

J. TESSIER.
 FILM GUIDING MECHANISM.
 APPLICATION FILED APR. 30, 1913.

1,126,589.

Patented Jan. 26, 1915.

2 SHEETS—SHEET 1.

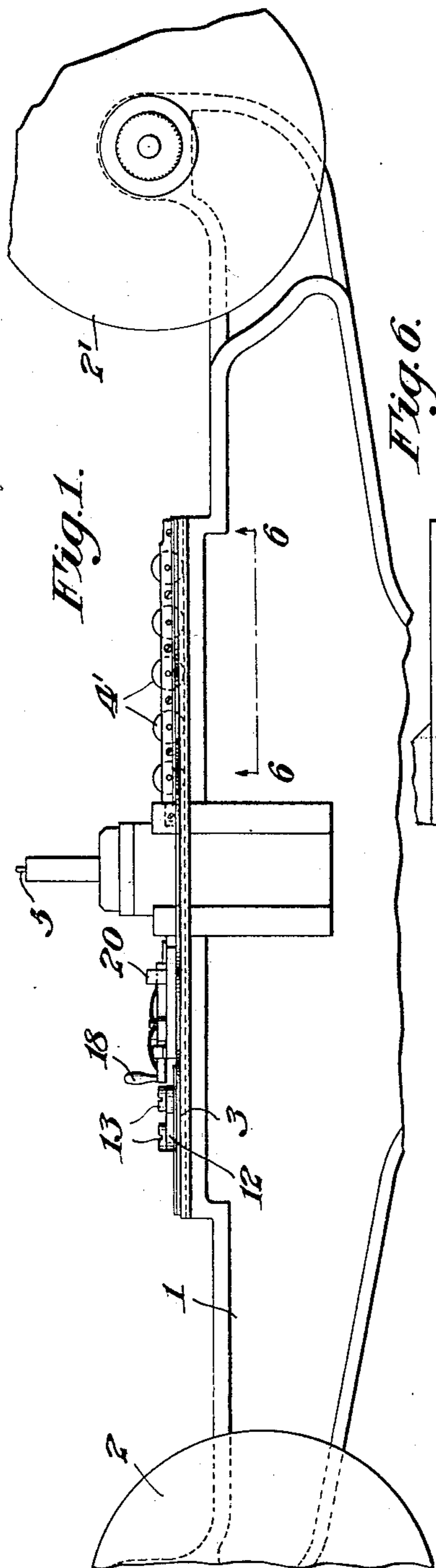


Fig. 1.

WITNESSES:

*Joseph S. ...
 Geo. D. ...*

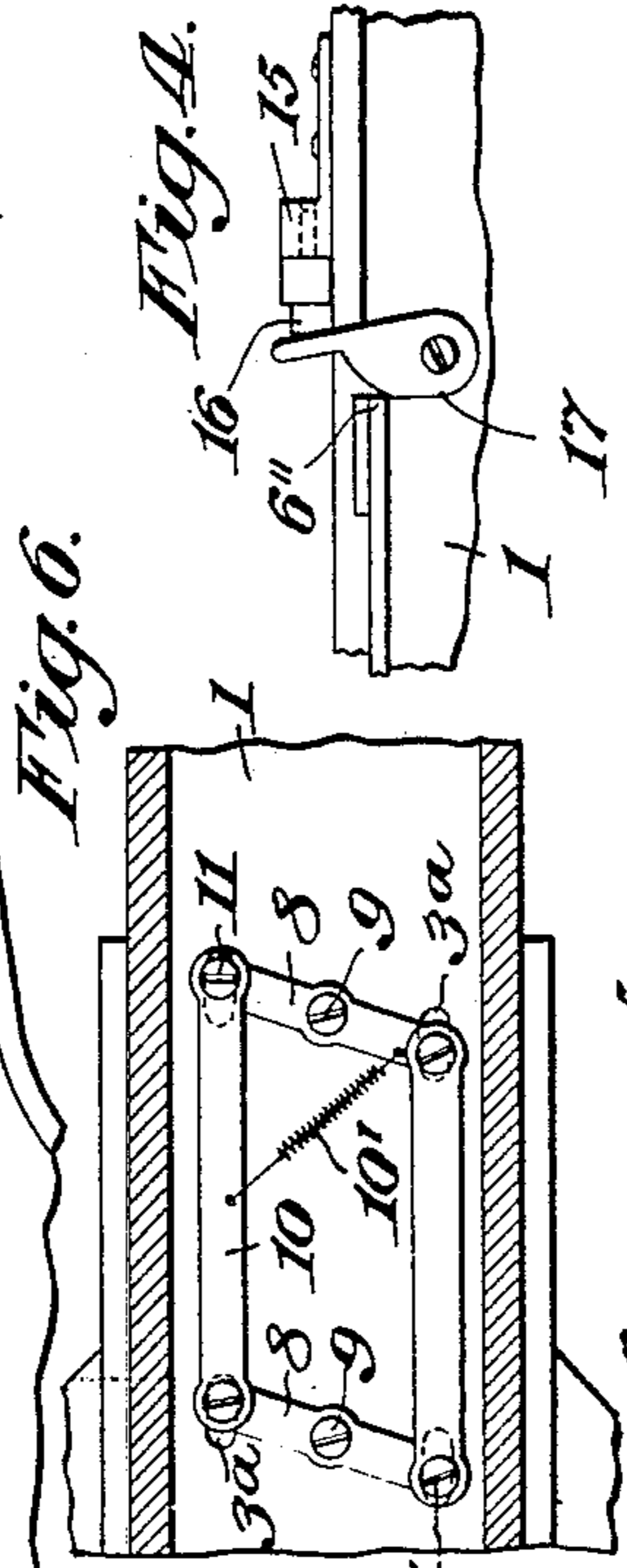


Fig. 6.

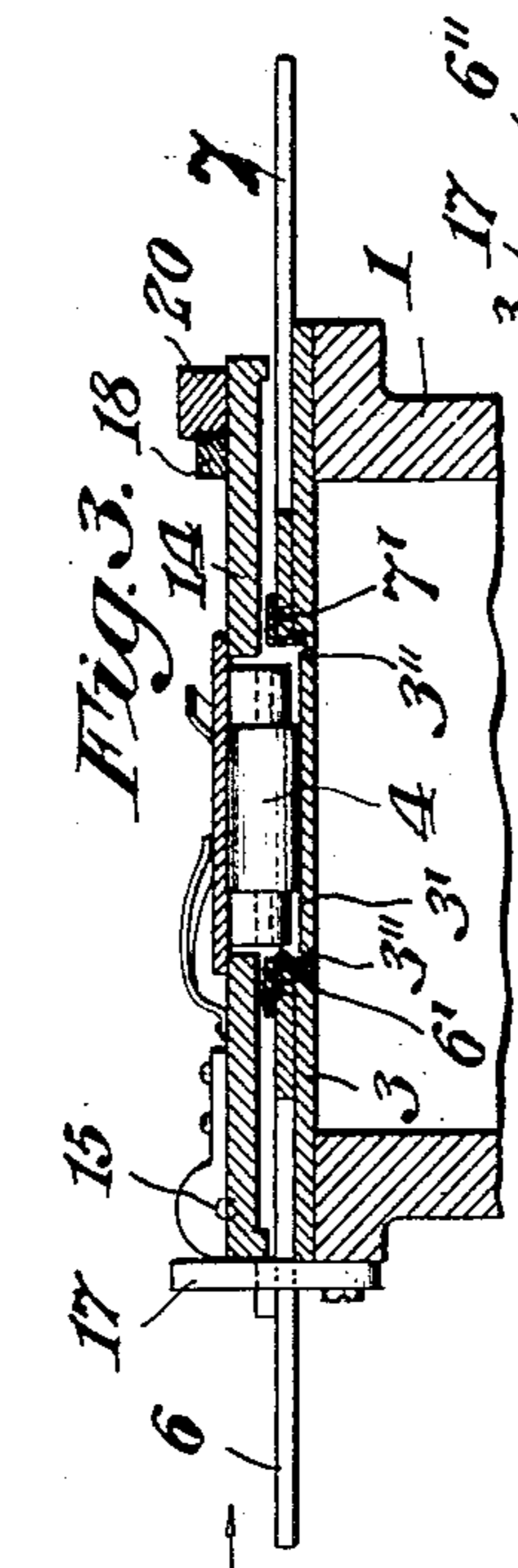


Fig. 3.

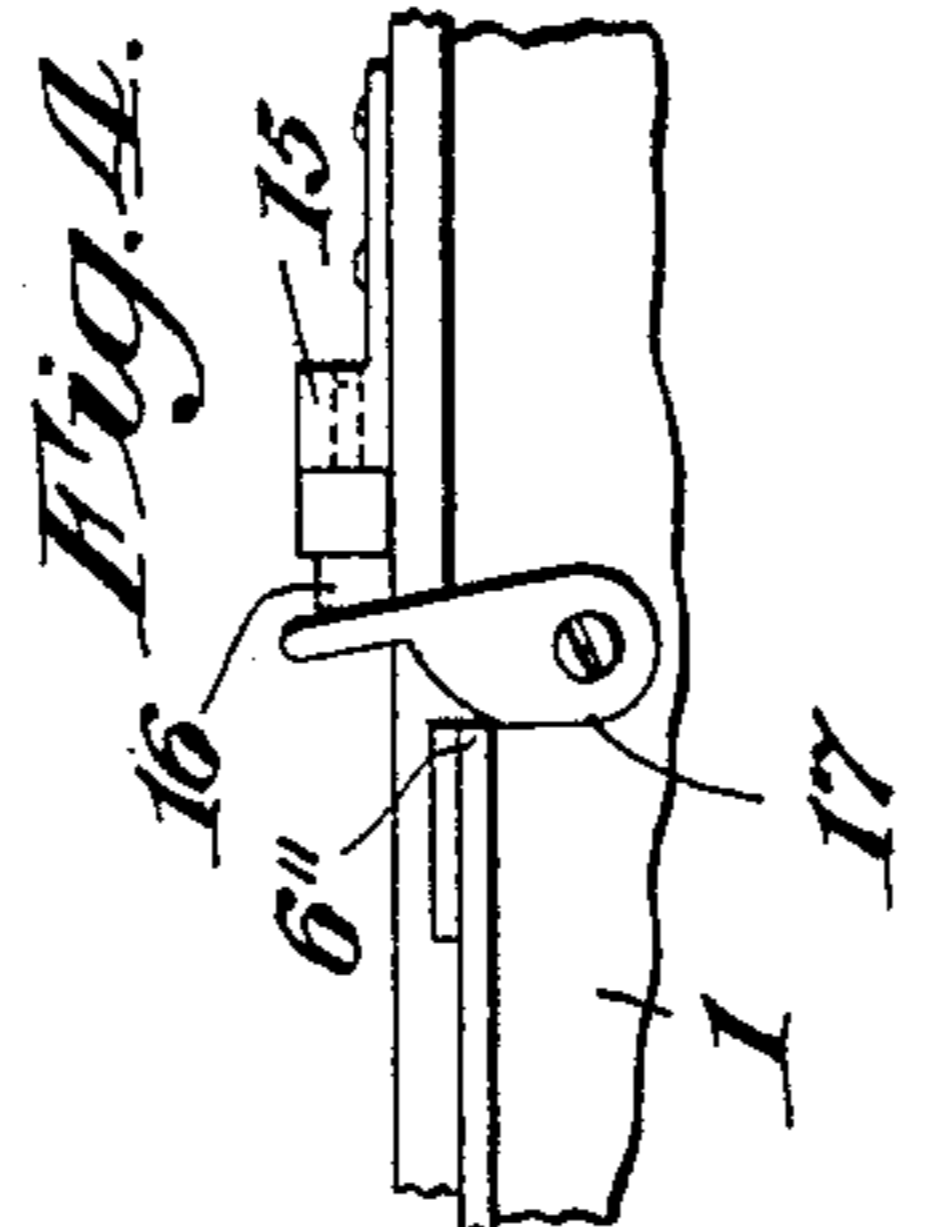


Fig. A.

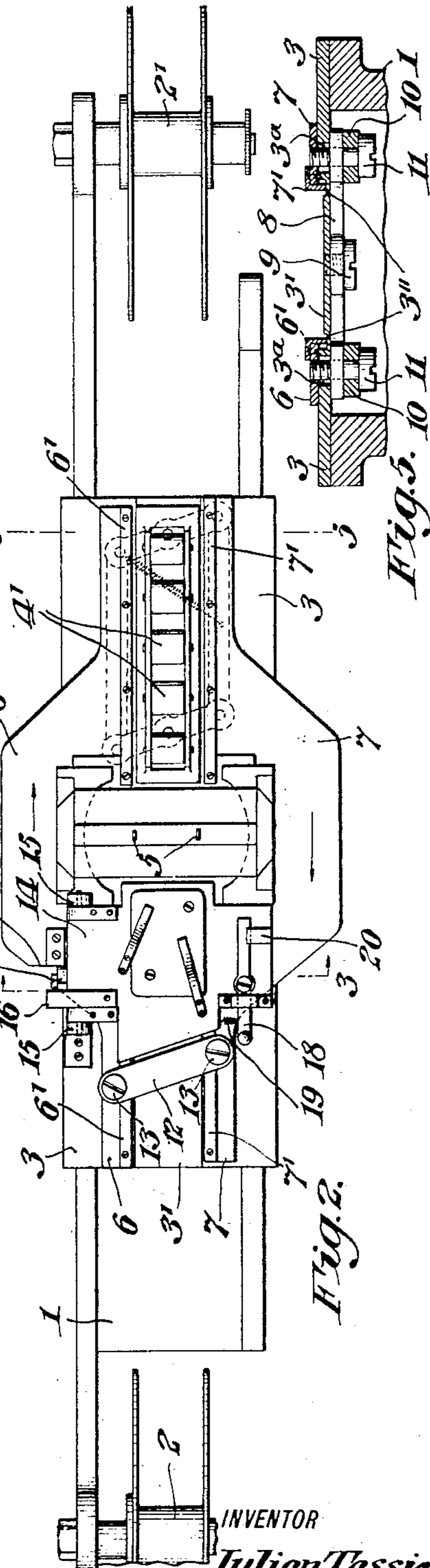


Fig. 2.

Fig. 5.

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2 SHEETS—SHEET 2.

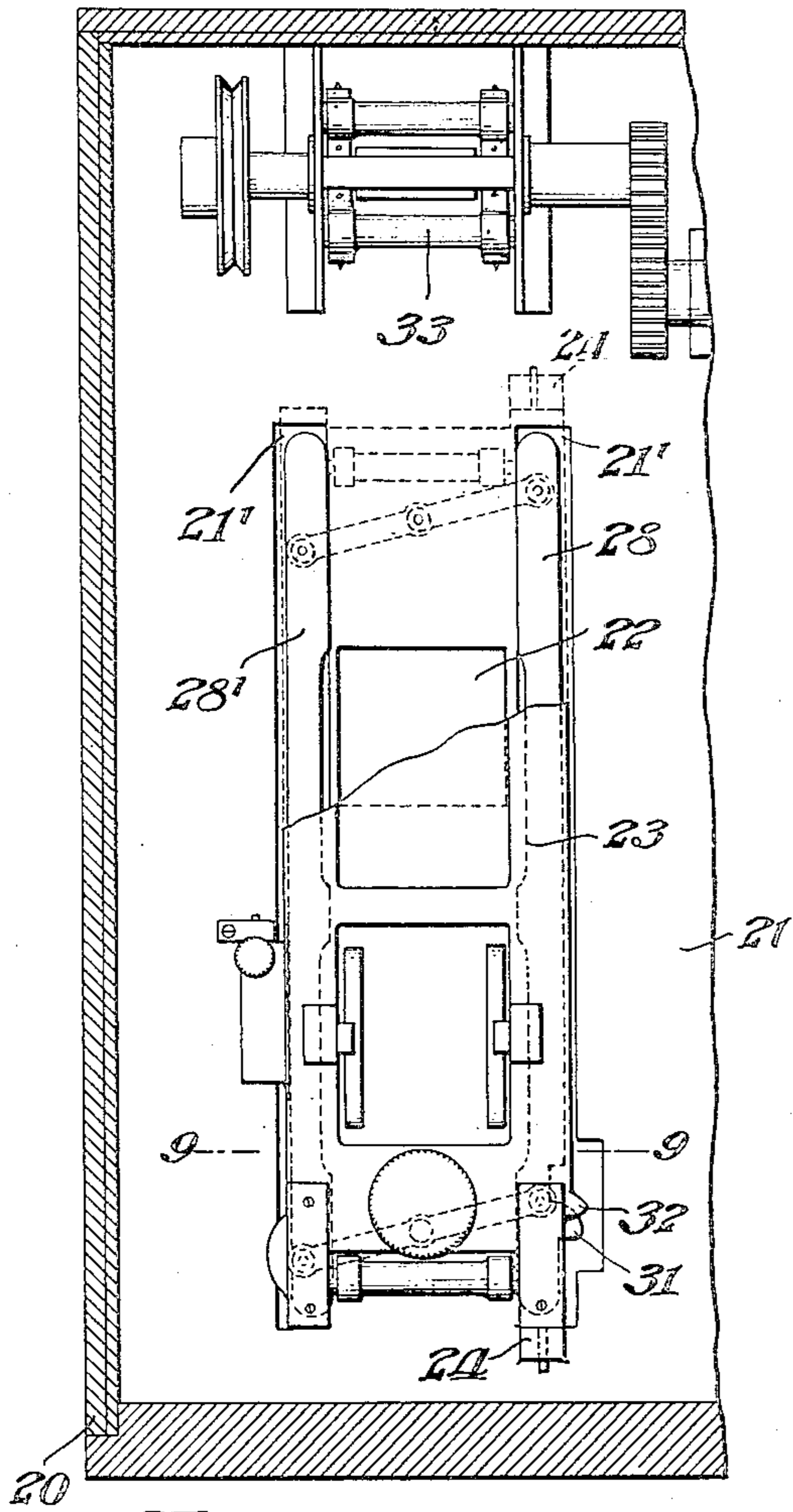


Fig. 7.

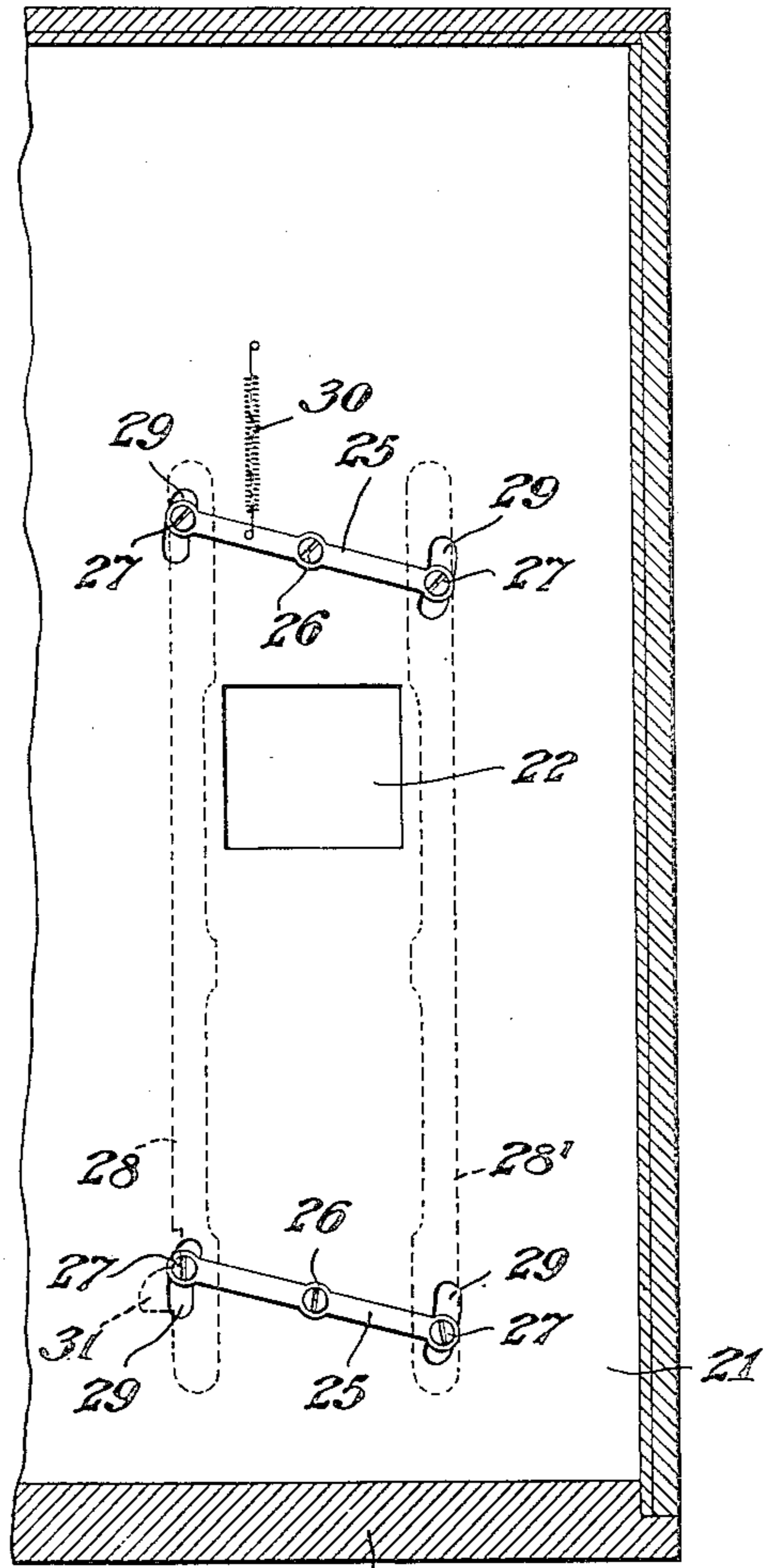


Fig. 8.

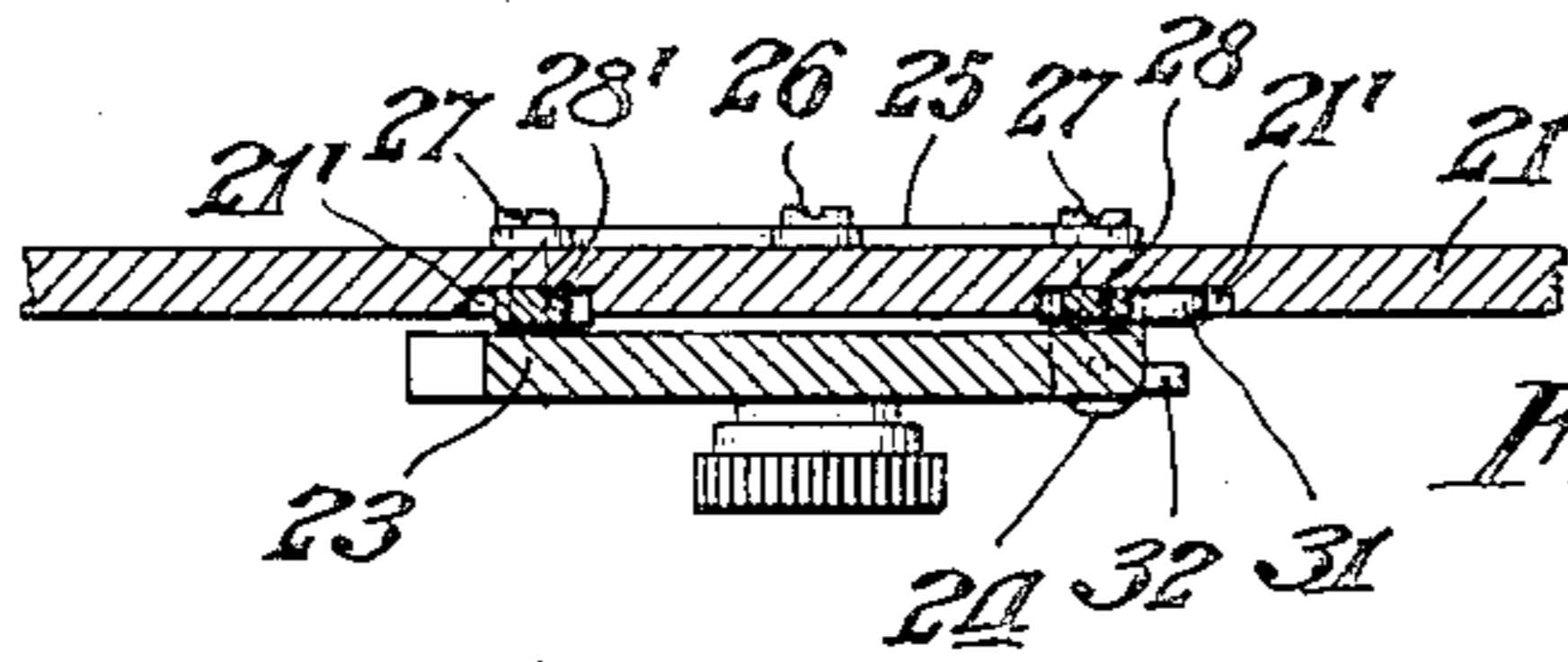


Fig. 9.

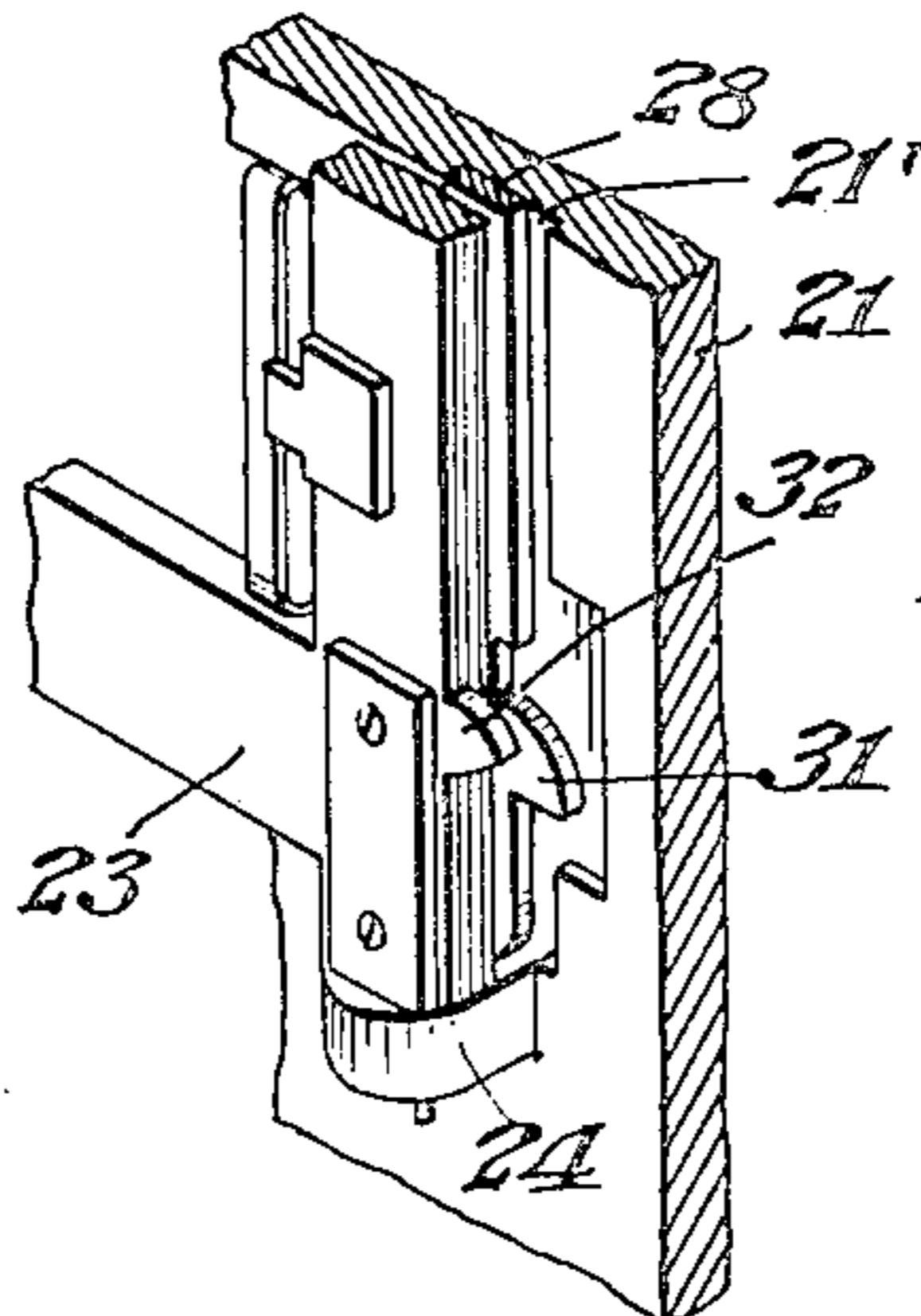


Fig. 10.

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UNITED STATES PATENT OFFICE.

JULIEN TESSIER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO LUBIN MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

FILM-GUIDING MECHANISM.

1,126,589.

Specification of Letters Patent.

Patented Jan. 26, 1915.

Application filed April 30, 1913. Serial No. 764,504.

To all whom it may concern:

Be it known that I, JULIEN TESSIER, a citizen of the French Republic, residing in the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain Improvements in Film-Guiding Mechanism, of which the following is a specification.

My improvements relate more particularly to means for guiding the films for moving picture machines in the operations of passing them through perforating machines, cameras and projecting machines, and my leading object is to provide simple, convenient and efficient guiding mechanism which can be opened for the ready insertion and withdrawal of and access to the film sections in the operation of feeding them.

The characteristic features of my improvements are fully disclosed in the following description and the accompanying drawings in illustration thereof.

In the drawings, Figure 1 is a side elevation of a section of a perforating machine having my improvements applied thereto; Fig. 2 is a broken plan view of the same machine; Fig. 3 is a sectional view taken on the line 3-3 of Fig. 2; Fig. 4 is an elevation of a section looking in the direction of the arrow shown in Fig. 3; Fig. 5 is a sectional view taken on the line 5-5 of Fig. 2; Fig. 6 is a sectional view taken on the line 6-6 of Fig. 1; Fig. 7 is a broken vertical sectional view taken transversely through a camera embodying my improvements; Fig. 8 is a transverse vertical sectional view of the same seen from the opposite direction from the view shown in Fig. 7; Fig. 9 is a sectional view taken on the line 9-9 of Fig. 7; and Fig. 10 is a perspective view showing the connection between the door and the film guides operated thereby.

The invention, as illustrated in Figs. 1 to 6 inclusive, is embodied in a perforating machine comprising the bed 1 having the reels 2 and 2' journaled at its opposite ends, the longitudinal plate 3 over which the film is fed, the rollers 4 and 4' for passing the film over the plate, and the perforating mechanism 5 under which the film is drawn. Plates 6 and 7 are movably supported on the plates 3 at the opposite sides of the central section 3' and are provided with guides 6' and 7' having vertical legs movable laterally in the parallel longitudinal channels 3''

at opposite sides of the part 3'. Levers 8 are fulcrumed on studs 9, set in the underside of the plate 3, and are connected with the links 10 by studs 11 which pass through the slots 3'' into the respective plates 6 and 7, a spring 10' connected with a lever and a link normally holding the parts in the position shown in Fig. 6. A link 12 is pivotally connected by studs 13 with the respective plates 6 and 7 on the opposite side of the perforating device 5 from the levers 8. A film protector comprising a cover or door 14 is connected to the plate 3 by the hinges 15 and is provided with a rearwardly projecting lug or cam 16 which engages the cam 17 on the bed 1, the cam 17 engaging the shoulder 6'' of the plate 6. The door 14 is provided with the latch 18 fulcrumed thereon and adapted to be held by the spring 19 in engagement with the hasp 20, whereby the door is held closed over the roller 4 and the film thereon. When the latch 18 is disengaged from the hasp 20 and the door 14 is opened, the cam 16 thereon rocks the cam 17 and moves the plate 6 in the direction of the arrow thereon, this plate acting through the studs 11 fixed thereto to move the levers 8 toward positions at right angles thereto so as to spread the plates 6 and 7 with the guides 6' and 7' thereon. The film, having been inserted, removed or examined, as circumstances may require, upon closing the door 14 the spring 10' acts to restore the mechanism to its normal position, in which the guides 6' and 7' occupy their closest relation, in position for engaging the edges of the film and guiding it with accuracy as it is carried through the machine between the reels 2 and 2', over the rollers 4 and 4' and under the perforating device 5.

The invention, in the form illustrated in Figs. 7 to 10 inclusive, comprises the box 20 containing the diaphragm 21 provided with the light aperture 22 and the door 23 having the hinges 24. Levers 25 are journaled on studs 26 set in the diaphragm 21 and are connected by the studs 27 with the parallel guides 28 and 28' on the opposite side of the diaphragm from the levers, the studs 27 being movable in the slots 29 of the diaphragm. These guides are held in their closest relation, in position for guiding the film across the aperture 22, by the spring 30 connected with the diaphragm 21 and one of the levers

25. The guides, which are movable laterally and longitudinally in the channels 21' of the diaphragm 21, are spread for the insertion or removal of the film by means of a cam 31 fixed to one of them and the complementary cam 32 fixed to the door 23. When the door is swung out on its hinge 24 in the operation of opening it, the cam 32 thereon engages the cam 31 on the guide 28 and forces it downwardly, thereby moving the levers 25 toward positions at right angles thereto, whereby the guides are spread. When the door is closed, the spring 30 moves the guides 28 and 28' together into position for engaging the edges of the film fed over the sprocket 33 and drawn between the diaphragm 21 and the door 23.

Having described my invention, I claim:

1. The combination with film feeding mechanism, of guides, means for varying the distances between said guides, a door, and means operated by said door for actuating said means first named.

2. The combination with film feeding mechanism, of guides, fulcrumed levers pivotally connected to said guides, means for rocking said levers to increase the distance between said guides, a movable film-protector, and means operated by the movement of said film protector for automatically returning said levers to their initial positions whereby said guides are moved toward each other.

3. The combination with film feeding mechanism, of a plate containing channels, mechanism comprising connected guides movable laterally and longitudinally in said channels, and mechanism comprising a hinged door adapted for actuating said mechanism first named to spread said guides.

4. The combination with film feeding mechanism, of guiding mechanism compris-

ing a plate, a lever fulcrumed on said plate, a guide pivotally connected with said lever, a second guide forming with said first guide a way, a film cover, and cam mechanism operated by said cover whereby said first named guide is reciprocated.

5. The combination with film feeding mechanism, of guiding mechanism comprising a fulcrumed lever, a guide pivotally connected with said lever, a cam on said guide, a door having a cam connected therewith for engaging said first named cam, and a spring connected with said guiding mechanism and acting oppositely to the action of said cams.

6. The combination with film feeding mechanism, of a slotted plate, a lever fulcrumed on said plate, guiding devices on the opposite side of said plate from said lever, a stud connecting said lever with one of said guiding devices, a revoluble member, and means comprising a cam operated by said member and a spring for reciprocating said device last named relatively to the other guiding device.

7. The combination with film feeding mechanism, of a slotted plate, a pair of levers fulcrumed on said plate, a pair of guiding devices pivotally connected with said levers, a cam on one of said devices, a film protector having thereon a cam adapted to engage said first named cam and move said devices, and means comprising a spring for retracting said devices.

In testimony whereof I have hereunto set my hand this 14th day of April, 1913, in the presence of the subscribing witnesses.

JULIEN TESSIER.

Witnesses:

CHARLES GOLDSMITH,
JOS. G. DENNY, Jr.