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PUMP.

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985,300.

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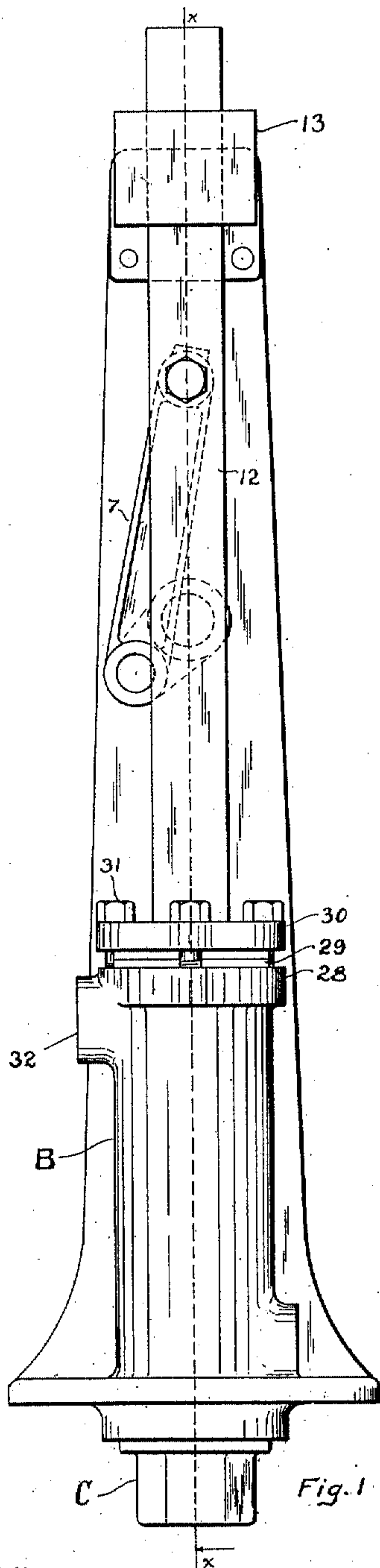


Fig. 1

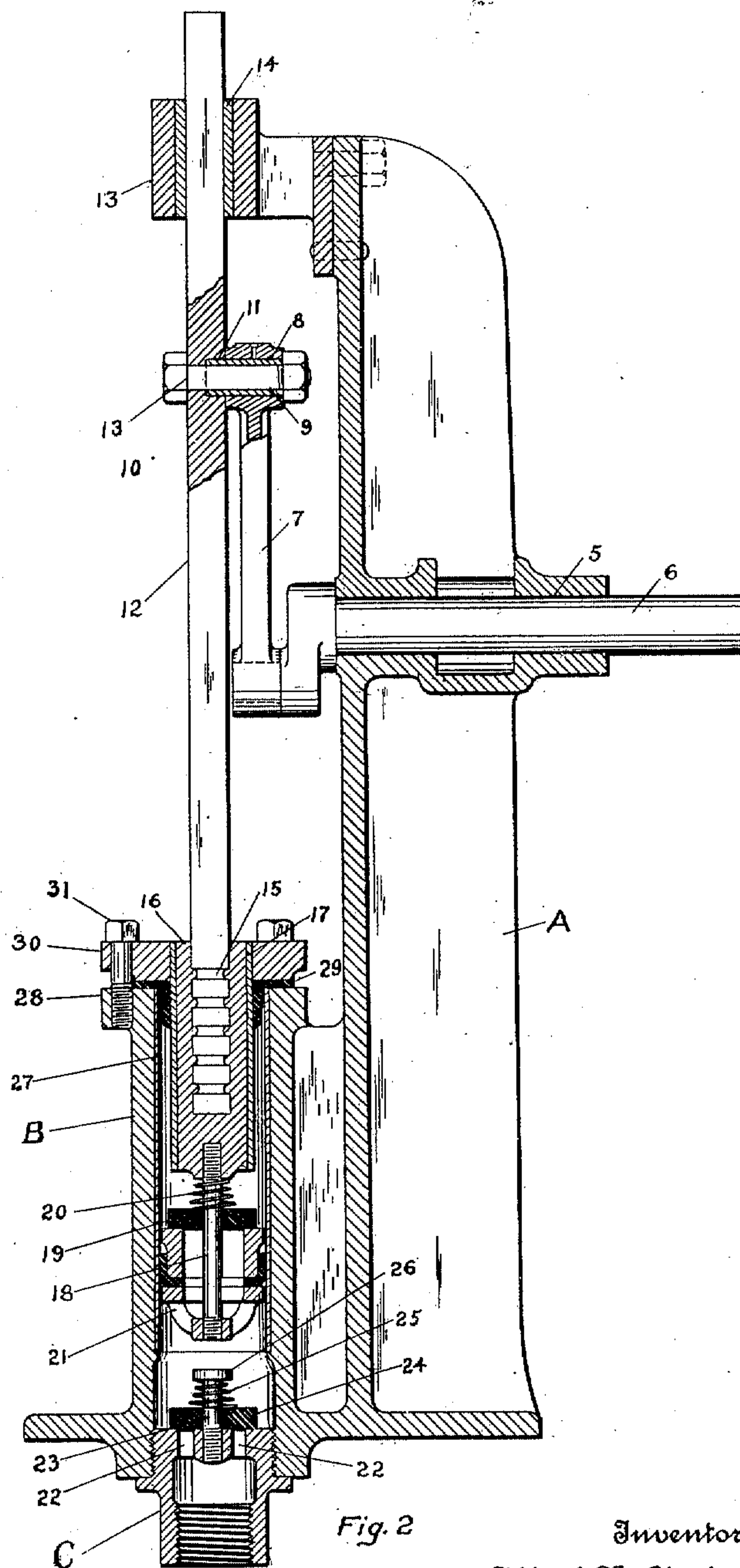


Fig. 2

Witnesses

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PUMP.

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To all whom it may concern:

Be it known that I, ALBERT B. STROHM, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Pumps, of which the following is a specification.

This invention relates to certain novel and useful improvements in pumps.

10 In the present instance it is my purpose to provide a pump embracing in its construction the desired features of simplicity, strength and durability.

15 Still a further object of my invention is to provide a pump having an improved form of plunger and valve, and furthermore to connect the pump rod to the pump shaft or crank in a novel manner.

20 With the above recited objects and others of a similar nature in view, my invention consists in the construction, combination and arrangement of parts set forth in and falling within scope of the appended claim.

25 In the accompanying drawings—Figure 1 is a view in elevation of a pump embodying my improvements, and, Fig. 2 is a vertical sectional view taken on the line $x-x$ of Fig. 1 and looking in the direction of the arrow.

30 Referring now to the accompanying drawings in detail, the letter A designates the pump standard which may be of any ordinary and improved character, said standard being provided with a lateral bearing 5 for the reception of the power shaft 6, said shaft extending through the bearing and having the crank arm 7 at one end thereof. The crank is provided with a lateral bearing 8 through which passes a relatively long bushing 9, the end 10 of said bushing projecting into a recess 11 in the pump rod 12. The crank is connected to the rod through the medium of the bolt 13. By reference to Fig. 2, it will be seen that an exceedingly strong and durable connection is made, the crank 7 fitting flush against the face of the rod 12 and yet at the same time having ample bearing. By so arranging the parts, the possibility of the crank working loose is gradually diminished. The pump rod 12 passes through the bore of the vertical bearing 13, said bearing being provided with a bushing 14 of suitable metal such as Babbitt metal or the like. The lower end of the pump rod 55 is provided with a series of grooves as is shown at 15, said end carrying the brass

plunger 16, the latter being covered by a smooth sleeve of metal 17, which may be in the nature of a section of brass tubing. In the construction of this portion of the plunger, the part 16 may be in a comparatively rough state when applied to the rod, and then covered with the smooth piece of tubing. Threaded or otherwise secured in the end of the plunger is a relatively short valve stem 18, upon which is adapted to slide the valve disk 19 which is formed of any suitable material such as rubber, composition or the like, said valve being tensioned in its movement through the spring 20 interposed between the top of the valve and the plunger. The valve stem also carries the cage 21 which slides with the piston in the pump cylinder B. Connected to the pump cylinder at the lower end thereof, through the medium of threads or the like is the contacting pipe C which brings the water from the source of supply, the end of said pipe at the cylinder being provided with ports or openings 22. Upon the stem 23 carried at the end of the pipe is a valve disk 24 similar to the disk 19, and like the latter formed of any suitable material such as rubber or the like, said valve being tensioned through the spring 25 and limited in its upward movement by the head 26 of the valve stem 23.

Referring to Fig. 2 of the drawings, it will be seen that the interior wall of the cylinder B is provided with a lining 27 which is of brass or other smooth material preferably a section of tubing. At the top flange 28 of the cylinder, I provide a packing 29, held in position through the medium of the collar 30 which is connected to the flange through the medium of bolts 31. It will be noted of course that the piston or plunger of the pump works through the collar, in Fig. 2 the piston being shown at its upward limit of movement.

From the above description taken in connection with the accompanying drawings, the construction and operation of my improved pump will be readily apparent.

This pump is of the type known as a displacement pump, that is to say, when the piston is traveling or working on the suction stroke, the valve 24 is drawn up on its stem to permit the water to pass into the barrel or cylinder of the pump, while the valve 19 is closed. Upon the return or displacement stroke of the plunger, the valve 24 is closed

and the valve 19 opened, thereby permitting the water to pass through the cage and past the valve and out through the outlet 32. It will be noted that I have provided a compact
5 form of pump of relatively few parts, and these assembled and arranged in a manner to obtain the best results, and the pump although simple in its construction, is capable of relatively large pumping capacity.

10 What I claim, is—

A pump comprising a standard, a pump cylinder carried thereby, a metallic tube lining said cylinder, said cylinder having a fluid inlet, a valve disk at said fluid inlet, a

plunger comprising a body portion, and a 15 metallic tube surrounding the same, a spring tensioned valve carried by the plunger, a collar at the end of the cylinder and a packing interposed between the collar and the cylinder, a plunger rod, a power shaft, and 20 a crank connection between the power shaft and the plunger rod.

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

ALBERT B. STROHM.

Witnesses:

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