

E. L. HALL.

DETACHABLE FILM SPOOL RECEPTACLE FOR PLATE HOLDERS.

APPLICATION FILED AUG. 4, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

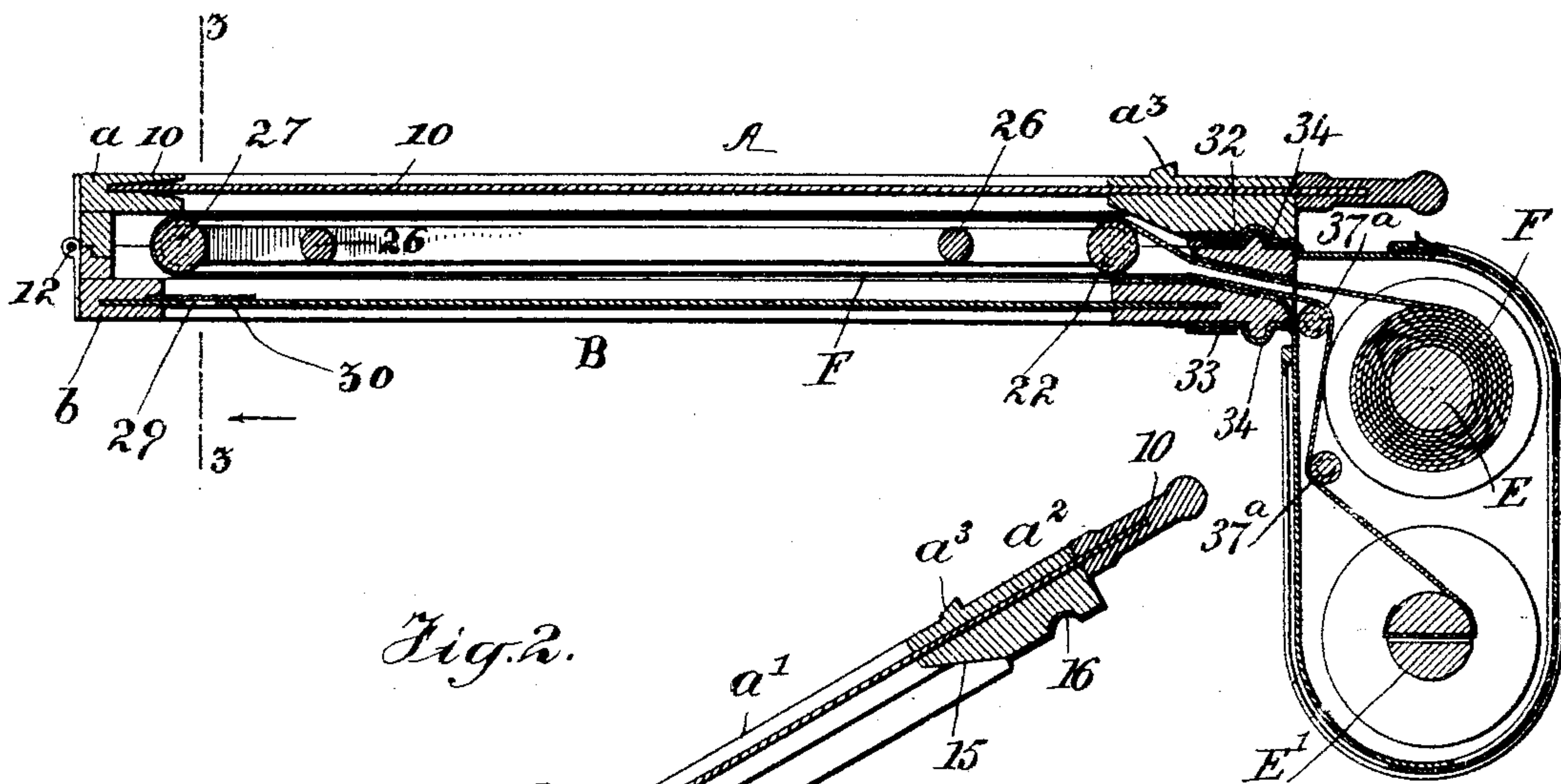
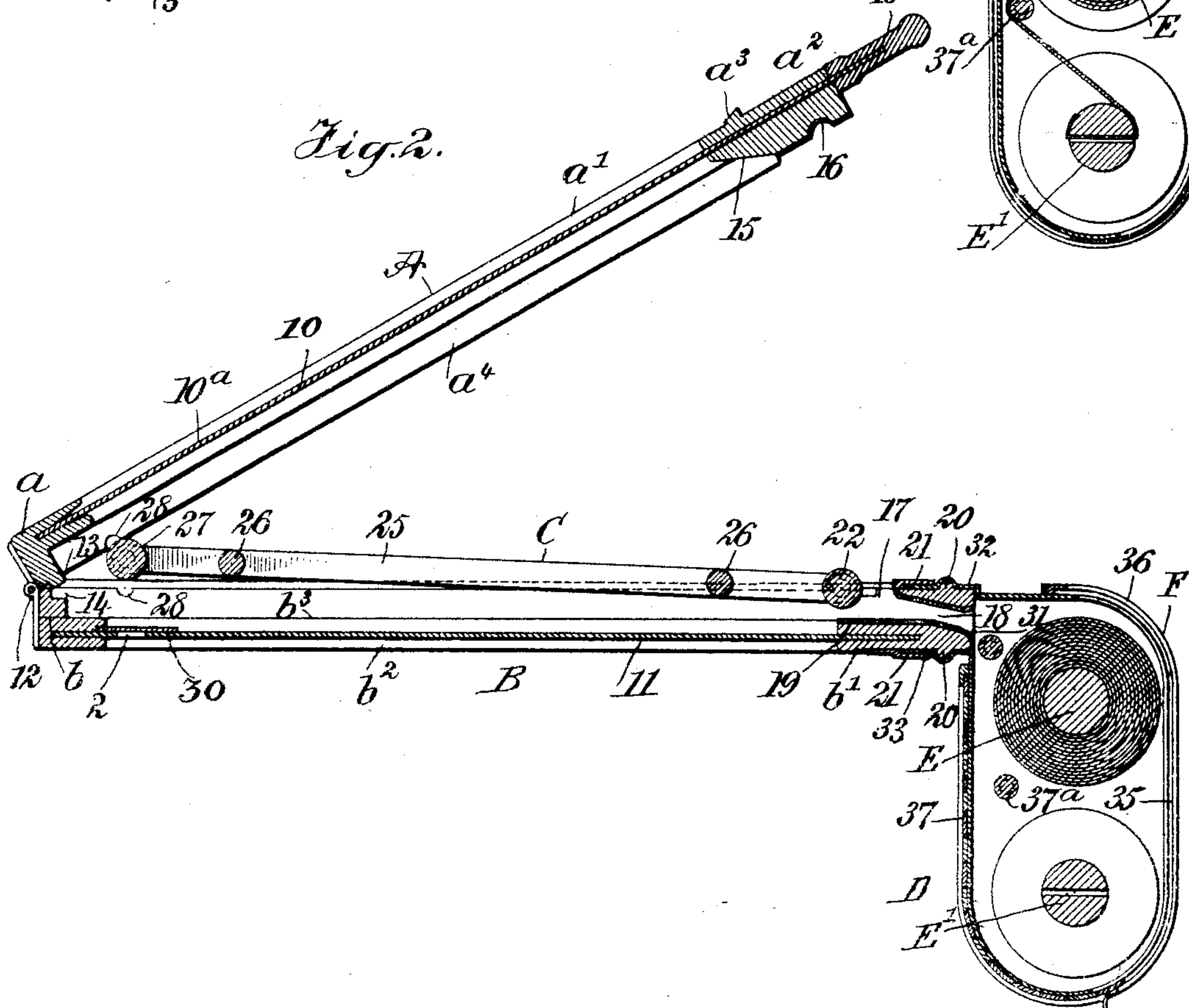


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

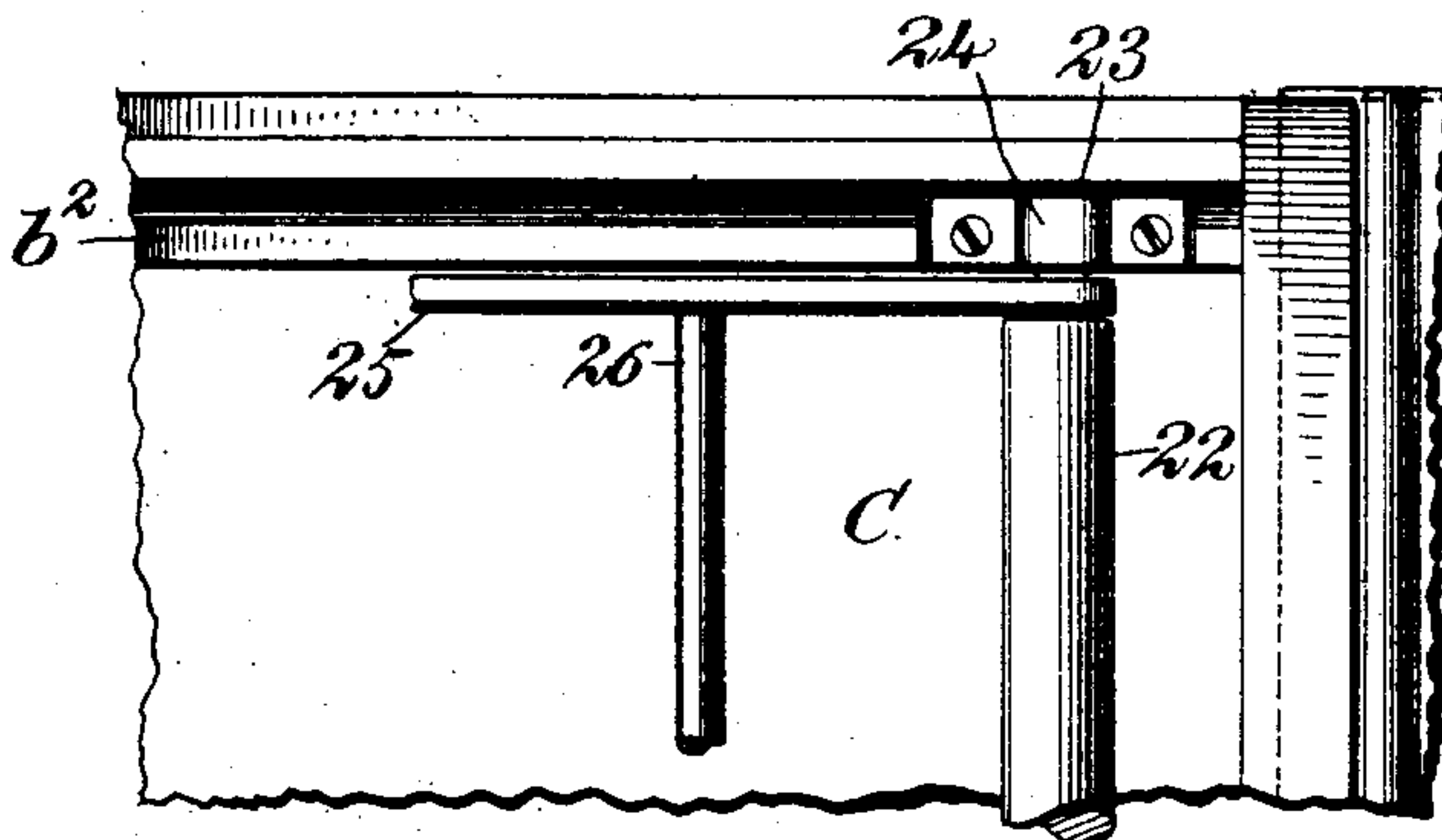


Fig. 5.

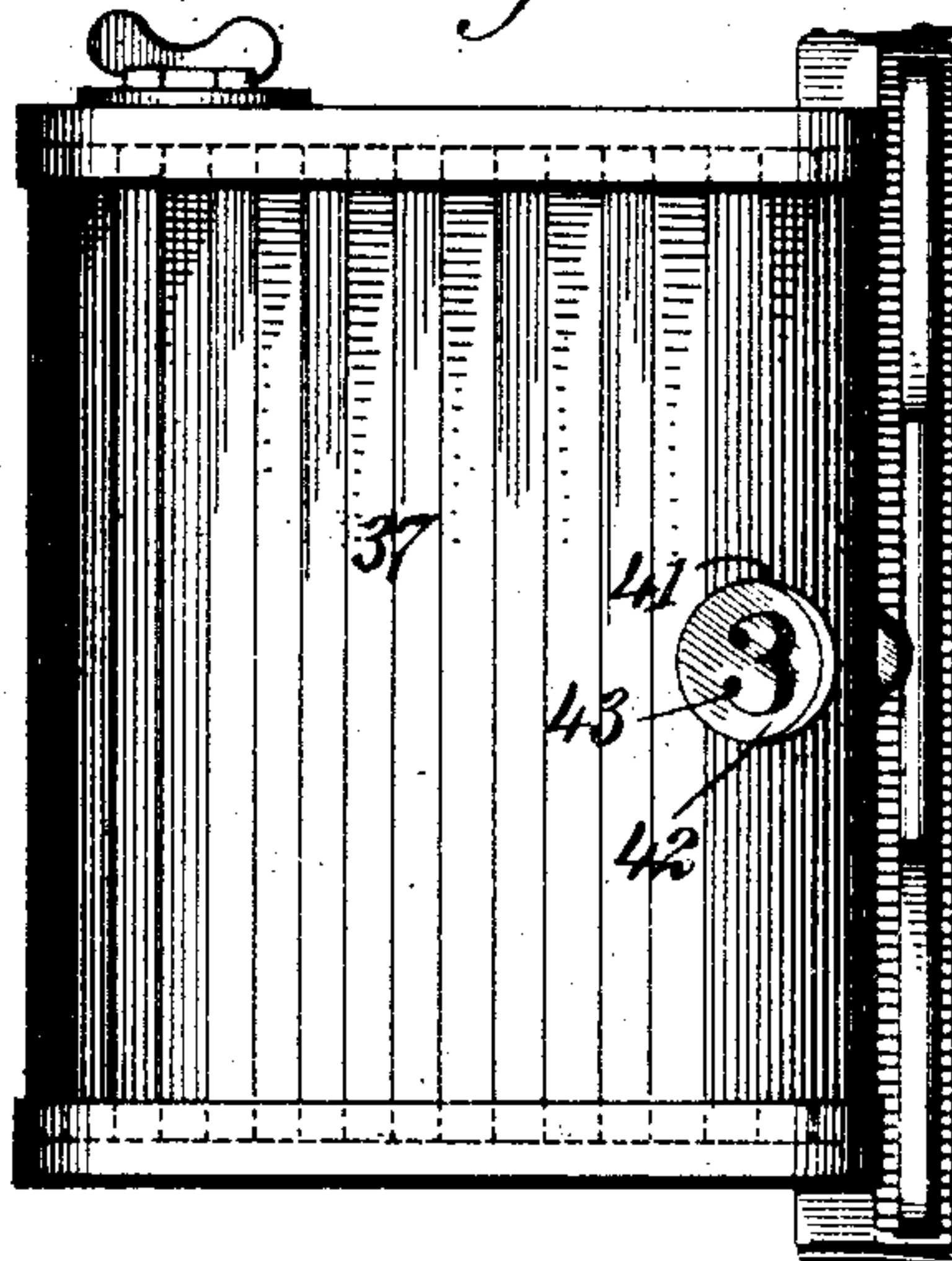
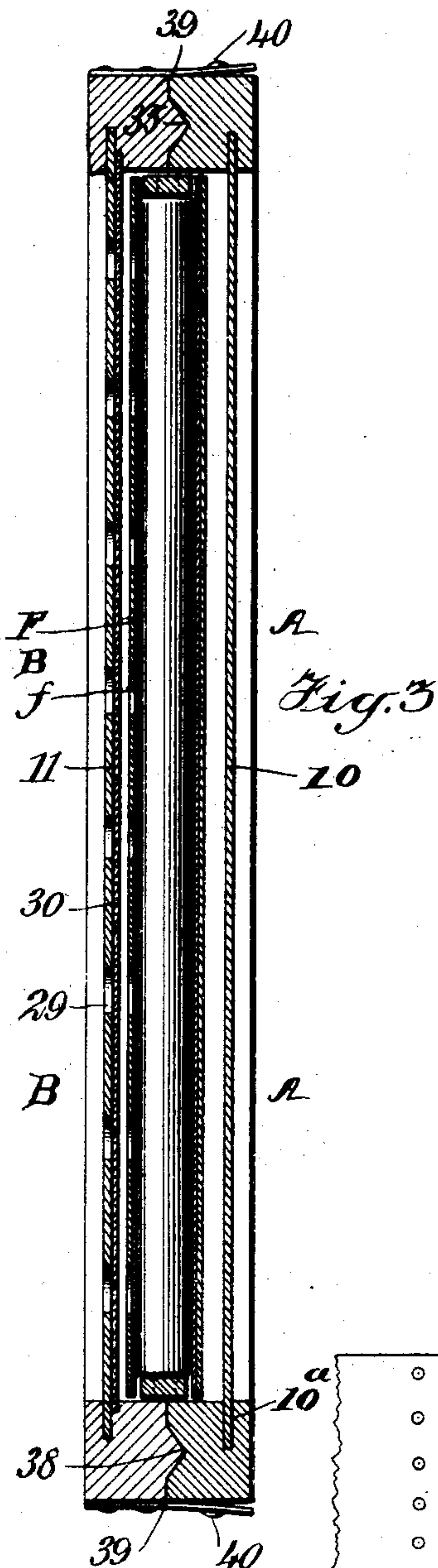
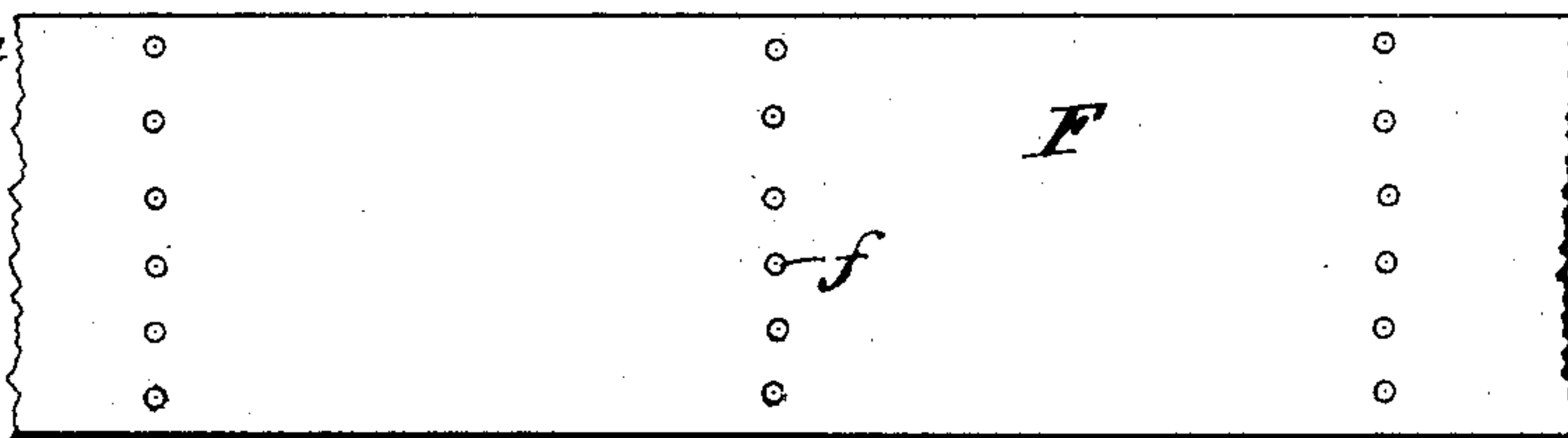


Fig. 6.



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EDWARD LANDER HALL, OF NEW YORK, N. Y.

DETACHABLE FILM-SPOOL RECEPTACLE FOR PLATE-HOLDERS.

SPECIFICATION forming part of Letters Patent No. 790,123, dated May 16, 1905.

Application filed August 4, 1904. Serial No. 219,553.

To all whom it may concern:

Be it known that I, EDWARD LANDER HALL, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Detachable Film - Spool Receptacle for Plate-Holders, of which the following is a full, clear, and exact description.

10 The purpose of the invention is to provide a novel form of plate-holder for cameras and a film-spool receptacle for such holders, whereby a film can be used in connection with a plate-holder, which holder can be used the same as an ordinary holder, enabling focusing to be accomplished through the ground glass of the camera-box.

Another purpose of the invention is to provide means which enable a film-receptacle to be quickly and readily attached to or detached from a plate-holder, and also to provide means for accurately adjusting any section of film for exposure, and also to so construct the film that when separating the exposed sections for developing there will be no danger of cutting through any other sections than the marginal portions.

30 The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

35 Figure 1 is a longitudinal section through the improved holder and film receiving or carrying receptacle, the holder and receptacle being shown loaded and both holder and receptacle closed and ready for use. Fig. 2 is a view similar to Fig. 1, and both the film receiving or carrying receptacles are shown open. Fig. 3 is an enlarged transverse section through a closed and loaded holder, the section being taken practically on the line 3-3 of Fig. 1. Fig. 4 is an enlarged detail view of a part of one section of the holder, illustrating how the film-guiding frame is pivoted therein. Fig. 5 is an outer side view of the film-receptacle, showing it adapted for the

Eastman film; and Fig. 6 is a plan view of a portion of a strip of film.

The holder is made in two sections A and B, adapted to be closed one upon the other and to be opened one from the other. The frame of the section A consists of an end bar *a*, side bars *a'*, and an opposing end or cross bar *a''*, which latter is provided with the usual exterior batten *a'''* to enter the ordinary groove at the focusing end of the camera-box. A slide 10 is made to enter a groove 10^a in the section A of the plate-holder in the manner customary with such slides, as the slide is of the usual character, and in each side bar *a'* a rabbet *a⁴* is formed at the inner portion of said side bar for a purpose to be hereinafter mentioned. The opposing section B consists of an end or cross bar *b*, which corresponds to the cross-bar *a* of the section A, side bars *b'*, and an opposite end or cross bar *b''*, the side bars *b'* having rabbets *b³* produced therein corresponding to the rabbets *a⁴* in the section A.

The two sections A and B are connected at their cross-bars *a* and *b* by suitable hinges 12, and a batten 13, of elastic material or of any suitable material, is located at the inner portion of the cross-bar *a*, adapted when the two sections are closed one upon the other to enter a recess 14 in the cross-bar *b*, thus making a light-tight connection at that point.

It may here be remarked that the cross-bar *a''* of the section A is provided in its under face at its inner edge with an inclined surface 15, and in the same face near its outer edge a transverse groove 16 is produced. The cross-bar *b'* at what is the receiving end of the plate-holder is provided with a longitudinal opening 17 in communication with the outside atmosphere and in communication with the interior of the said section B. The upper wall of the upper part of the cross-bar *b'* is cut away at 18 at its inner edge, rendering the lower portion where the opening is made of greater depth. Furthermore, the opening 17 is inclined more or less from its outer end outwardly and inwardly, as is clearly shown in Fig. 2.

The inner wall of the opening 17 may be and preferably is covered with a soft mate-

rial 19, usually of an opaque character, and at the inner and outer faces of said cross-bar b' ribs 20 are formed, usually more or less segmental in form, and these ribs extend
 5 nearly or entirely from side to side of the said section. Furthermore, adjacent to the inner surface of each rib 20 a slideway 21 is formed upon the said inner and outer faces of the cross-bar b' .

10 A guide-frame C is located within the section B, and this guide-frame carries a roller 22, the trunnions 23 whereof are journaled in bearings 24, located in the side bars b^2 adjacent to the inner end of the opening 17. The
 15 side bars 25 of the guide-frame are pivoted on the trunnions 23, said side bars being connected by suitable brace-bars 26, while the construction of the frame is completed by the addition of a roller 27 at its free end. The
 20 trunnions of this roller may extend out beyond the ends of said roller sufficiently to enter notches or recesses 28 in the side bars of both sections when they are closed, thus holding the frame firmly in position and pre-
 25 venting the frame from dropping so far downward as to bring it in engagement with the rabbets b^3 in the side bars of the section B; but, if desired, the trunnions of the roller 27 may be flush with the outer faces of the
 30 side bars 25 and the ends of the inner brace-rod 26 be carried outward to accomplish the same result. Under such an arrangement the location of the notches or recesses 28 would necessarily be changed.

35 The section B of the plate-holder is closed at its outer face portion by means of a slide 11, which corresponds to the second exposing-slide in an ordinary plate-holder; but this slide 11 is permanently secured in the said
 40 section, as is shown in Fig. 2 and likewise in Fig. 3. This permanent slide or cover 11, near the hinged end of the said section, is provided with a series of apertures 29, covered by a non-actinic strip 30, secured in any suit-
 45 able or approved manner to the inner face of the cover 11, as is shown in Fig. 3. These openings are intended to enable a person to ascertain accurately when a section of film in position in the holder is to be exposed, as will
 50 be hereinafter particularly stated.

The film-receptacle D consists of a casing provided with an opening at its upper inner edge, adapted when the casing is in position on the section B to be in registry with the
 55 opening 17, the opening in the casing being designated as 31. The casing is attached to the said section B of the plate-holder in the following manner: Arms 32 and 33 extend, respectively, from the upper and the lower
 60 walls of the said opening 31, these arms having outwardly-struck grooves 34 therein, so that when the said arms 32 and 33 are slid over the receiving end of the section B from one side in direction of the other the grooves
 65 34 will receive the ribs 20 on the said section,

thus holding the casing in position. Furthermore, at such time the said arms 32 and 33 will enter the slideways 21 and will be prevented from having lateral movement thereby.

At the outer side faces of the casing an opening 35 is formed, which opening may be closed by any suitable form of door. In the drawings the casing is so made as to provide runways 36 for a roll-door 37, operated in the customary manner, which door is shown closed
 75 in Fig. 1 and open in Fig. 2. A slight modification is illustrated in Fig. 5.

In order that the two sections may be light-proof at their sides when closed together, one section is provided with a V-tongue and the
 80 other with a corresponding groove to receive the tongue, as is shown at 38 in Fig. 3. Any approved form of latches may be employed to hold the sections in their closed position. In
 Fig. 3 the latches shown consist of spring-
 85 tongues 39, secured to one section, having apertures therein to receive pins 40, secured to the other section.

The casing is adapted to receive two spools—namely, a dispensing-spool E and a receiving-
 90 spool E', the former being nearest the opening in the casing communicating with the plate-holder. These spools are removable, the door 37 being provided for that purpose, and they may be journaled in the casing in any
 95 suitable manner. In connection with these spools I have shown guide or friction rollers 37^a permanently journaled in the said casing; but I desire it to be understood that they are not absolutely necessary and may be dispensed
 100 with, if desired. However, when they are employed the film F, which is on the dispensing-spool E, is carried through the opening 17 into the plate-holder and over the outer face of the guide-frame C and then in direction of
 105 and over the inner face of the said guide-frame and out again through the said opening 17 into the casing of the spool-receptacle in engagement with the guide-rollers 37^a to an engagement with the receiving-spool E', as
 110 is clearly shown in Fig. 1. When the guide-rollers 37^a are not employed, the film is carried in a slightly-different way from the plate-holder to the receiving-spool.

The film F is provided with series of transversely-arranged apertures f , as shown in
 115 Figs. 3 and 6, dividing the film into so many sections adapted for exposure, each section being of the length of the guide-frame C, which practically extends from one end of the
 120 plate-holder to the other. The spools having been placed in the casing and the casing placed on the section B of the plate-holder, the films are conducted from one spool to the other in the manner described and then the two sec-
 125 tions are brought together and locked. The plate-holder is now ready for use. When the films are first set in the holder, one series of apertures f will be opposite the openings
 130 29 in the cover 11 of the section B. An expo-

sure may now be made, and after an exposure has been made the film is moved in any approved manner, so as to wind on the receiving-spool E', the film being shifted until another series of apertures f' in the film are brought opposite the openings 29 in the cover 11 above mentioned, and when such registry is accomplished the operator may rest assured that a suitable length of film is in position for exposure.

When a plate-holder of the above description is employed, it may be used in the same manner as the ordinary plate-holder, and likewise enables the operator to employ the ground glass in focusing, which is more satisfactory than a finder.

In Fig. 5 I have illustrated the roll-door for the film-receptacle as provided with an opening 41, covered by a non-actinic material 42, so that an Eastman film may be employed or a film having consecutive figures produced thereon, and as each figure appears at the said opening 41 in the door 37 the operator may keep track of the number of exposures made.

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

1. A plate-holder, comprising two hinged sections having opposing notches at the meeting edges thereof, a film-receptacle connected with one section, and a film-guide in the

holder, having rollers provided with journals mounted in each set of said notches.

2. A plate-holder constructed in two hinged sections, a film-receptacle connected with one section of the holder, and a film-guide pivoted in the holder, one section of the holder having a slide and the other section having a cover or bed provided with a series of openings covered by a non-actinic material.

3. A plate-holder, comprising two sections hinged together at one of their edges, one section being provided on the inner and outer faces thereof near its opposite end with corresponding ribs and slideways, and a detachable film-receptacle having attaching-arms adapted to enter said slideways, and provided with means for receiving said ribs.

4. A divisional plate-holder, a film-receptacle forming a portion of the holder and removable therefrom, a means for guiding the film from the receptacle to the holder and back to the receptacle, and means for determining the correct position of the film while in the holder and from the exterior of the latter.

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

EDWARD LANDER HALL.

Witnesses:

J. FRED. ACKER,
JNO. M. RITTER.