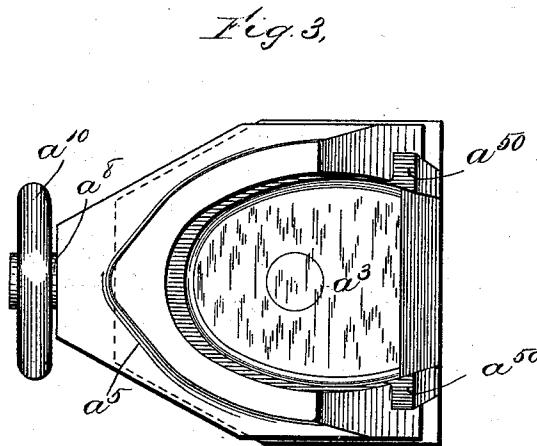
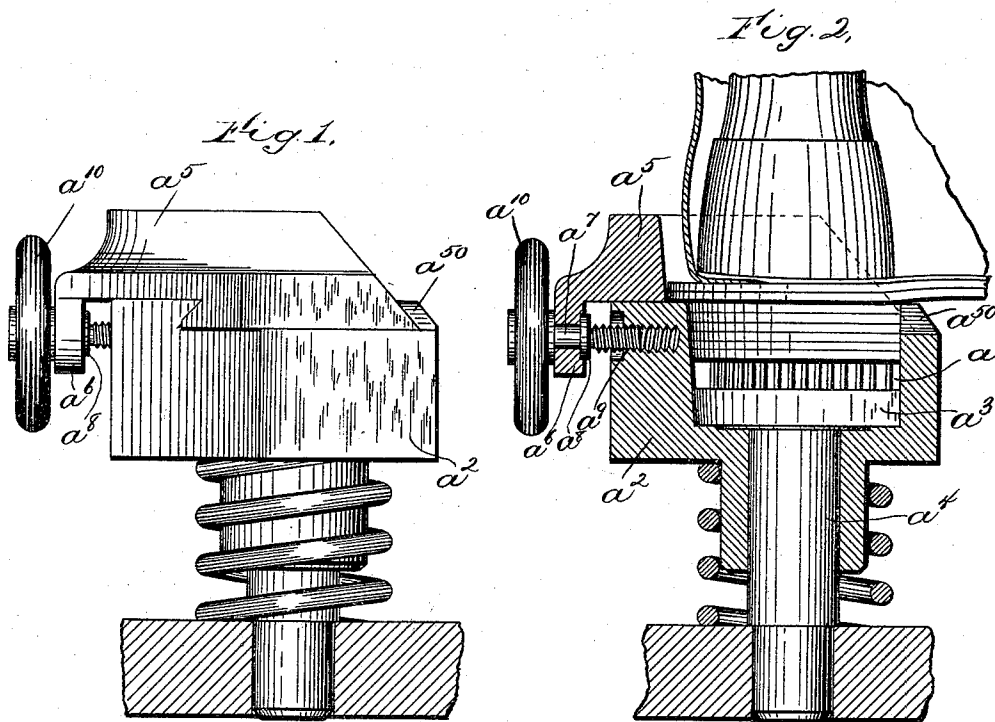


(No Model.)

W. E. SEARLES.
HEEL CUP.

No. 546,083.

Patented Sept. 10, 1895.



Witnesses,
Jas. J. Maloney,
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Att'y.

UNITED STATES PATENT OFFICE.

WALTER E. SEARLES, OF MARLBOROUGH, MASSACHUSETTS.

HEEL-CUP.

SPECIFICATION forming part of Letters Patent No. 546,083, dated September 10, 1895.

Application filed March 8, 1895. Serial No. 540,938. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. SEARLES, of Marlborough, county of Middlesex, State of Massachusetts, have invented an Improvement in Heel-Cups, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to shoe machinery and is embodied in an improved heel cup or receiver adapted to be used in connection with a machine for attaching the completed heel to the shoe—such, for example, as the well-known Bigelow machine shown in United States Patent No. 108,677. In a heeling-machine of the kind to which the present invention is applicable the heel is supported upon the ends of the nails which have been previously partially driven in from the lower surface of the heel, the said nails being adapted, when completely driven home, to enter the sole of the shoe and thereby secure the heel thereon. The heel is laterally supported upon the said base or standard by means of the heel-cup to which the present invention relates, the walls of said cup being shaped to fit the contour of the heel and thus hold it in the proper position to be operated upon. The depth of the cup is such that when the heel, with the protruding nails, is placed therein, with the heads of the nails resting upon said base, the upper surface of said heel will be on a level with the edge of the cup, so that a shoe-sole placed over the said cup and resting on the said edge will also be in contact with the upper surface of the heel. In order, however, to properly position the shoe-sole with relation to the heel, the rear and side walls of the said cup are somewhat higher than the front wall thereof upon which the sole of the shoe rests, so that the edges of the said sole engaging the said rear and side walls determine the position of the shoe with relation to the heel. The driving operation is performed by a driver or plunger acting on the inner surface of the sole and adapted by its downward stroke to drive the sole and heel together down toward the base upon which the heads of the nails rest, thus causing the said nails to penetrate the heel and the sole and secure them together. The cup, which is movable with relation to the said base

portion, is yieldingly supported in its normal position with relation to said base-piece, so that when the driving operation takes place it yields and permits the sole to descend toward the base a sufficient distance to complete the operation of driving the nails. As heretofore constructed, heel-cups of this class have been made practically solid—that is to say, the upwardly-extending portions of the rear and side walls, which form the gage for the shoe-sole, have been formed integral with the remainder of the cup, thus necessitating substantial uniformity in the soles in order to insure a proper positioning of the heel with relation thereto in the machine. Such uniformity commonly does not exist in shoes at that period of their manufacture in which the heel is secured thereto, and consequently before the heeling operation takes place with a cup of this nature it is necessary to trim the soles to obtain the desired uniformity. This is undesirable, since it is also necessary to trim the heel after it is secured to the shoe, and if it is possible to avoid the prior operation of trimming the sole to gage this operation may be saved, as it is perfectly practicable to trim both heel and sole together. The present invention aims to accomplish this purpose and is embodied in a heel-cup with a movable upper portion or gage above that portion of the cup in which the heel is held and provided with means for adjusting the said upper portion with relation to the lower, so that when the rear portion of the untrimmed sole is in contact therewith the heel will be in the proper position relative to the counter. The shoe is thus gaged from the sole without necessitating the prior trimming of said sole, and the heel and sole may afterward be trimmed together when the heel is secured to the shoe.

Figure 1 is a side elevation of the heel-cup embodying this invention. Fig. 2 is a vertical section thereof, and Fig. 3 is a top plan view.

The cup *a*, Fig. 2, which is substantially the shape of the heel of the shoe, is formed in a solid piece of metal *a*² and provided with a base portion *a*³, upon which the bottom of the heel rests when the heel is in place, the said base-piece being mounted upon a standard *a*⁴, passing upward through the bottom of the cup and mounted in any suitable way to form an

anvil to receive the blow of the driver. The cup a is flexibly mounted at such height with relation to the base that when the ends of the partially-driven nails protruding from the heel rest upon the base-piece a^3 the uppersurface of the top lift is substantially on a level with the top of the cup, so that the sole of a shoe placed over the said cup will be practically in contact with the said top lift. It is necessary, however, in placing the shoe in the machine, as has been stated, to so gage the said shoe that the heel when secured thereto will be in a proper position with relation to the counter, and in order to properly gage the shoe the cup, in accordance with the present invention, is provided with a supplemental or gage portion a^5 , extending upward from the main walls of the cup and adapted to fit the rear edges of the sole, and said gage portion is longitudinally movable with relation to the main portion and adapted to form an abutment or gage for the rear portion of the sole of the shoe. As herein shown, the said gage portion is secured to the main cup portion by means of undercut or dovetail guides a^{50} , which admit of a longitudinal movement only with relation to said main cup portion, since longitudinal adjustment only is required. The adjustment may be secured in any suitable way, and, as herein shown, the gage portion a^5 is provided with a downward extension a^6 at the rear thereof, through which passes a spindle a^7 , having fixed flanges a^8 —one at each side of the said extension—so that the said spindle is free to rotate with relation thereto, but adapted to move longitudinally therewith. The said spindle is threaded at its inner end, so as to co-operate with an internally-threaded socket a^9 in the main cup

portion, so that when it is turned by an operating-handle a^{10} it will cause the supplemental cup a^5 to move longitudinally with relation to the main cup a .

The shoes are commonly received at the heeling-machine in lots ready for the heeling operation, and the overhang of the sole with relation to the counter is substantially the same throughout each lot, so that it is only necessary to adjust the cup to fit the first shoe, after which it will be correct for subsequent operations until that particular lot is finished.

I claim—

1. In a machine for attaching the heels to shoes, the herein described heel-cup comprising a main cup-portion adapted to fit the heel, and an adjustable gage-portion comprising an extension of the rear and side walls thereof, said extension being movable with relation to the said main cup-portion, substantially as described.

2. In a machine for attaching the heels to shoes, the herein described heel-cup comprising a main cup-portion adapted to fit the heel, an adjustable gage-portion comprising an extension of the rear and side walls thereof, and a threaded spindle secured thereto and cooperating with an internally threaded opening in said main cup-portion, substantially as described.

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

WALTER E. SEARLES.

Witnesses:

H. J. LIVERMORE,
M. E. HILL.