Dec. 18, 1923. 1,478,227

K. HOFFMAN

COMBINATION FAUCET

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Fig. 1

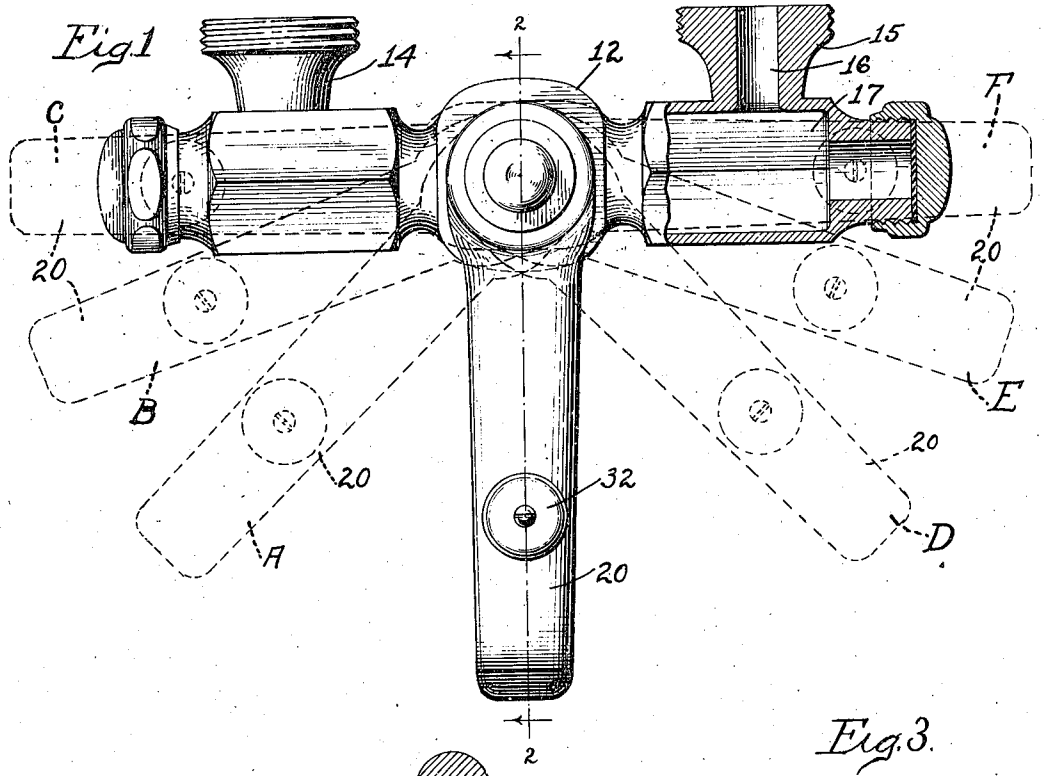


Fig. 3.

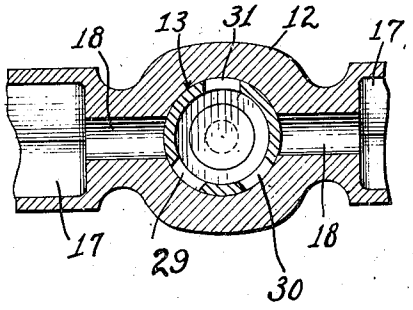
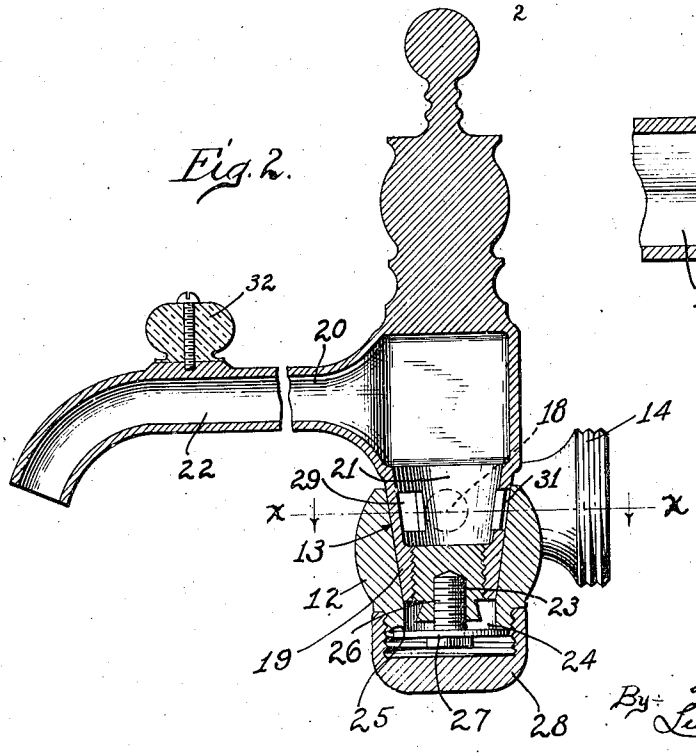


Fig. 2.



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Fig. 4.

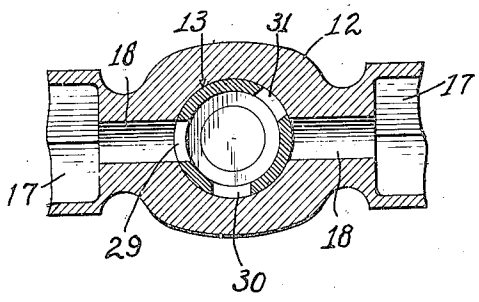


Fig. 7.

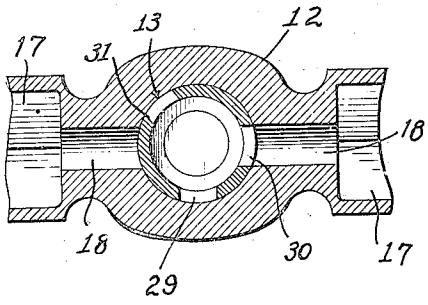


Fig. 5.

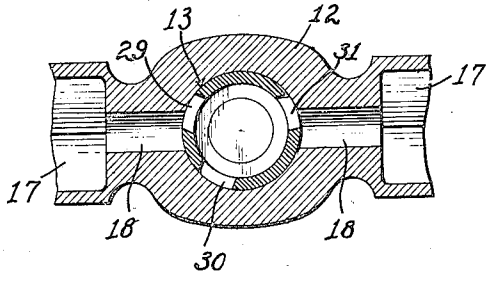


Fig. 8.

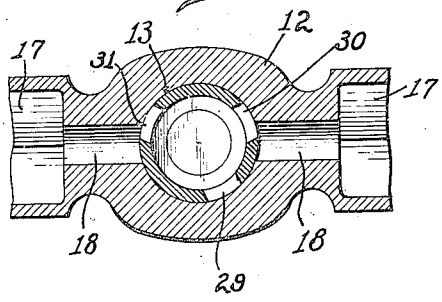


Fig. 6.

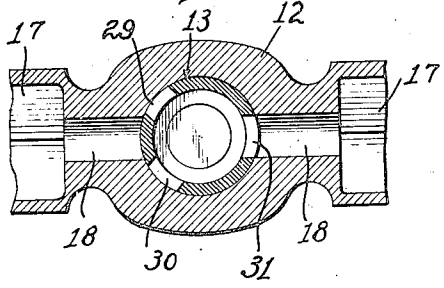
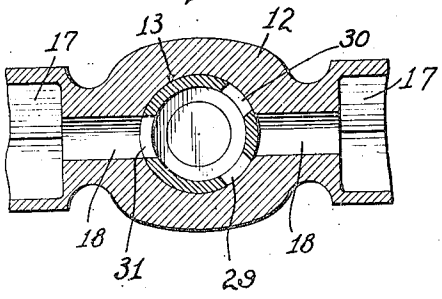


Fig. 9.



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UNITED STATES PATENT OFFICE.

KEVA HOFFMAN, OF CHICAGO, ILLINOIS.

COMBINATION FAUCET.

Application filed September 26, 1921. Serial No. 503,129.

To all whom it may concern:

Be it known that I, KEVA HOFFMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combination Faucets, of which the following is a specification.

My invention relates to improvements in faucets, particularly to combination faucets which are adapted to be connected to a plurality of supply pipes, for example, the hot and cold water service pipes commonly leading to kitchen sinks, lavatories, bath tubs, laundry tubs, and the like.

One of the objects of the invention is to provide a combination faucet having a swinging spout and of such construction that the spout serves as a handle for turning on and cutting off the supply of water as desired.

The invention contemplates a faucet comprising a body member having a swinging spout and adapted to be connected to the supply pipes, the body member being formed so as to provide a valve seat and passageways leading from the valve seat to the respective supply pipes; and a further object of the invention is to provide a valve member associated with the seat and the swinging spout and which is of such construction that the passageway through the spout may be placed in communication with the respective passageways in the body member by swinging the spout into the proper position.

The valve seat in the body of the faucet is preferably tapered and the valve member is preferably in the form of a tubular plug ground to fit the seat, the passageway in the plug being in communication with the passageway through the spout; and a further object of the invention is to provide ports in the valve member so arranged that when the spout is in central or normal position, communication between the passageway in the spout and the passageways in the body of the faucet will be entirely cut off, but when the spout is swung to either side from its normal position communication between the passageway in the spout and the respective passageways in the body of the faucet may be established so that either hot or cold water, or, both hot and cold water in any desired proportion may be drawn, as desired.

A further object of the invention is to provide means for holding the tubular valve member in close engagement with its seat, the preferred arrangement being to provide a screw extending from the body member into and having threaded engagement with the bottom portion of the valve member so that in case leakage should develop between the valve member and its seat the screw may be turned and the valve member drawn into closer engagement with its seat.

The invention consists in the novel arrangements, construction and devices to be hereinafter described and claimed for carrying out the above stated objects and such other objects as will appear from the following description of a certain preferred embodiment illustrated in the accompanying drawings, wherein—

Fig. 1 is a plan view of a combination faucet embodying the principles of my invention, certain portions being broken out and shown in section;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional detail view, taken on the line x—x of Fig. 2, showing the position of the valve member when the swinging spout is in its normal or central position; and

Figs. 4, 5, 6, 7, 8 and 9 are sectional detail views taken on the line x—x of Fig. 2, but showing the valve member in its various operating positions.

Like characters of reference designate like parts in the several views.

Referring now to the drawings, it will be seen that the faucet comprises a body member 12 formed with an open valve seat 13 and with rearwardly extending neck portions 14 and 15 adapted to be connected to the hot and cold water supply pipes, respectively, (not shown). Each of the neck portions is provided with a passageway 16 which is in communication with a bore 17 provided in each end of the body of the faucet. Passageways 18 extend from opposite sides of the valve seat and lead into the respective bores 17.

The valve seat is preferably ground on a taper, as shown in Fig. 2, and is adapted to receive a plug valve member 19 ground externally so as to closely fit the seat, the valve member being formed integrally with the spout 20 of the faucet. The valve member is tubular, the passageway 21 provided

therein being in communication with the passageway 22 provided in the spout. The lower end of the valve member is closed by means of a plug, or the like, which is formed with an internally screw threaded recess 23. The body below the valve member is provided with an opening 24 which is surrounded by a seat 25. A screw 26 adapted to be inserted into the recess 23 is provided, said screw having a flange 27 which is adapted to bear against the seat 25 so that when the screw is turned in the proper direction, the valve member 19 will be drawn into close fitting engagement with its seat. The periphery of the seat portion 25 may be externally threaded for the reception of a cap 28 to give the faucet a more finished appearance.

The valve member 19 is formed with ports 29 and 30 adapted to be brought into register with the respective hot and cold water inlet passageways 18 when the valve member is turned. The valve member is preferably provided also with a port 31 adapted to be brought into alignment with either the hot or cold water inlet passageways 18, according to the side to which the swinging spout of the faucet is turned.

When the spout is in its normal or central position, as shown in full lines in Fig. 1, the valve member 19 is in the position shown in Fig. 3, and communication between the passageway in the valve member 19 is cut off from either of the passageways 18. When, however, the spout is swung to the dotted line position A shown in Fig. 1, the valve member is brought around into the position shown in Fig. 4 of the drawings, and when in such position, the port 29 is in substantial alignment with the hot water inlet passageway and the cold water inlet passageway on the opposite side is cut off so that hot water only is discharged through the spout. If the spout be moved into dotted line position B, the valve member will be brought into the position shown in Fig. 5, and the ports 29 and 31 will be in communication with the hot and cold water inlet passageways, respectively, so that substantially one-half of the water discharged through the spout will be hot and the other half cold. If the spout now be moved into dotted line position C, the valve member will be moved to the position shown in Fig. 6, in which position the port 31 will be opposite the cold water inlet passageway and the hot water inlet passageway will be entirely cut off. It will thus be apparent that by moving the swinging spout into the proper position, either hot or cold water, or, both hot and cold water in any desired proportion may be obtained. The same combinations may be obtained by swinging the spout in the opposite direction. When the spout is in the dotted line position D, the valve member will be in the position shown in Fig. 7 and cold water only will be permitted to flow. When the spout is moved to the dotted line position E, the valve member will be in the position shown in Fig. 8, both the hot and cold water flowing through the spout, and when the spout is moved into the dotted line position F, the valve member will be in the position shown in Fig. 9, in which case only hot water will be permitted to flow.

The faucet is particularly useful in connection with a two-compartment stationary laundry tub, the faucet being connected with the hot and cold water supply pipes so that the spout, when in its normal position, is in substantial alignment with the partition separating the two compartments of the tub and when so installed, either hot or cold water or hot and cold water combined may be discharged into either compartment by simply moving the swinging spout to its proper position. It will thus be seen that a faucet embodying the principles of my invention will readily control the flow of water to either compartment with the same nicety of regulation of the water as though independent hot and cold water pipes, each provided with an individual faucet, were run to each compartment of the tub.

The faucet is of very simple construction, durable and economical to manufacture. It will be observed that no Fuller balls, washers, or gaskets of any kind are required in order to maintain a water tight connection. If any leakage develops between the valve member and its seat, it may be readily stopped by simply removing the cap 28 and turning the screw 26.

I preferably provide a knob 32, of porcelain or the like, on the spout to facilitate turning it to its several positions without burning the hands.

I do not intend to limit the invention to the details of construction shown and described, except only in so far as certain of the appended claims are specifically so limited, as it will be obvious to those skilled in the art that modifications may be made without departing from the principles of the invention.

I claim:

1. A faucet of the class described comprising a body member adapted to be connected to hot and cold water supply pipes and formed so as to provide a valve seat and passageways leading from said valve seat to the respective pipes, a valve member on said seat, and a swinging spout fixed to said valve member, said valve member having ports in communication with the passageways in said spout and so arranged that when the spout is in normal position communication between the passageways in

said spout and the passageways in the body member is cut off but when the spout is swung to either side from its normal position communication therebetween may be established so that either hot or cold water or both hot and cold water may be drawn, as desired.

2. A faucet of the class described comprising a body member adapted to be connected to hot and cold water supply pipes and formed so as to provide a valve seat and passageways leading from said valve seat to the respective pipes, a ported tubular valve member in said seat and a swinging spout fixed to said valve member, the passageway in said valve member being in communication with the passageway in said spout, the ports in said valve member being so arranged that when the spout is in normal position communication between the passageway in said spout and the passageways in the body member is cut off but when the spout is swung to either side from its normal position communcation therebetween may be established so that either hot or cold water or both hot and cold water may be drawn, as desired.

3. A faucet of the class described comprising a body member adapted to be connected to hot and cold water supply pipes and formed so as to provide a tapered valve seat and passageways leading from said valve seat to the respective pipes, a ported tubular valve member in said seat, means to maintain said valve member in close engagement with its seat and a swinging spout fixed to said valve member, the passageway in said valve member being in communication with the passageway in said spout, the ports in said valve member being so arranged that when the spout is in normal position communication between the passageway in said spout and the passageways in the body member is cut off but when the spout is swung to either side from its normal position communication therebetween may be established so that either hot or cold water or both hot and cold water may be withdrawn, as desired.

4. A faucet of the class described comprising a body member adapted to be connected to hot and cold water supply pipes and formed so as to provide a tapered valve seat and passageways leading from said valve seat to the respective pipes, a ported tubular valve member in said seat, a screw associated with the body member and having threaded engagement with said valve member to maintain the latter in close engagement with its seat and a swinging spout fixed to said valve member, the passageway in said valve member being in communcation with the passageway in said spout, the ports in said valve member being so arranged that when the spout is in normal position communication between the passageway in said spout and the passageways in the body member is cut off but when the spout is swung to either side from its normal position communication therebetween may be established so that either hot or cold water or both hot and cold water may be drawn, as desired.

KEVA HOFFMAN.