Feb. 12, 1924. 1,483,745

C. F. PROPSON

MAGNIFIER

Filed May 2, 1919

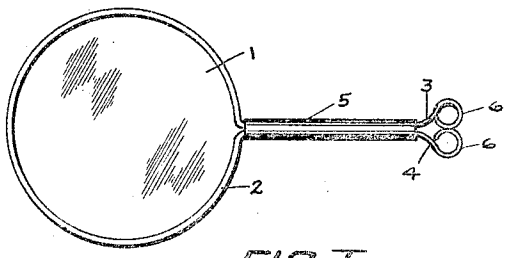


FIG. I

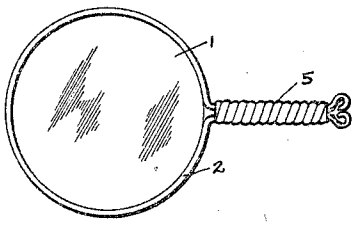


FIG. II

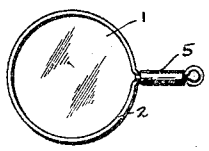


FIG. III

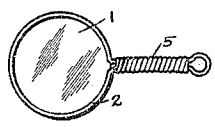


FIG. IV

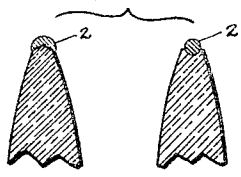


FIG. V

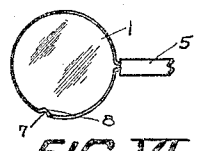


FIG. VI

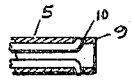


FIG. VII

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UNITED STATES PATENT OFFICE.

CARL F. PROPSON, OF SOUTHBRIDGE, MASSACHUSETTS, ASSIGNOR TO AMERICAN OPTICAL COMPANY, OF SOUTHBRIDGE, MASSACHUSETTS, A VOLUNTARY ASSOCIATION OF MASSACHUSETTS.

MAGNIFIER.

Application filed May 2, 1919. Serial No. 294,135.

To all whom it may concern:

Be it known that I, CARL F. PROPSON, a citizen of the United States, residing at Southbridge, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Magnifiers, of which the following is a specification.

This invention relates to improvements in magnifying devices or the like and has particular reference to the mounting for the lens employed.

One of the leading objects of the present invention is the provision of a novel and improved form of combined frame and handle for a lens which may be inexpensively constructed and simply and satisfactorily applied to the lens.

A further object of the invention is the provision of a structure of this character which can be manufactured without either threading of the parts or the use of solder, thus eliminating the expense of threading or soldering operations, while leaving the material with the full resiliency and strength imparted to it by its original rolling or other formation and without interfering with the strength or resiliency of the material through softening it by soldering operations or the like.

Other objects and advantages of my improved construction should be readily apparent by reference to the following specification taken in connection with the accompanying drawings, and it will be understood that I may make any modifications in the specific details of construction shown and described within the scope of the appended claims without departing from or exceeding the spirit of my invention.

Figure I represents a plan view of one embodiment of my invention.

Figure II illustrates another form thereof.

Figure III is a similar view of an extremely simple form.

Figure IV illustrates a spring handle type of construction.

Figure V represents a fragmentary sectional view through a lens and frame illustrating the connection between these parts.

Figure VI represents a detail view of another modification of my invention.

Figure VII represents a sectional view of a modified construction.

In the drawings, the numeral 1 designates the lens of what I have termed a magnifier, although it will be understood that the lens may be of either convex form for magnifying purposes, concave form for diminishing purposes, or without focus but having special color values or the like as desired, the particular form, shape or composition of the glass member 1 being no essential feature of my invention.

Surrounding the lens or member 1 is a suitable frame 2, which so far as the lens engaging portion is concerned may be of any desired form, as for instance the forms shown in Figure V, the left hand form being a grooved eye wire receiving a bevelled edge on the lens, and the right hand form being a circular eye wire or frame portion received in a groove in the lens. In any event, however, the frame member encircles the lens and has the two outwardly extending portions 3 and 4 which are brought closely together to lie in parallel relation and preferably pass through the handle portion 5, which may be either in the form of a solid tube, a heavy wound substantially rigid tube, as shown in Figure II, or a finer flexible wound tube, as illustrated for example in connection with Figure IV.

In the assembling of the form of construction shown in Figures I and II for example, the two ends of the members 3 and 4 are drawn out through the tubular handle 5 and each curled in the portion 6, the two members 6 together forming a substantially heart-shaped terminal design of attractive appearance at the end of the handle, while at the same time the outward flaring bend of the members 3 and 4 serves to bind against the interior of the tube 5 at its end, in assembling the parts 3 and 4 being drawn as tightly as possible through the tube 5 and bent to lock them, while the interengagement of the coils or circularly wound portions 6 at the handle end holds the terminals of the parts 3 and 4 outwardly flared to resist any reverse sliding through the handle 5.

The structure illustrated in Figure II is substantially that of Figure I, with the exception that in place of the tube 5 a tube formed by winding of heavy wire is substituted.

Figure III shows a similar form of construction but with only one end of the frame 2 projecting outside the handle 5 and bent

into a single circular loop, while Figure IV shows a flexible wound wire handle with both ends of the parts 3 and 4 brought outward and bent into overlying loops. It is to be noted that the members 3 and 4 are of semi-tempered or resilient material, and in connection with the handle 5 the entire handle will have flexibility and sufficient rigidity to satisfactorily hold the magnifier, but lessening the liability of a blow being given to the magnifier in laying it down, which on account of resistance in the handle might tend to shatter the lens through transmitted vibrations in the case of a rigid handle, so the Figure IV construction possesses a particular advantage in this respect.

In Figure VI, I have shown a form of my construction particularly adapted for use when a cylinder or other special form of lens is to be used in connection with the magnifier, in that in this form of the structure I have shown the frame formed with the lateral indentation 7 extending into a notch 8 formed in the periphery of the lens. This construction serves to prevent any relative rotation of the lens 1 and the frame, and is particularly valuable in case of cylindrical lenses or the like where the value or effect is varied by rotation of the parts and where it is, therefore, desirable to have the lens held in a certain definite relation to the handle.

In Figure VII is illustrated a further slight modification of my invention in which the ferrule encircling member or handle 5 is provided with the terminal or other notches or slots 9, while the ends of the arms 3 and 4 are bent outward through the encircling member 5 in the notches where they may be cut off flush or otherwise as desired, but in which they form outwardly deflected portions or hooks firmly engaging the ferrule and holding it in place.

I claim:

1. A flexible handle magnifier, including a lens engaging rim having outwardly deflected terminal portions, an elongated resilient tube mounted on said terminal portions and of length to provide a handle, the terminal portions extending through said tubular member and terminating therebeyond in flared parts frictionally engaging the tubular member to retain the latter in position.

2. A projecting handle magnifier, including a lens engaging rim having outwardly deflected terminal portions, an elongated tube mounted on said terminal portions and of length to provide a handle, the terminal portions extending through said terminal member and terminating therebeyond in flared parts frictionally engaging the tubular member to retain the latter in position.

3. A spirally wound handle magnifier, including a lens engaging rim having outwardly deflected terminal portions, a spirally wound tube mounted on said terminal portions and of length to provide a handle, the terminal portions extending through said tubular member and terminating therebeyond in flared parts engaging the tubular member to retain the latter in position.

In testimony whereof I have affixed my signature, in presence of two witnesses.

CARL F. PROPSON.

Witnesses:

ALICE G. HASKELL,

H. E. COLEMAN.