

(No Model.)

J. W. D. FIFIELD.
Last.

No. 239,378.

Patented March 29, 1881.

Fig. 1.

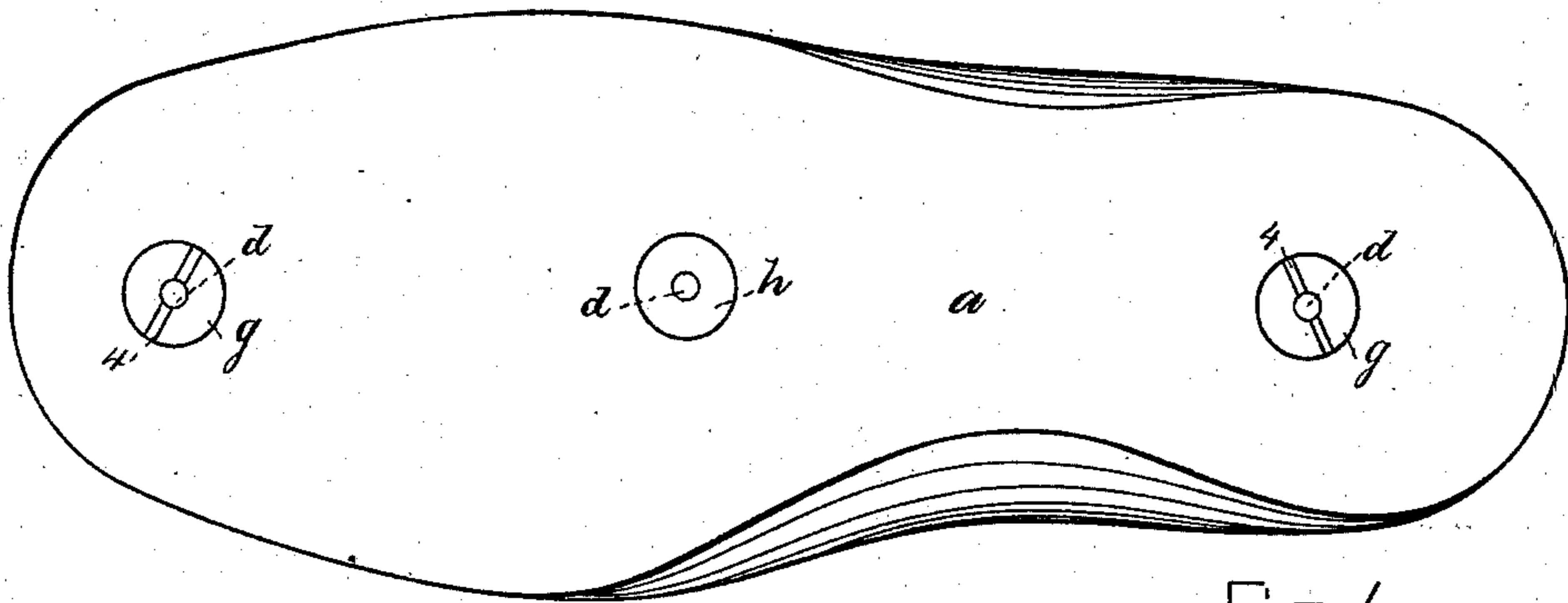


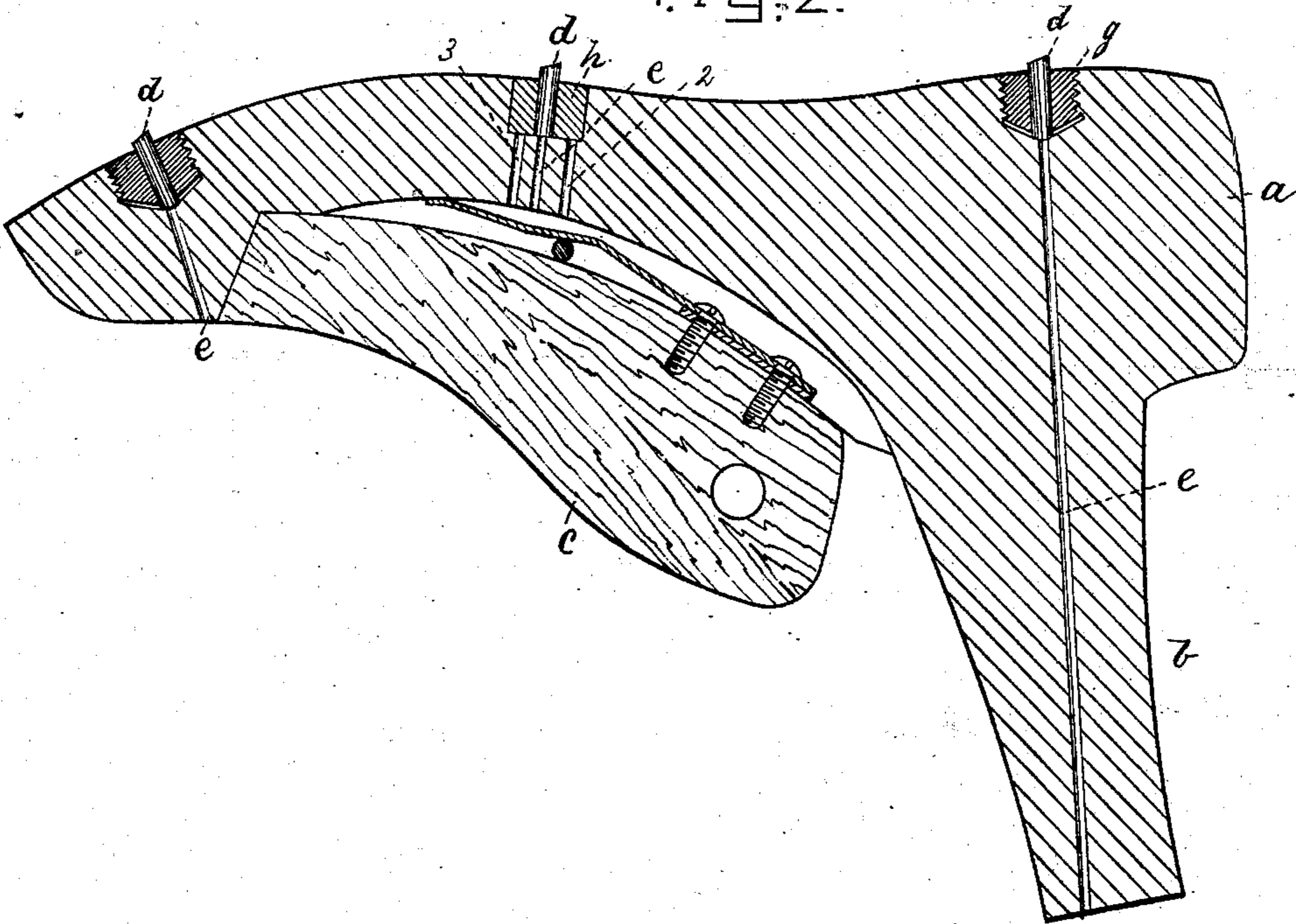
Fig. 3.



Fig. 4.



Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN W. D. FIFIELD, OF NORTH BROOKFIELD, MASSACHUSETTS.

LAST.

SPECIFICATION forming part of Letters Patent No. 239,378, dated March 29, 1881.

Application filed February 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. D. FIFIELD, of North Brookfield, Worcester county, State of Massachusetts, have invented an Improvement in Lasts, of which the following description, in connection with the accompanying drawings, is a specification.

My invention relates to improvements in lasts for use in the manufacture of boots and shoes, and is herein shown embodied in a metal last.

The bottoms of lasts have been provided with spurs driven directly into shallow holes drilled in the bottoms of the lasts, but when said spurs are broken off the portions of the spurs left in the last can be removed only by drilling or by a cold-chisel.

The object of my invention is to so apply these spurs to the bottom of the last that in case they are broken the part of the spurs left in the last may be quickly and easily removed and a new one supplied. To do this I have made in the last certain holes in line with the spur-receiving holes, but of less diameter, so that by means of a steel wire, or suitable metal prong inserted therein, the spur may be struck or operated upon from its base or inner end and be knocked out from the bottom of the last. Instead of inserting the spurs directly in holes made in the bottom of the last, I have shown them as held by removable holders, which I prefer to use.

Figure 1 represents the bottom of an iron, or iron-shod, last made in accordance with my invention; Fig. 2, a longitudinal vertical section thereof; Fig. 3, one of the spur-holders, and Fig. 4 a modified form of spur.

The last *a*, its projection *b* to enter the socket of a standard, and the block *c* are all as usual.

The spurs *d*, extended somewhat above the bottom of the last, are suitably shaped at their upper or outward ends to somewhat enter the inner sole laid upon the last when struck by a hammer or mallet near the said spurs. The holes which receive these spurs are of less diameter than the passages *e*, which intersect the said holes, so that the inner ends of the spurs

may be supported so as not to be driven down through the last from its bottom; but in case a spur should break off, I may place a small steel or metal rod in the passage *e*, against the inner end of the spur, and by a blow, or force applied to the end of the rod, force the spur from the bottom of the last outward.

I prefer, in practice, to place each spur *d* in a removable holder, *g*, either provided with a screw-thread, as at the toe and heel of the last, or made as a plug driven into the bottom of the last, as shown at *h*. In such case the plug may be driven out by the wire referred to placed in passages 2 3.

Each screw-threaded holder *g* is provided with a slot, 4, to receive a screw-driver, to permit the holder to be readily screwed in or out.

When the holder is made removable I may, if desired, provide the spur with a head, as in Fig. 4, and insert it in the holder from its inner end, the said spur in such case being removable only after removing the holder.

When the inner sole is confined to the last by means of the spurs, as described, the edges of the upper may be drawn over on the inner sole and secured by tacks or pegs, after which the outer sole may be applied and nailed in place, the ends of the nails clinching on the iron bottom of the last.

I claim—

1. A last provided with a hole to receive a spur, and with a passage coincident therewith and with a spur, but smaller in diameter than the said spur, to permit the spur to be acted upon at its inner end to be driven out from the bottom of the last, substantially as described.

2. In a last, the removable screw-threaded holder provided with an opening to receive a screw-driver or device by which to turn it, combined with the spur held by the said holder, substantially as described.

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

JOHN W. D. FIFIELD.

Witnesses:

G. W. GREGORY,
W. H. SEGSTON.