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A. S. HOWELL

2,004,608

REEL

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Fig-1

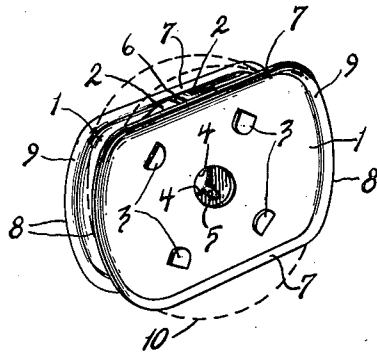


Fig-2

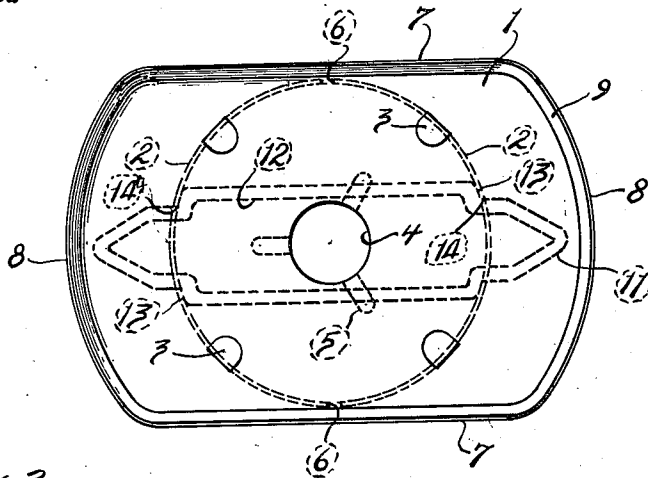
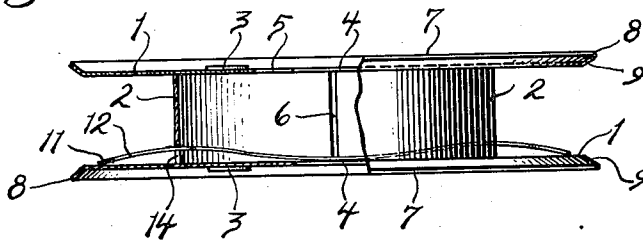


Fig-3



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UNITED STATES PATENT OFFICE

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REEL

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12 Claims. (Cl. 242-74)

My invention relates particularly to motion picture film reels although not limited to this use alone.

The main object of the invention resides in the provision of a flanged reel, having means for securing a strip end at the hub of the reel for the reeling of the strip, which provides for the convenient securing of the strip end at the hub particularly with reference to reels which are so narrow that one's fingers cannot pass between the flanges of the reels such as reels for 8 mm. motion picture film.

With this object in view my invention consists in certain features of novelty in the construction, combination and arrangement of parts by which the said object and certain other objects hereinafter appearing, are effected, all as fully described with reference to the accompanying drawing and more particularly pointed out in the appended claims.

In the said drawing—

Figure 1 is a perspective view of a reel embodying my invention.

Figure 2 is an enlarged face view of the same; and

Figure 3 is an enlarged edge view of the same.

Referring to the drawing, 1 designates the side flanges of the reel, and the hub of the reel is formed of two substantially semi-circular segments 2. The flanges and hub segments are preferably formed of sheet metal, and are assembled with the flanges in spaced relation at opposite ends of the hub by means of lugs 3 formed on the ends of the segments and passing through apertures through the flanges and bent over the outer surfaces of the flanges to secure the flanges and hub segments together to form the reel.

The flanges 1 are provided with central spindle apertures 4 for the mounting of the reel on a suitable spindle, and one of the apertures 4 is provided with radial driving slots 5 for engagement with a corresponding formation on a spindle for angularly fixing the reel and spindle.

The ends of the hub segments 2 are adjacently spaced to form diametrically opposite axially extending peripheral slots 6 for the engagement of a strip end in either thereof to secure the strip end at the hub for the reeling of the strip.

The flanges 1 have corresponding diametrically opposite portions of reduced radius, as designated at 7, and provided by forming the edges of these reduced portions on chords of normal curved edge portions of the flanges as designated at 8.

These radially reduced portions 7 of the flanges

preferably approximate the radius of the hub and are disposed at the slots 6 to facilitate the engagement of the strip end in either of the slots, and the edges of the flanges 1 are flared outwardly as designated at 9 to prevent the strip from catching on the edges of the flanges in the reeling of the strip, a roll of the strip on the reel being indicated at 10 in Figure 1.

As an alternative of the strip end securing means exemplified by the hub slots 6, the following is provided.

An elongated light bow spring 11 of flat stock is apertured longitudinally, as designated at 12, and is reduced adjacent its ends to provide outwardly facing shoulders 13. This spring is disposed at the inner face of one of the flanges 1 and extends diametrically of the reel with its aperture 12 embracing the spindle opening of the reel for the passage of a spindle therethrough, and is held in place by reason of its extension through recesses 14 on the corresponding edges of the hub segments 2 and the engagement of the shoulders 13 of the spring engaging the internal surfaces of the hub segments.

The end portions of the spring 11 project outwardly from the periphery of the hub for edge-wise engagement with a strip end on the hub at diametrically opposite points to exert edgewise pressure thereon against the far hub flange to secure the strip end at the hub.

The diametrically opposite engagements of the spring 11 with the strip are angularly displaced from the diametrically opposite radially reduced flange portions 7, and the radially reduced flange portions facilitate the engagement of the strip end with the spring 11 by permitting one's finger to hold the strip on the hub as the strip is wrapped on the hub into engagement with an end of the spring.

Accordingly, the radially reduced flange portions are disposed with reference to the strip securing means, exemplified by either the hub slots 6 or the spring 11, to facilitate engagement of the strip thereby, the diametrically opposite radially reduced flange portions affording a symmetrical appearance and a balance to the reel.

Having thus described my invention, I do not wish to be limited to the precise details described as changes may be readily made without departing from the spirit of my invention, but having thus described my invention, I claim as new and desire to secure by Letters Patent the following:

1. In a reel the combination of a substantially circular hub, adjacently spaced side flanges secured therewith to form the reel and at least one

of which has a portion of materially reduced radius, and means for securing a strip end at said hub for the winding of the strip thereon and arranged with reference to said reduced flange portion so as to facilitate the securing of the strip end.

2. In a reel the combination of a substantially circular hub, adjacently spaced side flanges secured therewith to form the reel and having corresponding portions of reduced radius approximating that of the hub, and means for securing a strip end at said hub for the winding of the strip thereon and arranged with reference to said reduced flange portions so as to facilitate the securing of the strip end.

3. In a reel the combination of a substantially circular hub, adjacently spaced side flanges secured therewith to form the reel and at least one of which has diametrically opposite portions of materially reduced radius, and means for securing a strip end at said hub for the winding of the strip thereon and arranged with reference to said reduced flange portions so as to facilitate the securing of the strip end.

4. In a reel the combination of a substantially circular hub, adjacently spaced side flanges secured therewith to form the reel and having corresponding diametrically opposite portions of reduced radius approximating that of the hub, and means for securing a strip end at said hub for the winding of the strip thereon and arranged with reference to said reduced flange portions so as to facilitate the securing of the strip end.

5. In a reel the combination of a substantially circular hub, adjacently spaced side flanges secured therewith to form the reel and at least one of which has a portion of materially reduced radius and has the peripheral edge thereof flared outwardly, and means for securing a strip end at said hub for the winding of the strip thereon and arranged with reference to said reduced flange portion so as to facilitate the securing of the strip end.

6. In a reel the combination of a substantially circular hub, adjacently spaced side flanges secured therewith to form the reel and having corresponding diametrically opposite portions of reduced radius approximating that of the hub and having the peripheral edges thereof flared outwardly, and means for securing a strip end at said hub for the winding of the strip thereon and arranged with reference to said reduced flange portions so as to facilitate the securing of the strip end.

7. In a reel the combination of a hub, side flanges secured with said hub to form the reel, said hub being provided with an axially extend-

ing peripheral slot for the engagement of a strip end thereon, and at least one of said flanges having a radially reduced portion disposed at said slot to facilitate the engagement of a strip end therein.

8. In a reel the combination of a hub, side flanges secured with said hub to form the reel, said hub being provided with diametrically opposite axially extending peripheral slots for the engagement of a strip end in either thereof, and said flanges having corresponding diametrically opposite portions of reduced radius and disposed at said slots to facilitate the engagement of a strip end therein.

9. In a reel the combination of a hub comprising two substantially semi-circular segments, side flanges secured with said segments to form the reel with the ends of said segments spaced to provide strip end engaging slots, and said flanges having corresponding diametrically opposite portions reduced in radius and disposed at said slots to facilitate the engagement of a strip end therein.

10. In a reel the combination of a hub, spaced side flanges secured with said hub to form the reel, spring means associated with one of said side flanges and adapted to secure a strip end at said hub by edgewise pressure on the strip against the other of said flanges, and at least one of said flanges being radially reduced at a place angularly displaced from the engagement of said spring means with the strip end to facilitate engagement of the strip thereby.

11. In a reel the combination of a hub, spaced side flanges secured therewith to form the reel, spring means associated with one of said side flanges and adapted to secure a strip end at diametrically opposite points on said hub by edgewise pressure on the strip against the other of said flanges, and at least one of said flanges being radially reduced at diametrically opposite places angularly disposed between said strip securing points to facilitate engagement of said spring means with the strip end.

12. In a reel the combination of a hub, spaced side flanges secured therewith to form the reel, spring means associated with one of said side flanges and adapted to secure a strip end at diametrically opposite points on said hub by edgewise pressure on the strip against the other of said flanges, and said flanges having corresponding diametrically opposite portions reduced in radius and angularly disposed between said strip securing points to facilitate engagement of said spring means with the strip end.

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