

G. M. PETTENGILL.
 AWL FOR PRICKING HEELS.
 APPLICATION FILED FEB. 14, 1910.

999,182.

Patented July 25, 1911.

Fig. 1.



Fig. 2.



Fig. 3.

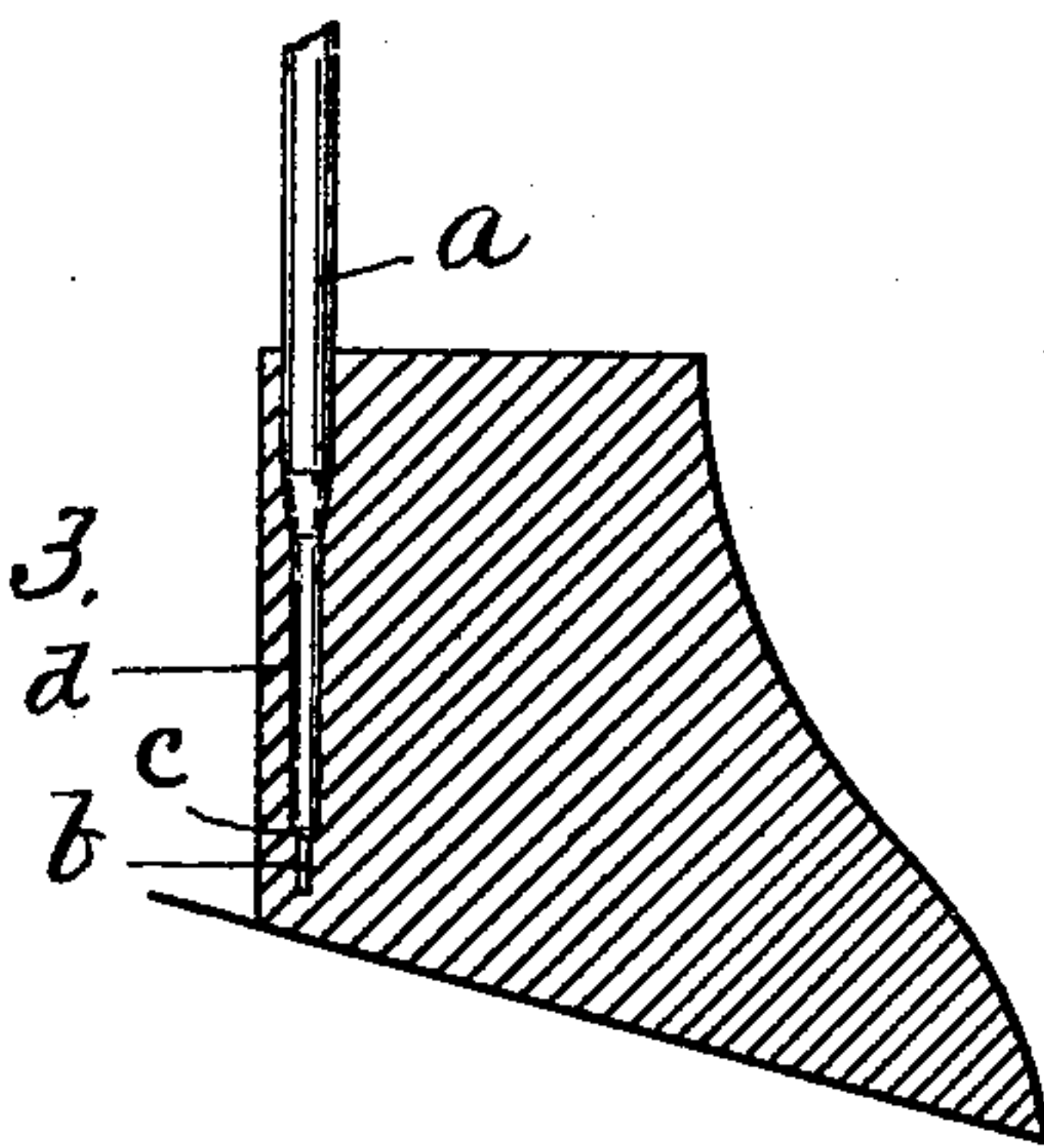
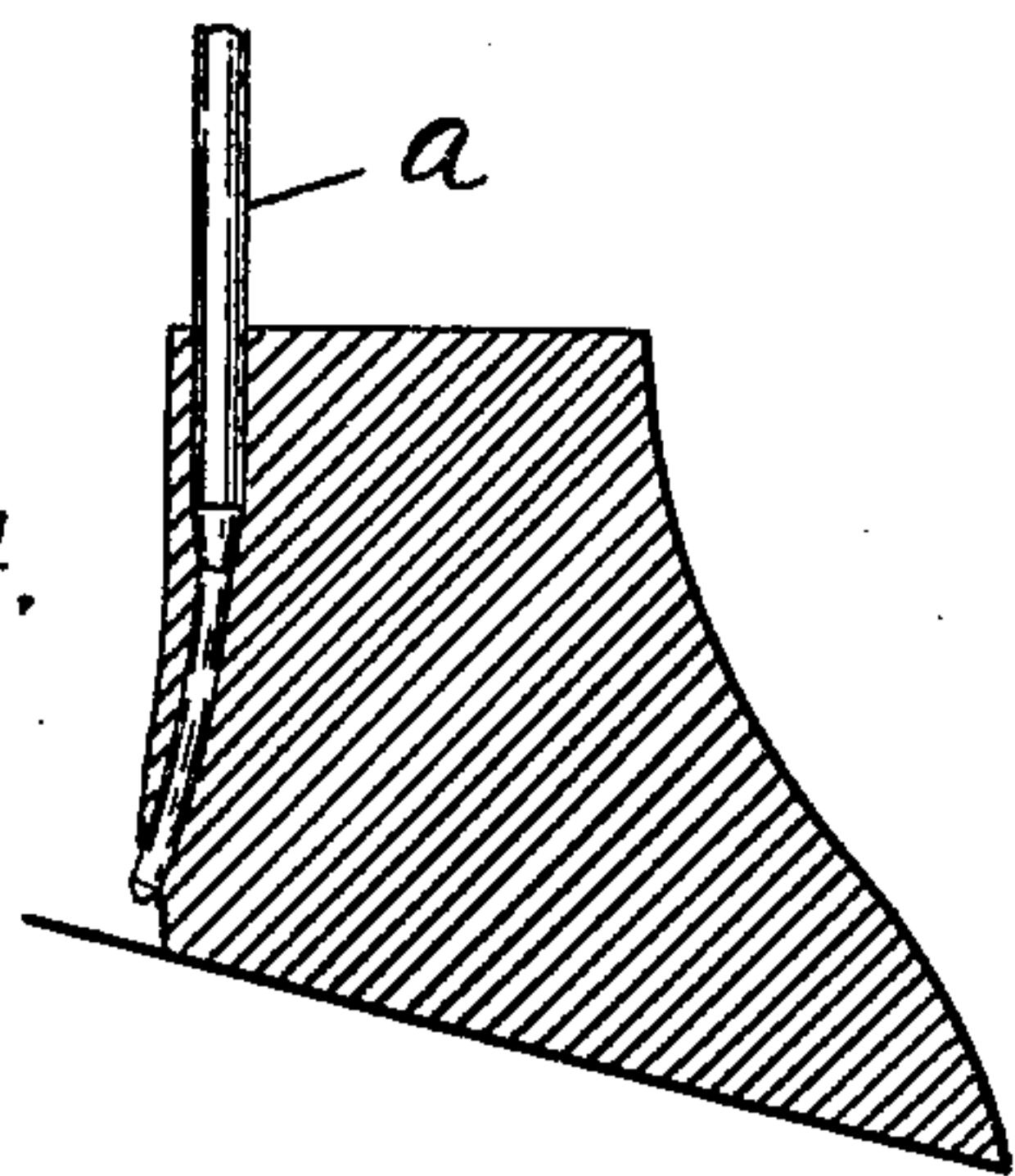


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE M. PETTENGILL, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO HAVERHILL SHOE MACHINERY COMPANY, A CORPORATION OF MAINE.

AWL FOR PRICKING HEELS.

999,182.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE M. PETTENGILL, of Haverhill, county of Essex, and State of Massachusetts, have invented an Improvement in Awls for Pricking Heels, of which the following is a specification.

In pricking a heel with a gang of awls, previous to nailing on a heel-nailing machine, it has been customary to employ awls having a conical-shaped end, the pointed portion extending from the middle to the side in a single bevel. It has been observed that when an awl of this type is forced into a heel close to the side or breast thereof the leather between the awl and the side of the heel will yield more easily than the leather at the opposite side, so that, as the awls are forced into the heel, they are gradually deflected toward the side of the heel which is nearest, with the result that, by the time an awl is forced down to its fullest extent, the awl will either have emerged at the side of the heel, or will have been perceptibly turned from a straight course into a direction obliquely toward the side of the heel. The obvious result will then be that, when the nails are driven they will also emerge at the side, or will be so directed at the lower portion of the prick-hole as either to emerge at the side or be driven so close to the side as to be struck by the heel shaving or breasting knives. This tendency to deflect the awls toward the sides of the heel even causes some heels to be split from end to end in the line of the awl-holes at each side of the heel. Obviously, any of the above occurrences renders a heel useless and necessitates its removal from the shoe, if it has been attached. Awls are also frequently broken or rendered useless by reason of the lateral deflection above referred to. In pricking a high heel to great depth, the difficulties above referred to are all the more likely to occur, as the penetrating portions of the awls are so long, or the distances between the portions which are mounted in the awl block and the points of the awls are so great, that the awls may be easily bent, or deflected, and, obviously, the deeper the awls are forced into the heel the greater will be the deflection.

The object of my invention is to provide a form of awl, which may be employed in pricking a heel, and in which all tendency of the awl to yield or be deflected from a

straight course through the heel, by reason of the unequal yielding of the material at each side of said course, will be successfully counteracted. I accomplish this object by providing the awl with an elongated leader of such relatively small diameter that the amount of material which it forces aside is so small that the yielding of the material in all directions is uniform and which is of such length that it will counteract any tendency of the conical portion of the awl, which follows, to be deflected by reason of the unequal yielding above referred to.

For a more complete understanding of my invention reference is made to the accompanying drawings, in which—

Figure 1 is an elevation of an awl made according to my invention, Fig. 2 is a similar view of the end-portion thereof on a greatly elongated scale, Fig. 3 is a sectional view of a heel illustrating the driving action when employing an awl made according to my invention, and Fig. 4 is a similar view illustrating the action when employing an ordinary awl.

According to my invention, I provide an awl having an elongated shank portion *a* with a leader *b* at its end, said leader being of approximately uniform diameter and preferably having its end square. The leader *b* is connected to the shank portion of the awl by a conical or beveled portion *c*, and the awl is preferably provided with an end portion *d*, of somewhat reduced diameter, between the beveled portion *c* and the main portion of the shank of the awl. The end portion of the shank, which is supported in the awl block, when in use, is similar to the corresponding portion of awls in general use. The leader *b* is of such small diameter that it may be and preferably is made blunt or square at its end, and yet may be readily forced into the heel, and, as there are no oblique surfaces at its end, there is practically no possibility that it will be deflected from a straight course as it is driven into the heel. Moreover, the quantity of material which is displaced by the leader is so small, as compared with the thickness of the material between the course of the awl and the side of the heel, that the material will yield equally at all sides of the leader, and there is no tendency to cause deflection of the leader by reason of unequal yielding of the material. The length of the leader *b* is

such that it will enter the leather, or other material of which the heel is made, far enough to secure a firm hold thereon before the beveled portion *c* engages the leather, so
5 that any tendency to deflect the awl from a straight course caused by variations in the force required to push the leather aside with the beveled portion *c* is fully counteracted. The result is that the course of the awl will
10 be perfectly straight throughout its length, so that the heels will not be split or the nails driven so that they will emerge at the side of the heel.

I claim:

15 1. An awl for pricking heels comprising an elongated penetrating portion having a supporting portion at one end, a relatively short, square-ended leader at the other end thereof, of relatively small and approxi-
20 mately uniform diameter, said leader being

constructed to penetrate the heel without causing unequal yielding of the material thereof at either side of its course, substantially as and for the purpose set forth.

2. An awl for pricking heels comprising 25 an elongated penetrating shank having a supporting portion at one end, and a relatively short, square-ended leader, of relatively small diameter, at the other end, the portion between the leader and the shank be- 30 ing beveled, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE M. PETTENGILL.

Witnesses:

L. H. HARRIMAN,
H. B. DAVIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
