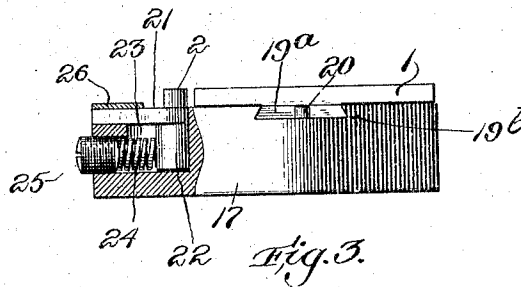
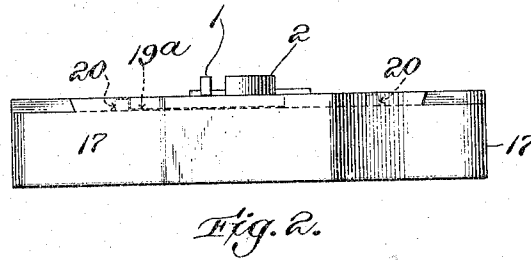
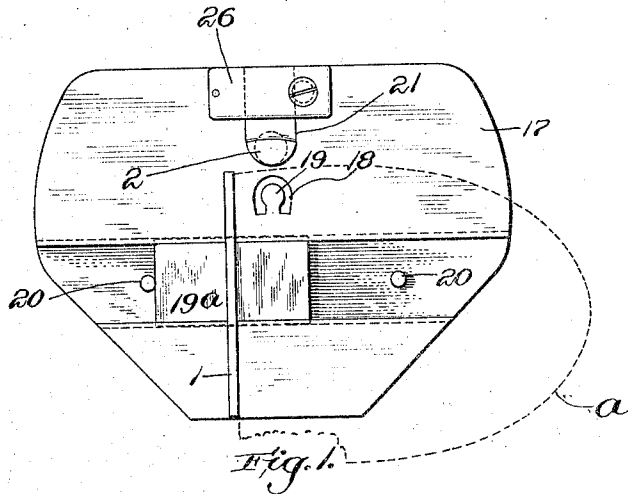


B. J. CONLON.  
 PROTECTOR SETTING MACHINE.  
 APPLICATION FILED OCT. 5, 1901.

1,015,543.

Patented Jan. 23, 1912.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## PROTECTOR-SETTING MACHINE.

1,015,543.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed October 5, 1901. Serial No. 77,663.

*To all whom it may concern:*

Be it known that I, BARTHOLOMEW J. CONLON, a citizen of the United States, residing at Lawrence, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Protector-Setting Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 United States Letters Patent No. 654,298 granted July 24, 1900, to Henry W. Winter and myself, show and describe certain portions of a machine for setting or driving so-called "protectors" into the top-lifts of the 15 heels of boots and shoes. The said protectors are in practice formed of strip metal having the required bent form, and are applied by being driven edgewise into the leather until the edges thereof remaining visible usually are flush with the outer surface of the top-lift, or substantially so. The 20 said Letters Patent relate more especially to the work-supports which are employed in protector setting machines to uphold or sustain the top-lifts, soles, or the like, which are to receive the protectors, during the driving operation; and, in particular, the said Letters Patent show, describe and claim gages by means of which to position top-lifts and 30 soles of boots and shoes upon the work support of a protector setting machine in having protectors driven in the required positions adjacent the edges thereof.

My present invention has relation to work- 35 supports for protector setting machines and the gages which are employed in connection therewith.

The general object of the invention is to facilitate the operation of driving or setting 40 protectors into the opposite angles at the breast of a heel top-lift, and the invention consists, therefore, in the combination, with the work-support of a protector-setting machine, of a breast-gage whereby to position 45 heel top-lifts properly in having protectors driven into the said angles.

I will now proceed to explain my invention with the aid of the accompanying drawings, in which latter I have represented an 50 embodiment of the same in the preferred and best form which I have devised.

In the drawings,—

Figure 1 shows in plan a work-support for protector setting machines having in con-

nection therewith the said embodiment of 55 the invention. Fig. 2 shows the same in front elevation. Fig. 3 shows the same in end elevation from the left-hand side in Fig. 1, a part of the work-support being broken away to show features that would 60 otherwise be hidden.

Having reference to the drawings,—17 designates the plate or block constituting the top of the work-support of a protector setting machine. In practice, the said plate or 65 block preferably will be mounted and operated as in the Letters Patent aforesaid. It is formed with a slit 18, conforming in its contour to the outline of the protectors which are to be driven, and a post 19 is arranged 70 centrally of the said slit. The said slit is shown of horse-shoe outline because this is the well-known shape or form of the protectors commonly in use at the present time. Should a different shape or form of protec- 75 tors be employed, the outline of the slit would be varied to correspond. The central post 19 serves during the driving of the protectors to support the portion of leather which is partly surrounded by the protectors 80 being driven.

The features thus far referred to are in general all as shown and described in the Letters Patent aforesaid; and are not in themselves of the gist of the invention. The 85 form, construction, and arrangement may be varied, so far as the said features are concerned, without necessarily involving any departure from the principles of the invention. 90

It will be understood that for the sake of clearness I have omitted from the drawings all features which are not required to be shown or referred to herein in disclosing the nature and relations of the present inven- 95 tion.

In conformity with my invention I provide the work-support 17 with a breast-gage against which the breast of a heel top-lift will be placed in order to position the said 100 top-lift properly to receive a protector in one of the angles of the top-lift adjacent the breast. Such a breast-gage is shown at 1, it rising sufficiently above the general level of the upper surface of the work-support 105 to become engaged by the breast of a top-lift resting upon the said surface. At 2 is a back-gage, located at the rear of the slit

18. When one curved side or flank of a top-lift is pressed against the back-gage 2 and the breast thereof is pressed laterally against the breast-gage 1, the top-lift will be given the required position upon the work-support, to enable the protector to be driven by the driver into one of the corners of the top-lift.

In Fig. 1 of the drawings, a top-lift *a* is indicated in position in dotted lines. In order to enable a protector to be driven into the opposite corner of the top-lift, the breast-gage, as will be apparent, will require to be transversely reversed in position; that is to say, will require to occupy a position at the side of the selected driving point which is opposite the position which the breast-gage occupies in Fig. 1, so as to enable the top-lift to be reversed in position as required in presenting the opposite angle of the breast of the top-lift beneath the driver. I therefore give the breast-gage capacity to be shifted from one side to the other of the driving point and thus transversely reversed with relation thereto. Preferably, I connect the breast-gage with the work-support 17 in a manner which renders it movable relatively to the latter, to enable the required shift or adjustment of the breast-gage to be made. The movability which renders the breast-gage reversible with respect to the driving-point may be secured in different ways, according to the construction which it is preferred to employ in practice. In the illustrated construction and arrangement, the work-support 17 is formed with a dove-tailed guideway 19<sup>b</sup>, in which latter is received the dovetail-shape slide 19<sup>a</sup> on which the breast-gage 1 is mounted. The slide 19<sup>a</sup> may be shifted endwise in the said guideway, to displace the breast-gage from one side to the other of the slit 18, as will be obvious from the drawings. The opposite positions of the slide and breast-gage are fixed or determined by stop-pins 20, 20, with which the slide engages. When it is desired to remove the breast-gage, one of the said stop-pins may be removed, which will permit the slide 19<sup>a</sup> to be withdrawn from the guideway 19<sup>b</sup>.

The back-gage 2 is carried by a small plate 21 fitted to a guideway formed in the top of the work-support 17, in which guideway it is movable in a direction from front to rear. A keeper-plate 26 attached to the top of the work-support holds the said plate 21 within the said guideway. A block or plate 22 depends from the said plate, and enters an open-topped slot or chamber 23 in the body of the work-support 17. A spiral spring 24 is compressed between the said depending block or plate 22 and an abutment at the rear end of the slot or chamber 23. The said abutment is constituted in the present instance by the inner end of a

screw 25. By turning the said screw the tension of the spring 24 may be regulated if required. The spring backing for the back-gage 2 permits the latter to yield to the outward expansion of the stock of the top-lift occurring as the protector is driven into the top-lift, obviating by such yielding the marking and injury to the edge of the top-lift which would result if the back-gage were rigidly mounted.

I claim as my invention,—

1. The combination with a work-support, of a gage cooperating with the forward portion of the flank of a heel top-lift, and a breast-gage reversible with relation to the driving-point to enable opposite flanks of a top-lift to be presented respectively at the same driving-point.

2. The combination with a work-support, of a gage cooperating with the forward portion of the flank of a heel top-lift and yielding to the expansion of the stock which results from the setting operation, and a breast-gage reversible with relation to the driving-point to enable opposite flanks of a top-lift to be presented respectively at the same driving-point.

3. The combination with a work-support of a breast-gage movable into reverse relations with respect to the driving-point in such machine to enable opposite flanks of a heel top-lift adjacent the breast thereof to be presented, respectively, at one and the same driving-point.

4. In a protector-setting machine, in combination, a work-support, and a gage having opposite surfaces to cooperate alternately with the edge of a heel top-lift, and movable into opposite positions relative to the driving-point to present the said surfaces successively in position with relation to the said driving-point.

5. In a protector-setting machine, in combination, the work-support, and a stop located adjacent the driving-point to engage with the breast of a heel top-lift to locate the angle at one end of the said breast in position to receive a protector, the said stop having reversely disposed working surfaces, and being transversely reversible relative to the driving-point to present the said working surfaces alternately in position for action.

6. In a protector-setting machine, in combination, the work-support, and gaging means to engage with the edge of a heel top-lift to locate the angle at one end of the breast thereof at the driving-point in position to receive a protector, comprising a member movable into working positions at opposite sides of the said driving-point to permit the opposite angles in turn to be presented at the same driving-point.

7. In a protector-setting machine, in combination, the work-support, and a shifting

breast-gage for heel top-lifts transversely reversible with relation to the driving-point, the respective positions thereof operating to locate the respective angles at the breast of a top-lift, at the same driving-point in position to receive a protector, substantially as described.

8. In a protector-setting machine, the combination with a work-support, of a breast-gage and a flank gage which are relatively movable into reverse relations with respect to the driving point, whereby the opposite flanks of a lift may be successively located in proper position relatively to the driving point.

9. In a protector setting machine, in combination, the work-support, and the breast-gage for heel top-lifts fitted to a guide with which said work-support is provided and movable to opposite sides of the driving-point to position top-lifts properly in having protectors driven into the opposite angles at the breasts thereof, substantially as described.

10. In a protector-setting machine, in combination, a work-support, a back-gage located adjacent the driving-point to act in connection with the edge of one flank of a top-lift, and the breast-gage adjacent the driving-point and movable into opposite positions relative to the latter to enable protectors to be driven into the opposite angles of the breast of the top-lift alternately.

11. In a protector-setting machine, in combination, a work-support, a yielding flank gage located adjacent the driving-

point to act in connection with the edge of one flank of a top-lift adjacent the breast of the latter, and adapted to yield to accommodate the expansion of the top-lift laterally as a protector is driven into the same, and the breast-gage movable into opposite positions relative to the driving-point, to enable protectors to be driven into the opposite angles of the breast of the top-lift alternately.

12. In combination, a work-support, a yielding back-gage located adjacent the driving-point to act in connection with one edge of a top-lift and adapted to yield to accommodate the expansion of the top-lift laterally as a protector is driven into the same, and a breast-gage having opposite surfaces to cooperate with the breast of a top-lift and movable into opposite positions relative to the driving-point, to present the said surfaces alternately in position with relation to the said driving-point.

13. In a protector-setting machine, in combination, a work-support, and a gage located immediately adjacent the driving-point and reversible to dispose the same in opposite working positions with respect to the driving-point said gage constituting a breast-gage in each of the said positions.

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

BARTHOLOMEW J. CONLON.

Witnesses:

CHAS. F. RANDALL,  
WILLIAM A. COPELAND.