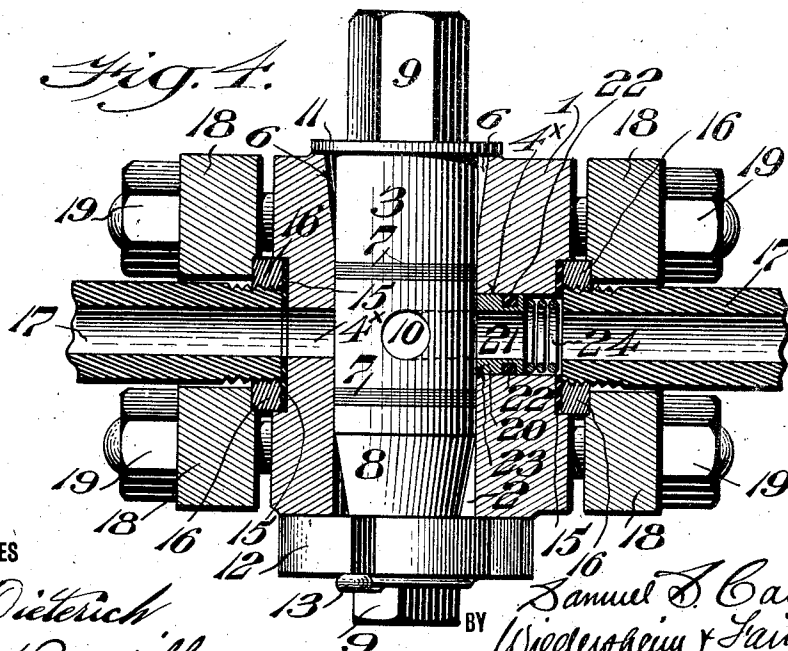
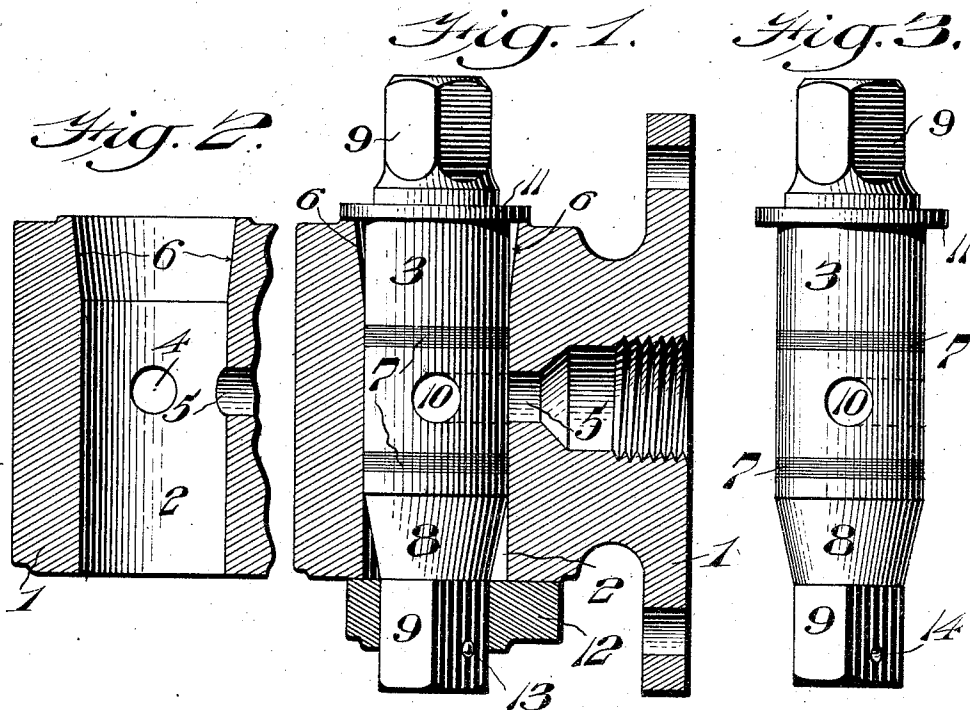


S. S. CASKEY.  
PLUG VALVE.  
APPLICATION FILED AUG. 23, 1909.

1,027,178.

Patented May 21, 1912.



WITNESSES

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# UNITED STATES PATENT OFFICE.

SAMUEL S. CASKEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO CASKEY VALVE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF NEW YORK.

## PLUG-VALVE.

1,027,178.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed August 23, 1909. Serial No. 514,189.

*To all whom it may concern:*

Be it known that I, SAMUEL S. CASKEY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Plug-Valve, of which the following is a specification.

This invention relates to high pressure valves and more particularly to an improved construction of casing and plug whereby the assembling of the valve and its adjuncts is greatly facilitated.

It further consists of a new and novel packing arrangement whereby leakage to the exterior of the valve casing is prevented and in combination with the packing adjusting means a device is provided for connecting the valve casing to the pipe line.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

Figure 1 represents a vertical section of a valve involving my invention. Fig. 2 represents a detail of a portion of the same. Fig. 3 represents a side elevation of the valve plug. Fig. 4 represents a vertical section of another embodiment of my invention.

For the purpose of illustrating my invention, I have shown in the accompanying drawing one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates a valve casing having a bore 2 therethrough adapted to receive the controlling plug 3 and also provided with the fluid conduits 4 and 5 extending from the bore 2 to the exterior of the casing whereby a two-way construction is obtained. As here shown, the bore 2 is provided with a tapered portion 6 at one end for the purpose of permitting the plug 3 with its packing 7 to be readily inserted in position within the casing 1 and it will be noted that the plug 3 has a tapered portion 8 adapted to cooperate with the tapered portion 6 and bore 2 to assist in the proper

fitting together of the parts. Each end 9 of the valve plug 3 is here shown of rectangular shape so that a wrench or like operating means may engage the same to change the position of the plug relative to the conduits 4 and 5 with which latter an opening 10 in the plug is adapted to align.

11 designates a collar secured to the plug preferably integral therewith and forming a stop to set the plug with its opening 10 in operative relation to the several conduits.

12 designates a collar or the like adapted to fit over one of the ends 9 of the plug 3 and with which a cotter-pin 13 passing through a suitable opening 14 in the end 9 is adapted to cooperate and lock the parts against removal.

In the embodiment disclosed in Fig. 4 the conduit 4<sup>x</sup> extends through the casing whereby a three-way construction is obtained as shown in dotted lines including the conduit 5.

It will be noted that the conduits 4<sup>x</sup> adjacent the sides of the casing are counter-bored for the purpose of inserting a packing 15 with which collars 16 cooperate each of said collars being suitably threaded upon the adjacent end of the pipe line 17. In order to adjust the packings 15, as desired, a plate 18 is fitted over said pipe 17 in contact with each of the collars 16 and suitable stud bolts 19 are provided and threaded into the casing 1 so that the collars 16 may be forced tightly against the respective packings. As here shown, one of the conduits 4<sup>x</sup> is somewhat larger in diameter than the other to receive a bushing 20 having an opening 21 therein of substantially the same diameter as the pipe line. This bushing 20 is suitably grooved to receive a packing ring 22 adapted to protect the joint between the casing 1 and the said bushing, while the face 23 of the bushing 20 is suitably ground to form a tight joint with the plug 3. In order to maintain the bushing 20 firmly against the plug 3, I preferably provide a spring 24 which is located and compressed between the pipe 17 and the bushing 20 thereby maintaining the ground surface closely in contact at all times.

It will now be apparent that I have devised a simple and efficient means of assembling the valve plug and its cooperating parts wherein the packing rings may be readily forced into the casing without dis-

placing or damaging them in any manner and wherein the tapered plug may be readily forced into place with the ground surfaces in close contact and in which the packings are so disposed and related as to insure a close fitting joint to prevent leakage.

It will now be apparent that I have devised a novel and useful construction which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description and while I have in the present instance shown and described the preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent, is:—

In a device of the character described, a casing having a bore therethrough, provided with a tapered portion and a plurality of conduits, a plug in said casing provided with an opening, packing between said plug and casing and on opposite sides of said conduits, a bushing in one of said conduits and having a ground face abutting said plug, packing in said casing encircling the ends of said conduits, a collar engaging each of said packings and adapted for attachment to a pipe line, a plate engaging each collar, and means to adjust said plate to compress said packings.

SAMUEL S. CASKEY.

Witnesses:

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