No. 654,791. Patented July 31, 1900.

A. O. GRAF.

SIDE ARM BRACKET SPRING FOR CAMERAS.

(Application filed May 1, 1900.)

(No Model.)

Fig. 1.

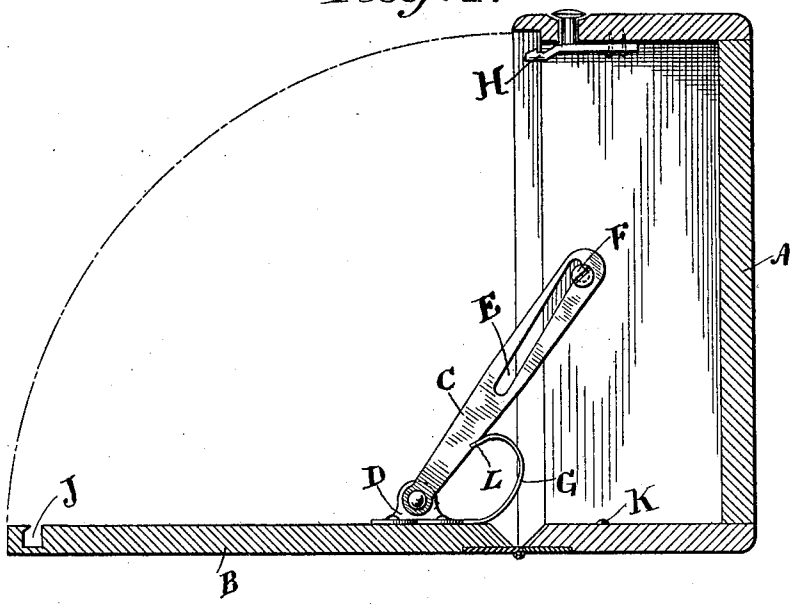
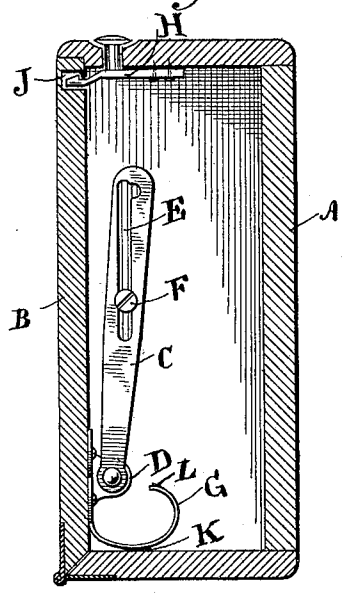


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

ADOLF O. GRAF, OF DEMAREST, NEW JERSEY, ASSIGNOR TO THE MANHATTAN OPTICAL COMPANY, OF NEW YORK.

SIDE-ARM-BRACKET SPRING FOR CAMERAS.

SPECIFICATION forming part of Letters Patent No. 654,791, dated July 31, 1900.

Application filed May 1, 1900. Serial No. 15,038. (No model.)

To all whom it may concern:

Be it known that I, ADOLF O. GRAF, a citizen of the United States, and a resident of Demarest, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Side-Arm-Bracket Springs, of which the following is a specification.

The object of my invention is to provide a new and improved spring for the side-arm supporting-brackets of hinged lids for cases of all descriptions to force the side-arm bracket into its locking position when the lid is opened and to remain in tension when the lid is closed, ready to throw out the lid as soon as the same is released from its catch.

Other advantages will appear later in the specification.

For the purposes of illustration I have represented my improved spring as employed on a camera-case.

In the drawings, Figure 1 is a sectional side view of an opened camera having my new spring applied to the side-arm bracket thereof. Fig. 2 is a similar view showing the spring in the position it occupies when the camera is closed.

Similar reference-letters denote similar parts throughout the views.

A is the usual camera-case of an ordinary folding extension-front camera.

B is the folding side of the camera-case, adapted to close the case in its raised position and in its lowered position to serve as the bed on which the extension-front slides.

C is a side-arm bracket hinged to the support D on the side B and provided with an elongated slot E, receiving a pin F, fastened in the camera-case. There are two of these brackets, one on each side.

Integral with the support D is an elongated piece of metal G, formed into a curved spring extending rearwardly or toward the camera-box at the point where it joins the support D and curving upwardly and forwardly, the convexity being toward the rear and ending in a forwardly-extending tip. When the camera is opened—that is, when the folding side B is turned down into its horizontal position—the outer end of the spring G comes in contact with the side arm C and forces the upper end thereof to move outwardly, so that the pin F engages in the L-shaped end of the elongated slot E. When the camera is closed—that is, when the folding side B is in its raised or upright position—the convex side of the spring G under some compression bears on the pin K in the bottom of the camera-case, as shown in Fig. 2. The result is that on pressing the push-button catch H on the top of the camera-case to release it from the notch J in the side B the spring G throws out the side B with some force to the point where the hand can easily grasp it and carry it still farther into its horizontal position. The end of the spring G now comes into play and throws the side arm C outwardly until the pin F engages in the end of the slot E, as above described, whereby the side B is firmly held in its horizontal position. It thus appears that the spring G has two functions: first, that of throwing out the folding side of the camera, and, second, that of throwing the side-arm bracket into locking position.

In order to prevent the spring G from slipping sidewise out of engagement with the bracket C, the end of the spring G is forked or notched, as seen at L, and the bracket C lies in this notch.

While I have shown my invention as embodied in a camera-case, it is applicable to many other articles, such as writing-boxes, desks, trunks, &c.

What I claim as new, and desire to secure by Letters Patent, is—

1. A side-arm-bracket spring having a point of attachment to the folding lid of a case, and having a convexly rearwardly curved portion adapted to bear upon the stationary bottom of the case when the folding lid is in its closed position, and having also a forwardly-curved tip adapted to bear on the side-arm bracket, said convexly rearwardly curved portion lying between the said point of attachment and the said tip, when the folding lid is in its open position, substantially as described.

2. In a camera-case, the combination of a folding side, a support thereon, a side-arm bracket pivoted to the support at one end and loosely engaging the camera-case at its other end, and a spring integral with the support and bearing at its tip on the side-arm

bracket when the side is in its horizontal position, and bearing at its middle portion on the bottom of the camera-case when the side is in its raised position, substantially as described.

3. In a camera-case, the combination of a folding side, a support thereon, a side-arm bracket pivoted at one end to the support and having at its other end an elongated slot, a pin attached to the inner side of the camera-case and passing through the slot, and a spring integral with the support, terminating in a notched tip and bearing at said notched tip on the side-arm bracket to cause the slot and the pin to engage securely when the folding side is in a horizontal position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two witnesses.

ADOLF O. GRAF.

Witnesses:
THEODORE T. DORMAN,
G. A. TAYLOR.