A. L. SANDERSON.

LENS SLITTING DEVICE.

APPLICATION FILED NOV. 5, 1915.

1,196,294.

Patented Aug. 29, 1916.

Fig. I.

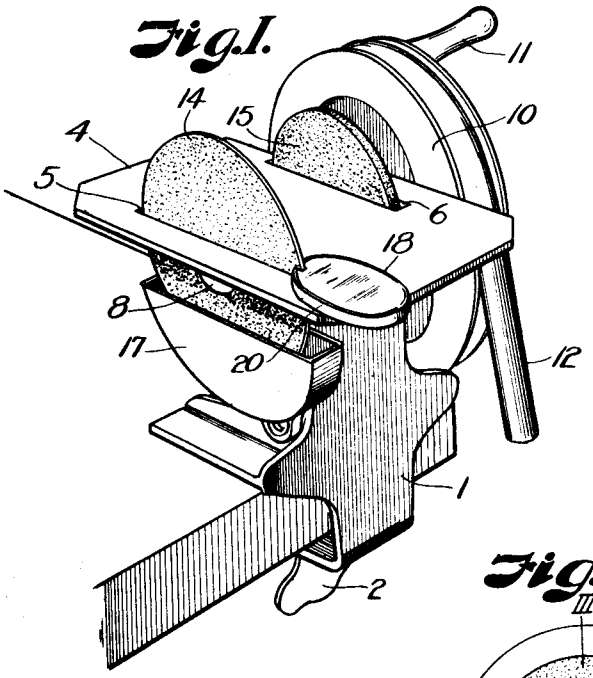


Fig. II.

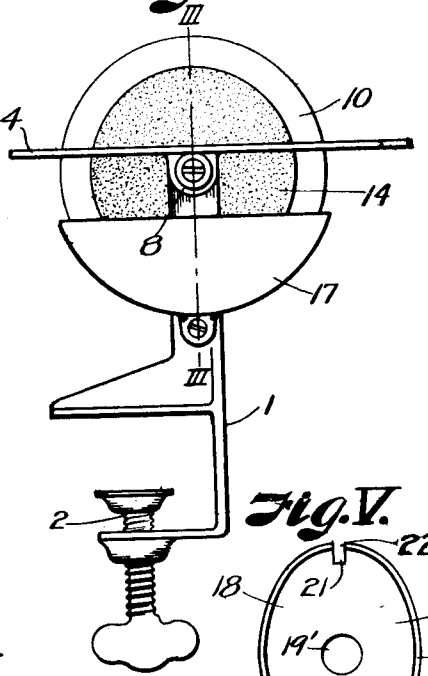


Fig. III.

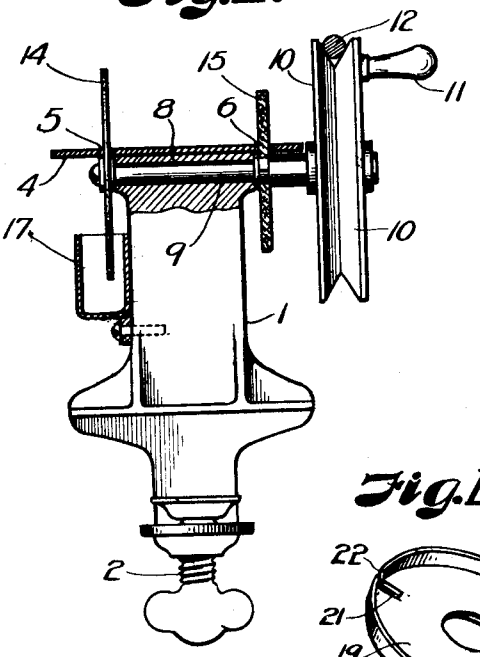


Fig. V.

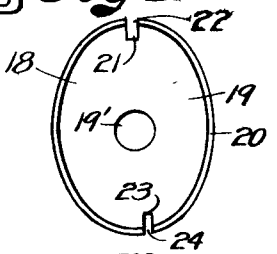
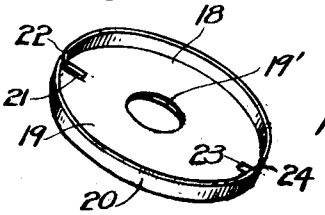


Fig. IV.



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LENS-SLITTING DEVICE.

1,196,294. Specification of Letters Patent. Patented Aug. 29, 1916.

Application filed November 5, 1915. Serial No. 59,744.

To all whom it may concern:

Be it known that I, ALVA L. SANDERSON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Lens-Slitting Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to apparatus for slitting eyeglass or spectacle lenses, and more particularly to an apparatus for forming slots therein that will adapt the lenses for use with screwless mountings, the principal object of the invention being to provide a combination of grinding tool and lens holding parts, whereby the lens may be accurately and conveniently moved against the grinding member to properly locate the slot.

In accomplishing this and other objects of the invention I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Figure I is a perspective view of a lens-slitting apparatus embodying my improvements. Fig. II is a side elevation of the grinding tool. Fig. III is a vertical section on the line III—III, Fig. II. Fig. IV is a detail perspective view of the lens cup. Fig. V is a plan view, particularly illustrating the offset guide slot in the cup.

Referring more in detail to the drawings: 1 designates the frame of a grinding tool, which is preferably formed in U-shape, so that it may be located over the edge of a table or the like, and is provided with a screw clamp 2 whereby the frame may be securely attached to the table. The frame 1 carries a table 4 having slots 5—6 near the longitudinal edges thereof, and journaled in a bearing 8, formed in the body of the frame, is a shaft 9, having a pulley wheel 10 fixed on one end thereof and provided with a handle 11 whereby the wheel and shaft may be revolved. The pulley is preferably V-shaped to take a round belt 12 whereby the shaft may be driven from a suitable motor, if desired.

Fixed on the shaft 9 is a slitting stone 14, of such thickness that it will grind a slot of desired width in a lens when the lens is moved thereagainst, the said stone 14 being projected through the slot 5 in the table 4, so that a part thereof will revolve about the table. Also fixed on the shaft 9 is a trimming stone 15 which is preferably thicker than the stone 14 and is arranged to project through the slot 6 in the table, so that a lens may be supported on the table and moved against the trimming stone to remove sharp corners from the lens after the lens has been formed. The stone 14 preferably runs in a bath of water contained within a vessel 17 that is fixed to the side of the frame.

In order to insure proper location of the slot in the lens I provide a cup 18 for carrying the lens and comprising a closed bottom 19 and edge flange 20, the cup being of such size that it will snugly nest a lens of given dimensions therein, and having a slot 21—22 therein at the center of one end, so that when a lens is located in the cup and the cup moved on the table in the direction of the stone 14 the stone will project through the slot 21 and 22, and engage the lens to grind the slot therein. At the opposite end of the cup 18 is a similar slot 23—24, which is located at one side of the center but extended parallel with the major axis of the cup, but at one side thereof, so that a lens located in the cup may be slotted at one side of the major axis of the lens in order to provide a suspended mounting for the lens on the finished eyeglass or spectacle.

In order that a lens may be conveniently removed from the cup I provide an opening 19′ in the bottom of the cup, through which an operator may push the lens from its seat in the cup.

In order that an operator may properly guide the lens toward the slotting stone and for convenience in handling a cup during the grinding operation, I locate the slots in the table such a distance from the longitudinal edge of the table, so as to leave a margin at the side of the cup when the latter is moved toward the stone, and the table is of such length that the cup will project thereover in the direction of the operator at all times during the slotting operation, so that when the operator places the cup on the

table and moves the same toward the stone, he guides the movement by the adjacent longitudinal edge of the table and may grasp the cup from beneath without interference from the table itself.

Assuming the apparatus to be constructed and assembled as described, the operator places a lens in the cup 18 and starts the shaft 9 in operation. He then places the cup on the table and grasps the outer end of the cup and the lens, so that the latter is held firmly in the cup and moves the cup along the table, in guided relation to the longitudinal edge and until the slotted part of the cup is projected over the stone. Forward pressure on the cup and lens then moves the latter toward the stone, so that the edge of the stone grinds into the lens and forms a slot therein, the length of the slot in the lens being limited by the length of the slot 21 in the bottom of the cup. If the lens is to be ground along its major axis the end of the cup having the slot 21—22 is moved toward the stone, but if a suspended lens is desired, then the end of the cup containing the slot 23—24 is moved toward the stone, so that the stone will grind through the slot 23—24 and form the slot in the lens at one side of the major axis of the lens. After the slot has been formed in the lens, should there be any rough edges, the lens may be placed against the stone and the sharp corners ground off.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters-Patent, is:

1. In an apparatus of the character described, a lens cup comprising a bottom member and an edge flange, having slots in substantial alinement with the longitudinal axis of the cup, for the purpose set forth.

2. In an apparatus of the character described, a lens cup comprising a bottom member and an edge flange, having slots in substantial alinement with the longitudinal axis of the cup, and having slots in the opposite end at one side of the major axis, for the purpose set forth.

3. In an apparatus of the character described, a lens cup comprising a bottom member and an edge flange, having slots in substantial alinement with the longitudinal axis of the cup, and having an aperture in said bottom member, for the purpose set forth.

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

ALVA L. SANDERSON.

Witnesses:
G. H. STURDIVAN,
W. B. HOMER.