No. 701,863. Patented June 10, 1902.

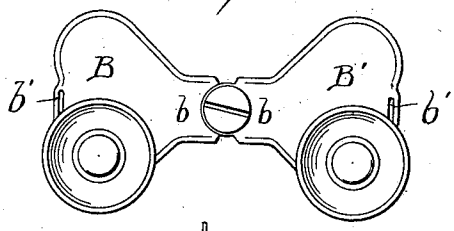
G. FECKER.

BINOCULAR GLASSES.

(Application filed Oct. 24, 1901.)

(No Model.)

Fig. 1.



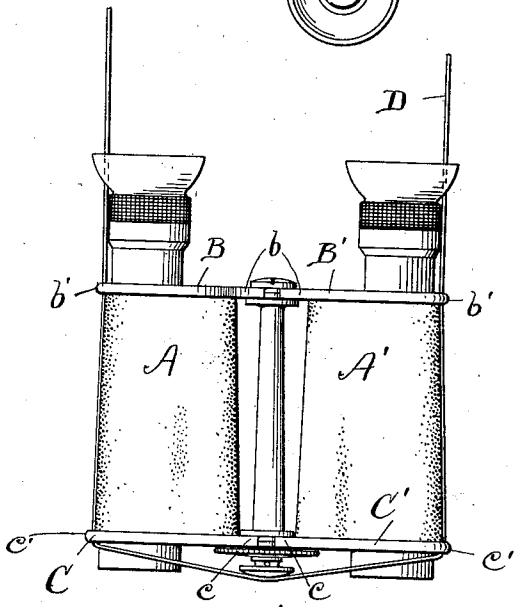


Fig. 2.

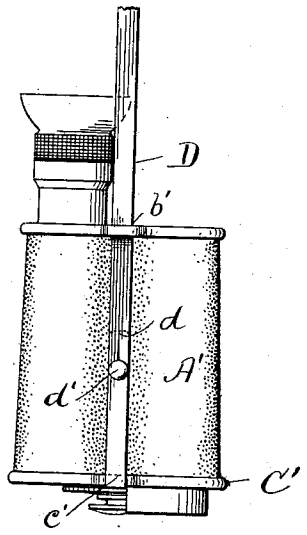


Fig. 3.

Fig. 4.

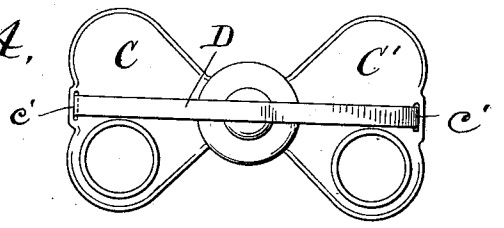
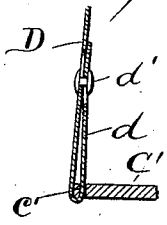


Fig. 5.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GOTTLIEB FECKER, OF CLEVELAND, OHIO, ASSIGNOR TO THE WARNER AND SWASEY COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

BINOCULAR GLASSES.

SPECIFICATION forming part of Letters Patent No. 701,863, dated June 10, 1902.

Application filed October 24, 1901. Serial No. 79,769. (No model.)

To all whom it may concern:

Be it known that I, GOTTLIEB FECKER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Binocular Glasses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

Binocular glasses are commonly provided with a strap by means of which they may be suspended from one's shoulder. In the constructions heretofore employed with which I am familiar either independent plates having strap-eyes have been secured by screws to the sides of the barrels or integral eyes have been cast with the metallic body of the barrel. Each of these forms is objectionable on account of the added expense and the interference with the neatness of the glass. Moreover, where the separate strap-eyes are screwed on they are liable to gradually become loose from the barrels, and where the eyes are cast with the barrel there is trouble in forming the outer leather covering around them in a durable way. It is impracticable to secure the strap directly to the upper cap-plate, because the screws which hold that cap-plate must necessarily be small and the weight of the glass hanging on the strap or its momentum when the operator drops it at his side after use would be very liable to either pull the cap-plate off of its barrel or loosen it, which latter effect would disarrange the optical axis of the eyepiece and ruin the performance of the glass. For lightness the barrels are made of aluminium as thin as practicable, and hence it is not feasible to secure the barrel and cap-plate with sufficient rigidity to stand the strain that would come upon it if the straps were secured directly to it.

By my invention I provide at once a very simple, cheap, and efficient construction which is not open to any of the above-recited objections and is very neat in appearance and does not cause any strain on the cap-plates. In my construction the cap-plates at the objective end of the instrument are provided with integral eyes formed close to those edges which are farthest removed from the connections between the two barrels and which overhang the barrel, as shown. The cap-plates at the eyepiece end of the instrument are provided with similar integral eyes which are vertically above and in line with the eyes on the objective cap-plates. The suspending-strap is passed through these upper eyes—that is to say, the eyes on the eyepiece end of the instrument—and down to the eyes on the objective end thereof, through which they are likewise passed. The ends of the strap may be either attached to these lower eyes, in which case the weight of the instrument will merely draw the said cap-plates against the barrel and not away from it, or the strap may go through the lower eyes under the instrument, whereby it will rest upon the strap. In either case the instrument will be held in an upright position by the upper eyes and their engagement with the strap.

The invention may be conveniently summarized as consisting in the construction and combination of parts shown and described, and definitely pointed out in the claims.

In the drawings, Figure 1 is a top plan view when the instrument is in its ordinary position as shown in Figs. 2 and 3. Fig. 2 is a front elevation, and Fig. 3 is a side elevation, of the instrument. Fig. 4 is a bottom plan view, and Fig. 5 is a fragmentary vertical section through the lower cap-plate and the supporting-straps. Figs. 2 and 4 show the strap passing entirely under the instrument, and Figs. 3 and 5 show its ends doubled back upon themselves and buttoned.

Referring to the parts by letters, A A′ represent the two barrels. B and B′ represent, respectively, the cap-plates, which are secured to the upper or eyepiece end of said barrels, said cap-plates being provided with arms *b*, by means of which the cap-plates are hinged together. C C′ represent the bottom cap-plates—that is to say, the cap-plates at the objective end of the instrument—which cap-plates are provided with similar arms *c*, by means of which said cap-plates are hinged together. The barrels are approximately triangular, and the four cap-plates are correspondingly shaped. The several hinge-arms project each from an angle of its cap-plate

and approximately at right angles to the opposite side edge thereof. Near the edge of that side of each cap-plate which is opposite to the hinge-arm is a perforation or eye which overhangs the barrel. The two eyes close to what may be called the "outer" edges of the cap-plates B B′ are lettered *b′*. The eyes formed in the corresponding edges of the bottom or objective end cap-plates are indicated by the reference-letters *c′*, and they are respectively in a vertical line below the corresponding upper eyes. All of said eyes, as shown, are respectively integral parts of their several cap-plates.

As will be seen from the drawings, a suspending-strap D is passed through both eyes *b′*, down along the sides of the instrument, and through both eyes *c′*, which are vertically below the eyes *b′*, and the strap may have its ends *d*, which are doubled back on themselves in Figs. 3 and 5, secured by buttons or studs *d′*, or the strap may pass continuously under the instrument, as shown in Figs. 2 and 4. In either case the weight of the instrument when suspended from the strap does not tend to loosen any of the cap-plates from the barrel, but, on the contrary, has the effect, as it were, of drawing the lower cap-plates more closely against the barrel. The eyes being in vertical alinement, the pair on each side act in combination with the suspending-strap to hold the instrument in an upright position without any danger of loosening the connections between any of its parts. Even when the strap passes under the instrument and the instrument is a Porro-prism binocular glass, as shown, the strap does not pass across the objective lenses, and therefore when one is carrying one of these instruments thus suspended from a strap he may use the instrument without having to trouble himself with pushing the strap away from its natural and normal position.

Having described my invention, I claim—

1. A binocular glass composed of two barrels side by side and adjustably connected together, and two cap-plates secured to the objective ends of said barrels, said cap-plates projecting beyond the outer surface of their respective barrels and being there perforated to form strap-eyes, and guides for the strap secured respectively to said barrels and lying vertically over the said strap-eyes, substantially as and for the purpose specified.

2. A binocular glass composed of two barrels side by side and adjustably connected together, and four cap-plates secured respectively to the two ends of said two barrels, said four cap-plates being perforated beyond the sides of their respective barrels, substantially as and for the purpose specified.

3. A binocular glass composed of two connected members, each including a barrel having in its outer surface a longitudinal depression, and two cap-plates secured respectively to opposite ends of said barrel and having integral perforated extensions in alinement with said depression, substantially as and for the purpose specified.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

GOTTLIEB FECKER.

Witnesses:
A. E. WEINBERG,
EDWIN HEINA.