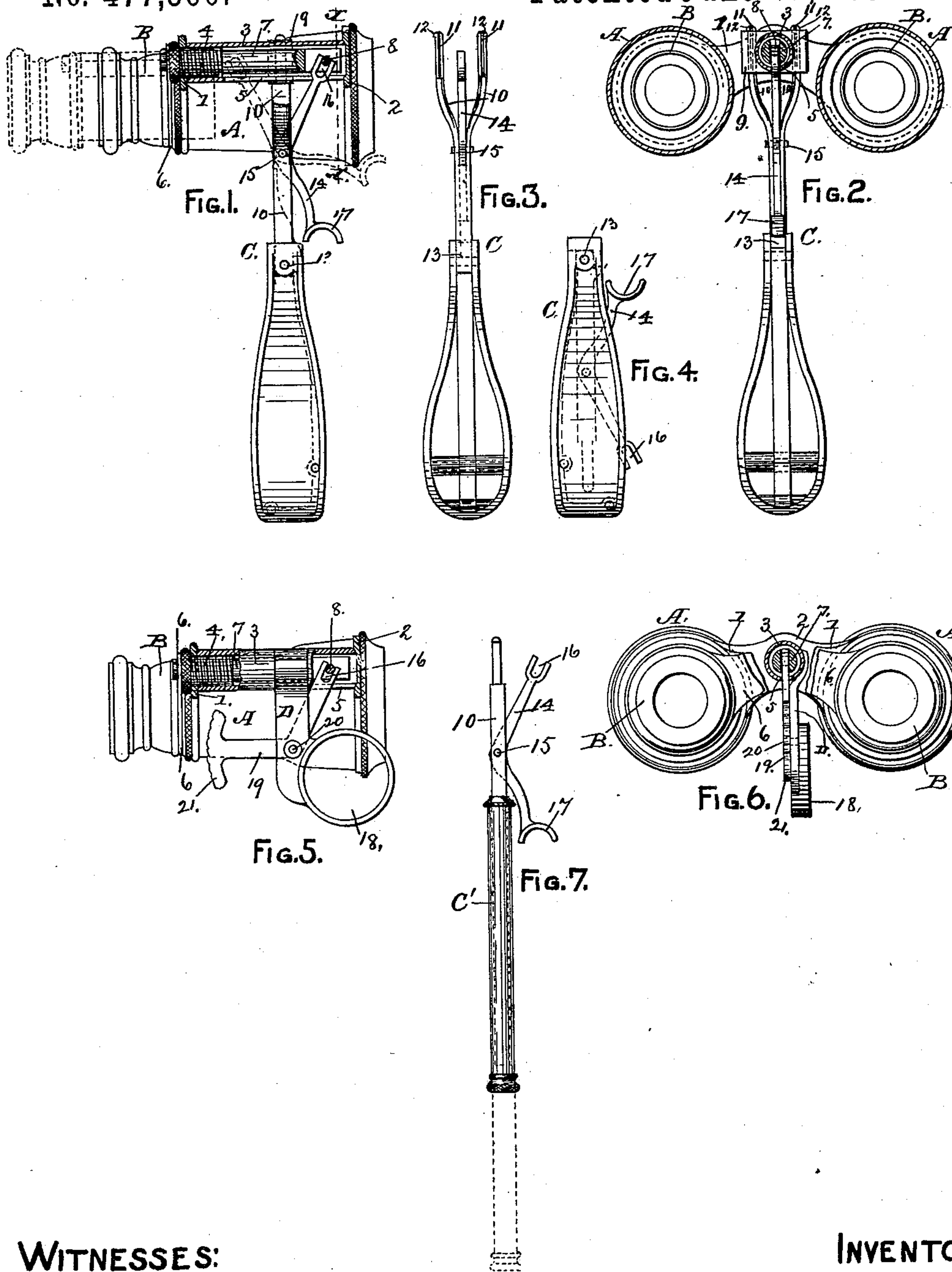


(No Model.)

C. F. GLOCKER.  
OPERA GLASS.

No. 477,360.

Patented June 21, 1892.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CARL F. GLOCKER, OF ALBANY, NEW YORK.

## OPERA-GLASS.

SPECIFICATION forming part of Letters Patent No. 477,360, dated June 21, 1892.

Application filed November 9, 1891. Serial No. 411,392. (No model.)

*To all whom it may concern:*

Be it known that I, CARL F. GLOCKER, of the city and county of Albany, in the State of New York, have invented new and useful Improvements in Opera-Glasses, of which the following is a specification.

This invention relates to improvements on the mechanism for adjusting the lenses of opera-glasses to the required focal distance, and is an improvement on my invention for which an application for Letters Patent, Serial No. 379,304, was filed in the United States Patent Office on the 27th day of January, 1891; and the object of my present invention is to simplify the construction of the operating mechanism and to render the same more efficient in its action. This object I attain by the means illustrated in the accompanying drawings, which are herein referred to and form part of this specification, and in which—

Figure 1 is a vertical section of the opera-glasses at mid-length, the detachable handle and a portion of the operating parts being shown in elevation. Fig. 2 is a horizontal section of the same at the line X X on Fig. 1. Fig. 3 is a plan view of the detachable handle removed from the opera-glasses and its extended position. Fig. 4 is a detached side elevation of the detachable handle in a closed position. Fig. 5 is a vertical section of a modified form of my invention provided with a non-detachable handle. Fig. 6 is a plan view of said modified form with a portion of the central parts removed to expose underlying parts, and Fig. 7 is a side elevation of a modified form of the detachable handle.

As illustrated in the drawings, A designates the outer tubes of an opera-glass of an old and well-known construction, said tubes being connected together in the usual manner—that is to say, by means of a lower connecting-bar 1 and an upper connecting-bar 2—and said tubes are provided with the usual object-glasses. (Not shown in the drawings.) The connecting-bars 1 and 2 are connected to each other by means of a tubular connection 3, which, unlike a similar connection in opera-glasses as commonly constructed, is non-revoluble, and is held in place to the connecting-bar 2 by means of a tubular screw-nut 4, which engages in a corresponding screw-

thread cut in the bore of the tubular connection 3. The latter is provided with a longitudinal slot 5 at the lower portion of one of its sides, said slot being made for a purpose hereinafter explained.

B designates the movable tubes of the opera-glass, which are connected by a bar 6 and are fitted to slide telescopically in the tubes A. The tubes B are provided with the usual sight-lenses, (not shown in the drawings,) and the bar 6 is provided with a central stud 7, which is fitted to slide telescopically in the tubular connection 3. Said stud is provided with a cross-pin 8 or any equivalent means for connecting the end of an operating-lever thereto for the purpose of imparting a sliding movement to the tubes B.

In the form of my invention shown in Figs. 1 and 2 a socket-piece 9 is attached to the tubular connection 3, and is provided with openings for receiving a detachable handle C, whose inner end is preferably bifurcated to form a fork 10, whose extremities are split, as at 11, to form springs, and the extremity of each of the outer springs is provided with a slight enlargement 12, which, when the limbs of the fork 10 are inserted in the openings of the socket-piece 9, will engage with the outer face of said socket-piece and form a locking device to hold the detachable handle C securely in its place. By pressing the outer springs toward each other the enlargements 12 will be released from their hold on the socket-piece 9, and thereby the fork 10 will be put in condition to allow the detachable handle C to be separated from the opera-glass. Preferably the detachable handle C is made in the jointed form shown in Figs. 1, 2, 3, and 4, in which the fork 10 is jointed by means of a knife-joint 13, so as to close into the handle, as shown in Fig. 4. An operating-lever 14 is pivoted, as at 15, between the limbs of the fork 10, and the outer end of said lever is forked, as at 16, to engage with the cross-pin 8. The opposite end of said operating-lever is provided with a concave 17 or other suitable provision to admit a finger of the user of the opera-glass for the purpose of manipulating said lever to effect the movement of the tubes B to bring the lenses to a required focal distance.

In the modification of my invention shown



in Figs. 5 and 6 an arm D is permanently attached to the tubular connection 3, and said arm is provided with an eye 18 or other provision, whereby the opera-glass can be easily held in or on the hand of a user. An operating-lever 19 is pivoted, as at 20, to the arm D, and said lever is provided with a serrated arc 21 or other provision by which said lever can be manipulated by a finger of the same hand that holds the opera-glass.

In the modified form of the detachable handle shown in Fig. 7 one end of the fork 10 is fitted to enter a tubular handle C', which is fitted to slide telescopically on the shank of said fork, so as to elongate the handle, as indicated by dotted lines in said figure.

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

1. In an opera-glass, the combination of a longitudinally-slotted non-revoluble tubular connection between the upper and lower connecting-bars of the outer tubes, a non-revoluble stud which is attached to the connecting-bar of the movable tubes and is fitted to slide telescopically in said tubular connection, and an operating-lever pivoted to the handle of the opera-glass and fitted to engage with said stud for the purpose of effecting the sliding move-

ment of the movable tubes, substantially as herein specified.

2. The combination of a slotted tubular connection provided with a socket-piece, a detachable handle having a bifurcated end fitted to engage in said socket-piece and having an operating-lever pivoted to said handle, and a stud attached to the movable tubes of an opera-glass and fitted to slide telescopically in said tubular connection, said stud being provided with means, substantially as described, for engaging with the end of said operating-lever, as and for the purpose herein specified.

3. In an opera-glass, the combination of a slotted tubular connection between the upper and lower connecting-bars of the outer tubes, an arm attached to said tubular connection for the purpose of holding the opera-glass, and an operating-lever pivoted to said arm and provided with means, substantially as described, for engaging with a stud of the movable tubes of said opera-glass, as and for the purpose herein specified.

CARL F. GLOCKER.

Witnesses:

WM. H. LOW,  
S. B. BREWER.