parts of the calk, and a locking-lug extending transversely to the shoe and adapted to fit in a transverse recess of the shoe and lock the calk against longitudinal slipping.

2. A two-part detachable heel-calk, one part being formed with a locking-lug adapted to project into the cross-section of the shoe and to enter a recess in the shoe and means for clamping the parts together.

3. A detachable heel-calk for flat horse-shoes, consisting of two clamp-sections each having flanges overlapping the top of the shoe, one of which sections is formed with an integral screw-threaded stem and a locking-

lug adapted to enter a recess in the face of the shoe, and the other of which sections is perforated to receive the screw - threaded stem, and a nut adapted to be turned upon said screw-stem.

4. A detachable heel-calk for flat horse-shoes, consisting of two clamp-sections, one section being formed in one piece with a calk proper, a broad bearing - plate fitting the outer face of the shoe, a side plate with a marginal flange, a lug projecting from the outer bearing-plate into the cross-section of the shoe and adapted to enter a recess therein and extended laterally in the form of a screw-threaded stem, a flanged and perforated clamp-plate and a retaining-nut.

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