

(No Model.)

E. J. MOLERA.
CAMERA SHUTTER.

No. 490,031.

Patented Jan. 17, 1893.

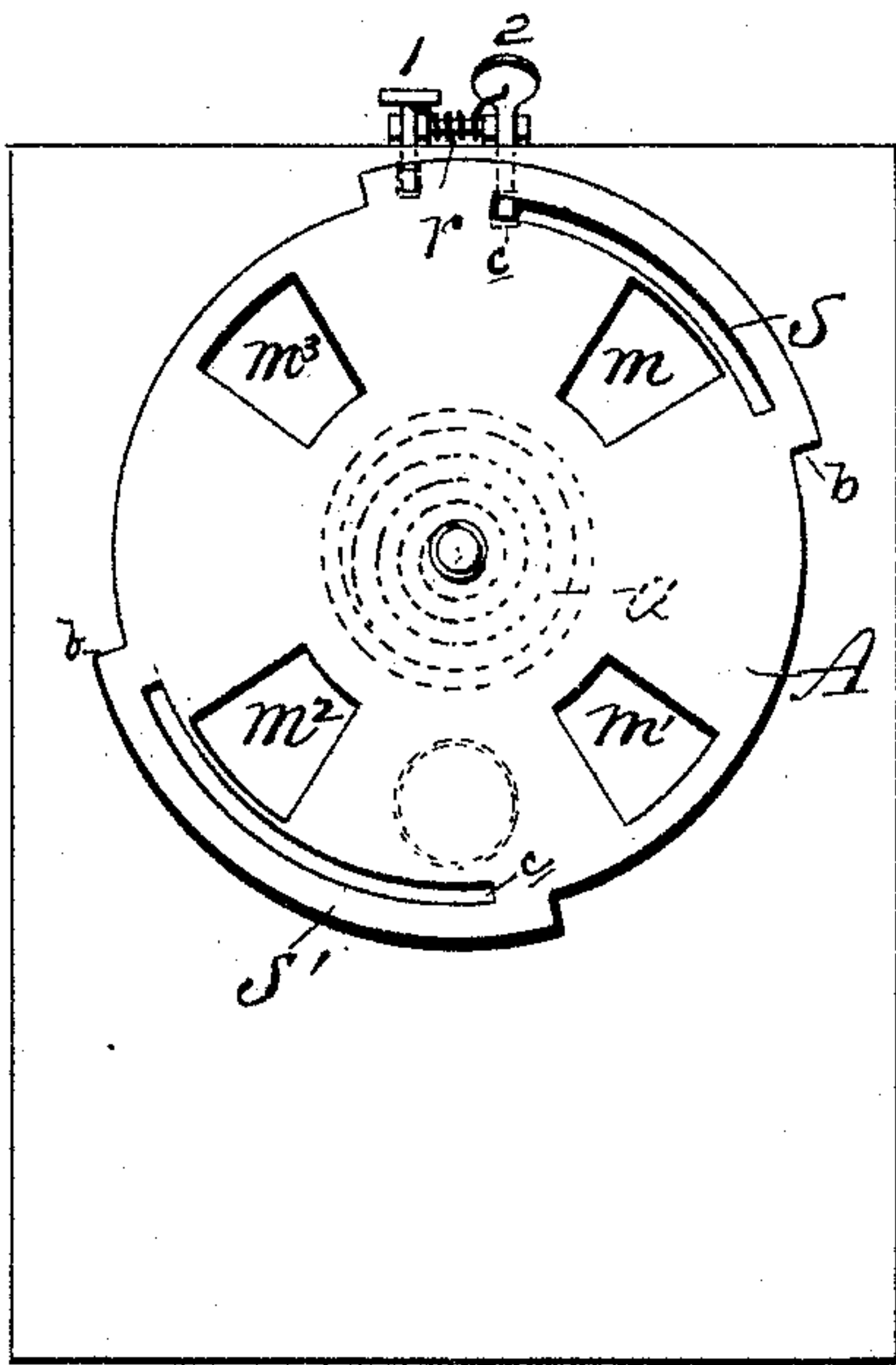
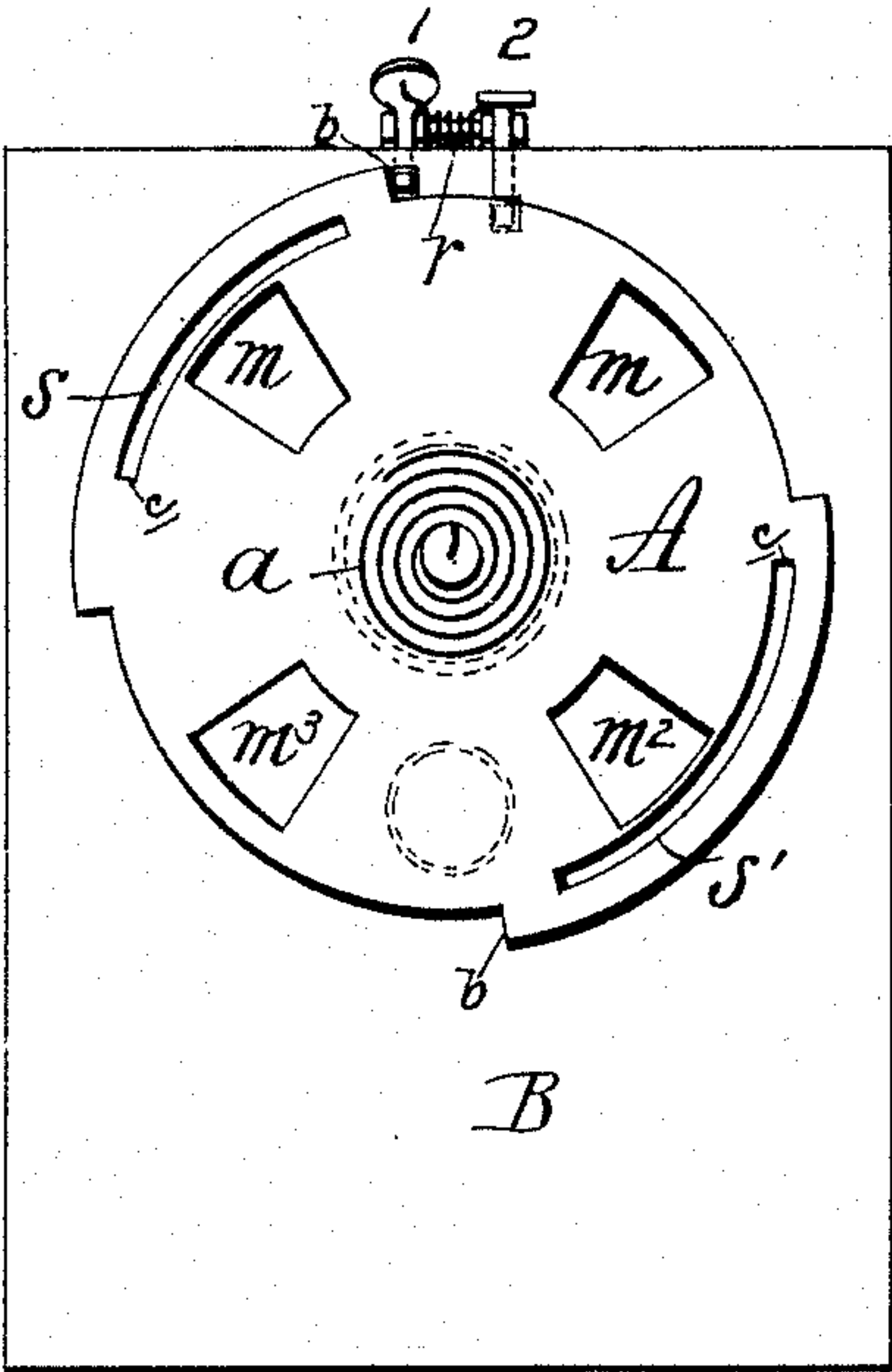
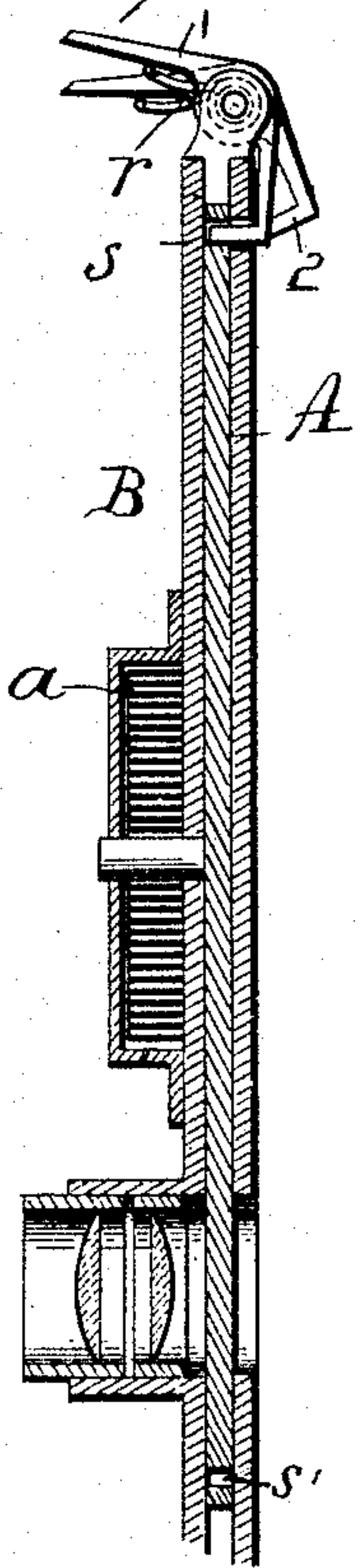


Fig. 1.

Fig. 3.

Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

EUSEBIUS J. MOLERA, OF SAN FRANCISCO, CALIFORNIA.

CAMERA-SHUTTER.

SPECIFICATION forming part of Letters Patent No. 490,031, dated January 17, 1893.

Application filed February 6, 1892. Serial No. 420,562. (No model.)

To all whom it may concern:

Be it known that I, EUSEBIUS J. MOLERA, of San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Camera-Shutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in shutters for photographic cameras,—its object being to provide a shutter with a series of openings and to so construct the device that one of said openings will be uncovered at a time.

A further object is to produce a shutter for a photographic camera which shall be simple in construction and effectual in the performance of its functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangement of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figures 1 and 2 are face views of my improved shutter, showing the same in different positions. Fig. 3 is a sectional view showing the arrangement of the keys 1, 2.

A represents the shutter which is actuated by spring *a*, one end of which is attached to the front plate of the camera and the other end to the shutter. The shutter consists of a steel plate having four perforations or openings *m*, *m'*, *m*², *m*³. The plate or shutter A is cut away on two opposite parts of the shutter to produce shoulders or stops *b* and is provided at points intermediate of the cut away portion with two slots *s*, *s'* to produce shoulders or stops *c*.

On top of the plate of the front B, two keys in the shape of hooks, represented by numbers 1 and 2 are pivoted; these keys engage respectively the shoulders or stops *b* and shoulders or stops *c* at the ends of the slots and are controlled by a spring *r* so

that one or the other of the keys will stop the shutter, unless both are raised at the same time by pressing said keys. In the position represented in Fig. 1, key 1 holds the shutter by its engagement with one of the stops *b* at the end of one of the notches cut on the rim of the disk of the shutter. If key 1 is forced downwardly then the stop *b* is released and the shutter will turn around until key 2 drops in the slot *s*. If key 2 is pressed now, the shutter will assume a position similar to the one shown in Fig. 1. It will be seen then, that by pressing alternately keys 1 and 2 the shutter turns a quarter revolution and one opening passes before the lens, making thereby an exposure. The shutter thus constructed is very simple, easy to manipulate and effectual in the performance of its functions.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with a spring actuated shutter axially supported on a suitable pivot, said shutter having a slotted and notched outer portion, said notches and slots concentric with the axis, of keys adapted to engage in said notches and slots, substantially as set forth.

2. A camera shutter comprising an axially supported spring actuated disk, said disk having recesses formed on its periphery and provided with slots extending between the ends of the recesses, said recesses and slots located at different distances from the disk support and terminating in shoulders, and spring keys, arranged and adapted to alternately enter the slots and peripheral recesses, substantially as set forth.

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

EUSEBIUS J. MOLERA.

Witnesses:

F. ORTON,

C. A. STETEFELDT.