L. S. WIGNOT.

DEVICE FOR PLACING AND RETAINING INSOLES ON LASTS.

APPLICATION FILED JUNE 30, 1915.

1,166,957.

Patented Jan. 4, 1916.

Fig. 1.

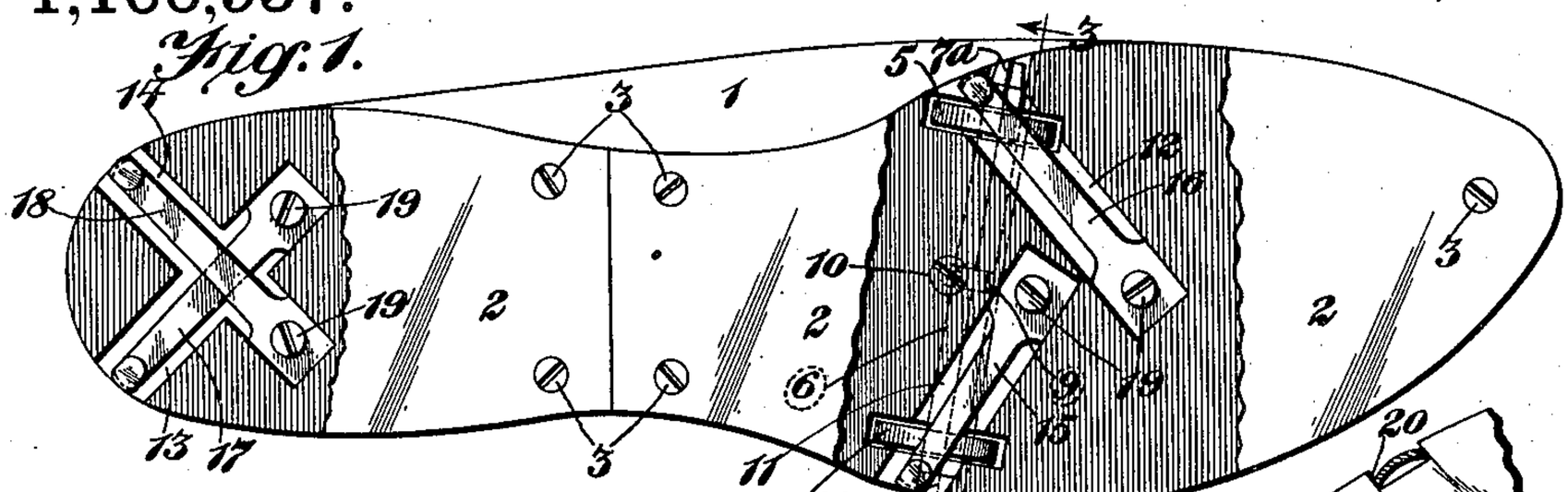


Fig. 2.

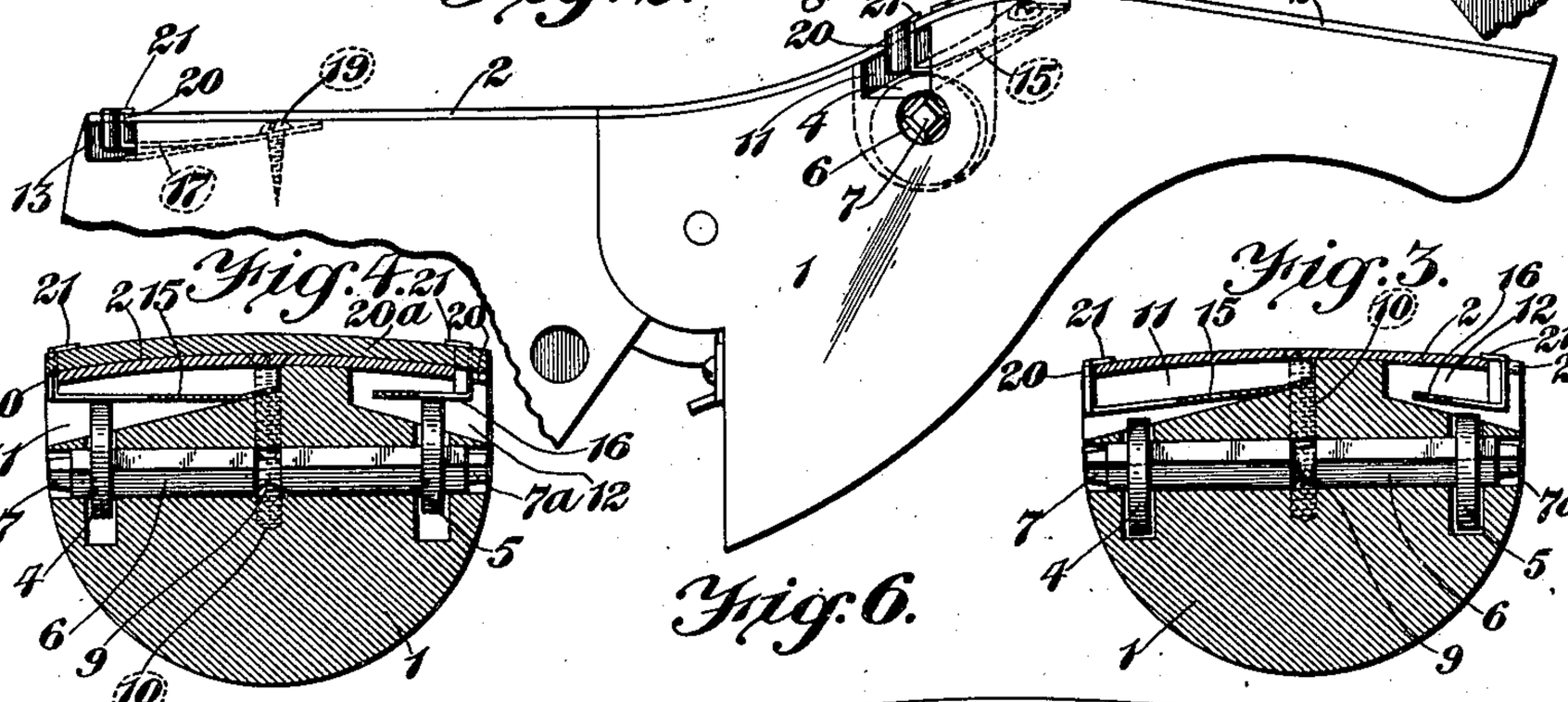


Fig. 5.

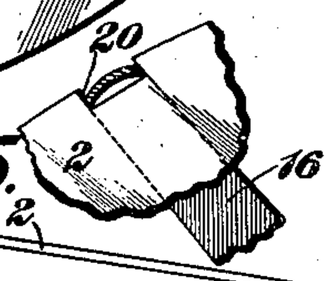


Fig. 4.

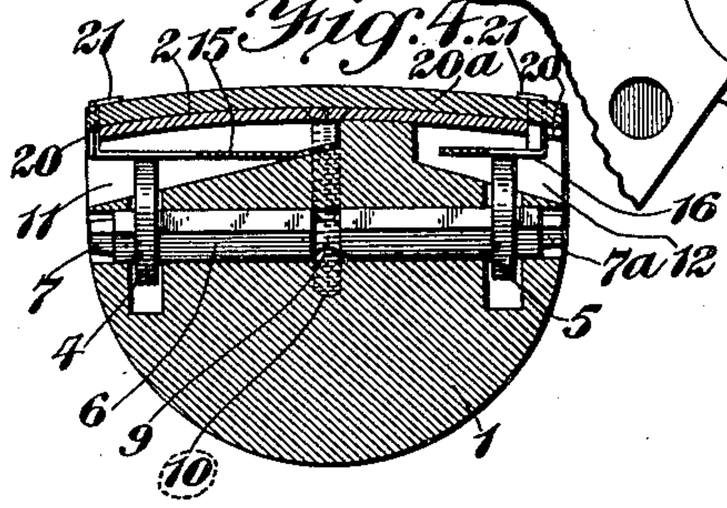


Fig. 3.

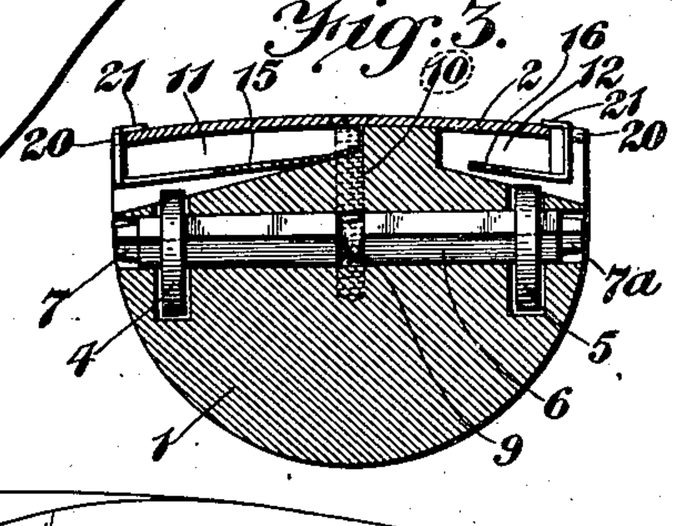


Fig. 6.

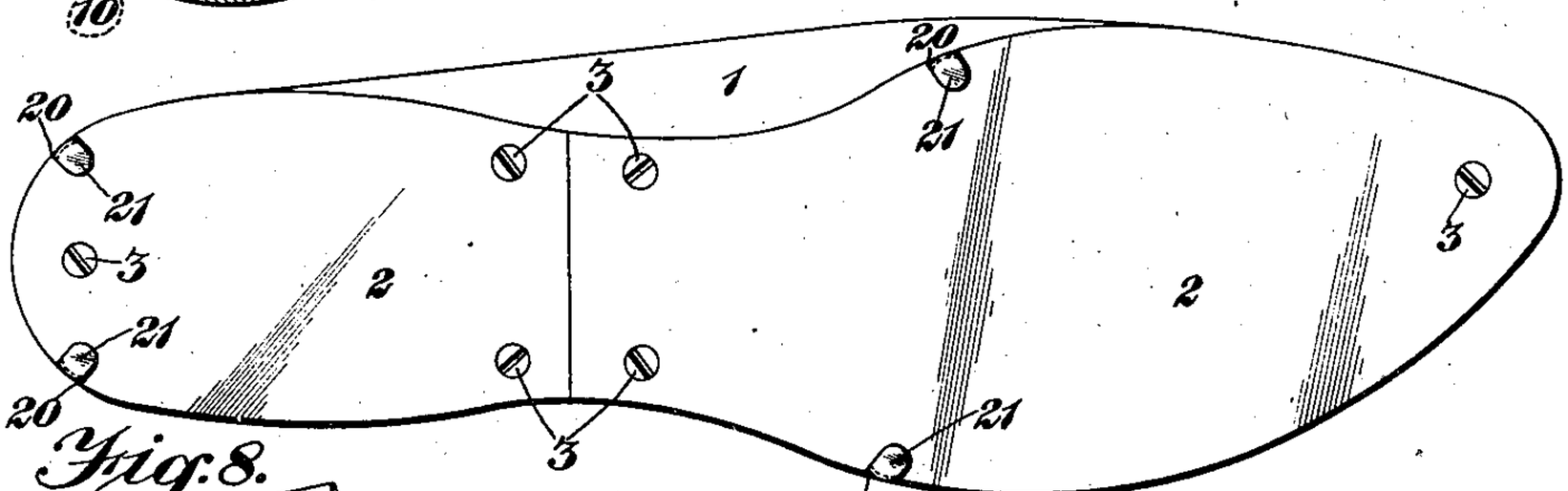


Fig. 8.

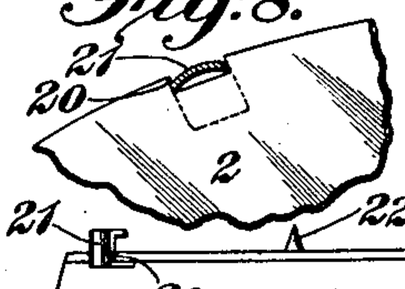
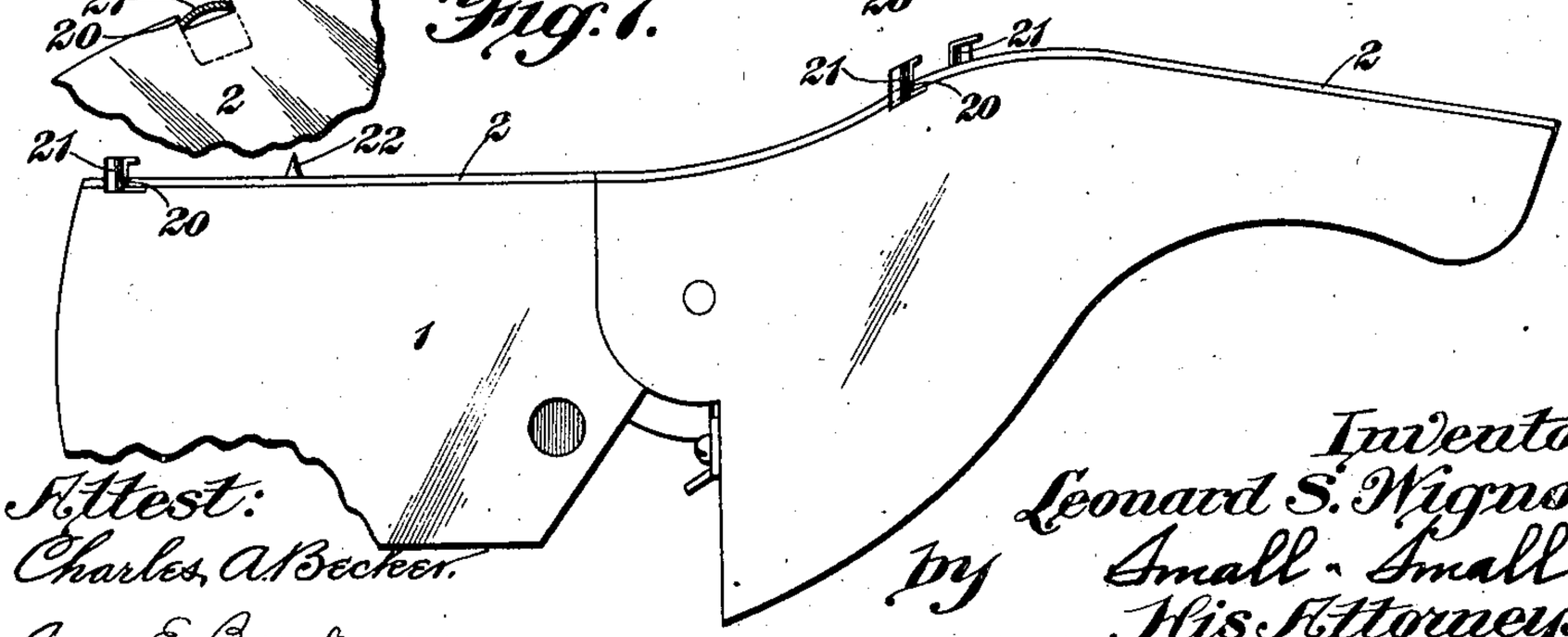


Fig. 7.



Attest:
Charles A. Becker.
Anna E. Brockmeier

Inventor.
Leonard S. Wignot,
by Small & Small
His Attorneys.

UNITED STATES PATENT OFFICE.

LEONARD S. WIGNOT, OF ST. CHARLES, MISSOURI, ASSIGNOR OF ONE-HALF TO LUCY MARIE WIGNOT, OF ST. CHARLES, MISSOURI.

DEVICE FOR PLACING AND RETAINING INSOLES ON LASTS.

1,166,957. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed June 30, 1915. Serial No. 37,348.

To all whom it may concern:

Be it known that I, LEONARD S. WIGNOT, a citizen of the United States of America, residing at St. Charles, in the county of St. Charles, State of Missouri, have invented certain new and useful Improvements in Devices for Placing and Retaining Insoles on Lasts, of which the following is a specification.

This invention relates to improvements in devices for properly placing an insole on a shoe last and retaining the same during the lasting and making operation, a prime object of the invention being to afford a simple, durable and inexpensive structure for the purpose described which can be easily incorporated into the style of last now commonly employed and will serve to prolong its life.

In the manufacture of shoes it is now the usual practice, before the "pulling-over" and lasting operation, to secure the insole to the last by means of several tacks which are driven through the insole (along the center line thereof) and into the bottom of the last, the metal plate covering the latter being slotted for this purpose. It is the practice to remove these tacks before the shoes leave the factory as, if they are allowed to remain, there is danger of an injury being done to the feet of the wearer, and for this purpose it is necessary to employ one or more persons, depending upon the quantity of shoes produced. Obviously, the cost of first inserting and subsequently removing these tacks is considerable when considered in the aggregate and it will also be appreciated that this continuous insertion and withdrawal of tacks will in time so disintegrate the wood of the last as to render it unfit for use. Having in view these facts, I have produced a last comprising devices which render unnecessary the use of tacks and slotting of the covering plate, and which further insure that the insole will assume the proper position above said plate and remain in that position during the subsequent steps in the manufacture of the shoe.

In the drawing hereto annexed, wherein like numerals refer to like parts throughout the several views, Figure 1 is a plan view of the preferred form of my invention, with the top plate partly broken away; Fig. 2, a side elevation thereof; Figs. 3 and 4 cross-sectional views taken along line 3—3 of Fig. 1; Fig. 5, a fragmentary detail view serving to illustrate the conformation and relation of certain parts hereinafter described; Fig. 6, a plan view of the last as the same appears with the top plate complete; Fig. 7, a side elevation of a modification of the invention; and Fig. 8, a fragmentary detail view illustrating the conformation of one of the holding clips and its relation to the edge of the top plate.

Referring to the accompanying drawing, numeral 1 indicates the body of the customary wooden last and 2 the comparatively heavy metal plate which is usually formed in two sections and fixed upon the last by means of screws 3. Having first removed said plate, I form in the wooden portion of the last a small circular channel extending from side to side and insert adjacent the ends thereof cam-disks 4 and 5 each of which is provided with a square-cut aperture for the reception of a square shaft 6 whose opposite extremities are tapered as at 7, 7ª to fit within the open end of a detachable key 8. In order to prevent lateral movement of shafts 6, I form at the center thereof a circumferential groove indicated by numeral 9 and project the shank of a screw 10 within said groove, the screw passing through the channel aforesaid at one side of said shaft. These steps having been taken, the last is then cut at four (4) different points to provide slots 11, 12, 13 and 14, the bottom of each of which is downwardly inclined from the median line of the last (as shown in Figs. 3 and 4) so as to render them of greatest depth at the edges of the last. At the inner end of each of said slots spring-metal clamps 15, 16, 17 and 18 are secured by means of screws 19, and it will be observed that the free extremity of each of said clamps is rebent over plate 2 whose edge is provided with shallow recesses 20 through which the clip is projected as best shown in Fig. 5.

In order to insure the easy removal of the insole from the last during the subsequent operations in the manufacture of the shoe, clamps 15 and 16 are preferably located between the widest part of the ball of the last and the narrowest part of its shank, while the clamps 17 and 18 may be disposed at any point between the widest part of the heel of the last and the narrowest part thereof.

In a last as thus constructed the spring

clamps are normally depressed so that their rebent portion lies closely upon plate 2 as shown in Fig. 3, whereby bending or breaking of the clips is prevented. When it is desired to fix an insole upon the last, the operative raises clamps 17 and 18 with his thumb and forefinger, inserts the edge of the sole 20ª thereunder and then releases his hold upon these clamps, after which key 8 is engaged with either end of shaft 6 and given a half turn which serves to force cam-disks 4 against the under surface of clamps 15 and 16, whereby the latter are raised (as shown in Fig. 4) to permit the insertion therebeneath of the edge of the insole, said key being subsequently turned to its original position thus permitting said clamps to descend upon the sole.

In the modification shown in Figs. 7 and 8 stationary clamps 21 soldered to the under surface of plate 2 are employed in lieu of the spring-clamps hereinbefore described, the clamps 21 being located at the same points on the last as described with reference to the spring-clamps and normally projecting thereabove a sufficient distance to permit of the insertion of the insole edge. In this form of the invention it will be noted that a sharpened pin 22 projects upwardly from the heel portion and this serves, when a hammer blow is directed upon the portion of the last thereabove, to supplement the action of the clamps 21 in preventing accidental longitudinal movement of said sole.

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

1. A last having a plurality of sole-retaining clamps disposed adjacent to the edge of the bottom thereof.

2. A last having a plurality of resilient sole-retaining clamps disposed adjacent to the edge of the bottom thereof.

3. A last having a metal plate provided with marginal recesses; affixed upon the bottom thereof, and a plurality of sole-retaining clamps projecting through said recesses from beneath said plate.

4. A last having a metal plate provided with marginal recesses; affixed upon the bottom thereof, and a plurality of resilient sole-retaining clamps projecting through said recesses from beneath said plate.

5. A last having a metal plate affixed upon the bottom thereof, a plurality of sole-retaining clamps disposed beneath said plate extending over the edge thereof, means for retaining the gripping portion of said clamps against said plate, and mechanism for raising said clamps to permit the insertion of an insole between said gripping portion and said plate.

6. A last having a metal plate affixed upon the bottom thereof, a plurality of sole-retaining clamps disposed beneath said plate extending over the edge thereof, means for retaining the gripping portion of said clamps against said plate, a revoluble shaft projecting through said last beneath said clamps, cam-disks mounted upon said shaft adapted to raise said portion of certain of said clamps above said plate to permit the insertion of an insole, and means for operating said shaft.

7. A last having a pair of sole-retaining clamps disposed at opposite sides thereof between the widest part of the ball of the last and the narrowest portion of the shank thereof, and a pair of said clamps disposed between the widest part of the heel of the last and the narrowest portion thereof, whereby the sole may be easily removed when desired.

8. A last having a metal plate affixed upon the bottom thereof, a plurality of resilient sole-retaining clamps disposed beneath said plate extending over the edge thereof, means for retaining the gripping portion of said clamps against said plate, a revoluble shaft projecting through said last beneath said clamps, cam-disks mounted upon said shaft adapted to raise said portion of certain of said clamps above said plate to permit the insertion of an insole, and means for operating said shaft.

LEONARD S. WIGNOT.

Witnesses:
WM. WAYE, JR.,
RAYMOND WAYE.