

F. J. SHAINSEY.

LAST.

APPLICATION FILED AUG. 19, 1903.

905,240.

Patented Dec. 1, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

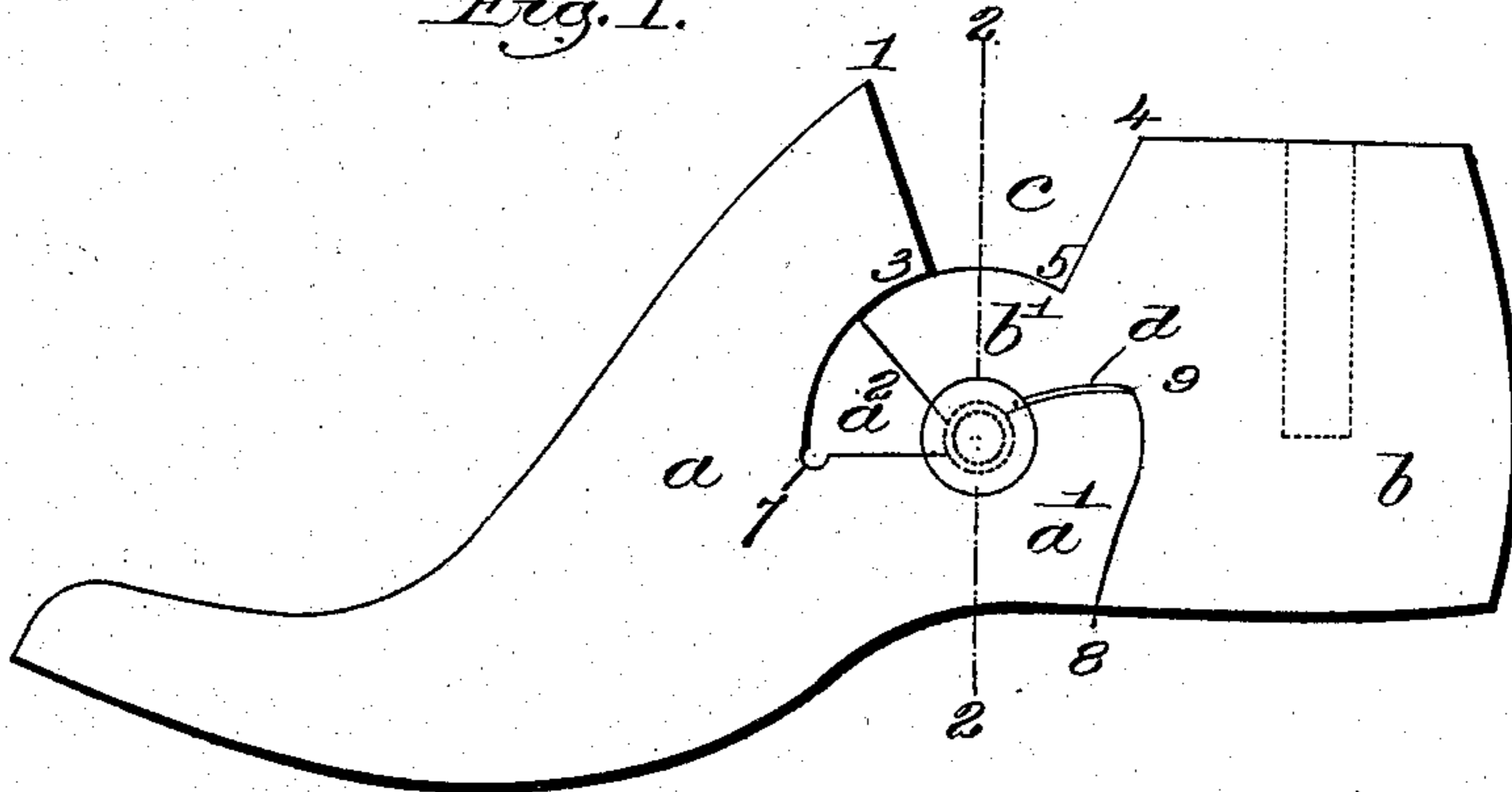


Fig. 2.

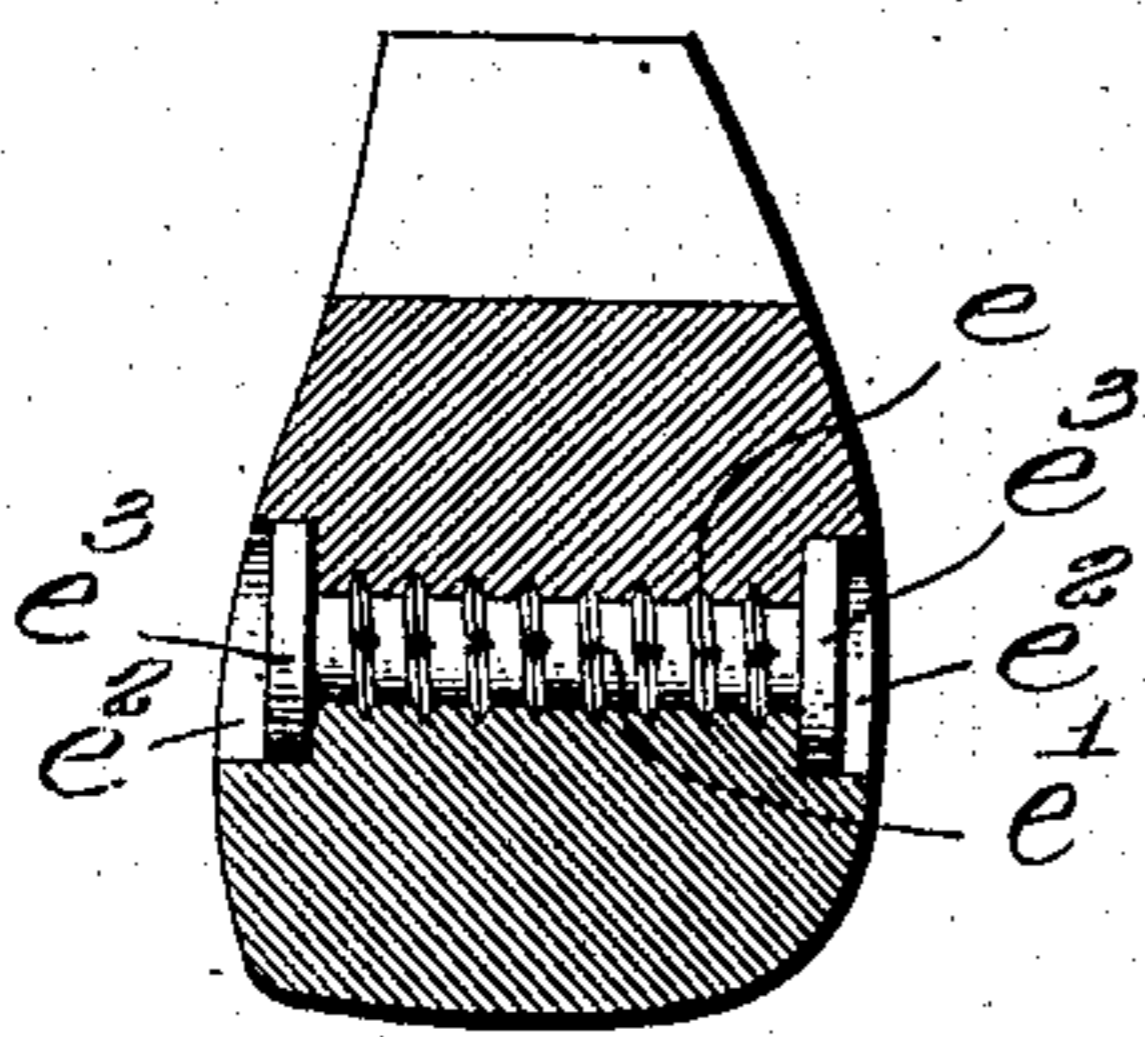


Fig. 3.

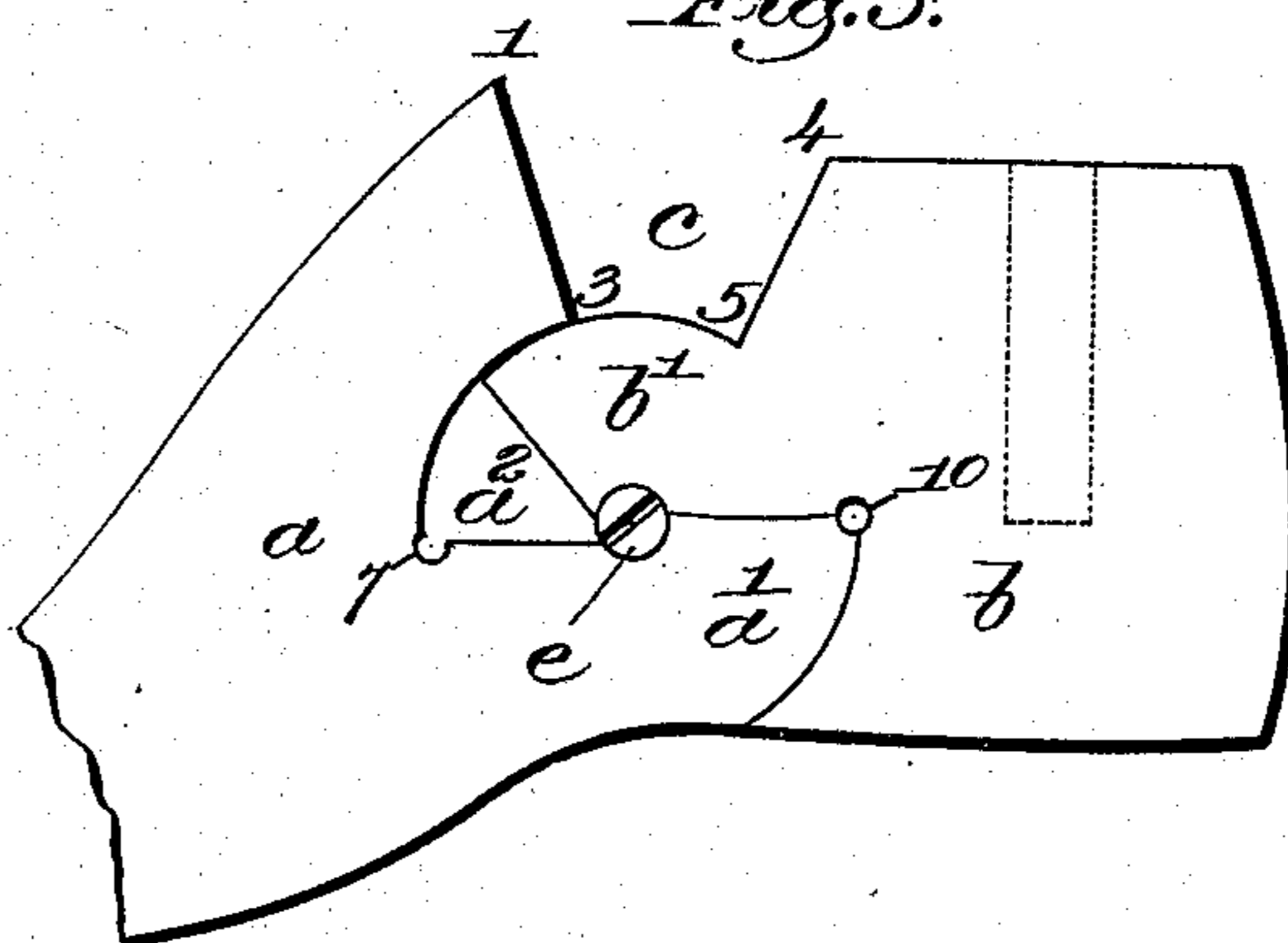
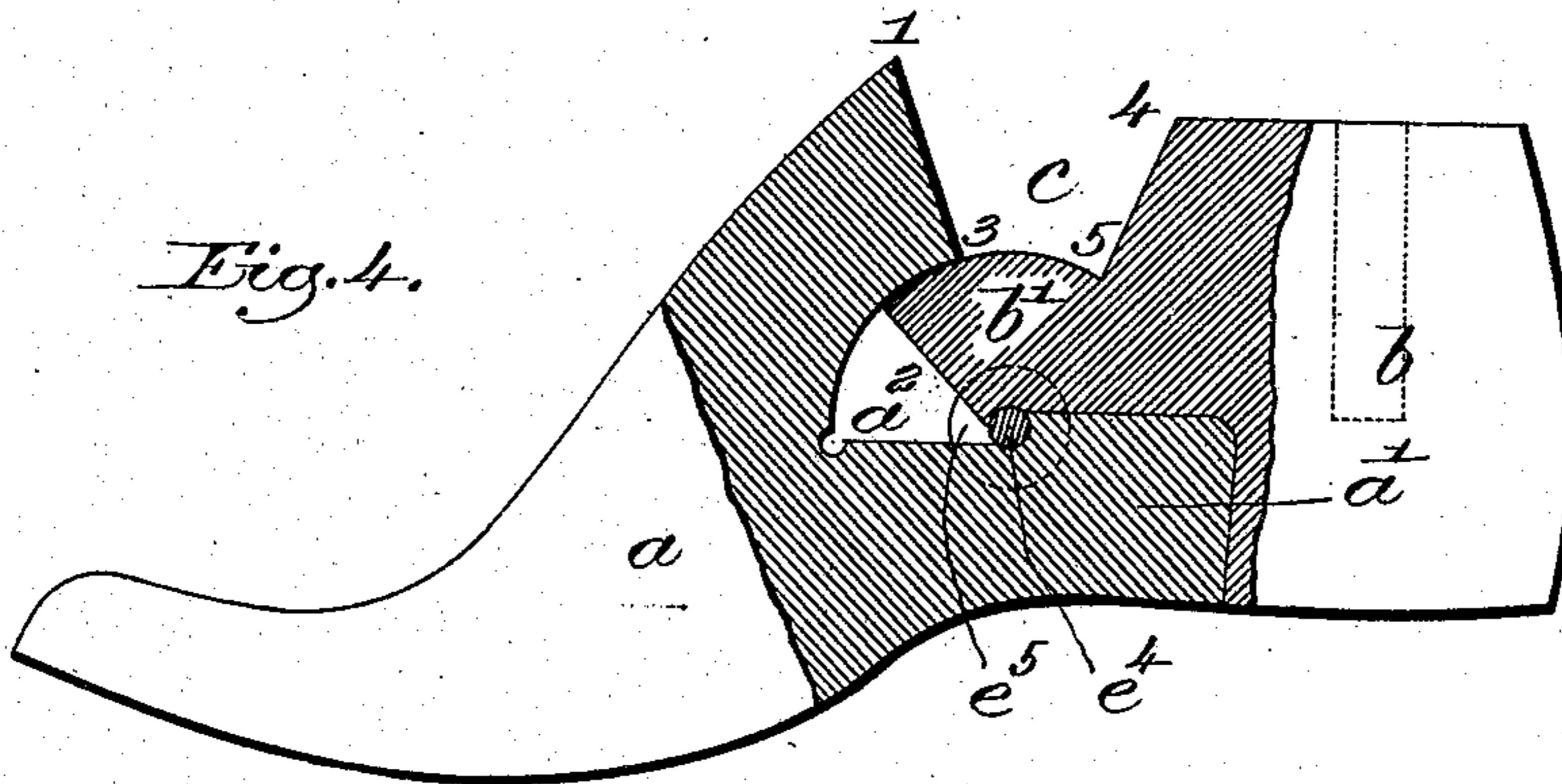


Fig. 4.



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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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LAST.

No. 905,240.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRED JOHN SHAINSEY, a citizen of the United States, residing at Dayton, in the county of Montgomery, in the State of Ohio, have invented an Improvement in Lasts, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is a last and is especially adapted for use as a follower or second last.

My invention is of the hinged last variety, so called, and has for its object a construction in which the heel-part turns on the fore-part without disconnecting therefrom and without requiring the labor and expense of the application of a separate hinge, but instead of the latter, I secure the requisite turning action simply by the manner in which the wood is sawed.

The constructional details and further advantages of my invention will be pointed out more fully in the course of the following description, reference being had to the accompanying drawings in which I have shown several embodiments of my invention.

In the drawings, Figure 1 shows in side elevation a preferred embodiment and Figs. 3, 4, 5, and 6 are similar views of modifications, Fig. 4 being broken away. Fig. 2 is a transverse vertical sectional view taken on the line 2—2, Fig. 1.

It will be understood that the general character of the last may be of any usual or preferred kind, my invention relating to the joint thereof.

In general terms, my invention consists of having a fore-part *a*, provided with a rear extension *a'* and a heel-part *b*, provided with a forward extension *b'*, said two extensions overlapping each other and the fore-part having a recess *a²* for receiving the heel-part extension *b'* in such position that as the heel-part turns upon the fore-part, said extension moves into said recess and holds the parts at all times interlocked.

In forming my last, I remove the wood to form a gap *c* by sawing in from the instep along the line 1—3 and from the top of the last along the line 4—5, and then preferably bore one or more transverse holes and make at least two curved saw cuts.

In the construction shown in Fig. 1, I bore a hole at the pivotal point and another at 7,

and then saw in a straight line from the bottom of the pivot hole to 7 and thence in the arc of a circle to 5, and then make another cut from the bottom at 8 to the point 9 and thence to the upper side of the pivot hole, and then cut off the end of *b'* obliquely to permit it to turn into the recess *a²*. The space made by the saw kerf may be taken up by metal plate *d*, if desired. I then insert in the pivot hole a pin for holding the last-parts against shifting laterally and also for tightening them in place, said pin in Fig. 2 being shown as consisting of a special screw *e* having offsets *e'* in its threads to aid in retaining it properly in place; and the screw *e* is provided with large circular heads *e³*, counter-sunk deeply in the last parts as shown at *e²*, which serve both to retain the last-parts in place and to help give precision of pivotal movement and hold the last firmly together.

The construction shown in Fig. 3 is very much like that already described, excepting that I bore not only the pivot hole and the hole 7 but also a rear hole at 10 so as to provide a sharper internal angle or corner on the extension *a'*. And I have also simply provided a screw *e* therefor, having omitted therefrom the countersinks and rivet heads.

In Fig. 4 I have shown a slightly different rear cut and have omitted the screw threads, simply showing the parts as retained by and turning on a usual rivet *e⁴*, whose heads *e⁵* are countersunk the same as already described.

In Figs. 5 and 6, I have omitted altogether the boring of transverse holes and have not provided any screw, rivet or other transverse device, but have simply provided the extension *a'* with a groove or depression *a³* sawed therein and the projection *b'* with a transverse rib or lump *b²* formed thereon for fitting snugly into the complementary part *a³*.

In Fig. 5 a pin *e⁶* passes upwardly through the extension *a'* into a pocket *e⁷* provided therefor in the extension *b'* thereby tending to hold the parts together and also prevent their lateral shifting, and in Fig. 6, a somewhat similar construction is provided rearwardly thereof so as to permit the parts to be separated if desired, a pin *e⁸* extending upwardly through the extension *a'* into a pocket *e⁹* in the heel-part in such position that when the heel-part is thrown up it will

disengage from said pin and the two parts may then be separated laterally, if occasion require it.

Instead of taking up the saw cut space by a plate d , the extension b' may be held tightly in place by employing a larger rivet or screw than the size of the hole bored at the pivot. The outer end of the grooved wall of the recess a^2 is thus engaged by the extension b' , which has a sliding fit therewith and closes the mouth of said recess, but preferably the inner end of the curved wall of the recess a^2 diverges slightly from the path of the swinging outer end of said extension b' , so as to give free inward movement to the said extension.

In operation when the heel-part is thrown up, according to all the embodiments of my invention herein shown, the extension b' turns inwardly and downwardly until it fills the recess a^2 at which time the last is entirely collapsed so that it may readily be removed from or inserted in a shoe.

When inserted in a shoe the heel-part is turned down, forcing the fore-part tightly into the toe of the shoe and bringing the parts of the last into the positions shown in the drawings.

The overlapping projections give considerable strength to the joint portion of the last; there is no possibility of either part getting lost from the other; they cannot get out of proper alinement; and the construction is such that there is a smooth closed surface over substantially the entire area of the opposite sides of the last.

I do not intend to restrict myself to the constructional details herein presented as I am aware that many changes may be resorted to without departing from the spirit and scope of my invention, and accordingly I do not intend to limit myself otherwise than as expressed in the claims taken in connection herewith.

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

1. A hinged last, having its fore-part provided with a recess at its rear end, normally partially open, the heel-part having an extension constituting a hingeless-connection for permanently interlocking the last parts and shaped to bear in binding sliding engagement at all times with the opposite sides of said recess, said extension extending over into said recess and turning down into and closing the same when the last-parts are collapsed.

2. A hinged last, having its fore-part and heel-part each provided with extensions that of the heel-part horizontally overlapping in direct lengthwise contact on the extension of the forepart when the last is in lengthened position, said fore-part having a normally partially open recess above its extension, and

the extension of the heel-part closing and wedging against the mouth of said recess in such a manner as to lock the last parts together and being constructed to turn down into said recess when the last is collapsed.

3. A hinged last, having a rearward extension at the bottom of its fore-part and an overlapping extension projecting from its heel-part, a recess being formed in the forepart to receive said heel-part extension, and the heel-part pivoting on the forepart midway of the length of said forepart extension.

4. A hinged last, having its fore part and heel part provided with overlapping extensions, said fore-part extension having at its upper side a transverse groove, and means resting in said groove and interlocking said two extensions together, said heel-part extension having its upper portion projecting forward beyond said means and being overhung and engaged by the upper portion of the fore-part.

5. A hinged last, having overlapping extensions extending from its fore-part and heel-part, a recess in the fore-part permitting the extension of the heel-part to turn thereinto when the last is collapsed, said parts having their pivotal axis located between the overlapping portions of said extensions, and means for preventing lateral shifting of the heel-part relatively to the fore-part.

6. A hinged last, having its fore-part and heel-part provided with overlapping extensions, the upper portion of the fore-part overhanging the heel-part extension and a pivot pin occupying opposite grooves formed in the adjacent horizontal faces of said two extensions.

7. A hinged last, having its fore-part and heel-part provided with overlapping extensions, the upper portion of the fore-part overhanging the heel-part extension, and a pivot pin occupying opposite grooves formed in the adjacent horizontal faces of said two extensions, said pin being threaded for preventing lateral movement.

8. A hinged last, having its fore-part and heel-part provided with overlapping extensions, the upper portion of the fore-part overhanging the heel-part extension, and a pivot pin occupying opposite grooves formed in the adjacent horizontal faces of said two extensions, said last-parts being countersunk adjacent said pivot, and said pin having enlarged circular ends fitting said countersinks.

9. A hinged last, having its forepart and heel-part provided with overlapping extensions, the upper of said overlapping extensions having a normally downwardly protruding under-surface, said upper extension being arranged to turn at its projection on the approximately horizontal upper surface of the lower extension, said extensions moving angularly apart at the rear of said projection when the heel-part is turned up in

shortening the last and moving angularly
apart at the front of said projection when
the heel-part is turned down in lengthening
the last, hingeless means permanently hold-
5 ing said last-parts against longitudinal move-
ment at the turning point, and means for
preventing lateral shifting of the last-parts.

10 10. A hinged last, having its forepart and
heel-part provided with overlapping exten-
sions shaped to turn on each other inter-
mediate their longitudinal length and pro-
vided with interlocking portions for pre-
venting relative longitudinal movement at
said turning point, said forepart having a

rearwardly overhanging upper portion above 15
said point of turning in continuous engage-
ment with the projecting forward end of
the extension of the heel-part, said engage-
ment constituting the holding means for
maintaining said interlocking portions in 20
permanent engagement with each other.

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

FRED J. SHAINSEY.

Witnesses:

W. H. H. ECKI,

E. J. FINKE.