(No Model.)

H. W. OLIVER.

PHOTOGRAPHIC WASHING APPARATUS.

No. 323,721. Patented Aug. 4, 1885.

Fig. 1.

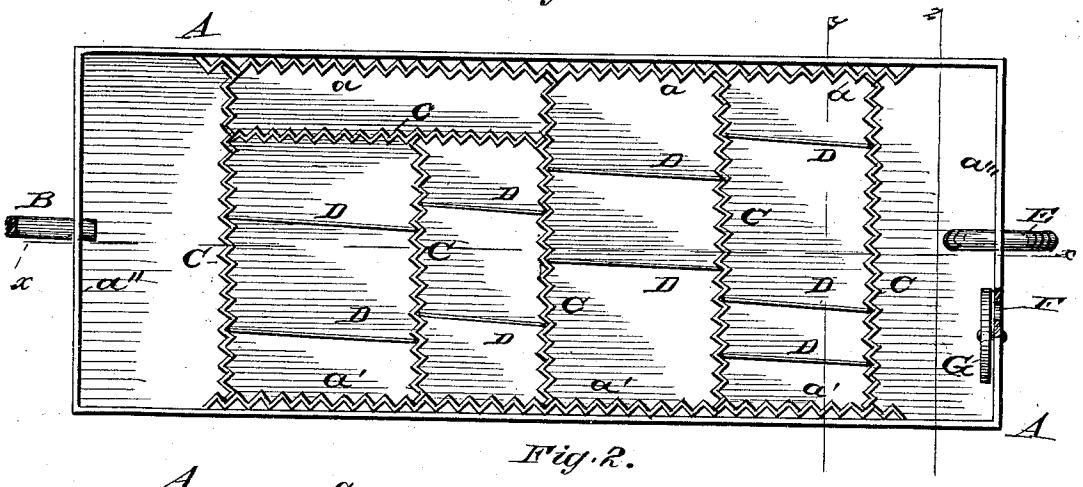


Fig. 2.

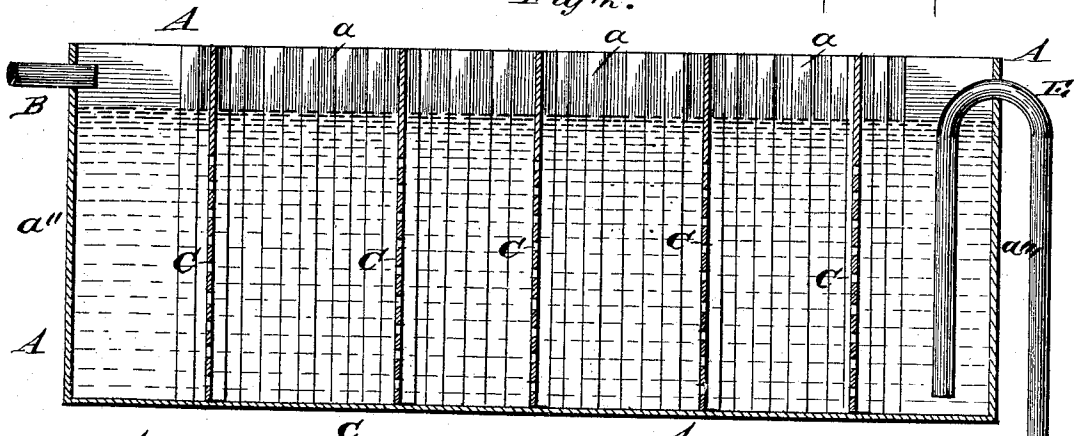


Fig. 3.

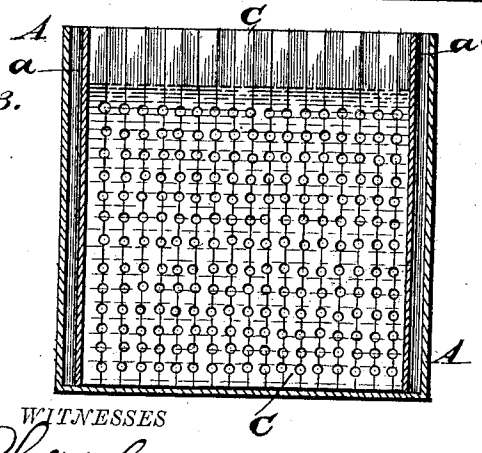
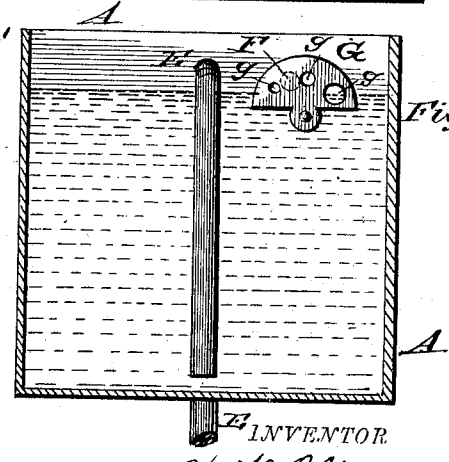


Fig. 4.



WITNESSES

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PHOTOGRAPHIC WASHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 323,721, dated August 4, 1885.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. OLIVER, a citizen of the United States, residing at Rome, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Photographic Washing Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a top view of my device. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a transverse section taken through line *y y*, Fig. 1; and Fig. 4 is a transverse sectional view taken on line *z z*, Fig. 1.

The object of this invention is to construct a washing-tank for gelatine photographic negatives, to act automatically in such manner that the water may be allowed to accumulate for a greater or less time at will before it is drawn off to make room for a fresh supply. The purpose of this is to more easily and effectually control the soaking of such negatives, which in practice are found to be more effectually washed by this process than by a stream of running water—such as the tap.

The invention essentially consists of a tank made of any suitable material, but preferably of zinc, having perpendicularly-corrugated sides, or having its sides lined within with perpendicularly-corrugated sheets of zinc or other proper material. Within any two opposite corrugations of the sides slide the edges of transverse partitions perpendicularly corrugated and perforated, or open for the passage of water through the tank, the water being supplied by a pipe or other suitable means over or through the upper edge of one end of the tank. The partitions are removable from any two opposite corrugations of the sides to any other two, thus lengthening or shortening the distances between partitions for the accommodation of different-sized negatives, which during the process are fitted by their edges into any two opposite corrugations of adjacent partitions, and consequently stand perpendicularly and longitudinally within the tank. The tank is provided at the end opposite its water-supply pipe with a siphon and an adjustable gate for water-outlets, which are hereinafter more fully described.

In the accompanying drawings, A indicates a rectangular tank or water-tight box, made preferably of zinc. This tank or box is provided on its inner side walls with vertical corrugations *a*, which in the present instance I have shown as being formed on strips of suitable metal and secured to the inner side walls of the tank; but, if found desirable, the corrugations may be formed directly in the walls of the tank. The tank A is at one end, *a''*, provided with a pipe, B, or other proper water-inlet, and at the other end, *a'''*, with a siphon and adjustable gate, hereinafter more fully described.

C are perpendicularly-perforated and corrugated partitions fitting snugly by their vertical edges into any two opposite corrugations, *a a*, of the sides, and removable at will to any other two. If desirable, a longitudinal partition, *c*, corrugated but not perforated, may be slid by its edges into two opposite corrugations of the end partitions, C. With this arrangement narrower partitions may be used.

D D are negatives standing longitudinally and vertically in the tank, with their edges in any two opposite corrugations of adjacent partitions C C, which are fitted into side corrugations, *a a*, suitable to accommodate the dimensions of said negatives.

E is a siphon fixed in the end *a'''* of the tank, with its bend slightly below the upper edge of the same. The inner end of the siphon reaches nearly to the bottom of the tank, and the outer end extends, of course, below the level of the bottom. The capacity of the siphon E to discharge water from the tank A is much greater than that of the pipe B to allow its inflow.

F is an outlet-hole made in the end *a'''* of the tank at a point a little above the plane in which the upper edges of the negatives would usually lie. The discharge of water through F is when the gate is adjusted to the pressure of the inflow through B.

G is a gate pivoted to the end of the tank in such manner that when turned the holes *g g g*, &c., with which it is provided, will successively correspond with the hole F. When no one of the former corresponds with the lat-

ter, the gate being over the hole F, the outlet of water from the same is entirely cut off. A sliding gate may be substituted for the same purpose. As the holes *g g*, &c., vary in size, the water-outlet through F can be varied and regulated by turning different sizes of the former over the latter.

The operation of the device is as follows: The gate G being closed the water will flow into the tank through the pipe B, pass through the perforations into the partitions C C between the negatives D D, and quickly rise in the tank till it reaches the level of the top of the bend of the siphon. The latter will then empty the tank, to be again refilled through the pipe B. When the gate is properly adjusted to the pressure of the inflow, the water will rise quickly till it reaches the level of the hole P, (above the negatives,) when, in consequence of its escape from the same, which will be a little less than the inflow, it will rise very slowly till it reaches the top of the bend of the siphon, when the tank will be emptied as above. Thus the negatives will be quickly covered with water at each refilling, and will be allowed afterward to soak for as long a time as the device will admit of.

By making the holes *g*, of different capacities, correspond with F, the discharge through the latter can be varied at will and consequently the time of soaking the negatives similarly varied.

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

1. In a gelatine photographic-negative washing apparatus, the combination, with the tank A, having its sides provided with the vertical non-perforated corrugations *a a* and *a' a'*, of the perforated and vertically-corrugated partitions C C, removable from any two opposite corrugations *a a'* to any similar two, substantially as specified.

2. A tank for washing gelatine photographic negatives, having its inner walls adapted to sustain partitions which are provided with means for holding photographic negatives, and provided at one end with a water-supply pipe and at the opposite end with a siphon, whereby the said tank may be automatically emptied at regular intervals, substantially as specified.

3. A tank for washing gelatine photographic negatives, having its longitudinal inner walls adapted to sustain removable, transverse perforated partitions, which are provided with means for holding gelatine photographic negatives, and the said tank also having means for receiving and discharging water, substantially as specified.

4. In a gelatine photographic-negative washing apparatus, the combination, with the tank A, provided at one end with the water-inlet B, of the siphon E, at the opposite end of the said tank, the opening F, and the gate G, provided with the holes *g g*, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY W. OLIVER.

Witnesses:
WM. E. WRIGHT,
JOHN F. KEAHO.