

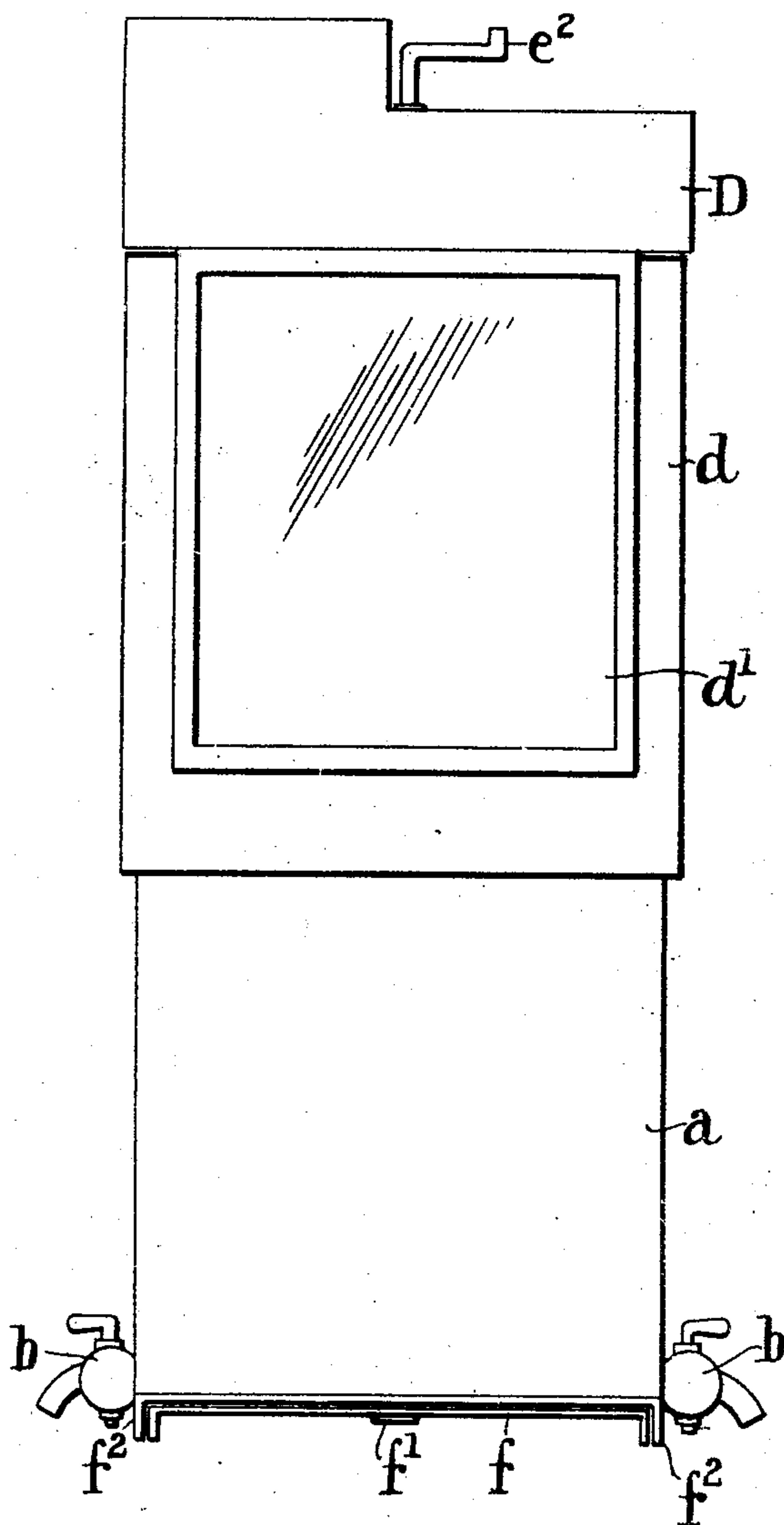
E. H. SMART.
 DAYLIGHT DEVELOPING APPARATUS FOR PHOTOGRAPHIC PLATES, FILMS, AND THE LIKE.
 APPLICATION FILED JULY 9, 1909.

955,443.

Patented Apr. 19, 1910.

2 SHEETS—SHEET 1.

Fig:1



Witnesses
H. H. Knight
Ray T. Ernst

Inventor
 Edmund Hodgson Smart
 by his attorneys *James W. Smith*

E. H. SMART.

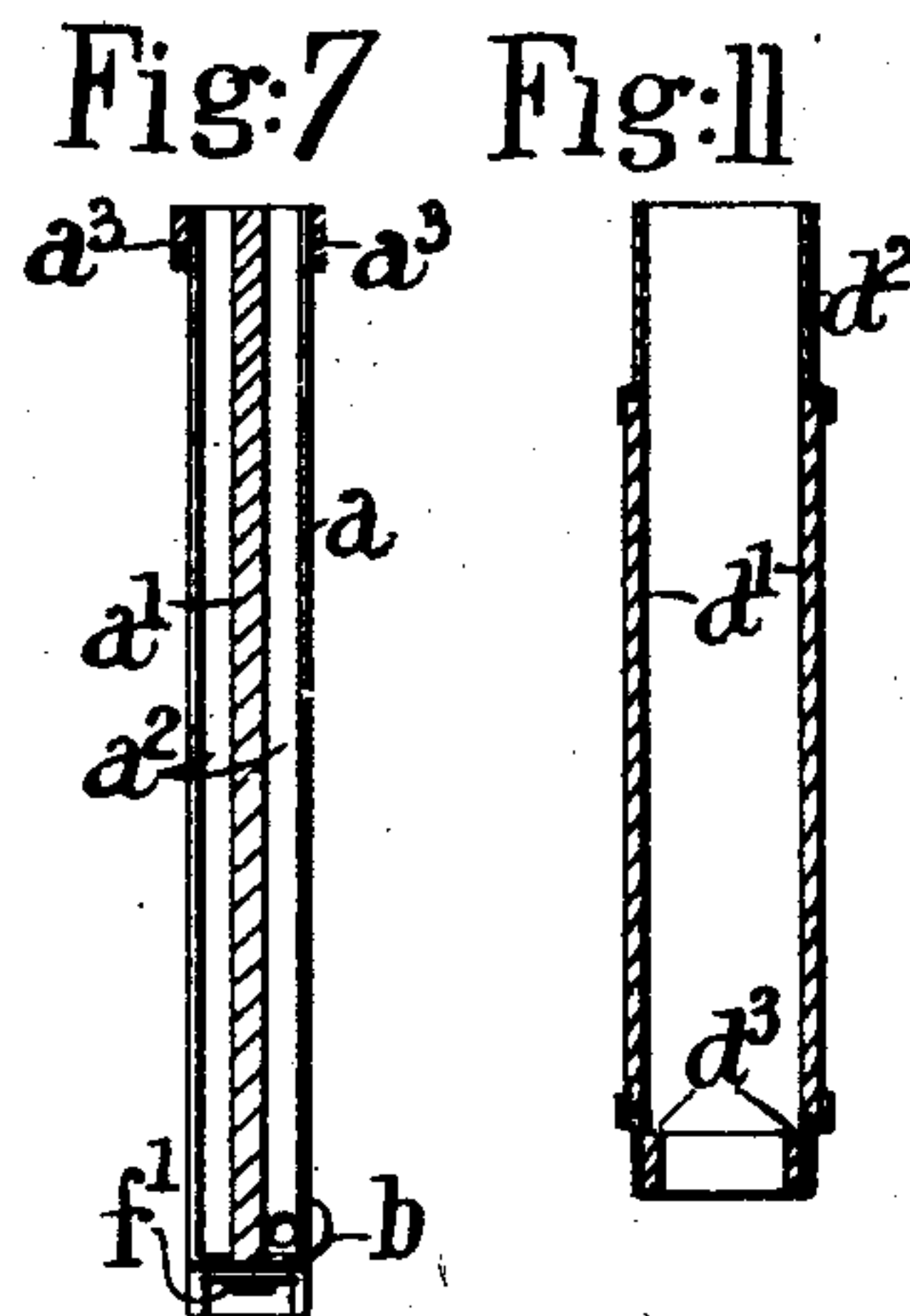
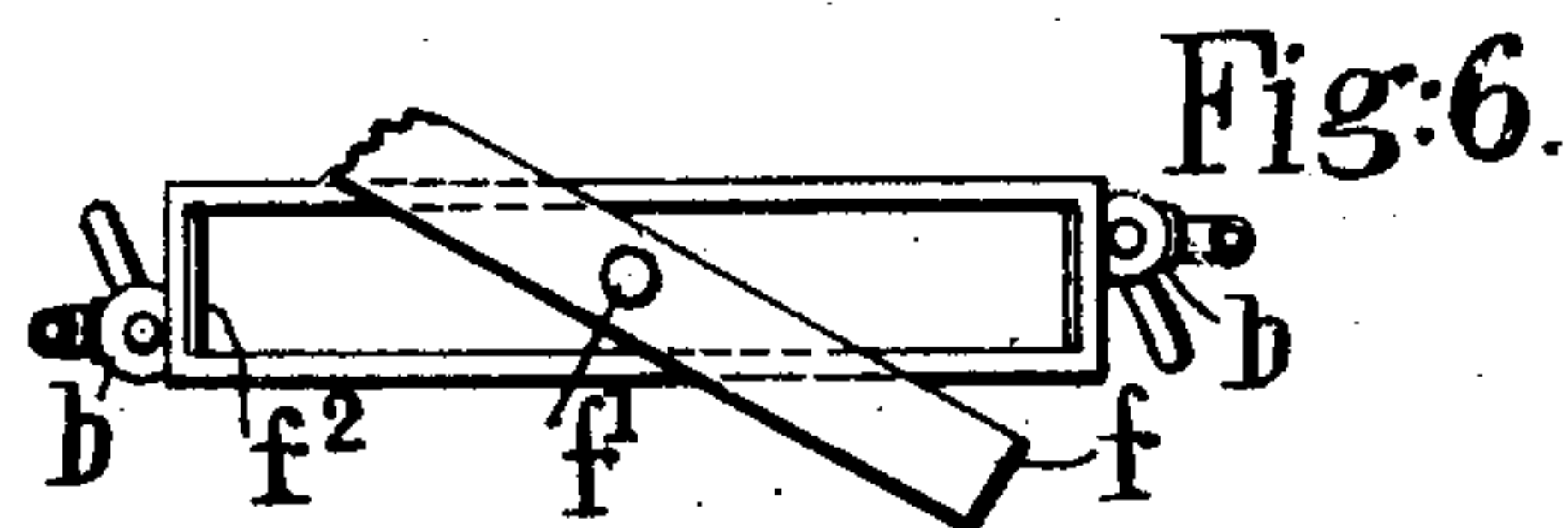
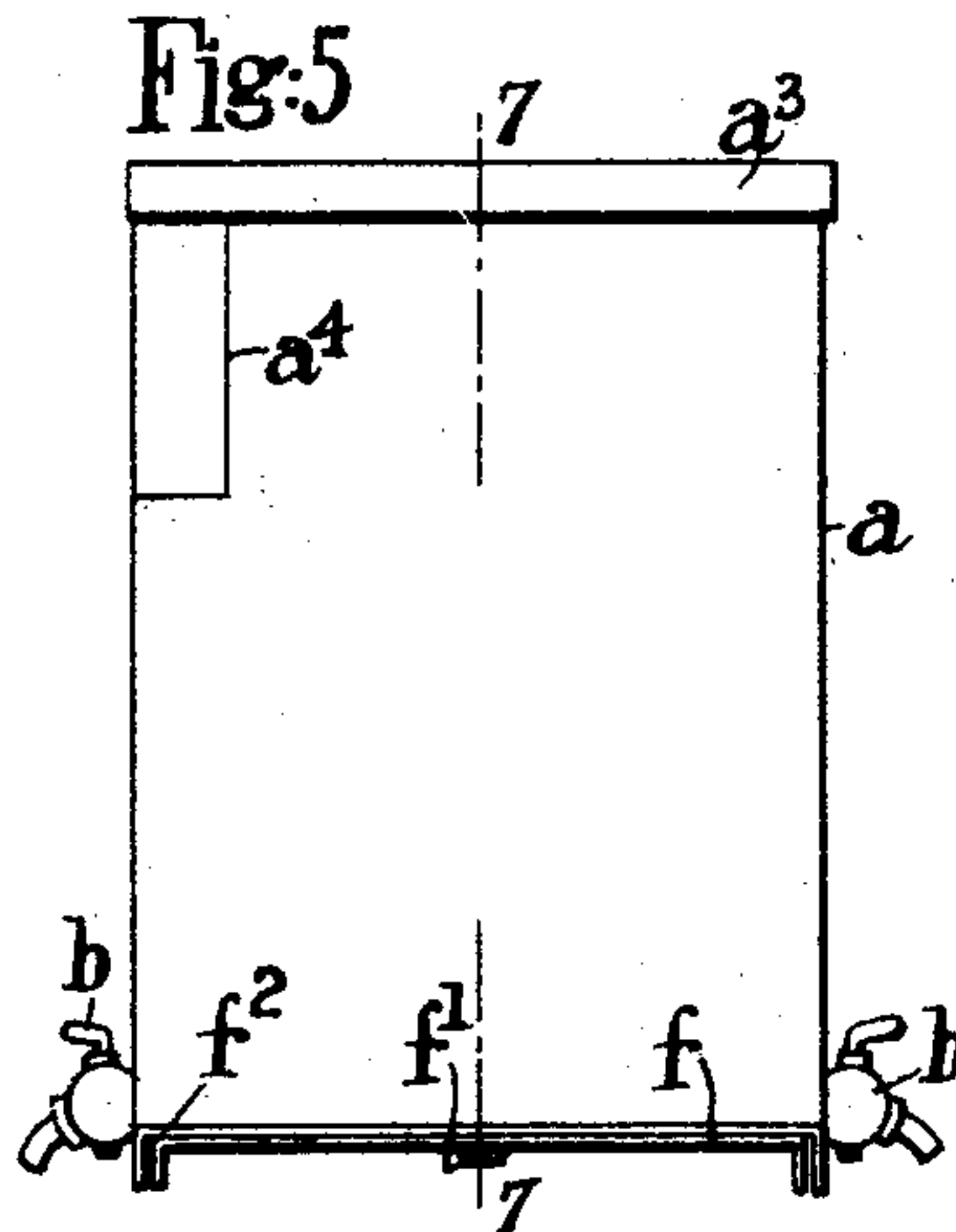
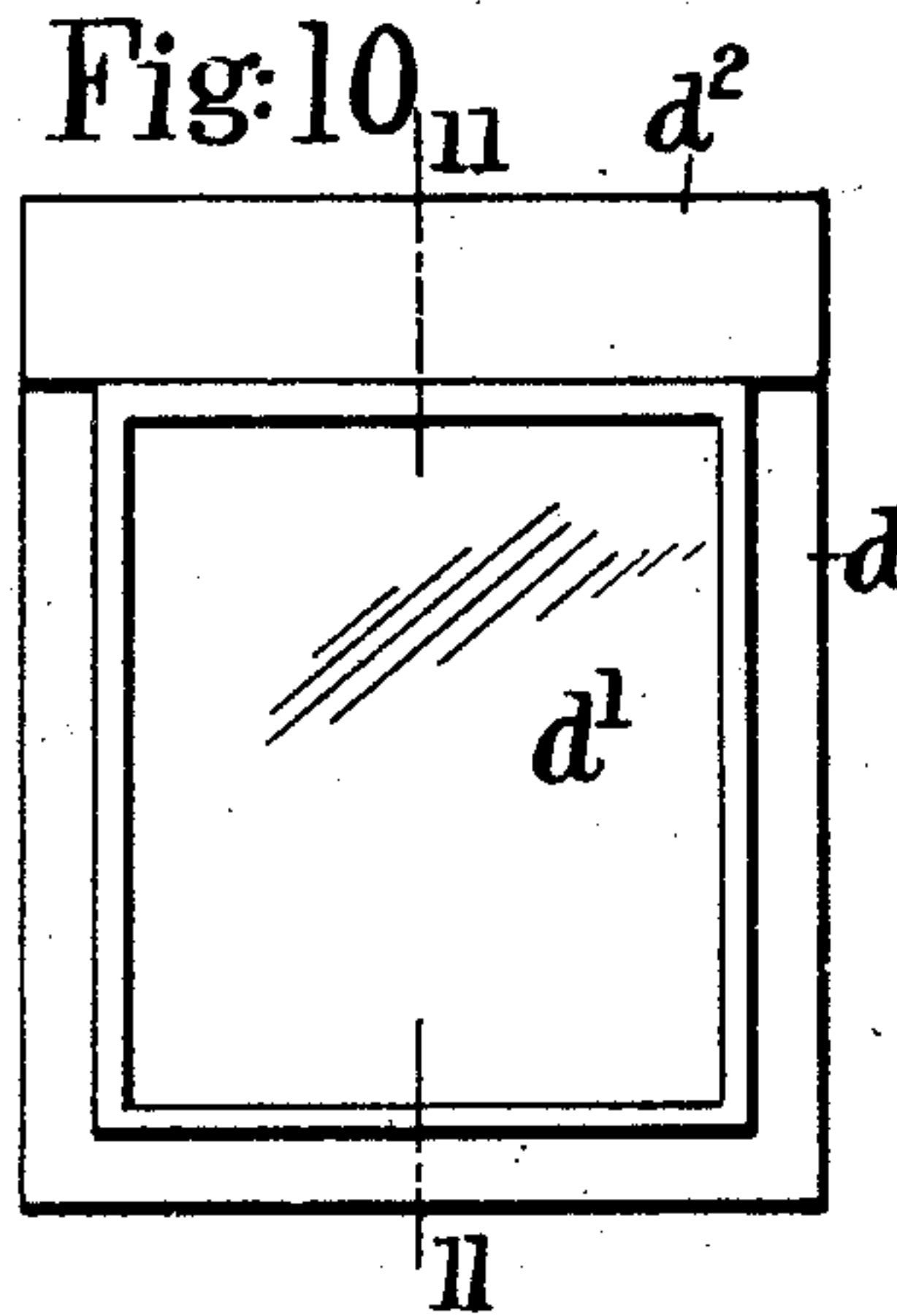
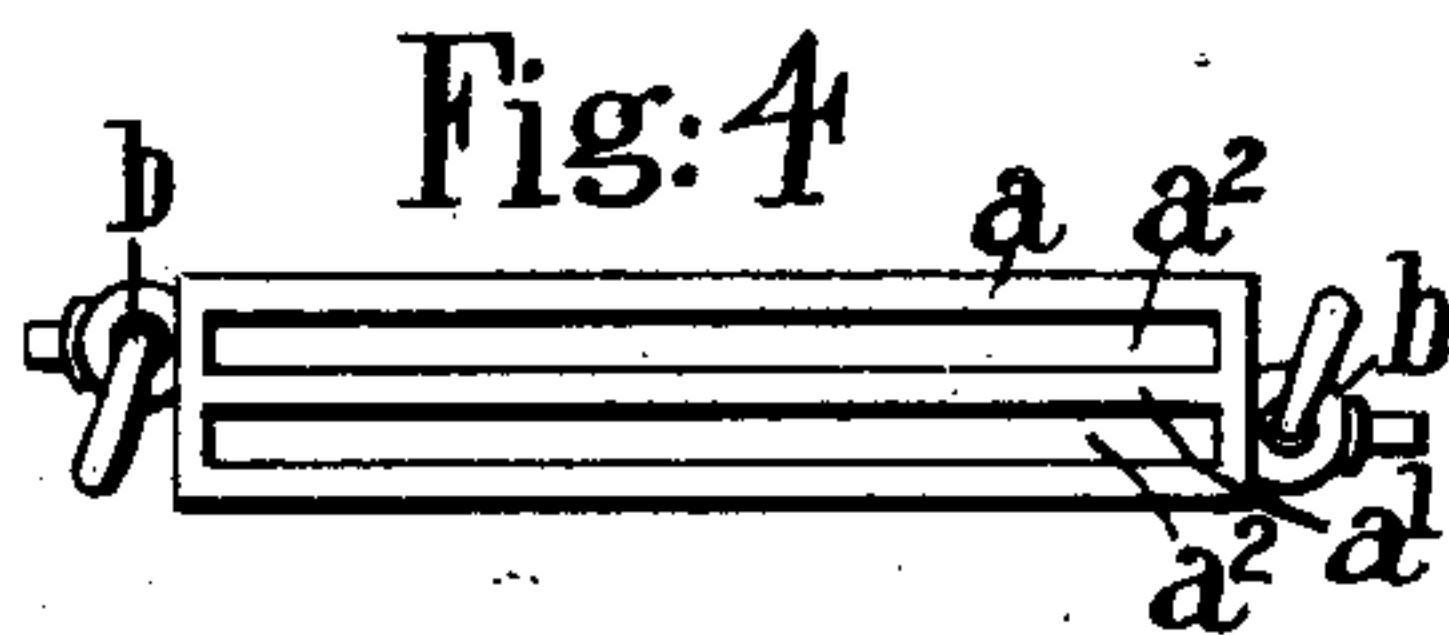
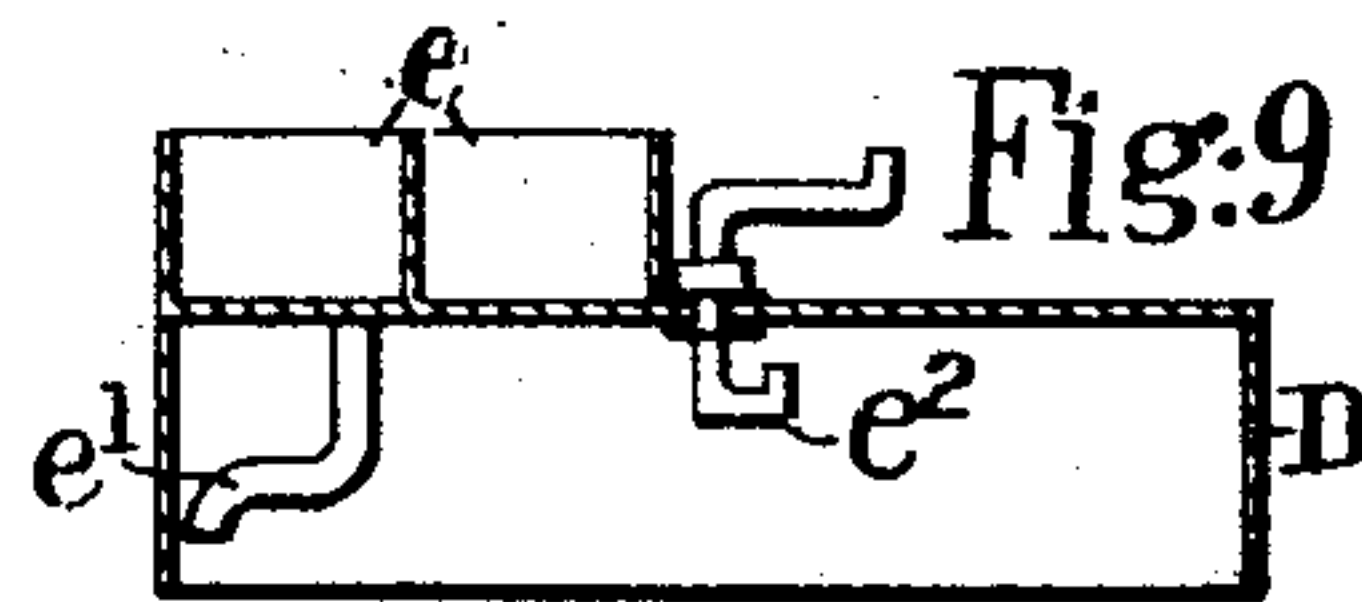
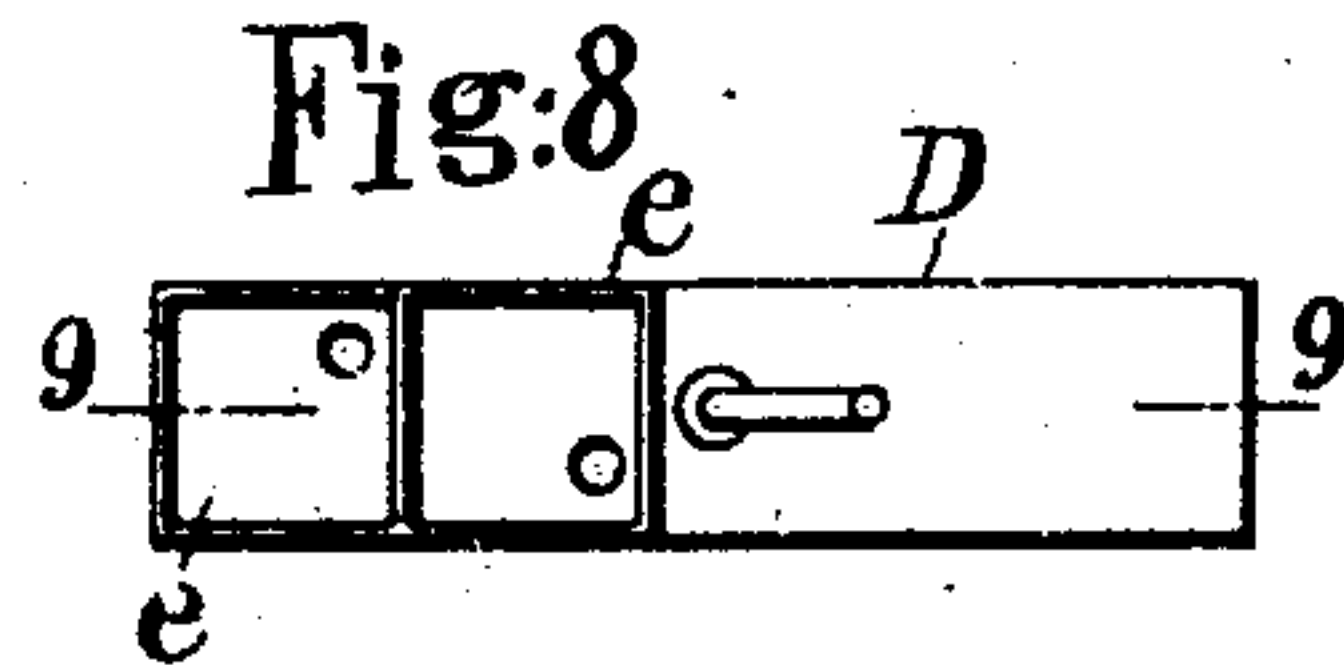
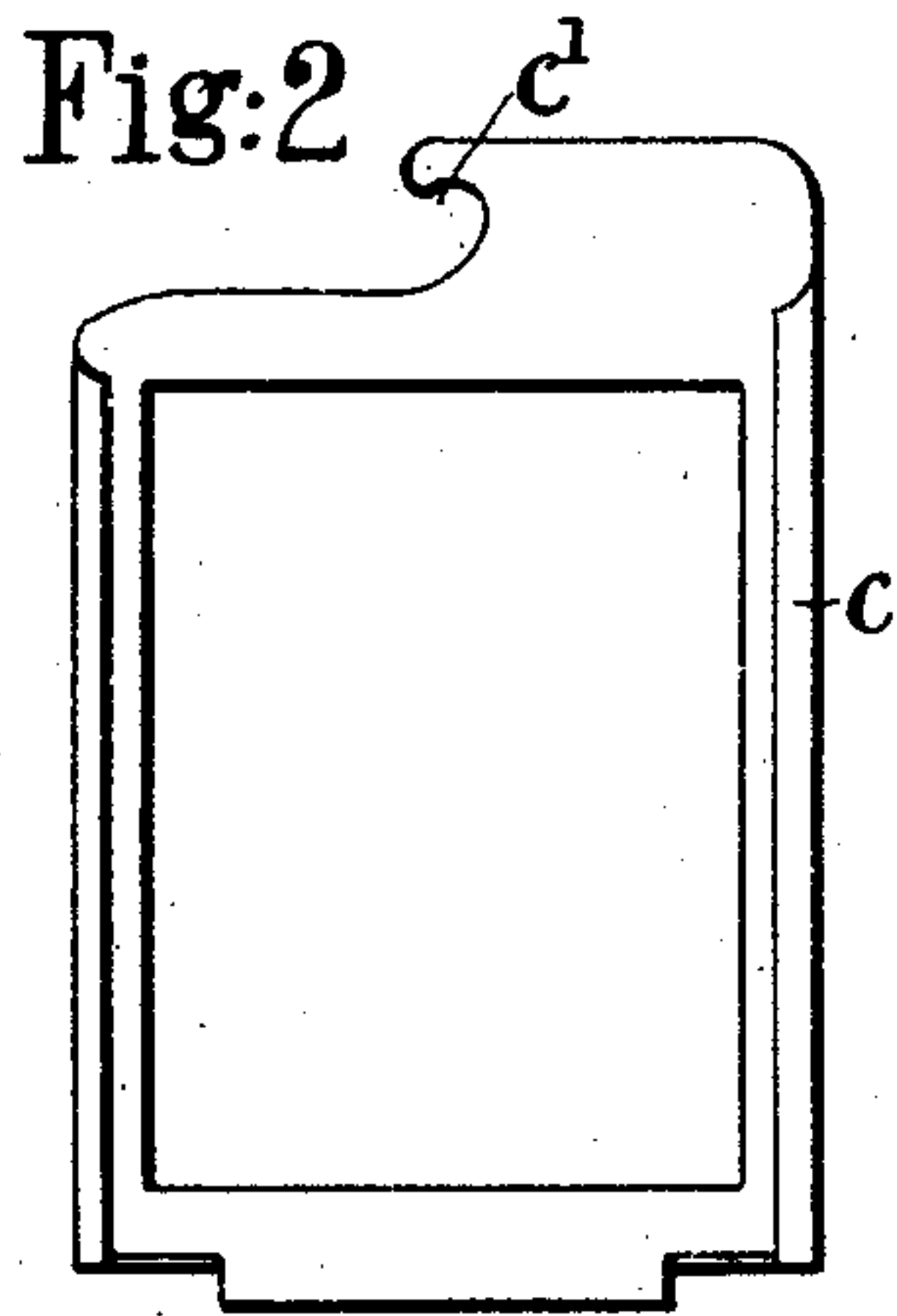
DAYLIGHT DEVELOPING APPARATUS FOR PHOTOGRAPHIC PLATES, FILMS, AND THE LIKE.

APPLICATION FILED JULY 9, 1909.

955,443.

Patented Apr. 19, 1910.

2 SHEETS—SHEET 2.



Witnesses
Ray J. Ermet.

Inventor
Edmund Hodgson Smart
by his attorneys

UNITED STATES PATENT OFFICE.

EDMUND HODGSON SMART, OF LONDON, ENGLAND.

DAYLIGHT DEVELOPING APPARATUS FOR PHOTOGRAPHIC PLATES, FILMS, AND THE LIKE.

955,443.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed July 9, 1909. Serial No. 506,790.

To all whom it may concern:

Be it known that I, EDMUND HODGSON SMART, a subject of the King of Great Britain, residing at London, England, have invented new and useful Improvements in Daylight Developing Apparatus for Photographic Plates, Films, and the Like, of which the following is a specification.

The invention relates to that class of daylight developing apparatus consisting of two chambers, one containing the developing bath and the other sliding with relation to the first and provided with red glass panels and acting as an inspection chamber. This inspection chamber is also provided with means for raising a plate out of the developing bath.

The invention consists in certain details of construction and combinations of parts hereinafter fully described, whereby the construction is simplified compared with other similar apparatus, and whereby plates may be separately and more carefully developed.

One method of carrying the invention into effect is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the complete apparatus. Fig. 2 is a side elevation of a slide or carrier for a plate, and Fig. 3 is a plan of the same. Fig. 4 is a plan, Fig. 5 is a side elevation and Fig. 6 is an underside view of the developing tank. Fig. 7 is a section on the line 7—7 of Fig. 5. Fig. 8 is a plan of the upper part of the apparatus, and Fig. 9 is a section on the line 9—9 of Fig. 8. Fig. 10 is a side elevation of the inspection cover or chamber, and Fig. 11 is a section on the line 11—11 of Fig. 10.

In carrying the invention into effect I construct a light-tight tank, *a*, sufficiently large to receive the plate or plates. When the tank is constructed to receive several plates, it may be divided by partitions, *a'*, into a number of separate compartments, *a*². Each compartment *a*² is provided with means for emptying the same such as a draw-off tap, *b*. Each plate is mounted in a carrier or slide *c*, which has suspending means such as a hook, *c'*, as shown, at the upper part of which it may be raised from its developing compartment, *a*². The developing tank *a* is covered at the top and sides with an inspection cover, *d*, made of light-tight ma-

terial with suitable panels, *d'*, at the sides, made for instance of red glass, or of red transparent celluloid. This inspection cover *d* slides over the outside of the tank and fits this latter light-tight. The inspection cover *d* has one or more funnels, *e*, in its top, *D*, which is or are so constructed as to admit liquid to the various compartments *a*² but not admit light.

In the construction shown in Figs. 8 and 9, the upper part *D* is made separately from the inspection chamber *d*, and is caused to slide on to the upper part, *d*², of this latter. The funnels *e* are each provided with a curved tube, *e'*, which allows liquid to pass into the tank but does not admit light. This inspection cover *d*, shown in the drawings, is so made that it may slide laterally into position over the tank, but it cannot be entirely withdrawn from the tank when pulled upward, owing to the parts *d*³ engaging beneath the rim *a*³ at the upper part of the tank *a*.

The tank *a* may have a suitable sight panel, indicated by the line *a*⁴, at its top corner so that the height of the liquid may be seen. By this means one may avoid pouring too much liquid into the funnels and thus spilling it.

The top *D* of the inspection chamber *d* is provided with an internally projecting hook *e*² or the like which may be rotated from the exterior to engage with the hook *c'* at the top of the slide *c*, when it is desired to lift a plate by sliding the inspection chamber upward.

The tank *a* may have a recessed plate *f* pivoted at *f'* to its bottom and approximately of the same shape as the recessed portion of the bottom, which may be rotated, as shown in Fig. 5 to project laterally from the bottom of the tank and act in conjunction with the extreme ends *f*² of the bottom to retain the tank *a* in a vertical position.

The plate or plates to be developed are each mounted in a slide or carrier *c* and inserted into the tank *a*. The top *D* of the inspection cover is placed in the position shown in Fig. 1. These operations are performed in the dark or in a dark room. The tank *a* is then taken into the daylight and developer is poured through a funnel *e* into the compartment or compartments *a*² containing the plate or plates. After a short time the in-

spection cover *d* is lifted, carrying with it one of the slides *c* with a plate therein which is examined by looking through the red panel *d'* or the sides of the inspection chamber when this latter is made entirely of celluloid or glass. If necessary some of the liquid may be run off and more or other developer may be added. When the plate is sufficiently developed the developer is run off and water is allowed to run through the tank.

Although I have only referred to plates in the description it will be understood that the invention is equally applicable to cut films and the like.

What I claim is:—

1. In daylight developing apparatus, the combination of a developing tank, an inspection chamber fitting the exterior of the developing tank light-tight and capable of being pulled upward with respect to said tank, means carried by the said tank and inspection chamber whereby the latter cannot be withdrawn when pulled upward, a light-tight funnel carried by the inspection chamber, and means for emptying the tank without removing the inspection chamber, substantially as set forth.

2. In daylight developing apparatus, the combination of a developing tank, an inspection chamber fitting the exterior of the developing tank light-tight and capable of being pulled upward with respect to said tank, a plate carrier located within the tank, suspending means on said plate carrier and a rotatable hook carried by the top of the inspection chamber to engage the suspend-

ing means on the plate carrier, substantially as set forth.

3. In daylight developing apparatus, the combination of a developing tank, an inspection chamber fitting the exterior of the developing tank light-tight and capable of being pulled upward with respect to said tank, means carried by the inspection chamber for filling the tank and means carried by the tank for emptying the same after a plate has been inserted in the apparatus, a plate carrier located within the tank, suspending means on said plate carrier, and a rotatable hook carried by the top of the inspection chamber to engage the suspending means on the plate carrier, substantially as set forth.

4. In daylight developing apparatus, the combination of a developing tank, having a plurality of separate compartments, a sliding inspection chamber fitting the tank light-tight, a plurality of light-tight funnels carried by the inspection chamber, a tap carried by the tank for emptying each compartment after plates have been inserted in the apparatus, a separate plate carrier in each compartment, suspending means on each plate carrier, and means carried by the inspection chamber for engaging the suspending means, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EDMUND HODGSON SMART.

Witnesses:

B. J. B. MILLS,
WM. GIRLING.