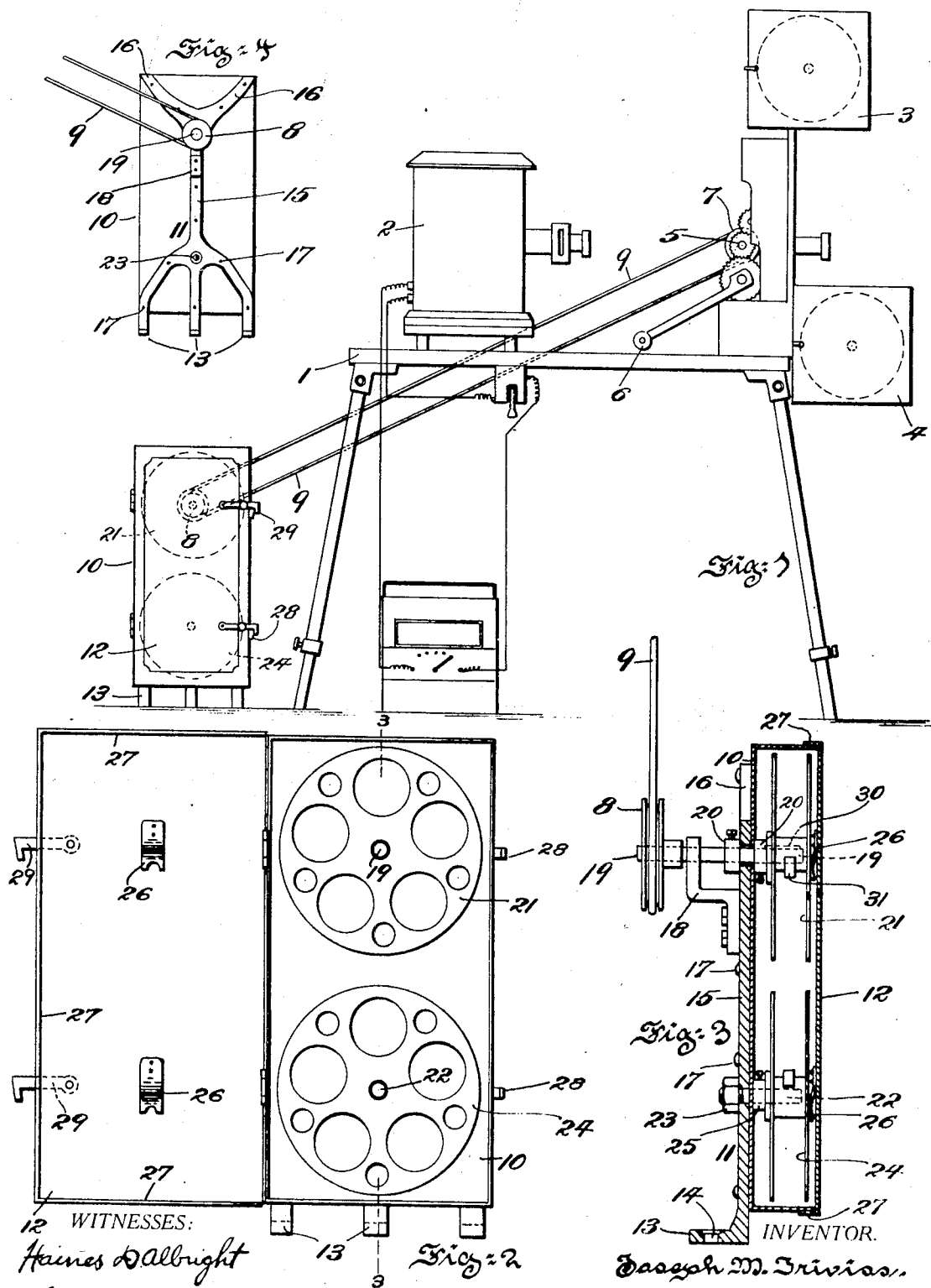


J. M. TRIVISS.
 FILM REVERSING MECHANISM.
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12 WITNESSES:
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JOSEPH M. TRIVISS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO CHARLES A. CALEHUFF AND ONE-THIRD TO RALPH V. M. BECHTEL, BOTH OF PHILADELPHIA, PENNSYLVANIA.

FILM-REVERSING MECHANISM.

931,813.

Specification of Letters Patent. Patented Aug. 24, 1909.

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To all whom it may concern:

Be it known that I, JOSEPH M. TRIVISS, a subject of the King of Portugal, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Film-Reversing Mechanism, of which the following is a specification.

As at present constructed it is necessary after exhibiting a film upon a moving picture machine, to remove the reel containing the film exhibited, place the same upon a table or other convenient place and rewind said film upon another reel, or in other words, reverse the film so that it will be in proper position to again exhibit. This rewinding or reversing operation takes place where the film is unprotected and in danger of being ignited since it is highly combustible. Aside from this fact, much time is consumed in the rewinding or reversing operation.

The principal object of the present invention is to provide apparatus whereby a film that has been exhibited may be rewound or reversed by the same operation of the moving picture machine exhibiting another film.

A further object of the invention is to provide a fire-proof attachment wherein a reel containing a film may be rewound or reversed.

Other objects of the invention relate to general details of construction and arrangement of parts as will appear hereinafter.

The invention consists of the improvements hereinafter described and finally claimed.

The nature, characteristic features and scope of the invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof and in which:

Figure 1, is a view in side elevation of one type of so-called moving picture machine having coupled therewith apparatus embodying the invention. Fig. 2, is a front view of the attachment of the invention and shown as having its door or cover in open position. Fig. 3, is a view in section taken upon the line 3—3 of Fig. 2; and Fig. 4, is a rear view of the same drawn to a reduced scale.

Referring to the drawings one type of so-called moving picture machine is illustrated wherein there is illustrated a table 1, upon

which is mounted the lamphouse 2, upper and lower film magazines 3, and 4, and the film operating mechanism including the take-up shaft 5, to which motion is imparted by means of a hand-crank 6. These parts are all well known in the art and have been described merely for a better understanding of the invention. Upon one end of the take-up shaft 5, and preferably upon the side of the machine opposite the hand-crank 6, I fix a grooved or other pulley 7, so that motion may be imparted to a similar pulley 8, of my film reversing device by means of a belt 9, as is clearly illustrated in Fig. 1. As shown in Figs. 2, 3, and 4, of the drawings the film reversing apparatus is shown as comprising a generally rectangular fire-proof box 10, supported at its rear by means of a frame 11, and provided at its front with a hinged and flanged door or cover 12.

Referring more particularly to Figs. 3, and 4, the frame 11, is shown as comprising a series of feet 13, provided with apertures 14, whereby the attachment may be suitably fastened in place, said feet extending upwardly and terminating in a rib 15, which in turn branches at its top into arms 16. The various parts of the frame 11, may be secured to the box 10, by means of rivets or other suitable securing devices 17. Bolted or otherwise secured to the frame 11, and adjacent to its upper portion is a bracket 18, which together with said frame constitute a bearing for the rotatable shaft 19, that carries the pulley 8. This shaft is prevented from endwise movement with respect to the apparatus by means of collars 20. As clearly illustrated this rotatable shaft 19, extends within the box 10, and is provided with a key 30, and is adapted for the reception of a reel 21. Also extending within the box 10, is a fixed shaft 22, shown as being secured to the frame 11, by means of a nut 23. A reel 24, is adapted to be carried by this shaft 22, and is kept in alinement with the reel 21, by means of the collar 25. Carried by the door 12, are springs 26, that are adapted to press against the reels 21, and 24, when the door is in closed position and serve to keep the reels in proper alinement. In this connection it may be remarked that the door or cover 12, is provided with flanged portions 27, that serve to prevent sparks or fire from entering the box when said cover is in closed position. The box 10, is provided with

catches 28, and the cover 12, is provided with hinged latches 29, for cooperating with said catches to lock the parts together.

In operation a reel 24, containing an exhibited film is removed from the lower magazine 4, and placed upon the fixed shaft 22, within the box 10, and the free end of said film is secured to the reel 21, by means of the spring clip 31. A film to be exhibited is then placed in proper position upon the moving picture machine whereupon the operator turns the crank 6, thus exhibiting the new film, and by the same operation causing the pulley 7, to revolve and thus transmit motion by means of the belt 9, to the pulley 8, of the box 10, and thus rewind or reverse the exhibited film upon the reel 21, so that it is in proper position to be inserted within the upper magazine 3, to again be exhibited.

The apparatus above described is simple in construction, efficient in operation, and saves considerable time and extra expense in rewinding the films. The box 10, being of fire-proof material precludes the possibility of the ignition of the film being rewound, and being separate and apart from the machine may be placed in any convenient position out of the road of the operator and can be readily taken down and moved with the machine which is an essential feature in machines of this character, that are apt to be moved from place to place.

What I claim is:

1. In combination film moving mechanism, film rewinding apparatus comprising a driven spindle, an idle spindle, reels for said spindles, a closed fire-proof casing located adjacent said mechanism containing said rewinding apparatus and through which the driven spindle projects, a driving element upon the extended end of said driven spindle, a door in said casing through which the reels may be placed in position on the spindles and means operatively connecting said film moving mechanism and the said driving element.

2. In combination film moving mechanism, film rewinding apparatus comprising a driven spindle, an idle spindle, reels for said spindles, a portable fire-proof casing located adjacent said mechanism containing said rewinding apparatus and through which said

driven spindle projects, a movable flanged cover for said casing, a pulley upon the projected end of said driven spindle, and a belt operatively connecting said film mechanism with the pulley of the driven spindle.

3. In combination film moving mechanism including its complementary takeup shaft, film rewinding mechanism comprising a driven spindle having keyed thereto a reel, an idle spindle having loosely mounted thereon a reel, a closed fire-proof casing located adjacent said film winding mechanism containing said rewinding apparatus and through which the driven spindle projects, a door in said casing through which the reels may be placed in position on the spindles and means operatively connecting said takeup shaft and the driven spindle.

4. An apparatus of the class recited comprising a portable stand said stand comprising feet terminating in an upwardly extending rib, a bracket fixed to the upper portion of said rib, a fire-proof casing carried by said rib, a flanged cover for said casing, a driven and an idle spindle within said casing the driven spindle being projected through said casing, rib and bracket, reels for said spindles and a driving pulley for the extended end of said spindle.

5. Apparatus of the class recited comprising a stand, a closed case carried thereby, a movable flanged cover for said case, reel receiving members within the case of which one is fixed and the other rotatable, means for rotating the last mentioned member and means for keeping said reels in alinement.

6. Apparatus of the class recited comprising a stand, a fire-proof casing mounted thereon, a flanged cover for said casing, reel receiving members within the casing one of which is fixed and the other rotatable, means for operating the last mentioned member and means for locking the cover with respect to the casing.

In testimony whereof I have hereunto signed my name.

JOSEPH M. TRIVISS.

Witnesses:

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