

(No Model.)

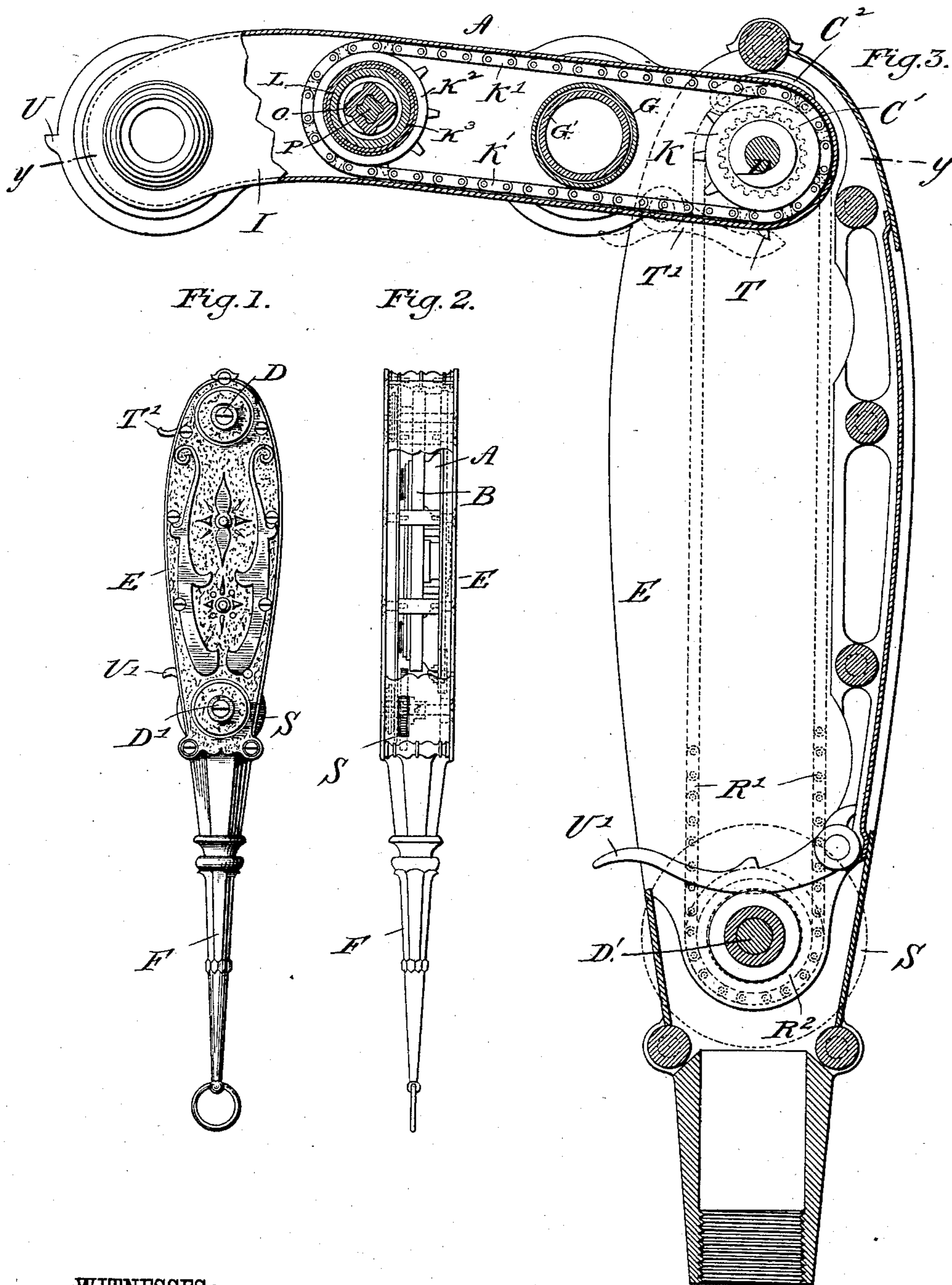
2 Sheets—Sheet 1.

F. SCHEIDIG.

OPERA GLASS.

No. 370,975.

Patented Oct. 4, 1887.



WITNESSES:

John A. Ellis.
C. Sedgwick

INVENTOR:

F. Scheidig

BY Munn & Co

ATTORNEYS.

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2 Sheets—Sheet 2.

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Fig. 4.

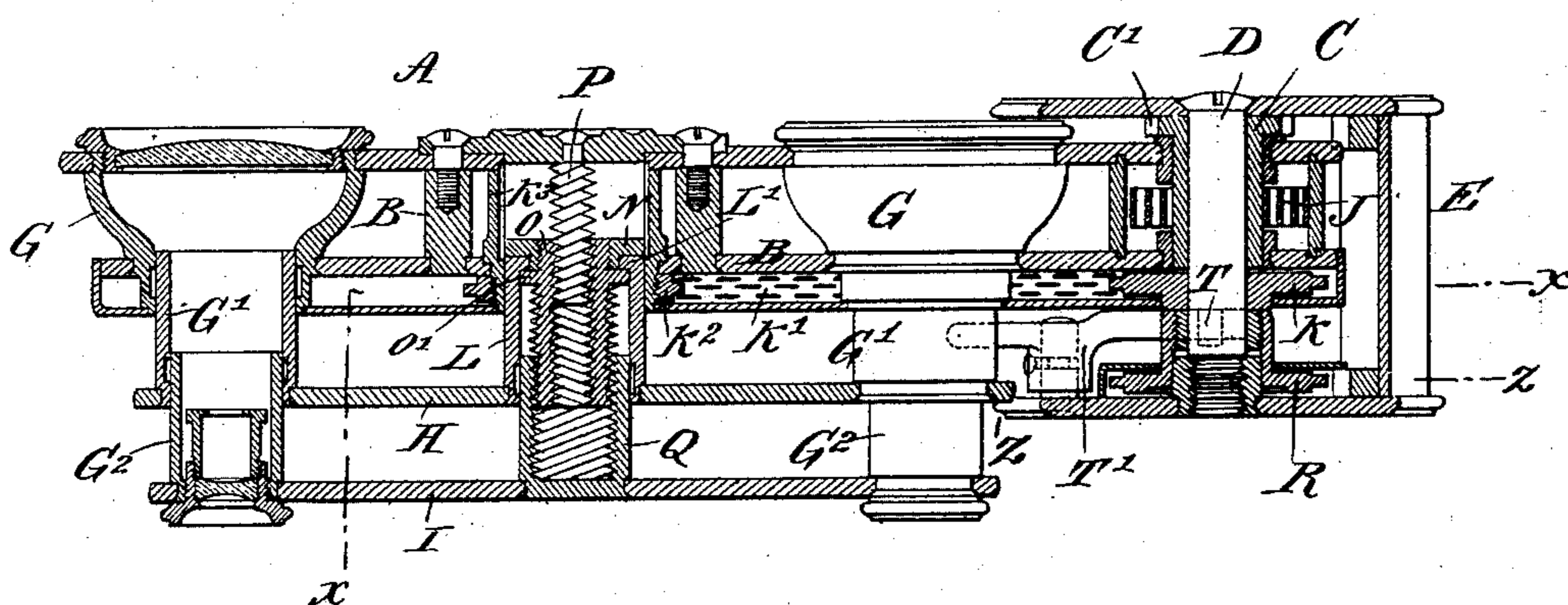
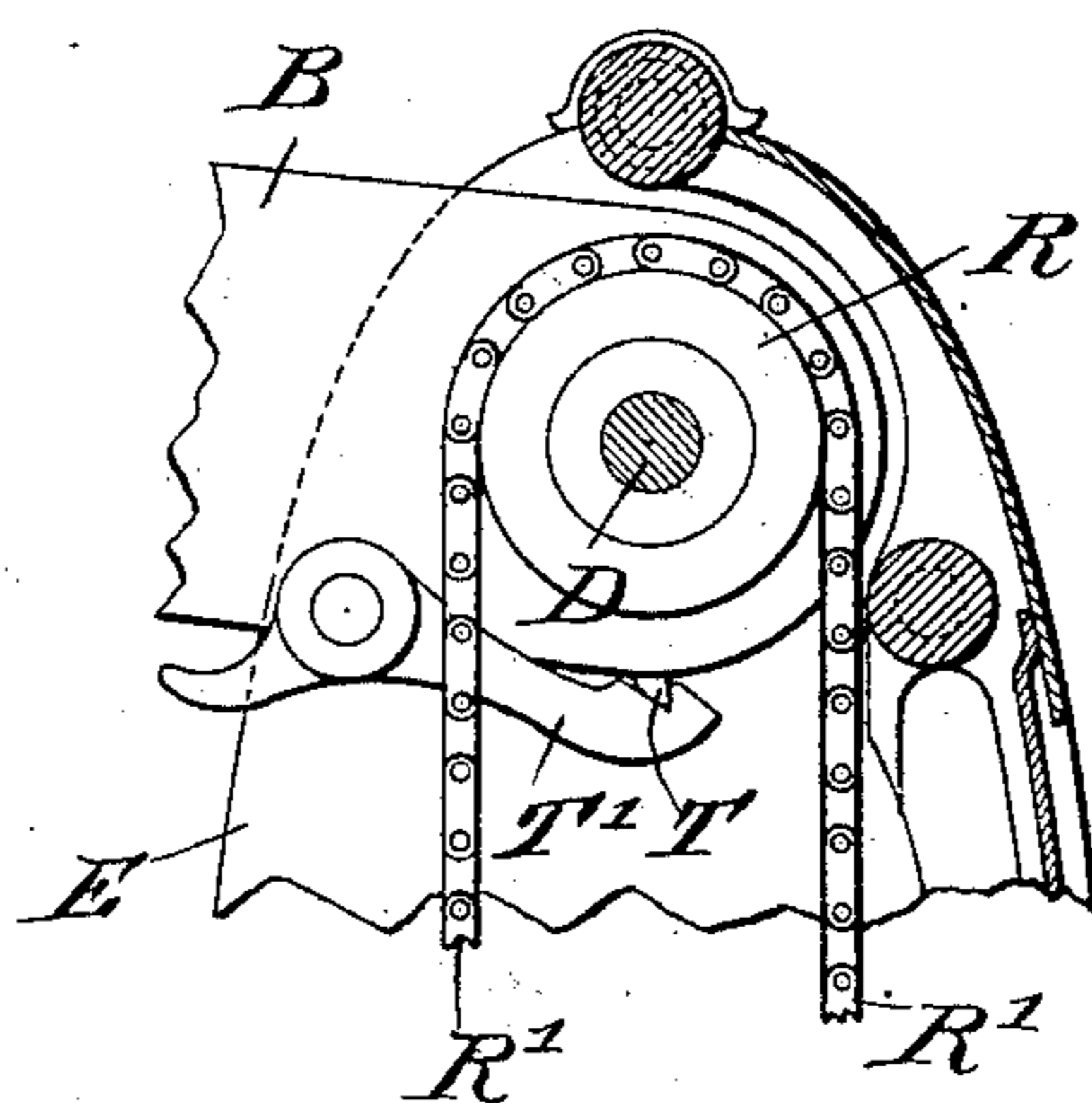


Fig. 5.



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UNITED STATES PATENT OFFICE.

FREDERICK SCHEIDIG, OF NEW YORK, N. Y.

OPERA-GLASS.

SPECIFICATION forming part of Letters Patent No. 370,975, dated October 4, 1887.

Application filed December 4, 1886. Serial No. 220,681. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK SCHEIDIG, of the city, county, and State of New York, have invented a new and Improved Opera-
5 Glass, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved opera-glass, which can be held very conveniently to the eyes, can be
10 focused easily, is ornamental in appearance, and very handy to carry.

The invention consists of an opera-glass pivoted in a casing having a handle, of means for moving the opera-glass into a position at right
15 angles with the casing, and of means for adjusting the focus of the opera-glass while in the latter position.

The invention also consists of various parts and details and combinations of the same, as
20 will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
25 corresponding parts in all the figures.

Figure 1 is a front elevation of my improvement in a closed position. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional front elevation on the line *xx* of Fig. 4, showing the improvement in an open position. Fig.
30 4 is a sectional plan view of the same on the line *yy* of Fig. 3, and Fig. 5 is a sectional front elevation of part of my improvement on the line *zz* of Fig. 4.

35 The opera-glass A is provided with the frame B, pivoted on the sleeve C, held on the bolt D, secured in the upper part of the casing E, which is open on one side and is provided on its lower end with a handle, F, of
40 any suitable form and shape. The opera-glass A is provided with the usual objectives, each held in casings G, secured rigidly to the frame B. In each casing G telescopes the extension-tube G', secured by its outer end on the cross
45 piece or plate H, and in each tube G' telescopes the extension-tube G², carrying the eye-pieces and secured to the cross piece or plate I.

A spiral spring, J, is secured by one end to the frame B and by its other end to the said
50 sleeve C, and has the tendency to throw the frame B into its outer position. (Shown in

Figs. 3 and 4.) The sleeve C is provided with teeth C', which engage a spring-catch, C², secured to the frame B and serving to hold the sleeve C in any desired position, thus permit-
55 ting of regulating the tension of the spring J by disengaging the spring-catch C² from the teeth C' and then turning the sleeve C until the desired tension of the spring J, held on the said sleeve, is attained. The catch C² is
60 then again engaged with the teeth C', and the sleeve is thus held in place.

On the bolt D is mounted, to revolve, a sprocket-wheel, K, over which passes a sprocket-chain, K', also passing over a sprocket-wheel, K², se-
65 cured to the sleeve K³, adapted to rotate in suitable bearings on the frame B, and also turning on the collar or sleeve L, secured in the middle of the cross-piece H, and telescoping in the said sleeve K³. In the sleeve K³ is
70 held a flanged nut, N, screwing on the double nut O, having the annular flange O', which, with the flange of the nut N, incloses the inwardly-extending flange L' of the sleeve L, so that the latter moves laterally with the double
75 nut O. The latter is provided with an interior screw-thread, on which screws the screw-bolt P, secured to the frame B, and is also provided with an exterior screw-thread, on which
80 screws the nut Q, adapted to telescope in the sleeve L, and secured by its outer end to the cross-plate I.

The sprocket-wheel K is secured to a second sprocket-wheel, R, over which passes an endless sprocket-chain, R', extending downward
85 and passing over the sprocket-wheel R², turning on the bolt D', secured in the lower part of the casing E. The sprocket-wheel R² is attached to a wheel, S, turning on the same bolt D', and provided with a milled periphery. 90
The wheel S extends on each side of the casing E, as shown in Figs. 1 and 3.

The pivoted end of the frame B is provided with a shoulder, T, (see Figs. 3 and 5,) which engages, when the frame is in the outer posi-
95 tion, with the spring-catch T', pivoted on the casing E and projecting slightly with its outer end on one side of the said casing, as shown in Figs. 1 and 5. A similar shoulder, U, is formed on the outer end or lower part of the
100 frame B, and engages with a similar spring-catch, U', pivoted on the lower part of the cas-

ing E, and also extending with one end from the open side of the casing E, as shown in Figs. 1 and 3. The catches T' and U' are preferably spring-catches—that is, a catch which is
 5 always held in a normal position by a spring, so as to engage the corresponding shoulder, T or U, firmly and securely.

The operation is as follows: The opera-glass A is held in a closed position, as shown in Figs. 10 1 and 2, by the spring-catch U' engaging the shoulder U on the frame B of the glass. In this position the opera-glass is fully protected from dust, &c., and is very handy to carry. When it is desired to use the glass, the operator presses on the projecting end of the spring-catch U' and disengages the shoulder U, so that the glass now swings into a position at right angles to the casing E, as shown in Figs. 3 and 4, by the action of the spring J. The
 20 glass is held locked in this position by the shoulder T of the frame B engaging the spring-catch T'. The opera-glass can now be held to the eyes and focused by turning the milled wheel S, so that the sprocket-chain R' and the
 25 sprocket-wheels R and K are set in motion, and the latter imparts its motion by the sprocket-chain K' to the sprocket-wheel K². The rotation of the latter turns the double nut O, which screws outward on the screw-bolt P and
 30 carries the sleeve L and its cross-plate H with it, and the latter draws the tubes G' outward. At the same time the rotation of the double nut O causes an outward movement of the nut Q and its cross-plate I, thus drawing the tubes
 35 G², carrying the eye-pieces, outward. It will be seen that the operator can thus focus the opera-glass A from the lower part of the casing E. The tubes G' and G² of the opera-glass A are telescoped inward by turning the wheel
 40 S in an opposite direction, and the opera-glass A, after being closed, can be brought back to its casing E by disengaging the spring-catch T' from the shoulder T and then pressing the glass A, which swings on the bolt D, downward until the shoulder U of the frame B en-
 45 gages the spring-catch U', thus locking the glass A in the casing E. This downward swinging motion of the glass A winds up the spring J, which is ready to move the glass upward again as soon as the spring-catch U' is released from the shoulder U, as before described.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

55 1. The combination, with an opera-glass, of a casing in which the said glass is pivoted, substantially as shown and described.

2. The combination, with an opera-glass, of a casing in which the said glass is pivoted, and
 60 a handle attached to the said casing, substantially as shown and described.

3. The combination of an opera-glass with a casing in which the said glass is pivoted, and means, as described, for holding the said
 65 glass in a locked position in the said casing, substantially as set forth.

4. The combination of an opera-glass with a casing in which the said glass is pivoted, a lock for holding the glass in position in the casing, and means, as described, for imparting
 70 a swinging motion to the opera-glass when the said lock disengages the glass from the casing, substantially as set forth.

5. The combination of an opera-glass with a casing in which the said glass is pivoted,
 75 means, as described, for imparting a swinging motion to the said opera-glass, and a lock for holding the said glass in an open position, substantially as set forth.

6. The combination of an opera-glass with
 80 a casing in which the said glass is pivoted, and means, as described, for focusing the opera-glass, when in an open position, from the lower end of the said casing, substantially as set forth.
 85

7. The combination, with the opera-glass A, provided with the frame B, of the casing E, in which one end of the said frame B is pivoted, and a spring, J, acting on the said frame B of the opera-glass, substantially as shown and
 90 described.

8. The combination, with the opera-glass A, provided with the frame B, of the casing E, the bolt D, held in the said casing E, the sleeve C, placed on the said bolt D and on which the
 95 said frame B is pivoted, the said sleeve being provided with teeth C², the catch C', attached to the said casing E and engaging the said teeth C², and the spring J, fastened by one end to the said frame B and by its other end to the
 100 said sleeve C, substantially as shown and described.

9. The opera-glass A, provided with the frame B, the bolt P, held on the said frame B, the double nut O, screwing on the said bolt P,
 105 and means, as described, for imparting a rotary motion to the said double nut O, in combination with the sleeve L, held on the said double nut O and carrying the cross-piece supporting the telescoping tubes, and the nut
 110 Q, screwing on the said double nut O and carrying the cross-piece I, supporting the telescoping tubes G², carrying the eye-pieces, substantially as set forth.

10. The opera-glass A, provided with the
 115 frame B, the screw-bolt P, attached to the said frame B, the double nut O, screwing on the said bolt P, the flanged nut N, held on the said double nut O, the sleeve K³, in which the said flanged nut N is held, and the sprocket-wheel K², se-
 120 cured on the said sleeve K³, in combination with the sprocket-chain K', the sprocket-wheel K, over which passes the said sprocket-chain K', the sprocket-wheel R, secured to the said sprocket-wheel K, the sprocket-chain R', the
 125 sprocket-wheel R², over which passes the said sprocket-chain R', and the milled wheel S, secured to the said sprocket-wheel R², substantially as shown and described.

11. The opera-glass A, provided with the
 130 frame B, the casing E, in which the said frame B is fulcrumed, the sleeve K³, held in the said

frame B, and the bolts D and D', held in the said casing E, in combination with the sprocket-wheel K², secured on the said sleeve K³, the sprocket-wheel K, turning on the said bolt D, 5 the sprocket-chain K', passing over the said sprocket-wheels K and K², the sprocket-wheel R, attached to the said sprocket-wheel K and turning with the same on the said bolt D, the sprocket-wheel R², turning on the said bolt D', 10 the sprocket-chain R', passing over the said sprocket-wheels R² and K, and the milled wheel S, secured to the said sprocket-wheel R² and turning with the same on the bolt D', substantially as shown and described.

15 12. The casing E, the handle F, secured to the said casing, and the spring-catch T', pivoted on the said casing, in combination with the opera-glass A, provided with the frame B, having the shoulder U and pivoted in the said 20 casing E, substantially as shown and described.

13. The frame B, carrying the tubes G, each provided with an objective, the tubes G', telescoping in the said tubes G, the cross-plate H, attached to the said tubes G', the sleeve L, secured to the said cross-plate H, the tubes G², 25 telescoping in the said tubes G' and carrying the eye pieces, the cross-plate I, carrying the said tubes G², and the nut Q, fastened on the said cross-plate I, in combination with the double nut O, screwing on the said nut Q, the 30 flanged nut N, holding the said sleeve L on the said double nut O, the screw P, secured on the said frame B, and the sleeve K³, operating on the said nut N and turning in suitable bearings on the said frame B, substantially as 35 shown and described.

FREDERICK SCHEIDIG.

Witnesses:

THEO. G. HOSTER,
ALFRED LURCOTT.