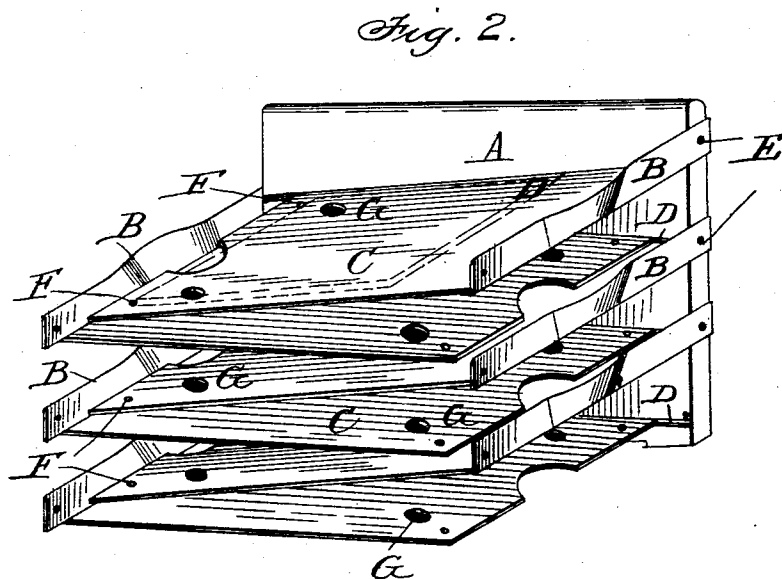
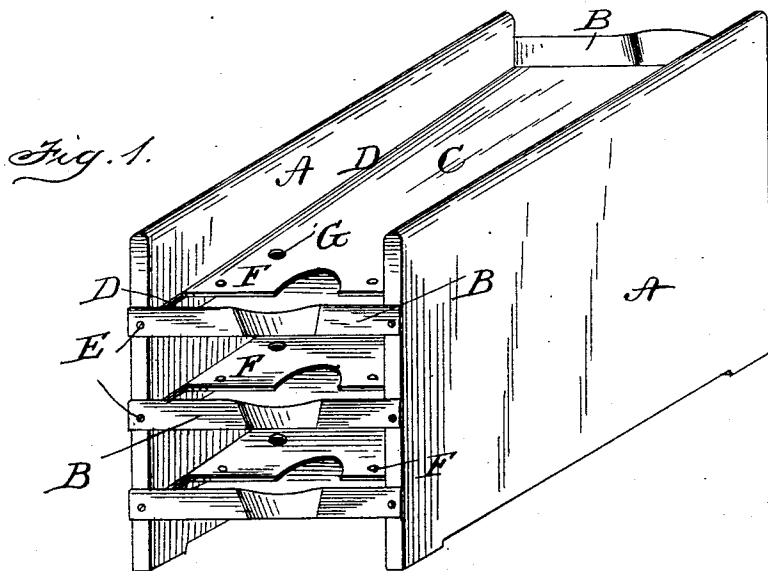


(No Model)

F. C. BARNUM.
PHOTOGRAPHIC NEGATIVE WASHER.

No. 586,303.

Patented July 13, 1897.



Witnesses
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FRED CLINTON BARNUM, OF MORRISON, ILLINOIS.

PHOTOGRAPHIC-NEGATIVE WASHER.

SPECIFICATION forming part of Letters Patent No. 586,303, dated July 13, 1897.

Application filed March 29, 1897. Serial No. 629,750. (No model.)

To all whom it may concern:

Be it known that I, FRED CLINTON BARNUM, a citizen of the United States, residing at Morrison, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Photographic Washers; 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 the letters of reference marked thereon, which form a part of this specification.

My invention has reference to improvements in photographic washers; and it consists in a vertical series of inclined surfaces, adapted to receive and retain the negative respectively, with suitable direct communication between said surfaces to permit a stream of water, the width of said surfaces to flow over the negative resting thereon, and in direct contact with the upper surface of said negative.

It is well known to those familiar with photography that it is essential to eliminate the sodium hyposulfite from the negative before utilizing the latter in the printing of reproductions therefrom. This has heretofore been accomplished by immersing the negative in water, so as to allow the latter to absorb the sodium hyposulfite from said negative. This process has been necessarily prolonged for the reason that the water in direct contact with the surface of the negative was stagnant or stationary, and its function was simply that of absorption.

In my invention I propose to supplement the absorbing quality of the water with the attrition or wash occasioned by the water passing over the surface of the negative in direct contact therewith and also increase the absorbing capacity of the water by augmenting the amount of the latter brought in contact with the negative. I attain this result by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of an apparatus embodying my invention. Fig. 2 is the same viewed from one side and with the side of the

frame removed to more clearly exhibit the internal construction.

Similar letters refer to similar parts in each view.

The vertical side plates A are held in suitable relation by the upturned ends B of the inclined plates C, the edges of said plates being suitably inserted in correspondingly-inclined grooves D, formed on the inner surface of the side plates A. This upturned portion B of the plate C is at the highest end of the latter and extending laterally about flush with the outer side of the plates A is fastened to the latter by screws E.

The plates C are arranged alternately in a series—that is to say, the lower end of the upper plate C discharging the water received by it into the upper or higher end of the next below succeeding plate C. This relation is continued until the lower plate C of the series is reached, where the water therefrom is discharged into any suitable receptacle. One negative can be washed on each of the plates C at the same time, and the number of plates C in such vertical series may be increased indefinitely. In the drawings herewith six such plates are shown.

The negative is placed on the upper surface of the plate C in a flat position with its film side upward. It is held nearly or quite up to the high end of the plate C by means of two small bosses F F, formed on the lower end of the upper surface of the plate C, which serve to prevent the negative from slipping down the inclined face of the plate C. The bosses F are somewhat less in height than the thickness of the negative, and the plate C being otherwise a uniform plane no obstruction is interposed to the water, which, flowing over the upper surface of the negative from the higher end thereof, freely passes over the entire plate in a stratum the width of the latter and any desired depth upon said plate and is discharged at the lower end of the negative in the width and depth aforesaid down upon the next lower succeeding plate and negative. The water is admitted to the upper end of the upper plate C from any suitable receptacle the width of said plate, so as to start the water in a stratum the full width

of the negative. Openings G are formed in the plate C near the lower end of the latter to draw off any water that may have accumulated under the negative and which might eventually raise the latter over the bosses F.

It will be seen from the construction shown and described that the water in contact with the upper face of the negative is a constantly-moving stratum and necessarily greatly expedites the process of washing the negative over those systems which rely substantially upon the absorbing quality of stationary water. I am a practical photographer and have used my invention, having previously used the immersion-washers, and have found that by the use of my invention I can complete the process of washing in about one-fourth of the time required in the use of the other.

Having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a photographic-negative washer, the

combination, with vertical side pieces, the adjacent faces of which are grooved longitudinally, alternately-arranged inclined plates within said grooves, each plate being of a less length than the length of the side pieces and having its upper end provided with a vertical flange, the ends of the flange extending over the ends of the side pieces, and being secured thereto, substantially as set forth.

2. In a photographic-negative washer, the combination, with side pieces, of alternately-arranged inclined plates therein, upwardly-projecting retaining-bosses near the lower end of each plate, said plates being further provided with openings between said bosses and the upper ends, substantially as set forth.

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

FRED CLINTON BARNUM.

Witnesses:

JOHN G. MANAHAN,
ISABELLE MANAHAN.