June 5, 1928. 1,672,573

A. E. MAYNARD

GRINDSTONE MOUNTING

Filed Nov. 14, 1923

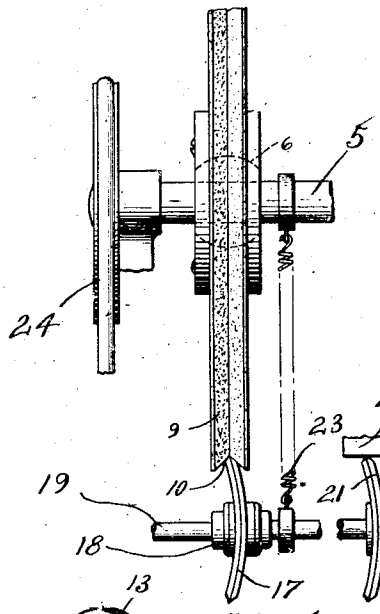


Fig. 1.

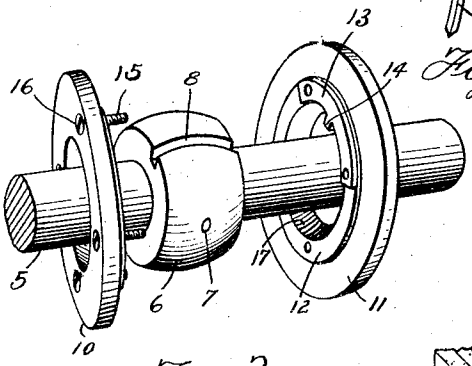


Fig. 2.

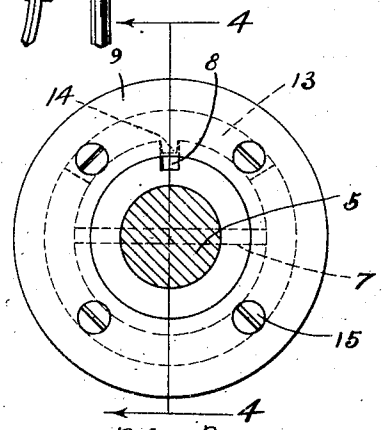


Fig. 3.

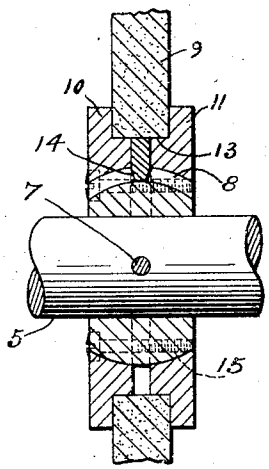


Fig. 4.

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UNITED STATES PATENT OFFICE.

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GRINDSTONE MOUNTING.

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The present invention relates to an improved stone mounting and has particular reference to a mounting used in conjunction with the stone of the so called bevel edging machines.

An important object of this invention is to provide an improved stone mounting of this nature that will produce a stone that will be what may be properly termed a floating stone.

Another very important object of the invention is to provide a mounting of this nature that will produce a floating stone for use in connection with a bevel edging machine that will greatly reduce the cost of the manufacture thereof and that will cut down to a considerable extent the number of parts that have heretofore been employed in making bevel edging machines.

Another very important object of the invention is to provide a mounting of this nature that will permit of the edging of any type of lens regardless of its curvature and at the same time both sides of the lens may be ground simultaneously.

A still further object of the invention is to provide a device of this nature that will be strong, durable, very simple and inexpensive in construction and manufacture and that will be exceptionally well adapted to the purposes for which it is designed.

Other very important objects of the invention will become apparent during courses of the following description.

In the drawings wherein like numerals are employed to designate like parts through-out the same,

Figure 1 is a front elevation of the stone and mounting as associated with a lens and lens holder,

Figure 2 is a fragmentary perspective view illustrating the parts of the mounting before assembling,

Figure 3 is a side elevation of the mounting in use,

Figure 4 is a vertical transverse section taken thru the stone and mounting.

In the drawing wherein for the purpose of illustration is shown the preferred embodiment of my invention the numeral 5, designates a shaft upon which is keyed a barrel like member 6 by means of the pin 7. The barrel like member is also provided with a slot 8 which is arranged parallel with the driving shaft 5. The barrel like member 6 is formed from a metallic material and is preferably polished to form a good bearing surface.

The numeral 9 designates a stone which may be of any desired material and is preferably provided with the groove 10 so as to adapt the stone for use as a bevel edger wherein both sides of the stone may be beveled simultaneously. The stone 9 is clamped between the members 10 and 11 respectively which members are each provided with the flange portions 12 which when clamped together will form a recess or groove 13, thus forming a seat for the stone 9.

The disc members 10 and 11 are each provided with the centrally disposed apertures which are chamfered around their edges preferably in arcuate formation to form a bearing surface edge to receive the barrel like member 6. Disposed between the flange 12 of the disc members 10 and 11 is a spacer 13 which is of arcuate formation as is clearly shown in Figure 2 of the drawings so as to conform to the curvature of the flange 12 and is provided with the depending lug or finger 14 which is adapted to be received within the slot 8 in the barrel like member. The members 10 and 11 are clamped together over the barrel like member 6 by means of the bolts 15 running thru the aperture 16 formed therein and thus properly mount the said members upon the barrel like member as is clearly shown in Figure 4. The spacer 13 is maintained in position by two adjacent screws 15 which pass through suitable openings formed therein as in Figure 2 of the drawings.

In use, the barrel like member having the slot 8 is keyed by means of the pin 7 upon a suitable shaft 5 which is rotated by any suitable power. The stone 9 is then placed between the members 10 and 11 while the spacer 13 is disposed between the flanges 12 in such a manner as the depending finger 14 will be arranged within the slot 8 of the barrel like member 6. The bolts 15 are then passed through the aperture 16, thus clamping the two members 10 and 11 tightly with the stone in position. As the finger 14 is arranged within the slot 8 it will be seen that the rings 10 and 11 will be rotated with the shaft 5 and due to the fact that the chamfered portions 17 are provided the

plates 10 and 11 will be free to rock on the barrel like member 6, thus creating what may be properly termed a floating stone. The pin 14 will not in anywise affect the movement of the members 10 and 11 upon the barrel like member but, on the other hand, will insure that they will be driven as required.

The numeral 17 designates the lens that is to be ground, and it will be seen that the lens is carried by suitable clamps 18 on the rotatable shaft 19. The shaft 19 is rotated by any suitable means, such as the pulley and belt 20. At 21 is shown a former that is of the same curvature and size that is desired of the lens 17 when it is finished, the said former bearing against a block 22. Resilient means 23 are associated with the shaft 19 in such a manner that the lens 17 will at all times be in contact with the stone 9 on the shaft 5, which is propelled by the pulley and belt 24. Of course it is well known to those familiar with the art that various shapes of lenses are used in ophthalmic mountings, and it is to be understood that this stone and mounting will adapt itself to flat, toric and meniscus lenses, due to the fact that lateral displacement of the stone 9 will be caused by the lens 17 within the groove 10.

It is to be understood that the form of my invention herewith shown and described is to be taken as the preferred embodiment of the same and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.

Having thus described my invention what I claim as new and desire to obtain by Letters Patent is:

1. A device of the character described comprising a shaft, a grooved grindstone mounted on the shaft, means to rotate the stone with the shaft and means which allow of the rocking movement of the stone on said shaft whereby the said stone will follow lateral displacements of a lens contacting in said groove.

2. In a device of the character described, a lens clamp, means to rotate the lens clamp, a grindstone with a groove in its periphery adapted to receive the lens, a grindstone shaft, means to rotate the grindstone shaft, a ball section having a peripheral groove arranged longitudinally of the shaft secured to the shaft and a bearing member over the ball section having a projection extending into the groove of the ball section and secured to the stone, whereby the stone may be displaced angularly with respect to shaft on its bearing by any lateral displacement of the lens in the groove of the stone as the lens is rotated therein.

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