Sept. 8, 1931. L. BLOCH 1,821,959

BATHTUB

Filed Oct. 23, 1929 2 Sheets-Sheet 1

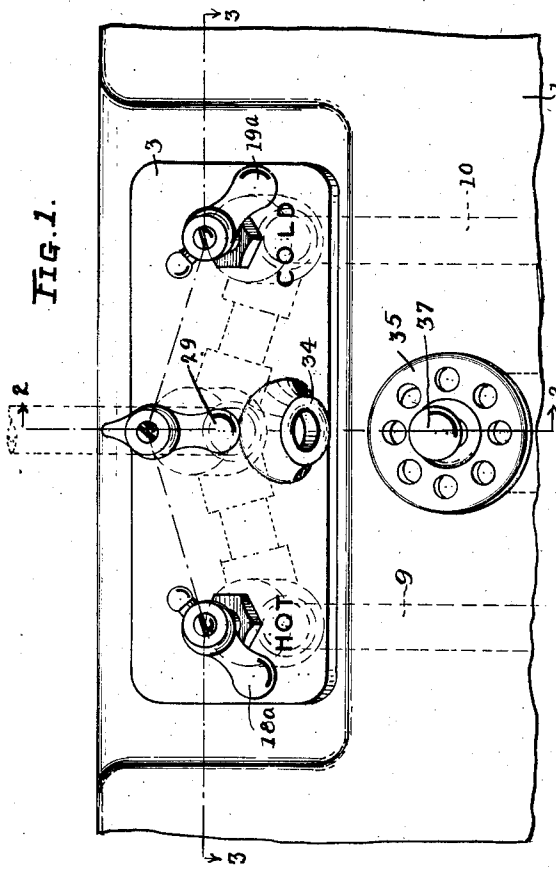


FIG. 1.

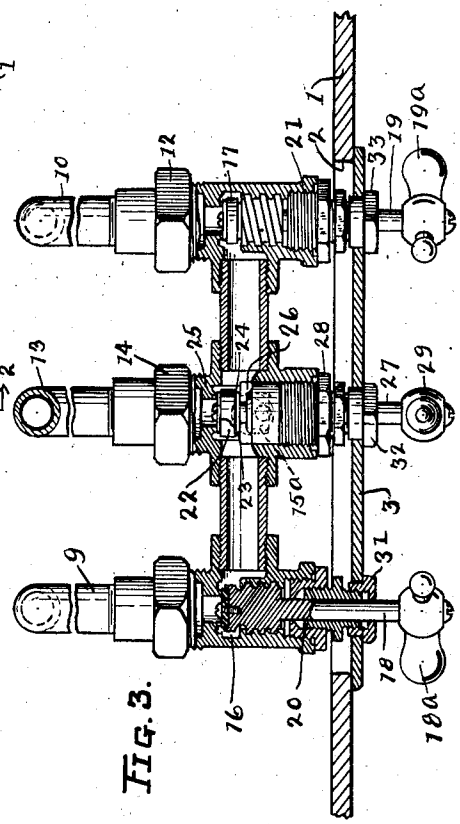


FIG. 3.

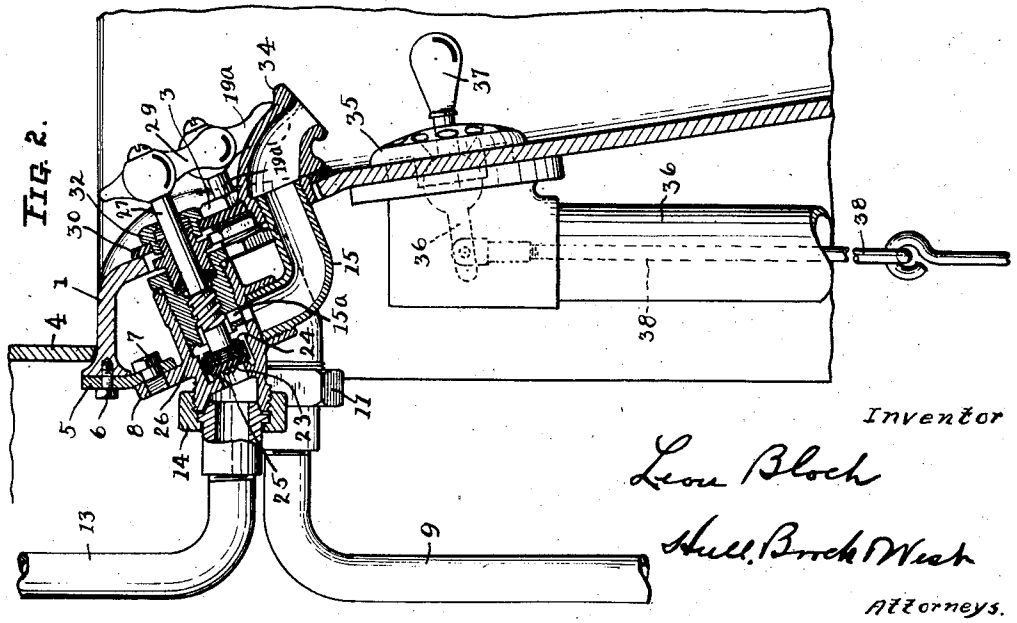


FIG. 2.

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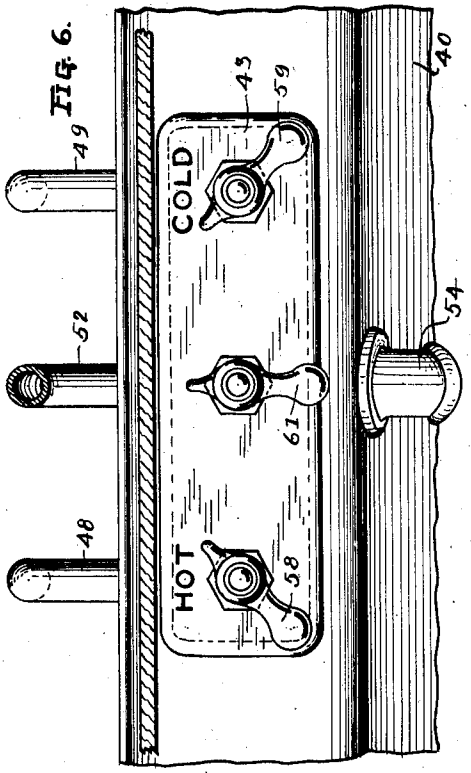
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BATHTUB

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FIG. 6.



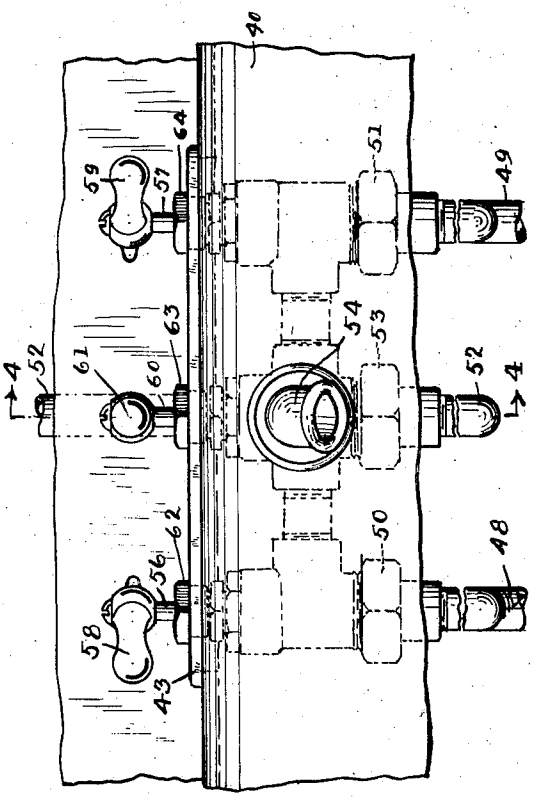
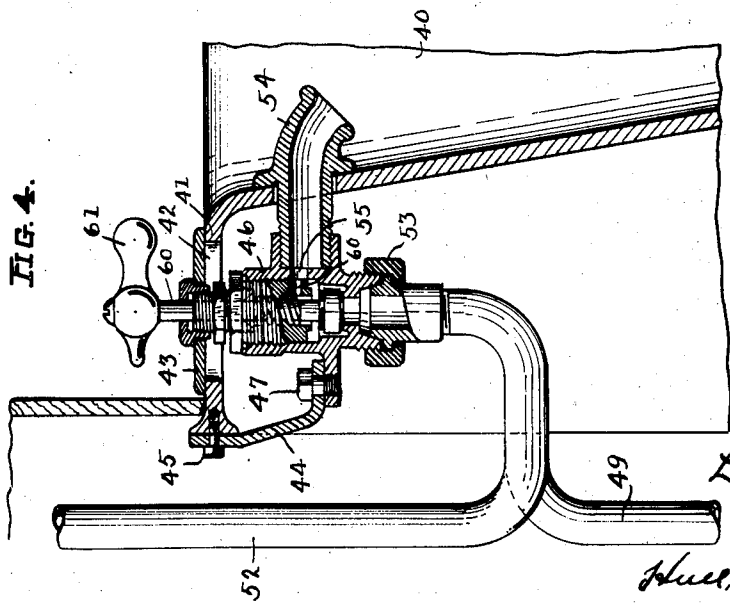


FIG. 5.

FIG. 4.



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UNITED STATES PATENT OFFICE

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BATHTUB

Application filed October 23, 1929. Serial No. 401,641.

This invention relates generally to a bathroom fixture for use in connection with a combined bathtub and shower. The main object of the invention is to provide a bathroom fixture of the character described in which the valves for controlling the supply of hot and cold water and the valve mechanism for diverting the flow of water to the tub or to the shower is carried by the tub; and in which only the operating means for the valves are exposed.

A further object of the invention is to provide a valve mechanism for use in connection with a combination tub and shower which is supported independent of the wall structure and in which the operating means for the valves extend through the wall of the tub and are operable from the exterior thereof, the tub and wall structure serving to conceal all of the connections except the valve operating means.

A further object of the invention is to provide a bathtub which is provided with means for supporting the hot and cold water supply valves and the valve mechanism for diverting the flow of water to the tub or to the shower, and which is so constructed and arranged that the valve mechanism may be removed from the tub as a unit.

Further and more limited objects of the invention will appear as the description proceeds and by reference to the accompanying drawings in which Fig. 1 is a fragmentary view in side elevation disclosing a portion of a bathtub with my improved fixture secured thereto; Fig. 2 is a fragmentary vertical sectional view on the line 2—2 of Fig. 1 and Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 1. Figs. 4, 5 and 6 are views showing a modification of my invention.

In modern bathrooms, the hot and cold water pipes are usually disposed within the wall structure and when a combination tub and shower is used, it is usually necessary to provide several openings in the wall structure in which the valves for controlling the supply of hot and cold water and the valve mechanism for diverting the flow of water to either the tub or shower are arranged. Such a construction is expensive in that it requires the use of several escutcheon plates and separate valve mechanisms and also detracts from the beauty of the bathroom.

It is therefore one of the objects of this invention to eliminate these difficulties and to provide a single valve mechanism for performing these functions which is supported on the tub and removable therefrom as a unit for the purpose of replacement or repair.

The invention consists in the novel features of construction and in the manner of arranging and combining the various parts, all of which will be more fully described hereinafter and set forth in the appended claims.

Referring now to the drawings, reference character 1 designates the wall of a bathtub which is provided adjacent its upper edge with an opening 2 which is preferably rectangular in shape and which is closed by a plate 3. That portion of the bathtub adjacent the plate 3 is slightly depressed as shown in Figs. 1 and 2 to provide a substantially flat surface. The upper edge of the bathtub projects beyond the front face of the wall structure as shown most clearly in Fig. 2. The outer surface of the wall 4 is usually covered with tile or some other suitable material. Attached to the upper edge of the tub is a bracket 5 which is secured thereto by means of a screw 6. Disposed behind the opening 2 in the tub is a valve casing 6 which is supported by the bracket 5 and secured thereto by means of a screw 7 extending through an apertured flange 8 on the casing. Disposed behind the wall structure are a pair of pipes 9 and 10 through which hot and cold water are admitted to the valve casing. Unions 11 and 12 serve to connect these pipes to the casing. Also disposed within the wall structure is a pipe 13, one end of which connects with an opening in the casing 6 by means of a union 14. The opposite end of the pipe 13 leads upwardly through the wall structure and is adapted for connection with a

shower which is disposed so as to deliver into the tub.

Leading from one side of the valve casing 6 is a pipe 15, one end of which is threadedly secured to an outlet opening in the casing and the opposite end of which projects through an opening in the escutcheon plate 3 and is exteriorly threaded. Arranged within the valve casing 6 are a pair of valves 16 and 17 which serve to control the supply of hot and cold water respectively and which are provided with stems 18 and 19 which extend through suitable stuffing boxes 20 and 21 respectively. Also arranged within the valve casing 6 is a diverter valve mechanism which consists essentially of a member 22 to one side of which is secured the valve 23 and to the opposite side of which is secured a valve 24. The valve casing is shaped to provide the valve seats 25 and 26 against which the valves 23 and 24 seat respectively. The valve casing is also provided with an opening 15^a which communicates with the pipe 15 leading to the spout.

The escutcheon plate 3 is positioned over the opening 2 in the tub and is provided with suitable openings through which the valve stems 18 and 19 extend. The escutcheon plate is also provided with an opening through which extends the valve stem 27 of the diverter valve which leads through a suitable stuffing box 28.

A handle 29 is secured over the valve stem 27 in any suitable manner. The valve stems 18 and 19 are provided with valve handles or operating members 18^a and 19^a respectively. By adjusting the position of the valve handles 18^a and 19^a, the supply of hot and cold water may be regulated and controlled as desired. By turning the valve handle 29, the diverter valve may be moved to divert the flow of water to the pipe 13, leading to the shower or to the pipe 15 leading to the spout.

The escutcheon plate 3 is disposed over the valve stems and is held in place by escutcheon holders 31, 32 and 33. The spout 34 is threadedly secured to the projecting end of the pipe 15 and also serves to hold the escutcheon plate in the said opening.

With the parts in the position shown in Figs. 2 and 3, the valve 23 is seated against the valve seat 25 and the valve 24 is open, permitting the flow of water past the valve seat 26 and through the opening 15^a to the pipe 15 leading to the spout. When the hot and cold water supply valves 16 are open, it will be seen that the flow will be diverted toward the spout. When the diverter valve is moved to such a position, the valve 24 seats against the valve seat 26, flow through the spout 15 will be cut off and communication will be established between the interior of the valve casing and pipe 13 leading to the shower.

Should it be necessary to remove the valve casing 6 for the purpose of replacing or repairing any of the valves, the valve handles 18^a, 19^a and 29 may be removed. The escutcheon holders 31, 32 and 33 are then removed and the spout 34 disconnected from the pipe 15. The opening 2 is of sufficient size to permit a wrench to be inserted therethrough to loosen the unions 11, 12 and 14 so as to permit the entire valve casing to be removed through the opening as a unit.

The bathtub is also provided with an overflow opening which is closed by an apertured escutcheon plate 35. Connecting with the overflow opening is an overflow pipe 36. Mounted in the overflow escutcheon 35 is a lever 36 to one end of which is secured a handle 37. Connected with the opposite end of the lever 36 is a flexible connection 38 which carries at its lower end a combination overflow and waste valve.

When the valve casing 6 and its associated parts are removed from the casing access can be had to the overflow pipe 36 and the overflow valve and its connections may be removed through the opening 2 in the tub, if desired.

In Figs. 4, 5 and 6 there is disclosed a modification of my invention in which the valves for controlling the supply of hot and cold water and the valve mechanism for diverting the flow of water to either the tub or to the shower is supported on the tub in a horizontal position. In this form of the invention, the reference character 40 designates a bathtub which is provided at one end with an overhanging horizontally disposed portion 41 having therein an opening 42 which is preferably rectangular in shape and is normally closed by an escutcheon plate 43. The edge of the bathtub projects beyond the front face of the wall structure, as shown most clearly in Fig. 4. Attached to the edge of the tub is a bracket 44 which is secured thereto by means of a screw 45.

Disposed below the opening 42 in the tub is a valve casing 46 which is supported by the bracket 44 and secured thereto by means of a screw 47 which extends through an apertured flange on the valve casing. Disposed beyond the wall structure are a pair of pipes 48 and 49 through which hot and cold water are delivered to the valve casing. Unions 50 and 51 serve to connect these pipes to the casing. Also disposed within the wall structure is a pipe 52, one end of which connects with an opening in the casing 46 and is secured thereto by means of a union 53. The opposite end of the pipe 52 leads upwardly through the wall structure and is adapted for connection with the shower which is disposed so as to deliver

into the tub. Leading from one side of the valve casing 46 is a spout 54 which leads through the wall of the tub and is threadedly secured to the valve casing and communicates with the interior thereof with a port or passageway 55. Suitable valves are provided for controlling the supply of hot and cold water, and these valves have valve stems 56 and 57 which project through the escutcheon plate 43 and are operable from the exterior thereof by means of valve handles 58 and 59. The diverter valve stem 60 also projects through the escutcheon plate and is also operable from the exterior thereof by means of the valve handle 61. The escutcheon plate is held in place by escutcheon holders 62, 63 and 64. The operation of this form of my invention is identical with the form of the invention shown in Figs. 1–3 inclusive. The esctucheon plate 43 is readily removable to enable the entire unit to be removed through the opening 42.

It will now be clear that I have provided a bathroom fixture which will accomplish the objects of the invention as hereinbefore stated. Various changes may be made in the details of construction as well as in the manner of securing the various parts in position without departing from the spirit of my invention. My invention is equally useful in connection with a bathtub in which no shower connection is provided. In such a case, however, the diverter valve mechanism may be omitted. It will therefore be understood that my invention is limited only in accordance with the scope of the appended claims.

Having thus described my invention, what I claim is:

1. A bathroom fixture including a tub and a pair of valves for controlling the supply of hot and cold water, and a valve for diverting the flow to a tub or to a shower, said fixture being supported on the wall of a bathtub, said tub having an opening in the wall thereof through which said valves are accessible, and a removable escutcheon plate covering said opening.

2. In a bathroom fixture of the character described, the combination of a bathtub having an opening in the wall thereof, a valve mechanism arranged behind said opening, and comprising means for controlling the supply of hot and cold water to the tub, an escutcheon plate covering said opening, the operating means for said valve mechanism extending through said escutcheon plate and operable from the exterior thereof.

3. In a bathroom fixture of the character described, the combination of a bathtub, one end of which projects within an opening in a wall structure and having an opening in the wall thereof, a valve mechanism carried by said tub, hot and cold water pipes leading to said valve mechanism, means for controlling the flow of hot and cold water, an escutcheon plate covering the opening in said tub, the operating means for each of said valves extending through said escutcheon plate and operable from the exterior thereof.

4. In a bathroom fixture of the character described, the combination of a bathtub, one end of which projects within an opening in a wall structure and having an opening in the wall thereof, a valve mechanism carried by said tub, a pipe leading from said valve mechanism to a shower, a pipe leading from said valve mechanism to a spout delivering to said tub, hot and cold water pipes leading to said valve mechanism, means for controlling the flow of hot and cold water, means for diverting the flow to the shower or to the spout, an escutcheon plate covering the opening in said tub, the operating means for each of said valves extending through said escutcheon plate and operable from the exterior thereof, the valve mechanism being removable as a unit through the opening in the tub.

5. A bathroom fixture including a valve casing and a bathtub, one wall of which projects through an opening in the wall structure, the tub having an opening therein adjacent the upper edge thereof, an escutcheon plate covering said opening, a spout carried by said escutcheon plate, a pipe connecting said spout and valve casing, a pipe leading from said valve casing to a shower, hot and cold water supply pipes leading to said valve casing, valves for controlling the supply of hot and cold water to said casing, a diverter valve for diverting the flow to the tub or to the shower, the operating means for said valves and diverter valve extending through said escutcheon plate and operable from the exterior thereof.

6. A bathtub having an opening therein adjacent the upper edge thereof, a removable escutcheon plate secured over said opening, a valve casing arranged behind said opening and accessible therethrough when the escutcheon plate is removed, hot and cold water supply pipes leading to said valve casing, valves for controlling the supply of hot and cold water, the operating means for said hot and cold water supply valves extending through said escutcheon plate and operable from the exterior thereof.

7. A bathtub having an opening therein adjacent the upper edge thereof, an escutcheon plate removably secured over said opening, a spout connected on said escutcheon plate, a valve casing disposed behind said opening and accessible therethrough when the escutcheon plate is removed, hot and cold water supply pipes leading to said valve casing, a pipe connecting said valve casing and spout, valves for controlling the supply

of hot and cold water, the operating means for said hot and cold water supply valves extending through said escutcheon plate and operable from the exterior thereof.

8. A bathtub having an opening therein adjacent the upper edge thereof, an escutcheon plate removably secured over said opening, a spout connected on said escutcheon plate, a valve casing disposed behind said opening and accessible therethrough when the escutcheon plate is removed, hot and cold water supply pipes leading to said valve casing, a pipe connecting said valve casing and spout, a pipe leading from said valve casing to a shower, valves for controlling the supply of hot and cold water, diverter valve mechanism for diverting the flow to the shower or to the spout, the operating means for said hot and cold water supply valves and for said diverter valve mechanism extending through said escutcheon plate and operable from the exterior thereof, said valve casing being removable through the opening in said tub when said escutcheon plate is removed.

9. A bathtub having an overflow opening therein, an escutcheon plate removably secured over said opening and having a spout thereon, a valve casing supported by said tub and disposed behind said second opening, said valve casing having a pair of openings therein adapted for connection with hot and cold water supply pipes respectively, said casing having a second pair of openings therein one of which is adapted for connection with a pipe leading to a shower and the other of which is adapted for connection with a pipe leading to said spout, valves for controlling the supply of hot and cold water, a diverter valve for diverting the flow to the spout or to the shower, the operating means for said hot and cold water supply valves and for said diverter valve extending through said escutcheon plate and operable from the exterior thereof.

10. A bathtub having an overflow opening therein, an escutcheon plate removably secured over said opening and having a spout thereon, a valve casing supported by said tub and disposed behind said opening, said valve casing having a pair of openings therein adapted for connection with hot and cold water supply pipes respectively, said casing having a second pair of openings therein one of which is adapted for connection with a pipe leading to a shower and the other of which is adapted for connection with a pipe leading to said spout, valves for controlling the supply of hot and cold water, a diverter valve for diverting the flow to the spout or to the shower, the operating means for said hot and cold water supply valves and for said diverter valve extending through said escutcheon plate and operable from the exterior thereof, the valve casing being removable through said second opening as a unit when said escutcheon plate is removed.

11. The combination with the wall of a bathroom, of a tub, one wall of which extends within the wall structure, said tub having an opening therein adjacent the upper edge thereof, an escutcheon plate removably secured over said opening, a spout carried by said escutcheon plate and adapted to deliver into said tub, a shower head projecting from the wall structure and adapted to deliver into said tub, a valve casing carried by said tub and disposed behind said opening so as to be accessible when said escutcheon plate is removed, a pair of pipes disposed within the wall structure one of which connects the valve casing with said spout and the other of which connects the valve casing with said shower, hot and cold water supply pipes leading into said casing, valves for controlling the supply of hot and cold water to said casing, a diverter for diverting the flow of water to the shower or to the tub, the operating means for said valves extending through said escutcheon plate and operable from the exterior thereof.

12. In a bathroom fixture, the combination of a bathtub and shower, a valve casing carried by said tub, a pair of valves arranged within said valve casing for controlling the supply of hot and cold water, and a diverter valve arranged within said valve casing for diverting the flow to the tub or to the shower.

13. In a bathroom fixture, the combination of a bathtub and shower and connections disposed within the wall structure for supplying water to said tub and shower, of a valve mechanism supported independent of the wall structure for diverting the flow to either the tub or the shower, an opening in said tub through which said valve mechanism is accessible, a removable plate covering said opening, the operating means for said valve mechanism extending through said plate and operable from the exterior thereof.

14. In a bathroom fixture, the combination of a tub and shower and pipe connections concealed within the wall structure for supplying water thereto, of valve mechanism carried by said tub for diverting the flow to the tub or to the shower, an opening in said tub through which said valve mechanism is accessible, a removable plate covering said opening, the operating means for said valve mechanism extending through said plate and operable from the exterior thereof.

15. In a bathroom fixture, the combination of a tub and shower and pipe connections concealed within the wall structure for supplying water thereto, a valve mechanism supported independent of the wall structure for controlling the supply of hot and cold water and for diverting the flow to the

tub or to the shower, the valve operating means extending through the tub and operable from the exterior thereof, the tub and wall structure concealing all of the connections except the valve operating means, an opening in said tub through which said valve mechanism is accessible, a removable plate covering said opening, the operating means for said valve mechanism extending through said plate and operable from the exterior thereof.

16. A bathroom fixture including a tub and a pair of valves for controlling the supply of hot and cold water, said fixture being supported on the wall of the bathtub, said tub having an opening therein through which said valves are accessible, and a removable escutcheon plate covering said opening.

17. In a bathroom fixture of the character described, the combination of a bathtub having an opening in the wall thereof, a valve mechanism arranged behind said opening and including means for controlling the supply of hot and cold water to the tub, and an escutcheon plate secured over said opening, the opening in the wall of the tub and the valve mechanism being of such size as to permit the removal thereof through the opening as a unit.

18. A bathroom fixture including a tub and a pair of valves for controlling the supply of hot and cold water thereto, said tub having an opening therein through which said valves are accessible, and a removable escutcheon plate secured over said opening, said pair of valves being removable through said opening when the escutcheon plate is removed.

19. In a bathroom fixture, the combination of a tub and shower and pipe connections concealed within the wall structure for supplying water thereto, said tub having a flattened portion adjacent one end thereof which is disposed at an angle to the wall of said tub, a valve mechanism carried by said tub and consisting of a pair of valves for controlling the flow of hot and cold water and a diverter valve for diverting the flow to either the tub or the shower, the flattened portion of said tub having an opening therein, an escutcheon plate detachably secured over said opening, the operating means for said pair of valves and for said valve mechanism extending through said escutcheon plate and operable from the exterior thereof.

20. In a bathroom fixture, the combination of a tub and shower and pipe connections concealed within the wall structure for supplying water thereto, said tub having a flattened portion adjacent one end thereof which is disposed at an angle to the wall of said tub, a valve mechanism carried by said tub and consisting of a pair of valves for controlling the flow of hot and cold water and a diverter valve for diverting the flow to either the tub or the shower, the flattened portion of said tub having an opening therein, an escutcheon plate detachably secured over said opening, the operating means for said pair of valves and for said valve mechanism extending through said escutcheon plate and operable from the exterior thereof, the opening in said tub and said valves and valve mechanism being so proportioned as to permit removal of the same through said opening when the escutcheon plate is removed.

In testimony whereof, I hereunto affix my signature.

LEON BLOCH.