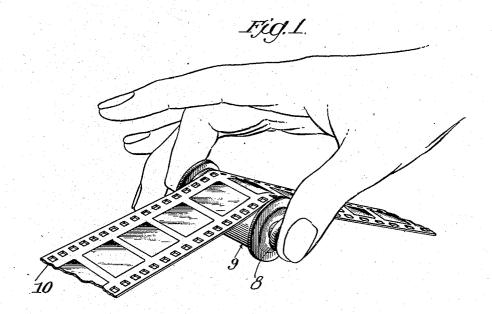
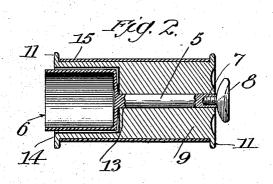
## C. C. CAMPBELL. PULLEY. APPLICATION FILED FEB. 17, 1908.

900,481.

Patented Oct. 6, 1908.





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## UNITED STATES PATENT OFFICE.

CLARENCE C. CAMPBELL, OF LOS ANGELES, CALIFORNIA.

## PULLEY.

No. 900,481.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed February 17, 1908. Serial No. 416,210.

To all whom it may concern:

Be it known that I, CLARENCE C. CAMP-BELL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Pulleys, of which the following is a specification.

My invention has particular reference to that particular class of pulleys known as idler or thimble pulleys, and has for its object the production of a pulley of a unique and novel design that may be detachably secured to an operator's hand in such a manner as to not interfere with the use of the hand for other purposes, and which can be instantly brought into an operative position when desired.

My invention is especially designed for the use of moving picture machine operators in the winding and unwinding of moving pic-

ture films.

Heretofore in the operation of a moving picture machine, the operator after the exposure of a long film by the machine, must rapidly remove the film from the machine before substituting another film. This operation must be accomplished as quickly as possible as the minimum amount of time must elapse between exposures. The accomplishment of this operation is a somewhat tedious and inconvenient one usually accompanied by many discomforts, as during the rewinding of the film the operator usually guides it ever his thumb and second finger which are brought end to end for this purpose. The rapid passage of the film over the fingers causes a burning sensation that is somewhat disagreeable, moreover the film being of light weight often becomes tangled and twisted.

With my improved pulley the above recited annoyances and discomforts are greatly obviated, and the rewinding of the exposed film is accomplished in a rapid and efficient

manner.

I accomplish the above object by means of the device described herein and illustrated in the accompanying drawings, in which;—

Figure 1,—is a perspective view of my device showing it in its operative position.

50 Fig. 2,—is a longitudinal section of my improved device.

Referring to the drawings 5 designates a spindle preferably cylindrical in form having secured to one end thereof a thimble 6, the thimble being preferably formed integrally therewith. The other end of the spindle is

drilled and threaded at 7 for the reception of a threaded thumb piece 8. Rotatively mounted on spindle 5 is a sheave 9 cylindrical in form and of a width to permit the 60 passage thereover of a moving picture film 10, annular flanges 11 on its edges forming guides and controlling the movement of the film. Pulley sheave 9 is provided with a cylindrical bore 13 and recess 14 for the accommodation of the spindle and thimble secured thereto.

The face of sheave 9 is provided with a resilient material 15 preferably thin sheet rubber which will possess sufficient friction 70 under contact of the moving film to cause the rapid revolution of the sheave and thus prevent scratching or other injury to the moving

I have illustrated the sheave in this in- 75 stance as being formed of wood as that material is inexpensive, but it may be formed of other materials such as celluloid, in which case the resilient material 15 may be dispensed with.

During the operation of unwinding a film the pulley being mounted on the operator's finger any tangling or accidental disarrangement may be instantly corrected without the necessity of removing the pulley from the 85 finger or laying it down for an instant

finger or laying it down for an instant.
It will be observed from the foregoing that I have provided a novel and efficient device that will greatly accelerate the rewinding of moving picture films.

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

1. A device of the class described, comprising, a spindle provided on one end thereof 95 with a thimble, and a sheave rotatively mounted on said spindle.

2. A device of the class described, com-

prising, a spindle provided with means for detachably securing it to a finger, and a 100

sheave mounted on said spindle.

3. A device of the class described, comprising, a spindle provided on one end thereof with a finger attaching means, and a flanged sheave rotatively mounted on said 105 spindle.

4. A device of the class described, comprising, a spindle provided on one end thereof with finger attaching means, and a sheave having a resilient face rotatively 110 mounted on said spindle.

5. A device of the class described, com-

prising, a spindle adapted for placement on a finger, and a sheave rotatively mounted on said spindle.

6. A device of the class described, comprising, a spindle provided on one end thereof with finger securing means, a flanged sheave mounted on said spindle, and a resilient covering for the face of the sheave.

7. A device of the class described, com-10 prising, a spindle provided on one end thereof with finger securing means, a flanged sheave mounted on said spindle, and a rubber covering for the face of said sheave.

8. In a pulley construction, a spindle pro-15 vided on one end thereof with a thimble, said thimble adapted for placement on the finger, and a recessed sheave mounted on said

spindle.

9. In a pulley construction, a spindle pro-20 vided on one end thereof with a thimble, said thimble adapted for placement on the finger, a recessed resiliently faced sheave mounted on said spindle, and means to maintain the operative relation of said sheave to said 25 spindle.

10. In a pulley construction, a spindle having one of its ends enlarged and recessed, a sheave mounted on said spindle, said sheave provided with a longitudinal bore recessed at one end, said recessed end adapted to encompass the enlarged end of said spindle, and means secured to said spindle to prevent the displacement of said sheave.

11. In a pulley construction, a spindle having one of its ends enlarged and recessed, a resiliently faced sheave mounted on said spindle, said sheave provided with a longitudinal bore recessed at one end, said recessed end adapted to encompass the enlarged end of said spindle, and means secured to said spindle to prevent the displacement of said sheave.

In witness that I claim the foregoing I have hereunto subscribed my name this 10th

day of February, 1908.

CLARENCE C. CAMPBELL.

Witnesses:

EDMUND A. STRAUSE, OLLIE PALMER.