

No. 785,115.

PATENTED MAR. 21, 1905.

W. L. C. NILES.

SHOE FORM.

APPLICATION FILED JAN. 23, 1904.

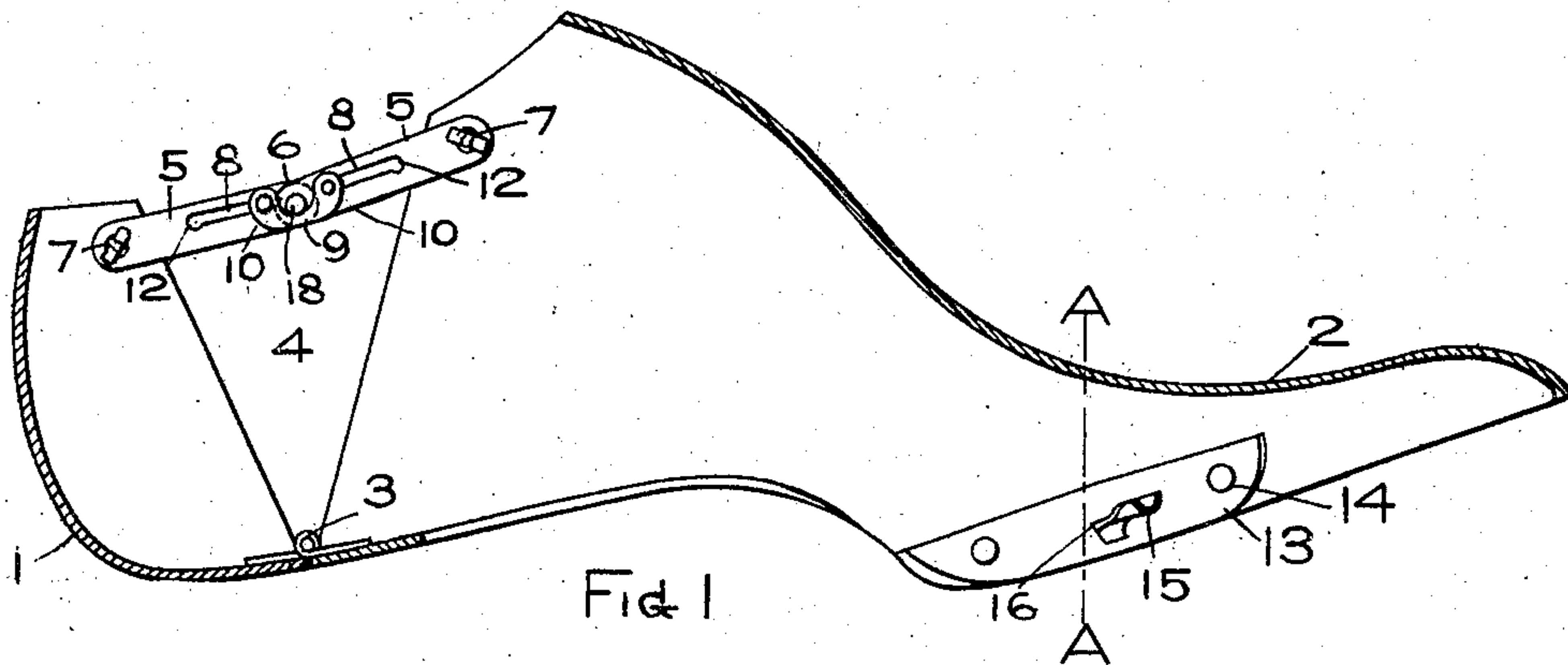


Fig. 1.

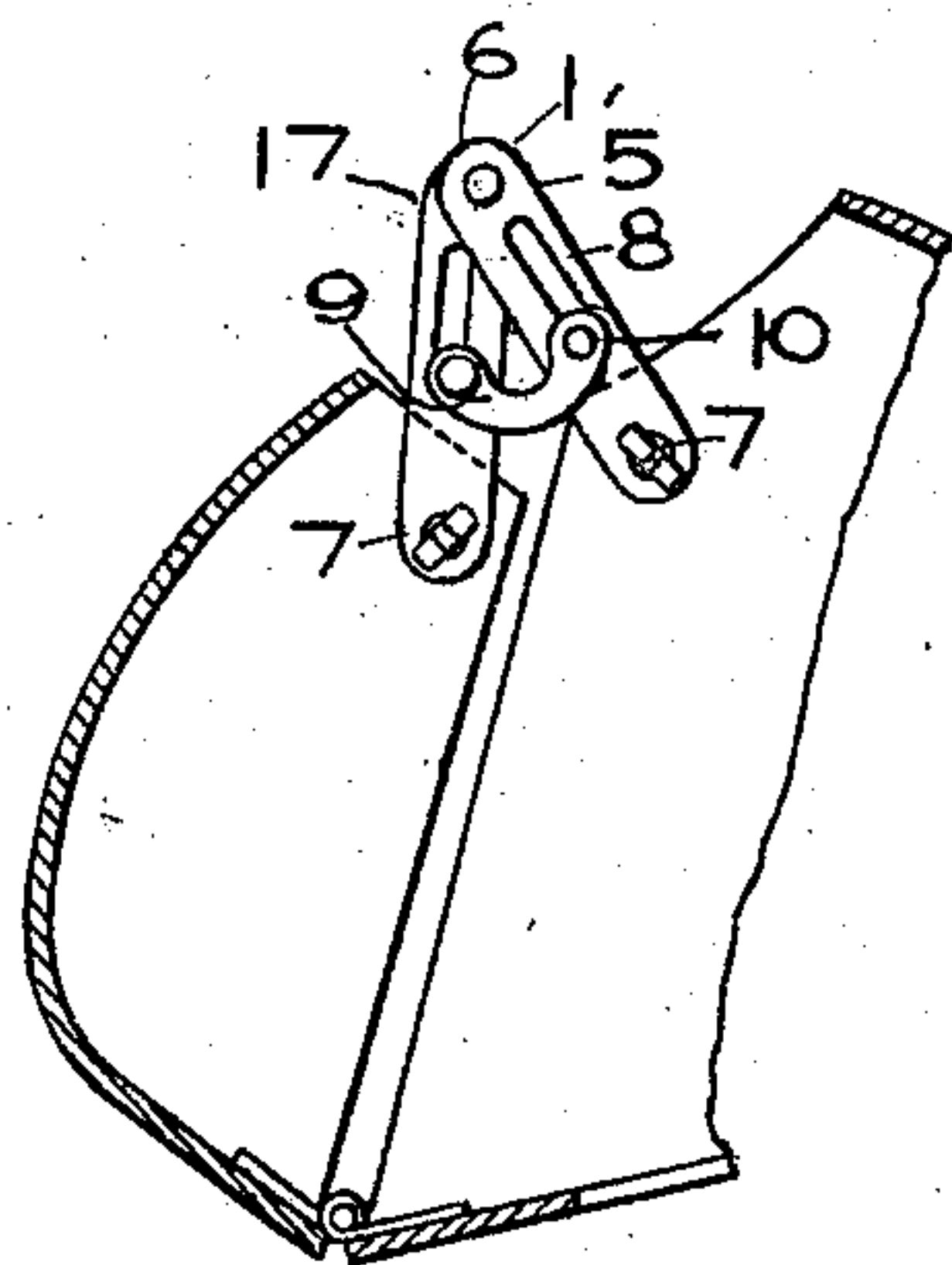


Fig. 2.

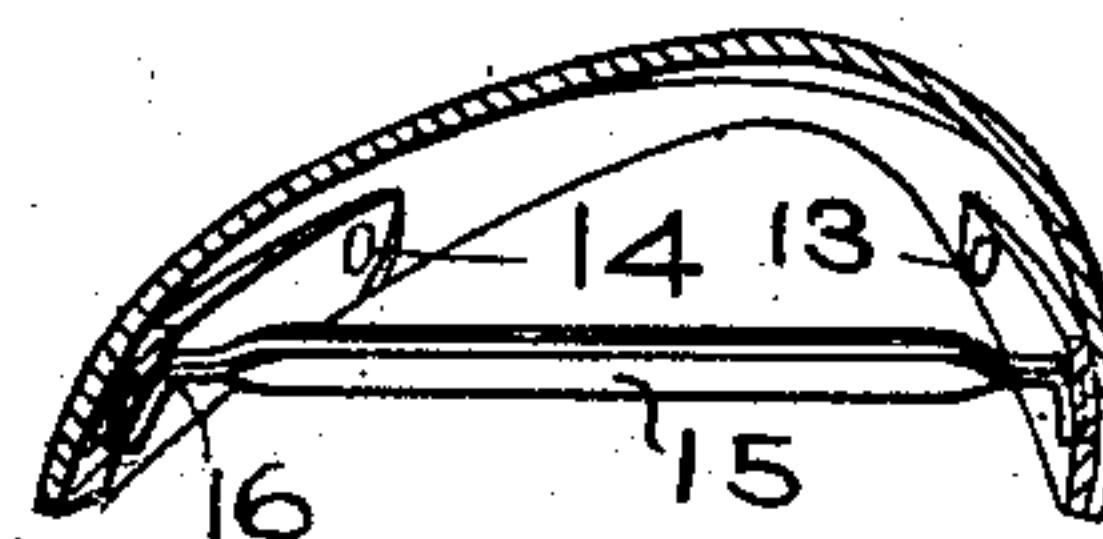


Fig. 3.

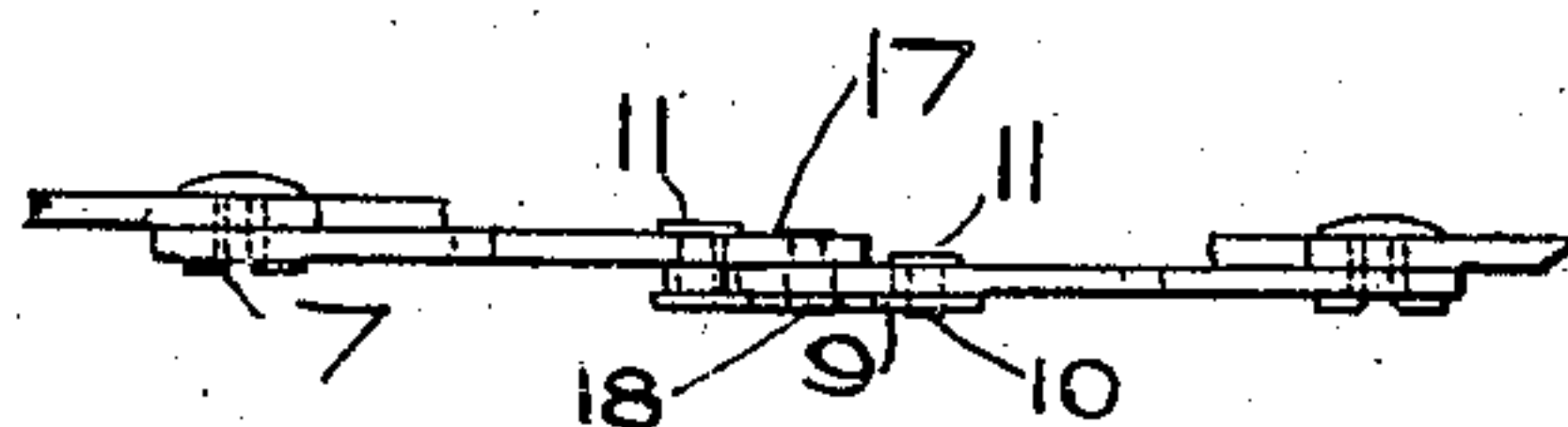


Fig. 4.

WITNESSES.

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WALTER L. C. NILES, OF SAUGUS, MASSACHUSETTS.

SHOE-FORM.

SPECIFICATION forming part of Letters Patent No. 785,115, dated March 21, 1905.

Application filed January 23, 1904. Serial No. 190,297.

To all whom it may concern:

Be it known that I, WALTER L. C. NILES, a citizen of the United States, residing at Saugus, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Shoe-Forms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in shoe-forms, particularly such as are designed for use in displaying samples.

It has been proposed to make lasts and forms in two sections connected so that that they may be collapsed when inserted into a shoe and thereafter expanded and secured in expanded position. In the use of such devices inconvenience arises from their tendency to expand while being drawn out from or inserted in a shoe.

It is the object of the present invention to obviate this objection by providing a collapsible shoe-form with means for holding the form in collapsed position while it is being inserted or withdrawn.

A further object of the invention is to improve the construction of shoe-forms in the respects hereinafter pointed out.

To these ends the invention consists in the shoe-form herein shown and described.

In the drawings, Figure 1 is a longitudinal vertical section of a shoe-form embodying the present invention. Fig. 2 is a similar view of the rear part of the form when in collapsed position. Fig. 3 is a section on line A A, Fig. 1; and Fig. 4 is a plan view of the toggle and connected parts.

In the illustrated embodiment of the invention the body of the form comprises a heel portion 1 and a toe portion 2, connected by a hinge 3 and cut away at 4, so that they may be swung together, as in Fig. 2. To hold the form in expanded position in the shoe, a toggle having arms 5, hinged together at 6, is pivotally connected at 7 7 to the parts of the body. When the form is collapsed, the toggle will be bent upward, as in Fig. 2, and

when the toggle is straightened the form will be held in expanded position, as in Fig. 1.

To hold the form in collapsed position while it is being inserted in or withdrawn from a shoe, the arms 5 of the toggle are slotted, as at 8; and a locking-bar 9 is provided having pins 10 engaging the slots 8. The pins have heads 11, which secure them in the slots. The pins are free to slide in the slots and when the form is collapsed they are forced down to the lower ends of the slots, as in Fig. 2, and engage notches 12 therein. Any tendency of the form to expand will be resisted by the pins and the locking-bar, the notches 12 preventing the tension of the locking-bar upon the pins from causing them to slide up the inclined slots. After the form has been inserted in the shoe it may be expanded by raising the locking-bar with the finger and straightening the toggle to the position shown in Fig. 1.

When it is desired to withdraw the form from the shoe, it is collapsed, as shown in Fig. 2, and the forefinger is inserted beneath the rear edge of the heel portion, which is held from movement with relation to the toe portion by the locking-bar while the form is being withdrawn, the locking-bar acting to positively and unyieldingly lock the form in collapsed position, so that it cannot be expanded by any force exerted upon the heel portion in withdrawing the form from the shoe. The locking-bar serves also to prevent the toggle from bending downward and closing when in the position of Fig. 1 by engaging the head 18 of the rivet by which the toggle-arms are connected together. The locking-bar is curved so as not to be engaged by the rivet until the toggle has slightly passed its straightened position, in order that any tendency of the form to close may not cause the toggle to bend upward.

In order that the form may be at once light and strong, the body portions are made of suitable sheet material, such as leather-board, the bottom of the toe portion being open. To reinforce this portion, reinforcing-strips 13 are secured by rivets 14 to the sides of the toe and a transverse brace 15 connects these strips.

The brace consists of a strip of sheet metal channeled to impart stiffness. This is bent at 16 to form shoulders bearing against the inner sides of the reinforcing-strips, and the ends 5 of the brace pass through the reinforcing-strips and are clenched between the strips and the material of the body of the form. This construction is superior to that formerly employed in shoe-forms in which the brace ex- 10 tends through the sides of the toe portion as well as through the reinforcing-strips and is clenched against the outside surface thereof, since the present construction leaves the outside of the form perfectly smooth and free 15 from points which might catch in the lining of the shoes in which the form is inserted, and, furthermore, absolutely prevents the ends of the brace from working through the sides of the form, as often happens in the prior con- 20 struction. It is to be observed in this connection that this method of securing the brace in the form contributes also to the strength and durability of the form. In the old construction the end of the brace penetrated the 25 body of the form through a slit cut therein to receive it, and the cutting of this slit in the body of the form weakened it somewhat, and when the old form was subjected to external pressure it bent at rather a sharp angle at the 30 end of the brace. In the present construction, in which the brace extends through a slit in the reinforcing-strip, the form bends when subjected to pressure along a curve, the body portion of the form not being weakened by the 35 slit which was formerly present in the old construction. This fact contributes materially to the life of the form, preventing, as it does, sharp bends in the form when subjected to pressure.

40 The present invention is not limited to the described embodiment thereof, but may be embodied in other forms.

Having thus described my invention, I claim as new and desire to secure by Letters Patent 45 of the United States—

1. A shoe-form comprising a collapsible body and means for positively and unyieldingly locking the same in collapsed position, substantially as described.

50 2. A shoe-form comprising a toe portion and a heel portion hinged together, and means for positively and unyieldingly locking the said parts in collapsed position, and for holding them in expanded position, substantially 55 as described.

3. A shoe-form comprising two relatively

movable parts, a toggle connecting the said parts, and means for locking the toggle in closed position, substantially as described.

4. A shoe-form, having, in combination, a 60 toe portion, a heel portion hinged thereto, a toggle secured at its ends to said parts and provided with slots in its arms, and a locking-bar carrying pins engaging the said slots to lock the toggle in closed position, substan- 65 tially as described.

5. A shoe-form comprising a hollow body having reinforcing-strips secured to the inner surfaces of the toe portion, and a brace connecting the said strips and comprising a metal 70 strip passing through the reinforcing-strips and clenched between the said strips and the body of the form, substantially as described.

6. A shoe-form, having, in combination, a 75 toe portion, a heel portion hinged thereto, a toggle secured at its ends to the said parts and provided with slots, a bar carrying pins engaging the slots, and an extension from the joint of the toggle arranged to engage the said 80 bar when the toggle is open to prevent closing of the toggle in one direction, substantially as described.

7. A shoe-form, having, in combination, a 85 toe portion, a heel portion, a toggle secured at its ends to said parts, a bar mounted on the arms of the toggle and having a sliding connection therewith permitting the toggle to close in one direction, and a projection from the toggle arranged to engage said bar and prevent the toggle from closing in the other 90 direction, substantially as described.

8. A shoe-form, having, in combination, a 95 toe portion, a heel portion hinged thereto, a toggle secured at its ends to said parts, a locking-bar mounted on the arms of the toggle, and means coöperating therewith to lock the toggle in closed position and to prevent closing of the toggle in one direction, substantially as described.

9. A shoe-form, having, in combination, a 100 toe portion, a heel portion hinged thereto, a toggle secured at its ends to said parts, and a locking-bar mounted on the arms of the toggle and coöperating therewith to lock the toggle in closed position, substantially as de- 105 scribed.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER L. C. NILES.

Witnesses:

FARNUM F. DORSEY,
FRED O. FISH.