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A. STUBER ET AL
MOTION PICTURE APPARATUS

Filed Jan. 17, 1925

FIG. 1

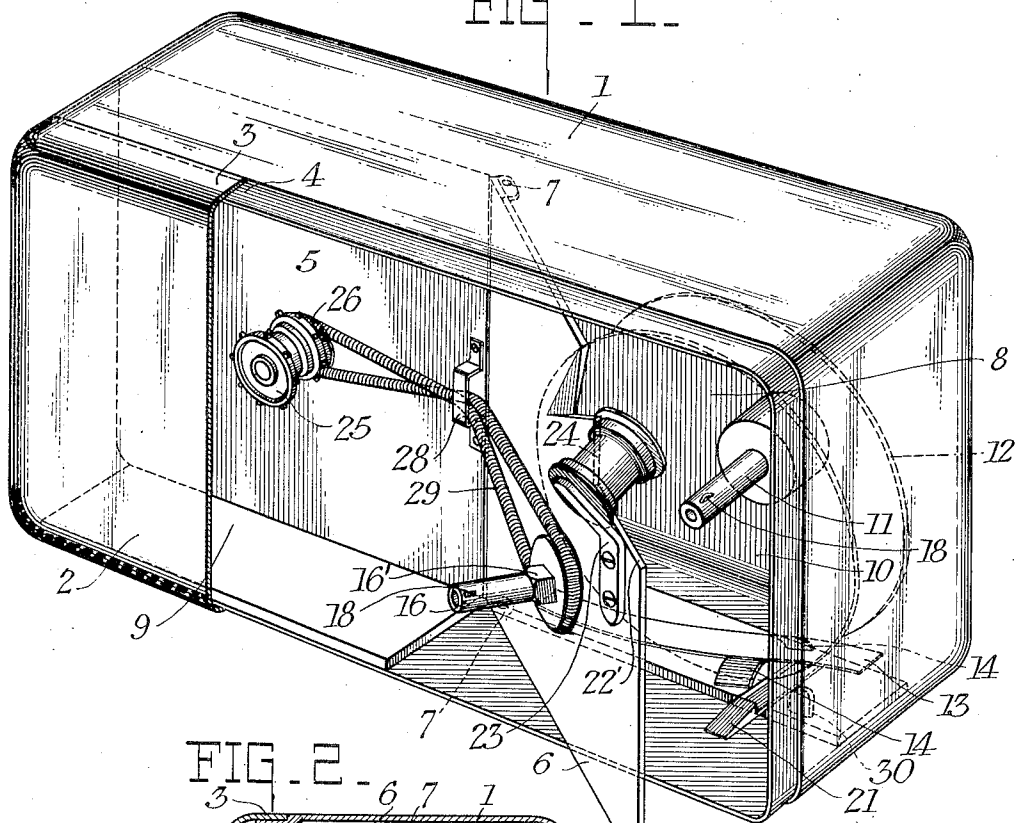


FIG. 2

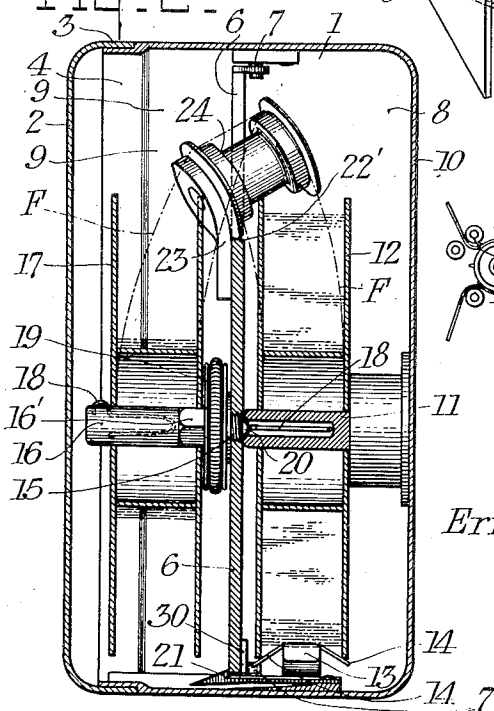
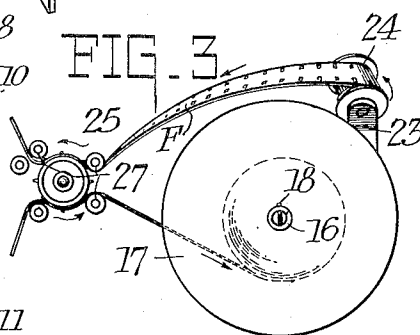


FIG. 3



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UNITED STATES PATENT OFFICE.

ADOLPH STUBER AND ERNEST E. UNDERWOOD, OF ROCHESTER, NEW YORK, ASSIGNORS
TO EASTMAN KODAK COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF
NEW YORK.

MOTION-PICTURE APPARATUS.

Application filed January 17, 1925. Serial No. 3,195.

To all whom it may concern:

Be it known that we, ADOLPH STUBER and ERNEST E. UNDERWOOD, citizens of the United States of America, residing at
5 Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Motion-Picture Apparatus, of which the following is a full, clear, and exact specification.

10 This invention relates to motion picture apparatus and more particularly to a compact and convenient arrangement for the film reels of such apparatus.

The principal object of our invention is
15 to provide such an arrangement in which both film reels are readily accessible from the same side of the machine and in which one reel containing a store of sensitized material may be placed in position and partially
20 protected from light while the film is being threaded through the machine and the other reel being positioned. Other objects will appear in the following description, reference being made to the accompanying drawing in the several figures in which the same
25 reference characters refer to the same parts and in which

Fig. 1 is a perspective view of a motion picture camera, with a part broken away,
30 embodying our invention;

Fig. 2 is a section of such a camera;

Fig. 3 indicates the path of the film in
such an apparatus.

In the illustrated embodiment of our invention, the apparatus is enclosed in a case
35 1 having a removable cover 2. In the present instance this cover constitutes one side of the casing and has flanges 3 overlapping a seat 4 in the main body of the casing. Longitudinally of the casing there is
40 positioned a partition having a front fixed portion 5 and a rear portion 6 hinged at 7 and dividing the casing into two compartments 8 and 9. In the compartment 8
45 formed between the fixed side wall 10 of the casing and the partition is mounted a shaft or seat 11 upon which a film reel 12 may be seated and be free to turn. In the
50 bottom of this compartment is a spring 13 adapted to bear against the outer convolutions of material on the reel and having side

wings 14 adapted to bear against the flanges of the reel when the material is partly unwound. This spring has only enough force to act as a brake, preventing the reel from spinning when the mechanism is stopped and preventing the convolutions of material from becoming loosened. The hinged partition member 6 carries a bearing member 15 upon which is revolubly mounted the stub
60 shaft 16. This stub shaft has a square portion 16' adapted to engage a similar aperture in a reel 17 and having a driving connection therewith. A spring catch 18 is provided for each stub shaft. Rigid with
65 the stub shaft 16 is a driving pulley 19. The bearing member 15 has a rounded protuberance 20 extending from the inner side of the partition and adapted to engage the end of stub shaft 11 and hold it from vibration.
70

The hinged portion 6 of the partition is held in closed position by the spring latch 21. The upper rear corner of portion 6 is cut out, as indicated at 22; and there is supported thereon by the bracket 23 a guide
75 roller 24 extending through part of the opening, thus formed, in an angular position. The shape of the opening is shown as designed for the passage of the film with
80 the parts in the relationship of the particular apparatus, but it could be varied within wide limits. An abutment 30 limits the inward movement of the portion 6.

In the front portion of compartment 9 is
85 a sprocket 25 having mounted therewith a driving pulley 26. An endless belt 29, here shown as a resilient coil spring, connects the driving pulley with pulley 19 and this
90 passes through a guiding bracket 28 so that whether the portion 6 is opened or closed. As indicated in Fig. 3, the film F will be drawn from the reel in compartment 8 over the guide roll 24, then over the sprocket 25.
95 It is then passed through a suitable gate by an intermittent mechanism, this portion not being shown but being well known in the art, and returned over the sprocket 25 to the take-up reel 17. Suitable guide rollers
100 27, shown only in Fig. 3, properly position it with respect to the sprocket 25.

In operation the film reel, which the user will purchase in a light tight package or magazine, will be removed from such magazine immediately before use and placed at once in the inner compartment 8, access to which is had by opening both the door 3 and the partition 6. The partition is at once closed, the end of the film being retained by the user and guided over the pulley 24. The reel of sensitive film is now in a compartment which, while not light tight, is not directly open to the sunlight. It has been found that in all forms of reeled sensitive material there is a tendency to edge fog and every possible precaution to prevent this is advantageous. While the film is reasonably well protected when on the reel by the usual protective lead strips, these must be at least in part unwound during the threading of the camera, and by placing the reel in the darkened inner compartment, the tendency to become edge fogged is much lessened.

The user can now thread the sensitive lead strip through the camera parts and upon the take-up reel, which will be positioned upon the shaft 16 upon the closed partition. Because of the reduced tendency to light fog, he can take his time about this operation and not be impelled to exercise all possible speed through fear of the light affecting a reel of sensitive film in an exposed position.

It is to be understood that the usual mechanism and camera parts necessary in motion picture apparatus are to be used, but these are not shown, as they do not constitute a part of our present invention. It is further understood that this embodiment is by way of example and that we contemplate as within the scope of our invention, such modifications and equivalents as fall within the terms of the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. Motion picture apparatus comprising a casing, a movable partition in said casing and having closed and open positions, a part of the casing and the partition forming a compartment, a seat for a film reel in said compartment, said partition when open affording access to said compartment, and a seat for a film reel on the side of the partition away from said compartment.

2. Motion picture apparatus comprising a casing, a partition in said casing having closed and open positions and, when closed, forming with the casing two compartments, one on each side thereof, a door in the casing affording access to one compartment, the door and partition, when open, together affording access to the other compartment, and seats for film reels in said compartments.

3. Motion picture apparatus comprising a

casing, a movable partition in said casing and having closed and open positions, a part of the casing and the partition forming a compartment, a seat for a film reel in said compartment, said partition when open affording access to said compartment, a shaft revolvably mounted on the side of the partition away from said compartment, means in the casing for feeding film from a reel in the compartment to a reel on the shaft and means for turning said shaft to wind film on a reel positioned thereon.

4. Motion picture apparatus comprising a casing, a partition, at least a part of which is movable, in said casing and capable of being opened and closed, the casing and partition, when closed, forming first and second compartments, one on each side of the partition, seats for film reels in said compartments, means on the partition for guiding film from the first compartment to the second, means in the second compartment for advancing a film from said guiding means and returning it to a reel on the seat in said second compartment, a door in the casing affording access to one of said compartments, and the door and partition, when open, together affording access to the other of said compartments.

5. Motion picture apparatus comprising a casing, a partition in said casing having closed and open positions and, when closed, forming with the casing two compartments, one on each side thereof, a door in the casing affording access to one compartment, and the door and partition, when open, together furnishing access to the other compartment, coaxial supports for film reels in the two compartments, the partition carrying one of the supports and also having an opening with an obliquely arranged guide for directing film from a reel in one compartment into the other compartment.

6. Motion picture apparatus comprising a casing, a movable partition in the casing and having open and closed positions, a part of the casing and the partition forming a compartment, a shaft in said compartment for revolvably supporting a film reel, means on the partition to engage and secure said shaft when the partition is closed, a shaft on the other side of the partition for supporting a second film reel, and means for advancing and guiding a film from one reel to the other.

7. Motion picture apparatus comprising a casing with a door on one side wall, a longitudinal partition in the casing and forming two compartments therein, the rear portion of the partition being hinged and having an opening and an obliquely arranged guide pulley in said opening, the door furnishing access to the first compartment and the door and hinged portion of the partition

together furnishing access to the second compartment, means for rotatably supporting a film reel in the second compartment, a shaft revolubly supported in the first compartment by the hinged portion of the partition, means in the first compartment for feeding a film from the guide roll and from the reel in the second compartment and to a reel on the shaft and means for turning said shaft to wind film thereon. 10

Signed at Rochester, New York, this 14th day of January, 1925.

ADOLPH STUBER.

ERNEST E. UNDERWOOD.