Feb. 28, 1933. L. W. LESSLER 1,899,279

PHOTOGRAPHIC FILM REEL

Filed March 12, 1931

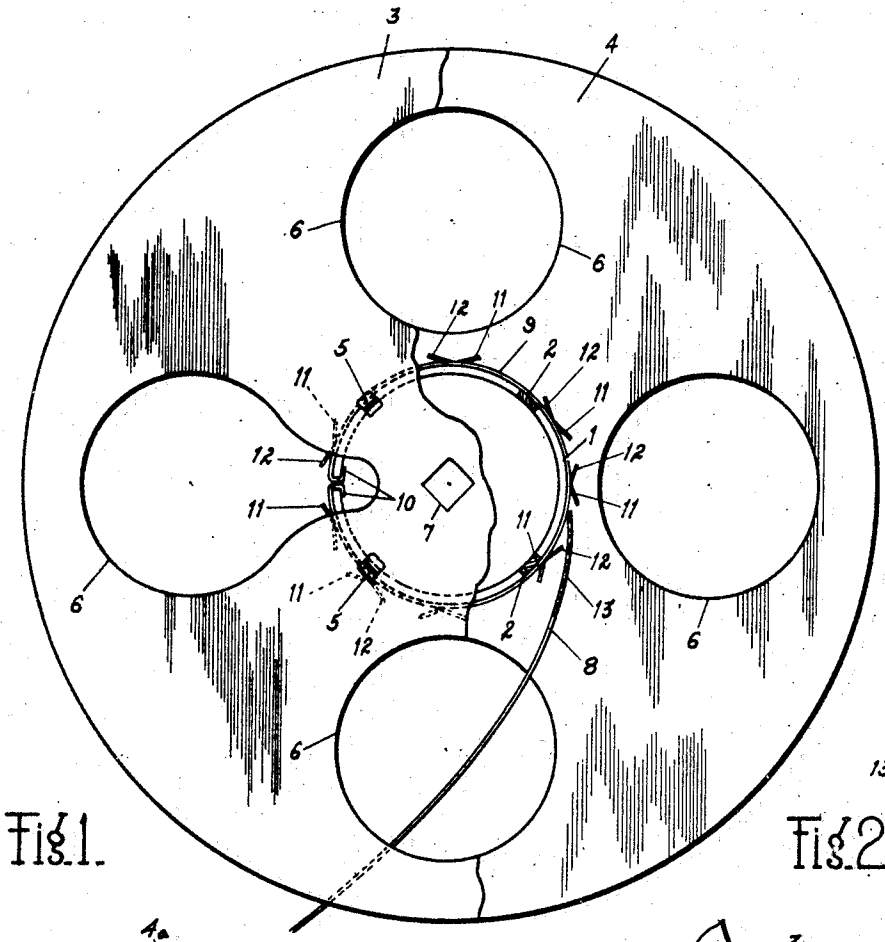


Fig. 1.

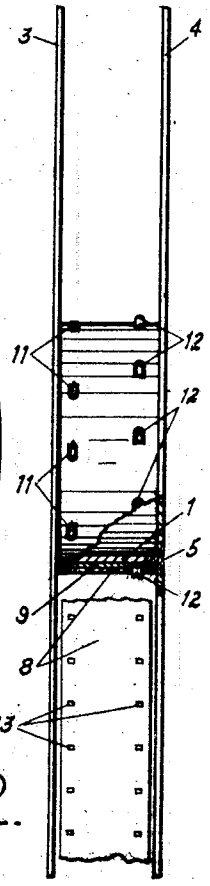


Fig. 2.

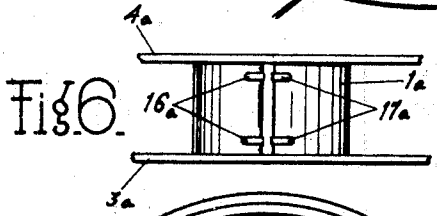


Fig. 6.

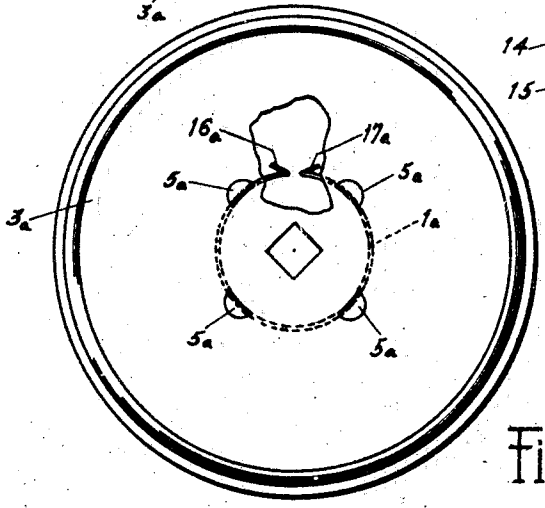


Fig. 5.

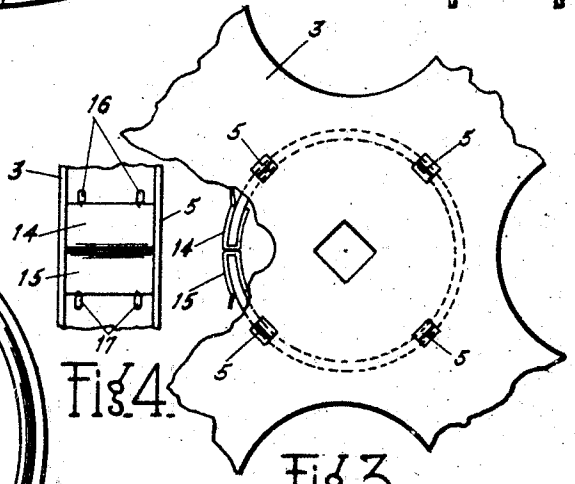


Fig. 4.

Fig. 3.

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UNITED STATES PATENT OFFICE

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PHOTOGRAPHIC FILM REEL

Application filed March 12, 1931. Serial No. 522,008.

My invention relates to reels for motion picture films and the like.

Cine film reels such as are used in motion picture cameras and projectors are usually provided with slotted cores, recessed portions in such cores with cross pins therein, or other contrivances adapted to secure one end of the film thereto for winding same thereupon. Such means of attachment necessitate the folding or creasing of the extreme end of the film prior to its introduction into the slot or its being folded over the cross pins etc. and this method of attachment is generally unsatisfactory in that it requires considerable time and is not always positive in action. In addition to this, after winding, or unwinding the film on the reel several times the creased brittle end becomes cracked or torn thus requiring the user to fold over a new portion of the film. Such methods of attachment prove even more objectionable on the small 16 m. m. size reels now being extensively used by amateur movie enthusiasts, wherein the flanges of such reels are spaced so closely together as to make it extremely difficult for the user to manipulate the folded end into the slot in the core or over the cross pin thereof.

The primary object of my invention is to provide an attaching means on the core of the reel which will effectually secure the film thereto and allow its easy and quick removal therefrom when desired, without requiring the folding, bending or unnecessary handling of same and which facilitates and expedites such operations of attaching or detaching the film thereto or therefrom.

Another object of my invention lies in the provision of a reel comprised of few parts adapted to be easily assembled and economic of manufacture.

Other objects and advantages in details of construction and arrangement of parts will be apparent as the description proceeds, reference now being had to the figures of the accompanying drawing, forming a part of this application and wherein like reference numerals indicate like parts.

In the drawing:

Figure 1 is a side view of my improved film reel, certain parts being broken away for clearness.

Figure 2 is an edge view thereof.

Figure 3 is a detail side view of the core portion of a modified form of my invention.

Figure 4 is an edge view thereof.

Figure 5 is a side view of another modification of my invention.

Figure 6 is an edge view thereof.

The reference numeral 1 refers to a cylindrical core preferably formed of metal provided at spaced intervals along the edges thereof with outwardly extending lugs 2 adapted to be passed through suitable openings provided in disc flanges 3 and 4 disposed on either end of the core, and headed over such openings as at 5 to thus rigidly secure the flanges 3 and 4 thereto and in parallel relation.

The flanges 3 and 4 are stamped or otherwise suitably formed of metal or other suitable material and are preferably made with a plurality of holes or openings 6 therein to further lighten the weight thereof and are provided centrally thereof with square axial openings 7 for the purpose of mounting the reel on the shafts of the camera or projector in which it is to be used. The spacing between the flanges 3 and 4 is dictated by the width of the film to be used in connection therewith.

It will be noted with particular reference to Figure 1 that the ends of the material of the cylindrical core 1 terminate with a slight space therebetween, the purpose of which, is to permit the ends of a strip of relatively thin metal stock 9 of a width substantially that of the core 9, to be snugly coiled about the core 1 and to be passed therethrough and firmly bent thereover as at 10, thus rigidly and integrally securing the strip 9 to the core.

Longitudinally of this strip 9 and along one side thereof adjacent the flange 3, there are struck angularly and upwardly therefrom a continuous series of spaced tongues, lugs, or hooks 11 in one direction; along the opposite side adjacent the flange 4 there are struck angularly and upwardly therefrom in the opposite direction, a corresponding continuous series of spaced tongues or lugs

12. It will be observed with particular reference to Figure 2, that these lugs 11 and 12 are struck from the strip 9 precisely in alignment with the usual standard perforations 13 of the film 8 whereby same may be quickly, easily and securely hooked thereon for winding. The alternate direction of the hooks 11 and 12 serves to permit the film to be hooked in either direction so that the film may be reeled thereon in a clockwise or a counter clockwise direction, circumstances dictating such directions. It may be stated that there is an inherent tendency for film to curl slightly at the end thereof as shown in Figure 1 and it is an easy matter for the user to insert the end of the film between the flanges 3 and 4, and without attempting to guide it other than into contact with the core 9, to draw it over the lugs 11 and 12 until one of the perforations thereof engages with one of the lugs 11 or 12. This, of course, secures the end to the core to permit winding the film thereon.

Referring now to Figure 3, the construction of the core 1 and flanges 3 and 4 is substantially the same as described in the foregoing, the change being in the substitution of two clip members herein indicated at 14 and 15 for the strip 9 of the preferred embodiment of my invention. These members 14 and 15 are preferably formed of relatively thin sheet material and are adapted to be secured to the core 1 as by securely clipping same in opposite directions over the spaced ends of such core. The outer and extreme end of these members 14 and 15 are provided each with a pair of suitably spaced parallel angularly upstanding lugs 16 and 17 respectively. The purpose of such lugs of course, corresponds to that of the lugs 11 and 12 of the preferred form, the difference being, that in using this form of construction two perforations of the film will be simultaneously engaged within lugs 16 and 17 instead of one as in the first case.

The reel disclosed in Figures 5 and 6 is of a relatively much smaller size than the two previously described reels and therefore permits the use of relatively much lighter stock in the manufacturing of same. It is obvious, therefore, that the core 1*a* thereof may serve the additional purpose of providing the film engaging lugs 16*a* and 17*a*. These lugs 16*a* and 17*a* are stamped integrally with the ends of the core 1*a* and are adapted to be bent upwardly and back at an angle as clearly shown in Figure 5. The flanges 3*a* and 4*a* of this form of my invention are secured to the core 1*a* as by means of the ears 5*a* of said core passing through slots provided in said flanges therefor and bent outwardly thereover.

Of course changes may be made in details of construction and arrangement of parts without departing from the spirit and scope of my invention. I do not limit myself, therefore, to the exact form herein shown and described other than by the appended claims.

I claim:

1. A reel for motion picture film comprising a core having spaced flanges secured thereto the ends of said core terminating in spaced relation to provide a single slot, and hooks provided on the ends of said core adjacent each of said flanges and in alignment with the perforations in a film to be wound on said core, the hooks on one end extending in one direction and those on the other end extending in the opposite direction.

2. A reel for motion picture film comprising a cylindrical core of sheet metal having spaced flanges secured thereto, the ends of said core terminating in spaced relation, clip members adapted to be clipped over said ends, the extreme outer ends of said clip members being provided each with a pair of spaced parallel angularly disposed upstanding lugs in alignment with the perforations of a film to be wound on said core.

In testimony whereof, I affix my signature.

LEW W. LESSLER.