

No. 763,600.

PATENTED JUNE 28, 1904.

K. ENGEL.  
BOOT OR SHOE.

APPLICATION FILED SEPT. 14, 1903.

NO MODEL.

Fig. 1.

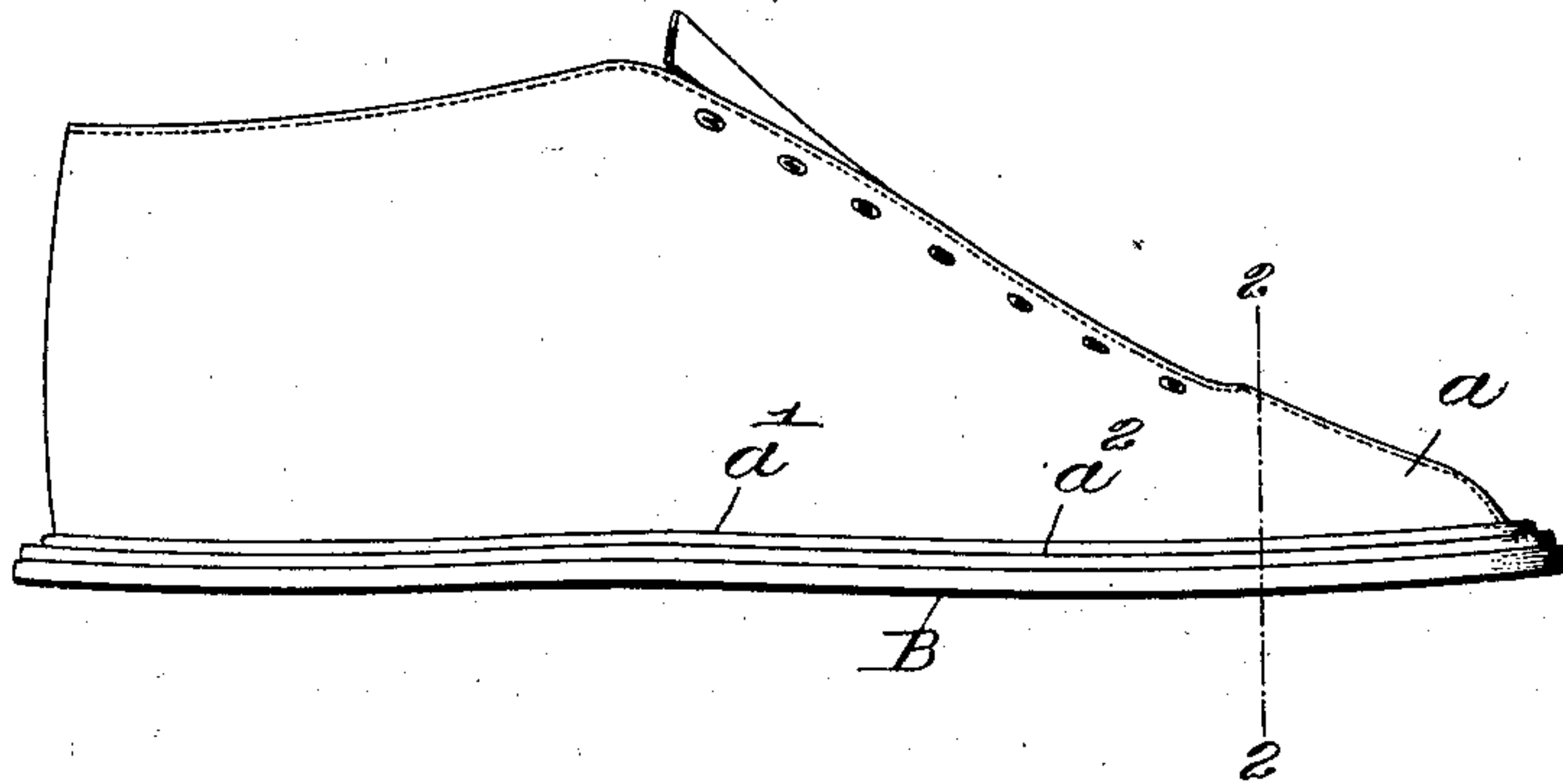


Fig. 2.

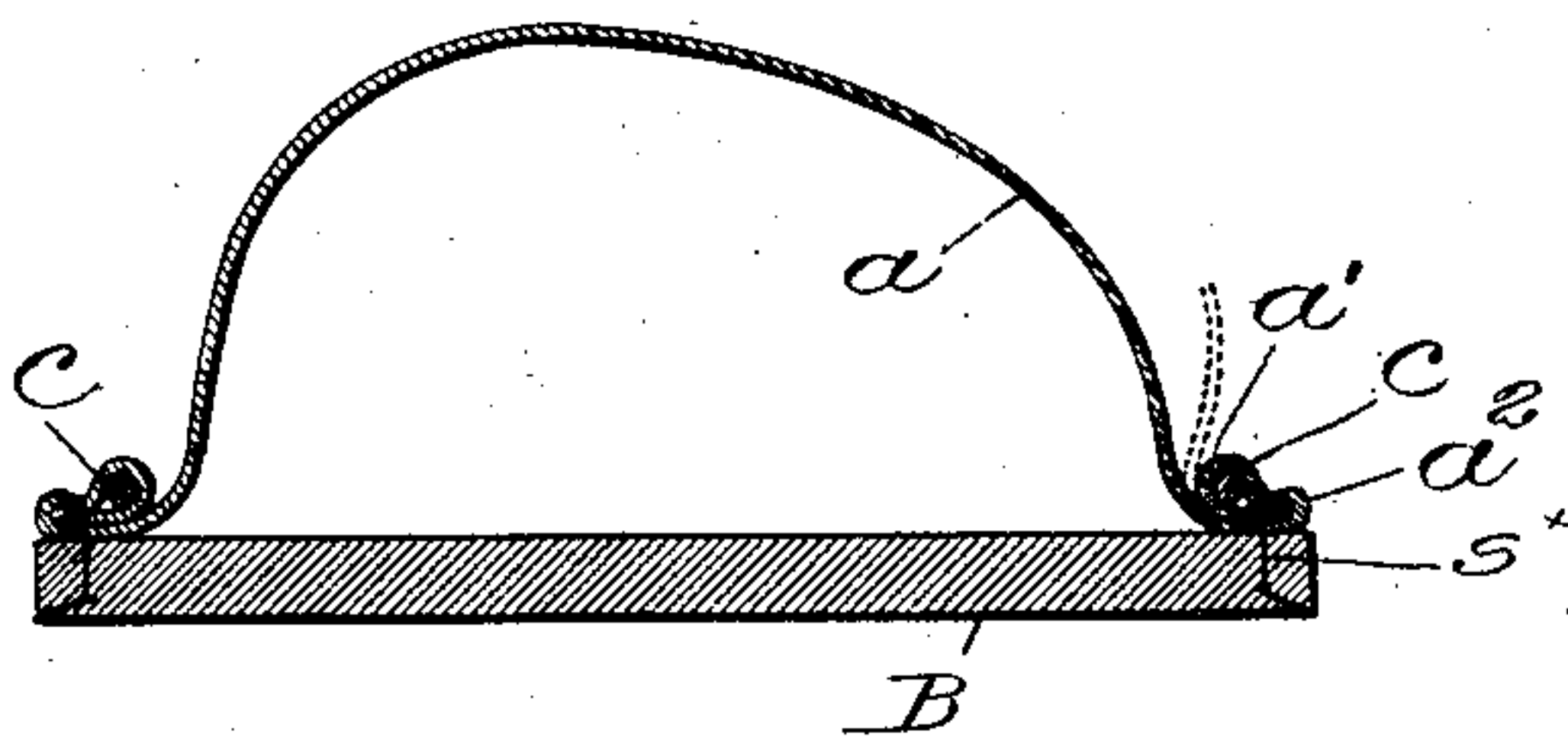


Fig. 3.

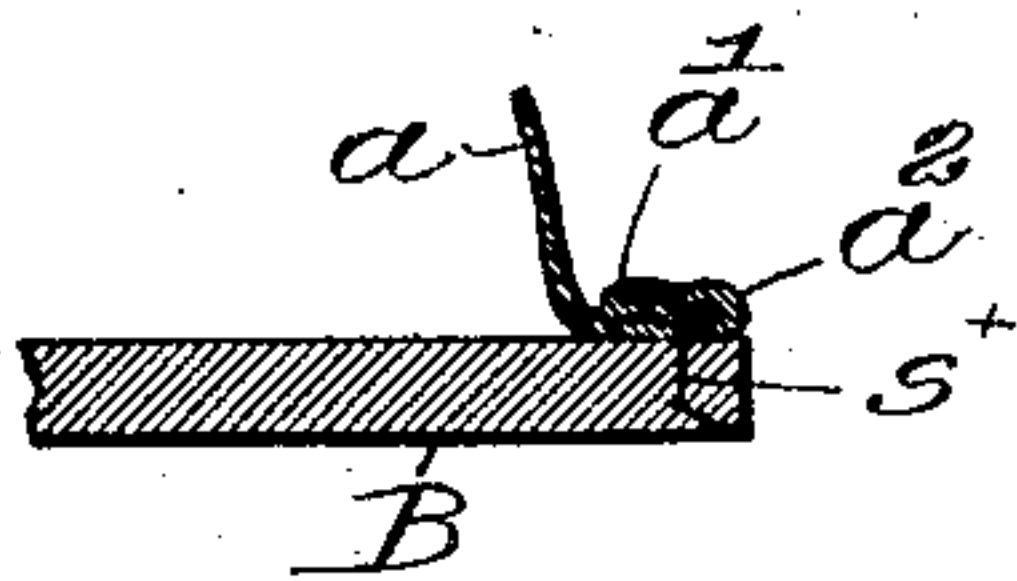
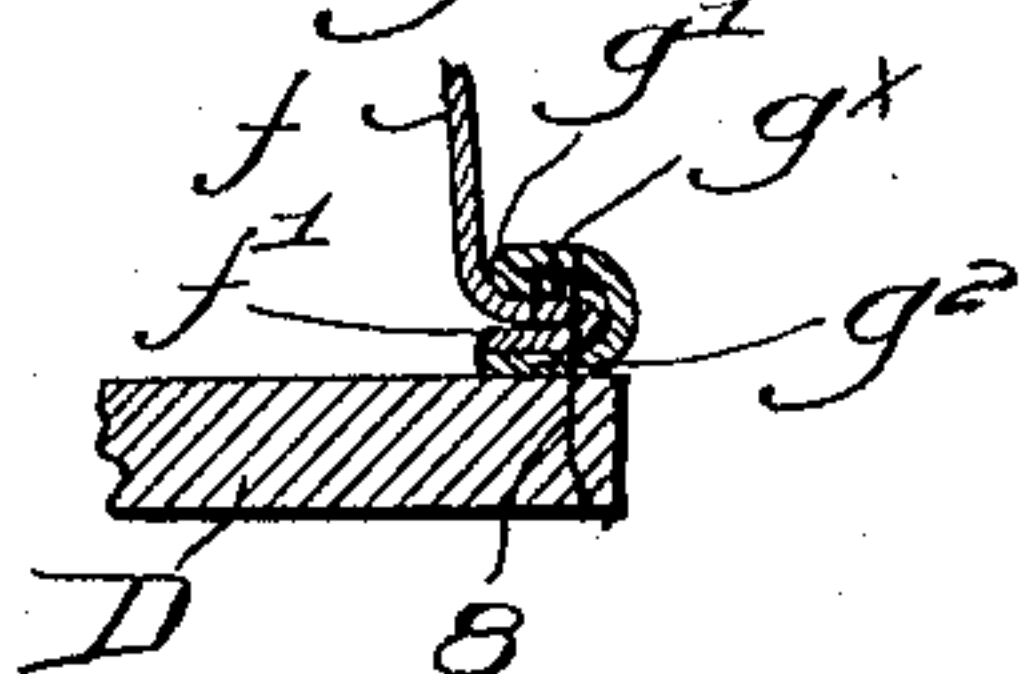


Fig. 4.



Fig. 5.



Witnesses:

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## UNITED STATES PATENT OFFICE.

KARL ENGEL, OF LYNN, MASSACHUSETTS.

## BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 763,600, dated June 28, 1904.

Application filed September 14, 1903. Serial No. 173,095. (No model.)

*To all whom it may concern:*

Be it known that I, KARL ENGEL, a subject of the Emperor of Germany, and a resident of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Boots or Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of a very flexible, cheap, and efficient boot or shoe of simple construction, and particularly adapted for the use of thin stock in the upper or with an upper of canvas, heavy cloth, or other suitable textile material.

A boot or shoe made in accordance with my invention has all the flexibility of a turned shoe and is smoother and more comfortable inside, requiring no insole, and it is practically as strong as a welted or similar shoe.

Figure 1 is a side elevation of a shoe embodying one form of my invention. Fig. 2 is an enlarged cross-section thereof on the line 2 2, Fig. 1, showing one form of stiffening and strengthening member. Fig. 3 is a similar view, but without the strengthening cord or wire to be described. Fig. 4 shows in cross-section the skived edge of the upper before it is folded; and Fig. 5 is a view similar to Fig. 2, but showing another form of stiffening and strengthening member.

My invention is particularly adapted for shoes the upper whereof is made of canvas, duck, or other textile material, such as tennis or boating shoes, gymnasium-shoes, or slippers. In making up such articles the tendency of the upper material to fray or pull out has been more or less overcome in various ways; but a boot or shoe made in accordance with my present invention is cheaper, and it possesses a number of points of superiority.

The upper  $a$  is preferably skived at its edge throughout its extent, as shown at  $a^x$ , Fig. 4, and the edge is then upturned and folded over upon itself, as at  $a'$ , Figs. 2 and 3. Such fold is then turned up and folded over at  $a^2$  to present a three-ply lip extended beyond the main body of the upper and of any desired width. I prefer to apply a stiffening and strengthening member to the lip, and in Fig. 2 I have

shown it as a wire or cord  $c$ , inserted within the fold  $a'$ , so that when the lip is completed the wire or cord will be adjacent the main part of the upper. A sole  $B$ , of any desired material—leather, rubber, or a compound sole—and of suitable thickness is then attached to the upper by a line of stitches or other fastenings  $s^x$ . Such fastenings pass through the lip between the inner and outer folds  $a'$   $a^2$  and firmly secure the upper and sole together. Inasmuch as the folding of the edge of the upper makes a multiply lip and incloses the raw edge of the upper material there is no chance for the fastenings to fray or pull out the material when the upper is subjected to strain in the wearing of the shoe.

By inserting a cord or wire within the inner fold  $a'$  a firm support or downhold is provided for the upper to pull against when strained or stretched, as indicated in dotted lines, Fig. 2.

Light shoes or slippers if not subjected to heavy strain in use may be made up as described, but omitting the cord or wire, as shown in Fig. 3.

Referring to Figs. 2 and 3, it will be seen that the lip projects beyond the body of the upper, and the sole is made wide enough to extend completely beneath the lip, and, if desired, it may project beyond it. The fastenings  $s^x$  pass through the lip between the inner and outer folds and outside of the cord or wire  $c$ , if the latter is used.

A boot or shoe can be made very cheaply and easily in accordance with my invention. It has great strength and durability, and it is extremely flexible and easy on the feet of the wearer. The sole can be made as thin as desired for slippers, and a very light canvas can also be used for such work.

Instead of a cord or wire stiffening member I may use a thin strip of leather, as shown in Fig. 5. In said figure the edge of the upper  $f$  is folded upon and against itself, as at  $f'$ , forming a two-ply lip, and before it is folded a thin strip  $g$ , of leather, is secured to the upper material at  $g^x$ , as by a line of stitching. When the lip is formed, the strip  $g$  is turned over upon the stitching at  $g'$ , forming a rib or fold adjacent the body of the upper, and



the free edge of the strip is carried out over the lip and then folded beneath the lower ply  $f'$ , as at  $g^2$ . The sole D is then applied and a line of fastenings 8 is passed through the lip and the two thicknesses of the strip  $g$ , uniting both lip and strip to the sole. The stitching  $g^x$  is thus concealed, and the rib or inner fold of the strip stiffens and strengthens the lip and being located adjacent the body of the upper resists upward pull thereof in the same manner as does the cord or wire hereinbefore described.

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

1. In a boot or shoe, an upper having its lower edge folded directly upon and against itself, to form an outturned lip, extended laterally beyond the body of the upper, means applied by said lip adjacent the body of the upper to stiffen and strengthen the lip and resist upward pull of the upper, a sole, and a line of fastenings passed through the lip and into the sole and serving also to retain said means in position.

2. In a boot or shoe, an upper having its lower edge folded directly upon and against itself to form an outturned, multiply lip, extended laterally beyond the body of the upper,

a stiffening and strengthening member applied to and extending longitudinally of the lip adjacent the body of the upper, to increase the resistance of the lip to upward pull of the upper, and a line of fastenings passed through said lip and into the sole.

3. In a boot or shoe, an upper having its lower edge skived and upturned and folded upon itself, and such folded portion turned up and folded over, to present a three-ply lip, a sole of sufficient width to extend to the outer edge of the lip, and a line of fastenings passed through the lip into the sole.

4. In a boot or shoe, an upper of textile material having its lower edge folded twice to present a three-ply lip, a stiffening and strengthening member inserted within the fold adjacent the upper, a sole, and a line of fastenings passed through the lip outside the stiffening and strengthening member and into the sole.

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

KARL ENGEL.

Witnesses:

WM. O'SHEA,  
EDWARD M. CURRY.