Sept. 20, 1949. B. C. HAMILTON 2,482,479

PHOTOGRAPHIC ACCESSORY

Filed July 9, 1948

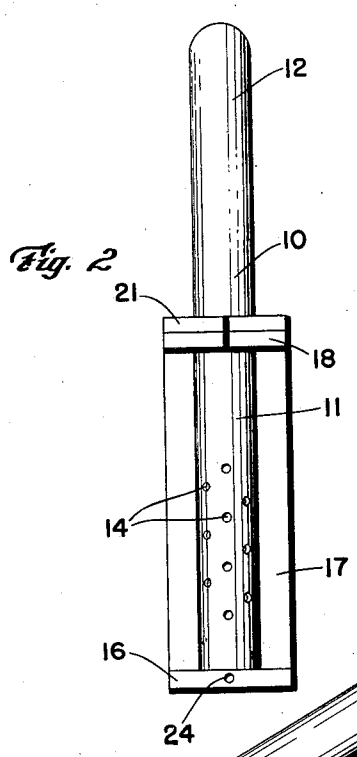


Fig. 2

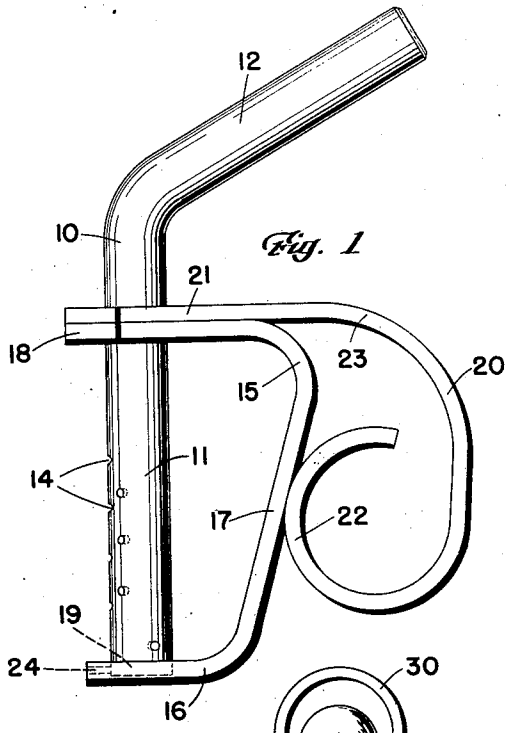


Fig. 1

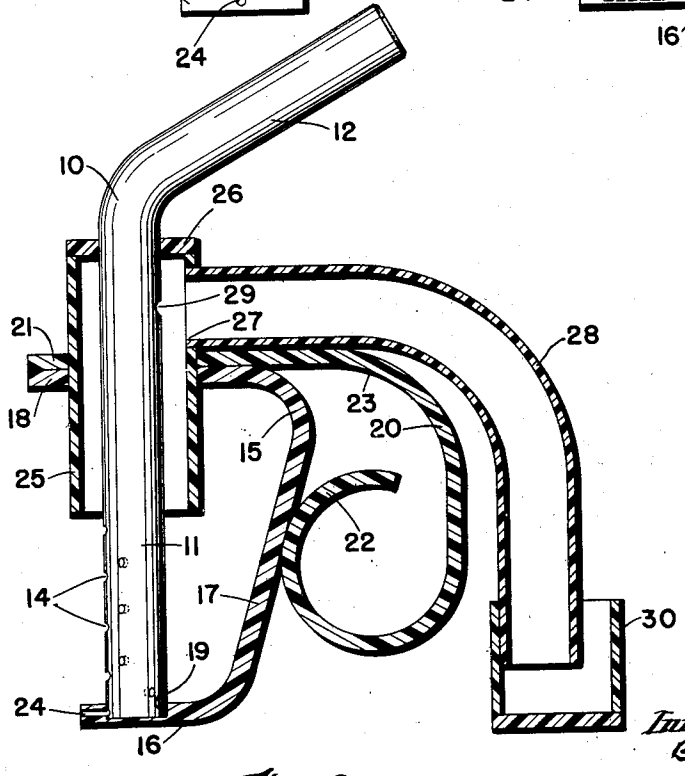


Fig. 3

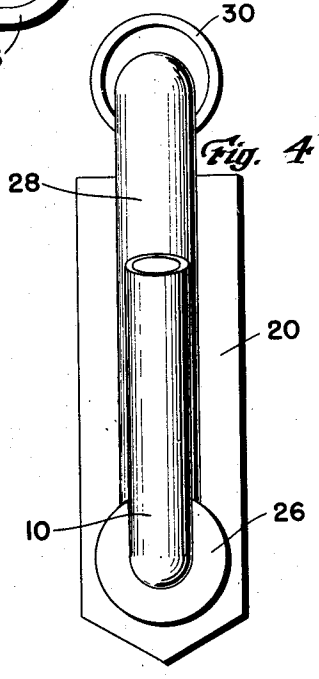


Fig. 4

Inventor:
Burton C. Hamilton
by: James R. Hodder
Attorney

Patented Sept. 20, 1949 2,482,479

UNITED STATES PATENT OFFICE

2,482,479

PHOTOGRAPHIC ACCESSORY

Burton C. Hamilton, Brookline, Mass.

Application July 9, 1948, Serial No. 37,913

2 Claims. (Cl. 259—4)

1

My present invention relates generally to photographic accessories, and more particularly to a novel, useful, and efficient device for association with the standard tray used for developing and washing films, plates, or prints in the process of finishing the same.

In the normal processing of prints and the like, I have found that the washing and rinsing operation is generally performed in an appropriate tray which fits into a sink or other drain and which is further associated with any standard water faucet by means of a hose connection. To materially expedite this operation, it is the usual practice to wash a number of such prints simultaneously, which often tends to crowd the tray and thus causes the prints to stick or pack together. To overcome this difficulty it has been customary to oscillate the tray or to have the water flowing into the tray so that the prints will be induced to circulate. Also the tray may be tilted at an angle to allow the liquid to flow out, or the depth of the liquid may be controlled by providing any suitable means, such as a syphon, to regulate the same.

I have discovered, however, that this prior procedure will not always keep the water sufficiently agitated to maintain the prints in properly separated relation, so that a main object of my invention is to provide a device which will obviate the above-mentioned objection by including means to spray water throughout the tray at divergent angles and at varying depths, and to maintain the liquid or water in said tray at a predetermined level.

Another important object of my invention pertains to the novel clamping means incorporated in my device whereby it may be readily attached to washing trays of any size. I also prefer to design such tray-attaching portion in the form of a combination spring clamp and handle, so that it will provide a convenient versatile gripping member adapted to aid in the assembly, removal, and transportation of the entire unit.

A further prime object of my invention resides in the adaptability of its construction whereby it may be readily made with or without the inclusion of a syphoning attachment.

Still further objects of my novel and handy print washer relate to the attractiveness of its design and color combination, the extreme simplicity of its construction, its inexpensive cost, and its durability.

Other objects, features, and details of construction will be hereinafter more fully pointed

2

out in the accompanying description and defined in the appended claims.

Referring now to the drawings, wherein I show preferred embodiments of my invention:

Fig. 1 is a side elevational view of my novel print washer;

Fig. 2 is a front elevational view of the same;

Fig. 3 is a side elevational view, partly in cross-section, of my novel print washer having a syphoning apparatus incorporated therewith, and

Fig. 4 is a top plan view of the unit shown in Fig. 3.

In Figs. 1 and 2 of the drawings, I have illustrated my photographic print washer for association with a standard processing tray as comprising a feed tube designated generally at 10, which is formed with a vertical perforated lower portion 11, provided with a plurality of small openings 14—14 drilled therethru at divergent angles on the front and side surfaces thereof, and an upper extended portion 12 adapted to connect with a water faucet thru the medium of a usual rubber hose or other water-conducting means. I have shown the spray openings 14—14 as being in staggered relation vertically, as well as being drilled at divergent angles, since I have found that such arrangement produces excellent results in maintaining the water in the tray at the proper degree of agitation throughout its entire depth.

Supporting the tube 10 is a substantially U-shaped bracket element 15 consisting of a flat base portion 16, a slanting back portion 17 and an approximately flat top portion 18.

Suitably formed in the base 16 is a circular recess 19 of appropriate size to receive the bottom of the tube 10 and, thus, the same are mortiсed together, and, if desired, may be permanently secured by fusing or cementing in order to impart strength and rigidity to the unit. As thus united, I preferaby drill another spray opening 24, as shown in Fig. 2, thru both the end of the base 16 and the contiguous wall of the tube portion 11 adjacent the bottom thereof, thereby supplying additional agitating means along the bottom of the processing tray.

The bracket top 18 is provided with a suitable opening thru which the tube 10 may fit and be supported therein. The bracket back portion 17 is slanted at an appropriate angle to closely approximate the level of the side of the processing tray and is also of sufficient length to correspond with the standard height of said tray side.

Adapted to cooperate with both the tube 10 and the bracket 15 is the third and remaining part of my device, a spring clamping element des-

ignated generally as 20. Said clamp 20 is formed with an opening therein adjacent the end of a flat section 21 thru which the tube 10 is also fitted, and which opening and section 21 fit directly above and correspond identically with said top portion 18 and its opening therethru. Further, to impart added strength and stability to my unit I cement or fuse the portion 18 and the section 21 together, where they are parallel and in contact, as shown in the drawings, and each in turn to the tube 10, so that each one of the three parts—tube, bracket, and clamp—reinforces and is, in turn, reinforced by the other two.

The clamp 20 is also shaped at the opposite end in the form of a looped section 22, the back of which contacts the back of said bracket portion 17, and between which sections 22 and 21 is a point of spring 23 which is predetermined by both my design of the construction and the inherent resiliency of the material.

It will be apparent that the clamp 20 is appropriately designed to serve as a handle for my unit when the same is being assembled, removed, or transported, and is particularly adapted for attachment to a tray edge inserted between the section 22 and the back portion 17.

I prefer to form my print washer out of synthetic plastic material, such as Plexiglas, as being peculiarly suited to this type of photographic accessory, as each section can thus be made of a different color for attractiveness and the unit light in weight but of durable construction and attractive color.

When utilizing my novel print washer, I first attach my unit centrally of the processing tray by positioning the edge of the tray in the opening between the loop section 22 and the bracket back 17, and then pressing downwardly until the bracket base 16 sets firmly on the tray bottom, thus causing the back 17 to rest against the side of the tray and the spring clamp 20 to retain the unit as thus positioned under sufficient tension.

Upon inserting the free end of the extended tube portion 12 in the faucet hose, I am now prepared to adjust the flow of water until the desired degree of turbulence is obtained thru the sprays of water being forced at divergent angles and at varying levels out of the perforations 14—14 and 24.

In using my device as above described and as shown in Figs. 1 and 2, the same not including a syphoning arrangement, any convenient means such as a wedge, or the like, may be placed under one side of the tray to control the overflow, preferably limiting it to one side only.

As thus set up, I can readily insert my prints in the tray for the washing operation, and can be assured of a sufficient, constant, and effective print-agitation due to my novel construction so that said prints will always remain well separated and not become stacked together.

In Figs. 3 and 4, I have illustrated a modification of my device constructed and equipped for automatic syphoning. In such modification I show my apparatus which includes the tube 10, U-shaped bracket 15, and curved clamping member 20 essentially as above described. To incorporate therewith the syphoning means, I form an appropriate opening thru the corresponding and united parts 18 and 21, said opening being of larger diameter than that shown in Figs. 1 and 2 to receive and hold in fused relation an inverted barrel 25, the closed top of which fits tightly around said tube 10 to provide a collar 26.

The barrel 25 extends substantially equidistant above and below the united portions 18 and 21, the upper half of said barrel 25 being provided with an opening 27 into which is sealed one end of a rearwardly extending syphon tube 28, while the lower half of said barrel 25 is adapted to control the water level in the tray.

As clearly shown in Fig. 3, I preferably form the tube 28 curved on a similar arc to that of the clamp 20 and as a means of imparting added rigidity to my complete unit, and also as shown, I prefer to fuse or otherwise secure the upper parts of said clamp 20 and tube 28 where parallel and in contact. Beyond the fused portion I separate the clamp and tube slightly to provide sufficient space for the spring function of said clamp 20, as above explained.

I have shown the bottom of said tube 28 cemented or fused to and carrying a seal cup 30 which is adapted to rest upon the sink or other drain into which the processing tray is placed, and which cup 30 is constructed with the sides thereof suitably above the bottom of the tube 28 so that the arrangement will serve to hold the vacuum seal once the syphon is in operation. Drilled in the tube 10 directly in central relation to said opening 27 is a suitable opening 29 thru which the water will flow to fill up the tube 28. Thus, automatic syphoning results.

When the liquid level in the tray rises above the lower opening in the barrel 25, the water supply from the faucet is of greater capacity and volume than the escaping spray thru the openings in the tube 10 and, hence, a sufficient barometric pressure is built up to cause an overflow thru the syphon 28, which syphoning action is further induced by the jet or spray thru the opening 29. Once the syphoning action is in operation, the liquid level in the cup 30 will hold the syphon tube full and, thus, expedite a succeeding as well as a continuing syphoning action.

I claim:

1. As a new article of manufacture, a photographic accessory for attachment to a print-washing tray, comprising, in intersupporting association, a substantially U-shaped bracket, an intake tube, and a spring member, said bracket designed to engage the inside of said tray, with its upper arm surrounding said tube and its lower arm resting on the bottom of said tray and attached to the bottom of the intake tube, the top of said tube being arranged for connection with a liquid supply and the lower portion of said tube being formed with a plurality of spray openings drilled therein at divergent angles and at staggered heights, said spring positioned in reinforcing relation with the upper arm of said bracket and constructed and arranged to contact the outside of said tray under tension.

2. As a new article of manufacture, a photographic accessory for attachment to a print-washing tray, comprising, in intersupporting association, a substantially U-shaped bracket, a barrel, an intake tube, a siphon element and a spring member, said bracket designed to engage the inside of said tray with its upper arm surrounding said barrel and its lower arm resting on the bottom of said tray and attached to the bottom of said intake tube, said intake tube passing thru said barrel and having an upper portion arranged for connection with a liquid supply, and a lower portion formed with a plurality of spray openings therein, said barrel closed at the top and open at the bottom, said siphon element connected with said barrel and extending downwardly, a seal cup attached to the lower end of

said element, a spray opening in said intake tube opposite the entrance to said siphon element, said spring member positioned between said siphon element and said bracket in reinforcing relation with the upper arm of said bracket and in supporting relation to said siphon element, and constructed and arranged to contact the outside of said tray under tension.

BURTON C. HAMILTON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,136,705	Nichols	Apr. 20, 1915
1,558,358	Hickman	Oct. 20, 1925
2,105,165	Schnetz	Jan. 11, 1938