

June 16, 1942.

M. SÜNSKES

2,286,319

LENS BLOCKING APPARATUS

Filed Dec. 13, 1939

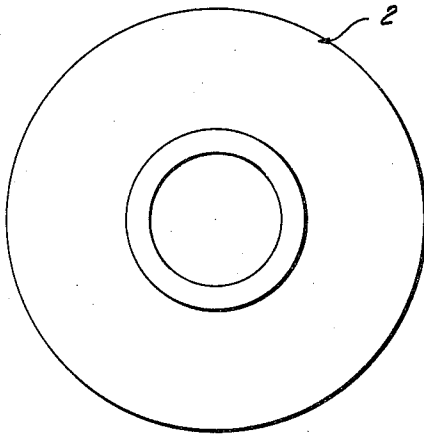
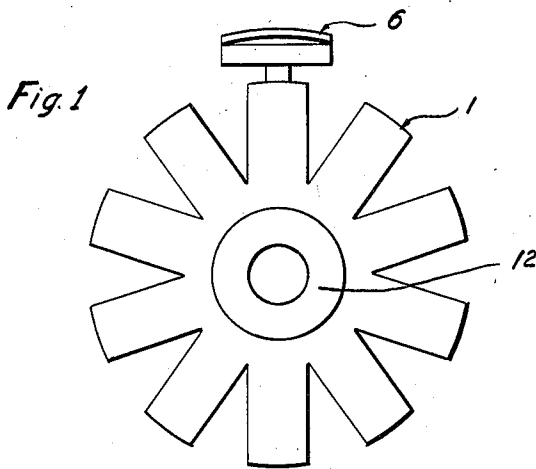


Fig. 4

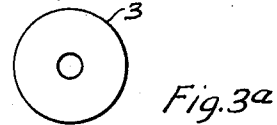
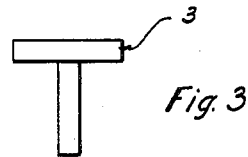
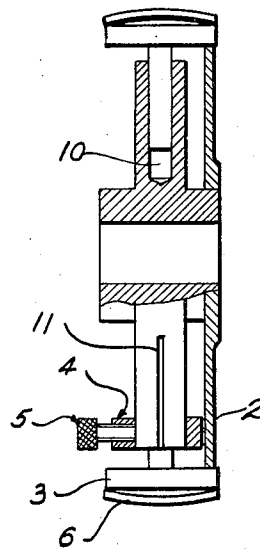


Fig. 4a

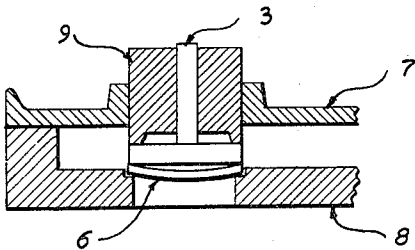


Fig. 5

INVENTOR.

Max Sünskes

UNITED STATES PATENT OFFICE

2,286,319

LENS BLOCKING APPARATUS

Max Sünskes, New York, N. Y.

Application December 13, 1939, Serial No. 308,999

1 Claim. (Cl. 51—216)

This invention relates to improvements in apparatus for grinding and blocking lens blanks, and it is the principal object of my invention to provide an apparatus and a method of holding simultaneously and securely a plurality of lens blanks of suitable thickness to be ground making the employ of skilled labor unnecessary, as the work may be done by unskilled workmen cheaply and readily.

Another object of my invention is the provision of such an apparatus employing a wheel having a plurality of longitudinally and centrally bored spokes for the removable, and exchangeable attachment of the lens blank holders for lenses of suitable size and shape.

A further object of my invention is the provision of a lens holder of simple and inexpensive construction, yet durable and highly efficient in use.

A still further object of my invention is the provision of a lens holder equipped with a suitable gauge for holding lens blanks to be ground thinner or thicker according to a predetermined dioptré.

These and other objects and advantages of my invention will become more fully known as the description thereof proceeds, and will then be specifically defined in the appended claim.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a front elevation of a wheel acting as a lens holder in an apparatus constructed according to my invention.

Fig. 2 is a side view partly in section thereof.

Fig. 3 is a detail view of a lens holder.

Fig. 3a is a top plan view thereof.

Fig. 4 is a front elevation of a gauge.

Fig. 4a is an edge view thereof.

Fig. 5 is a fragmentary detail view, partly in section of a lens holder illustrating the pitching of the lenses prior to their mounting on the holder wheel, Fig. 1.

As illustrated, a base 8 has one or a plurality of openings or recesses formed therein of a size slightly smaller than the diameter of a lens 6 to be ground. A second base 7 above or adjacent to said first named base also has a number of openings or recesses formed therein in alignment with the recesses in base 8. A block 9 passing through the opening in base 7 performs a dual function, it acts as a weight and also as a guide for the stem of the lens holder 3 passed through a channel in said block.

When a pitching compound is placed on the lens 6, the lens holder 3 together with the block

9 together with the stem of the lens holder 3 are guided by the holes in the second base 7, and the lens 6 will automatically assume a concentric position relatively to the lens holder 3 after being heated for the removal of the pitch compound so that any inexperienced person can attach any number of lenses or blanks 6 to the holders 3, the number of blanks being limited only by the number of apertures in the bases 7 and 8.

As shown in Figures 1 and 2, a wheel 1 is machined so that its spokes each have a longitudinally and centrally extending bore 10 therein for the reception of the stems of the lens holders 3 after the lenses have been pitched to their holders in the apparatus illustrated in Figure 5. In order to securely hold these stems in the bores 10 of the spokes which have slots 11, and a clamp collar 4 operated by a screw 5 is provided for securely holding the lens holder 3 in place.

The wheel 1 is mounted on a shaft passing through its hub 12 in the usual well known manner.

After the lens blanks have been pitched to their respective holders, as shown in Fig. 5, the stem of each holder 3 is inserted into the bore 10 of the corresponding spoke of the wheel. The lens 6 to be ground and pitched is seated as shown in Fig. 5 bridging the recess of the base 8 and held in this position by the weight of the block 9 through the channel of which the stem of the lens holder is passed and which block 9 is passed through the recess or opening in the base 7. After the stem of each lens holder has been inserted into the bore 10 of the corresponding spoke of the wheel 1, the clamp collar 4 and screw 5 are then suitably adjusted to clamp the stem of the lens holder securely to the respective wheel spoke.

A gauge 2 (Fig. 4) is used to suitably adjust the distance between the lens holders for suitably grinding the lens blanks to thicknesses of a predetermined dioptré according to the selected diameter of the gauge disk 2.

In operation, the lens blank 6 is placed on the base 8 and pitched, the weight is then placed on top of the holder head with the stem of the holder passing through the channel in the weight 9, after the same has been passed through the opening in the base 7, as shown in Figure 5.

Then the holder and the lens blank thereon is placed onto the wheel 1 with its stem engaged in the bore 10 of the respective wheel spoke to be securely held therein by the proper manipulation of the clamping collar 4 by means of its screw 5.

The lens blank is then ready to be presented to the grinding tool of any well known construction.

As shown in Figure 2, the adjustment of the lens holders to the desired thickness to which the blanks are to be ground to produce the lenses according to requirement, is effected by means of the gage plate 2, of a size selected to suit the special purpose and held on the wheel shaft between the properly adjusted holder heads, which are then secured in their relative positions as above stated by the screws 5.

The lens blanks are thus presented to the grinding tools so as to be ground according to the required dioptré. It will be clear that this can be done by unskilled labor, as the lens blanks are held in the center of the lens blank holder.

It will be understood that I have described and shown the preferred form of my invention only as one example of the many possible ways to practically construct the same, and that I may

make such changes in the general arrangement of the apparatus and in the construction of its minor details as come within the scope of the appended claim without departure from the spirit of my invention and the principles involved.

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

In a blocking apparatus as described for a lens blank, two recessed bases, a holder for the lens blank having a head and a stem to which said lens blank is pitched prior to its grinding, one of said bases forming a seat for supporting the lens blank, and the other of said bases having an opening to allow the passage of said lens holder head, and a weight having a channel for the passage of the stem of said lens blank holder, said weight engaging the head of the holder to hold the lens blank firmly in position for pitching.

MAX SÜNSKES.