

No. 731,820.

PATENTED JUNE 23, 1903.

W. E. STEVENS.

COMBINED LORGNETTE AND OPERA GLASS.

APPLICATION FILED MAY 23, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

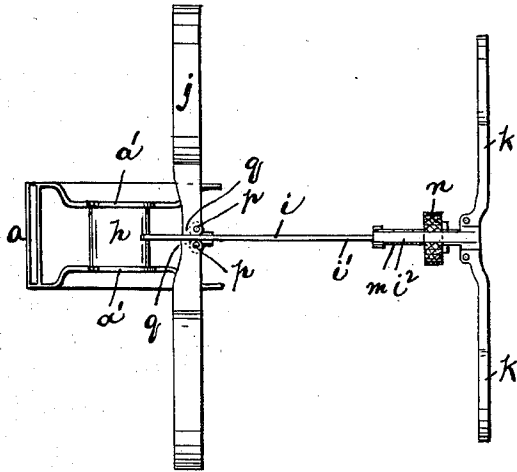


Fig. 1.

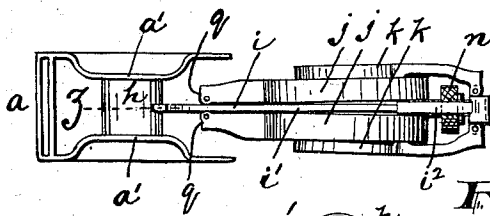


Fig. 2.

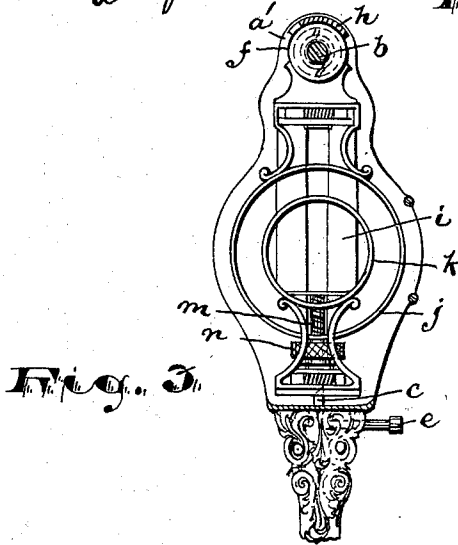


Fig. 3.

WITNESSES:

Henry Krug

Russell M. Everett

INVENTOR,

William E. Stevens

BY

Drake & Co

ATTORNEYS.

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2 SHEETS—SHEET 2.



Fig. 4.

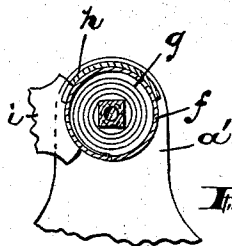


Fig. 7.

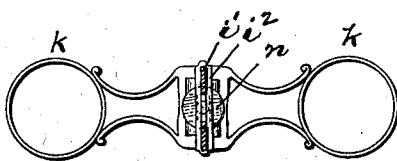


Fig. 6.

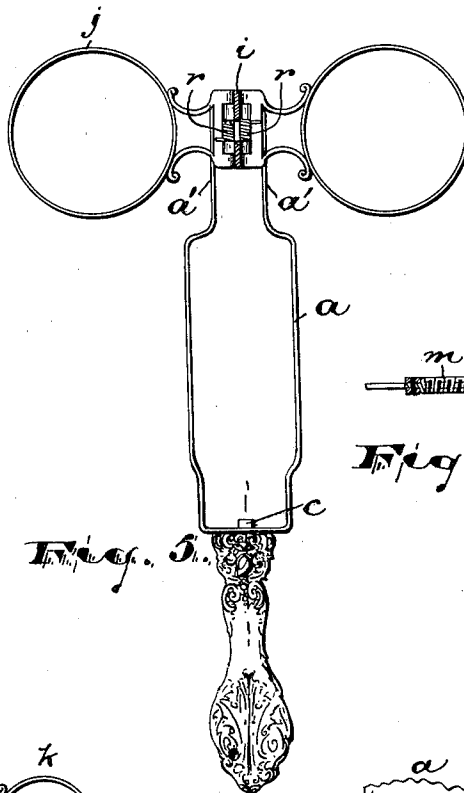


Fig. 5.

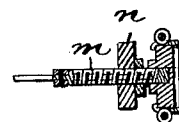


Fig. 8.

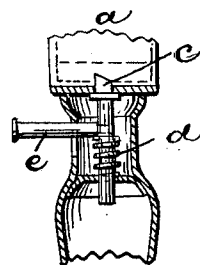


Fig. 9.
INVENTOR

WITNESSES:

Henry Krug

Russell M. Everett

William E. Stevens,

BY

Drake
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM E. STEVENS, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF
TO S. CHARLES HIRSCHBERG, OF NEW YORK, N. Y.

COMBINED LORNETTE AND OPERA-GLASS.

SPECIFICATION forming part of Letters Patent No. 731,820, dated June 23, 1903.

Application filed May 23, 1902. Serial No. 108,681. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. STEVENS, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in a Lorgnette and Opera-Glass Combined; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The objects of this invention are to provide a combined lorgnette and opera-glass which will be of more simple construction, of lighter weight, more convenient and easy of operation, and to enable the lens-frames to unfold automatically when released, so that the parts will automatically assume a position convenient and proper for use, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved combined lorgnette and opera-glass and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a top view or plan of the device open and ready for use. Fig. 2 is a similar view showing the lens-frames folded ready to be inserted in the handled case. Fig. 3 is a sectional view showing the same when the said lens-frames are folded together and inclosed in said case. Fig. 4 is a side view of the device when the parts are opened for use. Fig. 5 is a section taken on line *x* of Fig. 4 in the direction of the arrow, and Fig. 6 is a sectional view on the same line looking in the opposite direction from that indicated by the said arrow. Fig. 7 is a detail section at line *z*, Fig. 2. Fig. 8 is a detail section showing the arrangement of the adjusting-screw and nut, and Fig. 9 is a de-

tail view of the catch for holding the folded lens-frame in the case.

In carrying out my invention I employ a handled case *a*, which is of ornamental shape and open at one side to receive the folded lens-frames and at its top is provided with a pivot *b*, upon which the said lens-frames are adapted to turn. At the opposite side of the opening in said case from the pivot *b* the said case is provided with a catch *c*, substantially such as is commonly employed in lorgnettes, the said catch being controlled by a spring *d*, Fig. 9, and adapted to be operated by a finger-piece *e*. The parts are so arranged that by pushing the said finger-piece lengthwise of the handle the catch will be released from the folded frames that the latter will be enabled to move outwardly under the influence of a spring hereinafter described.

Around the pivot *b* and between the ears *a' a'* of the case is arranged a drum *f*, within which is a coiled spring *g*, Fig. 7, the said spring being attached to said drum and to the pivot and being normally under tension, so that when released the spring will turn said drum and the parts carried thereby to their open or outward position, the movements of the drum being limited, however, by means of a stop-bridge *h*, extending from one ear to the other, the said bridge serving also as a partial inclosure for the drum, whereby it is to some extent concealed from view and a better finish given to the casing. Attached to the said drum *f* is an arm or bar *i*, upon which the lens-frames *j j* and *k k* are pivoted. Said arm is preferably in sections *i' i'*, one section being adapted to slide on the other telescopically to enable the lens to be focused to suit the vision. The said arm or bar is longitudinally slotted to receive an adjusting-screw *m*, the nut *n* of which lies in a transverse slot *o* of the arm-section *i*, as shown in Fig. 4, whereby when the nut *n* is turned the screw and the sliding member of the arm attached to the said screw *m* will be given a longitudinal movement with relation to the fixed member of the bar. Near the base of the arm *i* or its point of connection with the drum are pivoted the objective-lens frames *j*, which are pivoted at *p*, Fig. 1, so as to fold against the opposite sides of the bar *i* when pressed by

the hand, and when released from the hand or when released by withdrawal from the case to open automatically, so that the said frame will stand in a plane at right angles or approximately at right angles with the said arm or bar, the frames being each provided with a stop q for limiting the said frames when moved under the power of the springs r on the hinge-pins p at such right-angular position. Upon the sliding member v of the sectional arm i are likewise pivoted the eyepiece-lens frames k , which are also controlled by springs and are adapted to fold toward the bar, the movement, however, being in the reverse direction, so that the said eyepiece-frames k will overlap the objective frames j , as shown in Fig. 2. Thus the four lens-frames can be compactly folded together in a very short and narrow space and be retained in folded relation when turned into the case. After folding the said lenses, as described, and pressing them into the said case they are held therein by engagement with the catch c . By disengaging the catch from said folded frames the spring g in the drum throws the sectional arm i and its attached parts out from the case. The lens-frames are then free to assume automatically their right-angular relation under the exerted power of the springs on their pivots, as described, and thus by simply operating the catch the four glasses automatically assume positions enabling the device to be used after the fashion of an ordinary opera-glass, and when in operative relation the lenses in the frames may be focused to suit the eyes by means of the nut and screw n .

I am aware that various changes in detail construction may be made without departing from the invention, and I do not wish to limit myself by positive descriptive expressions hereinbefore employed excepting as the state of the art may require.

Having thus described the invention, what I claim as new is—

1. The combination of a collapsible opera-glass frame pivotally mounted upon a recessed handle, adapted to contain said frame when collapsed, and provided with means for retaining said frame within, and positively releasing said frame from, said case, with means for automatically erecting the lenses of said frame in focal relation when released.

2. The combination with the case provided with a handle, of a pivoted sectional bar adapted to fold into said case and pivoted objective and eyepiece lenses adapted to fold toward said bar and with it enter the case, substantially as set forth.

3. The combination with the case provided with a handle, of a pivoted sectional bar and a spring tending to throw the same out from the case, objective frames pivoted on one section of said bar and springs tending to throw said objective frame to a position at a right angle to said bar, eyepiece-lens frames on the other section of said bar and springs tending to throw the last said frames to a position at

right angles to said bar, a catch for holding the folded frames within the case and means for adjusting the eyepiece and objective lens frames with relation to one another, substantially as set forth.

4. The combination with a case provided with a pivot, of a sectional bar adapted to turn on said pivot, and objective and eyepiece lens frames pivoted respectively upon opposite ends of said bar and adapted to fold toward each other to lap one over the other and lie parallel with said bar, and with said bar be folded into the case.

5. The combination of a case open at one side and at one end provided with a pivoted bar adapted to turn to a position substantially at right angles to said case, said bar being provided with lenses adapted to fold to positions substantially parallel with said bar in overlapping relation of one lens with another, the said bar and folded lenses being adapted to fold together into said case, a catch adapted to hold said folding parts into said case and a spring adapted to throw said folding parts automatically out from said case to their right-angular positions, substantially as set forth.

6. The combination with a case, open to receive the folding lenses, of a bar adapted to fold into said case, a spring adapted to automatically throw said bar out from said case, folding eyepiece and objective lenses adapted to fold one over the other, and springs for automatically throwing the free ends of said folding lenses from said bar, and means for holding said folding parts in folded relation, substantially as set forth.

7. The combination with an open case, of a bar adapted to fold into said case, said bar being provided with objective and eyepiece lenses, free to fold toward said bar, and an adjusting-screw adapted to effect an adjustment of the eyepiece-lens with reference to the objective lens, said lenses and adjusting-screw being adapted to enter together into the case, substantially as set forth.

8. The combination with an open case, of a folding bar having a limited pivotal movement on the case, eyepiece and objective lenses having limited pivotal movements on said bar, means for holding said bar at the limits of opening movement from the case and means for holding the lenses at their limits of opening movements from the bar, substantially as set forth.

9. The combination with an open case, of a folding bar having a limited pivotal movement on the case, of eyepiece and objective lenses having limited pivotal movements on said bar, means for holding said bar at its limit of opening movement from the case, means for holding the lenses at their limits of opening movements from the bar, and means adapted to hold said movable parts folded within the case, substantially as set forth.

10. The combination with an open case, of

a folding bar having a limited pivotal movement on the case, of eyepiece and objective lenses having limited pivotal movements on said bar, means for holding said bar at the limit of opening movement from the case, means for holding the lenses at their limits of opening movements from the bar and a spring-catch adapted to hold said folding parts within the case, substantially as set forth.

11. The combination with an open case, of a folding bar having a limited pivotal movement on the case, of eyepiece and objective lenses having limited pivotal movements on said bar, means for holding said bar at the limit of opening movement from the case, means for holding the lenses at their limits of opening movements from the bar, and means for adjusting the lenses with reference to one another to suit the eye, substantially as set forth.

12. The combination with an open case, of a folding bar having a limited pivotal movement on the case and adapted to be stopped in its opening movement at a position substantially at right angles to the longer axis of said case, a spring adapted to open said bar at its free end away from said case and hold the same in its open position, objective lenses, and eyepiece-lenses adjustable in relation to the objective lenses, all said lenses having limited opening movements, springs adapted to throw said lenses to the limits of opening movements, and means for holding said bar and lenses in their folded positions, substantially as set forth.

13. The lorgnette opera-glass herein described comprising a handle having a pivotal bar attached thereto adapted to lie parallel with the longer axis of said handle and open to a position substantially at right angles to said handle said bar being provided with fold-

ing objective and eyepiece lenses having limited pivotal movements on said bar adapted to open and stand at right angles to said bar, and to fold to positions substantially parallel with said bar and with said bar fold to positions substantially parallel with the said longer axis of the handle.

14. The lorgnette opera-glass herein described comprising a handle having a pivotal bar attached thereto adapted to lie parallel with the longer axis of the handle and open to a position substantially at right angles to said handle, said bar having thereon folding objective and eyepiece lenses adjustable with reference to one another and having limited pivotal movements on said bar and adapted to stand at right angles to said bar, said lenses being adapted to fold to positions substantially parallel with said bar and with said bar fold to positions substantially parallel with the longer axis of the handle.

15. The lorgnette opera-glass herein described comprising a handle having a sectional bar attached, said bar having an adjusting-screw adapted to cause one section to slide on the other and effect a change in the relation of the eyepiece and objective lenses, said sectional bar being adapted to lie parallel with the longer axis of the handle and open to a position substantially at right angles to the said handle, said bar having thereon folding objective and eyepiece lenses having limited movements on said bar from positions at right angles to said bar, to positions substantially parallel with said bar.

In testimony that I claim the foregoing I have hereunto set my hand this 15th day of May, 1902.

WILLIAM E. STEVENS.

Witnesses:

CHARLES H. PELL,
C. B. PITNEY.