

No. 610,392.

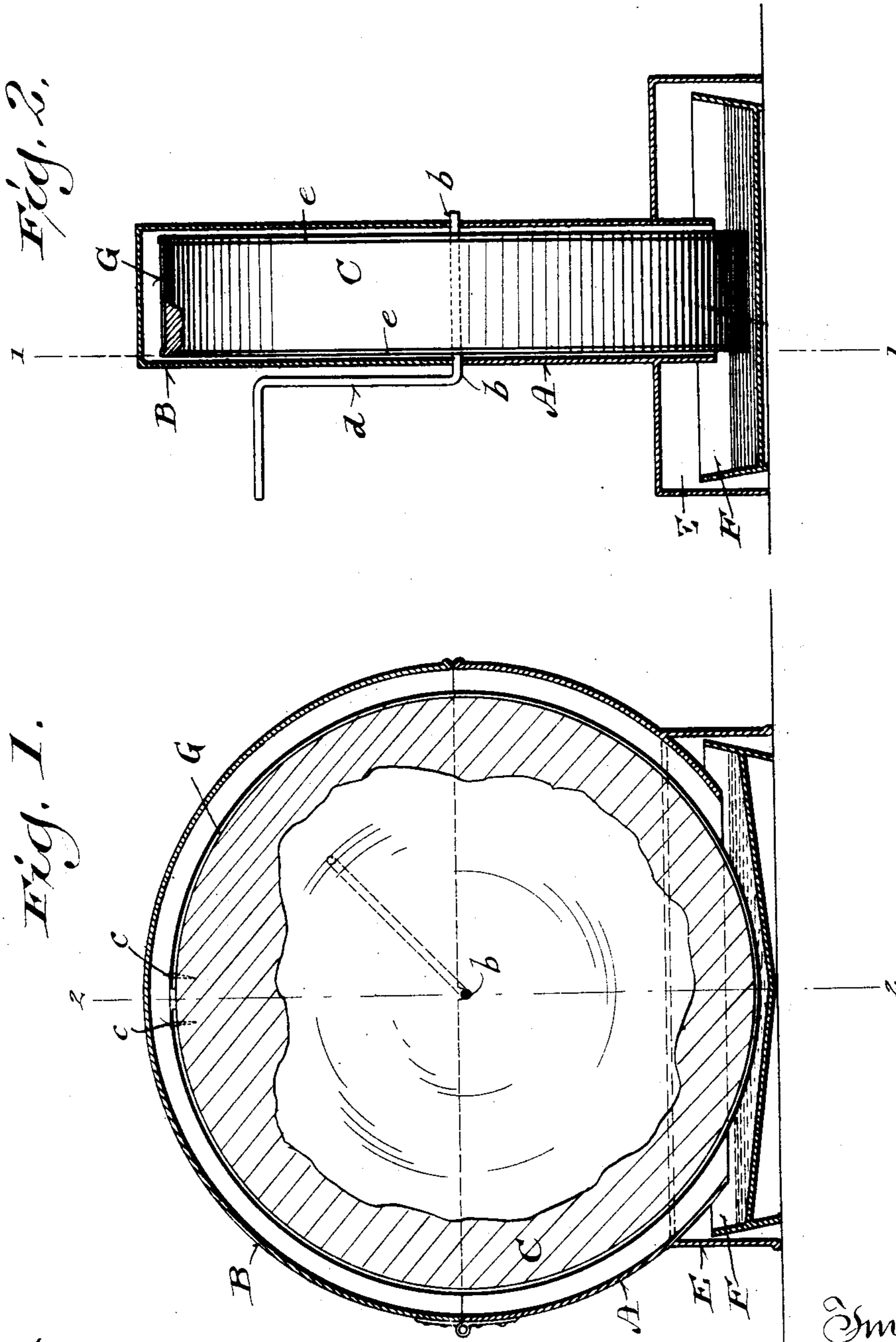
Patented Sept. 6, 1898.

M. FERNEKES.

PHOTOGRAPHIC DEVELOPING APPARATUS.

(Application filed Jan. 22, 1898.)

(No Model.)



Inventor

Witnesses:
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UNITED STATES PATENT OFFICE.

MAX FERNEKES, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO
WALTER FERNEKES, OF SAME PLACE.

PHOTOGRAPHIC DEVELOPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 610,392, dated September 6, 1898.

Application filed January 22, 1898. Serial No. 667,643. (No model.)

To all whom it may concern:

Be it known that I, MAX FERNEKES, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Apparatus for Developing Photographic-Negative Films; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to facilitate development of photographic-negative films; and it consists in certain peculiarities of construction and combination of parts hereinafter set forth, with reference to the accompanying drawings, and subsequently claimed.

Figure 1 of the drawings represents a partly-sectional view of a photographer's apparatus in accordance with my invention, the view being indicated by line 1 1 in the next figure; and Fig. 2, a similar view indicated by line 2 2 in the preceding figure.

Referring by letter to the drawings, A represents an open-bottom semicircular shell, and B a semicircular cover for the shell, the latter and its cover constituting a cylindrical casing for a drum C, of any suitable material, having journals *b*, that turn in notches formed in the upper edge of said shell, central of the same. The cover B is preferably in hinge-joint connection with trough A, as herein shown, and these casing-sections are made from sheet metal or other suitable material. The shell is open at its bottom, and the drum C is of such diameter and arrangement that its lower portion will extend through the open bottom of said shell, the latter being supported at an elevation sufficient to prevent interference with free rotation of said drum. As a preferred means of support the shell is provided with an angular supporting-flange E, designed to inclose a photographic tray F, the latter in its preferred form having the bottom thereof inclined in opposite directions from the center toward the ends, as herein shown, and the periphery of the drum C is preferably flanged at both sides, as is also herein shown, for the purpose hereinafter set forth.

In practice a web of photographic film G is unwound from a camera-spool onto the periphery of the drum C, face outward, between

the drum-flanges, its ends being secured by thumb-tacks *c* or other suitable means. The film being positioned on the drum, the latter is rotated by means of a crank extension *d* of one of its journals to gradually bring all of said film in and out of a bath contained in the tray F above specified. By having the tray-bottom substantially as herein shown less bath is required than is the case with a tray having its bottom on a horizontal plane. The casing and its contents may be readily transferred from one bath to another, according to the number of baths necessary to the development of the negatives. The film being stretched on the drum, it cannot curl at the edges during the developing process, and the drum-flanges *e* prevent side slip of said film. It also follows that the negative-film being dried while in place on the drum it is not liable to become scratched, as the usual handling is avoided. The cover-section B of the casing, if utilized, prevents splashing and also excludes light during the developing process, and it is to be understood that employment of the mechanical agency herein set forth will protect the hands and clothing of a person developing film negatives from contact with chemical solutions that tend to stain. It will also be understood that the film has even contact with the developing-baths and that the best possible results are more rapidly accomplished with less care than is usually the case.

The simple economical apparatus above described is especially designed to overcome the difficulties heretofore experienced by amateur photographers in the developing of film negatives; but it will be found advantageous to professional photographers.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for developing photographic-negative films, the same comprising an open-bottom shell provided with means of support, a drum rotatably mounted in the shell so as to be exposed through the open bottom of the same, and means for securing a web of photographic-negative film on the periphery of the drum for progressive immersion in a developing-bath under said shell, the latter

and its contents being transferable from one bath to another.

2. An apparatus for developing photographic-negative films, the same comprising
5 an open-bottom shell provided with means of support, a drum peripherally flanged at both sides and rotatably mounted in the shell so as to be exposed through the open bottom of the same, and means for securing a web of
10 photographic-negative film on the periphery of the drum between its flanges for progressive immersion in a developing-bath under said shell, the latter and its contents being transferable from one bath to another.

15 3. An apparatus for developing photographic-negative films, the same comprising an open-bottom shell provided with means of support, a cover for the shell, a drum rotatably mounted in said shell so as to be exposed
20 through the open bottom of the same, and means for securing a web of photographic-negative film on the periphery of the drum for progressive immersion in a developing-

bath under the aforesaid shell, the latter and its contents being transferable from one bath 25 to another.

4. An apparatus for developing photographic-negative films, the same comprising an open-bottom semicircular shell provided with means of support, a drum rotatably 30 mounted in the shell to have exposure through the open bottom of the same, and means for securing a web of photographic-negative film on the periphery of the drum; in combination with a bath-tray having the bottom thereof 35 inclined in opposite directions from the center toward the ends.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wis- 40 consin, in the presence of two witnesses.

MAX FERNEKES.

Witnesses:

N. E. OLIPHANT,
B. C. ROLOFF.