United States Patent [19]

Hyde

[11] **3,726,318**

[45] **Apr. 10, 1973**

[54] **FAUCET**

[75] Inventor: **Robert W. Hyde**, Crystal River, Fla.

[73] Assignee: **Pryde Inc.**, Cincinnati, Ohio

[22] Filed: **Oct. 28, 1971**

[21] Appl. No.: **193,306**

[52] **U.S. Cl.** **137/625.41,** 137/607, 137/616.7, 137/801, 222/536

[51] **Int. Cl.**.....**F16k 19/00**

[58] **Field of Search**.....222/533, 536, 537; 137/602, 615, 616, 616.7, 801, 625.41, 607

[56] **References Cited**

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3,089,626	5/1963	Kubiliunas	222/536 X
3,373,770	3/1968	Ward et al.	137/615
3,410,487	11/1968	Hyde	137/625.41 X

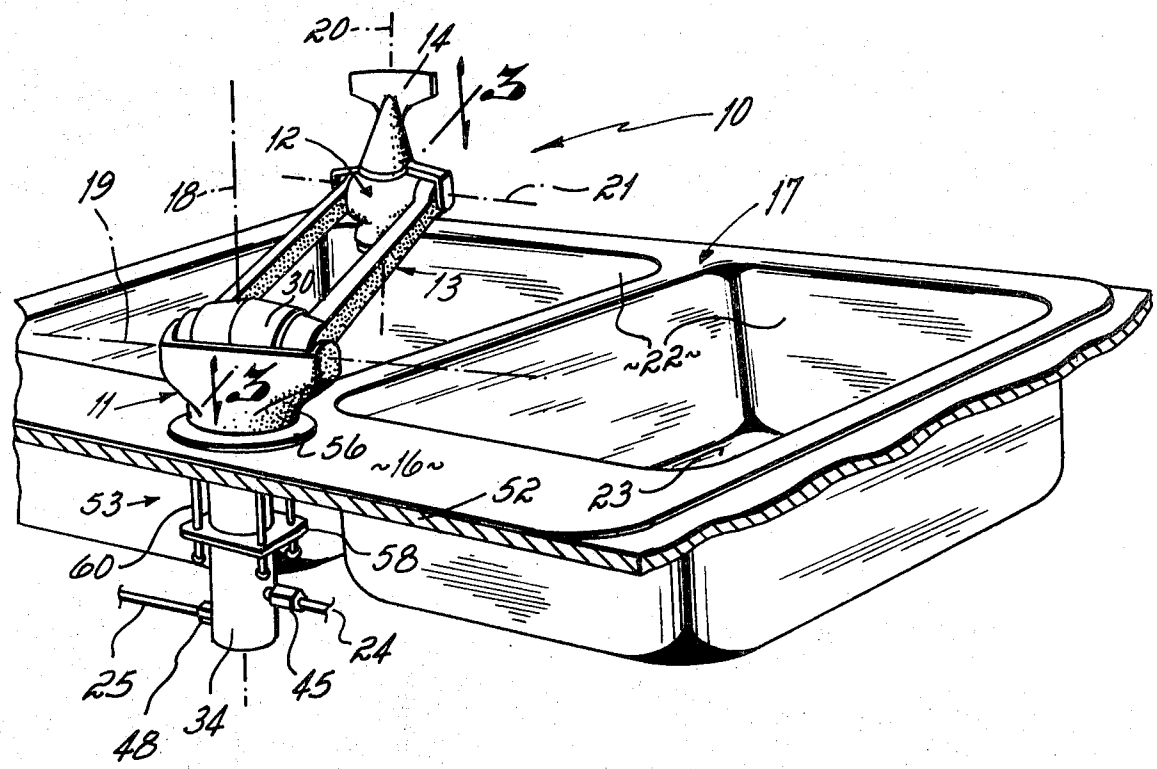
Primary Examiner—Robert G. Nilson

Attorney—John W. Melville et al.

[57] **ABSTRACT**

A hot-cold water faucet wherein the major components are of a compact, simplified construction and are molded of plastic. Further, the major faucet components are adapted to be assembled and locked together by hand. This faucet is of the type disclosed in U.S. Pat. No. 3,410,487 in that the temperature, volume and direction of water drawn from the faucet's spout can be controlled with one hand by manipulating a single knob associated with the spout.

7 Claims, 12 Drawing Figures



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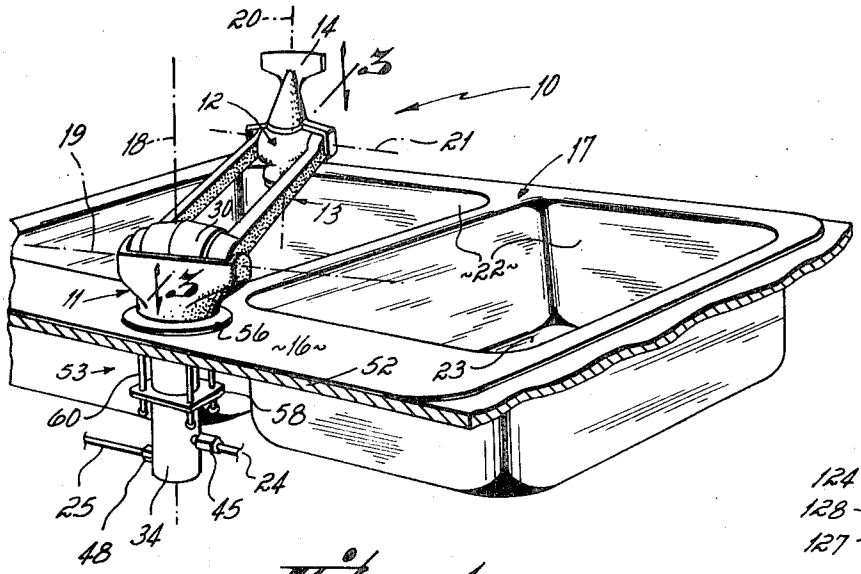

Fig. 1

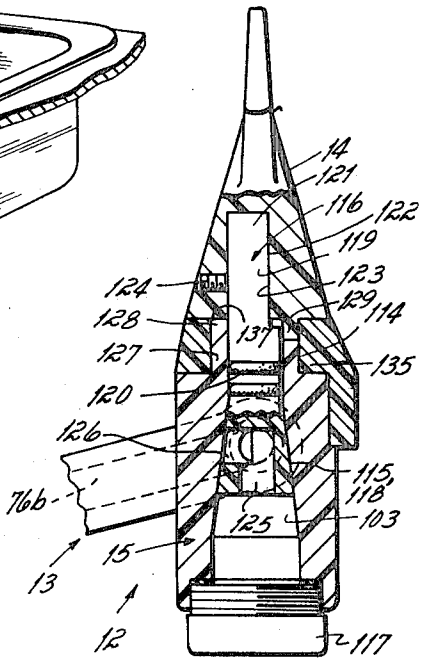

Fig. 7

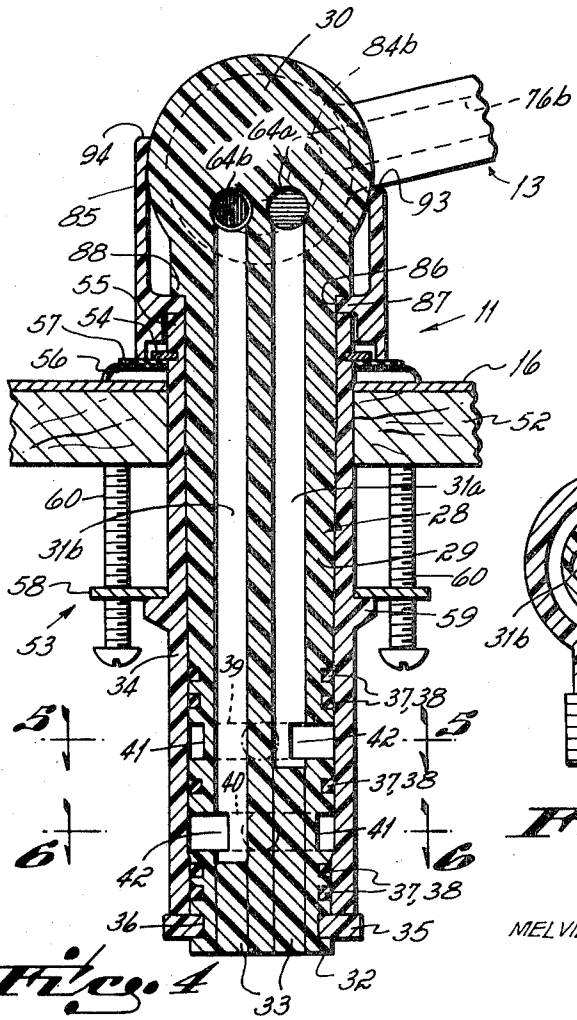

Fig. 4

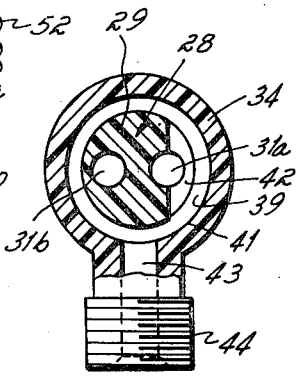

Fig. 5

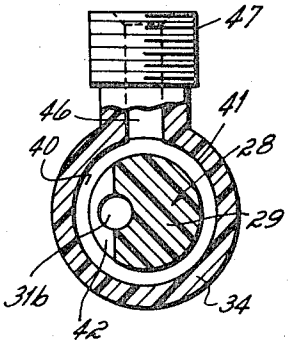

Fig. 6

INVENTOR.
Robert W. Hyde

BY
MELVILLE, STRASSER, FOSTER & HOFFMAN
ATTORNEYS

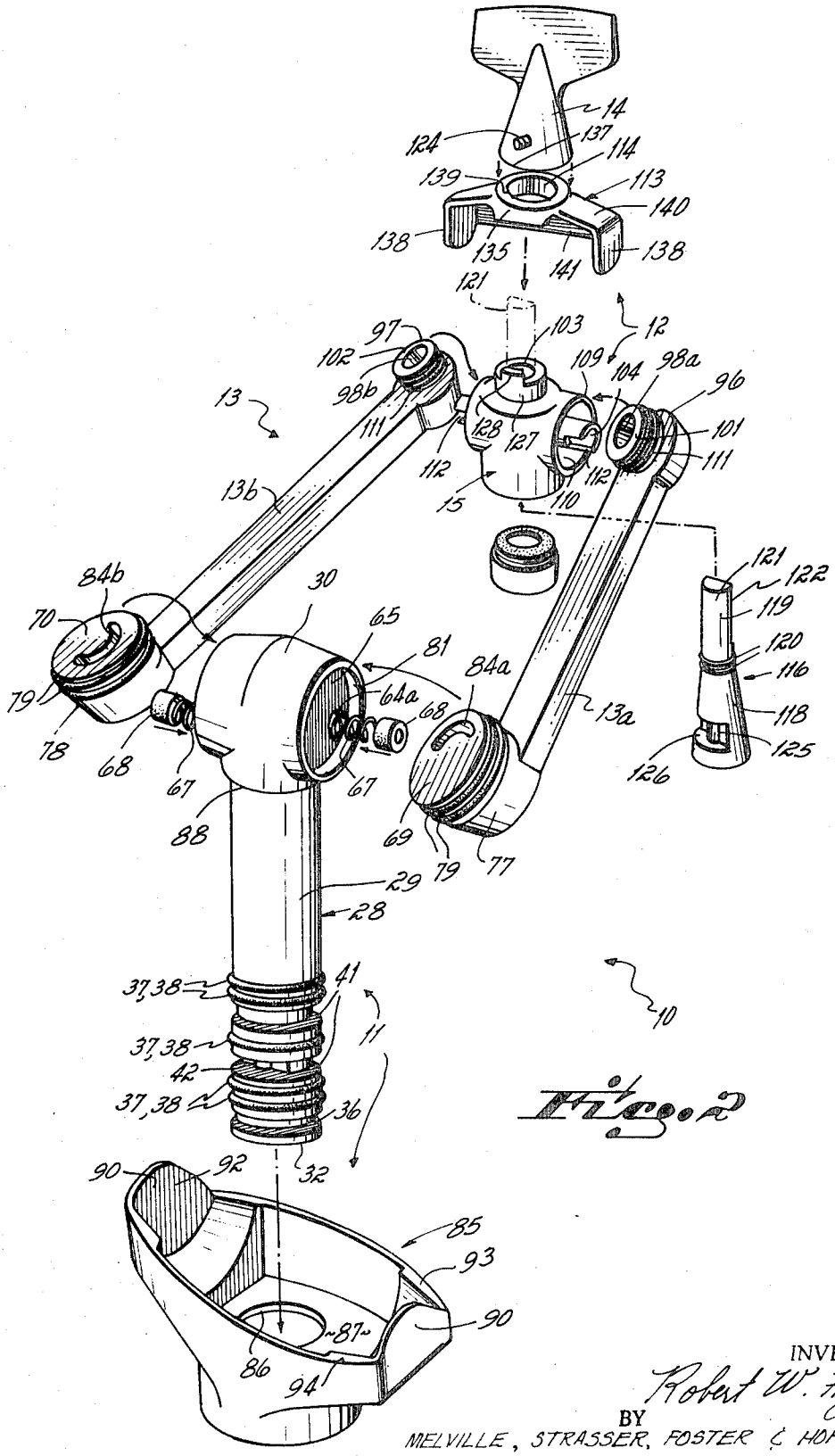

Fig. 2

INVENTOR.
Robert W. Hyde

BY
MELVILLE, STRASSER, FOSTER & HOFFMAN
ATTORNEYS

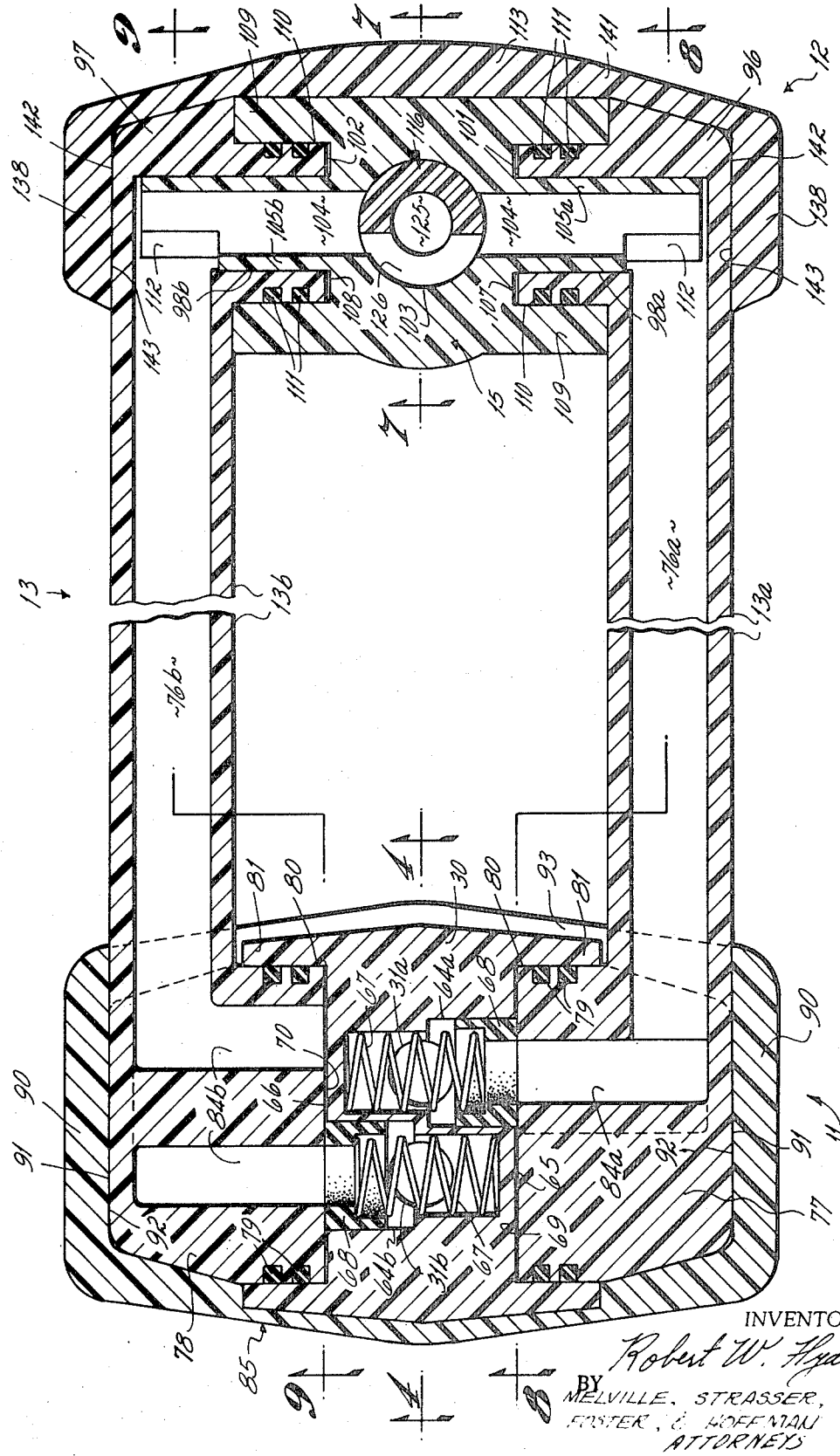

Fig. 3

INVENTOR.
Robert W. Hyde
BY MELVILLE, STRASSER, FOSTER, & HOFFMAN
ATTORNEYS

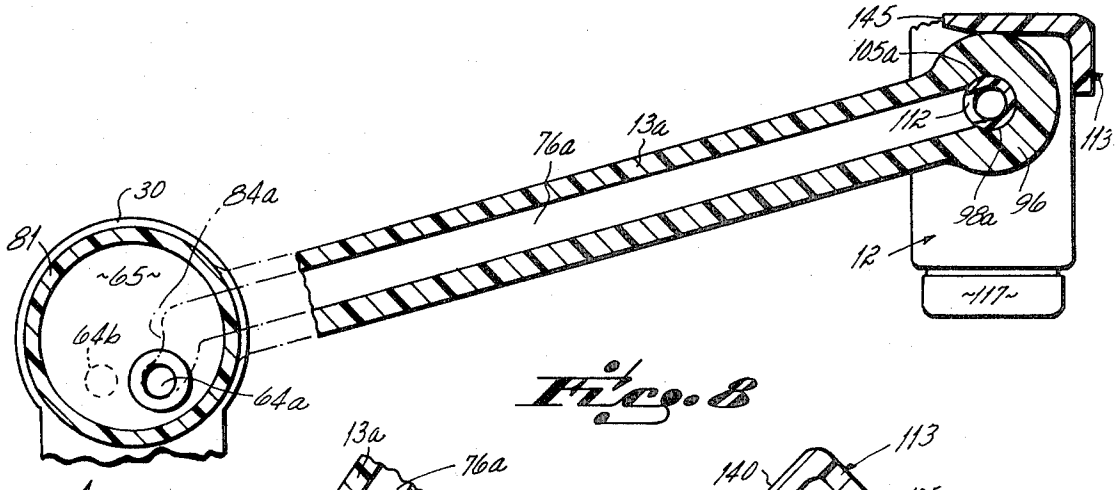

Fig. 8

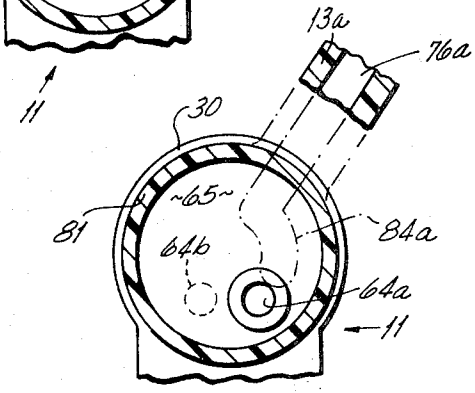

Fig. 8A

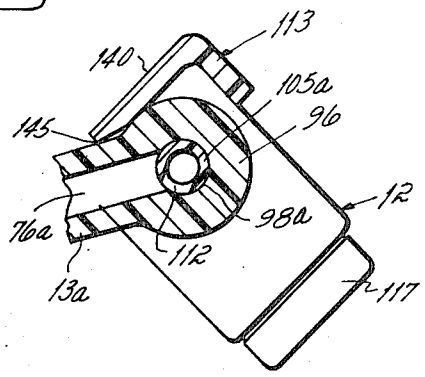

Fig. 8B

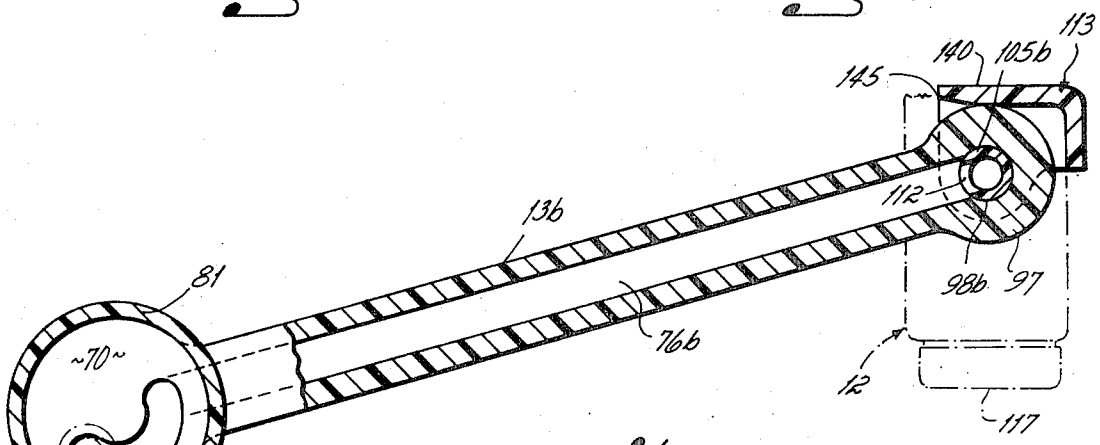

Fig. 9

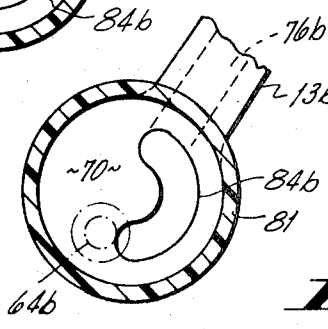

Fig. 9A

INVENTOR.
Robert W. Hyde
BY
MELVILLE, STRASSER, FOSTER & HOFFMAN
ATTORNEYS

FAUCET

This invention relates to faucets. More particularly, this invention is directed to a faucet of the type disclosed in U.S. Pat. No. 3,410,487.

The faucet of U.S. Pat. No. 3,410,487 is adapted to be operated with one hand. That is, the temperature, volume and direction of a stream of water flowing from the faucet's spout can be controlled by manipulating a single knob associated with the spout. As a result of this novel structural faucet concept, a stream of water of selected temperature and volume can be directed into any area of a sink or lavatory bowl, whether the bowl be single or double.

The faucet of U.S. Pat. No. 3,410,487 includes a base adapted to be mounted on the deck at the rear of a sink or lavatory bowl. The spout itself is mounted at the outer end of two arms which are connected to the base. Valving associated with the base controls the flow of water from hot and cold water supply lines through the respective arms to the spout. This valving in the base is arranged such that the water flow is off when the arms are raised and is turned progressively on as the arms are lowered, the arms thus swinging in an arc about a horizontal axis in the base. The base is further adapted to permit the arms to be swung from side to side about a vertical axis, thereby permitting the spout to be moved from one side of a sink or lavatory bowl to the other, as desired.

Valving associated with the spout is arranged such that rotation of the knob controls the temperature of water issuing from the spout within the limits of the temperature of the water available in the supply lines. Additionally, the spout itself may be rotated in an arc about a horizontal axis relative to the arms, thus allowing water to be directed against the desired side wall and bottom areas of a bowl. Valving associated with the spout at the outer ends of the arms is also provided, and this valving functions to diminish the flow of water from the spout as the spout is rotated about its horizontal axis toward the rim of the sink or lavatory bowl so as to prevent water from being directed outside of the bowl.

The faucet of this invention retains the operational features and advantages, i.e., retains the basic structural concept, of the faucet disclosed in U.S. Pat. No. 3,410,487. This invention is concerned primarily with improved structural features, and the advantages thereof, that implement the basic structural concept taught in U.S. Pat. No. 3,410,487. The faucet disclosed in that patent is of relatively simplified construction, but it is desirable from a manufacturing or production standpoint to make a faucet structure of as few parts as is possible so that initial assembly of the faucet is easy and, thereby, less costly. Further, it is highly desirable that the faucet construction be readily serviceable by a person not particularly skilled in the plumbing art; this is particularly the case where the faucet is adapted for use in a home.

Therefore, it has been one objective of this invention to provide a faucet structure that is an improvement over that faucet structure disclosed in U.S. Pat. No. 3,410,487, but which retains the operational features and advantages of that faucet structure.

It has been another objective of this invention to provide a faucet structure of the type disclosed in U.S. Pat. No. 3,410,487 that involves only a few major components, and that allows those major components to be easily assembled into and disassembled from an operating unit, thereby providing easy initial assembly and repair of the faucet.

It has been still another objective of this invention to provide a faucet structure of the type disclosed in U.S. Pat. No. 3,410,487 wherein the major components may be readily assembled and disassembled by hand without the use of tools.

Other objectives and advantages of the invention will be more apparent from the drawings in which:

FIG. 1 is a fragmentary, perspective view showing one embodiment of the faucet of this invention as installed on a double bowl sink; in this figure the faucet is shown in water "on" position;

FIG. 2 is an exploded view of the faucet's main components but without the mounting assembly;

FIG. 3 is a cross-sectional view taken along Lines 3—3 of FIG. 1;

FIG. 4 is a cross-sectional view taken along Lines 4—4 of FIG. 3;

FIG. 5 is a cross-sectional view taken along Lines 5—5 of FIG. 4 showing the hot water inlet;

FIG. 6 is a cross-sectional view taken along Lines 6—6 of FIG. 4 showing the cold water inlet;

FIG. 7 is a cross-sectional view taken along Lines 7—7 of FIG. 3 showing the faucet's spout;

FIG. 8 is a cross-sectional view taken along Lines 8—8 of FIG. 3 showing the faucet's hot water arm in water "on" position;

FIG. 8A is a partial view similar to a portion of FIG. 8 but showing the hot water arm in water "off" position;

FIG. 8B is a partial view similar to a portion of FIG. 8 but showing the faucet's spout in a different angular attitude;

FIG. 9 is a cross-sectional view taken along Lines 9—9 of FIG. 3 showing the faucet's cold water arm in water "on" position; and

FIG. 9A is a partial view similar to a portion of FIG. 9 but showing the cold water arm in water "off" position.

The faucet 10 of this invention (see FIG. 1) comprises four major components, namely, a base 11, a head 12, and two water supply arms 13 that interconnect the base and the head. The head 12 includes a control knob 14 and a spout 15.

The base 11 (and, hence, the faucet 10) may be mounted on a deck 16 at the rear of a double sink bowl 17. The faucet's head 12 and arms 13 are adapted to swing about a first vertical axis 18 so that the head 12 can be moved from one bowl to the other of a double sink bowl 17. The arms 13 are pivotable about a first horizontal axis 19 (that intersects the first vertical axis 18) so that the water flow can be turned on and off. The head's control knob 14 is adapted to oscillate about a second vertical axis 20 so that the mixture of hot water flowing through hot water arm 13*a*, and of cold water flowing through cold water arm 13*b*, can be controlled to provide the desired water temperature. The head's spout 15 is adapted to swing about a second horizontal axis 21 to direct the water flow against any portion of the bowls' side wall 22 or bottom 23 surface areas as desired. Hot water feed pipe 24 and cold water feed pipe 25 supply the faucet 10 with hot and cold running water.

The major part of the base **11** is a core **28**. As shown in FIGS. **2** and **4**, the core **28** comprises a generally cylindrical vertical column **29** and a horizontal barrel **30** located atop the vertical column, these two portions being molded integral one with the other. The vertical column **29** of the core **28** has two bores **31** extending vertically therethrough that are formed by drilling upward from bottom **32**, the axes of the bores **31** being in a plane transverse to the swing axis **19** of barrel **30**; bore **31***a* is for hot water and bore **31***b* is for cold water. Plugs **33** seal off the column's bottom **32** from the bores **31**. The vertical column **29** is surrounded by a sleeve **34** (also a part of the base **11**), these two parts being dimensioned such that there is an easy slip fit between them. A snap clip **35** received in column's annular groove **36** serves to support the sleeve **34** in axial alignment with, and in operating assembly with, the vertical column. Upon installation with the sink bowl's deck **16**, the barrel **30** is located above the deck and the major portion of the column **29** and sleeve **34** are located below the deck. Because the column **29** is in a slip fit relation with sleeve **34**, rotation of the column (and, hence, the arms **13** and head **12**) about vertical axis **18** is made possible to allow movement of the head from one of the double sink bowls **17** to the other.

Adjacent the bottom **32** of the core **28**, and beneath the sink bowl's deck **16**, annular grooves **37** (to receive O-rings **38**) are formed in the column's outer surface. These O-rings **38** seal off two annular chambers **39, 40** (one being located above the other) formed by cooperation of annular grooves **41** in the column's outer surface and the sleeve's inner surface. Such grooves **41**, by reason of notches **42**, allow chambers **39, 40** to communicate with the column's bores **31**. Hence, the annular chamber **39** is a hot water chamber and is connected, through a port **43** and threaded connector piece **44** (molded integral with sleeve **34**), to a conventional water pipe coupling **45** and, hence, to hot water supply pipe **24**. In a similar manner, the annular chamber **40** is a cold water chamber and is connected, through a port **46** and threaded connector piece **47** (molded integral with sleeve **34**), to a conventional water pipe coupling **48** and, hence, to cold water supply pipe **25**. Because of O-rings **38**, no mixture of the hot and cold water takes place as such water flows into the column from supply lines **24, 25**. Further, because of annular chambers **39, 40** and O-rings **38**, hot and cold water is always being supplied to bores **31***a*, **31***b* no matter what the position of arms **13** and head **12** about vertical axis **18**, i.e., no matter which bowl of the double sink bowl **17** the head is directing water into.

The base **11** is adapted to be fixed to the rear deck of the sink bowls **17**, and to the supporting wood frame **52**, by a mounting assembly generally indicated at **53**, see FIG. **4**. The base's sleeve **34** carries a metal ring **54** adjacent the top rim **55** thereof. An escutcheon ring **56** is positioned beneath the metal ring and a rubber gasket **57** is positioned therebetween, the escutcheon ring being located on top of the rear deck. Thus, the base **11** is vertically positioned relative to the sink's rear deck by the escutcheon ring **56**. The base **11** is locked or made immobile relative to the deck **16** of the sink bowl through use of a force ring **58** having an inner diameter sufficient to permit same to rest on annular ledge **59** provided intermediate the length of the sleeve **34** (and beneath the deck **16**). To attach the base **11** (and, hence, the faucet **10**) to the sink bowl's deck **16**, bolts **60** are simply threaded into the force ring **58** and tightened against the underside of the deck, thereby immobilizing the base **11** on the deck.

It is noted at this point that the base's column **29**, and those faucet parts that are attached to it, can be removed from installation on the deck **16** simply by removing the snap clip **35** at the bottom of the column. That is, from a practical standpoint it is the base's sleeve **34** which is fixed to the deck **16** with the base's column **29** (and, hence, the whole faucet **10** except for the sleeve **34** and mounting assembly **53**) being easily removed therefrom simply by removing snap clip **35** and drawing the column **29** upwardly. It is not necessary to remove the hot **24** and cold **25** water supply lines from the faucet **10** to remove the faucet from the deck as is required with conventional faucets.

The hot **31***a* and cold **31***b* water bores that extend vertically through column **29** stop short of the axis **19** of the barrel **30**; thus, bore **31***a* intersects stepped bore **64***a* and bore **31***b* intersects stepped bore **64***b* in the barrel. These stepped bores **64***a*, **64***b* extend horizontally in opposite directions from one another with bore **64***a* (which essentially is an extension of bore **31***a*) terminating at barrel face **65** and bore **64***b* (which essentially is an extension of bore **31***b*) terminating at barrel face **66**. The two bores **64** are formed by drilling in from opposite side faces **65, 66** of the barrel **30**. Note that the axes of these two bores **64***a*, **64***b* do not correspond one with the other, i.e., they are not coaxial, even though both are parallel to the barrel's axis **19**. This permits the barrel **30** to be relatively short as its length need only be sufficient to accommodate one stepped bore **64** since they are located parallel one to the other instead of coaxial one to the other.

The arms **13** provide bores **76***a*, **76***b* through which both hot (**76***a*) and cold (**76***b*) water is conducted from the base **11** into the head **12**, see FIGS. **2** and **3**. Each arm **13***a*, **13***b* is molded integral with a barrel hub portion **77, 78** having an axis transverse to the arms **13***a*, **13***b* respectively. The arms' barrel hubs **77, 78** are circular plugs in configuration and are adapted to be received in barrel seats **80**, see FIG. **2**. The barrel seats **80** are defined by rims **81** which extend outward from opposite side faces **65,66** of the barrel, the rims being circular in configuration and being coaxial with the axis **19** of the barrel **30**. Thus, in assembly with the barrel **30**, the arms' barrel hubs **77, 78** are coaxial with the barrel's axis **19**. Each hub **77, 78**, on its outer periphery, is provided with two annular grooves each of which carries an O-ring **79**. The hubs **77, 78** are of an outside diameter approximately equal to the inside diameter of the barrel's rims **81**, and the inner surface of the rim cooperates with the O-rings on the hubs to create a sealing relation as the hubs are slip fit into the seats **80**. Further this slip fit relation between the arms' barrel hubs **77, 78** and the barrel's seats **80** is such as to permit swinging motion of the arms **13***a*, **13***b* relative to the barrel **30** about the axis **19**; this is most important in the operation of the faucet **10** in that such swinging motion permits the volume of hot and cold water from the input lines **24, 25** to the faucet's head **12** to be turned on and off as is explained immediately below.

Note that the arms' barrel hubs 77, 78 define arcuate ports 84*a* and 84*b* respectively that communicate with bores 76*a*, 76*b* in the arms 13*a*, 13*b*, see FIGS. 2, 8 and 9. These arcuate ports 84*a*, 84*b* are adapted to cooperate with bores 64*a*, 64*b* in the base's barrel 30 to permit water to pass through the barrel and the hubs 77, 78 into the arms' bores 76*a*, 76*b*. As the arms 13*a*, 13*b* and, hence, the barrel hubs 77, 78 are rotated in a plane transverse to the axis 19 of the barrel 30 (i.e., are swung about the axis 19), the arcuate ports 84*a*, 84*b* in the hubs shift relative to stepped bores 64*a*, 64*b* in the base's barrel 30 (compare particularly FIGS. 8 and 8A relative to hot water arm 13*a*, and FIGS. 9 and 9A relative to cold water arm 13*b*). Swinging of the water arms 13 brings arcuate ports 84 *a*, 84*b* in the arms' barrel hubs 77, 78 into and out of alignment with stepped bores 64*a*, 64*b* in the base's barrel 30, thereby permitting the faucet 10 to be turned full on when the arms 13 are lowered (see FIGS. 8 and 9) or completely off when the arms 13 are raised (see FIGS. 8A and 9A). It will be understood that the arcuate port 84*a* of the hot water hub 77 is shorter than the arcuate port 84*b* of the cold water hub 78 because the barrel's hot water bore 64*a* is placed in front of the barrel's cold water bore 64*b*, see FIG. 4. Each stepped bore 64 receives a spring 67 and a tubular seal 68, each seal 68 being spring biased against flat hub faces 69, 70 of the water supply arms 13 when same are assembled with the base 11, see FIG. 3. That is, seals 68 are provided between hot 31*a*, 64*a* and cold 31*b*, 64*b* water bores in column 29, and hot 76*a* and cold 76*b* water bores in arms 13 to prevent mixing of the hot and cold water as it flows from the base's barrel 30 portion into the arms 13.

The two arms 13 are held in operative engagement with the base's barrel 30 by a first yoke 85, see FIGS. 2 and 4. The first yoke 85 is provided with a hole 86 in its floor 87 which permits the yoke to be slid over the base's column 29 into seating relation with the underside of the barrel 30. When in assembled relation, the yoke's floor 87 abuts against flange 88 molded into the column. The yoke 85 is held in assembled relation with the base 11 because of base's sleeve 34 forcing the yoke's floor 87 from the underside against the column's flange 88, see FIG. 4. The yoke 85 further includes ears 90 spaced one from the other a distance substantially equivalent to the axial length of the base's barrel 30 portion (not including rims 81) plus the axial length of both hubs 77, 78. The first yoke 85 is also provided with front and rear side walls 93 and 94 which aid in structurally reinforcing same. When the arms' hubs 77, 78 are positioned in barrel's seats 80, yoke 85 grips the arms' hubs between its ears 90 to hold the arms 13*a*, 13*b* in operating assembly with the base 11. Such permits swinging motion of the arms 13 relative to the barrel base 11 because of the planar bearing surfaces defined by the hubs' outside surfaces 91 and the ears' inside surfaces 92, see FIGS. 1 and 3. Note that front edge 93 and rear edge 94 of the yoke 85 are molded into the yoke so as to act as stops for the swinging motion of the arms 13. That is, the yoke's front edge or stop 93 limits the lower attitude of the arms 13 by reason of the arms abutting against that edge when in the lower attitude (see FIG. 4), and the yoke's rear edge or stop 94 limits the upper attitude of the arms 13 by reason of the arms abutting against that edge when in the upper attitude. This, of course, limits the arcuate swinging motion of the arms 13 about the horizontal axis 19.

Both the arms 13*a*, 13*b* also have a head hub 96, 97 located at their respective upper ends; the axis of each head hub is also transverse to its related arm 13 and the head hubs are also circular plugs in configuration. Note that each head hub-barrel hub pair 96, 77 and 97, 78 of each arm 13 are directed outwardly from the same side of that arm, and protrude from each arm such that their axes are parallel. Each head hub 96,97 defines a bore 98*a*, 98*b* that terminates at planar face 101, 102 of the hubs and intersects the arms' bores 76*a*, 76*b* respectively. In assembly with the head 12 these two head hubs 96, 97 are coaxial with head's horizontal axis 21.

The head's spout 15 includes a vertical bore 103 and a horizontal bore 104, the two bores intersecting at the middle of the molded, one-piece spout 15, see FIGS. 2, 3 and 7. The horizontal bore 104 is partially defined by two pipes 105, one of which extends from each side face 107, 108 of the spout 15. Each pipe 105 is surrounded by a rim 109 integral with the spout 15, the rims and pipes being coaxial with head's axis 21, and cooperating to define seats 110 adapted to receive the arms' head hubs 96, 97. The head hub 96, 97 on each arm 13*a*, 13*b* is of an outside diameter substantially equal to the inside diameter of head's rims 109, and each hub is provided with two grooves that receive O-rings 111. As the arms' head hubs 96, 97 are slipped over the head's pipes 105, they are received in a slip fit relation with the head's seats 110. This slip fit relation is such as to permit swinging motion of the head 12 relative to the arms 13 about the axis 21; this is most important in operation of the faucet as it allows water to be directed against the sink bowls' side walls.

The pipes 105 are each provided with a cutout or notch 112 at their outer ends, and these notches are adapted to cooperate with the bores 76*a*, 76*b* in the arms 13. As the spout 15 is rotated relative to the arms 13 about the axis 21, the hot 76*a* and cold 76*b* water bores are selectively opened to and closed from the head's discharge bore 103 through the relative position of the notches vis-a-vis the bores 76, compare the position of the head 12 in FIG. 8 with its position in FIG. 8B. This is important to the operation of the faucet 10 in that as the head swings toward the horizontal (which would, in effect, direct water outside the sink bowls 17 onto the floor), the bores 76*a*, 76*b* are closed by pipes 105, i.e., notches 112 are rotated out of alignment with bores 76*a*, 76*b* to close off the head 12 from the arms' water bores.

The head's two pipes 105 molded integral with the spout 15 open into the vertical discharge bore 103 that extends through the spout, see FIG. 7. This discharge bore 103 is of two different diameters and provides sloping shoulder 115 that interconnects the different diameter bore sections. The discharge bore 103 receives barrel valve 116 in a slip fit relationship, see FIGS. 2 and 7. The barrel valve's tapered lower portion 118 is of a larger diameter than the upper portion 119, and allows the valve to be vertically positioned within the discharge bore 103 and seated against sloping shoulder 115. The valve's upper portion 119 has two grooves which receive O-rings 120, thereby providing a sealing relation in the discharge bore 103 above the

pipes **105** to prevent water from spitting out the top of the head **12**. The valve's upper portion **119** includes a stem **121** having a flat **122** thereon. The stem's flat **122** cooperates with the knob's flat **123** to prevent the knob **14** from turning relative to the valve's stem **121**; a set screw **124** locks the barrel valve in place relative to its axial position in the discharge bore **103**, and locks the knob to the valve's stem. The valve's lower portion **118** has a vertical bore **125** therein, and this bore **125** opens to a cross slot **126** cut so as to interconnect with bore **125**. The cross slot **126** is so positioned that, when the barrel valve **116** is positioned within the spout's discharge bore **103**, the slot **126** can be turned to interconnect with either or both the pipes **105***a*, **105***b*. When the cross slot **126** is arranged such that its sides are open equally to the hot **105***a* and cold **105***b* water inlet pipes (as is the case in FIG. **3**), equal mixtures of hot and cold water will be discharged from the spout **15**; when the cross slot **126** is rotated toward the cold water line **105***b*, more cold water than hot (i.e., a cool water flow) is discharged from the spout; and when the cross slot **126** is rotated toward the hot water line **105***a*, more hot water than cold (i.e., a warm water flow) is discharged from the spout. It can be seen, therefore, that by rotating the control knob **14** about an axis **20** (which is spaced from but in a plane common to the vertical axis **18**) that a water temperature control is provided. The discharge bore **103** preferably has a conventional aerator **117** threaded thereinto at the bore's terminus.

The spout **15** also includes a collar **127** on the top thereof that is coaxial with the discharge bore's upper portion **119**, the collar **127** including stop **128** that cooperates with stop **129** fixed to the underside of the knob **14**. As illustrated in FIG. **7**, the knob **14** is mounted on the spout **15** such that as the knob is rotated relative to the spout so as to change the barrel valve's position, the knob's stop **129** slides on the top of spout's collar **127** and the spout's stop **128** slides on the collar surface of the knob. Thus, the stops **128**, **129** (each of which are of an arcuate length approximately equal to ⅛ the peripheral length of the spout's collar **127**) cooperate to limit the movement of the knob **14** (and, hence, the barrel valve **116**) to an oscillatory movement (as opposed to a rotary movement) between a position at which the stem **121** is turned full left (cold water only since hot water pipe **105***a* is blocked, refer to FIG. **3**) and a position at which the stem **121** is turned full right (hot water only since cold water pipe **105***b* is blocked, refer to FIG. **3**). That is, the extreme right hand turn and left hand turn limits on the barrel valve's cross slot **126** (i.e., on the knob **14** since same is used to oscillate the barrel valve **116**) is determined by cooperation of knob's stop **129** with spout's stop **128**.

The arms **13** are held in operative relation with the head **12**, i.e., the arms' head hubs **96**, **97** are kept seated in head's seats **110**, by a second yoke **113**, see FIGS. **2**, **3** and **7**. The yoke **113** defines a hole **114** received over the top collar of the head. When in assembled relation, the yoke's floor **135** is seated on top of ledge **136** formed on spout **15**, see FIGS. **2** and **7**. The yoke **113** is held in assembled relation with the head **12** by reason of knob's surface **137** overlying yoke's floor **135**, see FIG. **7**. The yoke **113** is also provided with ears **138** that grip the head hubs **96**, **97** and head **12** therebetween to compress same into an operative assembly when the arms' head hubs **96**, **97** are positioned and in head's seats **110**, see FIGS. **2** and **3**. The ears **138** are molded integral with the yoke collar **139**, shoulder **140**, and side **141**. Such permits swinging motion of the head **12** relative to the arms **13** because of the planar bearing surfaces defined by the hubs' outside surfaces **142** and the ears' inside surfaces **143**, see FIG. **3**. Note in FIG. **8B** that rear edge **145** of the yoke **113** is molded into the yoke so as to act as a stop for the swinging motion of the head **12**. That is, the yoke's stop **148** limits the counterclockwise motion of the head **12** (as viewed in FIG. **8**) by reason of the arms **13** abutting against the edge **145** when the head is rotated counterclockwise. This, of course, limits the arcuate swinging motion of the head about the horizontal axis **21**.

It may be seen, therefore, that three controls of the faucet **10** can be accomplished by grasping the knob **14**. The first of these is the on/off and volume control; such is accomplished by raising or lowering the head **12** (i.e., swinging the arms **13** about the horizontal axis **19**) because of arms' barrel hubs **77**, **78** rotating in base's seats **80**. The second of these is moving the position of the head **12** relative to the sink's bowls **17** as desired and needed; such is accomplished by swinging the arms **13** from side to side (i.e., about the vertical axis **18**) because of base's column **29** rotating in sleeve **34**, and by swinging the head **12** front to rear (i.e., about the horizontal axis **21**) because of arms' head hubs **96**, **97** rotating in head's seats **110**. The third of these is the control of the water's temperature flowing from the spout **15**; such is accomplished by rotating the knob **14** about spout's axis **20** between limits as determined by stops **128**, **129**.

While the faucet disclosed in U.S. Pat. No. 3,410,487 has established a true advance in the art, the faucet of this invention is an improvement thereon in the sense of simplicity of initial construction, of initial assembly into an operating attitude, and of disassembly and reassembly for repair. Such is in part due to the fact that arms **13** are provided with head hubs **96**, **97** and barrel hubs **77**, **78** which cooperate with and are seated in seats **110**, **80** defined in head **12** and base **11** respectively; this allows the arms **13** to be readily assembled, disassembled and reassembled with the head **12** and base **11** by means of an easy slip fit relationship that is made watertight by the hubs' O-rings **79**, **111**. Further, and importantly, the arms **13** are held and maintained in seated relation with the base's barrel **30** and the head **12** by yokes **85**, **113**. Further, because the base's column **29** (and, hence, the arms **13** and head **12**) are fixed to the sink's deck **16** only by reason of the column **29** being locked in sleeve **34** by snap ring **35**, the entire faucet (except for the sleeve **34** and mounting assembly **53**) can be easily removed from the sink's deck simply by removing the snap ring **35** from column's annular groove **36** and sliding the column **29** upwardly out of the sleeve. A further advantage is that the bore **64***a*, **64***b* configuration in the base's barrel **30** allows the barrel length to be relatively short because the bores **64***a*, **64***b* are located parallel one to the other, and to the axis of the barrel, instead of coaxial with one another as in U.S. Pat. No. 3,410,487; such a feature is made possible in part because the column's bores **31***a*, **31***b* are in a plane that is substantially transverse to the barrel's axis **19**.

Having described the preferred embodiment of my invention, what I desire to claim and protect by Letters Patent is:

1. A hot/cold water faucet comprising

a base adapted for mounting onto the rear deck of a sink bowl, said base defining a hot water bore and a cold water bore adapted to be respectively interconnected with a hot water supply line and a cold water supply line,

a pair of arms connected at one end to said base and adapted for swinging movement about a first horizontal axis through said base, one of said arms defining a hot water bore and the other of said arms defining a cold water bore,

a first yoke associated with said base and said arms for holding said arms in operative assembly with said base such that said base's hot and cold water bores respectively communicate with said arms' hot and cold water bores, said yoke permitting assembly of said arms with said base by hand, and

a head connected to the other end of said arms, said head including a spout through which the hot and cold water from said arms' bores can be discharged into a sink bowl.

2. A hot/cold water faucet as set forth in claim 1 wherein said first yoke includes an upper stop and a lower stop so as to limit the swinging movement of said arms about the first horizontal axis.

3. A hot/cold water faucet as set forth in claim 2 wherein said base is comprised of a column portion and a barrel portion, said column portion extending through the rear deck and said barrel portion being located above the rear deck, and one of said arms being connected to each side of the barrel portion, and wherein said first yoke is comprised of a floor with a hole therein, and a pair of ears located at each end of said floor, said first yoke being adapted to fit over said column against the underside of said barrel in a manner that allows said ears to restrain said arms in operative assembly with said barrel.

4. A hot/cold water faucet as set forth in claim 1 wherein said column's hot water and cold water bores are positioned in a plane transverse to the horizontal axis about which said arms swing.

5. A hot/cold water faucet as set forth in claim 1 wherein said head is adapted for swinging movement relative to said arms about a second horizontal axis, and further comprising a second yoke associated with said head and said arms for holding said head in operative assembly with said arms such that said arms' hot and cold water bores both communicate with said head's spout, said yoke permitting assembly of said head with said arms by hand.

6. A hot/cold water faucet as set forth in claim 5 wherein said second yoke also includes an upper and a lower stop so as to limit swinging movement of said head about the second horizontal axis.

7. A hot/cold water faucet as set forth in claim 6 wherein said head is comprised of a knob as well as said spout, said knob cooperating with a valve in said head that permits selection of water temperature as to the water discharged from said spout, and wherein said second yoke is comprised of a floor with a hole therein, a pair of ears located at each end of said floor, said second yoke being adapted to fit over the valve's stem in a manner that allows said ears to restrain said arms in operative assembly with said head.

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