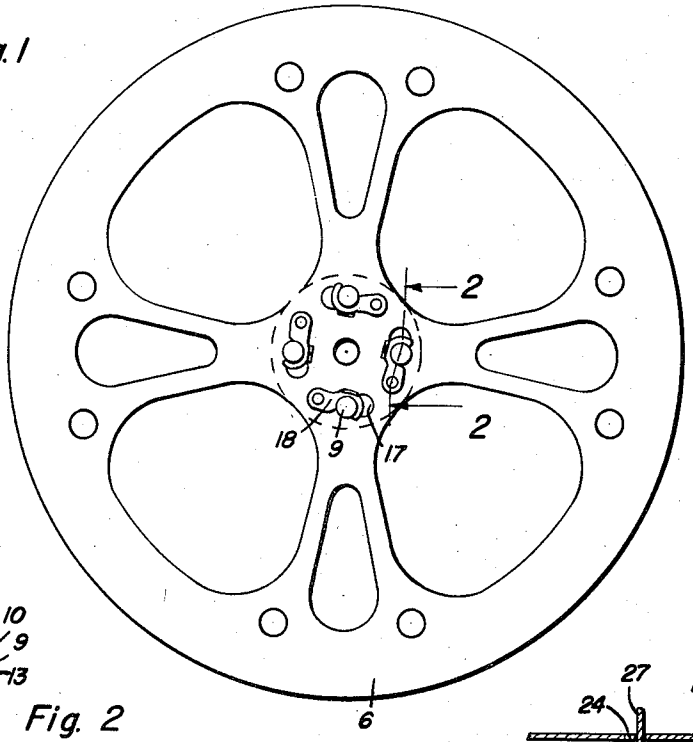
Aug. 5, 1958 L. S. THOMASON 2,846,160

SEPARABLE MOTION PICTURE FILM REEL

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Fig. 1



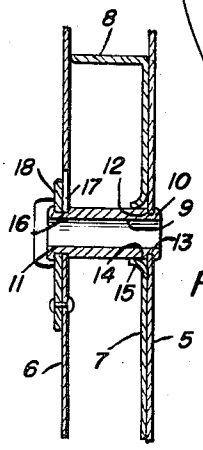


Fig. 2

Fig. 6

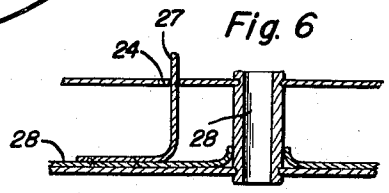


Fig. 3

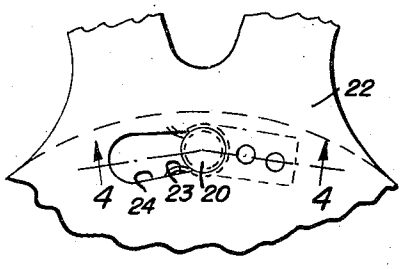


Fig. 5

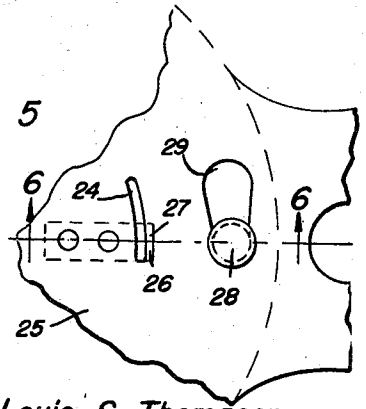
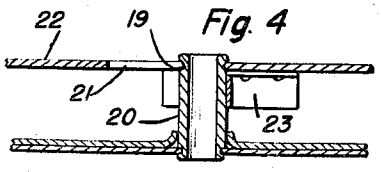


Fig. 4



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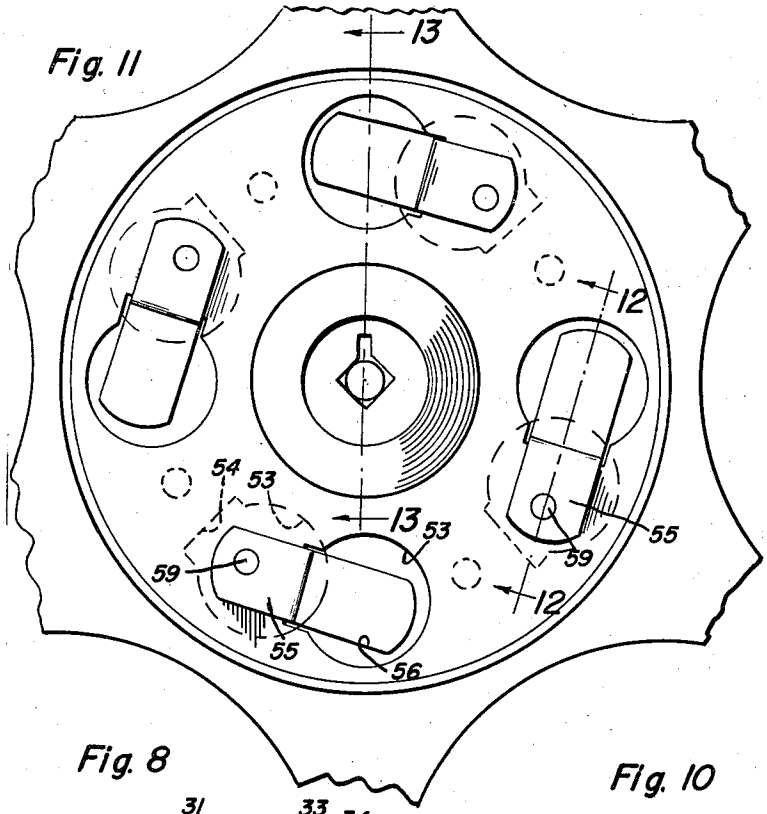
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Aug. 5, 1958 L. S. THOMASON 2,846,160

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Fig. 11



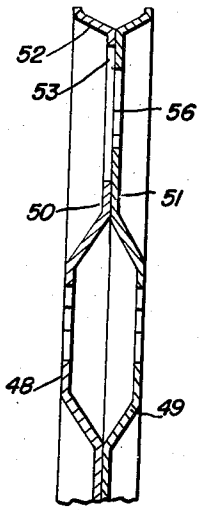


Fig. 13

Fig. 8

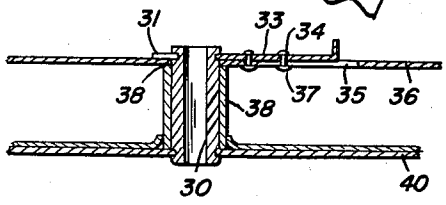


Fig. 10

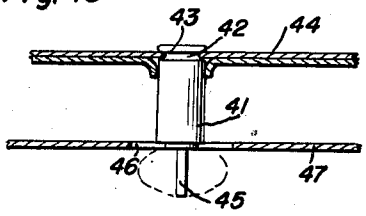
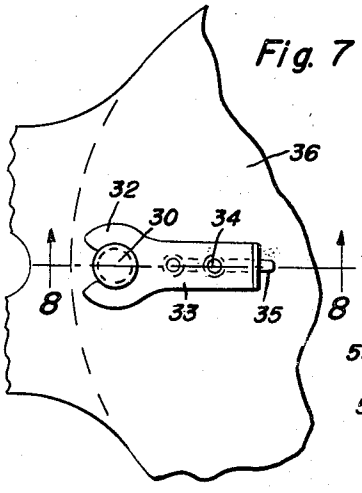


Fig. 7



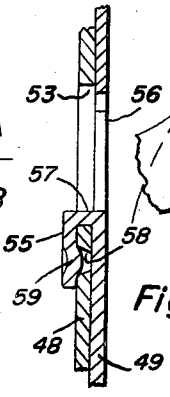
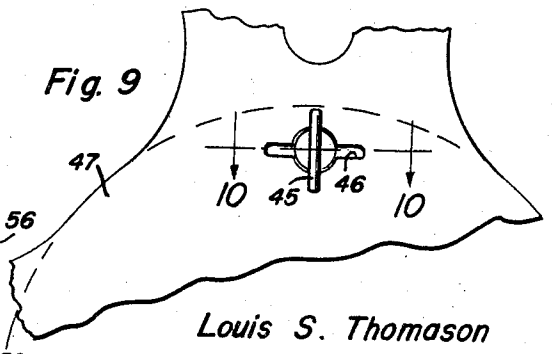


Fig. 12

Fig. 9



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United States Patent Office 2,846,160 Patented Aug. 5, 1958

2,846,160

SEPARABLE MOTION PICTURE FILM REEL

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Application November 6, 1952, Serial No. 319,102

2 Claims. (Cl. 242—71.8)

The present invention relates to new and useful improvements in reels for motion picture film and more particularly to a demountable or separable reel whereby the film may be bodily removed therefrom or placed thereon, without necessitating winding or unwinding the film.

An important object of the invention is to provide easily and quickly manipulated catch means for locking the two sides of the reel to each other in assembled relation.

Another object is to provide a core for the reel which is secured to the inner surface of one of the sides of the reel by a plurality of tubular spacing members which form an element of the catch means and which are enclosed by the core.

A further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture, and otherwise well adapted for the purpose for which the same is intended.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of a reel embodying one type of catch;

Figure 2 is an enlarged fragmentary sectional view taken on a line 2—2 of Figure 1;

Figure 3 is a fragmentary side elevational view of a modified catch construction;

Figure 4 is a sectional view taken on a line 4—4 of Figure 3;

Figure 5 is a side elevational view of another modification;

Figure 6 is a sectional view taken on a line 6—6 of Figure 5;

Figure 7 is a fragmentary side elevational view of a further modified construction;

Figure 8 is an enlarged sectional view taken on a line 8—8 of Figure 7;

Figure 9 is a fragmentary side elevational view of a still further modified construction;

Figure 10 is a sectional view taken on a line 10—10 of Figure 9;

Figure 11 is a fragmentary side elevational view of still another modification;

Figure 12 is a sectional view taken on a line 12—12 of Figure 11; and

Figure 13 is a sectional view taken on a line 13—13 of Figure 11.

Referring now to the drawings in detail, and first with respect to the construction illustrated in Figures 1 and 2, the numerals 5 and 6 designate the sides of a reel of a type for use with motion picture film and to the center of the inner surface of the side 5 is spot welded or otherwise suitably secured a metal disk 7 having a

flange 8 at its periphery to form a core or hub between the two sides 5 and 6 and on which the film (not shown) is wound.

A plurality of spacing sleeves or tubes 9 have reduced end portions 10 adapted for insertion in openings 12 in side 5 and are pressed or upset over the outer surface of the side 5 to lock the latter in circumferential grooves 13 thus formed in the spacing sleeve. The spacing sleeves also pass through openings 14 in disk 7 and which are formed with annular outwardly turned lips 15 to frictionally bind the sleeve in the openings 14 of the disk.

The other end portion 11 of each sleeve is formed with a circumferential groove 16 lockably engaged in the narrow end of an arcuate tapered or keyhole slot 17 in side 6 and the sleeve is locked in the slot by a pivoted catch 18 on the outer surface of side 6 adapted to engage the sleeve and to also enter the groove 16.

The side 6 of the reel is separated by releasing catch 18 and partially rotating side 6 to bring the sleeves 9 into the wider ends of keyhole slots 17 whereupon the side 6 may be removed from the sleeves.

In Figures 3 and 4 the groove 19 of sleeve 20 is locked in the narrow end of arcuate tapered or keyhole slot 21 of separable side 22 of the reel by a resilient clip 23 riveted to the inner surface of side 22 which frictionally grips the sleeve. Otherwise the construction is similar to that of Figures 1 and 2.

The modification illustrated in Figures 5 and 6 comprises an arcuate slot 24 in the separable side 25 of the reel having a notch 26 at one end of said slot and a resilient finger 27 is riveted at one end to the disk 28 of the core of the reel and the free end of finger 27 projects outwardly through slot 24 for locking in the notch to hold the spacing sleeve 28 in the narrow end of the tapered or keyhole slot 29 of the separable side.

In the modified construction illustrated in Figures 7 and 8, the spacing sleeve is shown at 30 with a circumferential groove 31 therein adapted to receive a forked end 32 of a slidable catch 33 having a pair of rivets 34 sliding in a slot 35 in the separable side 36 of the reel. The heads 37 at the inner ends of the rivets hold the rivets in the slot. The side 36 of the reel is formed with a circular opening 38 to receive the sleeve 30 and an outer spacing sleeve 39 surrounds spacing sleeve 30 to keep the side 36 of the reel separated from the side 40 thereof.

The modified construction illustrated in Figures 9 and 10 comprises a cylinder 41 having a circumferential groove 42 adjacent one end rotatable in an opening 43 of the side 44 of the reel and the other end of the cylinder is formed with a wing head 45 adapted to pass through a slot 46 in the separable side 47 and turned cross-wise of the slot, as shown in Figure 9, to lock the side 47 to the reel.

Figures 11, 12 and 13 illustrate a modified reel construction as well as a modified locking construction for the sides of the reel. In this form of the invention, the sides 48 and 49 of the reel are formed with back-to-back annular grooves 50 and 51 to form the core 52 on which the film is wound. The base of groove 50 of side 48 is formed with a plurality of circular openings 53 each having a straight segment 54 of the circle and through each of said openings a resilient locking tongue 55 is bent, the tongue being integrally formed with the material of side 49 and partially struck from an opening 56 therein to provide a united straight edge 57 bent over the straight segment 54 of opening 53 to position the tongue against the outer surface of side 48. The outer surface of side 48 adjacent each opening 53 is formed with a recess 58 in which a knob or button 59 on the back of the tongue 55 is lockably engaged. The two sides 48 and 49 are

separated by rotating one relative to the other in a direction to release button 59 from recess 58, as shown by dotted lines in Figure 11, whereupon the tongue 55 may pass through the circular opening 53.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. A reel of the class described comprising a pair of separable side members, each having a circularly arranged group of openings adjacent the center thereof, a plurality of cylindrical members fixedly secured at one end in the openings of one of said side members and with the other ends of said cylindrical members releasably engaged in the openings of the other of said side members, a hub positioned between said side members and including a flat circular plate having a group of circularly arranged openings for slidably assembling the hub on said cylindrical members to position the plate of the hub in confronting relation at the inner surface of one of the side members adjacent the fixed ends of the cylindrical members, said group of openings in which said cylindrical members are releasably engaged being of tapering formation, circumferential grooves in the adjacent end portions of said cylindrical members lockably engaged in said tapered openings upon a partial rotary movement of one side member relative to the other, and a resilient clip carried by one of said side members and lockably engaging one of said cylindrical members to oppose unlocking rotary movement of said side members.

2. A reel of the class described comprising a pair of separable flange members, at least one of said flange members having a circularly arranged group of arcuate openings adjacent the center thereof, a plurality of cylindrical connecting members fixedly secured at one end to one of said flange members and with the other ends of said cylindrical members releasably engaged in the openings of the other of said flange members, said group of openings in which the cylindrical members are releasably engaged being of tapering formation and each of said cylindrical members having a circumferential groove lockably engaged in said tapered openings upon a partial rotary movement of one flange member relative to the other, and a resilient clip carried by said one flange member and engaging one of the cylindrical members to secure the latter from unlocking movement.

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