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COMBINED HYDRANT AND STOP AND WASTE COCK.

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998,586.

Patented July 18, 1911.

Fig 1

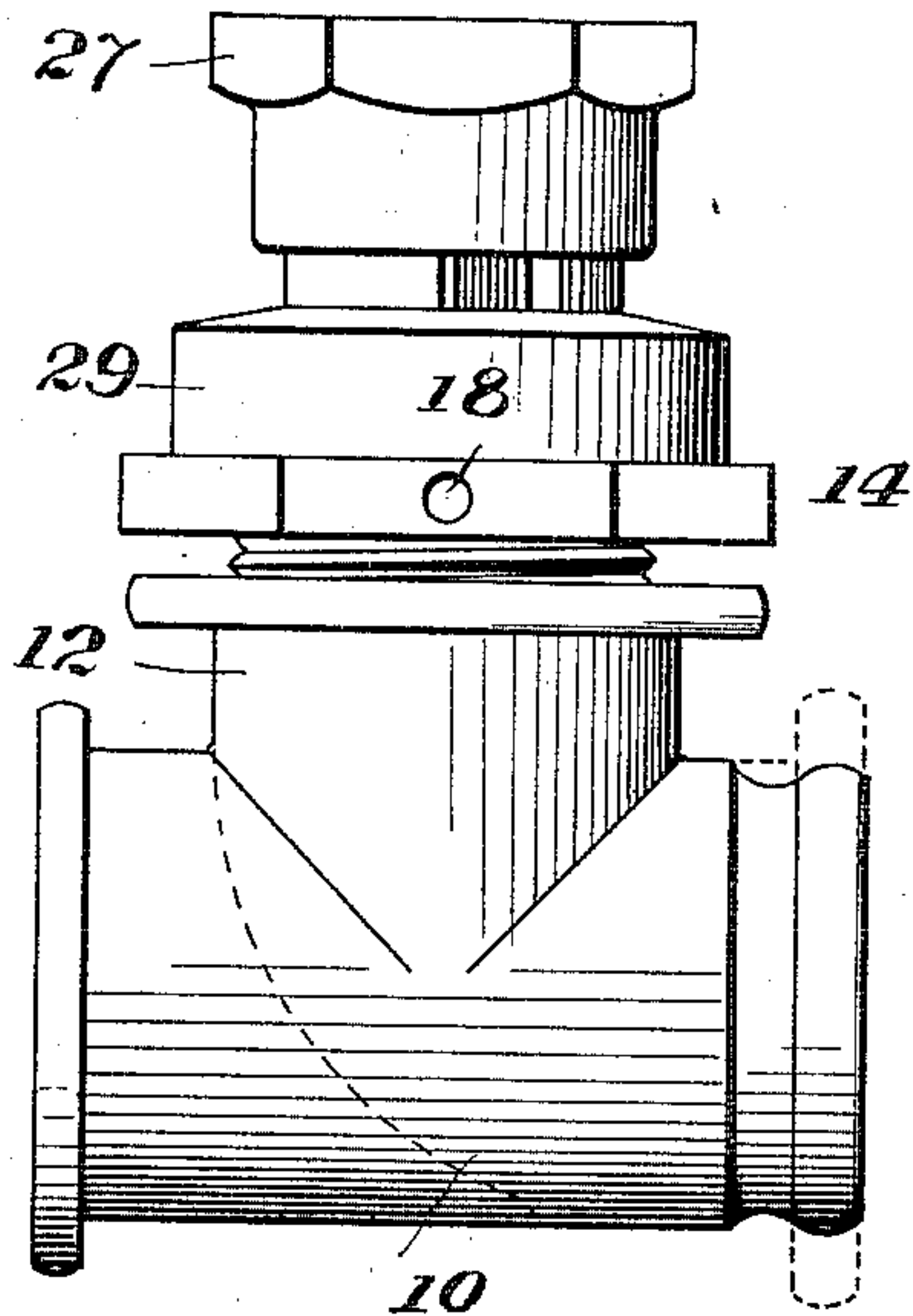


Fig 2

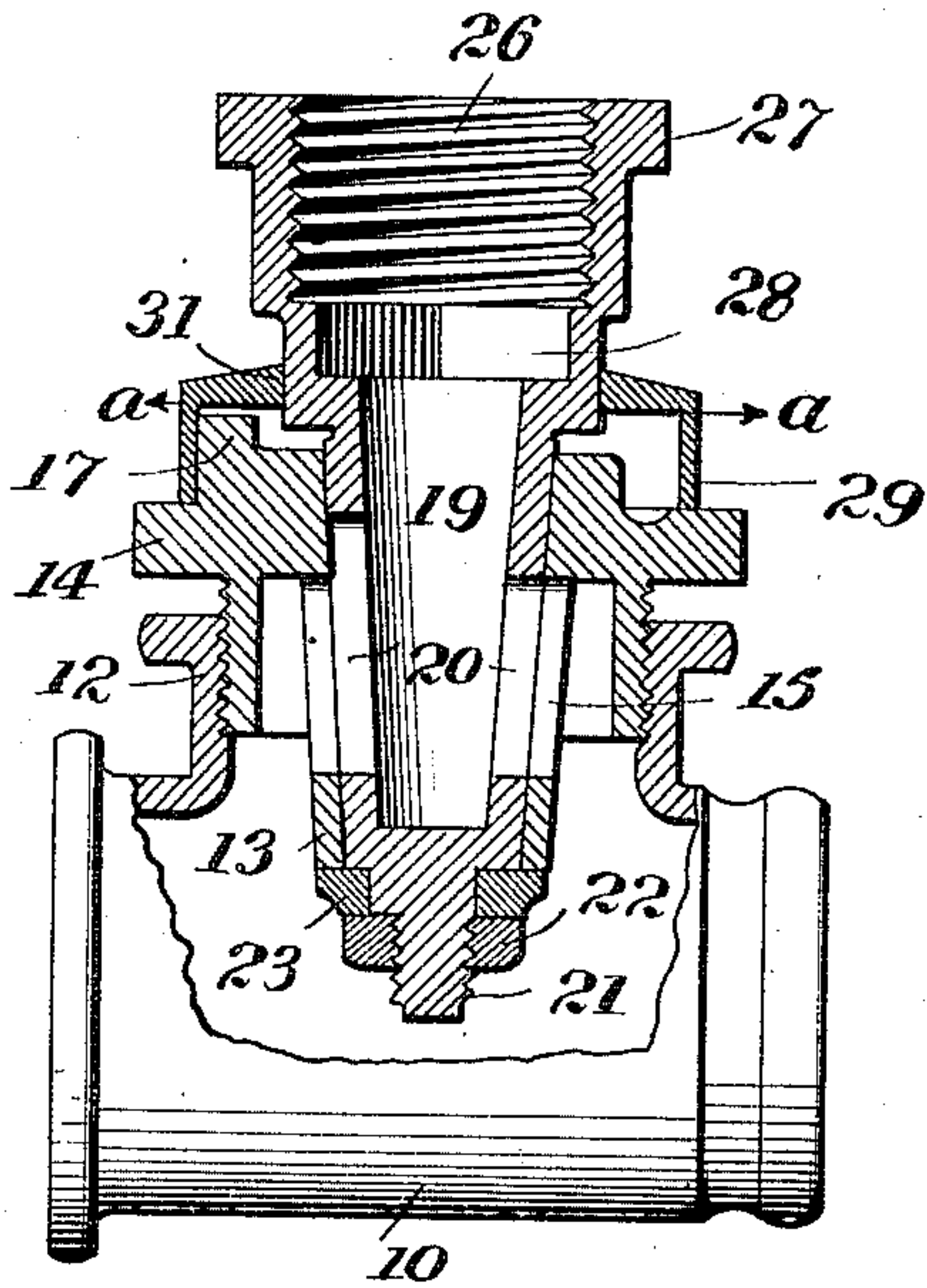


Fig 3

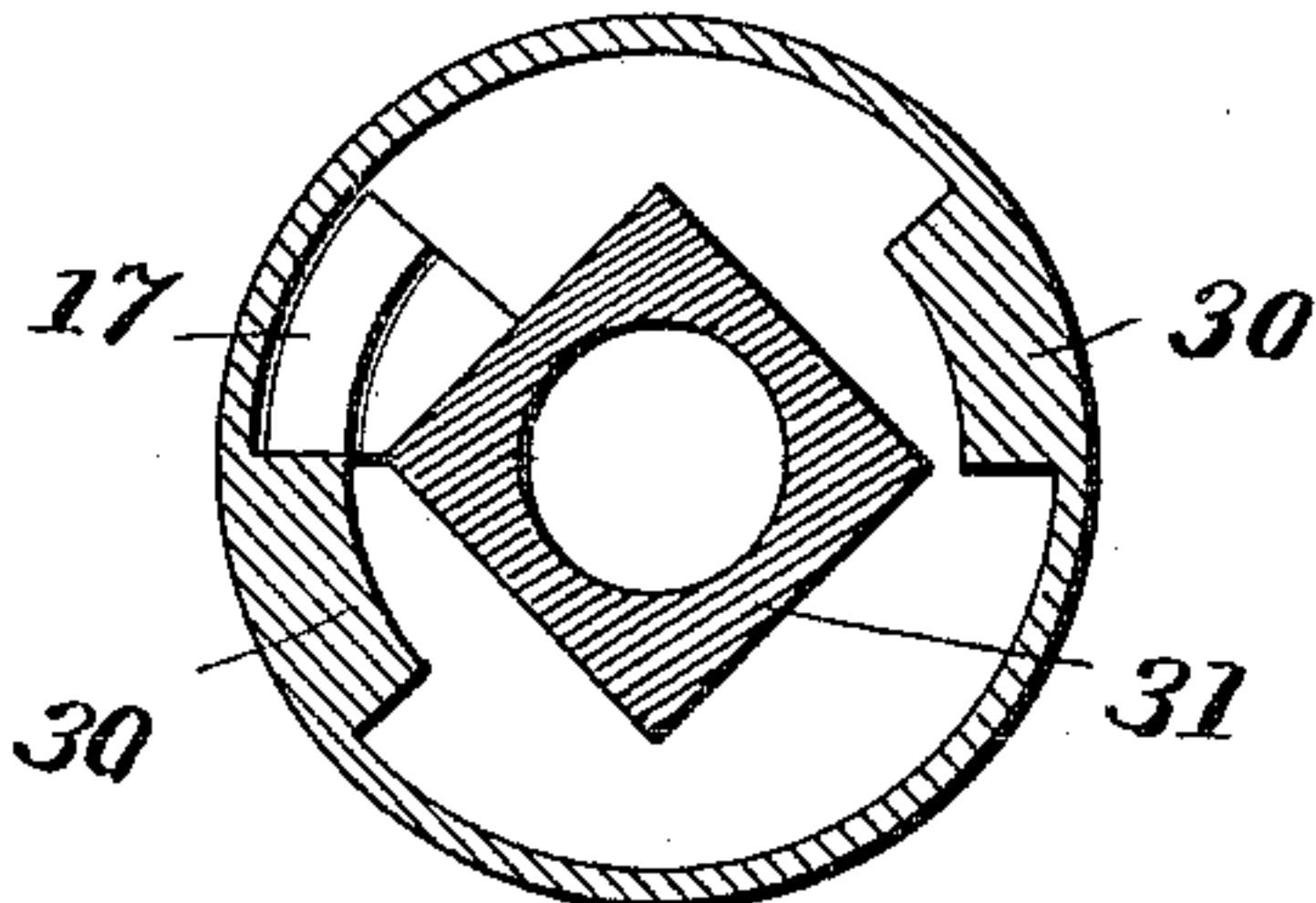
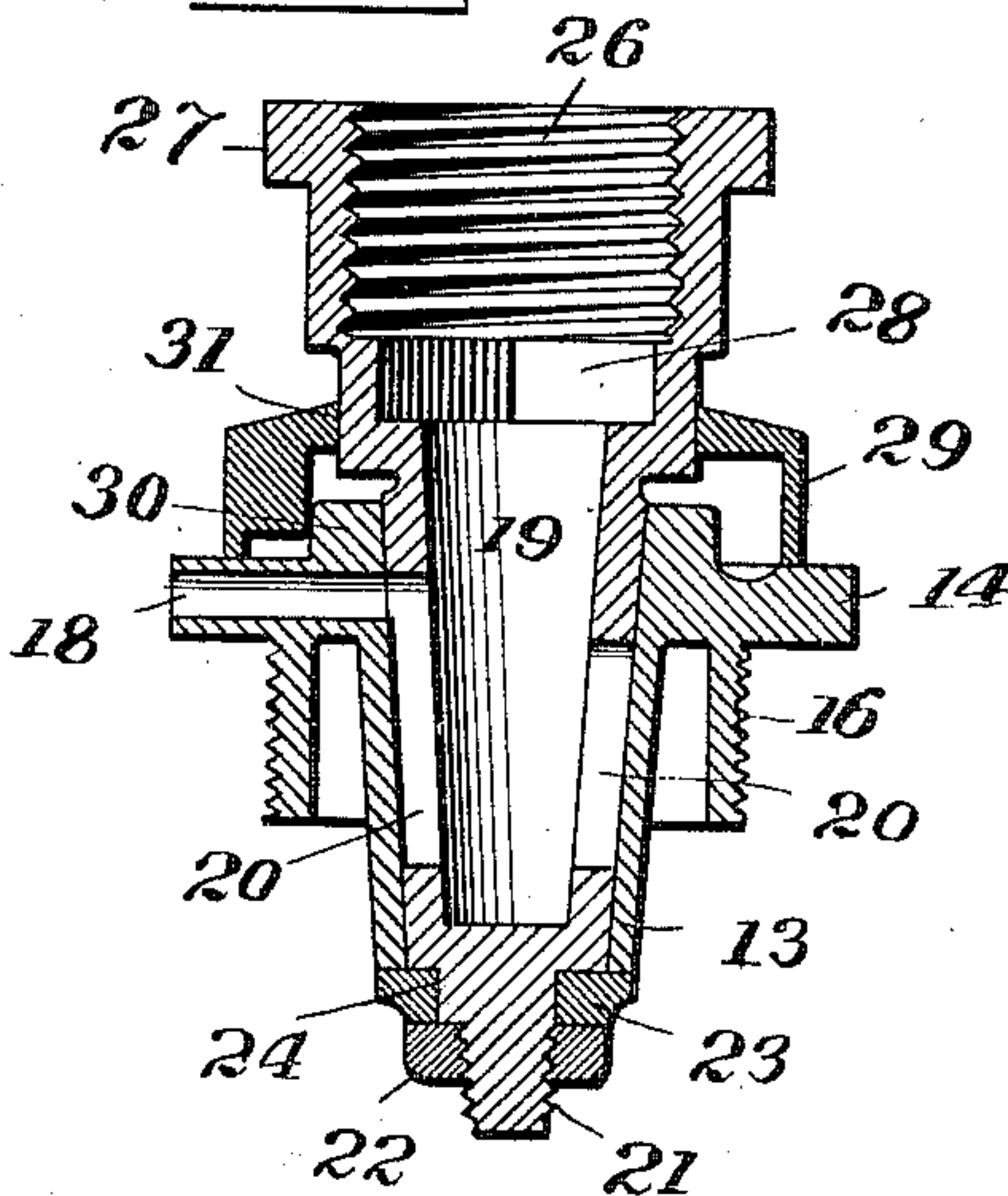


Fig 4

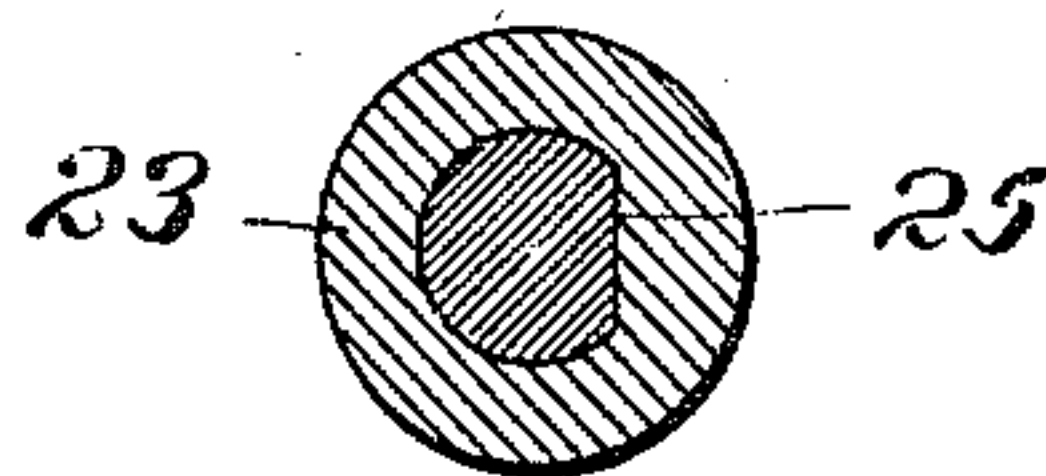


Fig 5

Witnesses

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# UNITED STATES PATENT OFFICE.

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COMBINED HYDRANT AND STOP AND WASTE COCK.

998,586.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed February 23, 1910. Serial No. 545,417.

*To all whom it may concern:*

Be it known that we, PHILIP MUELLER and HENRY MUELLER, citizens of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented new and useful Improvements in Combined Hydrants and Stop and Waste Cocks, of which the following is a specification.

Our present invention relates to certain new and useful improvements in a combined hydrant and stop and waste cock, and in the present instance these improvements are shown in connection with that type of hydrant wherein the stand-pipe, which is connected directly to the cock, is designed to be rotated in order to turn on and cut off the water.

One object of the invention is to provide a novel construction of plug or valve casing, which has its means for attachment to the coupling member of the water main so arranged with relation to the said casing that when attached in position for use it will exert no distortional or contractive effect thereon such as would cause a binding action between the said valve casing and its associated valve.

A further object of the invention is to provide a novel form and construction of plug or valve, with which there is associated, means for draining the hydrant when the water is turned off.

A still further object of the invention is to provide novel means coöperatively associated with both the valve and its casing to limit the turning movement of the former.

Finally the invention has for its object to provide a device of the character stated, composed of a comparatively few parts, all of which may be readily cast and easily assembled.

In order to enable others to understand, make and use our said invention we will now proceed to describe the same in detail reference being had for this purpose to the accompanying drawing, wherein—

Figure 1 is a side elevation of one of our improved devices shown attached to a coupling member. Fig. 2 is a vertical section, the valve being shown in open position. Fig. 3 is a vertical sectional view of the valve and its casing, the valve being shown in closed position and the drain port open.

Fig. 4 is a horizontal section on the line *a—*a** of Fig. 2. Fig. 5 is a horizontal section taken through the lower end of the valve and its washer.

Like characters of reference indicate corresponding parts throughout the several views.

The reference numeral 10 designates a coupling member which may be of T-shape as illustrated in full lines in Fig. 1, or it may be of substantially L-shape as indicated by dotted lines in said figure, the said coupling member having the threaded neck 12, to receive the valve casing and valve now to be described.

The valve casing 13, is formed integral with a polysided head 14, the latter forming a wrench-hold, said casing being by preference conical in form and having oppositely disposed inlet ports 15. The said head is also provided with an integral, externally threaded depending flange or skirt 16, arranged concentric with the valve casing and separated or spaced therefrom, said flange or skirt constituting the means for connecting the casing to its coupling member, as 10. The said depending skirt or flange 16 is separated or spaced from the valve casing 13, so that when it is screwed into the neck of the coupling member it will exert no distortional or contractive effect upon the hollow valve casing such as would tend to cause a binding action upon the plug valve seated therein which would render it difficult to turn, and this we consider one of the important and characteristic features of our invention.

The head 14, has formed integral with the upper face thereof, an upstanding stop-lug 17, adapted to coöperate with other stop-lugs movable with the valve and presently to be described, and is further provided with a drain port 18, which extends transversely through the wall of the head and at right angles to the inlet ports 15.

The reference numeral 19 designates the plug valve which closely fits the valve casing so as to turn freely therein to bring its ports 20, into and out of register with the ports 15, of the said casing. The valve is threaded at its lower end 21, to receive a nut 22, the latter bearing against a metal washer 23 removably fitted to a smooth section 24, of the



valve, but held against rotation relatively to the valve, by forming corresponding flat faces 25 on the said smooth portion and washer respectively.

5 The upper end of the valve plug is internally threaded at 26, to receive the stand-pipe of the faucet and externally said upper end is polysided as at 27, to receive a wrench. At a point directly below the threaded opening 26, the plug is formed with an internal polysided socket 28, into which a service-box key may be placed in order to turn the plug in case it should become jammed or for any other reason could not be conveniently gotten at from the outside.

The means for limiting the turning movement of the valve-plug consists of a cap 29, loosely, but non-rotatably connected with the plug, said cap being provided with a pair of oppositely disposed stop-lugs 30, which co-operate with the stop lug 17, formed on the upper face of the head 14, to limit the turning movement of the valve in an obvious manner.

25 In order to provide for draining the stand-pipe when the valve is turned to closed position, we make one of the inlet ports 20, in the valve or plug long enough to register with the drain port 18, as more clearly shown in Fig. 3, which shows the position of the parts when the water is turned off and the drain ports open.

One simple manner of removably, but non-rotatably connecting the cap 29 with the valve, consists in forming the valve with flat faces 31, and providing the cap with an opening corresponding in shape and size with the said flat faces 31, so that the cap may be readily slipped over the valve, and when brought to a position around the said

flat faces, it will be locked thereto and consequently turn therewith.

We do not wish to be understood as limiting ourselves to the precise details herein shown and described, except as we may be limited by the terms of the appended claim, but reserve to ourselves the right to such modifications as come fairly within the terms of said claim.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

The combination with a water main of a casing having a wrench cap at one end and a main body portion at the other, a downwardly extending flange beneath said cap, said main body portion spaced from said flange and having a free end within said main, said flange removably engaging said main to rigidly support said casing, a plug seated within said casing and having an exterior and interior abutment for a turning tool, a cap removably and rotatably carried by said plug and engaging the wrench cap of said casing, said casing and plug formed with registering inlet ports beneath said wrench cap, a waste chamber carried by the latter having communication with one of said inlet ports, a stop lug carried by said removable cap and diametrically opposite stop lugs formed on said wrench cap to engage therewith.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

PHILIP MUELLER.  
HENRY MUELLER.

Witnesses:  
W. R. BIDDLE,  
W. R. GUSTIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."