

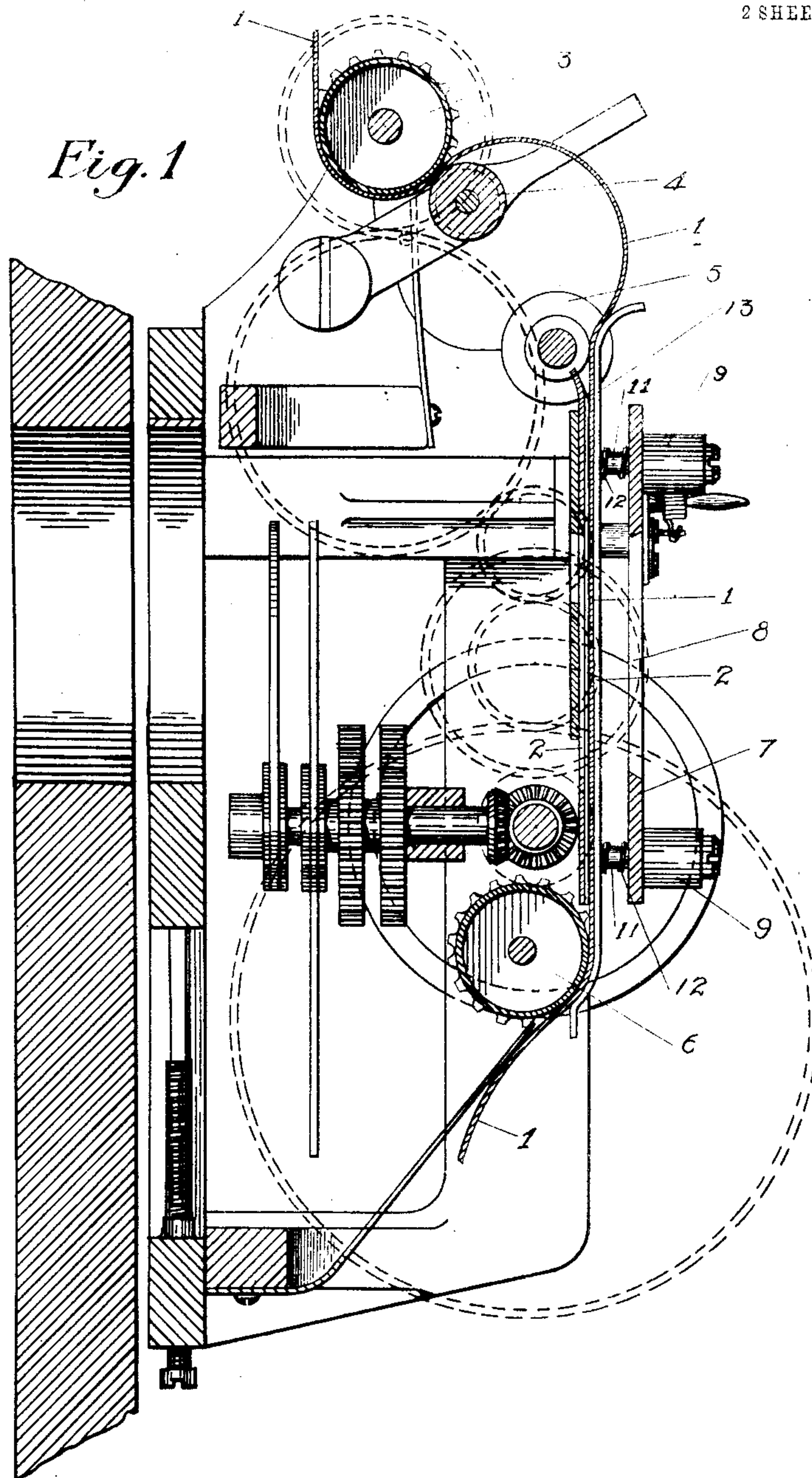
No. 785,237.

PATENTED MAR. 21, 1905.

A. E. SMITH.
FILM HOLDER FOR KINETOSCOPES.

APPLICATION FILED APR. 2, 1904.

2 SHEETS—SHEET 1.



Albert E. Smith Inventor

Witnesses
Estelle M. Titus
S. J. Cox

By William R. Baird

His Attorney

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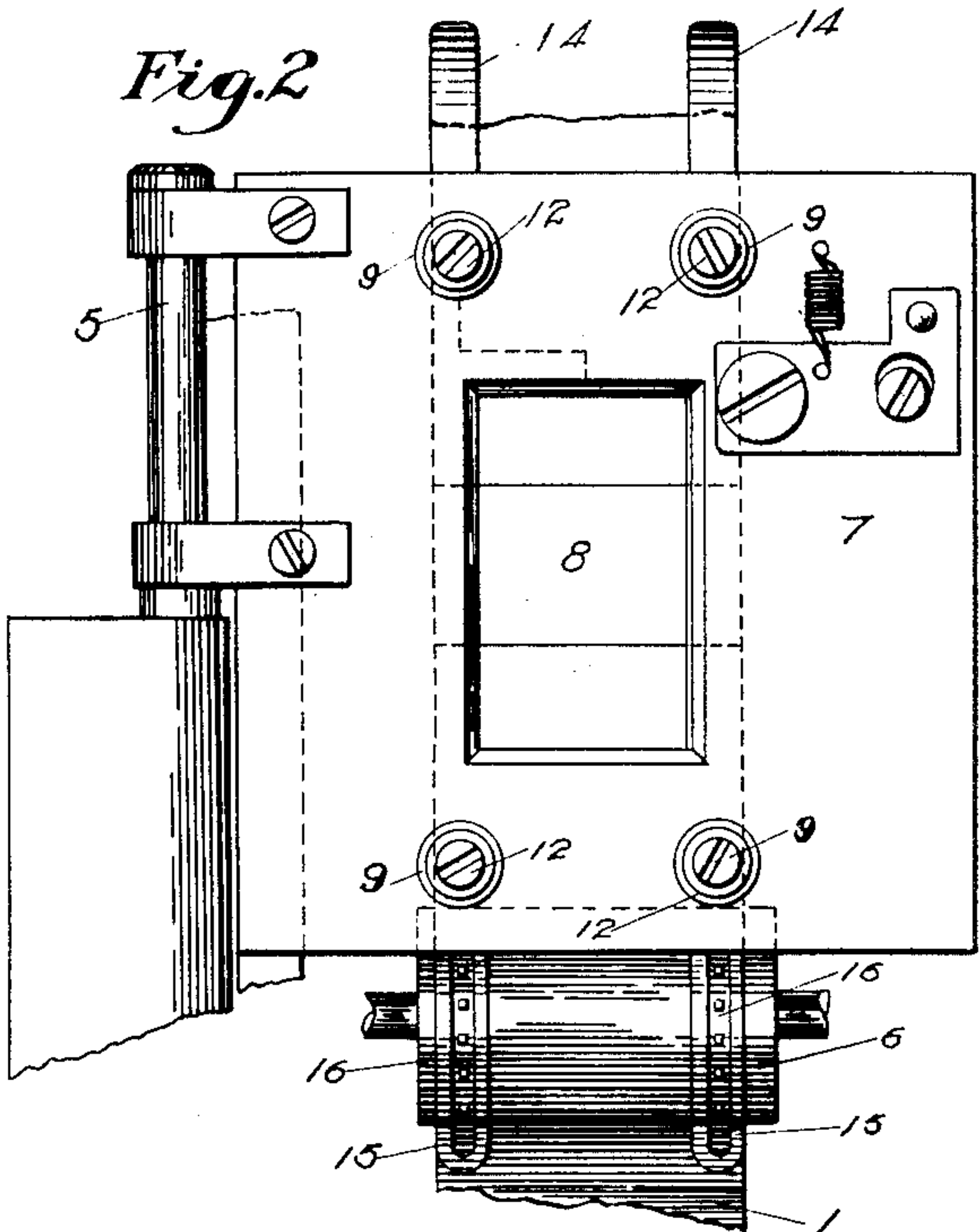


Fig. 4

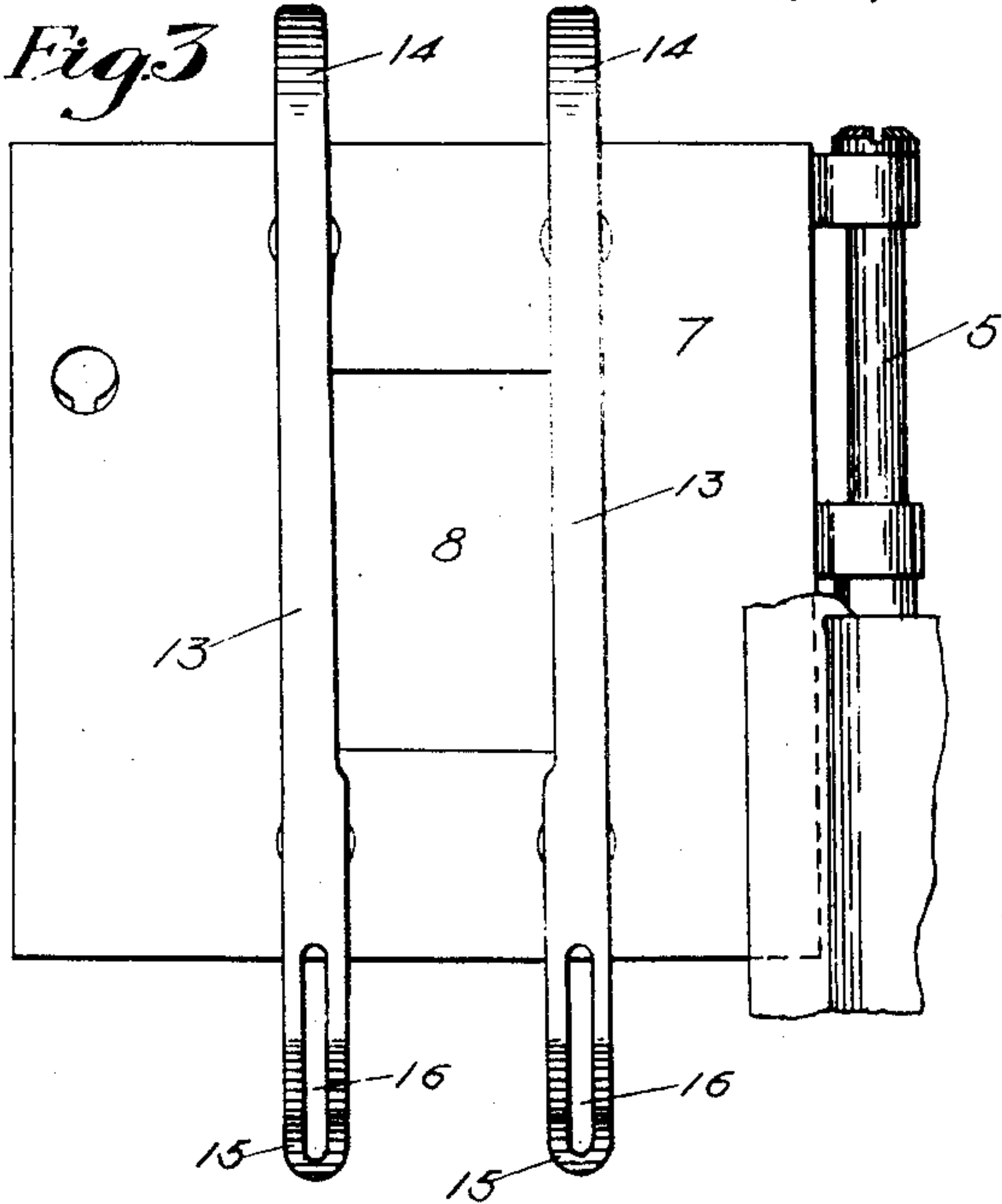
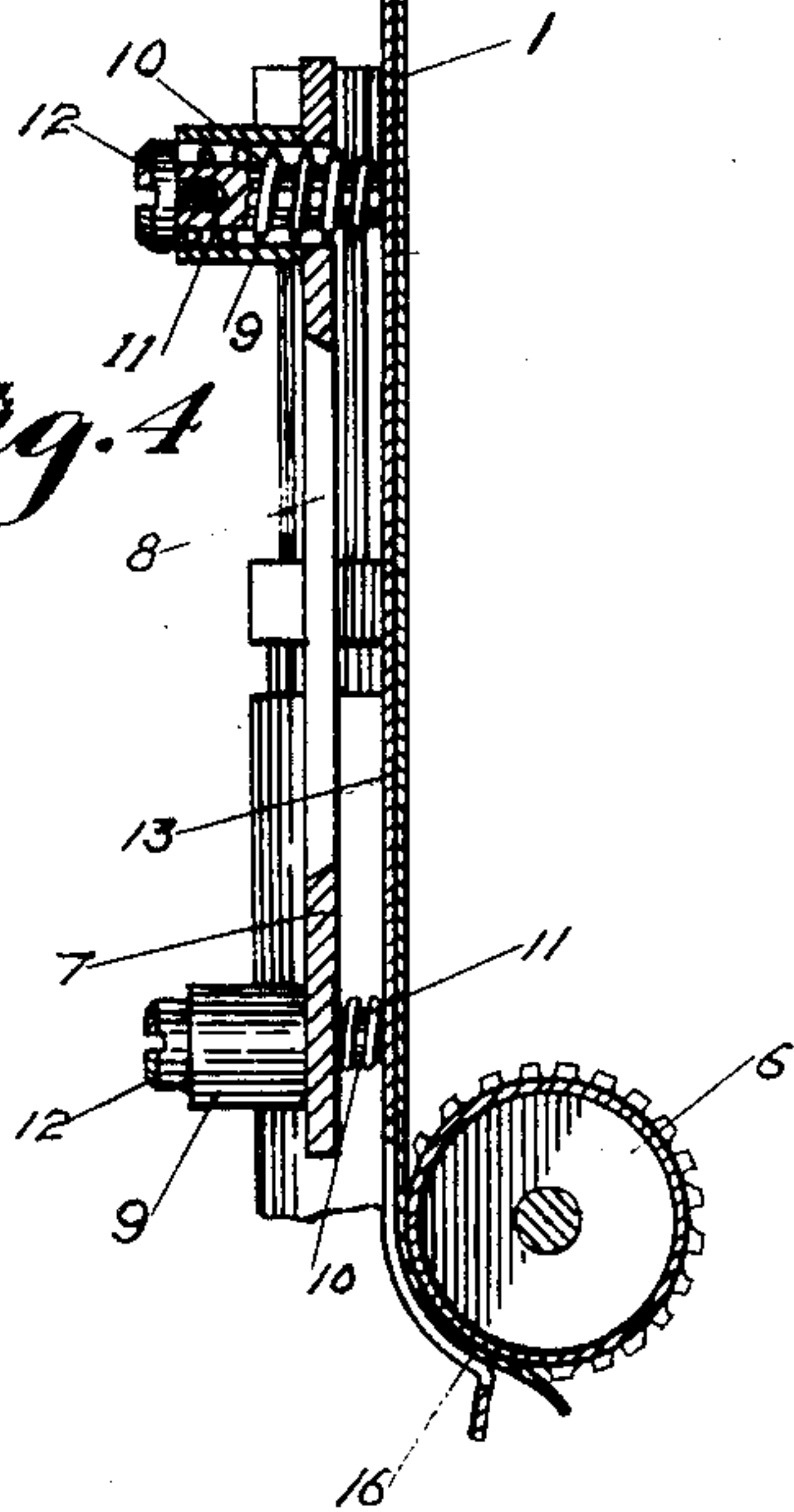
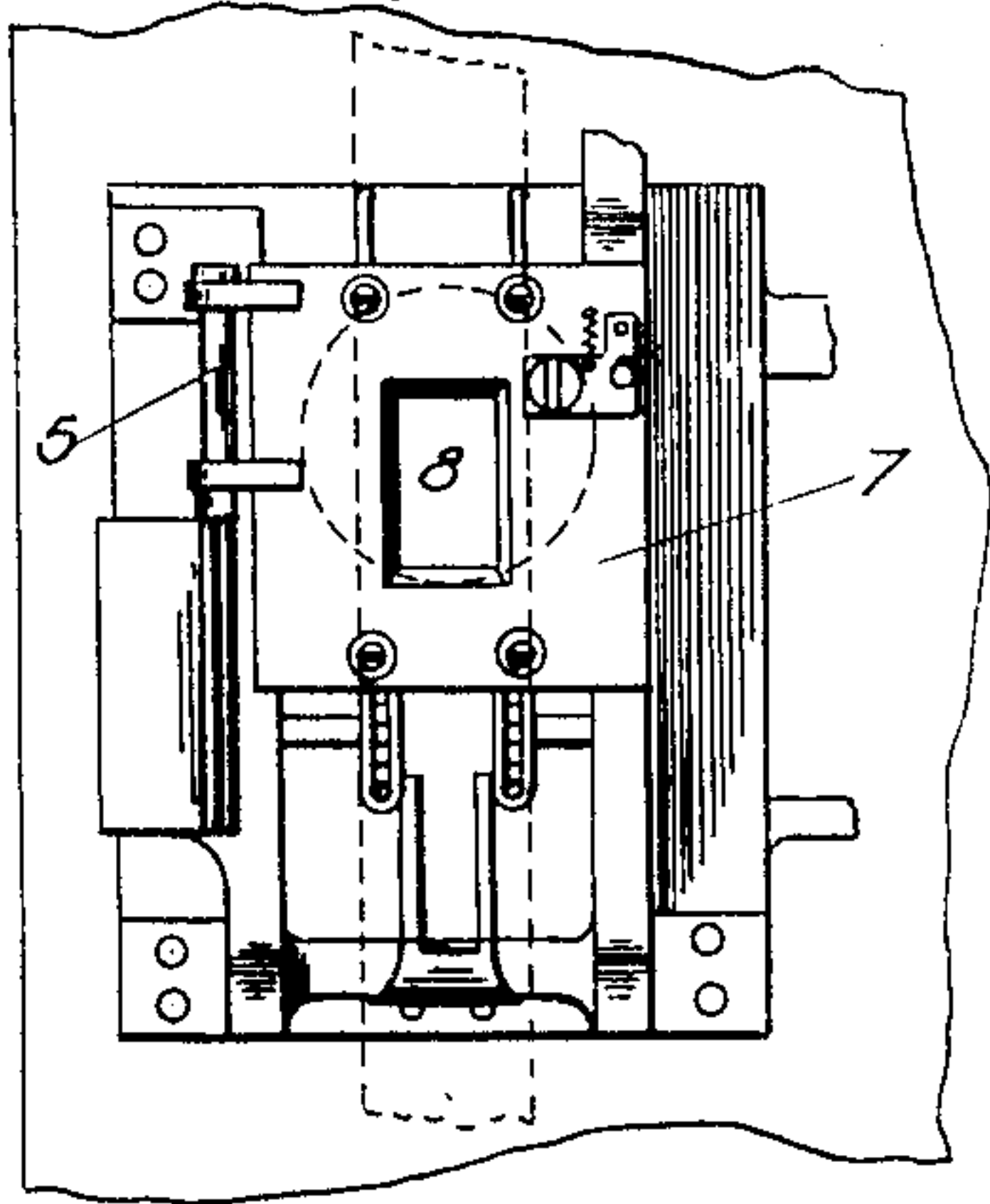


Fig. 5



Albert E. Smith Inventor

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UNITED STATES PATENT OFFICE.

ALBERT E. SMITH, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE VITAGRAPH COMPANY OF AMERICA, A CORPORATION OF NEW YORK.

FILM-HOLDER FOR KINETOSCOPES.

SPECIFICATION forming part of Letters Patent No. 785,237, dated March 21, 1905.

Original application filed April 24, 1903, Serial No. 153,354. Divided and this application filed April 2, 1904. Serial No. 201,277.

To all whom it may concern:

Be it known that I, ALBERT E. SMITH, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Film-Holders for Kinetoscopes, of which the following is a specification.

This invention, which by requirement of the Patent Office was divided from my application for Letters Patent filed April 24, 1903, Serial No. 153,354, consists in certain peculiarities in the construction of the means for holding the film in its passage across the light-apertures, substantially as hereinafter described, and particularly pointed out in the subjoined claims.

The particular object of the present invention is to provide a simple and practical means, which will most efficiently hold the film in its passage across the light-aperture of the kinetoscope and will accommodate itself to irregularities in the film. This object is well accomplished by the construction shown in the accompanying drawings, in which—

Figure 1 is a central vertical section and partial side elevation of a machine embodying my improvements. Fig. 2 is a front elevation of the friction-plate when in position to hold the film. Fig. 3 is a similar view of the other side of the plate. Fig. 4 is a central vertical section and partial plan view of the cushion-spring and film. Fig. 5 is a miniature front elevation of the friction-plate and its related parts.

The same reference characters designate the same parts in the several figures.

The general construction of the kinetoscope partially shown in the accompanying drawings resembles that disclosed in Letters Patent of the United States No. 673,329, granted to me April 30, 1901. For this reason and as the particular detail construction of kinetoscope is not essential to the present invention, which relates to the film-holding plate or means for holding the film, a detail description of the parts is not deemed to be essential further than to state that 1 designates the film, which has perforated edges and is fed from

an upper supply-roll, (not shown,) passes under the upper sprocket-drum 3, above the guide-roll 4 and bends outward, and thence passes downward in front of the guide-roll 5 and to the lower sprocket-drum 6. While taking this course the film 1 passes in front of the light-aperture 2. It is in practice fed intermittently by the means shown in my application Serial No. 153,354, of which, as above stated, the present application is a division.

Hinged at 5 to swing upon bearings secured to the framework of the apparatus is a friction-plate 7, having an aperture 8, which registers with the general light-aperture 2 of the kinetoscope and provided on its outer side with four projecting casings or pockets 9, which are arranged in two vertical pairs. Incased in said pockets are coiled springs 10, through which extend inwardly-projecting posts 11, which posts have threaded engagement with screws or heads 12 at their outer ends. Each pair of posts is connected with a flat steel film-holding strip 13, of which strips there are two employed, arranged one at each side of the light-aperture. Each of said strips 13 is bent outward at its top 14 and inward at its bottom 15, and its lower portion is formed with an elongated slot 16, arranged opposite the teeth of the lower sprocket wheel or drum 6 in order to accommodate said teeth, and thereby prevent the same from pressing the strips out of engagement with the film. Said strips thus constitute cushion-springs, and they are of sufficient width to afford a smooth firm bearing-surface against the two vertical sides of the film as it moves downward. They bear upon the edges of the film where the sprocket-wheels are situated and do not bear upon any portion of its surface displaying the picture. They also follow the curve of the film on its downward path and produce upon it a firm, uniform, and continuous pressure.

This device is much more efficient than a number of small springs arranged along the path of the film. It not infrequently happens that the film is broken and has to be mended. At the place where so mended there is an

extra thickness, and this is apt to catch upon the edges of individual springs arranged to hold it in place. With my improved cushion-spring, however, such portion of the film
 5 glides easily between the strip 15 and the guide-roller and passes on downward, gently pushing the strip back as it goes, and no interruption of the progress of the film can occur, although the film will be firmly held in
 10 place on both sides as desired.

It will be understood that the invention is not restricted in scope to the detailed construction described, which is merely selected because it is believed to exemplify the best
 15 embodiment of the invention. Changes in the details may be made without departing from the spirit of the invention.

Having thus described the invention, what I believe to be new, and desire to secure by
 20 Letters Patent, is—

1. In a kinetoscope, means adapted to hold the film in its passage across the light-aperture, comprising a friction-plate having an aperture to register with said light-aperture and
 25 provided at opposite sides of said aperture with a pair of relatively movable vertically-placed strips and with a plurality of springs arranged at different places in the length of each of said strips and pressing the same
 30 against said film, said strips engaging the edges of the film throughout their length and exerting a continuous pressure thereon.

2. In a kinetoscope, means adapted to hold the film in its passage across the light-aperture, consisting of a pair of continuous vertically-placed strips arranged at opposite sides of said aperture and engaging the edges of the film throughout their length, so as to exert a continuous pressure thereon, guiding means
 35 for said strips comprising posts arranged at right angles to said strips and connected therewith, and coiled springs mounted on said posts and engaged with said strips.

3. The combination with the frame of a kinetoscope, of the friction-plate provided with

an aperture to register with the light-aperture of said frame, casings carried by said plate, spring-pressed posts in said casings and a pair of continuous strips each arranged at one side of said aperture and attached to a pair of said
 50 posts, said strips exerting a continuous pressure against the edges of the film at opposite sides of said aperture.

4. The combination with the frame of a kinetoscope, having a light-aperture, and means
 55 for feeding the film across the same comprising a sprocket to engage the film, of the friction-plate provided with an aperture to register with that of the frame, casings carried by said plate, spring-pressed posts in said casings, and a pair of continuous strips each arranged at one side of said aperture and extending above and below the same and attached to a pair of said posts, said strips exerting a continuous pressure against the edges of the
 60 film at opposite sides of said aperture and each having a bent and slotted end portion contiguous to said sprockets.

5. The combination with the frame of a kinetoscope, having a light-aperture, and means
 70 for feeding the film across the same, comprising a sprocket to engage the film, of a plate provided with an aperture to register with that of the frame, casings carried by said plate and having open outer ends, a post extending
 75 from each of said casings, a pair of continuous strips each arranged at one side of said aperture and attached to a pair of said posts, a coiled spring mounted on each post and engaging said strip, and an adjustable head for
 80 each post mounted in the open outer end of each casing and engaging the spring therein, substantially as described.

Witness my hand this 31st day of March, 1904, at the city of New York, in the county
 85 and State of New York.

ALBERT E. SMITH.

Witnesses:

ESTELLE M. TITUS,
 WILLIAM R. BAIRD.