

No. 779,665.

PATENTED JAN. 10, 1905.

E. V. PIERCY.
PHOTOGRAPHIC SHUTTER.
APPLICATION FILED NOV. 30, 1903.

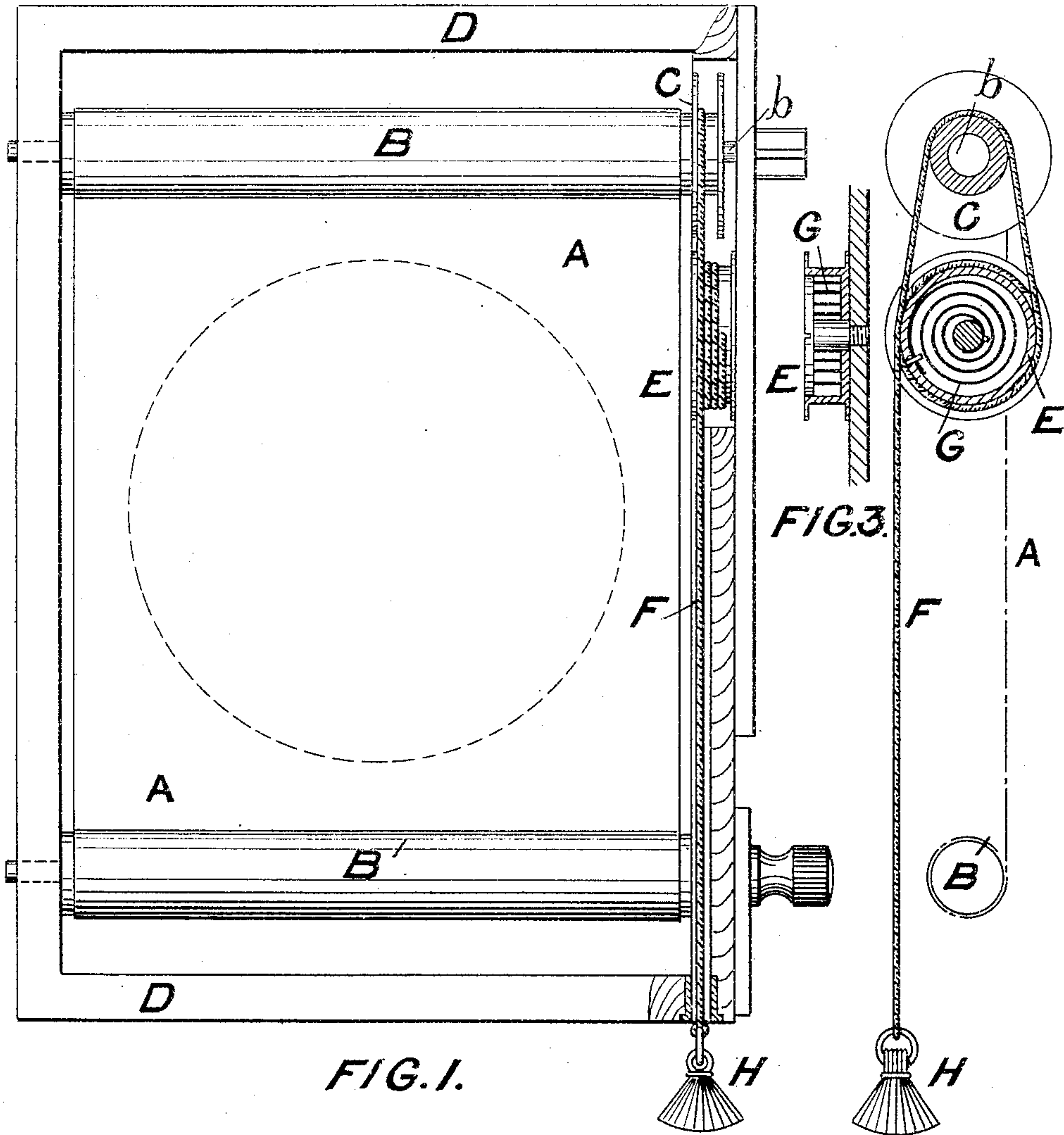


FIG. 1.

FIG. 2.

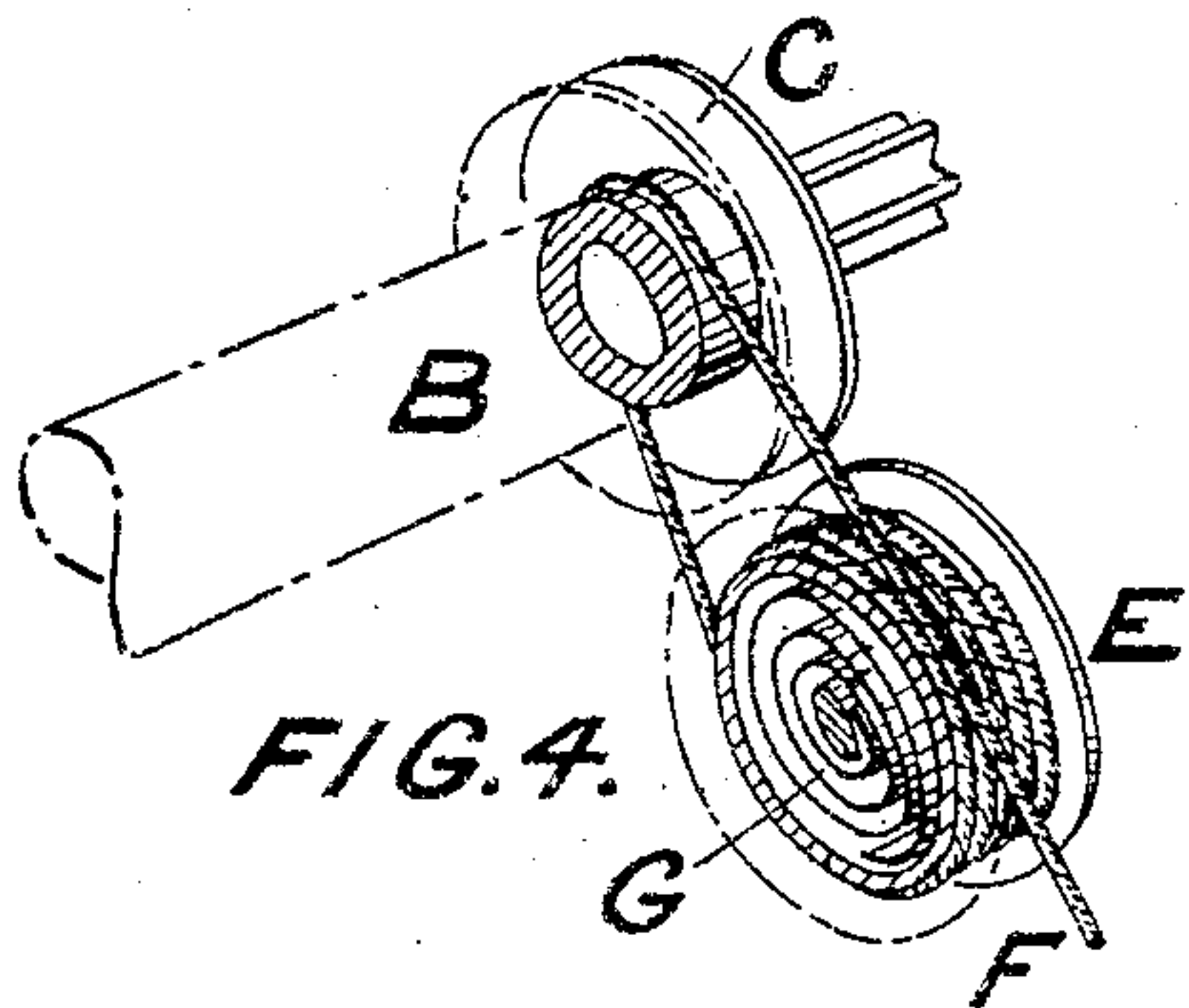


FIG. 4.

WITNESSES.

E. Howard
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INVENTOR.

E. V. Piercy
by *E. Howard*
att'y

UNITED STATES PATENT OFFICE.

ERNEST VARY PIERCY, OF ALTRINCHAM, ENGLAND, ASSIGNOR TO THE
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PHOTOGRAPHIC SHUTTER.

SPECIFICATION forming part of Letters Patent No. 779,665, dated January 10, 1905.

Application filed November 30, 1903. Serial No. 183,253.

To all whom it may concern:

Be it known that I, ERNEST VARY PIERCY, a British subject, and a resident of Altrincham, in the county of Chester, England, have invented certain new and useful Improvements in Photographic Shutters, of which the following is a specification.

This invention relates to certain improvements in roller-blind shutters for photographic cameras in which the blind is rolled up upon a roller by means of a cord affixed to a pulley on the roller-spindle. Hitherto in the construction adopted the cord has been drawn out when the shutter is set and remains hanging loose for its full length while the shutter is set and until it is released for making an exposure. This loose length of cord is an objectionable feature, as it is liable (in a breeze or current of air, for instance) to become entangled with or wrapped round the pneumatic tube or other part of the fittings of the shutter or camera and at the critical moment impedes the travel of the blind and interferes with the proper exposure of the sensitive plate. The present invention is designed to obviate this and to construct the shutter so that the cord will always be drawn back again and disappear inside the shutter as soon as released and the blind when set permitted to travel from one roller to the other without pulling upon or operating the cord.

It consists, essentially, in attaching the cord to a detached spring-operated drum distinct from the blind-roller and passing it round the pulley on the blind-roller, so that when drawn in one direction it rotates the pulley and roller and when released it is slack on the pulley and is drawn back again and coiled upon the spring-operated drum.

The invention will be fully described with reference to the accompanying drawings.

Figure 1 is a front elevation, partly in section, of roller-blind shutter with the invention applied thereto; Fig. 2, a side elevation in section of same; Fig. 3, a sectional elevation of spring winding-drum E; Fig. 4, a perspec-

tive view of the roller-pulley C and the spring winding-drum E.

The roller-blind A, the rollers B B', and the roller-pulley C are mounted in the usual way in the case D with any convenient construction or arrangement of retaining and releasing mechanism.

A detached spring winding-drum E is pivoted in the case D near to the journal of the roller, and to this drum the winding-cord F is attached. In the interior of the drum E or otherwise fitted is a helical or spiral spring G, coiled to rotate the drum in one direction. The cord F is passed from the drum E around the pulley C on the blind-spindle b and thence to the outside of the case D, as shown. The pulling of the winding-cord F tightens it upon the roller-pulley C and causes the pulley to rotate, at the same time unwinding it from the spring-operated drum E. The release of the cord F loosens it around the pulley C and permits the drum E by the action of the spring G to rotate in the reverse direction and coil up the cord, drawing it into the interior of the case D, where it disappears, with the exception of the knot or tassel H left protruding.

What I claim as my invention, and desire to protect by Letters Patent, is—

1. In a roller-blind shutter for photographic cameras the combination with the roller-blind A, the blind-rollers B B' to which the blind is attached, the roller-pulley C on the end of the roller B, and the case D in which they are mounted, of a detached spring-driven drum E, and a cord F attached by one end to the drum E, and passed round the roller-pulley C, and a tassel H on the end of the cord, substantially as described.

2. In a roller-blind shutter for photographic cameras the combination with the roller-blind A, the blind-rollers B B' to which the blind is attached, the roller-pulley C on the end of the roller B, and the case D in which they are mounted, of a separate detached spring-driven drum E, a spring G placed inside the drum to rotate it independently of the blind, a cord F

attached to the drum and passed over the roller-pulley C so that when pulled it rotates the roller B in one direction, and when released disappears into the interior of the case, substantially as described.

3. In a roller-blind shutter for photographic cameras the combination with the roller-blind A, the blind-rollers B B' to which the blind is attached, the roller-pulley C on the end of the roller B, and the case D in which they are

mounted, of the separate detached spring-driven drum E and a disappearing cord F attached thereto, substantially as described.

In witness whereof I have hereunto signed my name, in the presence of two subscribing witnesses, this 19th day of November, 1903.

ERNEST VARY PIERCY

Witnesses:

J. OWDEN O'BRIEN,

B. TATHAM WOODHEAD.