

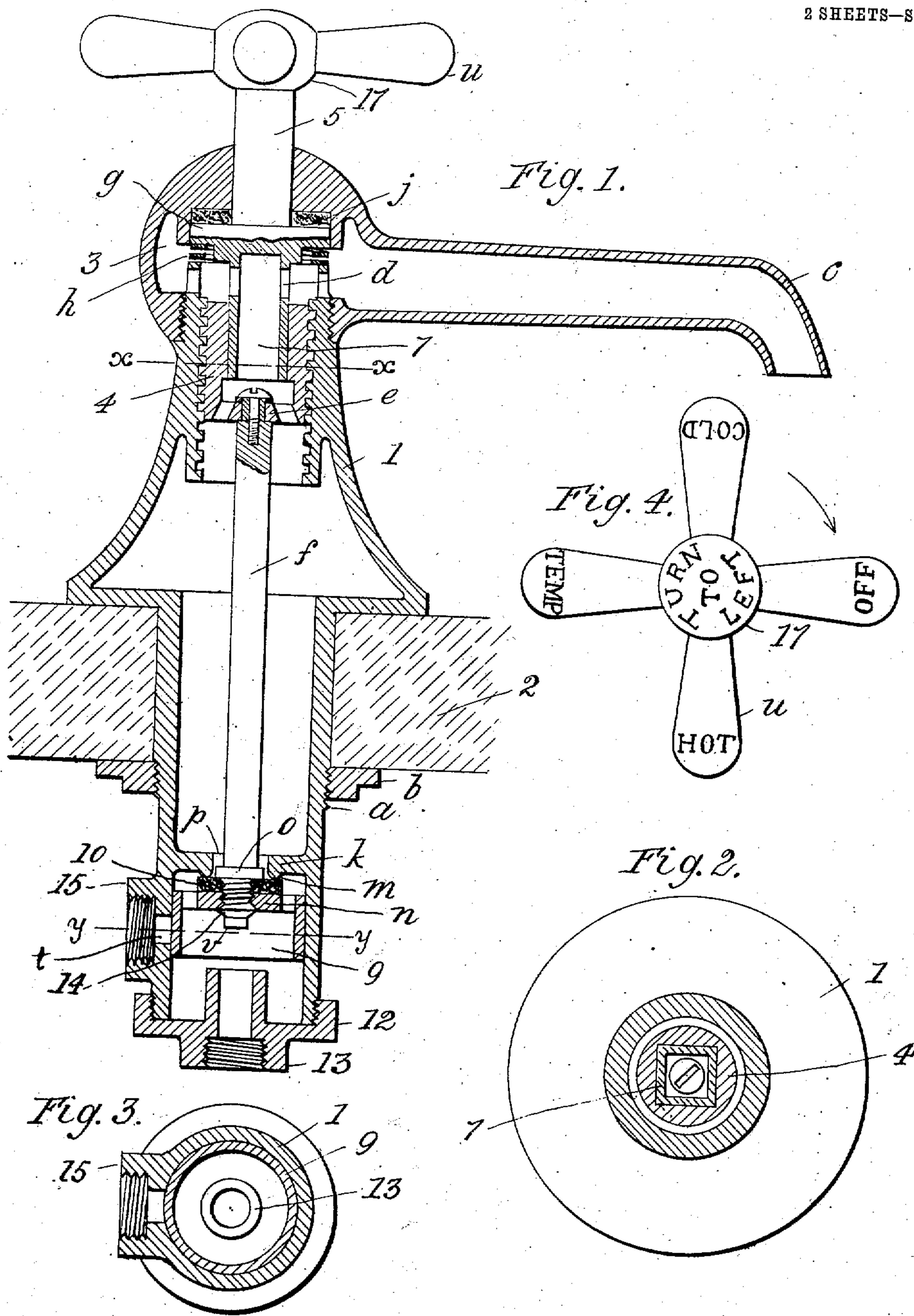
No. 885,347.

PATENTED APR. 21, 1908.

G. T. KENLY.
FAUCET.

APPLICATION FILED MAR. 22, 1907.

2 SHEETS—SHEET 1.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 6.

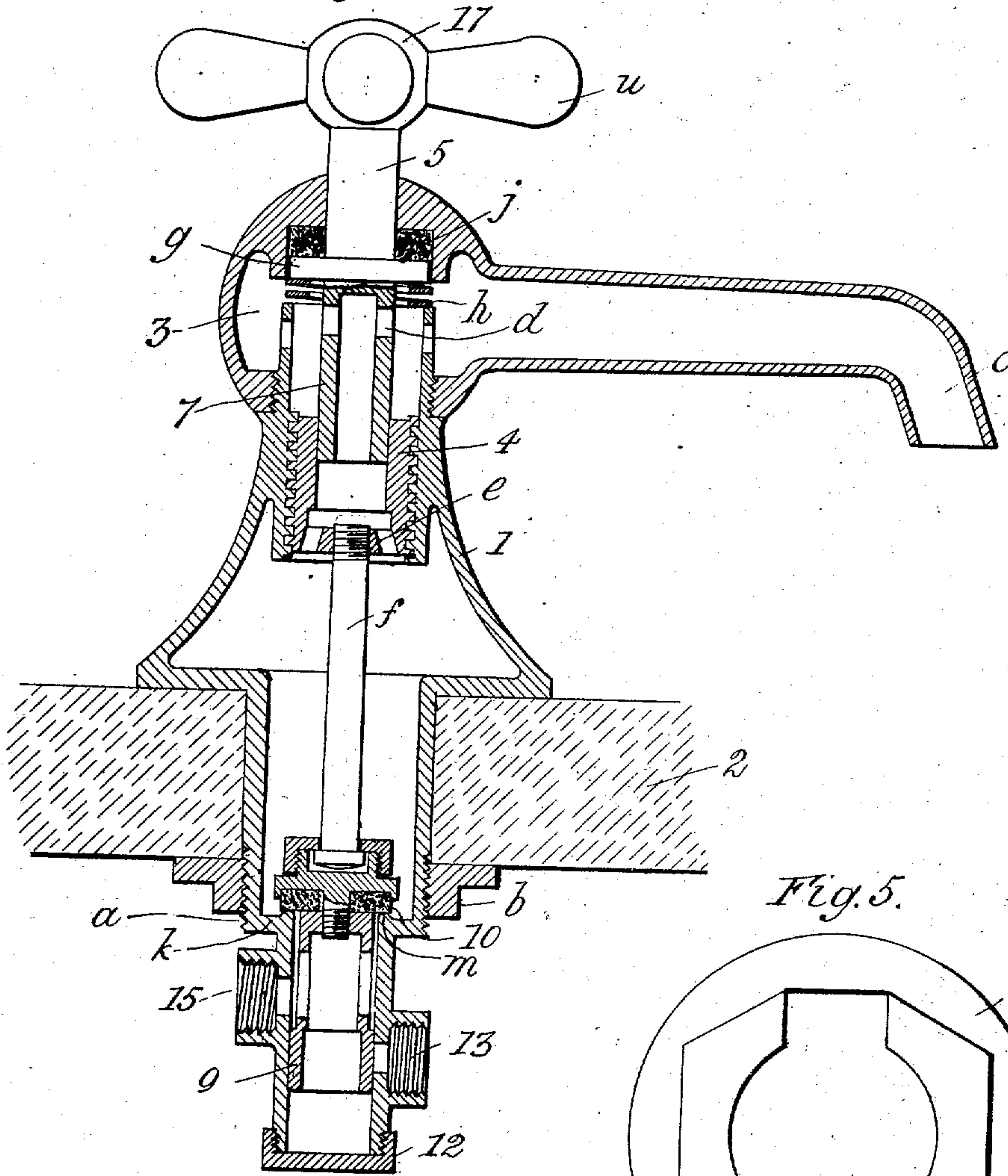
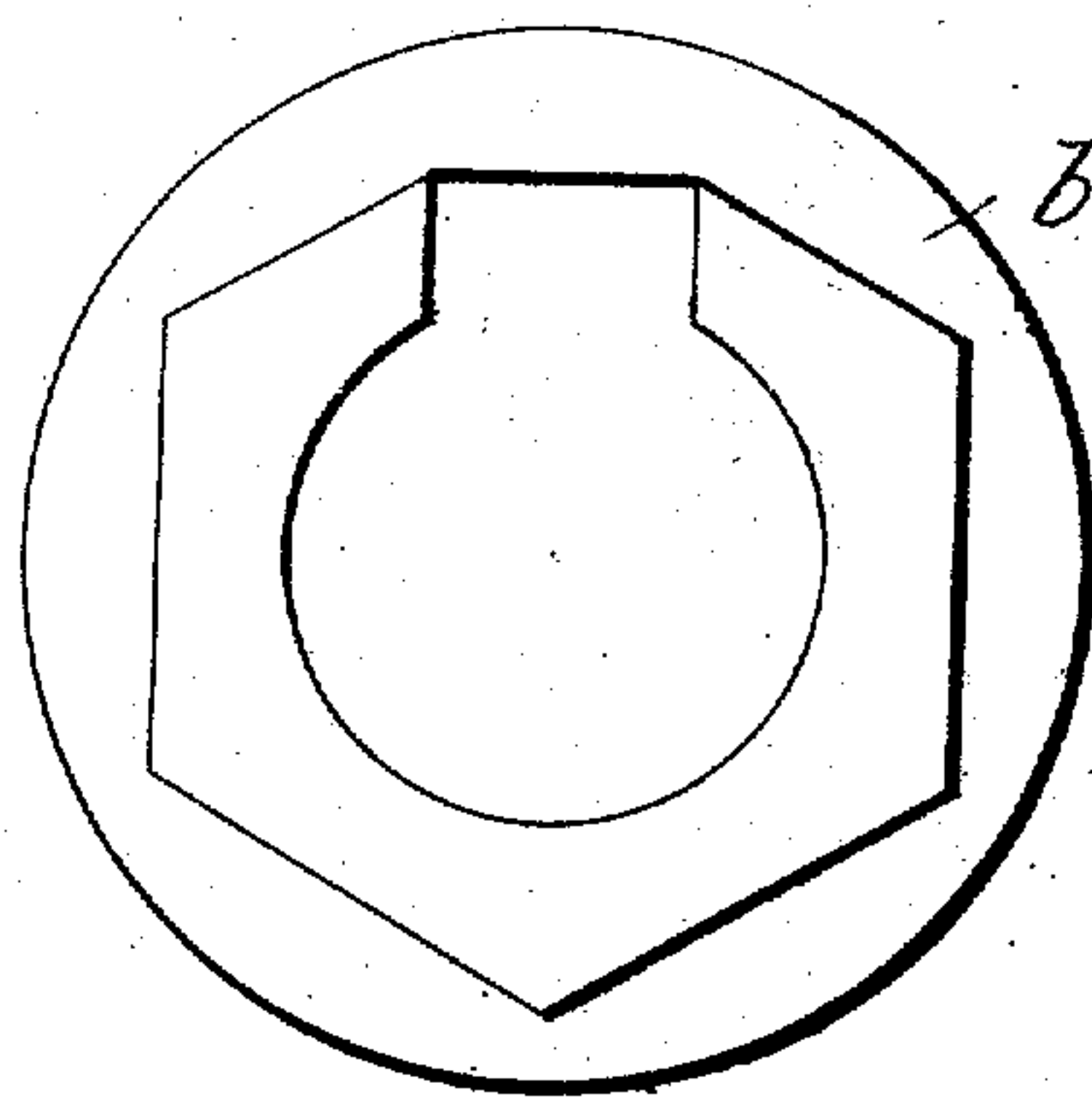


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE T. KENLY, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE PLUMBING SPECIALTY COMPANY, A CORPORATION OF DELAWARE.

FAUCET.

No. 885,347.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed March 22, 1907. Serial No. 363,809.

To all whom it may concern:

Be it known that I, GEORGE T. KENLY, of the city of Baltimore and State of Maryland, have invented certain Improvements in
5 Faucets, of which the following is a specification.

This invention relates to certain improvements in that class of faucets in which cold, or hot water, or a mixture of both, is dis-
10 charged through a single nozzle, and by the manipulation of a single handle.

In the description of the said invention which follows, reference is made to the accompanying drawings forming a part hereof
15 and in which,—

Figure 1 is a central sectional elevation of the improved faucet, and Fig. 2 is a section of Fig. 1 taken on the dotted line $x-x$. Fig. 3 is a section of Fig. 1 taken on the dotted
20 line $y-y$. Fig. 4 is a top view of the handle whereby the faucet is opened and closed, and Fig. 5 a top view of a certain nut used to hold the faucet in place. Fig. 6 is a view similar to Fig. 1 except that the arrangement of cer-
25 tain parts of the faucet is changed, as will hereinafter fully appear.

Referring now to Figs. 1 to 4, inclusive, of the drawing, 1 is the shell of the faucet adapted for attachment to the top or slab of a wash-
30 stand a portion of which is shown and denoted by 2. With this in view, the shell is threaded at a and provided with a nut b which is screwed into contact with the underside of the slab 2.

35 The upper end of the shell 1 is threaded, and onto this threaded portion is screwed the hollow head 3 having the discharge nozzle c . The upper portion of the shell is also internally threaded, and into it is placed an
40 exteriorly threaded plug 4.

The means whereby the threaded plug 4 is turned to raise or lower it in the shell 1, consists of a cylindrical stem 5 which passes loosely through the head 4 and has a hollow
45 extension 7 open at the bottom, of rectangular cross section which enters a cavity in the plug 4. The extension 7 has one or more ports d which place the interior of the shell at all times in communication with the nozzle c .
50 The portion of the cavity in the plug 4 which is below the extension 7 of the stem 5, is enlarged and provided with a bridge e to which a rod f is loosely attached. The office of this rod will be hereinafter described.

55 In order to support the stem 5 in the head

3, the stem is provided with a collar g , and between the collar and the ported end of the shell which projects into the head, is placed an ordinary cock spring h . To reduce wear of the upper surface of the collar g and the
60 adjoining surface of the head, a packing ring j of some suitable substance is interposed between them. The packing ring j also insures a tight joint between the collar and the head, and thereby prevents leakage when
65 water is being drawn from the faucet.

Near the lower end of the shell 1 is an annular partition k , and below the partition, the shell is bored to produce a cylinder with a smooth inner surface. On the under face of
70 the annular partition is formed a raised valve seat m .

9 is a hollow piston with an open bottom and a grated or perforated top n into which the lower end of the rod f is tightly screwed;
75 and between the piston and a collar o on the rod, is placed a packing gasket 10 which answers the purpose of a valve whereby the central aperture p in the annular partition k may be closed.
80

A cap 12 which is screwed over the lower end of the shell 1 is provided with a nozzle 13 a portion of which enters the shell below the piston 9.

It will be seen that the end of the rod f ex-
85 tends through the head of the piston 9, and is formed into a conical valve 14 adapted to close the inner end of the nozzle 13, and that the said valve has a cylindrical extension v which is considerably smaller than the inner
90 diameter of the said nozzle. In the downward movement of the piston the cylindrical extension v enters the nozzle and reduces its effective area considerably in advance of the action of the valve 14.
95

15 is the hot water nozzle which extends laterally from the shell 1, and t a port leading from the nozzle to the interior of the shell. The position and size of the said port are such that it is fully covered when the aperture p
100 in the annular partition k is closed by the packing gasket 10, but which is fully disclosed when the piston 9 is lowered to its limit and the inner end of the nozzle 13 closed by the valve 14.
105

The stem 5 is fitted with a handle 17 whereby the faucet is opened and closed, and preferably embraces four arms u which are marked with the words "Off," "Cold,"
110 "Temp." and "Hot." The normal position

of the handle or that which it occupies when all flow of water is cut off is that wherein the word "Off" is directly over the discharge nozzle *c*.

5 The pitch of the thread on the plug 4 is such that three fourths of a complete rotation of the handle 17 will effect the full movement of the piston 9 or that in which the piston is moved from the position shown in Fig. 10 1 to the other extreme position wherein the inner end of the cold water nozzle is tightly closed by the valve 14; and in view of the coarseness of the pitch necessary to produce such a result, a multiplicity of threads instead of a single thread are used, an expedient commonly availed of in the manufacture of faucets.

Supposing all the parts of the faucet to be in the relative positions shown in Fig. 1, it will be seen that the discharge of water is entirely cut off, and should it be desired to draw cold water the handle is turned in the direction indicated by the curved arrow in Fig. 5. In this movement the packing gasket 10 is lowered from the valve seat on the partition *k*, and cold water from the nozzle 13 passes through the central aperture in the said partition and into the hollow extension 7 of the stem 5, thence through the ports *d* to the interior of the head 3, and thence to the discharge nozzle *c*.

It will be understood that the downward movement of the piston as described is not sufficient to disclose the hot water port *t* which remains covered until the handle is moved so as to bring the arm marked "Temp." over the nozzle *c* when hot water is admitted and by commingling with the cold water in piston cylinder, produces a discharge of warm water which is defined as temperate.

Another quarter rotation of the handle will close the cold water nozzle and fully disclose the hot water port, the handle marked "Hot" being then over the discharge nozzle.

45 Referring now to Fig. 6, it will be seen that the cold water nozzle instead of being at the bottom of the shell 1 is at one side thereof and in a position similar to that of the hot water nozzle, and that the flow of cold water 50 is controlled by the hollow ported piston 9.

It will be seen also that the valve seat is formed on the upper side of the partition *k*, consequently the faucet is opened by raising the plug 4 instead of depressing it. In other respects the construction of the two types of faucets is practically the same.

I claim as my invention:—

1. In a faucet, a shell having near its upper end an internal thread and a discharge nozzle, and at its lower end two inlet nozzles at different vertical heights, combined with a hollow ported piston adapted to control the said inlet nozzles, an annular partition within the shell and situated above the said piston, a packing gasket carried by the said hollow ported piston to control the central opening in the annular partition, an exteriorly threaded plug the thread of which engages the thread in the upper portion of the shell, the plug being hollow and provided with a bridge at its lower end, a rod to connect the said bridge with the hollow ported piston, a hollow cylindrical stem having ports in communication with the discharge nozzle, the lower end of which stem enters the hollow threaded plug and has a vertical movement only therein, and a handle whereby the said stem can be turned and thus communicate a rotary motion to the exteriorly threaded plug and cause the raising or lowering of the hollow ported piston substantially as specified.

2. In a faucet, a shell which at the upper end is interiorly threaded and provided with a discharge nozzle, and at its lower end provided with inlet nozzles and means to control them, combined with an exteriorly threaded plug situated within the threaded portion of the shell, the said plug having a polygonal opening therethrough and a bridge, a rod to connect the said bridge with the means controlling the inlet nozzles, and an operating stem with a lower hollow ported and polygonal termination which rests in the hollow plug, substantially as specified.

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Witnesses:

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