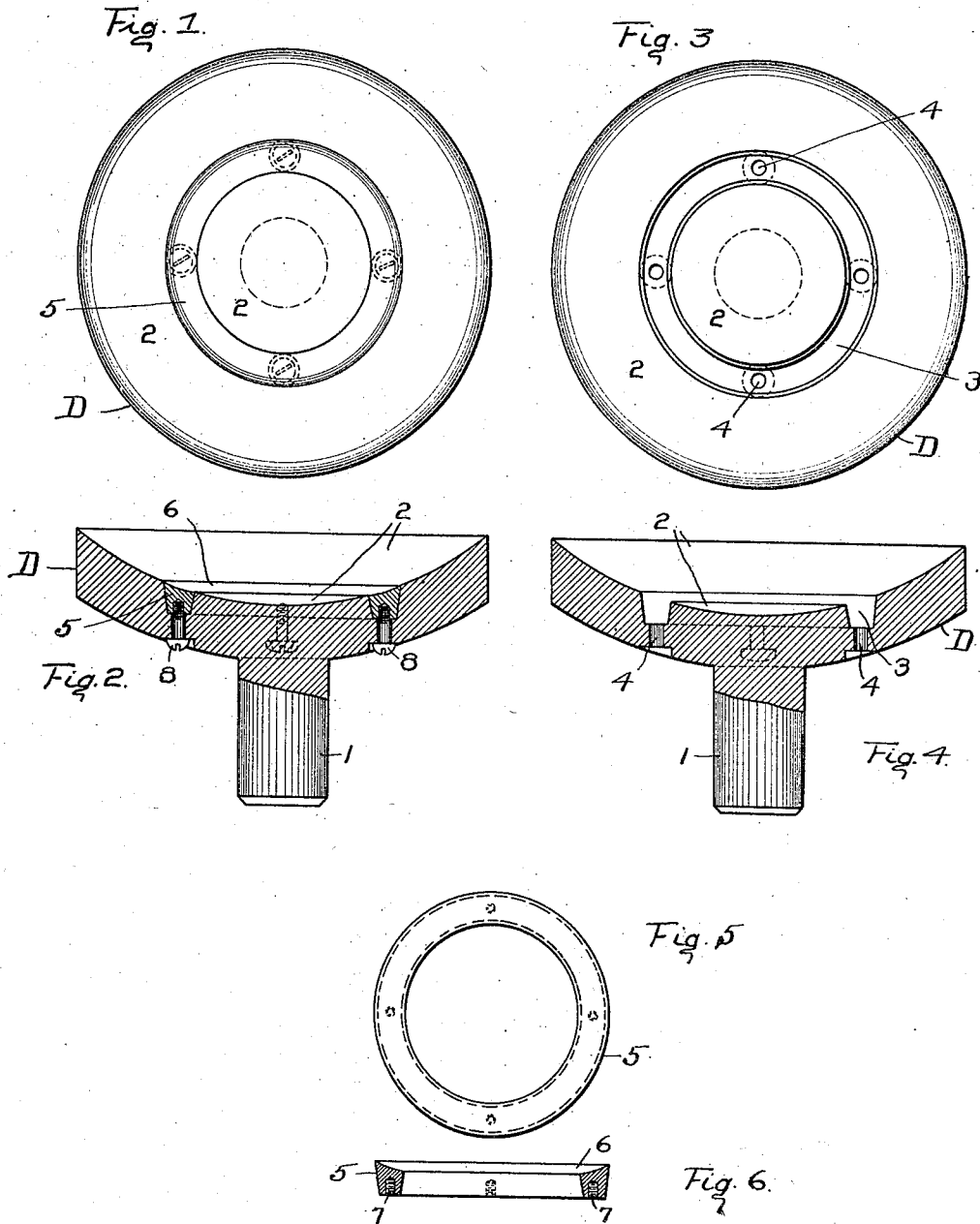


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 TOOL FOR GRINDING BOTH FIELDS OF BIFOCAL LENSES SIMULTANEOUSLY.
 APPLICATION FILED JUNE 16, 1911.

1,015,030.

Patented Jan. 16, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

CHANCIE C. KRIEGH, OF OSSIAN, INDIANA.

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Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed June 16, 1911. Serial No. 633,586.

To all whom it may concern:

Be it known that I, CHANCIE C. KRIEGH, a citizen of the United States, residing at Ossian, in the county of Wells and State of Indiana, have invented new and useful Improvements in Tools for Grinding Both Fields of Bifocal Lenses Simultaneously, of which the following is a specification.

This invention relates to tools for grinding lenses for spectacles, eye glasses and the like, in which lenses two fields of different radii are provided.

The object of my invention is to provide a simple and efficient tool having a grinding surface interrupted by a second grinding surface, the latter being removable so that a grinding surface having a different radii may be substituted in its stead, thereby enabling the former grinding surface to be used in combination with any one of a large number of interrupting grinding surfaces of different radii.

My invention consists in the novel construction, combination and arrangement of parts hereinafter described, of which one exemplification is illustrated in the drawings, in which—

Figure 1 is a top plan view of a grinding tool provided with my invention; Fig. 2, a central vertical section of Fig. 1; Fig. 3, a top plan view of the tool with the removable grinding member removed; Fig. 4, a central vertical section of Fig. 3; Fig. 5, a top plan view of a removable grinding member and Fig. 6, a central vertical section of Fig. 5.

Referring to the drawings, 1 is a spindle by which the head or disk D is secured to a rotatable support, not shown. The top or grinding surface of the disk is given the desired curvature—as the concave surface 2. This surface may have any desired radius of curvature and may be concave or convex as desired, and it is designed to grind the upper or far field of the lens. This surface 2 is interrupted by an annular concentric recess or channel 3 in disk D, the side walls of which may be parallel or tapered as shown. Openings 4 lead from the bottom surface of the disk into channel 3. In channel 3 is snugly fit a ring 5, the top surface 6 of which is flat or concave or convex of any desired radius of curvature, and it is designed to grind the lower or near field of the lens. The outer and inner top edges of the ring coincide accurately with the adjacent edges of the disk D so as to obviate

a sharp line of demarcation between the two fields of the lens when produced by surfaces 2 and 6. Ring 5 is preferably provided with threaded openings 7 in its lower surface which may be brought into register with openings 4 in disk D through which registering openings bolts or screws 8 are inserted for securing ring 5 to the disk. The contacting tapered sides of ring 5 and channel 4 furnish sufficient friction to securely retain the ring in the channel, but I prefer to use bolts or screws 8 as securing means for the purpose. Openings 4 also serve to admit a tool for dislodging a ring 5 from the disk.

It is apparent that any number of rings 5 may be provided each of which will have a top or grinding surface of a curvature differing in radius from any of the others so that with a single tool with a selected radius of curvature for surface 2 a ring 5 having the desired radius of curvature for its grinding surface may be combined, thereby enabling the operator to grind bifocal lenses in many combinations of fields and avoiding the necessity of constructing a complete tool for each of those combinations. All that the operator has to do is to select the disk and ring having the desired radii of curvature, assemble them and grind the lens. For another combination he may use the same disk with another ring or the same ring with another disk. In case the grinding surface of the ring, or any ring, becomes worn down so that it does not properly register with the disk I may insert a bushing or shim between the bottom of the ring and the bottom of the channel thereby elevating the ring to the proper height, the screws being of sufficient length to permit of this adjustment.

It will be understood that in the operation of grinding lenses with the tool above described it will be necessary that the lens be made to rotate about a transverse axis independently of the rotation of the tool and that the lens shall be placed in a fixed position relative to the disk in order that the fields shall be made on the lens. Means for accomplishing these conditions are well known in the art and as they form no part of my present invention I do not illustrate them.

What I claim is:

A tool for grinding the fields of bifocal lenses simultaneously comprising a head having a grinding surface thereon, an an-

nular channel in the head interrupting the continuity of the said surface, openings in the head extending from the bottom of the channel to the rear or lower side of the head, a ring in the channel having a grinding surface, the curvature of which differs from that of the curvature of the grinding surface of the head, and rotatable means in said openings and engaging the ring for removably securing the ring in the channel. 10

In witness whereof, I hereunto subscribe my name this 12th day of June, 1911.

CHANCIE C. KRIEGH.

Witnesses:

HELEN F. GLENN,

E. M. HULSE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."