

(No Model.)

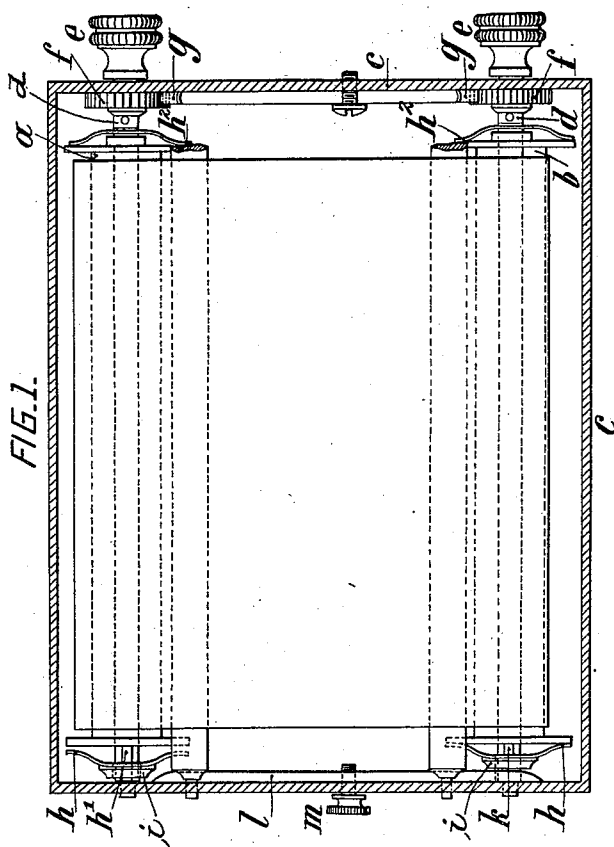
3 Sheets—Sheet 1.

J. RICHARD.

MECHANISM FOR OPERATING ROLLERS IN WINDING OR UNWINDING
BANDS, APRONS, &c.

No. 557,024.

Patented Mar. 24, 1896.



WITNESSES.

A. Lurcott

Isaac R. Owens

INVENTOR:

J. Richard
BY *Munn & Co*

ATTORNEYS

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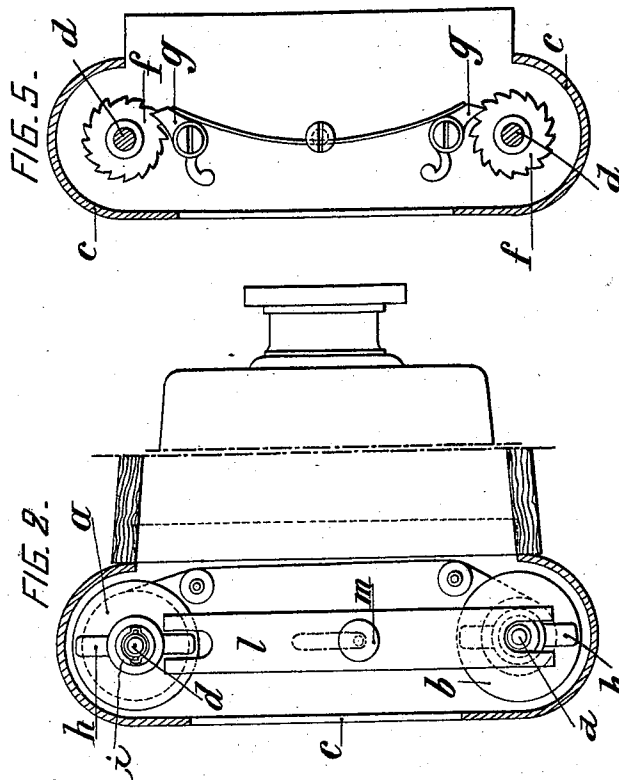
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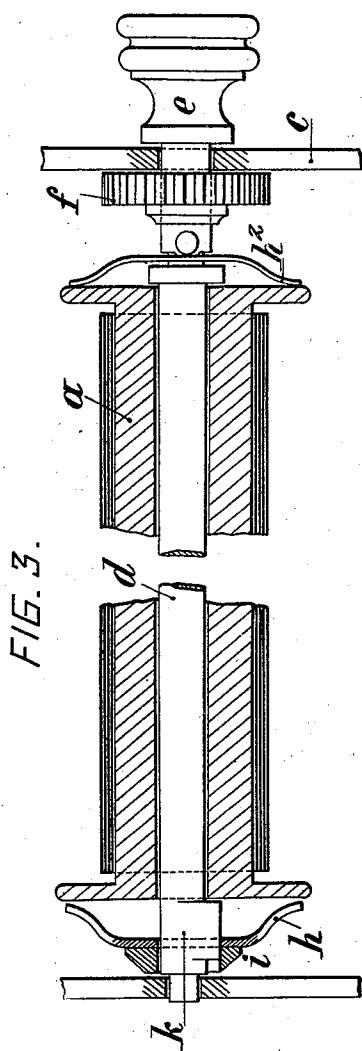
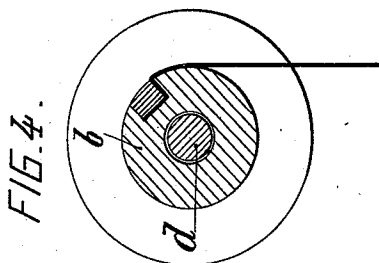
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UNITED STATES PATENT OFFICE.

JULES RICHARD, OF PARIS, FRANCE, ASSIGNOR TO HIMSELF AND RAOUL HARILAOS, OF SAME PLACE.

MECHANISM FOR OPERATING ROLLERS IN WINDING OR UNWINDING BANDS, APRONS, &c.

SPECIFICATION forming part of Letters Patent No. 557,024, dated March 24, 1896.

Application filed August 17, 1895. Serial No. 559,681. (No model.) Patented in France January 9, 1895, No. 244,216.

To all whom it may concern:

Be it known that I, JULES RICHARD, of the city of Paris, France, have invented an Improved Mechanism for Operating Rollers for Use in Winding and Unwinding Bands, Aprons, and the Like, (for which I have obtained Letters Patent in France for fifteen years, dated January 9, 1895, No. 244,216,) of which the following is a full, clear, and exact description.

The object of this invention is to provide mechanism for operating rolls on which ribbons, aprons and like devices are wound and whereby it will be possible to adjust the parts so that when the ribbon or apron is being moved in one direction it will be impossible to accidentally move it in the wrong direction.

The invention consists in certain peculiar features of construction and combinations of parts, that will be fully described hereinafter, and finally embodied in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 represents a sectional view of a stereoscopic chamber having my improved roller mechanism applied. Fig. 2 is also a sectional view taken on a line at right angles to the line of Fig. 1. Fig. 3 is a longitudinal section of one of the rollers and its shaft. Fig. 4 is a cross-section of the same; and Fig. 5 is a sectional view taken on a line parallel to the line of Fig. 2, the view looking toward the opposite ends of the rollers.

The casing is shown to be the ordinary stereoscopic chamber and has the two shafts *d* revolvably mounted therein. Each shaft *d* carries an operating-knob *e*, which is located outside of the casing, and the shafts have fixed thereon and located within the casing ratchet-wheels *f*, the same being respectively engaged by the spring-pressed pawls *g*. The rollers *a* and *b* are loosely mounted on the respective shafts *d*, and the shafts carry at the ends of the rollers which are adjacent to the knobs *e* bow-shaped springs *h*², which are respectively arranged with their terminals bearing against the adjacent ends of the rollers. The springs *h*² are fixed to the shafts, so that upon frictional engagement with the rollers

a and *b* they will tend to fix the rollers on the shafts.

The shafts *d* are formed at the ends opposite the springs *h*² with longitudinally-extending feathers or keys *k* and *h'* respectively. Movable longitudinally on the keys *k* and *h'* are the respective collars *i*, which have the springs *h* fixed to them, and these springs are also bow-shaped and have their terminals respectively bearing against the adjacent ends of the rollers *a* and *b*.

Slidable at right angles to the shaft *d* and on the inner left-hand side of the casing is a cam-plate *l*, each end of which is longitudinally divided and arranged to respectively embrace the shafts *d*, the cammed extremities of the plate being adapted to alternately engage and disengage the collars *i*, so as to force said collars inwardly and cause the springs *h* thereof to bind against the respective rollers *a* and *b*. Fixed to the cam-plate *l* is a button *m*, the shank of which is passed through a slot in the left-hand side of the casing and by which the cam-plate may be operated. Wound over the rollers *a* and *b* is an apron of any suitable kind—such, for example, as that used in the usual stereoscopic apparatus. It will now be seen that upon moving the cam-plate *l* so that it will push one of the collars *i* inwardly the spring *h* of said collar will be made to engage the adjacent roller and to push said roller further against the spring *h*² of the shaft on which the roller is mounted, so that the roller will be firmly engaged by each of its springs *h* and *h*², and thereby made to revolve with the shaft on which it is mounted. It will also be seen that this movement of the cam-plate *l* to fix one of the rollers on its shaft simultaneously operates to release the remaining roller, so that said remaining roller will be loose on its shaft.

It will be understood that the springs *h*² are normally in light engagement with their respective rollers. When, however, the collars *i* are operated to forcibly engage the springs *h* with the respective rollers, the said rollers are pushed into slightly further engagement with the springs *h*², which engagement, in addition to the engagement of the springs *h*, will effectively connect the rollers *h* with their respective shafts. When the

collars *i* have not been operated to cause their respective springs *h* to engage the respective rollers, the springs *h*² will tend to retard the revolution of their rollers and thus keep the apron at the proper tension.

While the invention is shown as applied to a stereoscopic chamber, it will be understood that it is applicable to many other uses.

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

1. The combination of two shafts, a roller loose on each shaft, a spring movable longitudinally on each shaft and capable of being pressed into engagement with the respective rollers, and a cam-plate reciprocal to alternately engage and disengage the springs, substantially as described.

2. The combination of two shafts, a roller loose on each shaft, a collar movable longitudinally on each shaft, a spring carried by each collar, and a cam-plate having bifurcated ends, the cam-plate being capable of movement to alternately engage and disengage the collars and of embracing the shafts with its respective bifurcated portions, substantially as described.

3. The combination of a shaft having a

feather or key, a roller loose on the shaft, a collar movable longitudinally on the feather or key, a spring carried by the collar and capable of engaging and disengaging the roller, and means for moving the collar, substantially as described.

4. The combination of a shaft, a spring fixed to one end of the shaft, a roller loose on the shaft and normally engaged by said spring, a second spring movable longitudinally on the remaining end of the shaft, and means for moving said spring into engagement with the roller, substantially as described.

5. The combination of two shafts, a roller loose on each shaft, a clutch carried by each shaft, and a cam-plate reciprocal to alternately engage and disengage said clutches, substantially as described.

The foregoing specification of my improved mechanism for operating rollers for use in winding and unwinding bands, aprons, and the like signed by me this 17th day of July, 1895.

JULES RICHARD.

Witnesses:

CLYDE SHROPSHIRE,
ALBERT MOREAU.