

C. R. UEBELMESSER.
 FILM HOLDING DEVICE FOR MOVING PICTURE MACHINES.
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994,044.

Patented May 30, 1911.

Fig. 1.

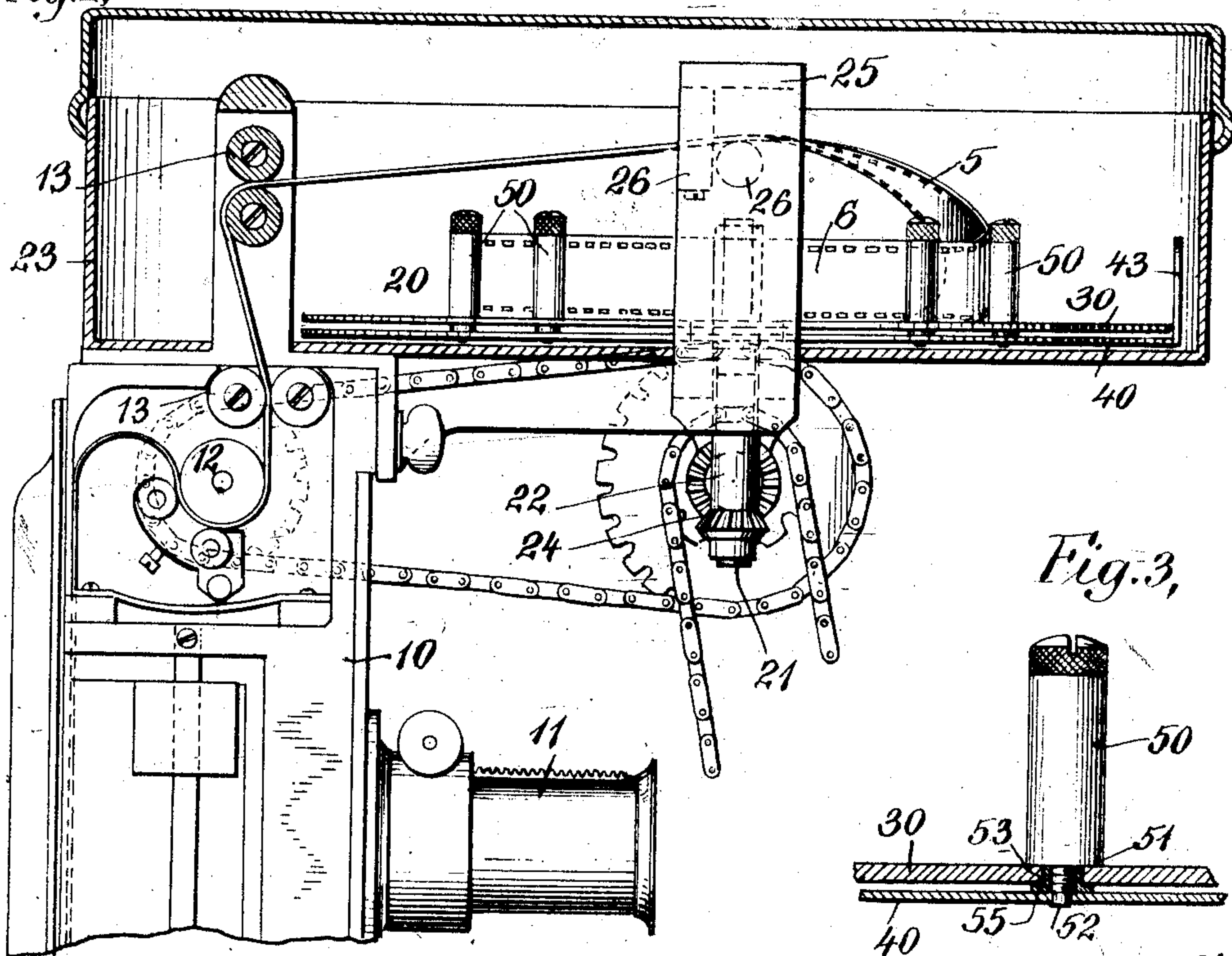


Fig. 3.

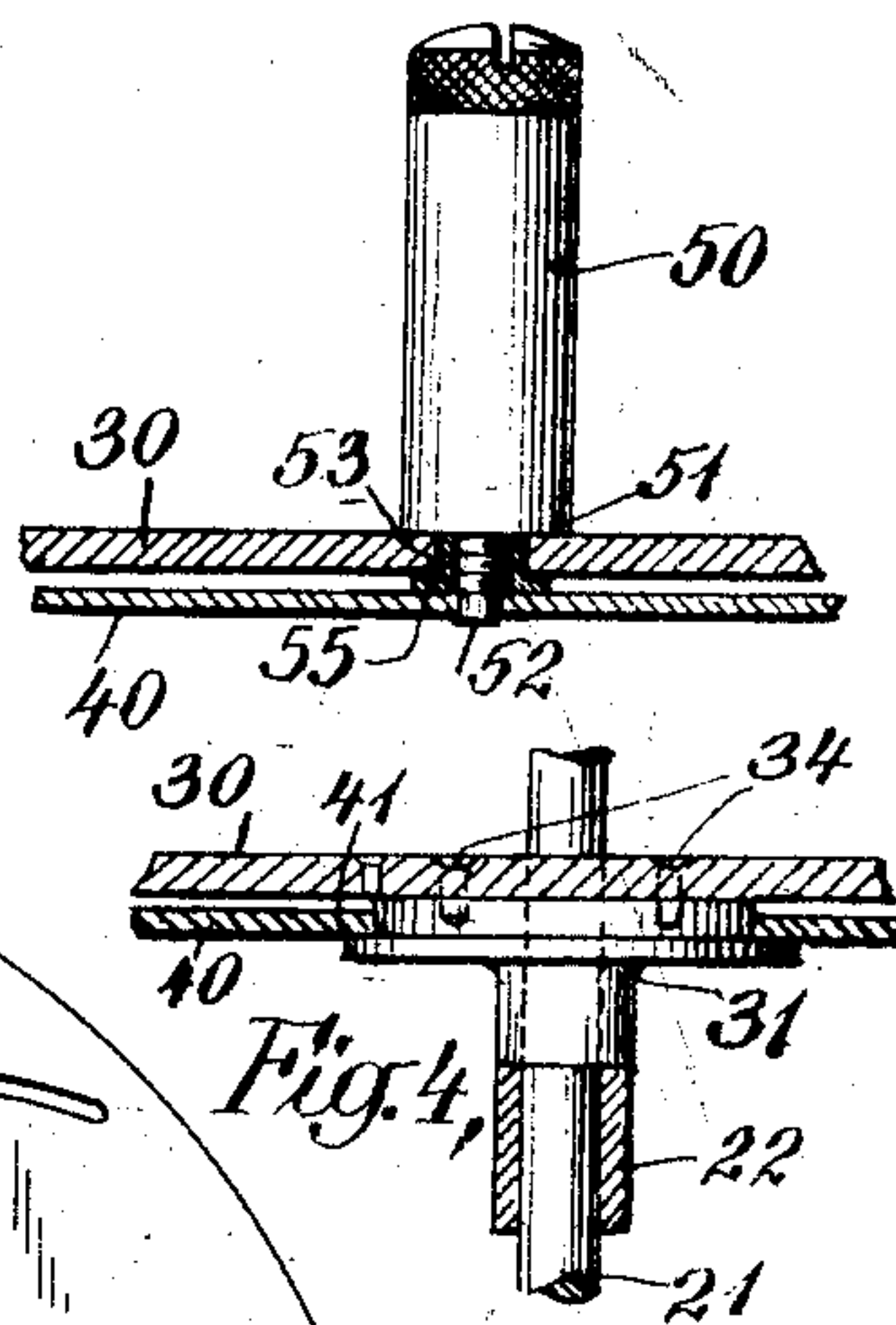
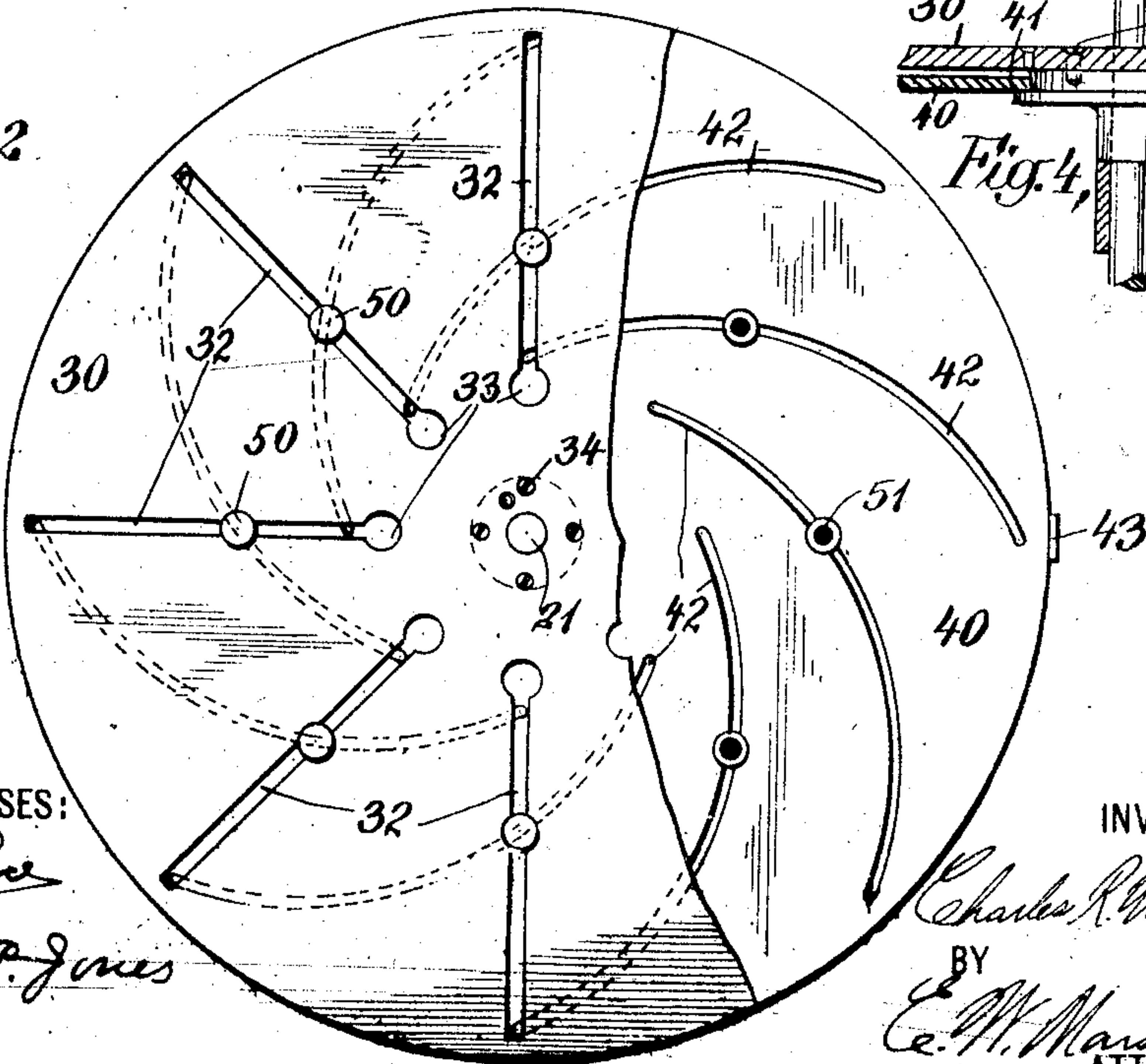


Fig. 4.

Fig. 2.



WITNESSES:

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FILM-HOLDING DEVICE FOR MOVING-PICTURE MACHINES.

994,044.

Specification of Letters Patent.

Patented May 30, 1911.

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To all whom it may concern:

Be it known that I, CHARLES R. UEBELMESSER, a subject of the Emperor of Germany, and a resident of the city of New York, in the county of New York and State of New York, United States of America, have invented certain new and useful Improvements in Film-Holding Devices for Moving-Picture Machines, of which the following is a specification.

My invention relates to improvements in moving picture apparatus in which the pictures on a strip or film in successive poses are made to appear over a fixed orifice in rapid succession.

The object of my invention is to provide improved means for centering and supporting the film roll.

I will describe my invention in the following specification and point out the novel features thereof in the appended claims.

Referring to the drawings, Figure 1 is a side view of a portion of a moving picture machine, the film-roll casing being shown in section to permit the film-roll carrier and bridge to be seen. Fig. 2 is a plan view of the film-roll carrier, a portion of the upper plate being broken away to show the lower plate. Fig. 3 is a detail view, showing the structure of the supporting pins and the manner of connecting them to the film carrier plates. Fig. 4 is a detail view showing the manner of supporting the film carrier plates.

Like characters of reference designate corresponding parts in all of the figures.

10 designates the stationary frame of the moving picture machine which supports the various parts thereof, such as the lens-carrier 11, film-driving rolls 12, guiding rolls 13, etc., all of which parts may be of any usual or well-known construction.

20 is the film-roll carrier mounted upon a vertical shaft 21, journaled in a supporting sheave 22 carried by a part of the frame 10. The carrier is preferably inclosed in a fire-proof protective casing 23 also carried by the frame. The film 5 is unwound from the inner convolutions of the roll 6, and to assist in this operation it is usually found necessary to positively rotate the roll-carrier 20, for which purpose I drive the shaft 21 through suitable gearing 24 from the motive power of the machine. 25 is a bridge supported within the casing 23 by a part of the

frame 10. This bridge forms a bearing for the upper end of the shaft 21 and also supports the film-guiding rolls 26. It is hinged at one end or made otherwise removable to facilitate the insertion of the film-rolls.

In my preferred structure, the roll-carrier 20 comprises a supporting plate 30 fixed to the shaft 21 by means of a collar 31, to which it is fastened by screws 34 or other suitable means. This plate is provided with a series of radial slots 32, having enlarged inner ends as shown at 33.

The lower plate 40 of the carrier 20 is mounted to turn about the collar 31 on a flange 41 projecting from the latter. This lower plate is provided with a series of spiral slots 42 and, with a projecting ear or handle 43, to facilitate turning the lower plate relatively to the upper.

Supported upon the upper plate are a series of upwardly projecting supporting or centering pins 50, each pin having a threaded neck or stud 51 of reduced diameter passing through a slot 32 in the upper plate; the unthreaded extremity 52 of the neck or stud entering one of the spiral slots 42 in the lower plate. For retaining the pins in place flanged nuts 53 are screwed on the studs 51, the neck portions of the nuts sliding freely in the slots 32 and being of a sufficient length when seated against the shouldered portions of the pins to hold the flanges 55 of the nuts clear of the lower side of plate 30. The plate 40 is sufficiently spaced from the plate 30 to permit the flanges 55 to slide freely between the two plates.

The operation of the roll-carrier will be apparent. To insert a roll of film the cover of the casing 23 is removed and the bridge 25 swung out of the way. The plate 40 is then turned by means of the handle 43 to separate the pins 50. The roll of film 6 is then placed on the plate 30 and the plate 40 turned slightly in the opposite direction, the plate 30 remaining stationary. This relative turning of the plates will cause the walls of the spiral grooves 42 to engage the studs on the pins 50 and force the latter simultaneously inward in the radial slots 32, centering the roll 6 with relation to the axis of rotation of the plate 30 and securely supporting the roll in such position. The bridge is now returned to its original position and the inner end of the roll of film is

threaded between the guide rolls 26 and 13 and passed through the apparatus when the machine is ready to be operated.

The above described device greatly facilitates the use of this apparatus. The films vary greatly in length and consequently the diameters of the film-coils vary. It is important for the smooth operation of the machine that these coils be centered nicely. Heretofore this adjustment had to be made by setting up each of the guiding pins separately, which necessarily consumed considerable time. With my improved device, however, the adjustment of all of these pins is made at once and with the greatest ease.

What I claim is—

1. A film-roll holding device comprising a supporting plate, a plurality of centering pins arranged about the center of said plate, and means for simultaneously moving the positions of said pins toward or from the center of said plate.

2. A film-roll holding device comprising a supporting plate revoluble about a central axis, a plurality of centering pins projecting from said plate and arranged at equal distances from the axis thereof, and means for simultaneously moving the positions of said pins toward or from the center of said plate.

3. A film-roll holding device comprising a supporting plate provided with a plurality of radial guide-slots, a plurality of centering pins slidably mounted in said slots, an adjusting plate provided with spiral slots, said spiral slots engaging with a portion of each of said pins, said adjusting plate being capable of a rotary movement relative to said supporting plate.

4. A film-roll holding device comprising a supporting plate provided with radial slots, and an adjusting plate provided with

spiral slots, both of said plates being mounted upon a vertical shaft, means for rotating said plates and shaft; a plurality of centering pins slidably mounted in said radial slots, each of said pins having a portion entering one of said spiral slots respectively, and means for giving said plates a rotary movement relative to each other, to thereby vary the distance of the centering pins from the axis of the shaft.

5. A film-roll holding device comprising a horizontal supporting plate provided with a series of radial slots and mounted upon a vertical shaft, and a horizontal adjusting plate mounted upon said shaft and provided with a series of spiral slots; a plurality of centering pins mounted on said supporting plate at equal distances from the axis of the shaft and having studs projecting through the radial slots, nuts screwed onto said studs for holding said pins in place, projections from said studs entering into said spiral grooves, and means for rotating one of said plates for a limited distance relative to the other to thereby vary the distance of these centering pins from the axis of the shaft.

6. A film-roll holding device comprising a rotary supporting plate, film-guide-rollers, a stationary frame for supporting said plate and rollers, a plurality of centering pins projecting at right-angles from the surface of said supporting plate, and means for simultaneously moving the position of said pins toward or from the center of said plate.

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

CHARLES R. UEBELMESSER.

Witnesses:

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ELLA TUCK.