E. G. NIESS-WANER.

FILM REEL.

APPLICATION FILED MAR. 14, 1919.

1,325,450. Patented Dec. 16, 1919.

Fig. 1.

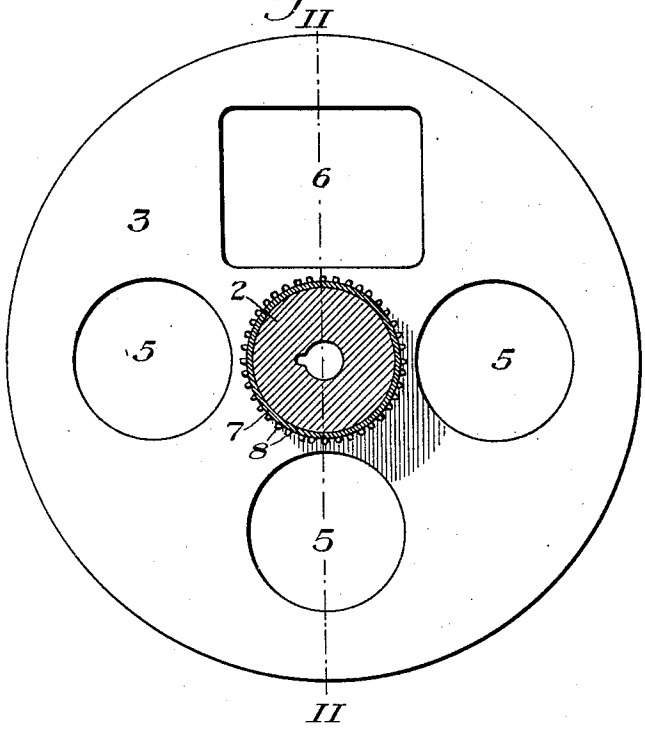


Fig. 2.

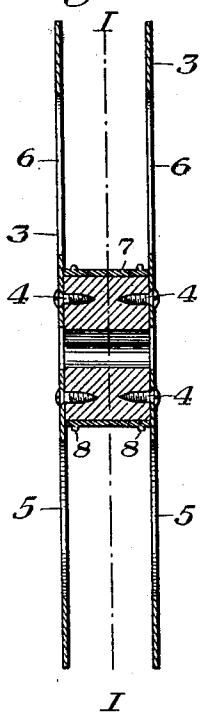


Fig. 3.

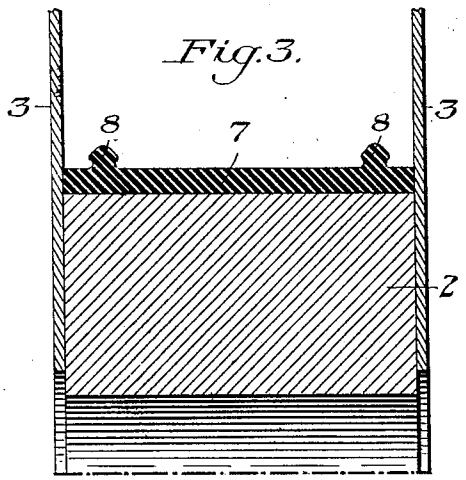


Fig. 4.

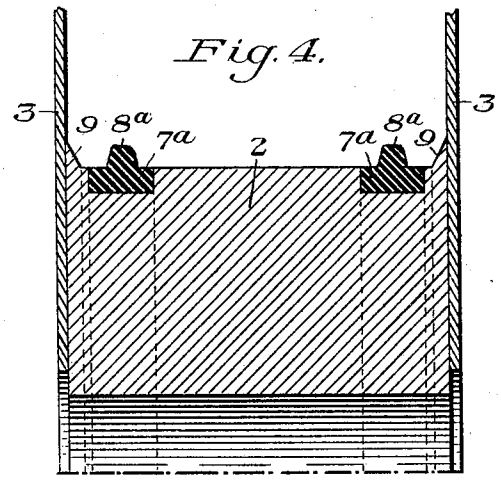
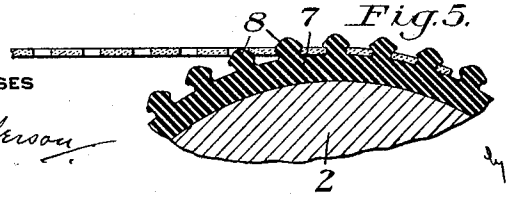


Fig. 5.



WITNESSES

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EDWIN G. NIESS-WANER, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO JAMES B. CLARK, OF PITTSBURGH, PENNSYLVANIA.

FILM-REEL.

1,325,450. Specification of Letters Patent. Patented Dec. 16, 1919.

Application filed March 14, 1919. Serial No. 282,599.

To all whom it may concern:

Be it known that I, EDWIN G. NIESS-WANER, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Film-Reels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section partly in elevation of the preferred embodiment of the invention, the section being taken along the line of I—I of Fig. 2.

Fig. 2 is a vertical section taken along the line of II—II of Fig. 1.

Fig. 3 is an enlarged vertical section through one-half of the hub.

Fig. 4 is an enlarged vertical section through one-half of the hub showing a modification; and

Fig. 5 is a fragmentary section showing the way in which the film is applied to the reel.

The invention relates to reels and more particularly to reels for moving picture films.

The object of my invention is to provide a simple and improved means for retaining the end of the film when it is to be wound upon the reel. With this object in view the invention consists of the improved film reel hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings which illustrate an embodiment of my invention:

The film reel comprises a hub 2, preferably of wood, and two side plates or disks 3. The side plates or disks 3 are secured to the hubs by means of screws 4. Through each of the disks 3 are perforations 5 for lightening the disks and for observing the film. Each disk or plate 3 is also provided with a hand hole 6 through which the operator may reach to attach the end of the film to the hub.

The construction above described is a standard construction of film reels.

My invention relates to the means for retaining the end of the film on the hub, which is now described.

Around the hub 2 is secured a strip of soft rubber 7 having two rows of little soft rubber projections or nibs 8. As shown in Fig. 1 each row of nibs extends completely around the hub. This, however, is not essential as shorter rows might be used. The nibs 8 are spaced so as to engage the rows of perforations around the sides of the film strip. The nibs 8 are made slightly larger than the perforations in the film, so that when the film is pressed over the nibs, the nibs will be slightly compressed thereby and frictionally and yieldingly engage the perforations. The nibs may be made as shown in Fig. 3 with their tops slightly enlarged, or they may be tapered from the base to the top, as shown in Fig. 4. In either case the soft rubber will be slightly compressed when the perforations are pushed over the nibs and by its resilience will frictionally engage and retain the sides of the perforations.

When the operator desires to wind a film on reel, he takes the end of the film and presses it against the hub, thereby pushing the perforations in the film over the soft resilient rubber nibs, as shown for example in Fig. 5. The operator can then proceed to wind up the film since the end of the film is held by the nibs. The end of the film may be pressed against the nibs at any point around the circumference of the hub. This permits the operator to quickly apply the end of the film by simply reaching in and pushing it against the nibs wherever the end of the film happens to engage them. The advantage of this will be apparent when it is remembered that the operator must work hastily, often in darkened rooms. The operator can utilize the hand hole 6 to reach through and press the end of the film against the soft rubber nibs.

In Fig. 4 is illustrated a modification in which the nibs 8^a are formed on two strips or circumferential bands of rubber 7^a set in slots around the hub. In this figure the hub 2 is shown as having short beveled end portions 9 next to the side plates 3 to assist in positioning the end of the film over the nibs 8, allowing a slight clearance between the edge of the film and the side plates 3 as the film is wound up.

In using the retaining means of the present invention, the film does not have to be bent or inserted in slots as is customary with the usual film end retaining arrangement in use at the present time. The end of the film is not therefore subjected to

breakage. The soft rubber nibs effectively retain the end of the film against the tangential pull when the film is being wound on the reel. When, however, the film is being unwound, the end of the film is easily pulled off the nibs, the direction of pull in such case being radial.

While the preferred embodiment of the present invention has been specifically illustrated and described, it is to be understood that the invention is not limited to its illustrated embodiment but may be embodied in other structures within the scope of the following claims.

I claim:

1. A film reel comprising a hub having soft resilient nibs thereon positioned to engage the perforations in the film, substantially as described.

2. A film reel comprising a hub having soft rubber nibs thereon positioned to engage the perforations in the film, substantially as described.

3. A film reel comprising a hub having compressible nibs thereon positioned to engage the perforations in the film, substantially as described.

4. A film reel having a soft rubber member or members for engaging and frictionally retaining the end of the film, substantially as described.

5. A film reel, comprising a hub having nibs thereon for engaging the perforations at the extreme end of the film and formed of such material as to frictionally retain the end of the film against the surface of the hub, substantially as described.

6. A film reel having a hub, and means external to the hub for engaging the extreme end of the film and retaining it frictionally against radial separation from the surface of the hub and retaining it positively against movement tangential to the surface of the hub, substantially as described.

7. A film reel having a hub around which the film is wound and a member of compressible material for engaging and frictionally retaining the end of the film at the hub, substantially as described.

8. A film reel comprising a hub around which the film is wound and nibs on the hub arranged to expand against and frictionally engage the edges of the film perforations, substantially as described.

In testimony whereof, I have hereunto set my hand.

EDWIN G. NIESS-WANER.