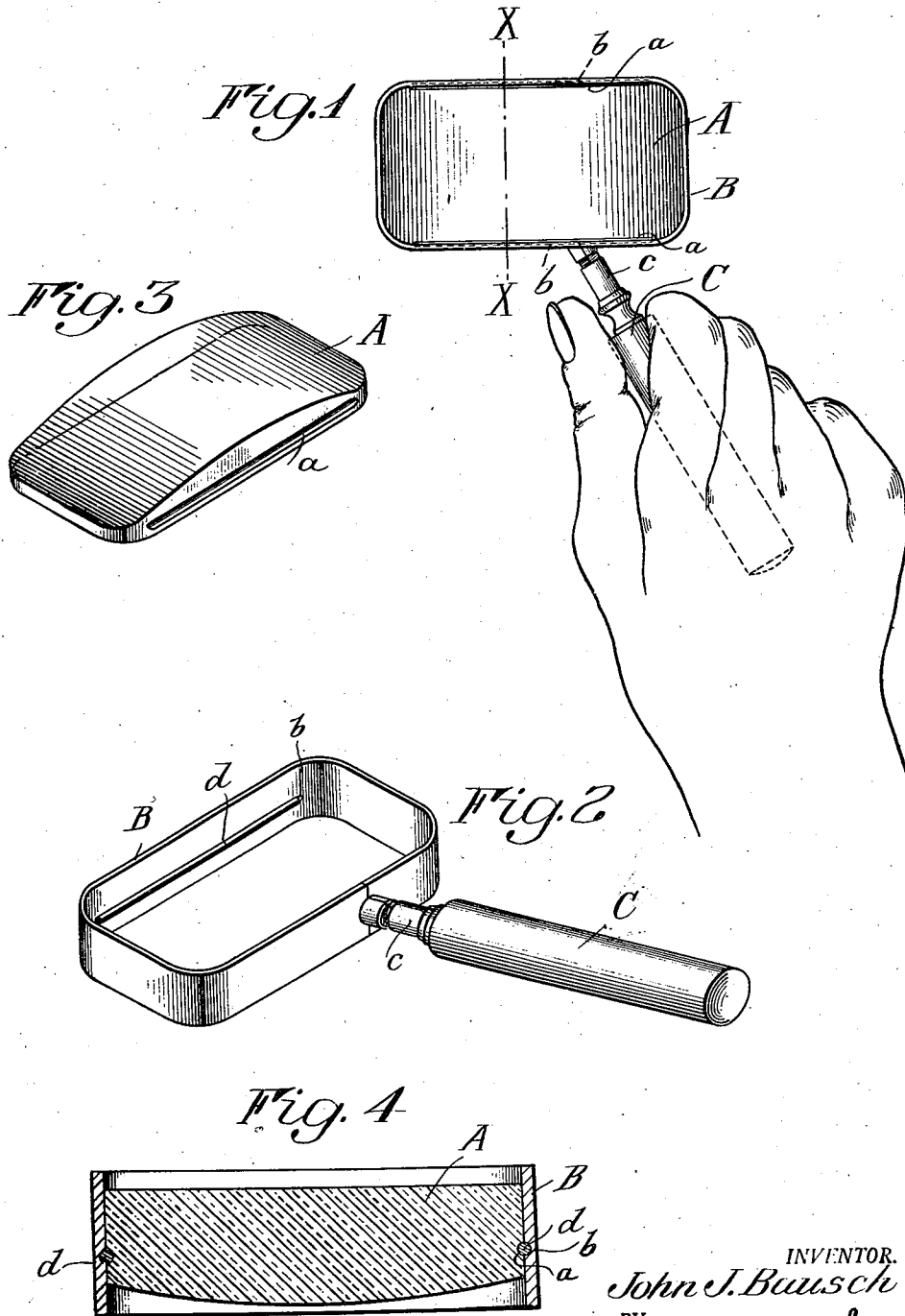


J. J. BAUSCH.
MOUNTING FOR READING LENSES.
APPLICATION FILED AUG. 31, 1920.

1,415,511.

Patented May 9, 1922.



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MOUNTING FOR READING LENSES.

1,415,511.

Specification of Letters Patent.

Patented May 9, 1922.

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To all whom it may concern:

Be it known that I, JOHN J. BAUSCH, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Mountings for Reading Lenses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference numerals marked thereon.

My present invention relates to a device for holding or supporting lenses, and particularly to provide a magnifying reading glass to be held in the user's hand which shall be simple in construction, readily assembled, and with the parts being arranged relatively and so balanced that it may be maintained by the user in proper reading position with a minimum of fatigue. To these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the accompanying drawings I have shown the invention as applied to a hand reading glass.

Figure 1 is a front elevation of the glass embodying my invention supported in convenient reading position by the hand of the user.

Figure 2 is a perspective view of the lens holding frame and the securing and supporting handle.

Figure 3 is a similar view of the lens.

Figure 4 is a vertical section taken on the line X—X of Figure 1.

Similar reference numerals throughout the several views indicate the same parts.

In securing lenses, particularly those adapted for reading glasses, in their frames, some difficulty has been encountered in connecting the parts in such manner that the connection is at the same time firm and slightly, without involving too great an expense in fitting the parts together. Ordinarily in the use of lenses of circular form, the periphery of the lens is reduced or sharpened to a thin edge and the expansible and contractible frame in which it is secured is provided with a narrow groove for the reception of said edge. The grinding and polishing of the edge of a circular lens re-

quires considerable time and is expensive. In order to reduce the operations and to provide a device which may be manufactured and assembled at slight cost, I form the opposite or opposing edges of the lens of substantially plane surfaces and provide them with grooves or keyways, and provide corresponding grooves or keyways in the adjacent sides of the frame adapted, when the parts are assembled, to register with those in the lens and secure the parts from movement by key pieces or locking pins, the sides of which enter the corresponding and adjacent grooves in both the lens and frame.

In the embodiment shown in the drawing A represents a lens which, when viewed in plan, is preferably substantially rectangular and oblong, and its opposite longitudinal edges are provided with shallow grooves *a—a* as shown in Figure 3, these grooves being formed by an ordinary grinding wheel or saw charged with a suitable abradant and requiring no particular skill on the part of the operator in forming them. The frame B for carrying the lens is formed of a flat strip of metal bent around and closely engaging the periphery of the lens A, the proximate ends of said frame being provided with half round studs (one on each end of the strip) threaded on their outer sides so that when the flat sides of said studs are placed in contact and the nut or ferrule *c* on the end of the handle C is screwed in place, the sides of the frame are drawn together, this construction being the same as that employed in forming the ordinary reading glass holders. The two opposite sides of the frame B thus formed are provided with relatively shallow grooves or keyways *b* and locking pins or wires *d* are loosely placed therein when the parts are assembled, said wires or keys resting partly in the grooves of the frame and partly in those in the lens, so that when the frame is clamped by the handle or otherwise, the lens will be held firmly in position and the means of attachment is not readily discernible. Instead of employing the keyways and keys on the upper and lower sides of the oblong lenses shown, they might be located at the shorter ends but I prefer the construction shown as it provides a longer bearing between the parts and they are not liable to become displaced in use.

The lens A may be a section of a sphere or may be plano-convex, double convex, or cylindrical, or of other form, but whatever the conformation of its refracting surfaces, it is preferably of oblong or of substantially rectangular oblong form, and the handle is connected between the center of the lower side of the frame and one of the lower corners thereof, and projects at an angle to the lower edge beyond the narrower side of the frame.

This construction and arrangement of the parts provides a laterally elongated lens opening covering a relatively wide field such as a column of printed matter (particularly advantageous when a long cylindrical lens is employed) and the handle projects at such an angle from the plane of the opening, that the device may be held by the user without unnecessary fatigue, his hand being located at the side of the printed matter in a natural and comfortable position.

By attaching such a handle intermediate the ends of the frame the device is also balanced and is not liable to turn in the hand of the user even when a thick, heavy lens is used.

The form of connection between the lens and frame embodying the longitudinally extending grooves formed therein and the readily applied keys or locking wires, is advantageous in that the lenses may be molded without being ground and polished at their edges and the grooves formed and the parts readily assembled by unskilled operators thus cheapening the product, and this feature can be readily employed in securing lenses such as stereoscopic lenses or prisms in their frames, or mirrors if desired.

While I prefer to employ a single piece holding frame for the lens the feature of securing the lens from lateral movement by means of the grooves and keys is advantageous in constructions in which the cooperating and opposing sides of the frame are movable relatively to the lens and secured in position by other means.

I claim as my invention:

1. A holder for glass articles such as lenses, comprising a suitable frame embracing the edge of the article and provided with grooves in its inner opposed sides, in combination with the article, such as a lens, having substantially straight edges in contact with the grooved sides of the frame, provided with grooves therein open toward the

outer side only and arranged adjacent the grooves in the frame, and the keys or rods arranged in both the grooves in the article and in the frame.

2. A holder for glass articles such as lenses, comprising a suitable frame having relatively movable opposed sides embracing the edges of the article and provided with grooves therein, in combination with the article having substantially straight edges in contact with the grooved sides of the frame and provided with corresponding and opposing grooves therein open toward the outer sides only, and the keys or rods arranged in the grooves in the article and in the frame.

3. The combination with a lens frame comprising a strip of material having its ends detachably connected and its inner opposed sides provided with grooves, of a lens fitted within the frame having grooves in its edges open toward the outer sides only and arranged opposite the grooves in the frame and the separate and detachable securing keys arranged in the grooves in the lens and frame to prevent relative movement of the parts.

4. The combination with a substantially rectangular lens frame having relatively movable sides provided with grooves in their inner surfaces, of a lens fitted within said frame and having substantially straight sides provided with grooves corresponding to those in the frame and open toward the outer sides only and the lens holding keys or rods arranged between the frame and lens the sides of said keys extending into the grooves in both parts.

5. A reading glass comprising a lens frame having an elongated opening therein, an elongated lens arranged in said opening and a supporting handle rigidly connected to the longer side of the frame between its center and the narrow side thereof and extending at an angle to said longer side and beyond the narrow side of the frame.

6. A reading glass comprising a substantially rectangular elongated frame, a substantially rectangular elongated lens mounted therein and a substantially straight handle rigidly connected to the longer side of the frame at a point between the center thereof and the narrow side and extending laterally at an angle to said longer side and beyond the narrow side of the frame.

JOHN J. BAUSCH.