

J. STOCK & J. STOCK.

Improvement in Photographic Apparatus.

No. 123,522.

Patented Feb. 6, 1872.

Fig. I.

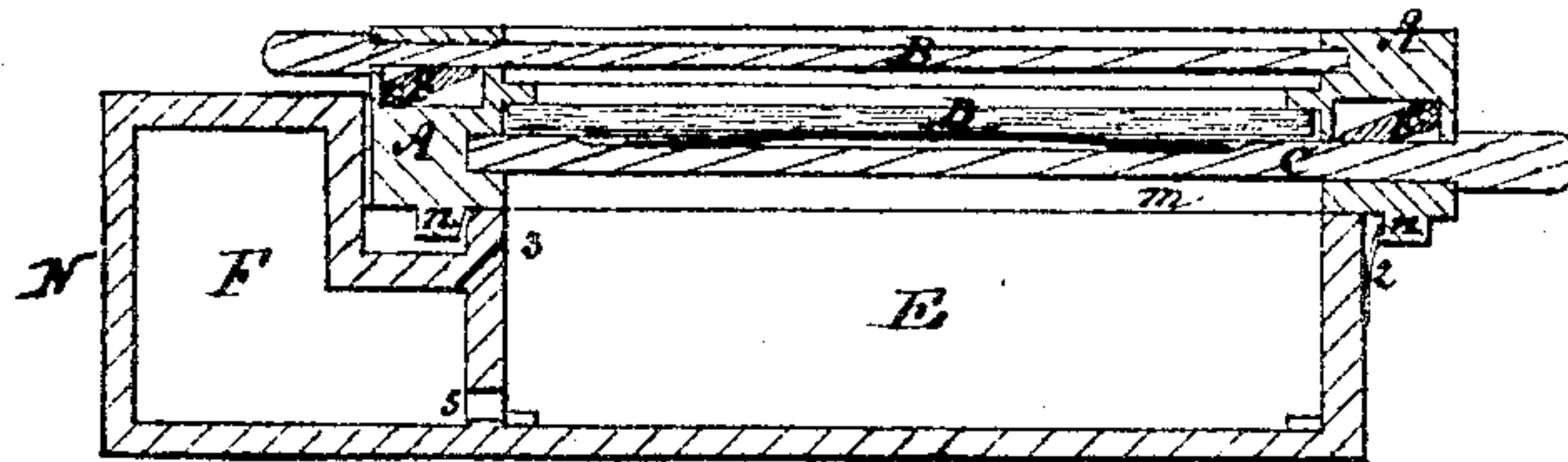


Fig. II.

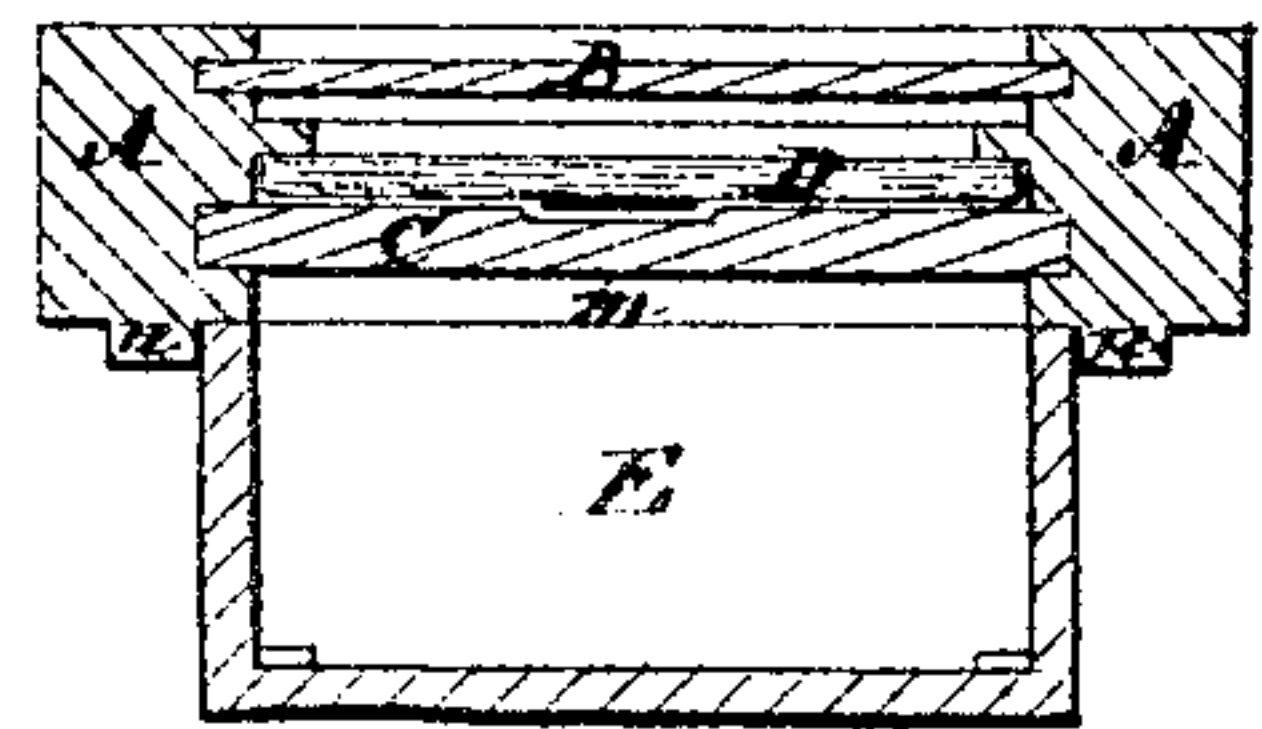


Fig. III.

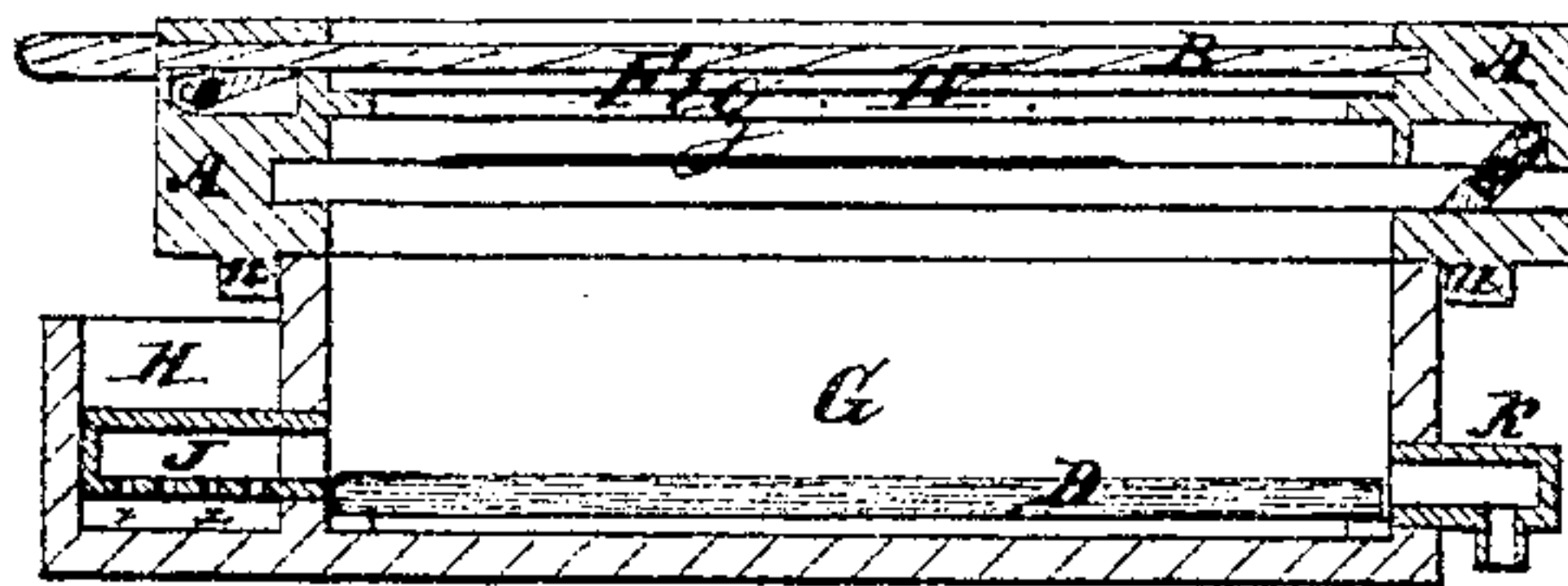
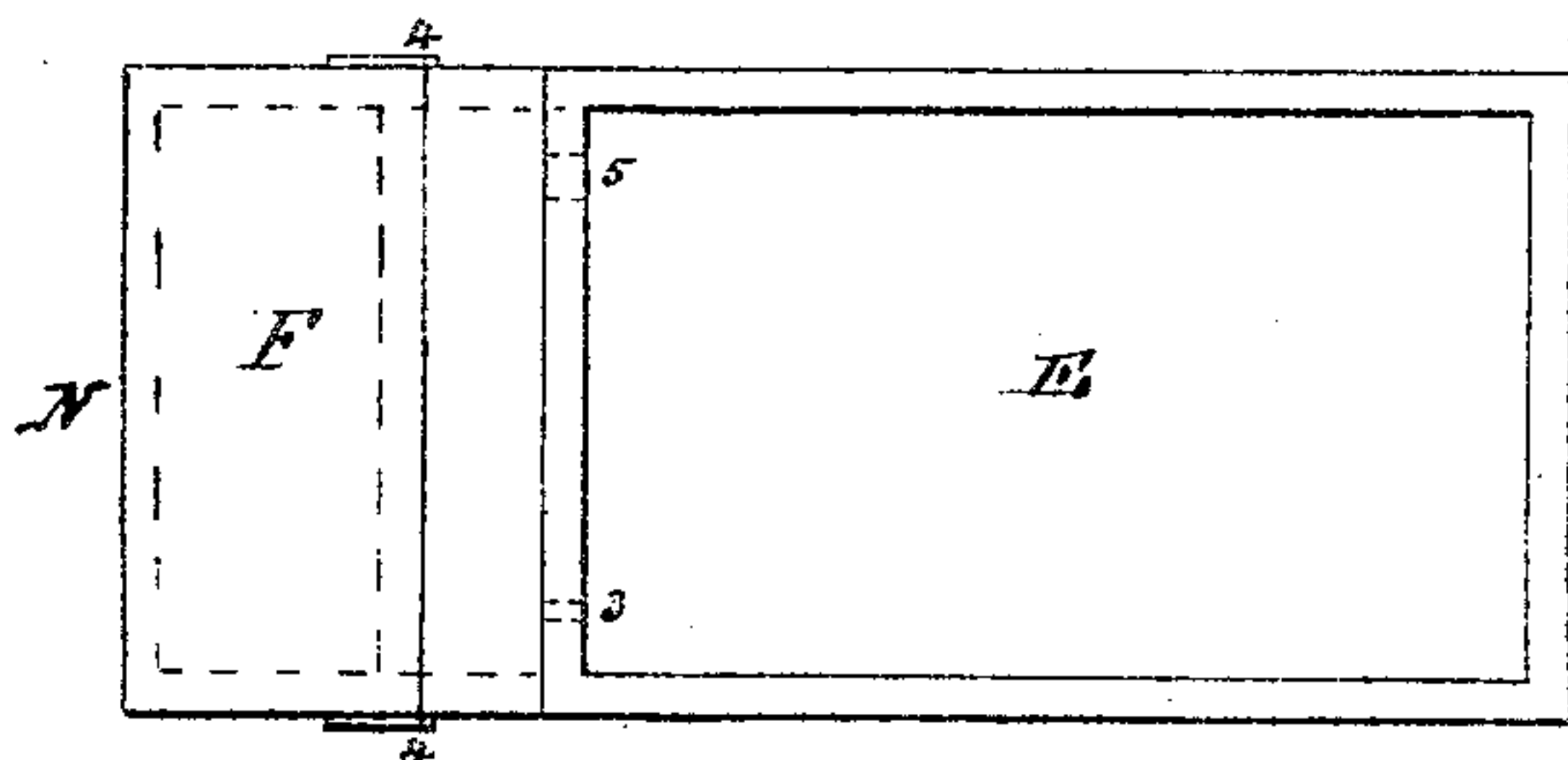


Fig. V.

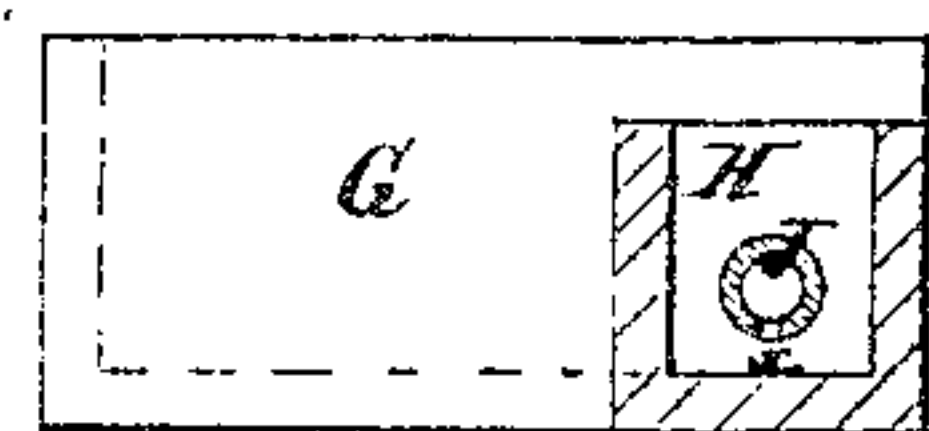
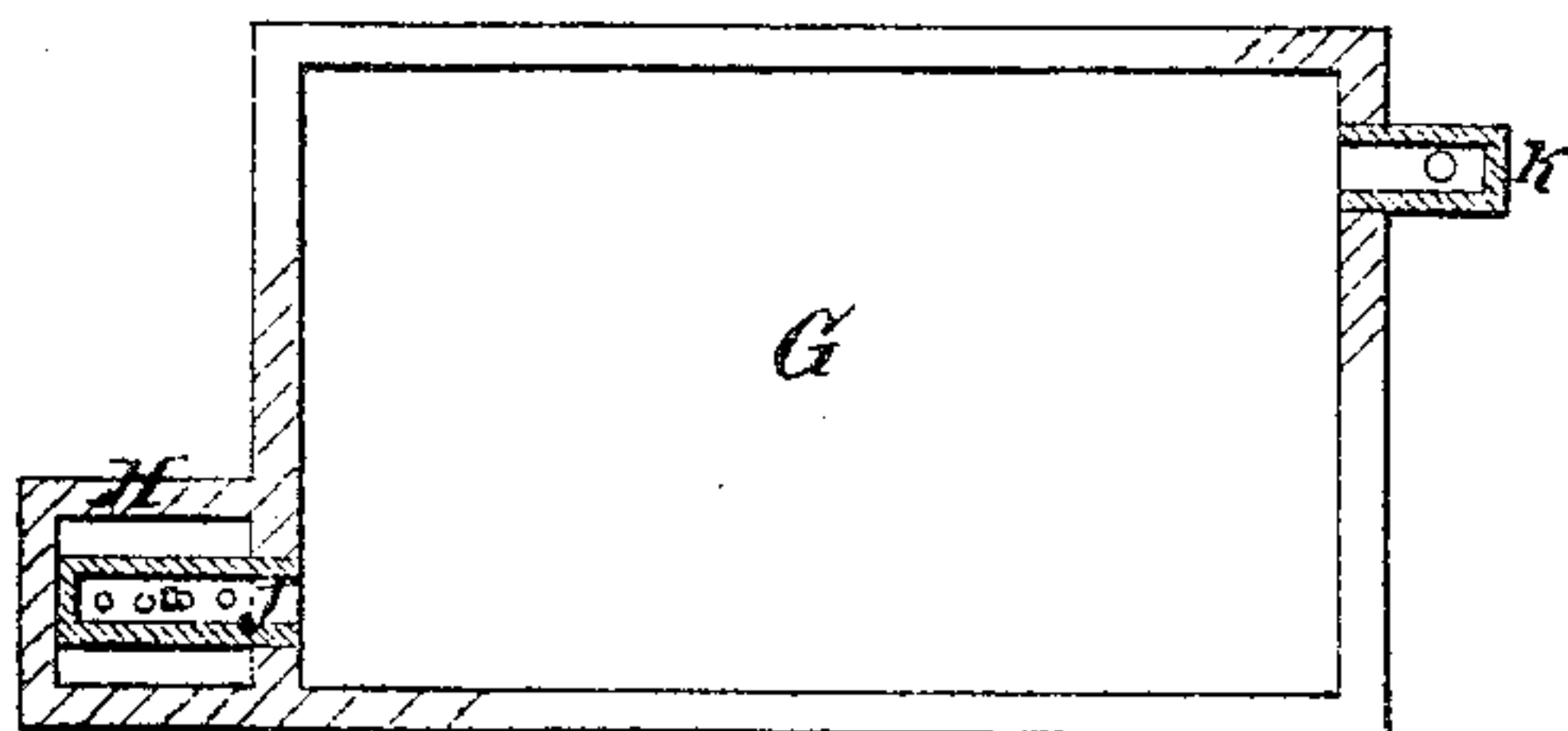


Fig. VI.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN STOCK AND JACOB STOCK, OF NEW YORK, N. Y.

## IMPROVEMENT IN PHOTOGRAPHIC APPARATUS.

Specification forming part of Letters Patent No. 123,522, dated February 6, 1872.

Specification describing certain Improvements in Photographic Plate-holders, Silver, and Water Baths, invented by JOHN and JACOB STOCK, of New York, State of New York.

The nature of our invention consists in the construction of a plate-holder, in combination with either a silver bath or a water bath, in such a manner that the glass plate can pass from the plate-holder into the silver bath and back again without being exposed to the light, and likewise from the plate-holder into the developing and water bath, to have the picture fixed and washed.

In the accompanying drawing, Figure I represents a longitudinal section of a plate-holder and silver bath embodying our invention. Fig. II is a cross-section of the same. Fig. III is a top view of a silver bath. Fig. IV is a longitudinal section of the plate-holder and water bath. Fig. V is an end view of the water bath, partly in section; and Fig. VI is a top view of the developing or water bath partly in section.

Similar letters represent similar parts in all the figures.

A is the plate-holder, provided with the usual slide B before the plate, and arranged with a second slide, C, behind the glass-plate D. This second slide C takes the place of the hinged door in general use at present with plate-holders to put in and take out the glass plate, and to fasten the same in its proper place. For this latter purpose this slide C is arranged with a suitable spring, *m*, on its inner side, fitting into a suitable recess made in the slide while the same is passed into or out of the plate-holder, and acting against the back of the glass plate, to keep the same fast in its position. Small spring valves or ledges *s s* are arranged in the frame of the plate-holder to close the openings when the slides have been removed, in the usual manner, to prevent the admission of light, (see Fig. IV.) Suitable projections, *n*, are made on the plate-holder, fitting tight over the silver and water baths, when the same are connected with the plate-holder, so as to exclude the light from the same. E is the silver bath, upon which the plate-holder A can be fixed and fastened by suitable projections 4, (see Fig. III,) and a small spring, 2, (see Fig. I.) To this silver bath E

a perfectly-tight chamber, F, is attached on one side, connected together by means of a pipe, 5, or by any other suitable opening near its bottom, and having a small air-hole, 3, near the upper part. This chamber F is fitted with the necessary solution of silver, when the openings 3 and 5 may be stopped up if found necessary, and the solution of silver be retained in this reservoir F by standing the bath on its end N. When the glass plate D has been covered with the required chemicals the same is placed in the plate-holder A and fastened in its place by means of the slide C, as above described. The plate-holder is then fixed upon the silver bath E, after first removing the stoppers from the openings 3 and 5, and the silver bath laid on its bottom, when the solution of silver will flow into the bath E. The slide C is then removed, when the prepared glass plate D is allowed to fall into the silver bath E. After remaining in the same a sufficient length of time, the silver bath, with the plate-holder attached, is turned on its end N, to allow the solution of silver to flow back into the reservoir F, after which the bath is turned quite over, so as to allow the glass-plate to fall back again into its place in the plate-holder A, when the slide C is inserted again into the plate-holder, so as to fasten the glass plate D and hold the same in its proper place. The plate-holder is now ready to be fixed to the camera. After the picture is taken the plate-holder is fixed upon the developing-box G. This developing bath and water bath G consists of a box fitting tightly into the recess or projections *n* on the plate-holder, and has on one side a reservoir or tank, H, open at the top and connected with the bath G by means of a pipe, J. This pipe connects with the water reservoir only by means of holes *x*, made in the underside of said pipe to prevent the admission of light into the bath G. The escape-pipe K is likewise closed at its end, and made with a branch leading downward, for the same purpose of excluding the light. When the plate-holder A has been fixed upon the bath G the slide C is again withdrawn, so as to allow the glass plate D to fall into this bath G. The required chemicals to develop the picture are then poured into the reservoir H, entering through the holes *x* in the bottom of the pipe J into



said pipe, and into the bath G, and flow out or escape through the pipe K, the construction of said pipes preventing any admission of light to the inside of the box G. When the picture has been developed, water is poured into the reservoir H to clean the plate, after which operation the plate-holder may be removed and the plate taken away.

From the above it will be perceived that by the construction of the plate-holder, silver, and water baths, and their combination with each other, the operation of silvering, developing, and washing the glass plate can be performed without handling the plate, and without exposing the glass plate, or any part of the inside of the apparatus to the light, and the whole process can be performed without the necessity of a dark room.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The plate-holder A, provided with the usual slide B before the glass plate, and a second slide, C, behind the plate, and provided with a suitable spring, *m*, attached to the slide C, substantially as and for the purpose set forth.

2. The silver bath E, in combination with a reservoir, F, connected through suitable openings, 5 and 3, or their equivalent, in combination with a plate-holder constructed as above described, and operating substantially as and for the purpose hereinbefore set forth.

3. The water bath G, provided with a reservoir, H, and connected through a pipe, J, having holes *x* only at its under side, substantially as and for the purpose set forth.

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