

July 17, 1923.

1,462,166

L. L. CHAPMAN

FILM REEL

Filed Dec. 18, 1922

Fig. 2.

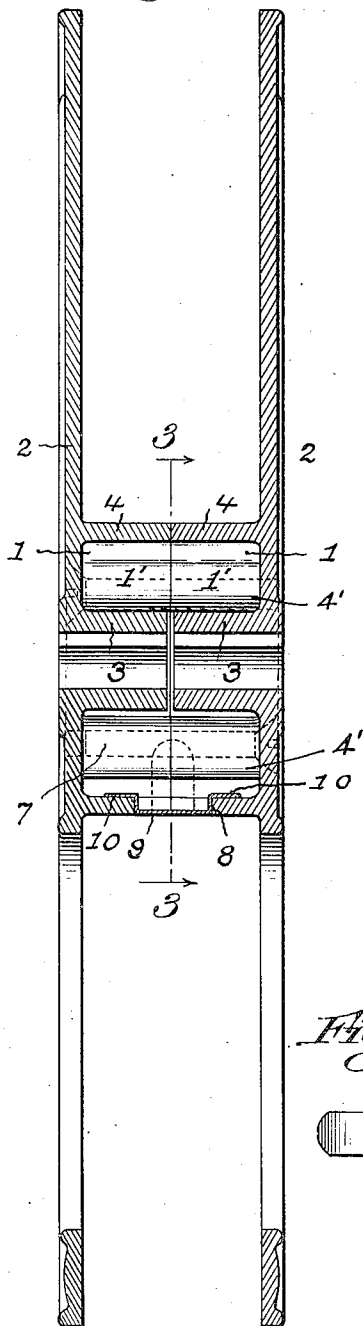


Fig. 1.

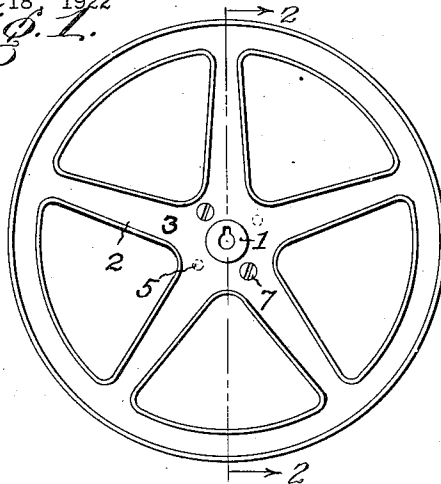


Fig. 3.

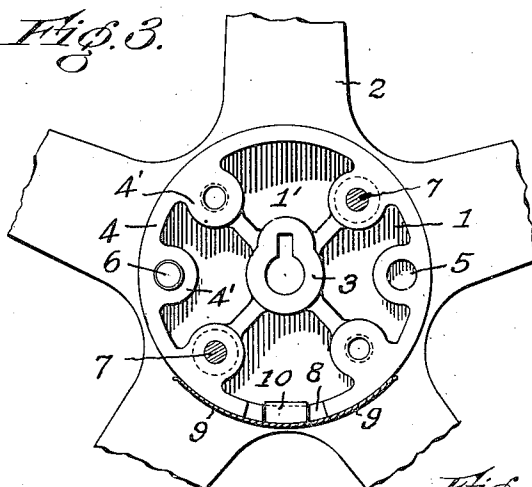


Fig. 4.

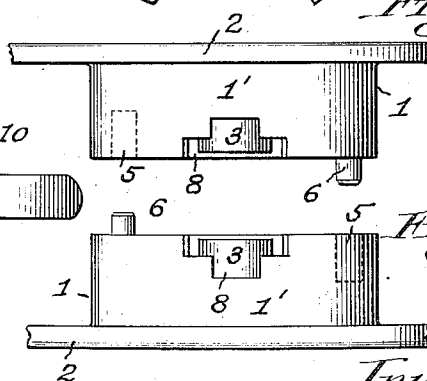


Fig. 6.

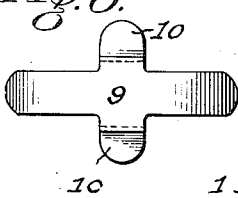
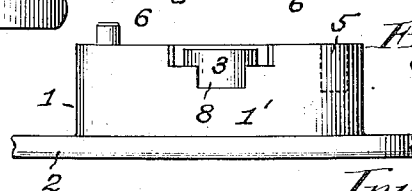


Fig. 5.



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UNITED STATES PATENT OFFICE.

LEO LAVERNE CHAPMAN, OF FOND DU LAC, WISCONSIN.

FILM REEL.

Application filed December 18, 1922. Serial No. 607,467.

To all whom it may concern:

Be it known that I, LEO LAVERNE CHAPMAN, a citizen of the United States of America, residing at Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Film Reels, of which the following is a specification.

This invention relates to that type of reels upon which motion picture films are compactly wound for storage and for use in motion picture apparatus, and the present improvement has for its objects:—

To provide a structural formation and combination of parts, providing a counterpart sectional construction of a reel which provides convenience and economy in manufacture with the sectional members adapted for accurate assembling into a complete reel having the requisite degree of strength, lightness and rigidity whereby true running is attained and liability to jumping and injury of the picture film in the winding and unwinding operations is prevented.

To provide an effective and convenient clip attachment for the hub portion of the reel for holding engagement with an end of the picture film, all as will hereinafter more fully appear.

In the accompanying drawing:—

Fig. 1, is an elevation of a reel embodying the present invention.

Fig. 2, is an enlarged transverse section on line 2—2, Fig. 1.

Fig. 3, is a detail sectional elevation on line 3—3, Fig. 2, of the hub structure of the present improvement.

Figs. 4, and 5, are companion detail plan views of the hub sections in separated relation.

Fig. 6, is a plan view of the resilient holding plate or clip of the reel hub.

Like reference numerals indicate like parts in the several views.

As represented in the drawing the general form of the present reel is similar to that of the reels now in general use in the motion picture art, and comprises a central hub portion 1, and a pair of skeleton side plates or disks 2 fixed on the respective ends of said hub portion. The material part of the present improvement relates to the formation of the reel in two counterpart and interchangeable sections, with each section comprising an integrally or otherwise fixedly connected side disk 2, and a half portion or section 1'

of the hub member 1, and with each counterpart section having a detail construction as follows:

3 designates an inner central sleeve portion formed with a central bore by which the reel is mounted on its usual carrying shaft to revolve therewith, or upon the same, in the varied uses of the reel.

4, designates an outer sleeve portion concentric with the aforesaid inner sleeve portion 3, with its perimeter constituting a part of the circular hub surface around which the picture film is wound, and with its inner circular surface formed with a series of enlargements 4' for purposes hereinafter set forth.

5, designates a socket or recess formed in the inner face of an enlargement 4' and in aligned relation to a complementary dowel pin or stud 6 on the inner face of an aligned enlargement 4' of an opposed sleeve portion 4. A plurality of such recesses 5 and studs 6 are usually employed as best adapted to hold the reel parts in proper aligned relation when assembled.

7 designates one or more transverse screw bolts adapted to secure the pair of reel sections together in proper assembled relation, the bolts preferably pass through orifices formed in enlargements 4' that alternate with the recesses 5 and studs 6, as above described.

8 designates counterpart gaps or recesses formed in the inner ends of the portions 4 of the reel hub and adapted for holding engagement with a film holding clip of the following construction.

9 designates a curved holding plate of resilient metal formed to fit the curved surface of the reel hub 1, and having fixed attachment to said hub by a pair of oppositely extending lateral lugs 10, which are offset from the plane of the plate 9 and adapted to engage the inner surface of the outer sleeve portions 4 aforesaid, to securely maintain the holding plate 9 in place when the reel sections are in assembled relation, and with either end of the holding plate free to receive and hold an end of the picture film.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A film reel comprising a pair of counterpart sections, each section comprising a side disk and a hub portion integrally con-

connected together, the meeting ends of the respective hub portions having interengaging stud and socket formations arranged a distance inside their perimeters, and means
5 for securing the reel sections fixedly together.

2. A film reel comprising a pair of counterpart sections, each section comprising a side disk and a hub portion integrally connected together, the meeting ends of the
10 respective hub portions having interengaging stud and socket formations arranged a distance inside their perimeters, and means for securing the reel sections fixedly together, the same comprising screw bolts
15 passing transversely through said hub portions.

3. A film reel comprising a pair of counterpart sections, each section comprising a
20 side disk and a hub portion integrally connected together, each hub portion comprising an inner sleeve and an outer sleeve in concentric relation, the outer sleeve having a series of enlargements on its inner face,
25 with the meeting faces of the enlargements having interengaging stud and socket formations, and means for securing the reel sections together.

4. A film reel comprising a pair of counterpart sections, each section comprising a
30 side disk and a hub portion integrally

connected together, each hub portion comprising an inner sleeve and an outer sleeve in concentric relation, the outer sleeve having a series of enlargements on its inner
35 face, with the meeting faces of the enlargements having interengaging stud and socket formations, and means for securing the reel sections together, the same comprising screw bolts extending through orifices in a plurality of the enlargements aforesaid. 40

5. A film reel comprising a pair of counterpart sections, each section comprising a side disk and a hub portion integrally connected, the ends of the respective hub portions being formed with aligned notches, a
45 curved holding plate of resilient metal having lateral offset wings adapted for holding engagement in said notches, and means for securing the reel sections together. 50

6. A film reel comprising a pair of counterpart sections, each section comprising a side disk and a hub portion integrally connected, the ends of the respective hub portions being formed with aligned notches, a
55 curved holding plate of resilient metal having lateral offset wings midway its length for holding engagement in said notches, and means for securing the reel sections together.

Signed at Fond du Lac, Wis., this 15th
day of December, 1922. 60

LEO LAVERNE CHAPMAN.