

No. 759,170.

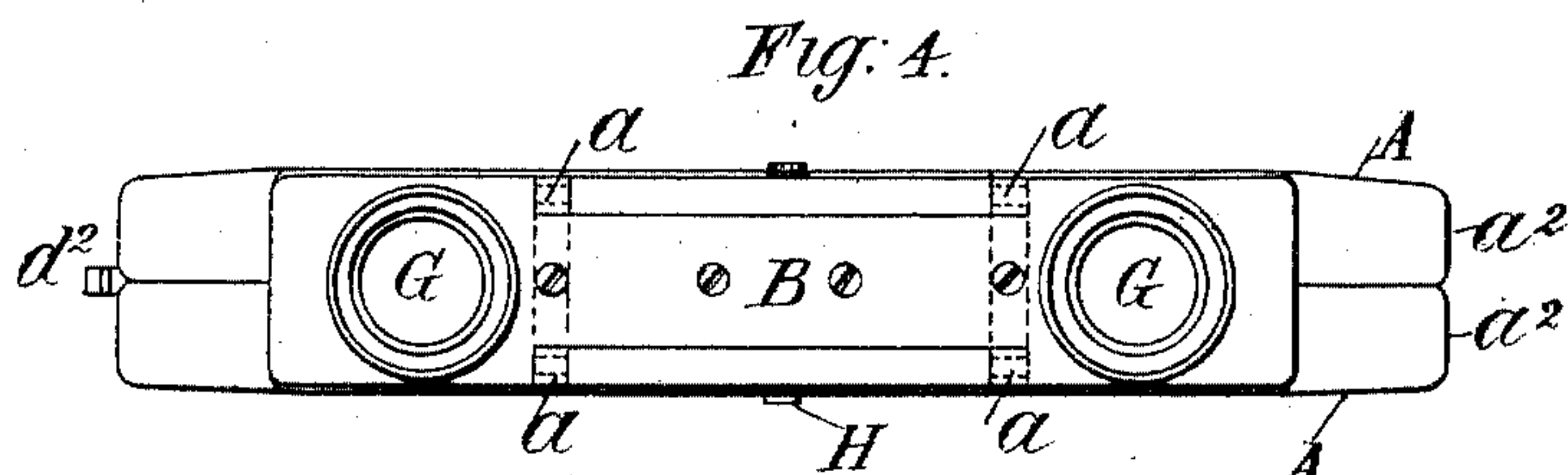
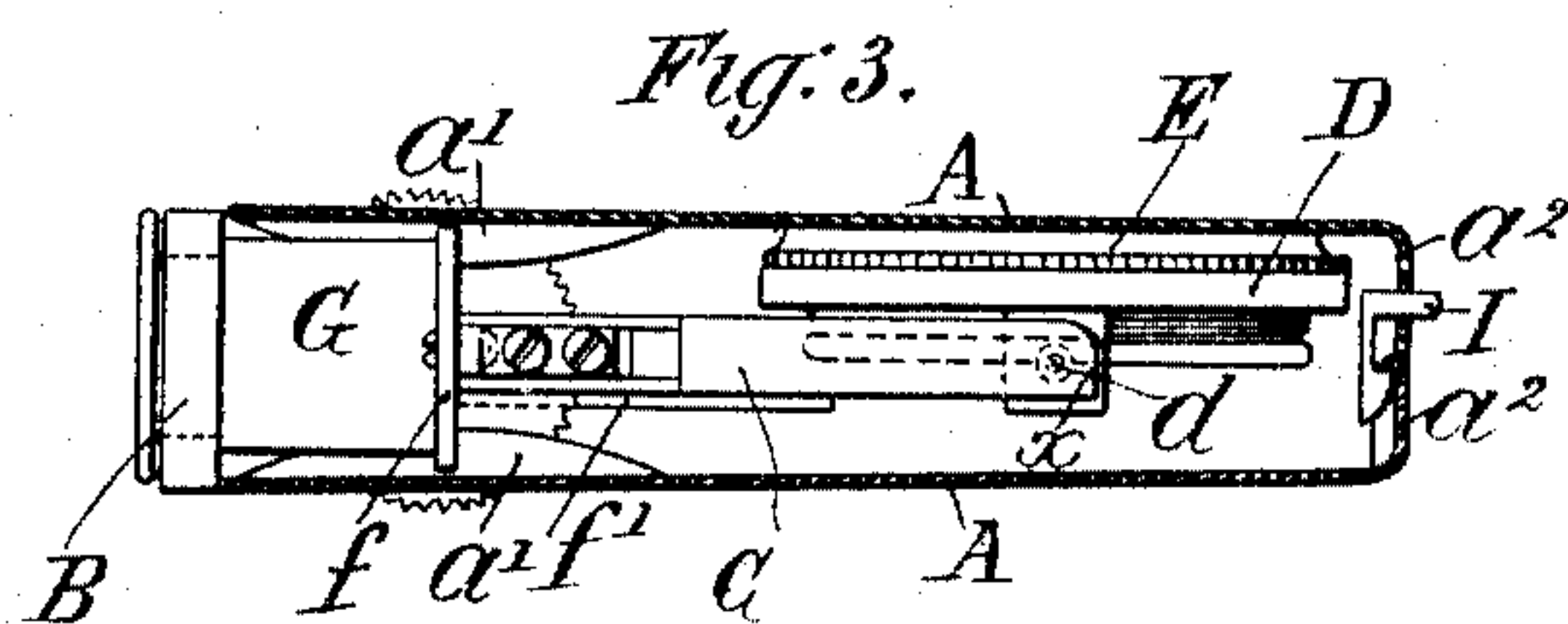
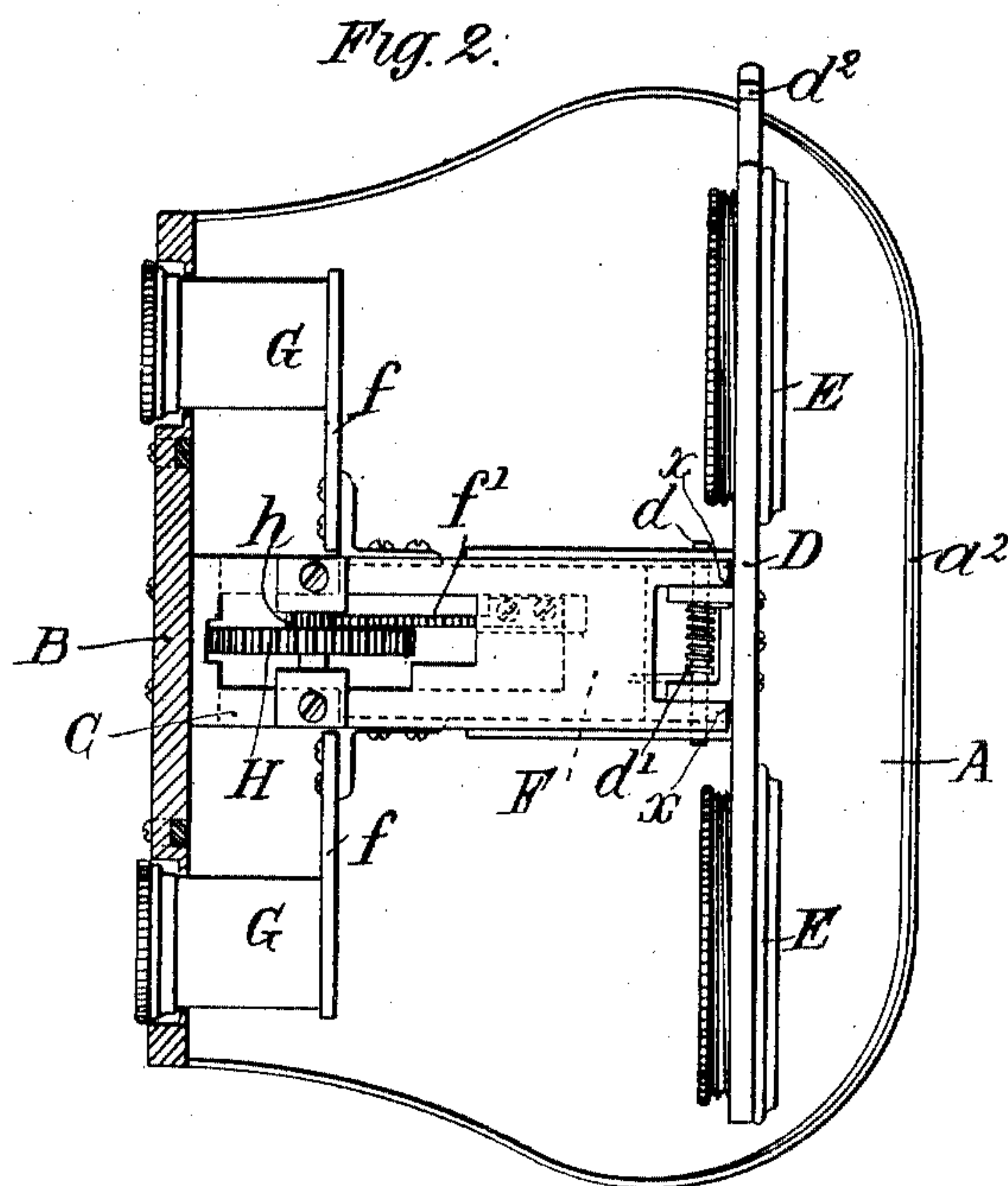
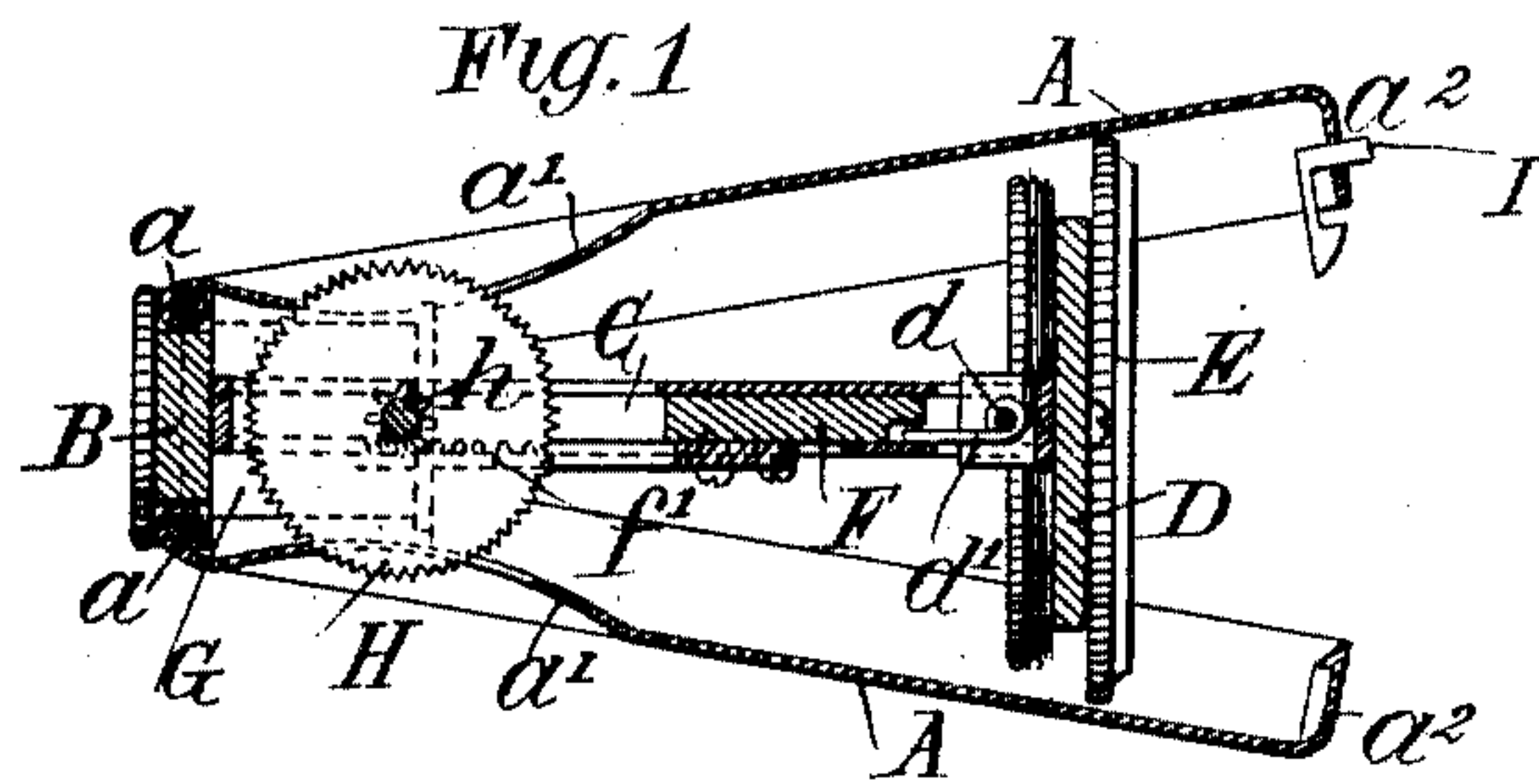
PATENTED MAY 3, 1904.

G. FOURNIER.
FOLDING BINOCULAR.

APPLICATION FILED NOV. 2, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES

A. W. Wright
E. W. Collins

INVENTOR

Gaston Fournier

BY

Howden and Howden
HIS ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 5

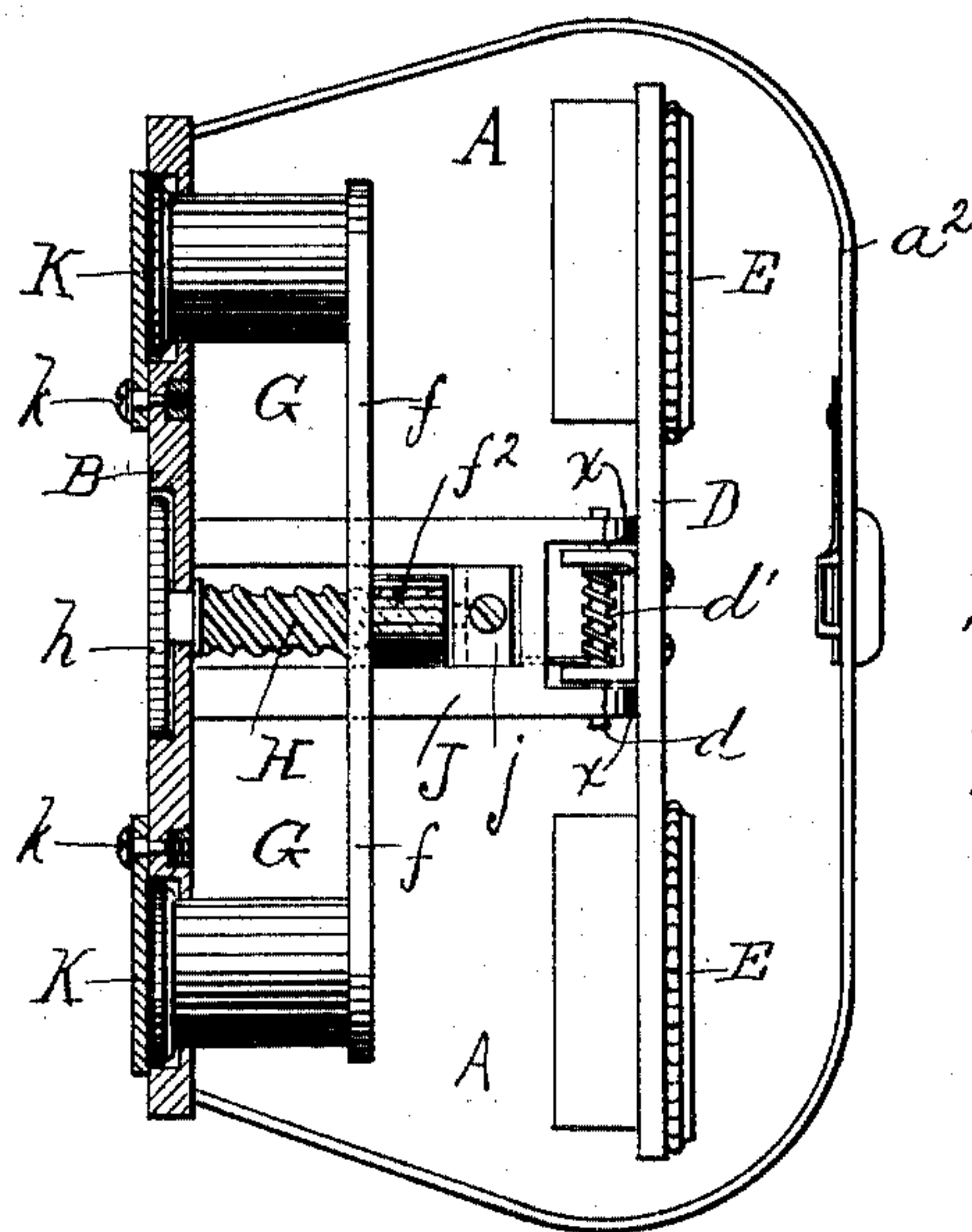
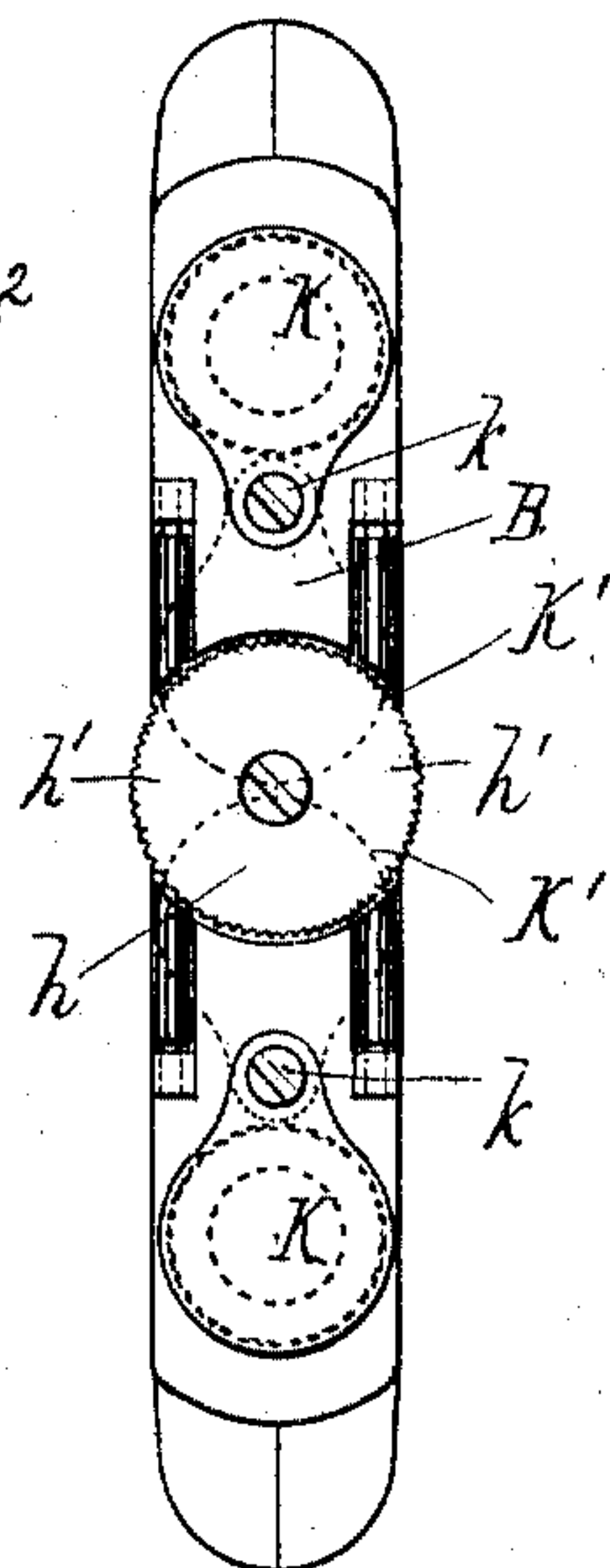


Fig. 6.



WITNESSES

F. W. Wright
H. Allen Abbott

INVENTOR

Gaston Fournier

BY

Howe and Howe

ATTORNEYS

UNITED STATES PATENT OFFICE.

GASTON FOURNIER, OF PARIS, FRANCE.

FOLDING BINOCULAR.

SPECIFICATION forming part of Letters Patent No. 759,170, dated May 3, 1904.

Application filed November 2, 1903. Serial No. 179,553. (No model.)

To all whom it may concern:

Be it known that I, GASTON FOURNIER, optician, a citizen of the French Republic, and a resident of 107 Avenue Parmentier, Paris, France, have invented a certain new and useful Folding Binocular, of which the following is a full, clear, and exact description, and for which I have applied for Letters Patent in France, dated November 3, 1902, No. 326,066.

This invention relates to a folding binocular.

In the accompanying drawings, representing this binocular, Figure 1 is a central section parallel to the visual axes of the instrument. Fig. 2 is a corresponding plan view. Fig. 3 is a section in the same direction as that of Fig. 1, showing the binocular closed. Fig. 4 is a front elevation at right angles to the visual axes, showing the binocular closed. Fig. 5 is a view of a modification in elevation and longitudinal section. Fig. 6 is a front elevation of the arrangement shown in Fig. 5 at right angles to the visual axes and showing the binocular closed.

This binocular comprises two plates or flaps A A, connected by hinges aa to a front plate or strip B, which forms a similar arrangement to the covering of a book, of which A A would be the covers and B the back. On the inside face of the part B is fixed a body C, at the end of which is pivoted, by means of the spindle d , a plate or frame D, on which are mounted the lenses E E. This lens-frame is caused by a spring d' upon the spindle d to take up such a position that its plane is at right angles to that of the body part C.

Near the plate B the body C forms a guide for a slide F, which carries at its sides two arms f , to which are attached the eyepiece-tubes G, these tubes sliding with slight friction in the plate B. This slide F, with the eyepieces, can be moved and adjusted by means of a milled disk or wheel H, arranged in a slot in the body C and perpendicular to the plane thereof. This milled disk H is provided with a pinion h in gear with a rack h' , which is fast to the slide F. Each of the flaps A A is provided in the plane of the said milled disk H with a recess a' , in which is arranged a slot through which the milled disk partly protrudes.

In order to fold or close up this binocular, the lens-frame is turned on its pivot d so as to bear against the body C, and then the two flaps A can be brought together and fastened by a clip I of any kind. These flaps A A are provided with flanges $a^2 a^2$, so as to allow between them when the binocular is folded sufficient space for the reception of the various parts, Fig. 3. The lens-holder is furnished with a button d^2 , by which it can easily be held.

To set up the binocular for use, it is sufficient to release the clip I and unlatch the two flaps A A. The lens-holder, under the influence of its spring d' , pushes back the flaps A and automatically takes up its position in a plane at right angles to the body C—that is, parallel to the plane of the eyepieces. The binocular is then in the position shown in Fig. 1. The back of the lens-holder D then bears against projections x , Fig. 3, on the end of the body C, which projections thus constitute a fixed stop to limit the movement of the lens-holder and to determine the working position parallel to the plane of the eyepieces. Focusing is effected by racking out the eyepieces by means of the milled disk H.

In the modification shown in Figs. 5 and 6 another means for adjusting the eyepieces is shown. The eyepiece-tubes G are connected by the cross-piece f , which engages with and can slide easily over the two sides of a frame J, fixed at one end to the front plate B, in which the eyepieces slide, and to the other end of which is hinged the frame or holder D, carrying the lenses E. The cross-piece f is fitted with a nut f^2 , which engages a screw H, placed between the two sides of the frame J, mounted at its two ends in the part j of the latter and in the front plate B and provided at its extremity with a milled disk h , by which it can be turned. This milled disk is preferably sunk in the thickness of the plate B, so that it does not form an outstanding projection. Its diameter is a little greater than the total width of this strip and thickness of the flaps, so that it presents two projecting portions h' , by which it can be held, Fig. 6. This method of construction permits the binocular to be made perfectly level on both faces and renders the method of manipu-

lation similar to that generally employed. To the plate B may also be secured two pivots $\frac{1}{2}$, on which are mounted two protectors K, which serve to cover the eyepieces when the binocular is not in use. In the drawings, Fig. 6, the position of these disks when they cover up the eyepieces has been shown at K and their position when the latter are uncovered at K'.

The binocular above described may be modified in various constructional details without departing from the spirit of the invention.

Having thus described my invention, what I claim as such, and desire to secure by Letters Patent, is—

1. A folding binocular, comprising a front plate and eyepiece-lenses adjustable therein, two flaps hinged to the front plate, a supporting-body secured to the front plate and projecting within the space contained between the two flaps, a lens-holder connected to the said body by a hinge, a spring which tends to turn the lens-holder automatically to the working position, and at the same time to push back the flaps, and a fixed stop to determine said working position.

2. A folding binocular, having hinged flaps and eyepiece-lenses at the hinge end, with a body part within the flaps and a lens-holder hinged to the body part within the flaps, a spring tending to turn said lens-holder automatically to the working position parallel to the plane of the eyepiece-lenses and at the same time to push back the flaps, a fixed stop to determine said working position of said

lens-holder, and means to latch the flaps when closed.

3. A folding binocular, comprising a front plate and eyepiece-lenses adjustable therein, two flaps hinged to the front plate, a supporting-body secured to the front plate and projecting within the space contained between the two flaps, a lens-holder connected to the said body by a hinge, a spring which tends to turn the lens-holder automatically to the working position and at the same time to push back the flaps, a fixed stop on the supporting-body to determine said working position, and means to latch the flaps when closed.

4. A folding binocular, comprising a front plate and eyepiece-lenses adjustable therein, two flaps hinged to the front plate, a supporting-body secured to the front plate and projecting within the space contained between the two flaps, a lens-holder, a spindle by which the holder is pivoted to said body, a spring coiled around said spindle to turn the lens-holder automatically to the working position, a fixed stop to determine said working position, and means to latch the flaps in the closed position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GASTON FOURNIER.

Witnesses:

AUGUSTUS E. INGRAM,
GUSTAVE DUMONT.