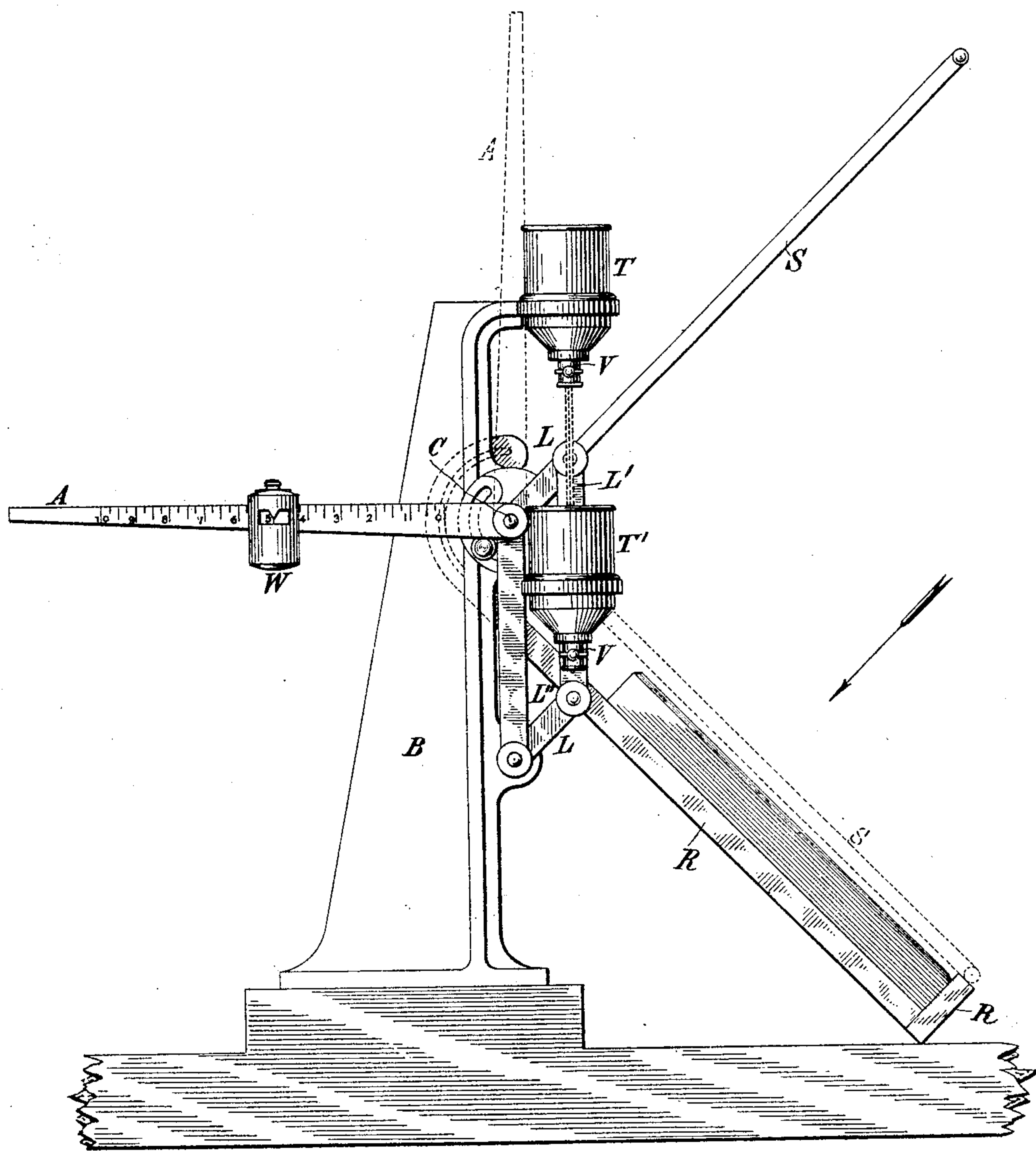


(No Model.)

E. K. ADAMS.
PHOTOGRAPHIC PRINTING APPARATUS.

No. 594,366.

Patented Nov. 30, 1897.



Witnesses:

Raphael Ketter
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UNITED STATES PATENT OFFICE.

ERNEST K. ADAMS, OF NEW YORK, N. Y.

PHOTOGRAPHIC-PRINTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 594,366, dated November 30, 1897.

Application filed September 1, 1897. Serial No. 650,251. (No model.)

To all whom it may concern:

Be it known that I, ERNEST K. ADAMS, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Photographic Apparatus, of which the following is a specification, reference being had to the drawing accompanying and forming a part of the same.

The invention subject of my present application is in an improved apparatus for taking solar prints from photographic negatives and similar purposes and designed to automatically shut off the light after a predetermined period of exposure, so as to obviate the attention and care now necessary, to permit a large number of printing-frames to be exposed simultaneously, and to secure a perfect uniformity in result.

The apparatus consists, essentially, of a hinged or movable screen or shade, a means for operating the same, a variable counterpoise for adjusting the power necessary for turning or closing the screen or shade, and a receptacle for receiving a regulated supply of sand or similar heavy material which acts as the weight for overbalancing the counterpoise. These parts or elements are arranged and combined in substantially the manner herein set forth to secure certainty of operation and simplicity of construction.

In the drawing hereto annexed the apparatus is shown in side elevation.

B is a standard of metal or wood to which is connected or which serves as a support for a rack R in an inclined position, so as to receive the direct rays of the sun. Any suitable contrivance may be provided for adjusting the inclination of the rack.

Fixed to a shaft C, having bearings in the standard B, is a frame S, covered with black cloth or otherwise constructed as a shade or screen and adapted to be raised to the desired height to permit the sun's rays to fall upon the printing-frames which are placed upon the rack R and to be lowered upon the rack to shut out the light from the frames thereon.

An arm A is rigidly connected with the shaft C, and hence the frame S, and carries a sliding counterweight W. The arm A is preferably graduated, so that the force re-

quired to lower the screen or shade may be readily determined by the adjustment of the weight W.

A system of parallel levers L L' L'' is mounted on the standard B, one end of the upper link, as L, being rigidly connected with the shaft C. The vertical link L' carries a ring or socket K, in which is set a receptacle T'. This latter has a conical bottom, with a contracted or funnel-shaped opening provided with a valve or cock V. A similar receptacle T is supported in a convenient manner on the standard B immediately over the first and serves as a hopper for fine black sand or similar material, which is permitted to run through the opening in its bottom into the receptacle T'. The rate of discharge of the sand is regulated by the cock V, and when, after a period, the duration of which is determined by the adjustment of the weight W, a sufficient weight of sand has run into the receptacle T' the frame S is lowered and caused to cover the printing-frames on the rack R.

When the apparatus is to be reset for use, the receptacles T T' may be simply transposed or the sand emptied from the lower into the upper.

What I claim is—

1. The combination with a support for holding photographic-printing frames, of a counterbalanced movable shade or screen, means for moving the shade or screen to cover the printing-frames, a receptacle connected therewith and a device for delivering such a substance as sand in regulable quantity into said receptacle, to effect the movement of the shade or screen after a predetermined interval, as set forth.

2. The combination with a support for holding photographic-printing frames, a hinged screen or shade, a counterbalance tending to maintain the screen in a raised position, a receptacle connected with the shade and operating when filled with a heavy substance to lower the shade so as to cut off the light from the printing-frames, and a hopper from which such a substance as sand is delivered at a given rate into the said receptacle, as set forth.

3. The combination of the standard B, the frame-rack R, the hinged shade or screen S, the weighted arm A, rigidly connected with

the shade, the receptacle T' connected with the shade, and a hopper T for delivering sand at a predetermined rate into the receptacle T', as set forth.

- 5 4. The combination of the standard B, the frame-rack R, the shade or screen S and the weighted arm A fixed to the same shaft, the parallel levers L L' L'' pivoted to the stand-

ard and connected with the shade, the receptacle T' connected with said levers, and the sand-hopper T, as and for the purpose described. 10

ERNEST K. ADAMS.

Witnesses:

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