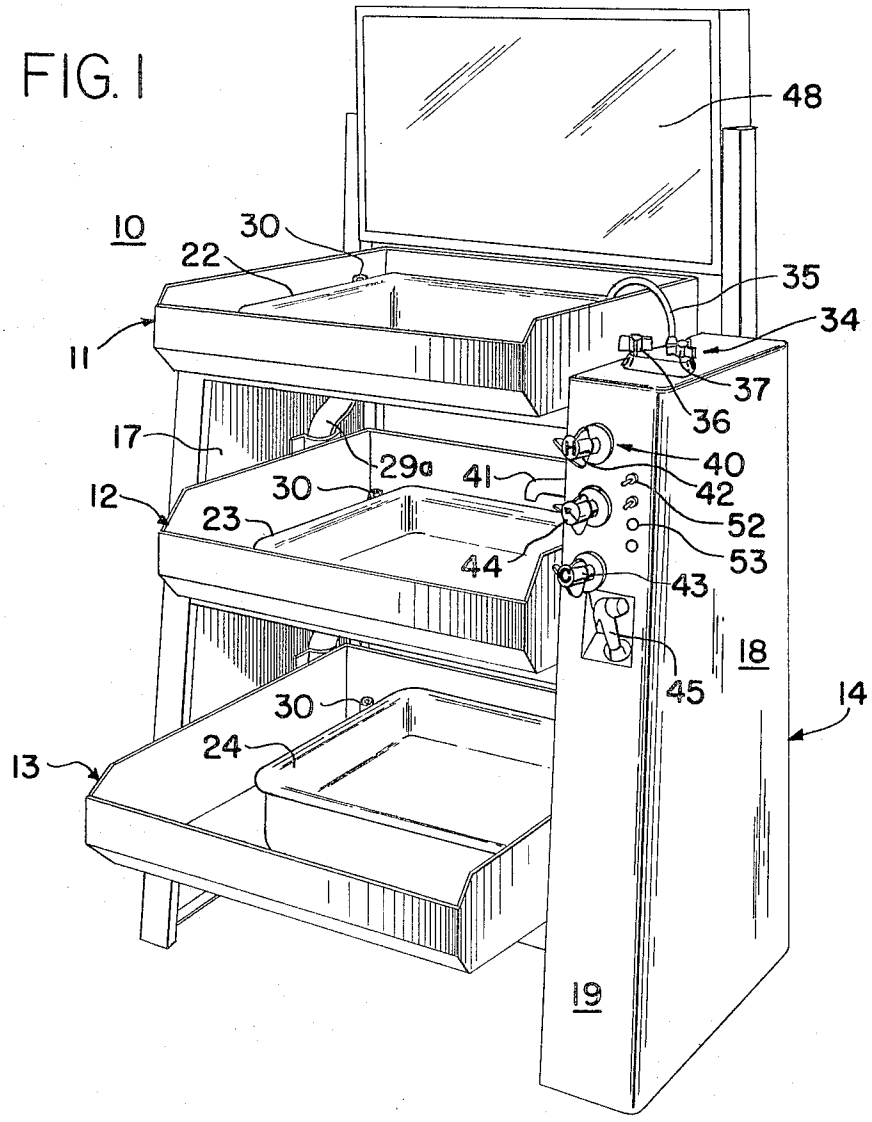
Dec. 27, 1966 H. R. BENSON 3,294,004

SINK

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FIG. 1



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FIG. 3

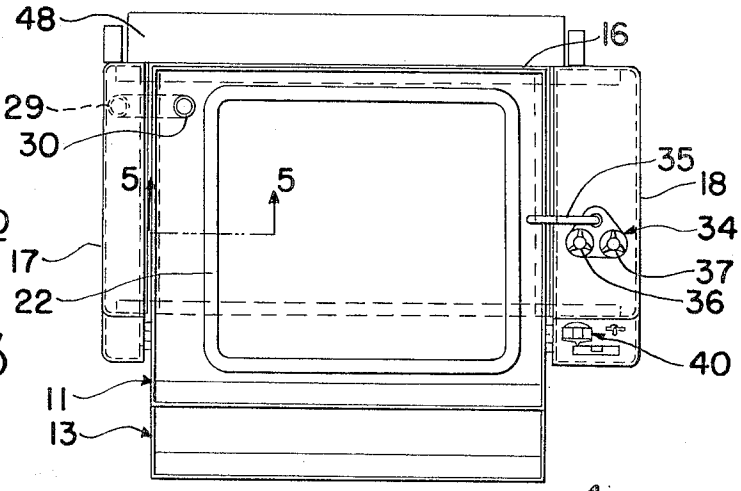
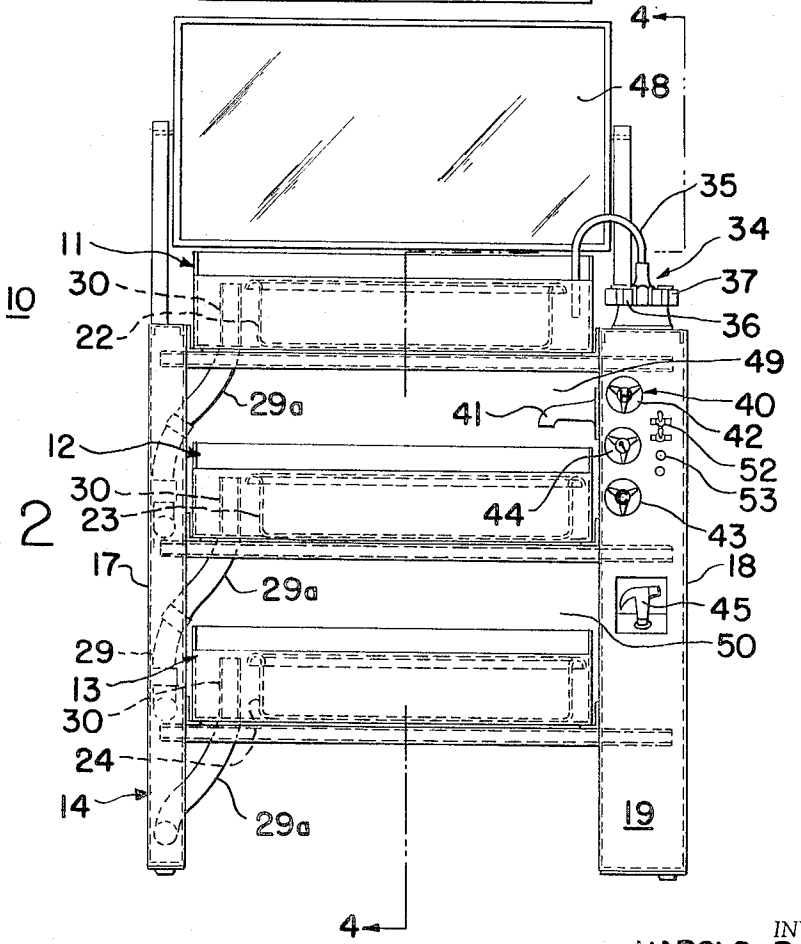


FIG. 2



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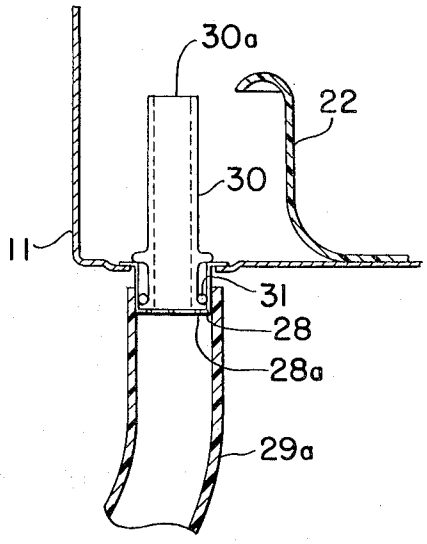


FIG. 5

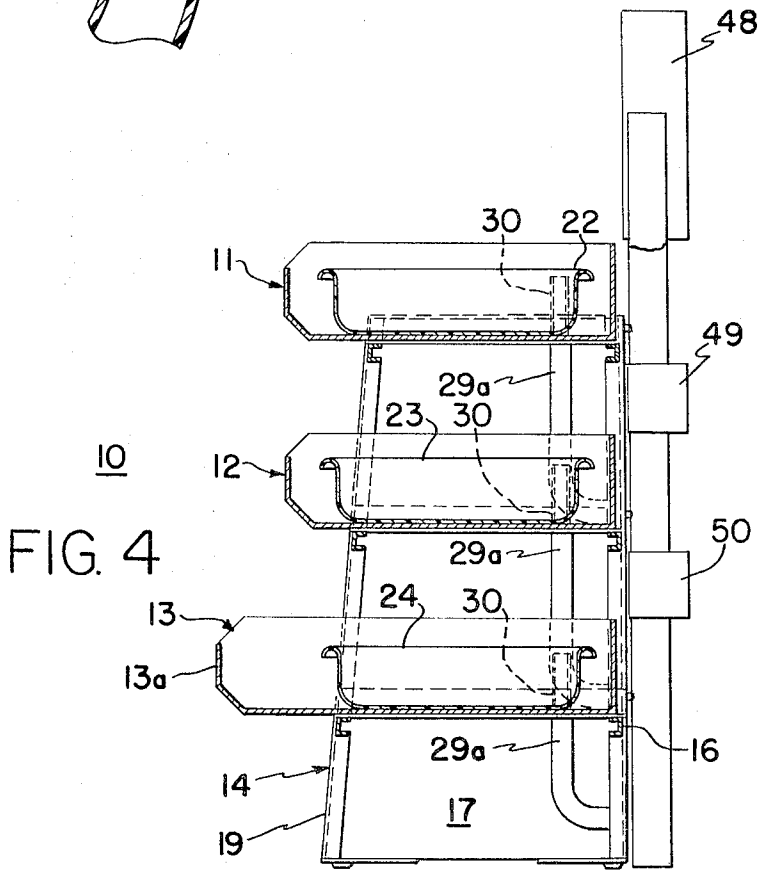


FIG. 4

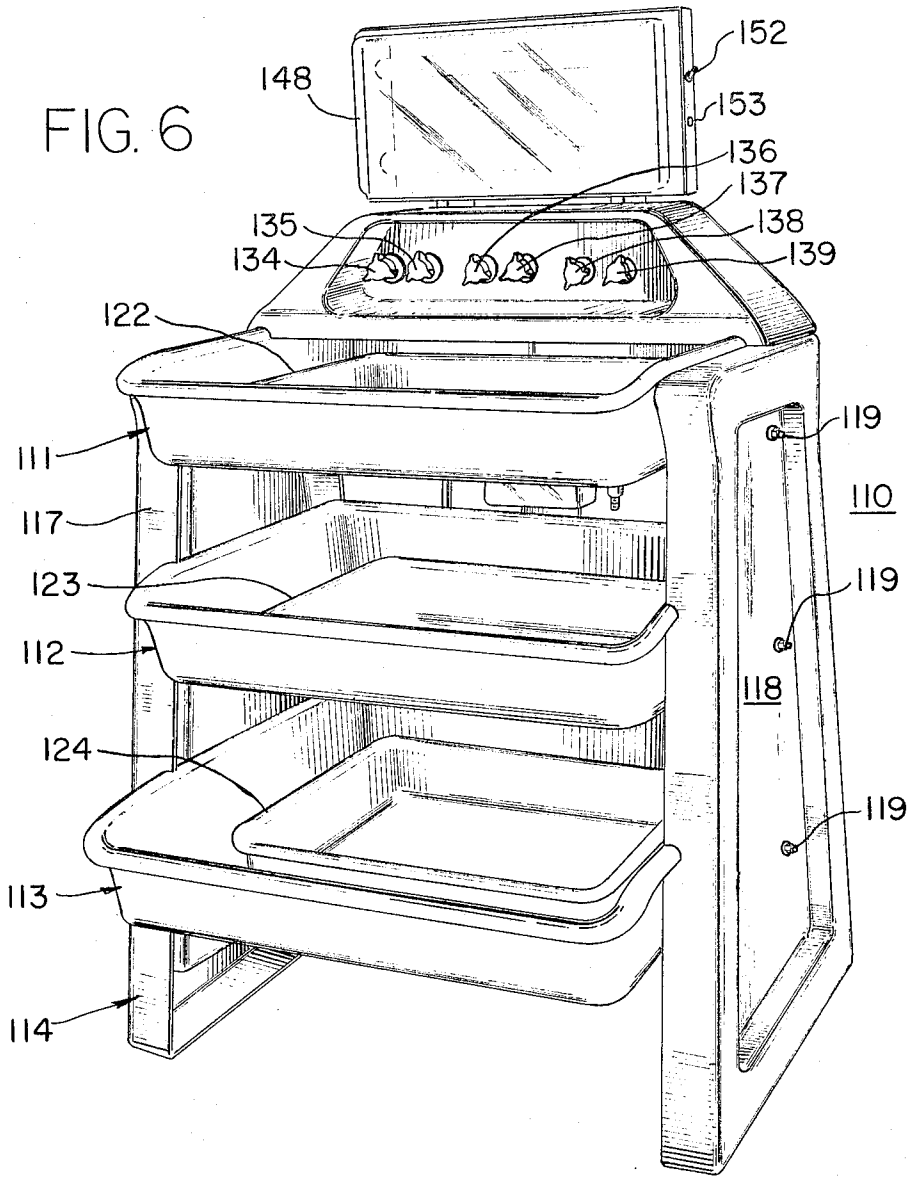
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FIG. 6



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FIG. 8

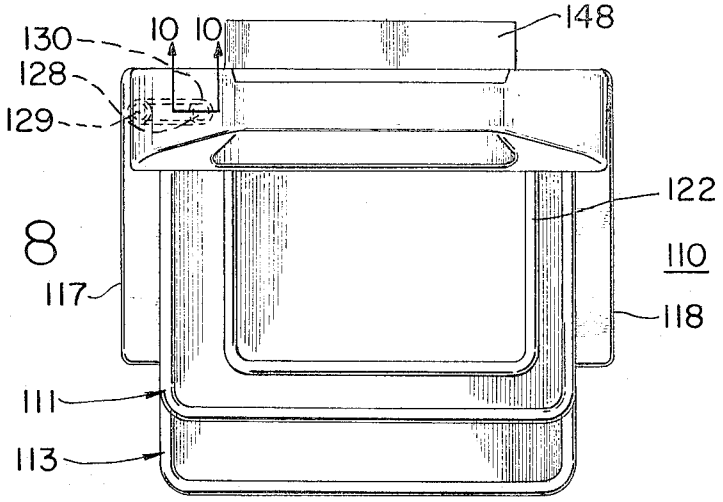
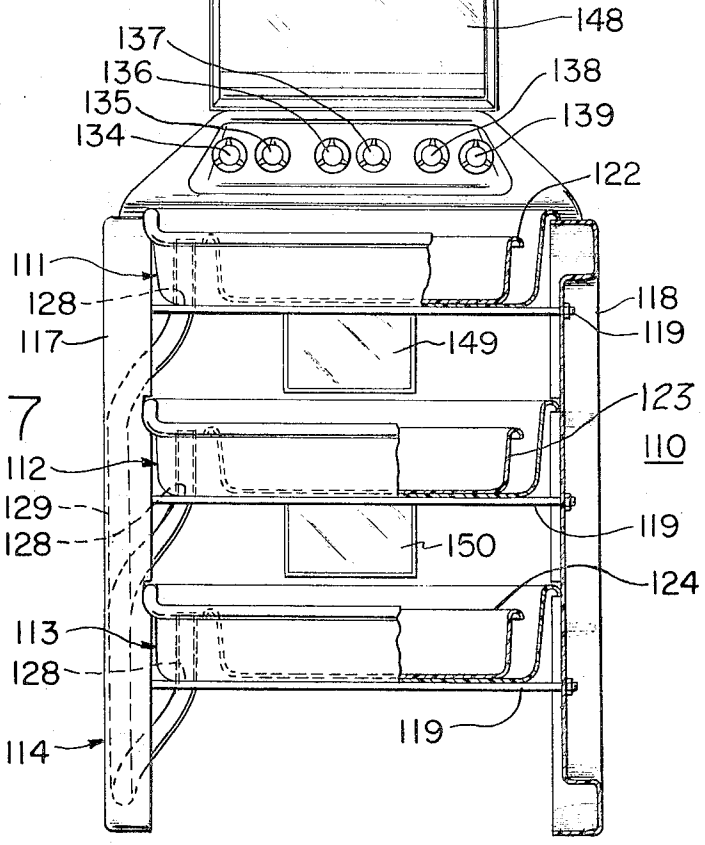


FIG. 7



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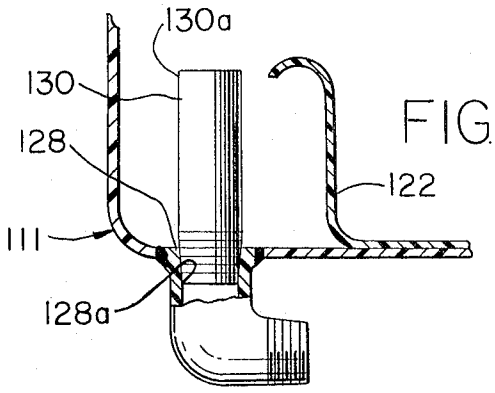
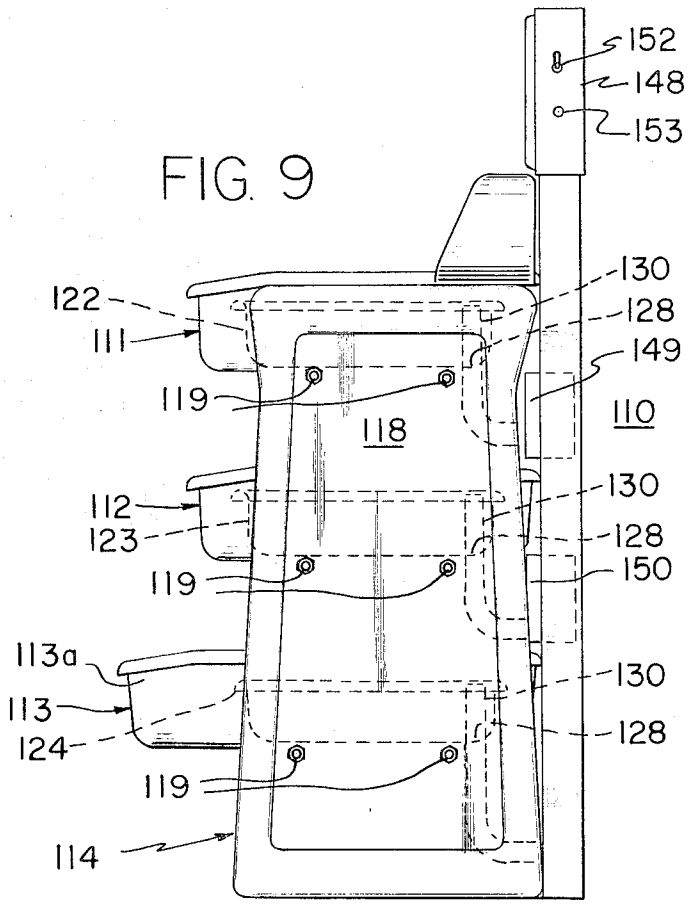


FIG. 10

FIG. 9



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3,294,004

SINK

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Filed Dec. 16, 1963, Ser. No. 330,800
8 Claims. (Cl. 95—96)

The present invention relates to a sink, and, more particularly, to a three-level vertical sink for processing sensitized photographic materials and the like.

In the development of photographic plates, films, papers, and other light sensitive materials, it is conventional practice initially to immerse the sensitized material into a developing solution to bring out the exposed latent image on the material. Once the image has been brought out in the developing solution, the sensitized material is then transferred to a stop solution, the action of which is to stop the development of the image on the sensitized material. Thereafter the sensitized material is transferred to a fixing solution, the function of which is to render the sensitized material insensitive to further light exposure by dissolving or otherwise washing away the unexposed portions of the sensitized materials.

Since the temperature of some of these solutions is quite critical in order to obtain optimum results, it is common to immerse trays of the solution in water of controlled temperature in order to maintain the solutions at the desired optimum temperature. Heretofore, it has been common to space the trays in horizontally spaced relation in sink basins. Obviously such an arrangement consumes a large amount of floor space in a photographic dark room. It is desirable to provide a new and improved processing sink for sensitized materials and the like which overcomes the above-mentioned difficulties.

Accordingly, it is an object of the present invention to provide a new and improved processing sink.

A further object of the present invention is to provide a new and improved developing sink of the type for processing light-sensitive materials and the like.

Another object of the present invention is to provide a new and improved processing sink which occupies a minimum floor space area.

Further objects and advantages of the present invention will become apparent as the following description proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

In accordance with these and other objects of the present invention, there is provided a new and improved sink for processing light-sensitive materials and the like. The sink comprises a base structure carrying a plurality of vertically spaced sink basins. The sink basins are each adapted to hold a removable tray positioned in a respective one of the basins. Each basin is provided with drain means and includes an overflow standpipe for controlling the level of water in the basin. Hot and cold water valves, and mixing spigots are provided for some of the basins, so that water of the desired temperature may be circulated around the trays to provide the desired temperature for the solutions in the trays. Darkroom safe lights are provided above each tray to facilitate development and processing of the light-sensitive materials. Moreover, in accordance with another aspect of the present invention, the lowermost basin protrudes forwardly of the other basins to catch any drippings from the other basins.

Advantageously, the vertical arrangement of the basins provides a processing sink requiring a much smaller floor area than the conventional type of processing arrangement wherein the sinks are horizontally spaced. Moreover, the temperature of the trays may be controlled individually by controlling the temperature of the water

flowing around the trays. The provision of an extendable hand-sprayer provides water wherever it is required in the photographic darkroom, and facilitates cleaning of the basins. Moreover, and most importantly, the new and improved vertical sink positions all the trays and water controls within easy reach for faster, fatigue-free processing of sensitized materials.

For a better understanding of the present invention, reference may be had to the accompanying drawings, in which:

FIG. 1 is an isometric view of the improved processing sink according to the present invention;

FIG. 2 is a front elevational view of the processing sink of FIG. 1;

FIG. 3 is a plan view of the processing sink of FIG. 1;

FIG. 4 is a side cross-sectional view of the processing sink of FIG. 1, taken along line 4—4 of FIG. 2;

FIG. 5 is a fragmentary cross-sectional view of the processing sink of FIG. 1 taken along line 5—5 of FIG. 3, and illustrating the standpipe arrangement in detail;

FIG. 6 is an isometric view of another embodiment of a processing sink according to the present invention;

FIG. 7 is a front elevational view, partly in section, of the processing sink of FIG. 5;

FIG. 8 is a plan view of the processing sink of FIG. 5;

FIG. 9 is an end view of the processing sink of FIG. 5; and

FIG. 10 is a fragmentary cross-sectional view of the processing sink of FIG. 5, illustrating the connection of the standpipe.

Referring now to the drawings, and particularly to the embodiment of FIGS. 1 to 5, there is illustrated a processing or developing sink **10** according to the present invention. The sink **10** includes an upper, intermediate and lower sink basin **11**, **12** and **13**, respectively, carried by a unitary base structure **14** formed of any suitable material such as Fiberglas, or steel coated with acid-resistant baked enamel. The base structure **14** includes a back wall **16**, a pair of closed side walls **17** and **18**, and a substantially open front wall **19**. The side walls **17** and **18** have their front edge inclined slightly upwardly and to the rear so that the front wall **19** is slightly inclined upwardly and to the rear. Moreover, the front edge **13***a* of the lower basin extends forwardly of the basins **11** and **12** so as to catch any drippings from the basins **11** and **12**. The basins **11**, **12** and **13** are all of steel construction with chemically-resistant coatings of epoxy phenolic material.

To provide for holding the processing solutions, the basins **11**, **12** and **13** are all adapted to hold processing trays **22**, **23** and **24**, respectively. In a conventional photographic light-sensitive developing process, the upper tray **22** would hold developing solution, the intermediate tray would hold a rinse or stop solution, and the lower tray would hold a fixing solution. In accordance with the present invention, the trays **22**, **23** and **24** are conveniently accessible from the top of tray **22** and the upper front of trays **23** and **24**. Moreover, sensitized materials may readily be transferred from the uppermost tray **22** to the intermediate tray **23** to the lowermost tray **24** in their course of processing.

For maintaining trays **22**, **23** and **24** in a bath of water of suitable temperature to maintain the desired temperature of processing fluid within the trays, the sink basins **11** and **12** are equipped to maintain a flow of water therethrough, and basin **13** may also be filled with a water bath. Each of the basins **11**, **12** and **13** is provided with a cup-shaped drain **28**, FIG. 5, provided with perforations **28***a* in the lower surface thereof to provide drain openings, each connecting into a single drain pipe **29** through a branch conduit **29***a*. Moreover, there is

provided a snap-in overflow standpipe **30**, removably positioned in each of the drains **28**, with the upper end **30***a* terminating below the top of the respective trays **22**, **23** and **24**. The height of the standpipe determines the height of the water bath in the respective basins **11**, **12** and **13**. An O-ring **31** positioned between the outer surface of the standpipe **30** and the inner cylindrical side walls of the drain **28** is effective to seal the standpipe **30** relative to the drain **28**. It will be appreciated that when it is desired to provide a bath in the basins **11**, **12** and **13**, the basins **11**, **12** and **13** may be filled with water up to the top **30***a* of the standpipe **30**. When it is desired to empty the bath from the basins **11**, **12** and **13**, the standpipes **30** may be removed from the basins **11**, **12** and **13** and the basins will empty through the drains **28**.

The bath water temperature for the upper basin **11** may be selected at any desired temperature by means of a water faucet **34** including a jet stream spigot **35** positioned to direct a jet stream of water into the basin **11** to provide a swirling or moving current of water, controlled by hot and cold water controls **36** and **37**, respectively.

To control the temperature of the bath water in the intermediate basin **12**, there is provided a selective faucet assembly **40** including a spigot **41** positioned to direct water into the intermediate basin **12**, and hot and cold water controls **42** and **43**, respectively. Additionally, the water faucet **40** includes a selector valve **44** to selectively direct water from the hot and cold water controls **42** and **43** to the spigot **41**, or to an extendable, flexible hand hose spray **45**. The hand hose spray **45** can be used not only to fill the lowermost basin **13**, but, additionally, provides a supply of water anywhere it is needed in the darkroom, for example during the washing of the basins **11**, **12**, and **13**. The temperature of the fixing solution normally in the lower tray **24** is not generally as critical as the temperature of the developing and stop solutions; however, if desired, a permanent circulating water system may be provided for the lowermost basin **13** similar to that provided for the basin **11** and **12**.

To provide a source of illumination for the processing operation, the sink **10** is provided with suitable darkroom safe lights **48**, **49**, and **50**, positioned above respective ones of the basins **11**, **12** and **13**, and having a suitable safe light cover, for example, ruby. A toggle switch **52** simultaneously controls all the safe lights **48**, **49**, and **50**, and an indicator light **53** may be used to indicate the position of the toggle switch **52**. Of course, it is understood that, if desired, separate switch controls may be provided for each of the safe lights **48**, **49** and **50**.

A modified embodiment of a developing sink according to the present invention is illustrated in FIGS. 6 to 10. It is understood that the sink disclosed in FIGS. 6 to 10 is similar to that heretofore described in discussing FIGS. 1 to 5 above. Referring now to the embodiment of FIGS. 6 through 10, there is illustrated a processing or developing sink **110**, including an upper, intermediate, and lower sink basin **111**, **112**, and **113**, respectively, carried by a base structure **114** vacuum-molded of polyvinyl chloride or other suitable plastic material. The basins **111**, **112** and **113** may be of any suitable material, but in the illustrated embodiment, the basins **111**, **112**, and **113** are vacuum-formed of suitable plastic material. The base structure **114** includes a pair of closed side walls **117** and **118**, interconnected by a plurality of tie rods, which, in the illustrated embodiment, are one-half inch threaded fasteners extending between the side walls **117** and **118** directly below the pans **111**, **112**, and **113**. The side walls **117** and **118** have a front edge inclined slightly upwardly and to the rear so that the front of the sink **110** is inclined slightly upwardly and to the rear. Moreover, a front edge **113***a*, FIG. 9, of the lower basin extends forwardly of the basins **111** and **112** so as to catch any dripping from the basins **111** and **112**.

To provide for holding the processing solutions, the basins **111**, **112**, and **113** are all adapted to hold processing trays **122**, **123**, and **124**, respectively. As heretofore described, in a conventional photographic light-sensitive developing process the upper tray **122** would hold the developing solution; the intermediate tray would hold a rinse, or stop solution; and the lower tray would hold a fixing solution. The trays **122**, **123**, and **124** are conveniently accessible from the top of tray **122** and the upper front of trays **123** and **124**. Moreover, sensitized materials may readily be transferred from the upper-most tray **122** to the intermediate tray **123** to the lowermost tray **124** in their course of processing.

From maintaining the trays **122**, **123**, and **124** in a bath of water of suitable temperature to maintain the desirable temperature of the processing fluid within the trays, the sink basins **111**, **112**, and **113** are equipped to maintain a flow of water therethrough. Each of the basins **111**, **112**, and **113** is provided with a drain **128** (FIG. 10), provided with threads **128***a* on the inner surface thereof, each connecting into a single drain pipe **129** through suitable branch conduits. Moreover, there is provided an overflow standpipe **130**, removably threaded in the respective drains **128** with the upper end **130***a*, FIG. 10, terminating below the top of the respective trays **122**, **123**, and **124**. The height of the standpipe **130** determines the height of the water bath in the respective basins **111**, **112**, and **113**. When it is desired to provide a bath in the basins **111**, **112**, and **113**, the basins **111**, **112**, and **113** may be filled with water up to the top **130***a* of the standpipe **130**. When it is desired to empty the bath from the basins **111**, **112**, and **113**, the standpipes **130** may be removed from the basins and the basins will empty through the drains **128**.

The bath water temperature for the basins **111**, **112**, and **113** may be selected at any desired temperature by means of hot and cold water controls. More specifically, there are provided hot and cold water controls **134**, **135**, respectively, connected to discharge a stream of water into the lowermost basin **113**. A second set of faucets including hot and cold water controls **136**, **137**, respectively, is connected to discharge a stream of water into the intermediate basin **112**. Moreover, a third set of faucets including hot and cold water controls **138**, **139**, respectively, are connected to discharge a stream of water into the uppermost basin **111**.

To provide a source of illumination for the processing operation, the sink **110** is provided with suitable darkroom safe lights **148**, **149**, and **150**, positioned above respective ones of the basins **111**, **112**, and **113** and having a suitable safe light covering, for example, ruby. A toggle switch **152** simultaneously controls all the safe lights **148**, **149**, and **150** and an indicator light **153** may be used to indicate the position of the toggle switch **152**. Of course, it is is understood that, if desired, separate switch controls may be provided for each of the safe lights **148**, **149**, and **150**.

It will be seen that a developing sink with the vertical arrangement of the basins in accordance with the present invention requires a much smaller floor area than a conventional type of processing arrangement wherein the sink basins are spaced horizontally of each other. Moreover, the temperature of the trays may be controlled easily and conveniently by controlling the temperature of the water bath around the tray. The provision of the extendable handsprayer in one embodiment provides water wherever it is required in a photographic darkroom and facilities cleaning of the basins. The forward extension of the lower basin is effective to catch drippings from the other basins. Moreover, and quite importantly, the new and improved vertical basin positions all the trays and water controls within easy reach during a processing operation.

Although the present invention has been described by reference to only a single embodiment thereof, it will be apparent that numerous other modifications and embodi-

ments will be devised by those skilled in the art which will fall within the true spirit and scope of the present invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A sink for processing sensitized materials and the like, comprising a base structure; a plurality of vertically spaced sink basins carried by said base structure; drain means in each of said basins and including overflow standpipe means for controlling the level of water in each respective basin; a plurality of inner removable trays, each positioned in a respective one of said basins; and means for selectively directing a flow of hot and cold water into at least one of said basins.

2. A sink as set forth in claim 1 above and including darkroom safe light means positioned above each of said basins.

3. A sink for processing sensitized materials and the like, comprising a base structure; a plurality of vertically spaced sink basins carried by said base structure; drain means in each of said basins and including a removable overflow standpipe for controlling the level of water in each respective basin; a plurality of inner removable trays, each positioned in a respective one of said basins; and means for selectively directing a flow of hot and cold water into each of said basins.

4. A developing sink for processing sensitized materials and the like, comprising a base structure; a plurality of vertically spaced sink basins carried by said base structure, the bottom one of said basins protruding forwardly of the other basins to catch any drippage from said other basins; drain means in each of said basins, each connecting into a common drain pipe; removable overflow standpipe means operatively associated with each of said drain means for controlling the level of water in each respective basin; a plurality of inner removable trays, each positioned in a respective one of said basins, and having side walls extending above the water level in each basin as determined by the height of the respective standpipe means; and means for selectively directing a flow of water into selected ones of said basins, including means for preselecting the temperature of said flow of water.

5. A developing sink for processing sensitized materials and the like, comprising a base structure having a substantially open front wall; a plurality of vertically spaced sink basins carried by said base structure accessible from the top and from said open front wall, the bottom one of said basins protruding forwardly of the other basins to catch any drippage from said other basins; drain means in each of said basins, each connecting into a common drain pipe; removable overflow standpipe means operatively positionable with each of said drain means for controlling the level of water in each respective basin; a plurality of inner removable trays, each positioned in a respective one of said basins, and having side walls extending above the water level in each basin as determined by the height of the respective standpipe means; faucet means having a spigot for directing water into the upper basin and including hot and cold water controls; and

faucet means having a spigot for directing a stream of water into the intermediate basin and including means for selectively directing water into said lower basin; and hot and cold water controls selectively connectable with the last-mentioned spigot and the last-mentioned means.

6. A developing sink for processing sensitized materials and the like, comprising a base structure having a back and closed side walls and having a substantially open front wall inclined slightly upwardly and to the rear; a plurality of vertically spaced sink basins carried by said base structure accessible from the top and from said open front wall, the bottom one of said basins protruding forwardly of the other basins to catch any drippage from said other basins; cup-shaped drain means in each of said basins, each connecting into a common drain pipe; snap-in removable overflow standpipe means for controlling the level of water in each respective basin; a plurality of inner removable trays, each positioned in a respective one of said basins, and having side walls extending above the water level in each basin as determined by the height of the respective standpipe means; jet stream water faucet means having a spigot for directing a swirling stream of water in the upper basin and including hot and cold water controls; and faucet means having a spigot for directing a stream of water into the intermediate basin and further including an extendable hand-sprayer and hot and cold water controls selectively connectable with said last-mentioned spigot and said sprayer.

7. A sink for processing sensitized materials and the like, comprising a base structure; a plurality of vertically spaced sink basins carried by said base structure; drain means in each of said basins for controlling the level of water in each respective basin; a plurality of inner removable trays, each positioned in a respective one of said basins; and means for directing a flow of hot and cold water selectively into each of said basins independently of the other basins.

8. A sink for processing sensitized materials and the like, comprising a base structure; a plurality of vertically spaced sink basins carried by said base structure; drain means in each of said basins; means for directing a flow of hot and cold water selectively into each of said basins independently of the other basins; and darkroom safe light means positioned above each of said basins.

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