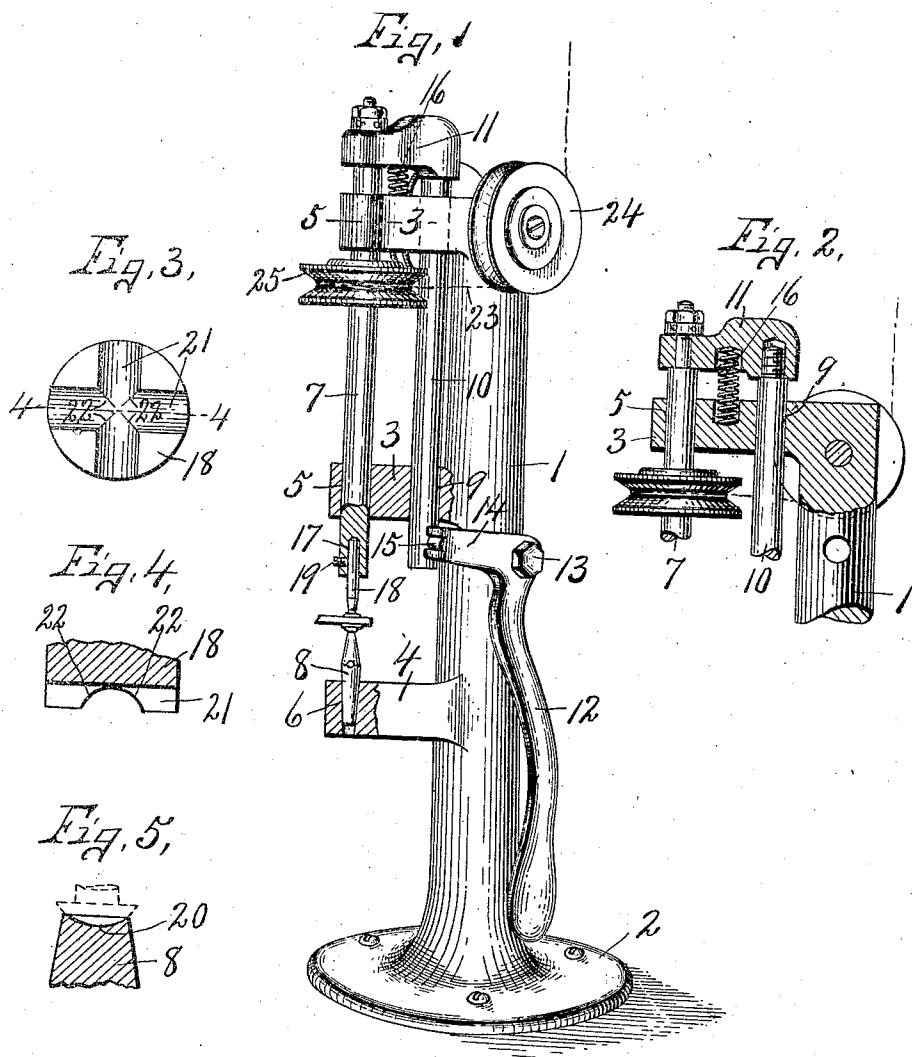


C. W. HOWLAND.
SCREW FINISHING MACHINE.
APPLICATION FILED AUG. 16, 1906.

979,006.

Patented Dec. 20, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

CHAUNCEY W. HOWLAND, OF GENEVA, NEW YORK, ASSIGNOR TO THE STANDARD OPTICAL COMPANY, OF GENEVA, NEW YORK, A CORPORATION OF NEW YORK.

SCREW-FINISHING MACHINE.

979,006.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed August 16, 1906. Serial No. 330,797.

To all whom it may concern:

Be it known that I, CHAUNCEY W. HOWLAND, of Geneva, in the county of Ontario, in the State of New York, have invented
5 new and useful Improvements in Screw-Finishing Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

10 This invention relates to certain improvements in screw finishing presses and is especially adapted for finishing the threaded ends of screws of eye-glasses after said screws have been inserted in the lens or parts
15 of its mounting.

The object is to finish the ends of the screws substantially flush with the adjacent face of the mounting by swaging or riveting the same under rotary pressure of a suitable
20 tool without liability of breaking the lens or overstraining the mounting.

In the drawings—Figure 1 is a perspective view of my improved screw-finishing press, parts thereof being shown in section.
25 Fig. 2 is a vertical sectional view of the upper portion of the machine, showing the guides for the rotary spindle or shaft and its actuating rod. Fig. 3 is an enlarged inverted end view of the finishing tool. Fig.
30 4 is a sectional view taken of line 4—4, Fig. 3, of the lower end of the same tool. Fig. 5 is an enlarged sectional view of the upper end of the lens supporting post.

This screw finishing press comprises essentially a standard —1— having a suitable supporting base —2— adapted to be secured to any available support, not shown, said standard being provided with laterally projecting arms —3— and —4— having apertures —5— and —6— respectively for receiving and supporting a rotary spindle or shaft
40 —7—, and a lens rest or post bearing —8—. The arms —3— are provided with additional apertures —9— for receiving and
45 guiding a vertically movable rod —10— carrying at its upper end a yoke —11— which is secured to the reduced upper end of the shaft or spindle —7—, as best seen in Fig. 2, so that the shaft —7— may be moved vertically by the vertical movement of the rod
50 —10—. This latter movement is accomplished by means of a hand lever —12— which is fulcrumed at —13— to the standard —1— and is provided with a furcated arm

—14— engaging a pin —15— on the lower 55 end of the rod —10—.

A spring —16— is interposed between the yoke —11— and upper arm —3— for the purpose of retracting the rod —10— and shaft —7— to their normal up-position, the
60 downward movement of said shaft and rod being effected by the rearward movement of the lever —12— against the action of the spring —16—. The lower end of the shaft —7— is provided with a socket —17— in
65 which is secured a finishing tool —18— by means of a set screw —19—, as best seen in Fig. 1.

The lens supporting post —8— has its lower end tapered and fitted in the tapering
70 socket —6— in the lower arm —4—, the upper end of said post projecting some distance above the arm and is also tapered, and has its top face formed with a concave socket —20— for receiving and supporting the
75 head of the screw, while the opposite threaded end is being finished, thereby bringing the strain wholly upon the screw without liability of unduly straining the ears of the mounting through which the screw is passed,
80 and also avoiding any liability of cracking the lens. The lower face of the finishing tool —18— is formed with intersecting grooves —21— of substantially the same depth, forming at their junctions comparatively sharp swaging ribs —22— disposed
85 in planes intersecting each other at the longitudinal centers of the groove.

In operation, rotary motion is transmitted from any available source of power to the
90 shaft or spindle —7— by a belt —23— passing over suitable idlers —24— and a pulley —25— rigid on said spindle.

In operation, the head of the screw after being assembled in the mounting and lens is
95 supported upon the concave bearing face —20— of the post —8— with its upper end protruding a slight distance through the ear of the mounting at the upper side, whereupon the lever 12— is rocked by hand rear-
100 wardly to force the finishing tool —18— down against the adjacent end of the screw, the rotation of said tool causing the swaging ribs —22— to trim and finish the adjacent end of said screw substantially flush with
105 the adjacent side of the mounting such finish taking a convex form corresponding to the swaging ribs 22. As soon as the threaded

end of the nut is finished in the manner just described, the pressure upon the hand lever —12— is relieved and the shaft —7— and its working tool —18— are returned to their normal position by the spring —16—.

What I claim:

A machine for finishing the threaded ends of the screws of eye-glasses comprising a vertically-disposed standard provided with an upper and an intermediate and a lower arm, said arms extending laterally with respect to the standard and arranged one over the other, a vertically-movable rod extending through the intermediate and upper of said arms and provided at its lower end with a pin, a lever pivotally connected to said standard and engaging the pin and adapted when shifted in one direction to move the rod upwardly, a vertically-movable and ro-

tatable spindle extending through the upper and intermediate of said arms, a yoke arranged over the upper arm and connected to the top of said rod and spindle whereby the spindle is shifted vertically with said rod, a resilient member interposed between said upper arm and said yoke moving the rod and spindle in a direction opposite to that imparted thereto by said lever, a lens rest carried by the lower of said arms, and a tool carried by the lower end of the spindle and arranged in alinement with respect to the lens rest.

In witness whereof I have hereunto set my hand this 11th day of August 1906.

CHAUNCEY W. HOWLAND.

Witnesses:

MARY CARRON,
EDWARD S. BOYDEN.