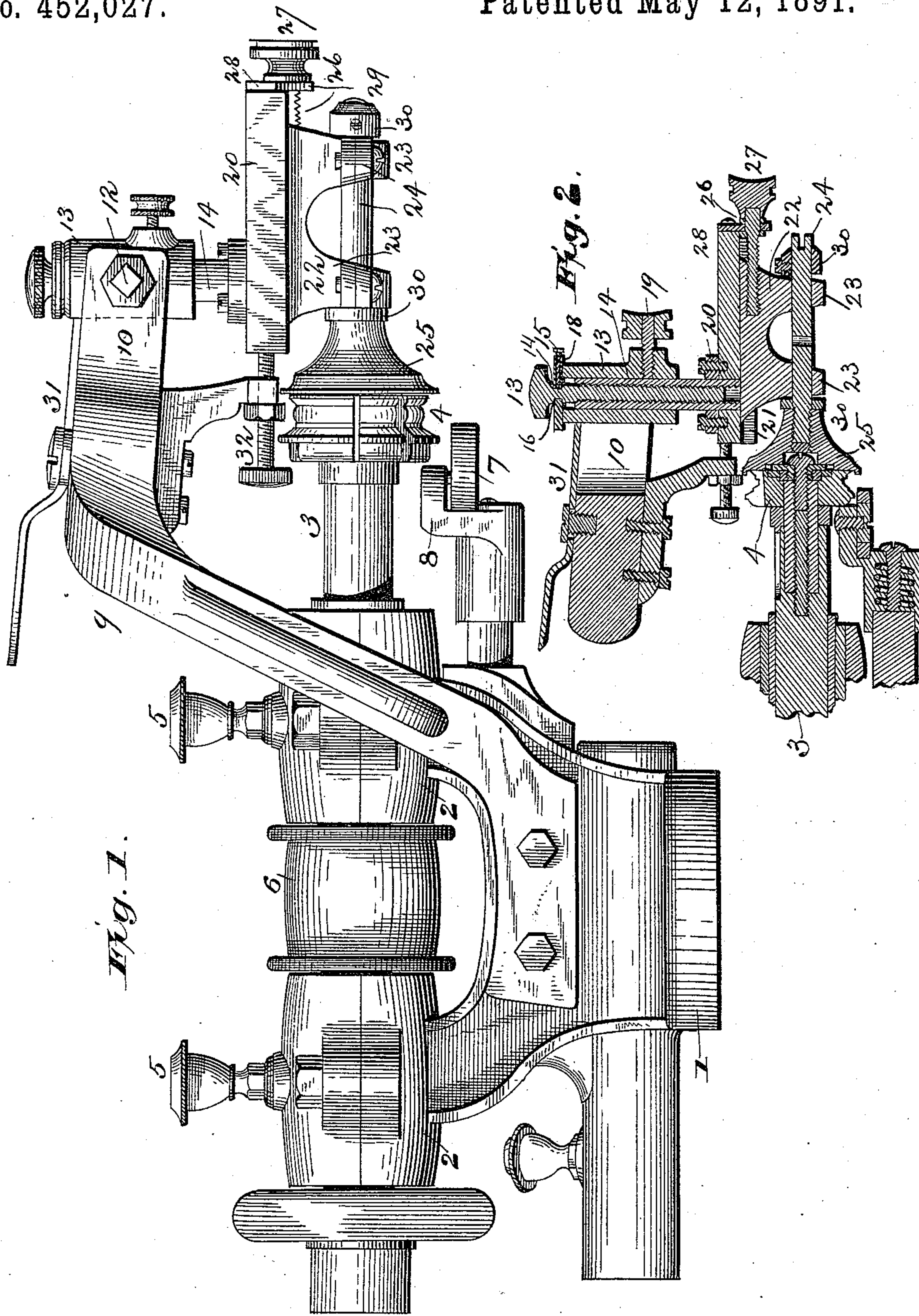


(No Model.)

A. S. VOSE.  
SOLE TRIMMING MACHINE.

No. 452,027.

Patented May 12, 1891.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

AMBROSE S. VOSE, OF EAST BOSTON, MASSACHUSETTS.

## SOLE-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 452,027, dated May 12, 1891.

Application filed September 6, 1890. Serial No. 364,171. (No model.)

*To all whom it may concern:*

Be it known that I, AMBROSE S. VOSE, a citizen of the United States, and a resident of East Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Sole-Trimming Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in boot and shoe sole trimming-machines.

The object of the invention is to provide an adjustable shield or gage for the revolving cutter of sole-trimming machines. As now ordinarily constructed such cutters are provided with annular shields or guides attached thereto, so as to revolve therewith. Such guides or shields, which are intended to run in the groove between the sole and the upper of a shoe, are very objectionable, as they sometimes come in contact with the leather of the upper while revolving at a high speed, thereby injuring and damaging the same. In the usual construction also it is extremely difficult to remove the knives of the cutters for the purpose of grinding or sharpening, and they otherwise possess serious defects and disadvantages.

In my invention the guide or shield is mounted upon a shaft in line with but separate from the cutter, so that while the said shield may be readily rotated, if desired, by the shoe-sole, which is in contact therewith, it has no connection with the cutter and does not revolve therewith, so that there is no danger of injuring the upper. The shaft carrying the said shield is also adjustable in a pivoted frame, which may be swung up out of the way, so that the knives can be removed from the cutter without taking the latter out of the machine. The guide can also be adjusted longitudinally, so as to bring it nearer to or farther from the cutter, according to the thickness of the sole being operated upon.

The invention consists in the novel construction and combination of parts herein-after fully described, and definitely pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a sole-trimming machine constructed in accordance with my invention. Fig. 2 is a sectional view of a portion of said machine, showing the pivoted frame and the adjustable shaft carrying the shield or guide.

In the said drawings, the reference-numeral 1 designates the bed or base of the machine, adapted to be secured to any suitable support and provided with bearings 2 2, in which is journaled the main driving-shaft 3, which carries the revolving cutter 4. The bearings 2 2 are provided with the usual lubricators 5, and the shaft has a driving-pulley 6. The cutter 4 may be of any ordinary or suitable construction, and is securely fixed or secured to said shaft, so as to revolve therewith. Underneath the cutter is a wheel 7, pivoted in an arm 8, secured to and projecting from the bed 1. The bottom of the shoe-sole rests against the wheel while the sole is being trimmed.

The numeral 9 designates an arm projecting upwardly above and in front of the cutter, and at its free end is bifurcated, forming two arms 10. Through these arms pass two set-screws 12, which engage with and form pivoted bearings for a sleeve 13, so that the latter is capable of oscillating thereon. This sleeve carries a vertical bar 14, the upper end of which is provided with an annular groove 16, with which engages a set-screw 15, projecting through a plate 18, secured to the upper end of sleeve 13. The sleeve is also provided with a screw-threaded recess at its lower end, in which is also a set-screw 19, the end of which engages with the bar 14 and holds it in place. To the lower end of the bar 14 is secured a plate 20, having downwardly-depending flanges 21 at each side, forming ways for the sliding carriage 22, provided with downwardly-depending boxes 23, in which is journaled the shaft 24, carrying at its inner end the annular shield or guide 25.

The carriage 22 is provided with a longitudinal screw-threaded recess, in which works a correspondingly-threaded screw-rod 26, provided with a milled head 27. This rod also passes under a plate 28 on the outer end of the plate 20. This plate has downwardly-projecting semicircular flange 29, which engages between two annular flanges on the screw-rod, and



thus prevents any horizontal or longitudinal movement thereof, but permits it to be rotated by means of the milled head. The shaft 24 and the shield which is secured thereto are capable of being rotated, and the shield is provided upon its face with recesses to receive the end of the projecting portions of the cutter, which fits snugly but loosely in said recesses. The shaft 24 is prevented from longitudinal movement by means of the collars 30, fixed thereon.

Upon the upper side of the arm 9 is a pivoted lever 31, one end of which is adapted to engage with the pivoted sleeve 13 and prevent it from oscillating. The other end of the lever forms an operating-handle.

Secured to the under side of arm 9 are adjusting-screws 32, which may be employed to regulate the distance of the plate carrying the shield and its connections from the cutter.

The operation is as follows: The sleeve being operated upon is held with the bottom of the sole against the wheel 7 and the shield or guide between the upper and sole. As the driving-shaft revolves it revolves the cutter without, however, rotating the guide or shield, thereby preventing any liability of injuring the upper. The shield is vertically and longitudinally adjustable by the means described, and when it is desired to remove the knives from the cutters the frame carrying the shield and its connections can be swung entirely out of the way, the pivoted sleeve 13, carrying the same, turning upon the pivots 12.

Having thus described my invention, what I claim is—

1. In a sole-trimming machine, the combination, with the bed, a driving-shaft, and a rotating cutter secured to said shaft, of an arm secured to said bed and projecting upwardly and in front of the cutter, a sleeve pivoted in said

arm, a rod vertically movable in said sleeve, a retaining-screw passing through said sleeve and engaging with the rod, a plate secured to the lower end of said bar, having downwardly-depending flanges forming ways or guides, a sliding carriage engaging with said ways and having a screw-threaded recess to receive a correspondingly-threaded adjusting-rod, a shaft carried by said carriage, and a shield or guide secured to said shaft, substantially as described.

2. In a sole-trimming machine, the combination, with the bed, the driving-shaft, the cutter secured to said shaft, and the wheel located underneath the cutter, of the bifurcated arm secured to said bed and projecting above and in front of the cutter, the set-screw passing through the bifurcations, the sleeve pivoted on said screws and having a retaining-screw near its lower end, the vertically-movable bar working in said sleeve and provided with an adjusting-screw, the plate secured to the lower end of said bar, having depending flanges forming ways or guides, the carriage sliding on said ways and provided with a screw-threaded adjusting-rod, the boxes depending from said carriage, the shaft journaled therein, the shield or guide carried by said shaft, the adjusting-screws carried by an arm secured to the lower side of the arm secured to the bed, and a lever pivoted to the upper side of said last-mentioned arm, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

AMBROSE S. VOSE.

Witnesses:

HERBERT B. HOBBS,  
J. FRED. LANG.