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V. D. KREHBIEL

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PROCESSING EQUIPMENT FOR PHOTOGRAPHY

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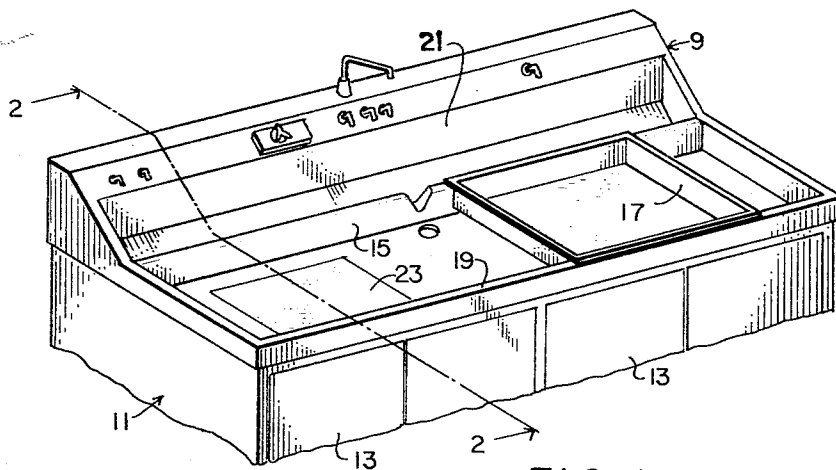


FIG. 1

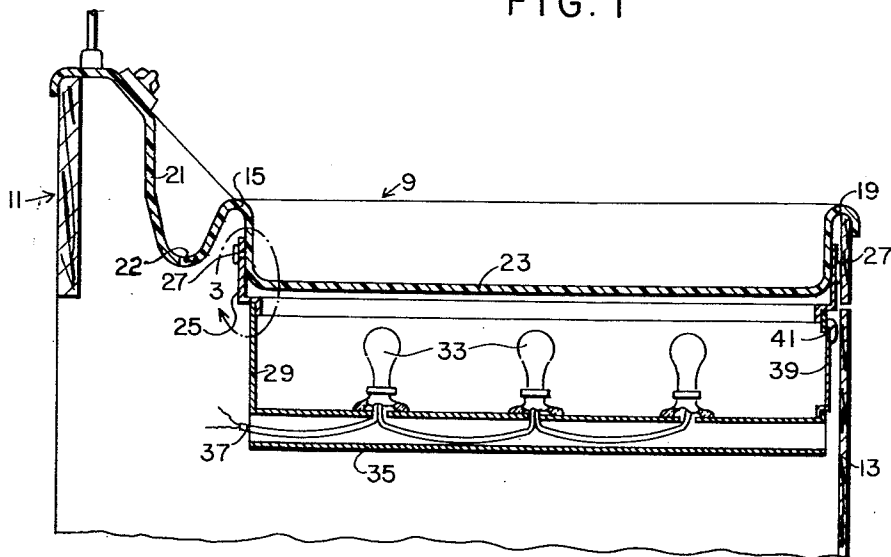


FIG. 2

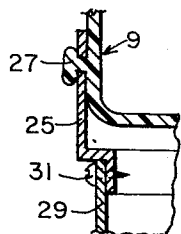


FIG. 3

INVENTOR.
V. D. KREHBIEL

BY
John H. Weddowson
ATTORNEY

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PROCESSING EQUIPMENT FOR PHOTOGRAPHY

Vivian D. Krehbiel, 715 E. 10th St., Wichita, Kans.

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4 Claims. (Cl. 95—95)

This invention relates to processing equipment. In a more specific aspect this invention relates to a new processing sink structure. In yet a more specific aspect, this invention relates to a new photographic processing sink structure having a bottom with a translucent portion. Yet a more specific aspect of this invention is concerned with a new photographic processing sink structure having a portion of the bottom of the sink translucent so that development of negatives or positives can be easily and conveniently handled to the optimum of processing, and specifically and preferably an aspect of this invention relates to producing such a photographic sink structure from resin or plastic materials and integrally formed.

Processing equipment of the structural nature of a sink has long been known in the art, and such has been common in photographic processing to develop and fix negatives. Also, sinks are commonly known and used in practicing the arts of chemistry, dentistry, medicine, etc. In most of these fields and arts, corrosive materials and chemicals are used in a great many of the common steps and procedures. Sinks and similar equipment are known and have been built of plastic materials, particularly synthetic plastic materials which in polymerized form and cured are resistant to corrosive substances such as mineral acids, caustic solutions, etc. These sink structures of resin or plastic materials are normally built up on a form or mold and reinforcing materials such as glass fibers and the like are incorporated into the sink structures to give them rigidity and strength. While these sink structures can and are used in photographic and graphic arts processing laboratories to develop and fix negatives, etc., they are rather inconvenient, because they do not provide for the worker to be able to view and examine the results of the processing operations, particularly during the developing and fixing steps. The exposed film, especially exposed halftones and fine line reproduction, has to be developed and fixed under rather rigid time, temperature, etc., conditions, and of necessity this must be done in a room or space where the only light available is what is known as "safe light" so that the exposed film will not be ruined prior to complete operation to produce the negative. As a result, the methods and apparatus of the prior art are not reliable, and the results depend to a great extent upon guess work on the part of the worker. The difficulty is encountered throughout the industry with all kinds of sinks, including those made of plastic materials, stainless steel, porcelainized metals, etc.

I have invented new processing equipment structures of the nature of a sink which overcome the difficulties, inconveniences and other disadvantages of the sinks known in the prior art. The new sink structure for photographic processing overcomes all of the many disadvantages of the sink structures known in the prior art. With the new sink structures of my invention, exposed photographic film can be developed and properly finished reliably and conveniently, and particularly in high contrast film work the developing and fixing can be carried to exactly the right point with no guess work on the part of the worker, resulting in the best negative possible to in turn produce excellent reproductions in color and black and white. The

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new sink structure for photographic processing of my invention is conveniently and easily made, is economical to make and install, and long lasting in use. The new sink structure of my invention is preferably made from plastic or resin material, and this has proven to be a very economical material from which a particularly desired sink can be made.

The new processing equipment of the nature of a sink of my invention has a bottom with a portion thereof translucent, and it preferably is constructed and adapted to pass light upwardly through the translucent portion. In use, it is preferred to have a source of light adjacent the processing equipment and positioned to in operation pass light rays up through the translucent portion of the bottom of the equipment. Most preferably the sink-type structure embodiment of the processing equipment of my invention has a partition thereacross, this partition forming a trough with a side of the processing equipment, and preferably this partition and other sides of the equipment are constructed and adapted to support tray means for tiltably mounting the tray means, so that in tilted position material will pass therefrom into the trough and out a drain conveniently provided therefrom. Most preferably the new processing equipment of my invention of a sink nature is integrally formed of plastic material including the preferred partition and the portion of the bottom which is translucent, such plastic material or resin preferably being reinforced with such as glass fibers used in a relatively loose mat form.

It is an object of this invention to provide new processing equipment.

Another object of this invention is to provide a new sink-type structure having a portion of the bottom of same translucent, so that light from a source of same can be passed upwardly through the translucent portion.

Still another object of this invention is to provide new photographic processing apparatus in the form of a sink which is particularly desirable to use for visual inspection when developing and fixing photographic negatives and positives for the graphic arts and allied fields.

It is still another object of this invention to provide an integrally formed sink-type structure which has integrally formed therein a translucent portion in the bottom of the sink structure.

Yet another object of this invention is to provide new photographic processing sink structures which are easy and economic to make, and convenient and reliable in use, and which in operation produce optimum results in processing color photographic film.

Other objects and advantages of the new processing equipment of my invention will become apparent to those skilled in the art upon reading this disclosure.

Drawings accompany and are a part of this disclosure. These drawings are of preferred specific embodiments of the new processing equipment of my invention and it is to be understood that such drawings are not to unduly limit the scope of my invention.

In the drawings,

FIG. 1 is a perspective view of a preferred specific embodiment of the new sink structure of my invention, such being mounted on cabinet means used to mount and support the sink structure.

FIG. 2 is an enlarged cross sectional transverse view through the sink structure of FIG. 1, such view being taken on line 2—2 of FIG. 1.

FIG. 3 is an enlarged view taken on line 3—3 of FIG. 2,

showing a preferred mounting of the reflective hood for the safe light source on the sink structure proper.

Following is a discussion and description of the new sink structure of my invention, such being made with reference to the drawings whereon the same reference numerals are used to indicate the same parts and/or structure. The discussion and description is of preferred specific embodiment of the sink structure of my invention and it is to be understood that such is not to unduly limit the scope of my invention.

The new sink structure of my invention shown in the drawings is a preferred specific embodiment, and it is preferably made in the form of a top or cap 9 which is suitably mounted for use. In the drawings, sink 9 is shown mounted on a cabinet-type base 11 which has doors 13 in the front end thereof to provide access to space therein for storing photographic chemicals and other supplies, if desired.

The sink structure 9 shown in the drawings is an integral structure preferably formed of reinforced plastic material and having an integrally formed partition 15 the length thereof. It is preferred to make sink 9 elongated so that one or more trays 17 can be used and supported on partition 15 and front edge 19 of the sink structure. Tray 17 is preferably translucent and desirably tiltably mounted as shown, so that in tilted position (not shown) fluid will run out of tray 17 into the trough formed by partition 15 and the back side 21 of the sink structure proper. It is preferred to form a drain opening 22 in the bottom of the trough so that material from tray 17 will flow thereout through plumbing conduit (not shown). In use a translucent tray 17 holds the film and solution during processing, and the film in the tray over a translucent portion 23 of sink 9 permits visual inspection of the film without removal from the solution. This is a most valuable function resulting from the new sink structure of my invention.

The bottom of sink 9 has a translucent portion 23 therein through which safe light passes upwardly when the sink is being used, so that a worker can view photographic negatives, etc., in solution, preferably in trays 17 which are translucent during developing and fixing. This is the principal feature of the new sink structure of my invention and has been found to allow optimum work and processing of photographic film. Portion 23 of the bottom of the sink is preferably formed integrally therewith by methods which are set forth hereinafter. And I have found that this provides a sink structure which is leak-proof and which is free of any and all corrosive problems with processing chemicals, and the like.

A source of light is provided with the new sink structure of my invention, and such is mounted on the bottom of the sink 9. This can be done in any suitable manner. A strip preferably of sheet metal or plastic 25 is mounted on the underneath side of the sink on the front, back and side thereof in the end portion having translucent portion 23 integrally formed therein. This sheet metal strip 25 is preferably of the shape shown in FIGS. 2 and 3, and it is preferably mounted thereon by means of a plurality of spaced holes in which and through which extends beads of plastic material which are forced therethrough and thereout in unpolymerized condition and polymerized to give a rigid mounting and connection. These beads of mounting material are given numeral 27 in the drawings. A reflective hood 29 is suitably attached to mounting strip 25, such as by the use of metal screws 31 therethrough. This reflective hood 29 mounts for use safe light bulbs 33, and a lower portion 35 of the reflective hoods forms an outlet for the wiring 37 to supply current to safe light source bulbs 33. These bulbs 33 are conveniently positioned under translucent portion 23 of the bottom of sink 9. Door means 39 of suitable shape and latch means 41 are incorporated into the front of the reflective hood so that it is convenient for one to reach therein to repair or change the light source bulbs 33.

Suitable plastic materials are desirably used in con-

structing the new sink structures of my invention. Preferably, I use polyester resins, unsaturated alkyd-styrene co-polymers, which as is known in regard to the alkyd resins in the reaction product obtained by heating unsaturated fatty acids or an acid anhydride with a polyhydroxy alcohol, and the resulting product is then dissolved in a monomer such as styrene to form the commercial polyester resin. And, as is known, these polyester resins are polymerized by the addition thereto of an addition type polymerization catalyst which works to cause polymerization of the resin in connection with light and heat. Also, I find it convenient and desirable to use epoxy resins in my new sink structure. Polystyrene, polyethylene, etc., are examples of suitable thermoplastic resins or plastic materials which can be used in making the new sink structure of my invention. These types of resins are the ones preferably used for constructing the new sink and, if desired, the various plastic materials can be provided with dyes of various types to obtain a pleasing color in the resulting product.

Also, reinforcing material, preferably in the form of a fiber glass mat or the like, can be used. Other reinforcing filler and strengthening materials can be used in either mat or fabric form, for example, sisal fiber, cotton, cellulose, rayon, nylon, and the like. I have obtained the best results with a loosely formed mat of the reinforcing fibrous materials, preferably glass fibers held together by any of the well-known adhesives or sizing agents.

As will be evident to those skilled in the art, various modifications of this invention can be made, or followed, in the light of this disclosure and discussion, without departing from the spirit or scope of the disclosure or from the scope of the claims.

I claim:

1. Photographic processing apparatus comprising, in combination, an elongated developing and processing sink integrally formed of reinforced plastic material and having an integrally formed partition therein the length thereof, translucent tray means, said partition and sides of said sink constructed to support said tray means, and said partition and another side of said sink forming a drain trough to receive material dumped from said tray means while tiltably supported on said partition, a portion of the bottom of said sink in one end portion being flat and a portion of said end portion being translucent, and a safe light source mounted adjacent said sink on the bottom thereof and positioned to pass safe light through said translucent portion.

2. Photographic processing apparatus comprising, in combination, a developing and processing sink having a partition therein, translucent tray means movably positioned on said sink, means on said sink to hold and support said tray means thereon during photographic processing, said partition and a side of said sink forming a drain trough to receive material dumped from said tray means, said sink having a flat, translucent sheet therewith and a safe-light source operatively connected to said sink and positioned to pass safe-light through said translucent sheet and through said tray means when same is positioned thereabove.

3. Photographic processing apparatus comprising, in combination, a sink having a translucent sheet therewith, said sink having drain means to receive and discharge liquids, translucent tray means movably positioned in said sink, means on said sink to support said tray means, and a light source operatively connected to said sink and positioned to pass light through said translucent sheet and through said tray means when same is positioned thereabove.

4. Photograph processing apparatus comprising, in combination, sink means having drain means therewith, a portion of said sink means being adapted for the passage of light therethrough, tray means movably positioned on said sink means and having a portion thereof adapted to transmit light, said portion of said tray means

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being alignable with said portion of said sink means, and light means connected to said sink means and positioned to provide light to said tray means through said portions of said sink means and said tray means.

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