(No Model.)

P. MOEWS.

OPERA GLASS ATTACHMENT.

No. 475,463. Patented May 24, 1892.

Fig. 1.

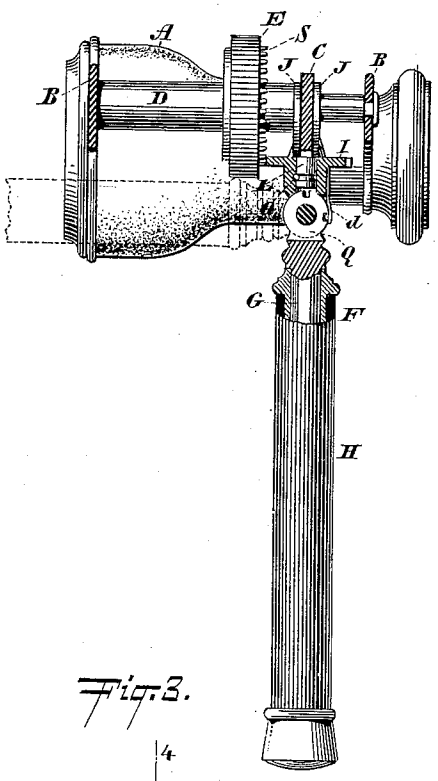


Fig. 2.

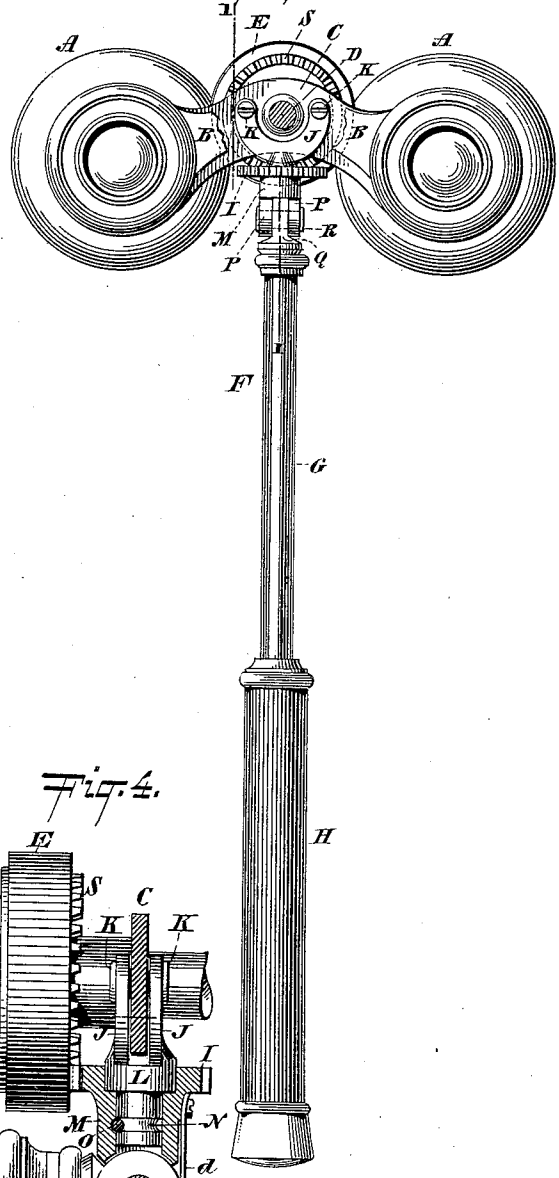


Fig. 3.

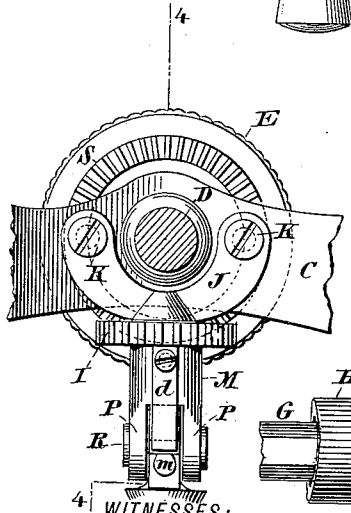
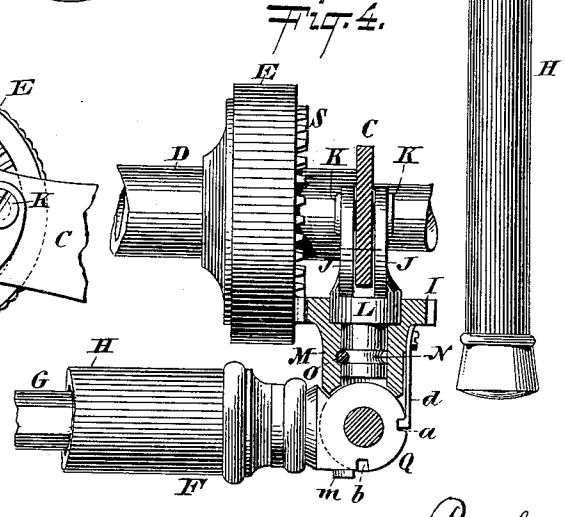


Fig. 4.



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OPERA-GLASS ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 475,463, dated May 24, 1892.

Application filed February 29, 1892. Serial No. 423,133. (No model.)

To all whom it may concern:

Be it known that I, PAUL MOEWS, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Opera-Glass Attachments, of which the following is a specification.

The invention relates to improvements in opera-glass attachments; and it consists in a novel holder and means of connection between said holder and the glasses by which the latter may be conveniently supported and the focus adjusted.

It is well known that opera and analogous glasses to which my invention is applicable consists of longitudinal telescopic barrels or tubes carrying the lenses and connected by cross bars, which support between said barrels the screw-cylinder and revoluble thumb-piece for adjusting the focus.

In accordance with my invention I do not change the character of the glasses or interfere with their use in the usual way independent of my attachments, but provide means connected with a handle, preferably telescopic and folding, by which on the axial revolution of the handle the aforesaid revoluble thumb-piece may be actuated to focus the glasses.

The invention consists in the novel devices and combinations of parts hereinafter more fully described, and particularly pointed out in the claims, and said invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of an opera-glass and holder constructed in accordance with my invention, the section being on the dotted line 1 1 of Fig. 2, which is an end elevation of same with one of the cross-bars broken away to disclose the means by which the holder is secured to the glasses. Fig. 3 is an enlarged detached view, partly broken away, of the upper end of the opera-glass holder and connecting parts carrying the means of attaching said holder to the opera-glass and gearing by which, on the rotation of the holder, the focus of the glasses may be changed at pleasure. Fig. 4 is a detached side elevation of same, partly in section, on the dotted lines 4 4 of Fig. 3.

In the drawings, A designates a pair of opera-glasses of the usual well-known form, the barrels thereof being connected by the usual transverse bars B C and having between them the screw-cylinder D for adjusting the focus of the glasses, said cylinder being operable in the usual manner by means of the thumb-piece E.

To the cross-bar C of the opera-glasses I apply the holder or handle F, consisting of the telescopic sections G H, respectively carrying at their upper end the gear-wheel I and arms J J, the latter fitting the cross-bar C on opposite sides and being secured thereto by means of the screws K. The arms J J are formed on the upper end of a plug L and each is bifurcated in form, so as to straddle the usual screw-cylinder D of the glass. The bifurcated form of the arms J also insures a firm attachment of the handle F to the opera-glass and results in the latter being nicely and conveniently balanced when in use. The plug L extends downward through the gear-wheel I and into the hub M, connected therewith, and forms a bearing around which said gear-wheel may revolve when actuated by the rotation axially of the handle F. The lower end of the plug L is provided with the annular groove N, which receives the pin O, by which the plug is retained within the hub M, without interfering with the rotation of the latter. The lower end of the hub M is provided on opposite sides with the ears P P, which receive between them the plate Q, secured upon the upper end of the handle F, said plate being secured by means of the transverse pin or rivet R and forming with the ears P a hinge, which adapts the handle F to be folded against the glasses and in line with the screw-cylinder D thereof, as illustrated in Fig. 4. The plate Q will be secured to or formed on the upper end of the handle F, as may be preferred, and said plate is provided on its edge with the notches *a b*, respectively, which co-operate with the spring *d* to lock the handle F in either its vertical position, as illustrated in Fig. 1, or in its folded position, as indicated in Fig. 4.

The spring D is fastened to the outer side of the hub M and carries at its lower end a projection which engages the notch *a* when

the handle F is folded and the notch *b* when said handle is in a vertical position. The gear-wheel I engages the gear-wheel S, secured to or formed on the inner side of the thumb-piece E, and by rotating said gear-wheel S operates to adjust the focus of the glasses.

I have illustrated in the drawings a telescopic handle for the glasses; but I desire it to be understood that I do not limit the invention exclusively to telescopic handles, since it is obvious that if the extended handle illustrated in Fig. 2 were in a single piece of appropriate length it would still form a convenient attachment to the gearing, by which the focus of the glasses might be adjusted. When, however, the handle F consists of the telescopic sections, I prefer that the inner section G may be polygonal in cross-section and enter a correspondingly-formed opening in the upper end of the outer or lower section H, in order that said sections may not turn axially one upon the other, but will simply have a telescopic or sliding movement.

The purpose of arranging the telescopic sections of the handle so that they will not turn one upon the other is to enable the user by rotating the section H of the handle to effect the rotation of the gear-wheel I, and thereby to impart a rotary movement to the gear-wheel S, secured upon or applied to the thumb-piece E.

When the handle F is in one continuous piece, it will be obvious that by applying a rotary movement to any part of the handle a corresponding motion will take place in the wheel I, and this in turn will operate the gear-wheel S and thumb-piece E; but when the handle F is made of telescopic sections without said sections having a provision for preventing their rotating one upon the other it will also appear obvious that a rotary movement applied to the outer or lower section H might not operate to rotate the gear-wheel I, and hence the inner section G of the handle should be polygonal in cross-section, or said handle should be provided with some other means by which its sections may be prevented from having an axial revolution one upon the other.

I have indicated a very simple expedient of preventing the sections of the telescopic handle from turning one upon the other, and the lead-pencil art is replete with further examples for accomplishing the same purpose. I do not therefore limit the invention to the use of any particular means for preventing the axial rotation one upon the other of the sections of the telescopic handles.

In the use of the invention, the bifurcated arms J J having been applied or secured to the transverse cross-bar C of the glass, the gear-wheel I will thereby be brought into engagement with the gear-wheel S on the thumb-piece E, and may be caused to operate said thumb-piece to adjust the focus of the glass by simply rotating the handle F axially. The gear-wheel I and the handle F are connected together by means which cause the rotation of the latter to impart a corresponding movement to the former, while the connection of the arms J J to the gear-wheel I is such as to enable the rotation of the latter without creating a tendency to cause a corresponding movement in the former. It is evident, also, from the foregoing description that the handle F may be folded inward against the glasses for convenience in carrying the same when not in use or may be turned into a vertical position at right angles with the longitudinal center of the glasses, as indicated in Fig. 2, and in such position serve as a support for the glasses while in use.

While I have specially referred to the bifurcated arms J J and the screws K as a means for applying the handle to the cross-bar of the opera-glass, I do not desire to be limited to such means of attachment in every instance, but reserve the right to change the form of said arms J J and their means of application to the opera-glass at pleasure. In some instances it may be desirable to extend the upper ends of the arms J J to a point above the upper edge of the cross-bar C and then connect said ends by screws, rivets, or other convenient means, thus securely attaching the handle to the opera-glass without in any manner being required to perforate or otherwise alter the cross-bar C. The handle F may also, if desired, be made detachable from the cross-bar C at will in order that the opera-glass may be used either with or without the handle. It is important to note that the opera-glasses are not changed in any respect which interferes with their proper use without the handle F, the only addition to the opera-glasses being the gear-wheel S, applied to the inner face of the thumb-piece E, and the latter being left, so far as its ordinary features are concerned, in its former condition, ready for use without the handle or the gearing I.

The revoluble handle, the gear-wheel I, and arms J are in line with each other and present a construction simple in character, neat in appearance, easily understood, and not likely to get out of order or become impaired by ordinary usage. By turning any part of the handle the wheel I may be set in motion to adjust the focus of the glasses, and operative mechanism within the handle for adjusting the focus is not required.

The handle F is provided with a stop *m* for the lower end of the spring *d*, as shown in Fig. 3.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The opera-glass, the adjusting revoluble cylinder thereof, and the gear-wheel on said cylinder, combined with the handle, means for securing the handle to the cross-bar of the glass and the gear-wheel on said handle and engaging the said gear-wheel on the adjusting-cylinder of the glass, said handle being swiveled at its upper end, axially revoluble through-

out, and capable from any part on being turned to set the gear-wheels in motion, substantially as and for the purposes set forth.

2. The opera-glass, the adjusting revoluble cylinder thereof, and the gear-wheel on said cylinder, combined with the handle axially revoluble throughout, the gear-wheel on said handle, means for attaching said handle to the cross-bar of the glass, and the hinge-joint in said handle, the latter being adapted to be folded lengthwise of the barrels of the glass and capable from any part on being turned to set said gear-wheels in motion, substantially as and for the purposes set forth.

3. The opera-glass, combined with the axially-revoluble handle applied thereto, the hinge-joint in said handle, whereby the same may be folded lengthwise of the barrels of the opera-glass, means for locking said handle in its open position, and gearing in engagement with said axially-revoluble folding handle and the glass for adjusting the focus of the latter, substantially as and for the purposes set forth.

4. The opera-glass, combined with the telescopic handle applied thereto and gearing in engagement with the said handle and glass for adjusting the focus of the latter the sections of said handle being locked against axial revolution one upon the other, substantially as and for the purposes set forth.

5. The opera-glass, combined with the telescopic folding handle applied thereto and gearing in engagement with the said handle and glass for adjusting the focus of the latter, the sections of said handle being locked against axial revolution one upon the other, substantially as and for the purposes set forth.

6. The opera-glass having the gear-wheel connected with its lens-adjusting devices, combined with the folding handle, the gear-wheel thereon, the plug seated in and affording a bearing for said last-mentioned gear-wheel, and the arms extending upward from said plug on opposite sides of the cross-bar of the opera-glass, substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 24th day of February, A. D. 1892.

PAUL MOEWS.

Witnesses:
CHAS. C. GILL,
ED. D. MILLER.