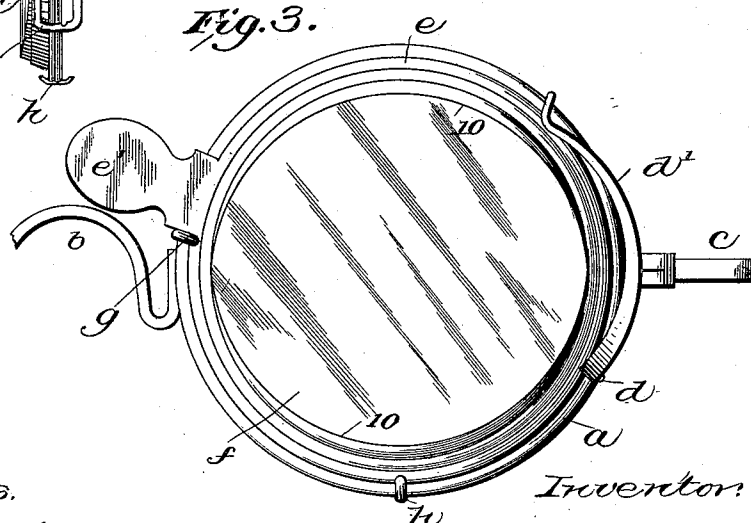
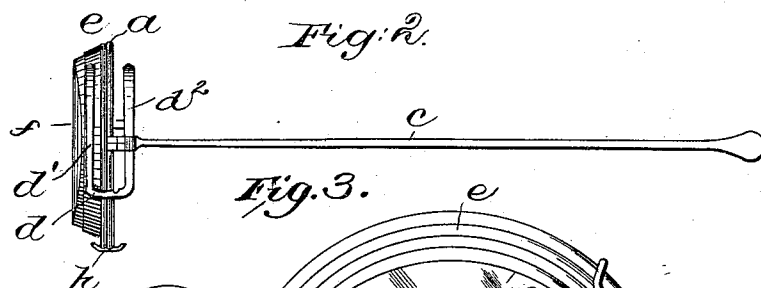
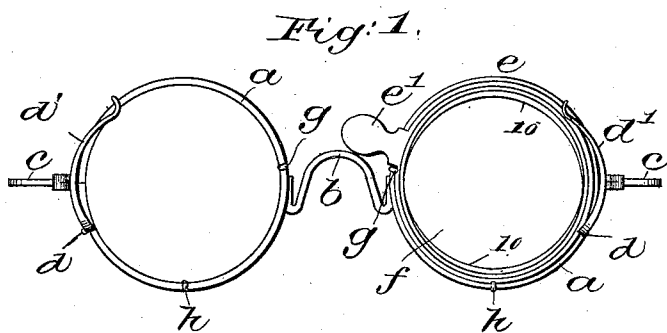


(No Model.)

A. G. McKENZIE.
TRIAL FRAME FOR OPTICIANS.

No. 479,607.

Patented July 26, 1892.



Witnesses.

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Edward F. Allen

Inventor.

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UNITED STATES PATENT OFFICE.

ANGUS G. MCKENZIE, OF BOSTON, MASSACHUSETTS.

TRIAL-FRAME FOR OPTICIANS.

SPECIFICATION forming part of Letters Patent No. 479,607, dated July 26, 1892.

Application filed September 14, 1891. Serial No. 405,613. (No model.)

To all whom it may concern:

Be it known that I, ANGUS G. MCKENZIE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Trial-Frames for Opticians, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

10 This invention has for its object to improve and simplify what are known as "trial-frames," employed in selecting and fitting lenses for use in defective vision.

15 My improved frame is very light in weight and is adapted to receive both spherical and cylindrical lenses, and the lens-holder may be rotated in the frame to enable the axis of the lens to be brought into any meridian from zero to one hundred and eighty degrees.

20 The frame in practice may be provided with any usual or suitable meridian marks or lines.

25 My improved trial-frame consists, essentially, of a spectacle-frame having an attached yielding finger, between which and the frame the lens-holder may be rotated, as stated, when desired, the handle of the holder passing behind the finger as the holder is rotated and brought into one of its extreme positions.

30 This frame is shown as provided with a stop pin or projection at the side thereof opposite the yielding finger, and preferably another projection to prevent the lens-holder from being moved diametrically across and off the frame by accident.

35 Figure 1 in front elevation represents a trial-frame embodying my invention, and Fig. 2 a right-hand side elevation thereof. Fig. 3 is an enlarged view of the right-hand half of the frame shown in Fig. 1.

40 The frame part, composed of the rims *a a*, nose-piece *b*, and bows *c*, is and may be of any usual shape and material. In accordance with my invention I attach to the rims at *d* one end of a finger *d'*, offset from and leaving between the rim and finger a space, the free end of the finger being shaped, preferably, as shown in Fig. 1, to act in a yielding manner on the side of the holder *e* for the lens *f*. This holder has a handle *e'*, by which the optician or other person using the frame may rotate the lens-holder from zero to one

hundred and eighty degrees, more or less, as may be desired. The rims *a* have stops *g* opposite the finger, and between the stops *g* and finger each rim has a projection *h*. The stops *g* and projections *h* are concaved at their inner sides or slightly curved, as clearly shown in the drawings, to project over the edge of the holder and keep it in place. It will be readily seen that the holders are retained in place on the rims at several isolated points, and as the stop *g* and point of attachment *d* of the finger are not diametrically opposite the holder is quickly slipped into place, the free end of the finger forming the remaining point of attachment. By this construction the weight of the frames is greatly lessened, the holders are put in place rapidly, and turn with very little friction. The handle *e'* meets the stop *g* when the lens is turned to the left, as at the right in Fig. 1, and the projection *h* prevents the holder from being accidentally pushed transversely across or off the frame. The handle *e'*, when the holder is rotated from the position, Fig. 1, over to the right, passes behind the finger *d'* and down, if desired, to the end of the space between the finger and the rim at the point where the finger is attached to the rim, forming at such point a limiting-stop to the rotation of the lens-holder in that direction. The rim may have a finger *d''* at the back, as well as at its front side, (see Fig. 2,) and the projection *h*, being also shown as on each side of the rim, so that the lens-holder may be inserted in front or at the back of the rim, as desired.

I have shown but one lens and lens-holder, and have marked on it at 10 the meridian mark or a mark to indicate the direction of the axis of the lens when the holder is at the extremity of its movement in either direction.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a trial-frame, the combination, with the rims of the frame, of parallel fingers fixed to each rim and offset therefrom on opposite sides thereof to co-operate at their free ends with the side of a lens-holder and its handle and retain the lens-holder between said free ends and rim, the end of the space between each finger and attached rim forming a lim-

iting-stop for the handle of the lens-holder, said holder being thereby retained in position at several isolated and independent points, substantially as described.

5 2. The frame having rims provided with a concaved stop or projection *g* and an outwardly-yielding curved finger attached at one end to and offset from said frame, combined with a lens-holder having a handle, said
10 holder being retained in place in the space between the inner side of the free end of the offset finger and adjacent portion of the rim and resting in the concaved stop, to operate substantially as described.

15 3. The frame having rims provided with concaved stops *g* and projections *h* and a

connected yielding finger on the front and rear of each rim, said fingers being offset from the rims and parallel to each other and to the plane of the rims, the inner sides of 20 the free ends of said fingers, and the adjacent portions of the rims, with the stops *g* and projections *h* forming a series of separate and independent retaining-points for the lens-holders, substantially as described. 25

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANGUS G. MCKENZIE.

Witnesses:

FREDERICK L. EMERY,
FRANCES M. NOBLE.