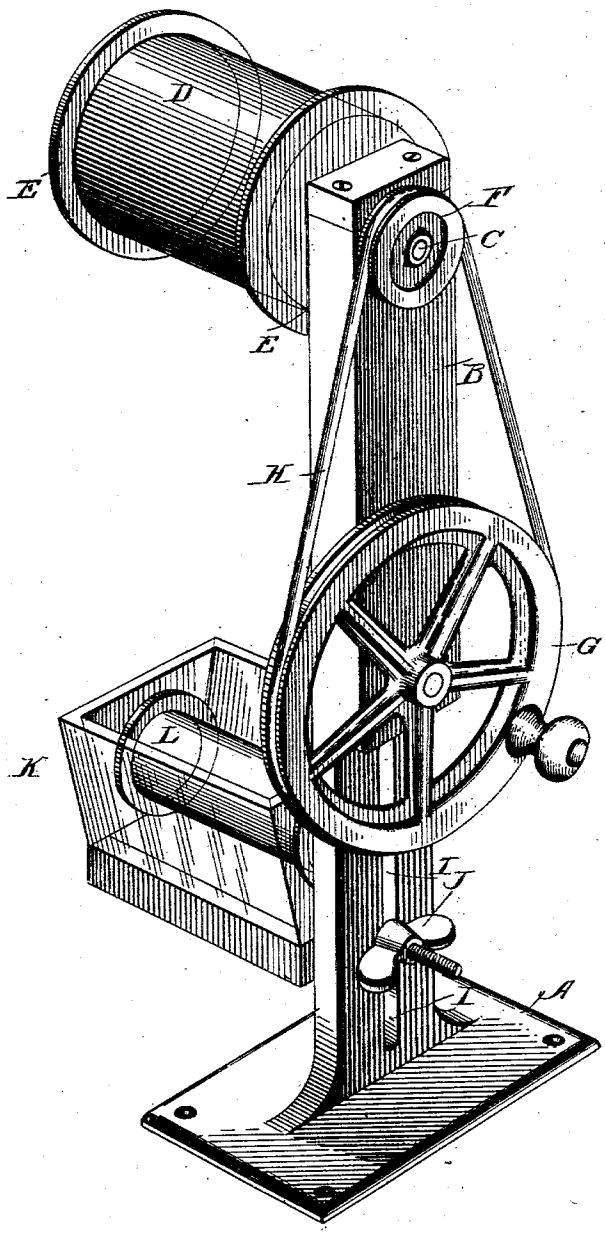
No. 634,631. Patented Oct. 10, 1899.

C. W. H. SMITHERS & A. A. KELLY.

APPARATUS FOR DEVELOPING ROLL FILMS.

(Application filed Apr. 9, 1898.)

(No Model.)



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APPARATUS FOR DEVELOPING ROLL-FILMS.

SPECIFICATION forming part of Letters Patent No. 634,631, dated October 10, 1899.

Application filed April 9, 1898. Serial No. 677,033. (No model.)

To all whom it may concern:

Be it known that we, CHARLES W. H. SMITHERS and ANTHONY A. KELLY, citizens 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 Apparatus for Developing Roll-Films, of which the following is a specification.

This invention relates to an apparatus for developing roll-films; and the object is to construct an apparatus that will produce uniform development and afford means whereby the same may be watched throughout the entire process.

For the attainment of these objects and for other purposes hereinafter enumerated in brief certain details of construction, arrangement, and combination of parts are necessary, all of which will be more fully described hereinafter.

The novel features of the invention are embraced in the appended claim, which are intended to accord in their terms, spirit, and meaning with the prior state of the art and the existing law, reference being had to the accompanying drawings, forming part of this specification.

Referring by letters of reference to the drawings, A represents the base, having an upright B. Journaled approximately near the top of the upright B is a horizontal shaft *c*, having mounted upon one end thereof a hollow glass drum D, provided with flanges E. This drum is adapted to receive the film and to be rotated by the pulley F, which is mounted upon the opposite end of the shaft and connected to the hand-wheel G by the belt H, the hand-wheel being journaled to the side of the upright directly beneath the pulley and adapted to operate the same. The portion of the upright between the hand-wheel and the base is cut away and provided with a slot I, adapted to receive a thumb-screw J, which affords means for adjustably securing the glass receptacle K beneath the drum. This receptacle is adapted to be filled with the developing solution and to admit of the immersion of the solid glass spool L, which serves to retain the film within the same.

Mode of operation: The ends of the films are first secured together in any suitable manner, the same being then placed over the drum with the film side outward and the glass spool in the loose end thereof. The glass receptacle containing the developing solution is then adjusted so as to allow the free and easy working of the spool therein. By turning the hand-wheel the drum is caused to rotate, thus immersing the film in the solution and producing a uniform development and providing means whereby the entire process may be watched by the aid of ruby light.

It will thus be seen that we provide a developing apparatus for roll-films that will quickly and easily perform all of its intended functions, the entire process being carried on without the necessity of the operator's fingers coming in contact with the film and preventing the possibility of foreign matter being deposited thereon.

Having thus described the various features of our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a developing apparatus, the combination with a base having an upright and a horizontal shaft journaled at the top thereof, of a glass drum mounted upon the said shaft on one side of said upright, said drum having flanges upon its ends, a pulley mounted on said shaft, opposite said drum, said drum and pulley being operated by a belt and hand-wheel, a glass receptacle adjustably secured to the said upright beneath said drum, and a spool having flanges upon its ends, said spool adapted to rest in said receptacle, substantially as shown and for the purpose set forth.

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