No. 817,828. PATENTED APR. 17, 1906.

E. C. WOODARD.

LAST.

APPLICATION FILED SEPT. 28, 1905.

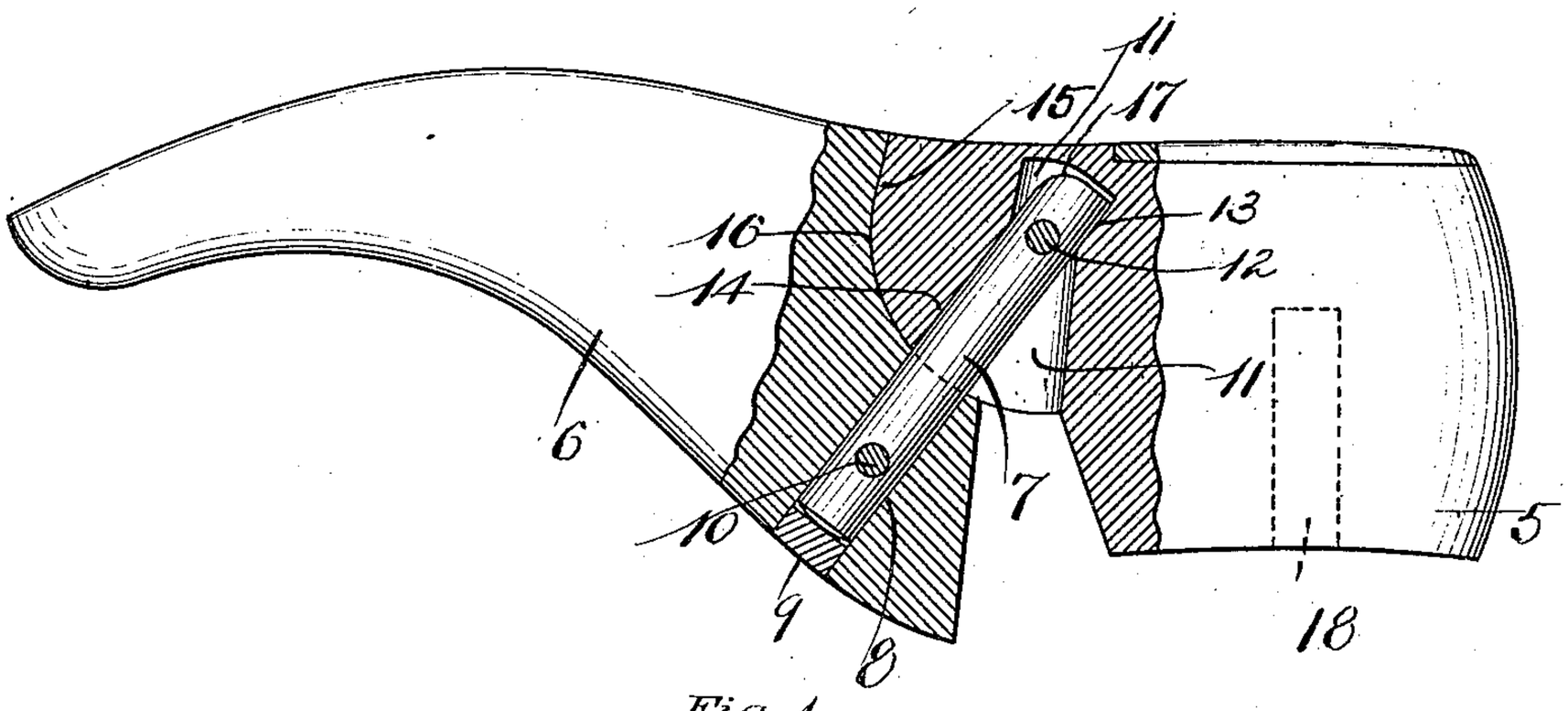

Fig. 1.

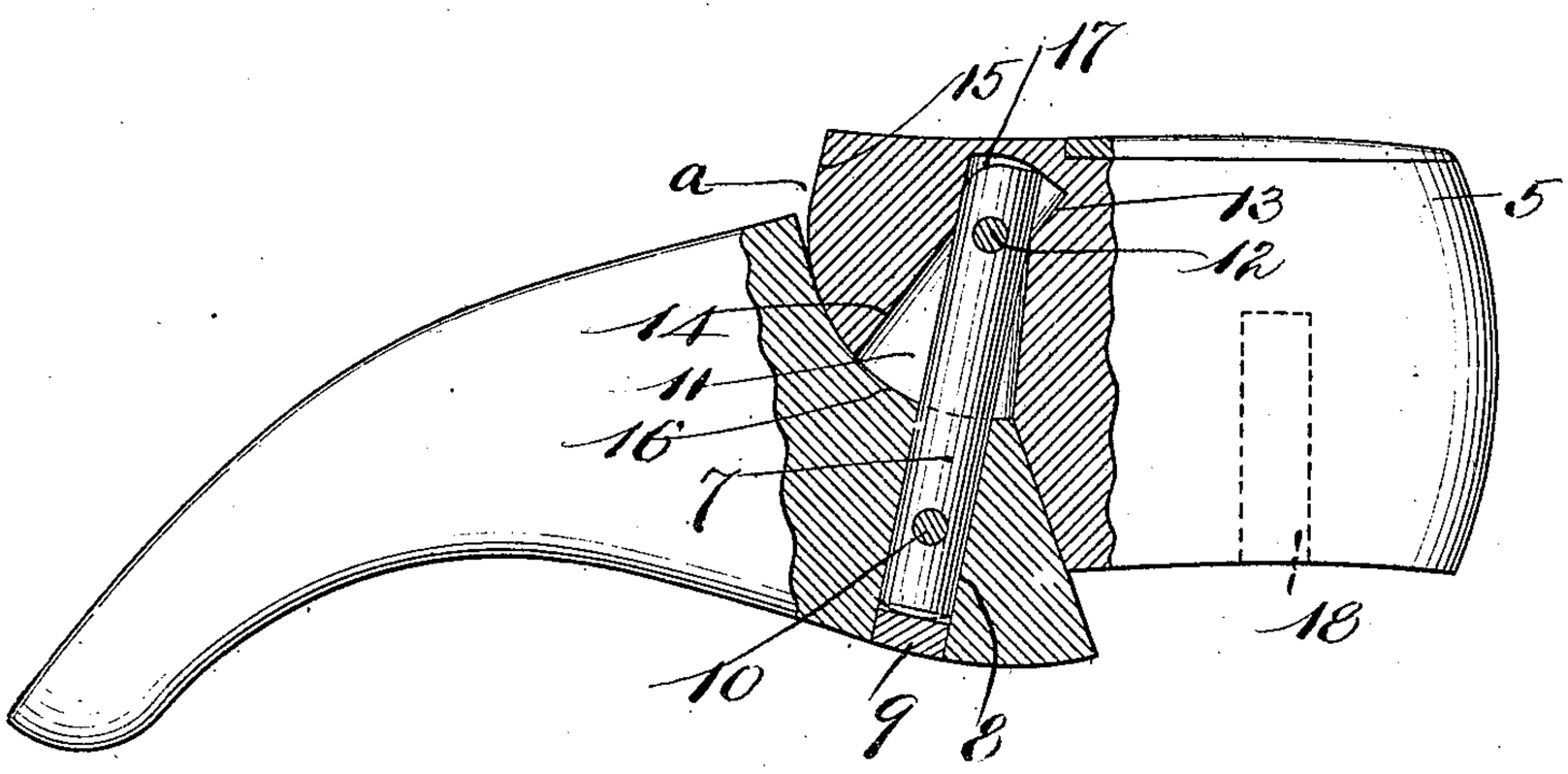

Fig. 2.

Witnesses:
Louis A. Jones.
William C. Glass.

Inventor:
Edward C. Woodard
by his attorney, Walter V. Gooding

UNITED STATES PATENT OFFICE.

EDWARD C. WOODARD, OF CAMPELLO, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO HORACE F. WOODARD, OF CAMPELLO, MASSACHUSETTS.

LAST.

No. 817,828. Specification of Letters Patent. Patented April 17, 1906.

Application filed September 28, 1905. Serial No. 280,419.

To all whom it may concern:

Be it known that I, EDWARD C. WOODARD, a citizen of the United States, residing at Campello, in the county of Plymouth and State of Massachusetts, have invented new and useful Improvements in Lasts, of which the following is a specification.

The object of this invention is to provide a two-part last of simple, cheap, and strong construction, the parts being pivoted one to the other in such a manner that when the last is collapsed to withdraw it from the shoe the fore part will swing under the heel part, the bottom of the fore part thus descending below the level of the bottom of the heel part, assuming said last to be placed as ordinarily used in shoe machinery of different types—viz., with the bottom of the last uppermost—thus making it easy to withdraw the last from the shoe.

The object of the invention is, further, to so construct said parts that the heel part shall extend along the bottom of the last toward the toe to a substantial distance beyond the pivot by which said parts are joined together, whereby great strength to resist pressure against the shank portion of the sole is secured and also a leverage against the shank of the shoe when the last is collapsed to aid in forcing the fore part under the heel part and to enable the last to be withdrawn from the shoe, as hereinafter described.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a side elevation of my improved last, partly broken away and shown in section, the fore part and heel part being in the relative positions assumed when said last is in use. Fig. 2 is a side elevation, partly in section, showing the last collapsed or with the fore part moved downwardly relatively to the heel part.

Like numerals refer to like parts throughout both the views of the drawings.

In the drawings, 5 is the heel part, and 6 the fore part, of my improved last.

7 is a standard, preferably consisting of a cylindrical rod rigidly fastened to the fore part 6, said standard being driven into a hole 8, extending through the rear portion of said fore part at an angle to the bottom thereof and toward the heel portion of the last. The hole 8 is preferably closed by a plug 9. The standard 7 is further fastened securely to the fore part by a pin 10, extending transversely through said standard and fore part. The standard 7 projects beyond the fore part 6 into a recess 11, formed in the heel part 5. Said heel part is secured thereto by a pivotal pin 12, which extends through the standard 7 and transversely across the heel part 5. The standard 7 projects toward the bottom of the heel portion 5 beyond the pivotal pin 12, and when the parts are in the position illustrated in Fig. 1 the rear side of said standard rests against the rear side 13 of said recess, while the front side of said standard rests against the front side 14 of said recess between said pivot 12 and the fore part 6. The heel part 5 is convexly curved upon its front side 15 concentric with the pivot 12, and said convexly-curved front side projects into a correspondingly-concaved recess 16, provided in the rear side of said fore part. The upper front corner 17 of said standard 7 is rounded off in order that said standard may swing upon the pivot 12 when the last is collapsed. The usual hole 18 is provided in the heel part 5 for the pin of the jack to enter It will be noted that the heel part extends along the bottom of the last toward the toe to a substantial distance beyond the pivot 12.

The operation of my improved last is as follows: Assuming the parts to be in the position illustrated in Fig. 1—that is, when the last is not collapsed and is ready for use—it will be seen that any pressure applied to the rear portion of the heel part 5 or to the right of the pivot 12 will be directly taken by the jack-pin, which is inserted in the hole 18, and by the jack upon which said last rests. Any pressure applied to the last at the instep portion will also be taken by said pin, as said instep portion is integral with the part 5 up to the curved front side 15 of said heel part. Moreover, any pressure applied downwardly upon the sole portion of the last throughout when said last is supported in a jack in the usual manner will have no effect in tipping the fore part upon the heel part, as said parts are locked together against movement by any pressure applied against the bottom of the last by the standard or rod 7, the front edge of which rests against the front side of the recess 11 and the rear edge of which rests

against the rear side of the recess 11, thus forming, together with the pivot 12, a lock against displacement of the fore and heel parts relatively to each other by any pressure exerted upon the bottom of the last. When the last is collapsed to the position illustrated in Fig. 2, it will be seen that the bottom part of the fore part drops below the bottom of the heel part, as at *a*, so that in withdrawing the last from the shoe there is no projection of the fore part beyond the bottom of the heel part and against the inner face of the inner sole of the shoe to render the withdrawal of the last difficult, but, on the contrary, said fore part being dropped below the heel part, the withdrawal of the fore part and of the heel part from the shoe becomes exceedingly easy. It will be seen and understood that when the fore part and heel part are rocked relatively to each other around the pivotal pin 12 the portion of the heel part which extends toward the toe beyond the pivot 12 acts as a lever against the inner sole of the shoe, thus assisting materially in the ease of collapsing the last from the position shown in Fig. 1 to that shown in Fig. 2 and rendering it easy to remove the last from the shoe.

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

1. A last in two parts, viz., a fore part and a heel part, a standard fast to said fore part and projecting into a recess formed in said heel part, a pivot upon said standard located within said heel part, said standard projecting beyond said pivot and resting against the rear side of said recess whereby said heel part is locked against rotation in one direction upon said pivot.

2. A last in two parts, viz., a fore part and a heel part, a rod fast to said fore part and extending rearwardly therefrom at an angle toward the bottom of said last and into a recess formed in said heel part, a pivot extending transversely through said rod and into said heel part, said rod extending beyond said pivot at an angle toward the heel of said last and resting against the rear side of said recess, whereby said heel part is locked against rotation in one direction.

3. A last in two parts, viz., a fore part and a heel part, a rod fast to said fore part and extending rearwardly therefrom at an angle toward the bottom of said last and into a recess formed in said heel part, a pivot extending transversely through said rod and into said heel part, said rod extending beyond said pivot at an angle toward the heel of said last and resting against the rear side of said recess at the rear side of said pivot and against the front side of said recess in front of said pivot.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWARD C. WOODARD.

Witnesses:
ABRAM L. BOWMAN,
WINFRED E. BRYANT.