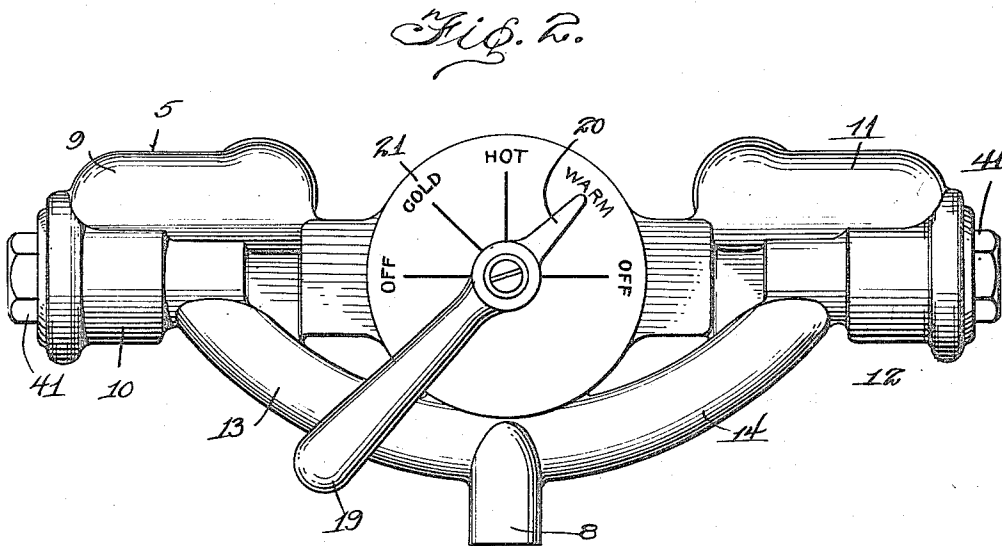
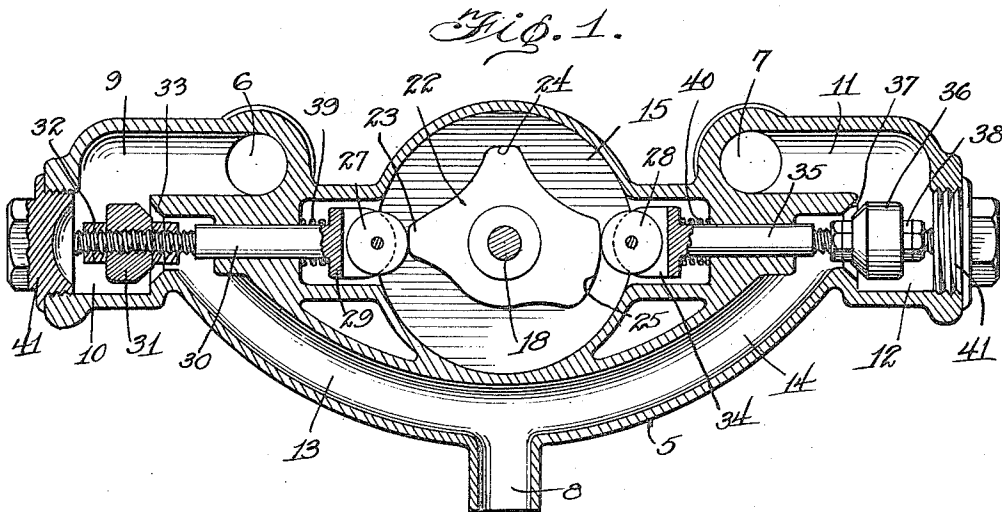


F. M. WRIGHT.
COMBINATION FAUCET.
APPLICATION FILED DEC. 22, 1914.

1,160,484.

Patented Nov. 16, 1915.

2 SHEETS—SHEET 1.



Witnesses

W. J. Mulligan
W. E. Everts

Inventor
Frank M. Wright

By *Richard E. Owen*

Attorney

F. M. WRIGHT.
COMBINATION FAUCET.
APPLICATION FILED DEC. 22, 1914.

1,160,484.

Patented Nov. 16, 1915.

2 SHEETS—SHEET 2.

Fig. 3.

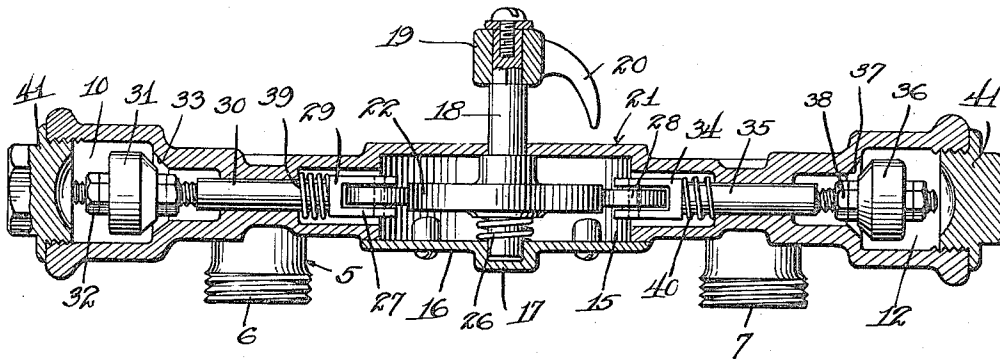
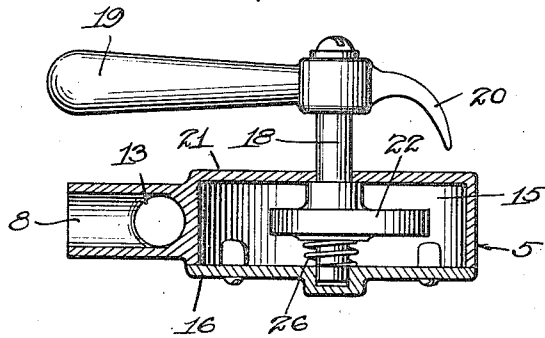


Fig. 4.



Witnesses

M. K. Mulligan
W. E. Evans, Jr.

Inventor
Frank M. Wright

By Richard C. Owen,

Attorney

UNITED STATES PATENT OFFICE.

FRANK M. WRIGHT, OF TOPEKA, KANSAS.

COMBINATION-FAUCET.

1,160,484.

Specification of Letters Patent.

Patented Nov. 16, 1915.

Application filed December 22, 1914. Serial No. 878,554.

To all whom it may concern:

Be it known that I, FRANK M. WRIGHT, citizen of the United States, residing at Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in Combination-Faucets, of which the following is a specification.

My invention is designed as an improved double acting or combination faucet, and as its primary object contemplates a faucet having both a hot and a cold water inlet and a single discharge outlet, the former two being open to the latter whereby to provide, through operation of a novel valve device, for a discharge of water, either hot, cold, or intermediate the two extremes.

To acquire a knowledge of the details of construction of the means for effecting the mentioned result, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of a faucet constructed in accordance with the present invention; Fig. 2 is a front elevation; Fig. 3 is a view similar to Fig. 1, the section however being taken transversely thereto; and Fig. 4 is a central cross sectional view.

Like reference numerals designate like parts throughout the several views.

5 designates as an entirety, the faucet casing, said casing having a cold water inlet opening 6, a hot water inlet opening 7, and a common discharge or outlet 8. A passage way 9 connects the opening 6 with a valve chamber 10 while a similarly formed passage way 11 connects the opening 7 with a like valve chamber 12, said two valve chambers 10 and 12 being formed at the opposite ends of the casing 5 and preferably in alinement as shown. The chamber 10 is open to the outlet 8 as indicated at 13 and chamber 12 is open to said outlet as indicated at 14, such arrangement providing, in use, a common outlet or discharge.

The casing 5 is enlarged at a point preferably equi-distant from its terminals to form a chamber 15 non-communicant with the chambers 10 and 12 mentioned before. One face, or rather one of the chamber walls is made removable and designated 16, the said wall being constructed to form a bearing 17 within which one end of a shaft 18, arranged concentric to the chamber 15, is journaled. Said shaft 18 penetrates the opposite or integral wall of the chamber and

carries at its outer terminal a handle 19 by means of which said shaft may be rotated as desired. Said handle, as indicated to advantage in Fig. 2, has formed thereon or attached thereto an indicator 20 which, upon movement of the handle, is adapted to traverse a dial 21 formed on the exterior face of the integral wall of chamber 15.

An operating cam or disk 22 is mounted on the shaft 18 and recessed to form lugs or contact projections 23, 24 and 25, the latter of said contact projections being greater in its diameter than the preceding two. Disk 22 is keyed or otherwise affixed to the shaft 18 that it may be rotated therewith. A spring 26 is arranged to embrace the shaft 18 and to abut respectively the mentioned disk and the removable chamber wall, said spring maintaining the disk in the manner desired.

At diametrically opposite points relatively to the chamber 15 and extending therein, I provide rollers 27 and 28, the former being mounted in the bifurcated and enlarged end 29 of a valve operating stem 30, the said stem being threaded throughout a portion of its length to provide for the arrangement thereon of an adjustable valve member 31. Valve member 31 operates within chamber 10 and is held in its adjusted position by means of lock nuts 32. Said valve is movable into and out of engagement with a valve seat 33 formed at the point where chamber 10 is open to the passage way 13. The roller 28, as hereinbefore suggested is situated at a point diametrically opposite to the roller 27 and is mounted on the enlarged bifurcated end 34 of a valve stem 35, said valve stem being threaded throughout a portion of its length to mount a valve member 36 adjustable thereon and movable with the stem into and out of engagement with a seat 37 formed at a point where chamber 12 is open to the passage way 14. The valve stems 30 and 35 are respectively slidably mounted in bearing portions 30' and 35' of the casing 5. Valve member 36 may also be locked in its adjusted position by means of lock nuts 38. Enlargements 29 and 34 are located within chambers 29' and 34' of casing 5 and which chambers communicate with chamber 15.

As a means for holding the valves 31 and 36 in engagement with their respective valve seats 33 and 37, I provide suitable springs 39 and 40, the former being arranged to em-

brace the stem 30 and to abut the enlargement 29 and the casing wall and the latter, arranged to embrace the stem 35 and to abut the enlargement 34 and the casing wall. Removable plugs 41 may be provided as a means for gaining access to the valves of the device should occasion demand.

In assembling the parts, plate 16 is removed to open chamber 15 whereupon valve stems 30 and 35 minus valves 31 and 36 and nuts 32, 33, 37 and 38, are inserted into the chamber, thence tilted and inserted into chambers 29' and 34' and finally through the openings in bearing portions 30' and 35. Thereafter the valves 31 and 36 as well as nuts 32, 33, 37 and 38 are applied to the stems.

In operation, should a supply of cold water be desired, handle 19 is turned to register the indicator 20 with that point on the dial designated "cold", in which event disk 22 is rotated until contact point 24 engages roller 27, and, by the pressure exerted thereon, causes valve stem 30 to move relatively to the casing 5 sufficiently to disengage valve 31 from its seat 33. As the valve begins to recede from its seat upon rotation of the disk 22, communication is opened between chamber 10 and passage way 13 thus permitting an unchecked flow of cold water from the inlet 6 to the outlet or discharge 8. Should hot water be desired, handle 19 is manipulated to register the indicator 20 with the word "hot" on the dial, such movement of the handle causing the disk to be turned until the contact point 25 engages the roller 28 with sufficient force to move stem 35 against the tension of its associated spring 40 and valve 36 out of engagement with its seat 37 thus connecting chamber 12 and passage way 14. Valve 36 having thus been moved, it is evident that an unobstructed passage way for warm water is effected. It is to be noted that the contact point or projection 25 is comparatively large in order that it may remain in engagement with the roller 28 while contact point or projection 23 is out of engagement with roller 27, this arrangement providing for a discharge of hot water without movement of valve 31. To draw a supply of water (hot and cold mixed) it is but necessary to move the handle sufficiently to cause the indicator 20 to register with "warm" on the dial, in which event the disk is turned to the position indicated in Fig. 1 or sufficiently to cause the contact point 23 to engage the roller 27 and at the same time the contact point 25 to engage the roller 28, such engagement causing both of the valves 31 and 36 to move out of engagement with their respective valve seats and communication to be opened from the inlet 6 to the outlet 8 and from the inlet 7 to said outlet, hot water intermingling with the cold water at the

junction of the outlet 8 and the passage ways 13 and 14 leading thereto. To shut off the water supply entirely, the handle is moved into either of its extreme positions so that the indicator 20 will register with "off" on the dial, such movement of the handle causing the disk to be correspondingly rotated until the several contact points are entirely out of engagement with the two rollers 27 and 28, in which event the springs 39 and 40 will act automatically to close communication respectively between the chamber 10 and the passage way 13 and the chamber 12 and the passage way 14, thus effectually cutting off both the hot and cold water supply.

From the foregoing, taken in connection with the accompanying drawings it will be noted that water of a varying temperature may be supplied to the outlet 8 through gradual movement of the handle 19; that the valves act automatically to cut off the water supply the moment the several contacts disengage the rollers mounted on the respective valve stems; and that a uniform and compact valve structure has been provided through the arrangement of the valves as hereinbefore described, both being actuatable through rotation of but a single disk.

In reduction to practice, I have found that the form of my invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize the fact that various minor changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as defined in the appended claims.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a faucet, a casing provided with a chamber, a plurality of inlet passage ways and an outlet passage way common to both inlet passage ways, said casing also being provided with second chambers, said second chambers communicating with the first mentioned chamber, said casing having bearing portions adjacent the second chambers, valve means to control communication between the inlet passage ways and outlet passage ways having stems mounted in said bearing portions, said valve stems being insertible through said first chamber and one stem into each of the second chambers, and thence into each of the bearing portions, detachable valve heads on said stems to directly control the communication between the inlet passage ways and outlet passage way, said stems on the opposite sides of the bearing portions to said valve heads having enlargements, springs intermediate

said enlargements and said bearing portions to urge the valves to move in one direction, turnable members on said enlargements, and means to operate said valves in the opposite direction engageable directly with said turnable members.

2. In a faucet, a casing provided with a chamber, a plurality of inlet passage ways and an outlet passage way common to both inlet passage ways, said casing also being provided with second chambers, said first chamber communicating with the second chambers, said casing having bearing portions adjacent the second chambers, valves to control communication between the inlet passage ways and outlet passage way having stems mounted in said bearing portions, said valve stem being insertible through said first chamber and one into each of the second chambers and thence into each of the bearing portions, springs to urge movement of said valves in one direction and means to operate said valves in the opposite direction.

3. In a faucet, a casing provided with a chamber and an outlet passage way, a valve to control the passage of fluid through the outlet passage way, said casing having a bearing portion to receive said valve, said casing also having a chamber adjacent said bearing and communicating with the first mentioned chamber, said valve being insertible through the first mentioned chamber and second mentioned chamber into the bearing portion, said valve having an enlargement, a turnable element carried by said enlargement, a spring to abut said enlargement and bearing portion, and means engageable with said turnable element to operate the valve against the tension of said spring.

4. In a faucet, a casing provided with a chamber and an outlet passage way, valve means to control the passage of fluid through the outlet passage way, said casing having a bearing portion, said valve means having a stem mounted in said bearing portion, said

casing also having a chamber adjacent said bearing portion communicating with the first mentioned chamber, said valve stem being insertible through the first mentioned chamber and second mentioned chamber into the bearing portion, said valve stem having an enlargement impassable through said bearing, and a detachable valve head on the valve stem on the opposite side of the bearing to the enlargement, and means to operate said valve means.

5. In a faucet, a casing provided with a chamber and an outlet passage way, a valve to control the passage of fluid through the outlet passage way, said casing having a bearing portion to receive said valve, said casing also having a chamber adjacent said bearing portion communicating with the first mentioned chamber, said valve being insertible through the first mentioned chamber and second mentioned chamber to the bearing portion, and means to operate the valve.

6. In a faucet, a casing provided with two inlets, a common discharge, a chamber non-communicant with said inlet and said discharge, said casing being further provided with second chambers communicant with said first chamber, valves to open and close communication between said inlets and said discharge, said casing having bearing portions to receive said valves, said valves being insertible through the first mentioned chamber and the second mentioned chambers to said bearing portions, the inlets being offset with relation to said valve, means to operate the valves, and means to adjust or repair said valves without disturbing the inlet connections.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK M. WRIGHT.

Witnesses:

MARY M. WRIGHT,
C. W. WRIGHT.