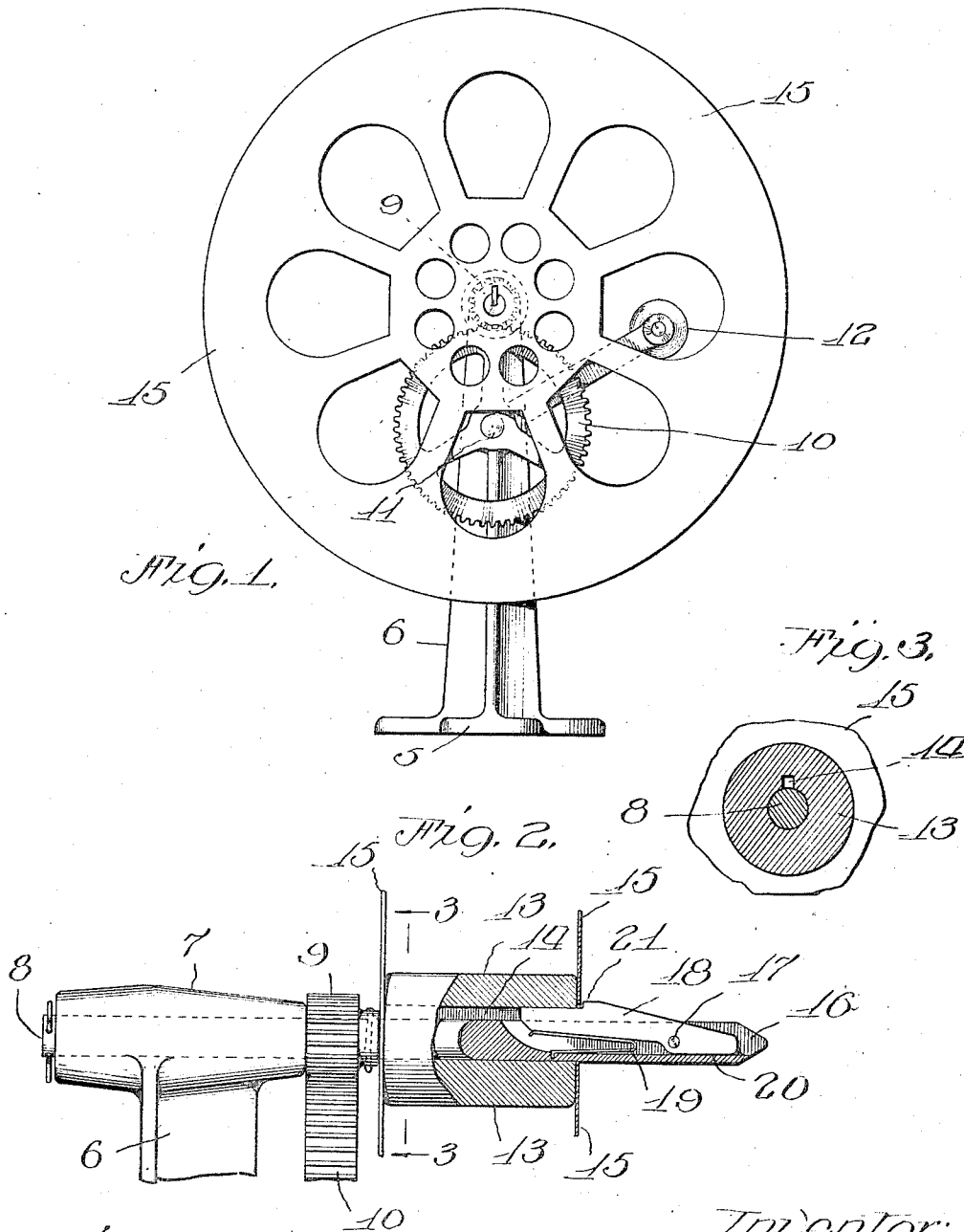


A. S. HOWELL.
 FILM SPOOL ARBOR.
 APPLICATION FILED MAR. 15, 1915.

1,179,924.

Patented Apr. 18, 1916.



Witnesses:
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UNITED STATES PATENT OFFICE.

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FILM-SPOOL ARBOR.

1,179,924.

Specification of Letters Patent.

Patented Apr. 18, 1916.

Application filed March 15, 1915. Serial No. 14,559.

To all whom it may concern:

Be it known that I, ALBERT S. HOWELL, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Film-Spool Arbors, of which the following is a specification.

My present invention relates to a spool for film used in cinematographic machinery, and more particularly to what is commonly termed "rewind-spool" which, as the name implies, is for rewinding the film after the same has been run through or used, and for the purpose of disposing or placing the starting end of the film at a point and in a position so as it may be placed upon a projector, camera, or a printing machine and be ready for immediate use.

The essential object of my invention is the provision of an arbor for supporting and rotating the spool or reel so that the spool may be quickly mounted upon the arbor, automatically locked thereto, and unlocked and disassembled therefrom with a minimum amount of labor.

I accomplish the above and other objects that will be apparent to those skilled in the art, by means of the lock shown in the accompanying drawing, wherein for the purpose of convenience, I have illustrated my particular form of lock in combination with a conventional form of hand rewind, and in the drawing;—

Figure 1 is a front elevation of a hand rewind and spool embodying my invention: Fig. 2 is an enlarged fragmental detail of the arbor and hub of the spool (partially in section) the bearing for the arbor and the means from which it receives its rotation; and Fig. 3 is a section on line 3—3 of Fig. 2.

Similar reference characters refer respectively to similar parts throughout the several views.

In the conventional form of hand rewind for cinematographic film reels to which I have shown my lock applied the base 5 supports a standard 6, the upper end of which terminates in a laterally disposed bearing 7, in which is journaled a spindle or arbor 8. The spindle 8 extends through its bearings at one end and adjacent thereto is provided with a gear 9, that meshes with a larger gear 10, keyed to a stud shaft 11, also journaled in

bearings in the standard 6, and preferably at a point below the bearing 7. Keyed to the opposite end of the shaft 11, is a suitable handle or crank 12, by means of which the gear 10, is rotated, thus driving the gear 9 and rotating the arbor.

Loosely mounted upon the extended end of the arbor 8, is a film spool, comprising a central hub 13, and flanges 15—15 rigidly secured thereto in any suitable manner. Said hub is provided with a splineway 14 extending longitudinally therethrough for keying the same to the arbor. In the forward end of the arbor is a longitudinally disposed slot 16, in which a latch or pawl 18 is medietely pivoted upon a pin 17. Secured within the slot 16 and between the under side of the inner end of the pawl 18 and the bottom of the slot 16, is an expansible leaf spring 19, which is adapted to normally force the adjacent end of the pawl 18 upwardly into the splineway 14 of the hub and is limited in its upward movement by the outer end 20 of the pawl which is so constructed as to contact the bottom of the slot 16 as shown in Fig. 2. The upper edge of the inner end of the pawl 18 is provided with a shoulder 21, adapted to form a stop that engages the outer adjacent surface of flange 15 and prevents the removal of the spool from the arbor without first depressing the inner end of the pawl 18 down into the slot 16.

It will readily be apparent from the foregoing that I have provided a simple, compact, and convenient form of arbor and lock, the construction of which is very rigid and the assembling of which eliminates longitudinal play of the spool upon said arbor.

While I have described and illustrated certain specific means for carrying out my invention it, of course, is obvious that modifications thereof are possible without materially departing from the spirit of my invention. I therefore desire it understood that all such modifications are contemplated within the scope of my invention as expressed in the following claims.

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

1. A device of the kind specified comprising in combination a winding spool, the hub whereof is axially bored and is provided

with a longitudinally disposed splineway, and a rotatable arbor upon which said spool is mounted, provided with a longitudinal recess, and a pawl pivoted intermediate its ends in said recess, one end portion of said pawl being provided with a shoulder adapted to abut the outer face of said spool and the portion of said pawl beyond said shoulder adapted to enter the recess in said spool.

2. A device of the kind specified comprising in combination a winding spool, the hub whereof is axially bored and is provided with a longitudinally disposed splineway, and a rotatable arbor upon which said spool is mounted, provided with a longitudinal recess, and a pawl pivoted intermediate its ends in said recess, a spring interposed between one end of said pawl and the bottom of said recess, one end portion of said pawl being provided with a shoulder adapted to abut the outer face of said spool and the portion of said pawl beyond

said shoulder adapted to enter the recess in said spool.

3. A device of the kind specified comprising in combination a winding spool, the hub whereof is axially bored and is provided with a longitudinally disposed splineway, and a rotatable arbor upon which said spool is mounted, provided with a longitudinal recess, and a pawl pivoted intermediate its ends in said recess, a substantially V-shaped spring interposed between the end of said pawl nearest said spool and the bottom of said recess, one end portion of said pawl being provided with a shoulder adapted to abut the outer face of said spool and the portion of said pawl beyond said shoulder adapted to enter the recess in said spool.

Signed at Chicago, Cook county, Illinois, this 12th day of March, 1915.

ALBERT S. HOWELL.

Witness:

WM. HAROLD EICHELMAN.