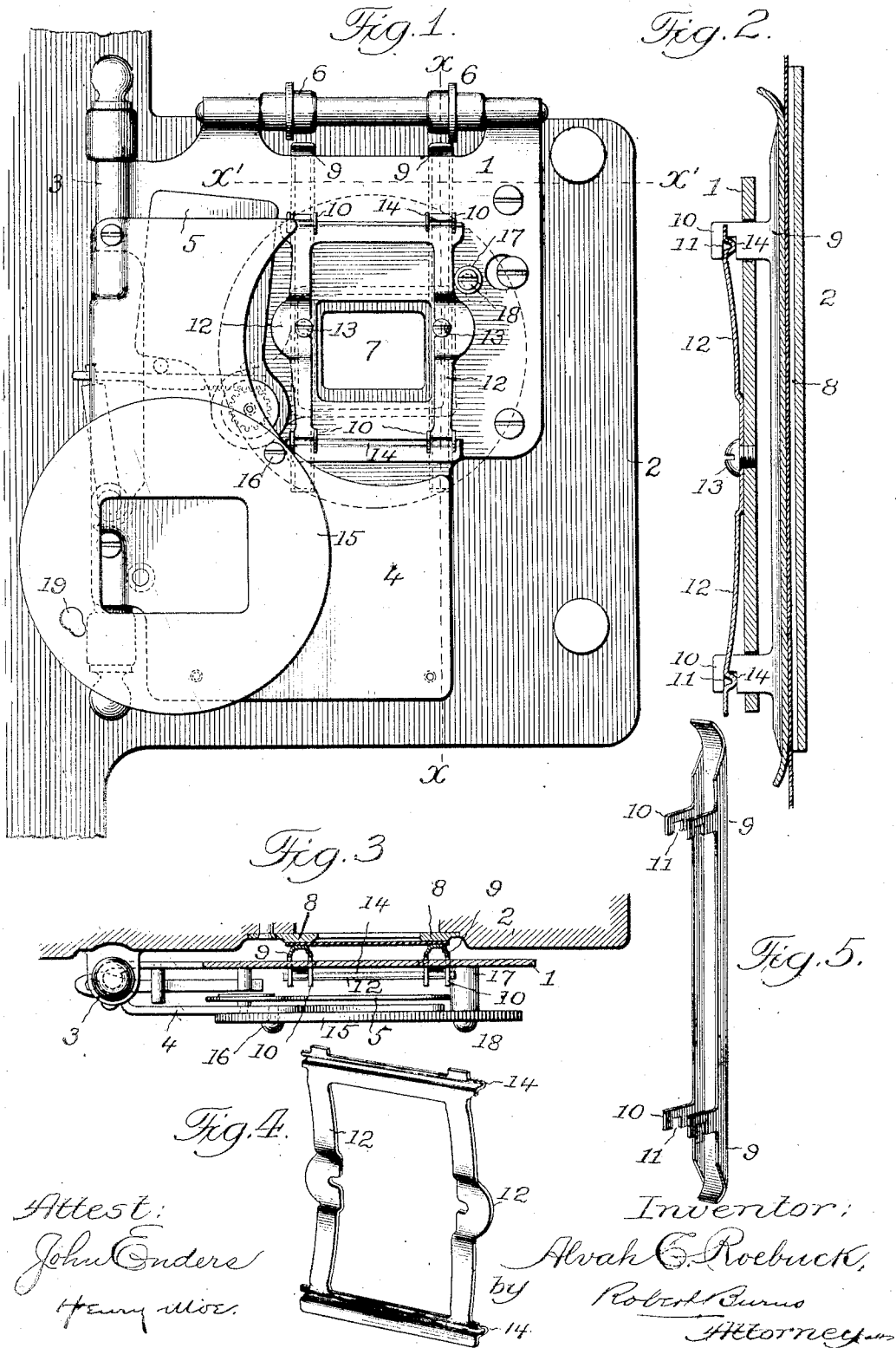


A. C. ROEBUCK.
KINETOSCOPE.
APPLICATION FILED MAY 25, 1910.

1,037,325.

Patented Sept. 3, 1912.



UNITED STATES PATENT OFFICE.

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KINETOSCOPE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALVAH C. ROEBUCK, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Kinetoscopes, of which the following is a specification.

This invention relates to kinetoscopes of the intermittent film feeding type, and has for its object to provide a simple and efficient structural formation and arrangement of the film tensioning mechanism of the apparatus whereby, a uniform and extended resilient contact of the lateral pressure member or shoes against the film is attained, with the resulting advantages of an avoidance of uneven wear of the guide ribs of the aperture plate, as well as the liability of damage to the sprocket holes in the film due to excessive tension necessary where short surface contact is had. With such uniform and extended tensioning contact the stoppage of the film in unison with the stoppage of the intermittent sprocket wheel, is insured, and any tendency of the teeth of the sprocket wheel to jump the sprocket holes of the film is eliminated, all as will hereinafter more fully appear.

In the accompanying drawings:—Figure 1, is a detail rear elevation illustrating the general arrangement of the present invention and its relation to the frame or housing of a kinetoscope. Fig. 2, is an enlarged detail vertical section on line $x-x$, Fig. 1. Fig. 3, is a horizontal section on line $x'-x'$, Fig. 1. Fig. 4, is a perspective view of one of the pressure members or shoes, detached. Fig. 5, is a detached perspective view of the spring member of the pressure members or shoes.

Similar reference numerals indicate like parts in the several views.

Referring to the drawing, 1 represents the film gate pivotally attached to the rear side of the kinetoscope frame or housing 2, by vertical pivot knuckles 3, as shown in Figs. 1 and 3. Said film gate is preferably formed of a main plate and an auxiliary plate 4 arranged in separated relation to provide a cavity for the usual safety or automatic fire shutter 5, preferably of the construction set forth in my Patent No. 1,006,406, dated Oct. 17, 1911.

6 is a flanged idler drum or pulley jour-

naled on the upper end of the film gate 1, and forming a guide for the picture film as it passes down past the usual light aperture 7 in the gate 1, and the corresponding light aperture of the kinetoscope housing 2.

8 are vertical guide ribs on the usual aperture plate of the kinetoscope housing, and arranged at the respective sides of the aperture thereof and adapted to provide bearings for the margins of the picture film in its movement past the aforesaid light aperture.

9 are counterpart pressure members or shoes mounted on the gate 1 in manner hereinafter described in detail, and in opposed relation to the aforesaid guide ribs 8 and adapted to bear against the margins of the film and press the same with some tension against the guide ribs 8 aforesaid. Said shoes are preferably of a U shape in cross section, as shown in Fig. 3, and are provided with curved upper and lower ends, and in adjacent relation to said ends with rearwardly projecting ears 10 which fit and have sliding movement in orifices formed therefor in the main plate of the film door 1. The rear and free ends of the ears 10 are formed with notches 11 in which engage the free ends of the spring members now to be described.

12 is a spring member of an open center rectangular form, and secured midway of its vertical height to the film gate 1 by attaching screws 13 in symmetrical relation to the light aperture of the same. The upper and lower horizontal portions of said spring member are formed with horizontal V shaped bearing projections 14, adapted to have bearing engagement in the notches 11 of the guide ears 10 aforesaid, with a tendency to force the shoes 9 toward the guide ribs 8 and frictionally hold the margins of the film against said ribs, the full vertical length of the shoes. Said spring member is preferably of a single piece of spring metal as shown, but when so desired may be of a sectional construction, with the sections having the same points of attachment, as the single piece construction above described. The described construction of a spring member and pair of counterpart bearing shoes affords a construction in which free independent movement of either shoe may take place to permit the passage of a patch at one side of the film without disturbing the normal condition of the other

shoe. At the same time the shoes are very effectively held from undue side wobbling movement. In effecting such functions the present construction complies with all requirements from an operating standpoint and at the same time is simple, economical and practical from the manufacturing standpoint. Another advantage of the present construction is that it eliminates in a very effective manner accidental stoppages of the exhibition due to the universal use of spliced films, which under the high stress of short tension contact devices are frequently pulled apart at the splices.

15 15 is an outer protecting shield preferably of a circular plate form and having a central aperture corresponding with the before described light apertures of the film gate and kinetoscope housing. Said shield is 20 pivotally secured to the film gate 1 by a pivot screw 16 passing through an orifice near its margin, and is adapted to swing from its normal position, shown in dotted lines in Fig. 1, into a depending position 25 shown in full lines in said Fig. 1, to render the film tension mechanism accessible when changes or adjustments are required.

17 is a horizontal stud secured to the film gate 1 in substantially diametric relation to 30 the before described pivot screw 16, and carrying at its outer end a headed screw 18 adapted to engage in an elongated orifice 19 formed therefor in the protecting shield 15, and when so engaged to hold the shield in 35 the normal position above described.

Having thus fully described my said invention what I claim as new and desire to secure by Letters Patent, is:—

1. The combination of a kinetoscope 40 frame having a light aperture and guide ribs at the side of said aperture, a film gate formed with a light aperture, a pair of counterpart bearing shoes arranged at the sides of the light aperture of said gate and 45 movably attached to the gate, and vertical spring members secured to the gate at the sides of the light opening of the same and connected together at top and bottom by horizontal connecting members which are 50 common to and have engagement with the upper and lower portions of the shoes, substantially as set forth.

2. The combination of a kinetoscope frame

having a light aperture and guide ribs at the side of said aperture, a film gate formed 55 with a light aperture, a pair of counterpart bearing shoes arranged at the sides of the light aperture of said gate and movably attached to the gate, and a spring member of a rectangular open form, common to both 60 shoes and having engagement with the upper and lower portions of the shoes, substantially as set forth.

3. The combination of a kinetoscope frame having a light aperture and guide ribs at 65 the side of said aperture, a film gate formed with a light aperture, a pair of counterpart bearing shoes arranged at the sides of the light aperture of said gate and formed with 70 upper and lower guide ears which move in orifices in the film gate, and a spring member common to both shoes and having engagement with the guide ears aforesaid, substantially as set forth.

4. The combination of a kinetoscope frame 75 having a light aperture and guide ribs at the side of said aperture, a film gate formed with a light aperture, a pair of counterpart bearing shoes arranged at the sides of the light aperture of said gate and formed with 80 upper and lower guide ears which move in orifices in the film gate and are formed with notches, and a single spring member common to both shoes and having engagement with the aforesaid notches of the guide ears, 85 substantially as set forth.

5. The combination of a kinetoscope frame having a light aperture and guide ribs at the side of said aperture, a film gate formed 90 with a light aperture, a pair of counterpart bearing shoes arranged at the sides of the light aperture of said gate and formed with upper and lower guide ears which move in orifices in the film gate and formed with 95 notches, and a single spring member of a rectangular open center form and having V shaped projections at its respective ends for engagement in the aforesaid notches of the guide ears, substantially as set forth.

Signed at Chicago, Illinois, this 21st day 100 of May, 1910.

ALVAH C. ROEBUCK.

Witnesses:

ROBERT BURNS,
HENRY MOE.