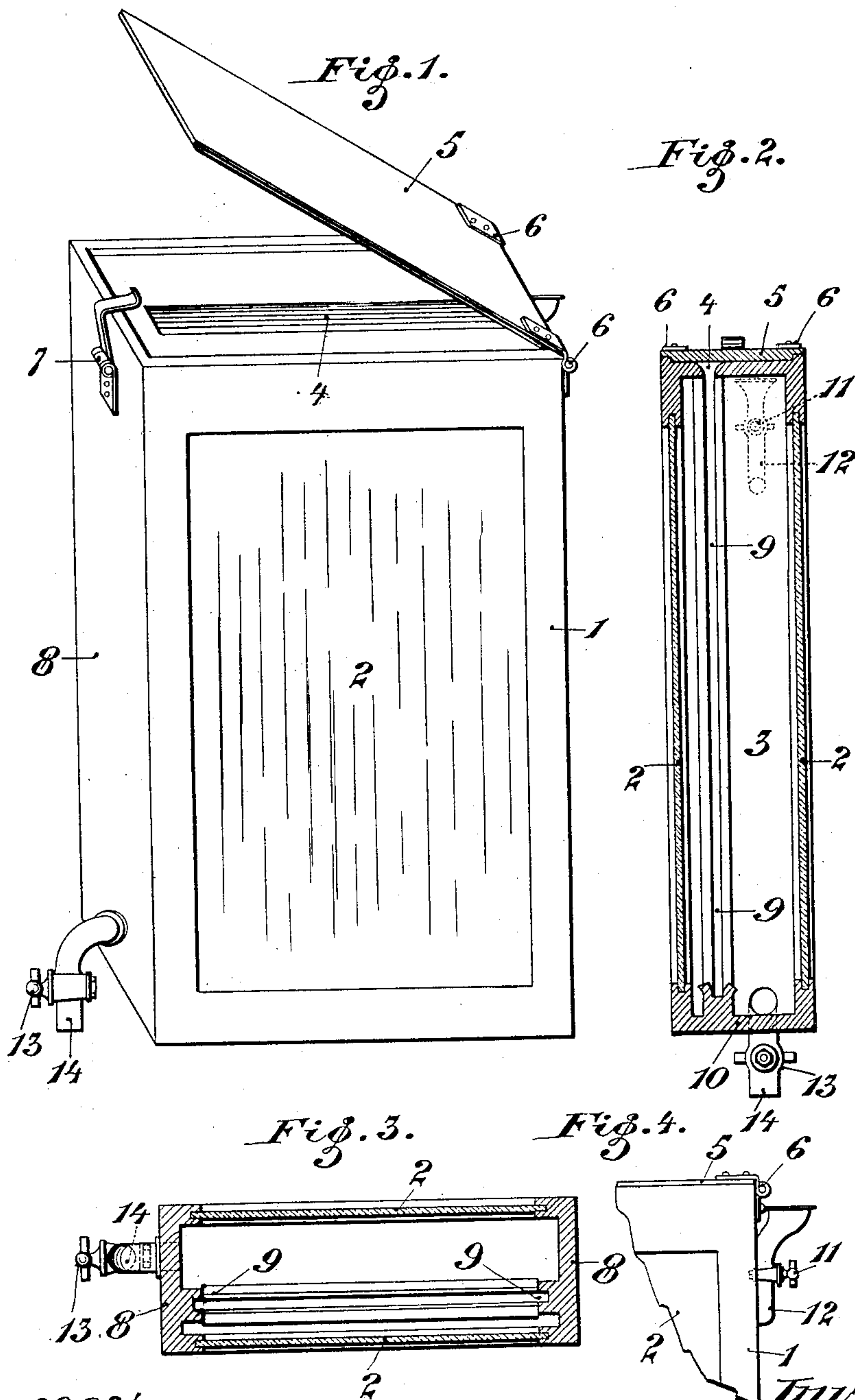


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H. KUCKELKORN & E. SAUPE.
PHOTOGRAPHIC DEVELOPING APPARATUS.
APPLICATION FILED JUNE 29, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

HUBERT KUCKELKORN AND EMIL SAUPE, OF ERFURT, GERMANY.

PHOTOGRAPHIC DEVELOPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 752,986, dated February 23, 1904.

Application filed June 29, 1903. Serial No. 163,650. (No model.)

To all whom it may concern:

Be it known that we, HUBERT KUCKELKORN and EMIL SAUPE, subjects of the King of Prussia, German Emperor, residing at Erfurt, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Photographic Developing Apparatus, of which the following is a specification.

Our invention relates to an apparatus for use in developing photographic plates or films in daylight or artificial light.

The invention comprises a casing intended to receive the plate or film to be developed and admitting only red light, said casing being more or less transparent and provided with an inlet and an outlet for liquids, which can be closed, as well as with a light-proof cover. In this apparatus the plate or the film can therefore be conveniently watched during the treatment. By using an apparatus according to this invention a dark chamber and other accessories hitherto required for developing become unnecessary.

An apparatus according to this invention is shown, by way of example, in the accompanying drawings, in which—

Figure 1 is a perspective view. Fig. 2 is a vertical cross-section; Fig. 3, a horizontal cross-section, and Fig. 4 a detail view.

The front and back of the receptacle or casing 1, made of any desired suitable material, are provided with red-glass panes 2. In this way the interior 3 of the casing 1 becomes accessible only to red light and can be easily examined from the outside, as the red panes 2 coincide, and a photographic plate or film placed in the interior of the casing 1 can be easily seen from the outside. The top of the casing is countersunk and further provided with a longitudinal slot 4, through which the plate to be developed is introduced into the chamber. This slotted top is closed in a light-proof manner by a cover 5, provided with rubber or like packing, hinged at one end to the casing 1 by means of hinges 6, and at the other end held closed by a clamp or other suitable closing device 7. Instead of this hinged cover 5 a sliding cover could of course be used. The side walls 8 of the casing are provided with grooves 9 for receiving and

guiding the edges of the plate introduced through the slot 4. The bottom 10 is also provided with a groove corresponding to the grooves 9. At the top of one of the sides 8 of the casing is arranged a funnel-shaped inlet 12 for supplying the liquid to the interior of the apparatus, the funnel being provided with a cock 11, while the lower end of the other side of the casing is provided with a draw-off pipe 14, with a cock 13.

The arrangement of the guide-grooves 9 and of the slot 4 for the plate to be developed has for its object to save as much as possible of the developing and fixing liquids, while at the same time giving the plate or film an ample quantity of liquid on the picture side, the back not receiving any or only very little passing between the edges of the plate and the grooves.

In order to enable liquid to be introduced when the casing is in either a vertical or horizontal position, the inlet-funnel 12 is formed and arranged so that it can be turned through an angle of ninety degrees. In this way the liquid-chamber can be filled almost completely without the plate being touched, whereupon the picture side is uniformly flooded with liquid by shaking or turning the apparatus.

The method of using the apparatus described is as follows: The exposed plate is removed from the dark slide under a light-proof black cloth or changing bag or in a dark chamber where such is available and after opening the cover 5 is introduced into the interior of the casing 1 through the slot 4. The cover 5 is then closed and the apparatus, with the plate, can then be exposed to any day or artificial light. The inlet 12 is opened and developer introduced into the interior. In introducing the plate care must be taken to have the film side turned toward the liquid-inlet. As red light enters through both the oppositely-arranged red glasses 2 the process of development of the plate can be easily and conveniently watched even better than in the best dark room. The apparatus can be held against light without any injury to the plate. After the plate has been developed the cock 13 is opened and the developer allowed to flow out through the pipe 14. Then both cocks 11 and 13 are opened

and clean water is passed through the apparatus. After sufficient rinsing the drain-cock 13 is closed and the fixing solution introduced through the inlet-funnel 12 and the plate fixed 5 in the usual way. After the fixing-bath has been discharged the plate can be removed by opening the cover 5 and placed to dry after the usual washing operation.

Having now particularly described and as- 10¹⁰certained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

A photographic developing apparatus consisting of a receptacle having front and rear 15 walls of transparent material and a countersunk portion in its top, inwardly-extending ribs integral with the end walls and the bottom of said receptacle, said ribs provided with guide-grooves and arranged at a point slightly 20 removed from one side wall of the receptacle and that portion of the receptacle between said ribs and the other side wall forming a

chamber for the developing liquid, said receptacle further provided in its top with a slot 25 having the ends thereof registering with guide-grooves of the ribs of the end walls, an adjustable and closable inlet-pipe directly communicating with said chamber near one end thereof, a closable discharge-pipe communicating directly with the said chamber near the 30 other end thereof, a hinged cover adapted to be seated in the countersunk portion of said top, said cover closing said slot, and a latch for securing said cover in its closing position, substantially as herein shown and described. 35

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

HUBERT KUCKELKORN.
EMIL SAUPE.

Witnesses:

MAX MEYER,

WILHELM BINDEWALD.