

No. 671,035.

Patented Apr. 2, 1901.

W. O. STANLEY.
PHOTOGRAPHIC SHUTTER.

(Application filed Sept. 22, 1899.)

(No Model.)

Fig. 2.

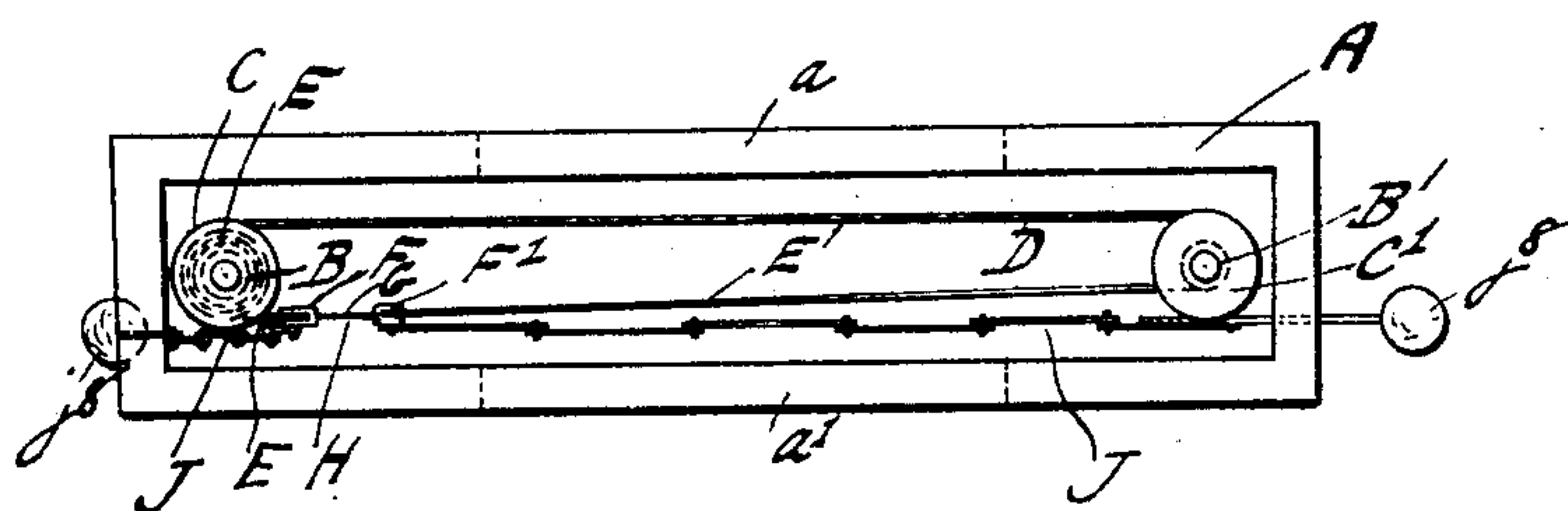
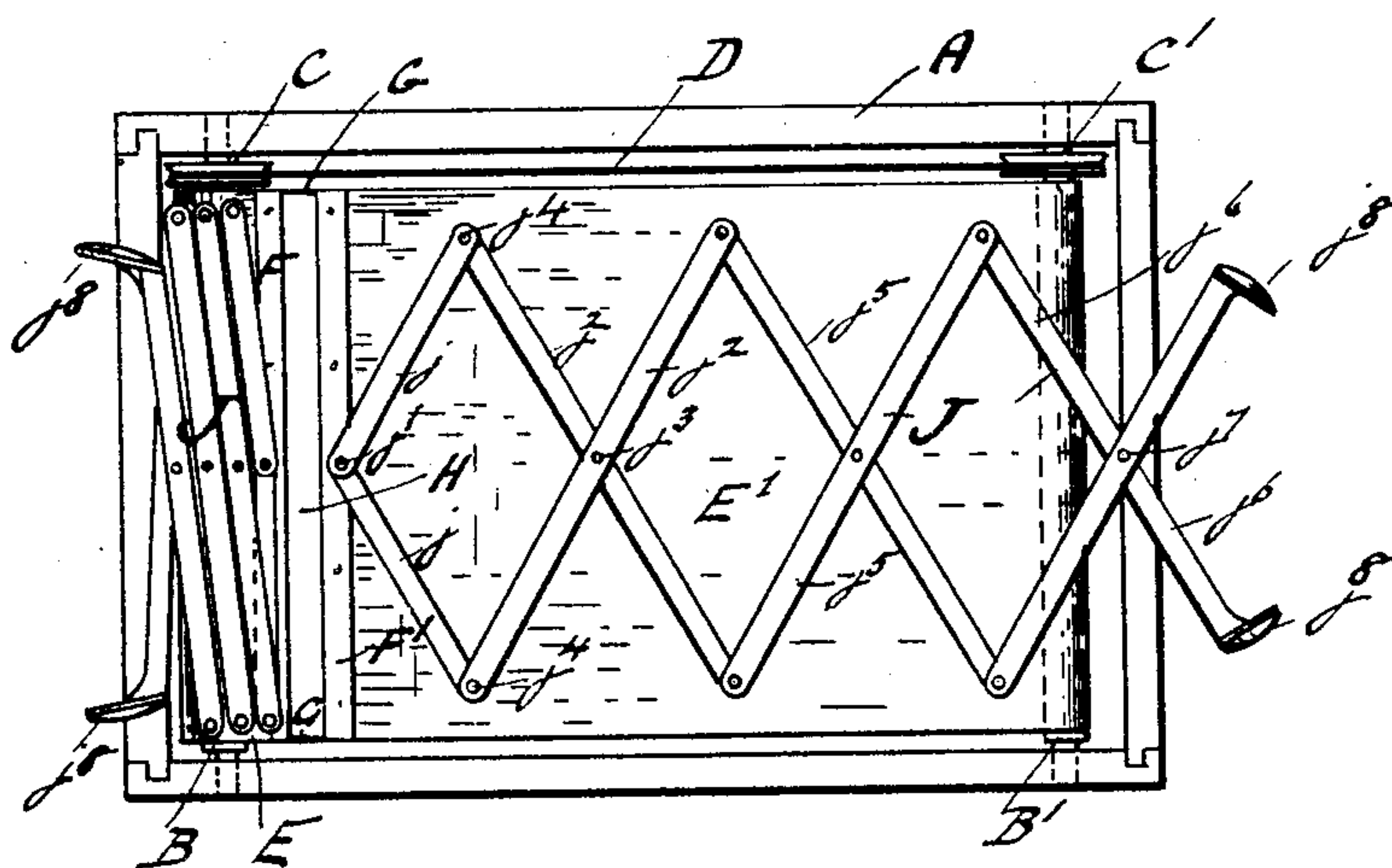


Fig. 1.



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PHOTOGRAPHIC SHUTTER.

SPECIFICATION forming part of Letters Patent No. 671,035, dated April 2, 1901.

Application filed September 22, 1899. Serial No. 731,324. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM OSWALD STANLEY, a subject of the Queen of Great Britain and Ireland, and a resident of Dublin, Ireland, have invented certain new and useful Improvements Relating to Photographic Shutters, of which the following is a specification.

This invention relates to means for actuating shutters used in photographic apparatus.

The annexed drawings illustrate the invention as applied to a shutter of the roller-blind variety and enables such a shutter to be used without a spring and to be at all times set and ready for use.

Figure 1 is a front elevation of the shutter with its actuating mechanism, the cover of the case containing it being shown removed. Fig. 2 is a plan view thereof with the top part of the case removed.

In a case A, the back and front of which are intended to be perforated to suit whatever lens may be used, as shown at *a* and *a'*, are journaled two rollers B B', having on them pulleys C C', respectively, geared to one another by a cord D, preferably elastic. To one roller B is attached a blind E and to the other roller a blind E'. Suitable strengthening-strips F F' are fastened along the ends of these blinds, and these two strips F F' are attached to one another, preferably at their ends, by cords or the like G, so as to leave an interval of space H between them, which may be more or less in width, according to the amount of exposure desired. To each of the strips F F' is attached a system of levers J of the kind known as those applied to lazy-tongs—namely, first two links *j j*, pivoted at *j'* to the strip F or F', two levers *j² j²*, pivoted together at *j³* and to the ends of links *j j* at *j⁴ j⁴*, and, further, couples of levers *j⁵ j⁶*, similarly pivoted together and to the next couples, the last couple being pivoted also to the case A at *j⁷* and preferably having their outwardly-extending ends shaped to form finger-holds *j⁸ j⁸*. The shutter being in the position shown in Figs. 1 and 2, by pressing together the finger-holds *j⁸* on the left the strip F will be carried to the right, unrolling the blind E and turning roller

B. The cord D transfers the rotary movement of roller B to roller B' and also winds up the blind E', the elasticity of the cord D allowing of difference in the rotary speeds of the two rollers. The system of levers on the right will now be compressed, as illustrated, for those on the left in the drawings, and when next the shutter requires to be actuated for purposes of exposure a similar pressure on the finger-holds *j⁸* on the right will again carry the blinds into the position shown in Figs. 1 and 2.

The blinds hereinbefore mentioned, with their spacing-strips, constitute, as will be readily understood, an opaque screen consisting of two parts extending in two opposite directions from an exposure-slot, and these parts are movable simultaneously back and forth, so as to carry the exposure-slot alternately back and forth across a stationary opening, and my invention, as stated in the claims, is of corresponding scope.

I therefore claim as my invention—

1. The combination with a photographic-apparatus shutter having opaque screens extending in two opposite directions from an exposure-space, of a system of levers known as "lazy-tongs" having connection with said screens, a stationary case, and pivotal connection of the extreme lever of said system with said case substantially as and for the purpose set forth.

2. The combination of a case, two rollers therein gear elastically connecting said rollers for simultaneous revolution, two blinds attached to said rollers, strengthening-strips at the ends of said blinds, means for connecting said strips so as to leave an interval between them, two systems of levers J known as "lazy-tongs" having attachment respectively to said strips and pivotal connection of their extreme members to the case for the purpose set forth.

In witness whereof I have signed this specification in the presence of two witnesses.

WILLIAM OSWALD STANLEY.

Witnesses:

LEOPOLD HUTCHISON DOUGLAS,
FRANK BARBER LOWE.