

JOHN W. OSBORNE.

Improvement in Photographers Steeping-Tanks.

No. 114,186.

Patented April 25, 1871.

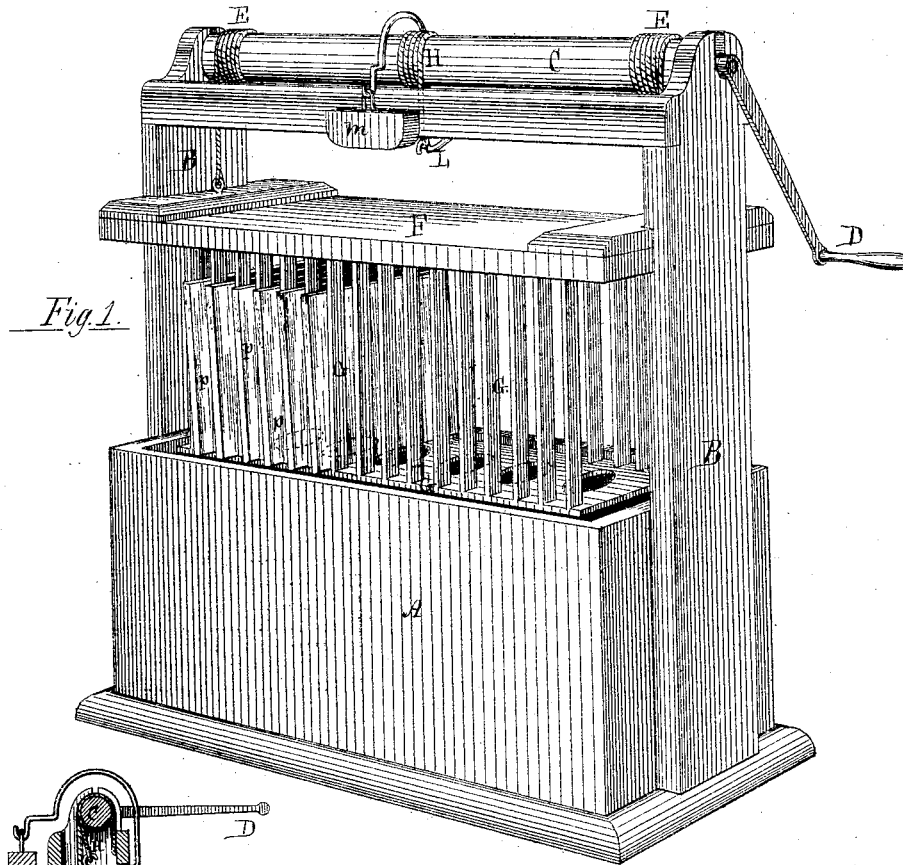


Fig. 1.

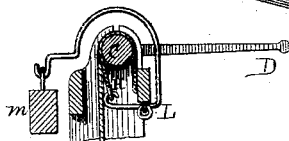


Fig. 2.

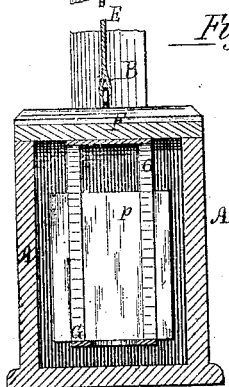
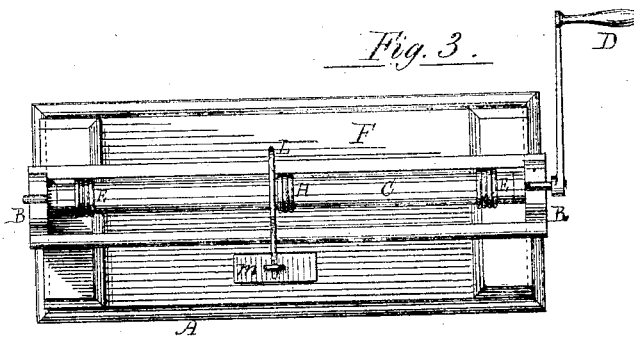


Fig. 3.



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JOHN WALTER OSBORNE, OF BROOKLYN, NEW YORK.

Letters Patent No. 114,186, dated April 25, 1871.

IMPROVEMENT IN PHOTOGRAPHERS' STEEPING-TANKS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN WALTER OSBORNE, of the city of Brooklyn, county of Kings and State of New York, have invented a Photographer's Steeping-Tank, of which the following is a specification.

Nature and Object.

My invention belongs to that class of photographic apparatus which is used for cleaning the plates of glass upon which the negatives are made; and

The object of the present invention is to provide a more complete apparatus for steeping the plates of glass in any liquid required to clean them, and so suspending said plates that there will be much less liability to breakage, and the operation of cleaning will be more quickly accomplished and with less wastage of the liquid used in the operation, and also less loss of the silver that may be removed from the plates that have been once used, and all accomplished without anything like the present injury to the hands of the operator, than by any apparatus or process with which I am acquainted.

Drawing.

Figure 1 is a perspective view of the entire apparatus, with the rack for holding the plates elevated from the tank, and in the proper position for holding the plates to "drip."

Figure 2 is a vertical cross-section of the apparatus or of fig. 1.

Figure 3 is a plan as seen from the top.

A is the tank for holding the acid or liquid for cleaning the plates, made of any desired size and shape to be best adapted to the number of plates required to be cleaned and their dimensions.

If made of wood, however, it must be thoroughly seasoned to furnish a firm support to the lining or coating on the inside, which may be either of sheet-lead, or rubber, or asphaltum, or some similar acid-resisting agent.

At the opposite sides or ends of the tank, as at B B, supports are erected to sustain a roller or windlass, C, which is furnished with a crank, D, or some similar device for rotating it.

At or near each end of said roller are attached cords E E, to suspend a rack-head, F, to which the racks *g g* are attached.

Said rack-head may be made of wood or any similar substance which is liable to be destroyed by the acids; but the racks themselves must be made of lead or some of the acid-resisting gums or resins.

I think lead will be found most preferable except when nitric acid is used; and I have preferred to cast the sides and bottom of said rack all in one piece or together, as they cannot be joined together by any solder that will resist the action of the acid, and the same amount of metal will furnish thereby greater strength than when the parts are riveted together.

The spaces in said racks may be wide enough to hold two plates at the same time, and yet have them slightly inclined from each other, so that the acid can have free access around them.

Some plates are shown in position at *p p p*, &c., fig. 1.

At H upon the roller or windlass a friction-brake is provided to hold the rack in any desired position.

This may be constructed in any manner that will accomplish the purpose; but the devices shown in the drawing consist of a cord, one end of which is attached to the frame that supports the roller, and is then wound around the roller a sufficient number of times to produce the desired friction thereon, and the other end is attached to a curved lever, L, upon the opposite end of which a weight, M, is suspended for increasing the tension of the cord.

By such an arrangement it is evident that the motion of the roller can be controlled either by increasing or diminishing the weight or increasing or diminishing the numbers of each of the wrappings of the cord around the roller.

The operation of this steeping apparatus will now be readily understood.

The plates to be cleaned are placed in the rack, as seen at *p p*, fig. 1, the acids or liquids that photographers use for that purpose having been placed in the tank A.

Motion is then given to the windlass and the plates are lowered into the liquid, where the rack and plates are allowed to remain as long as desired, say over night, which is the usual custom.

When the plates are wanted the rack is lifted to the position shown at fig. 1 by turning the roller or windlass, and the brake holds them over the tank, as there represented, until they drip and become nearly free from the liquid that has cleaned them, and which contains the silver that was on the plates, and also thereby saves the necessity of the operator dipping his hands into the liquid to remove the plates.

It is very evident that in small apparatus the windlass may be dispensed with, and a cord or chain may be attached to the rack-head and made to operate in a very similar manner; and I therefore do not wish to limit myself to the exact devices herein described; but

I claim—

1. The combination of the rack for holding the plates with the tank for holding the cleaning or steeping liquids, substantially as described and for the purposes set forth.

2. The combination of the rack with the roller or windlass and brake, when used for steeping photographic plates, as described.

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Witnesses:

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