No. 675,062. Patented May 28, 1901.

G. G. GUY.

PUMP.

(Application filed Sept. 28, 1900.)

(No Model.)

Fig. 1.

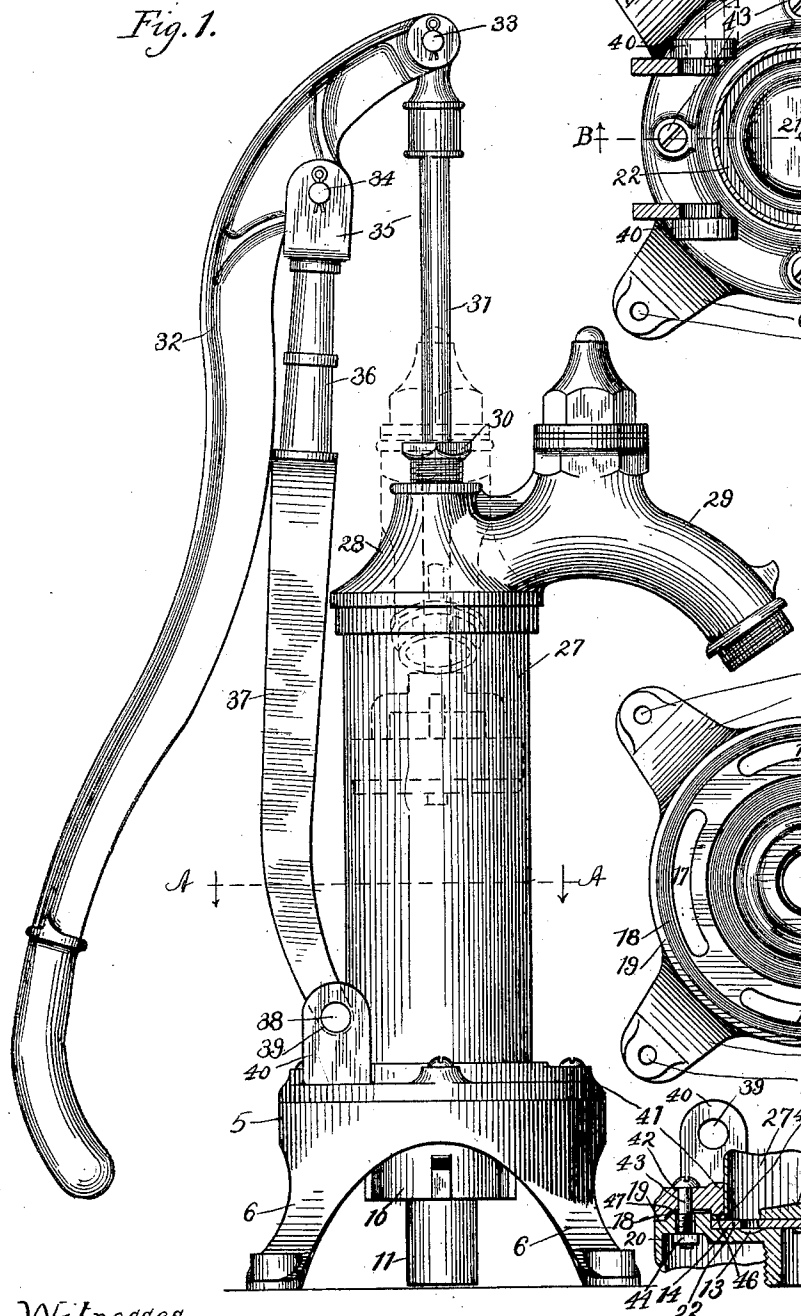


Fig. 2.

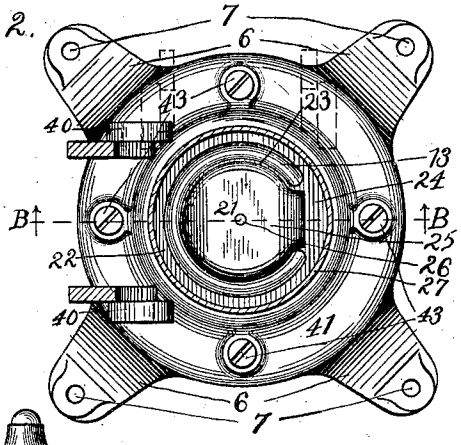


Fig. 3.

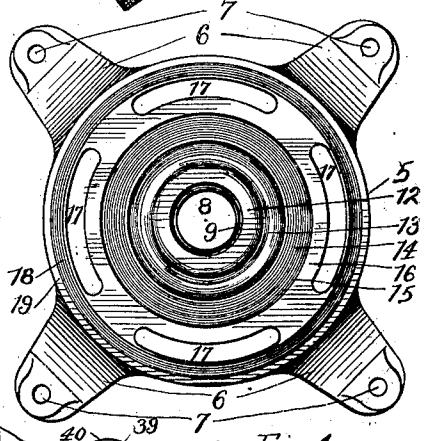
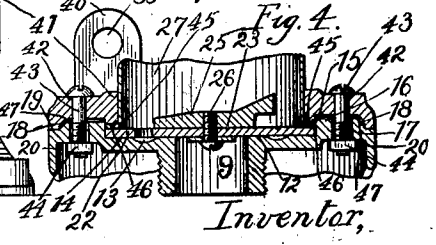


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE G. GUY, OF BATAVIA, ILLINOIS, ASSIGNOR TO THE U. S. WIND ENGINE & PUMP CO., OF SAME PLACE.

PUMP.

SPECIFICATION forming part of Letters Patent No. 675,062, dated May 28, 1901.

Application filed September 28, 1900. Serial No. 31,345. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. GUY, a resident of Batavia, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Pumps, of which the following is a specification.

My invention relates to certain new and useful improvements in pumps, and I have shown them as applied to a pump of the style known as "kitchen force-pumps," although it will be understood that they might be applied to other kinds of pumps.

My invention is designed, primarily, to produce a pump in which the spout or handle, or both, can be adjusted to any angular relation that may be desired with reference to surrounding objects, and that without shifting the position of the base or supporting piece. It is also designed to produce a novel combination for securing the barrel and its check-valve in position on the base-piece.

Referring to the accompanying sheet of drawings, in which the same reference characters are used to designate identical parts in all the views, Figure 1 is a side elevation of the complete pump. Fig. 2 is a plan view in section on the line A A of Fig. 1. Fig. 3 is a plan view of the base-piece, and Fig. 4 is a detail in vertical section on the line B B of Fig. 2.

The base-piece 5 is generally circular in shape and is provided with the legs 6, by which the pump is supported, and which may be secured in any desired position by bolts or screws passing through the holes 7. This base-piece 5 has the preferably circular aperture 8 therein. An annular flange 9, concentric with this aperture 8, is formed on the under side of the base and serves, together with the union 10, as a means for connecting the pump to the supply-pipe 11. Immediately surrounding the aperture 8 on the upper side is the annular plane surface 12, and next to this is formed the annular groove or channel 13, which in turn is surrounded by the annular plane surface 14, which is on the same level as the surface 12. The vertical shoulder 15 separates the plane surface 14 from the annular plane surface 16, which is on a slightly-higher level than the surface 14. This surface 16 has formed therein the elongated curved apertures 17, which are concentric with the body of the base-piece and are for the purpose to be described. The plane surface 16 is bounded by an inclined annular surface 18, which connects the surface 16 to the outermost annular surface 19. The under side of the base-piece 5, except for the legs 6 and the flange 9, might be plane; but I preferably form on said under surface the annular channel 20, which is opposite to the annular flange of which the surface 16 is the upper side. Resting upon the annular bearing-surfaces 12 and 14 is the barrel check-valve 21, which, as best shown in Figs. 2 and 4, consists of the leather ring 22, resting upon the bearing-surface 14 and having at the center thereof the substantially circular flap portion 23, which is connected with the annular portion by the strip 24. To hold the flap portion 23 on the bearing-surface 12, with which it coöperates, I provide the metallic piece 25, which is of the shape shown in Figs. 2 and 4 and is secured to the center of the flap portion 23 by the screw 26, in the manner clearly shown in Fig. 4.

The cylindrical barrel 27 has the cap-piece 28 secured thereon in any desired manner, as by being screwed thereon, and this cap-piece 28 is provided with the spout 29, from which the water may be delivered directly or to a pipe that may be attached thereto in any desired manner. The center portion of the cap 28 is provided with the packing-gland 30, through which reciprocates the piston-rod 31, and which connects the piston (shown in dotted lines) with the upper end of the handle-lever 32, to which it is pivotally secured at 33, and which in its turn is pivotally secured, as at 34, in the yoke-arms 35 of the swinging fulcrum-piece 36, the lower end of which is formed in a yoke 37, the arms of which are formed of comparatively thin metallic strips, which have projecting outwardly from the lower ends thereof the lugs 38, which are sprung into apertures 39, formed in the vertical bearing-lugs 40, which project upwardly from one side of an annulus 41. This annulus 41 is of the shape shown in cross-section in Fig. 4, and has as many apertures 42

therein as may be necessary to accommodate the screw-bolts 43, which pass through the apertures 42 and the slots 17 and have cooperating therewith the nuts 44, by which the annulus 41 is secured in position upon the base. By merely loosening the screw-bolts it will be apparent that the handle 32 can be adjusted to any desired position through the angular limits of the apertures 17, and by entirely removing the bolt-screws 43 the handle can be adjusted in any angular position desired without any limit.

As seen in Fig. 4, the barrel 27 has its lower end swaged or spun outward to form the horizontal flange 45, which when the parts are assembled rests upon the leather annulus 22, and which in turn supports the bearing-surface 46, formed on the under side of the annulus 41, by reason of the channel 47 on the under side of said annulus 41. With the construction thus employed it will be apparent that as the nuts 44 are tightened upon the screw-bolts 43 the barrel 27 will be clamped very firmly in position upon the leather annulus 22, thus forming a simple and efficient water-tight connection between the pump barrel or cylinder and the base-piece, and one which will allow the barrel 27, and consequently the spout 29, to be turned into any desired position of adjustment, the possibility of such changes being illustrated by the full and dotted line position of said spout in Fig. 1, while the possibility of changes in the position of the handle are indicated in Fig. 2 by the full and dotted line position of the bearing-lugs 40, which control the position of the handle.

With the structure herein described it will be seen that I have produced a simple and practical connection between the pump-barrel and the base-piece, which also permits of the adjustment of the pump-spout and the handle into any angular position that may be desired.

While I have illustrated my invention as embodied in the form which I at present consider best adapted to carry out its purpose, it will be understood that it is capable of some modifications, and that I do not desire to be limited in the interpretation of the following claims, except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a pump, the combination of the base-piece 5 having the annular bearing-surface 14 thereon and the apertures 17 therein, with the annulus 41 having the apertures 42 therein and the annular bearing-surface 46 on its under side, the barrel 27 having the flange 45 thereon projecting between said surfaces 14 and 46, and the bolts 43 for clamping said parts together in any desired position of angular adjustment.

2. In a pump, the combination of the base-piece 5 having the annular bearing-surface 14 thereon and the apertures 17 therein, the annulus 41 having the apertures 42 therein and the annular bearing-surface 46 on its under side, the barrel 27 having the flange 45 thereon projecting between said surfaces 14 and 46, the annular gasket 22 upon said surface 14, and the bolts 43 for clamping said parts together in any desired position of angular adjustment.

3. In a pump, the combination of the base-piece 5 having the annular bearing-surfaces 12 and 14 therein and the aperture 8 concentric with the bearing-surface 12, with the annulus 41 having the annular bearing-surface 46 on its under side, the barrel 27 having the flange 45 thereon projecting between the surfaces 14 and 46, the valve consisting of the leather annulus 22 and the weighted flap-piece 23 coöperating with the aperture 8, and means for clamping said parts together in any desired position of angular adjustment.

4. In a pump, the combination of the base-piece 5 having the annular bearing-surface 14 thereon, with the annulus 41 having the bearing-lugs 40 thereon, and the annular bearing-surface 46 on its under side, the swinging fulcrum 36 having its lower end pivoted in the lugs 40, the handle 32 pivoted in the upper end of the fulcrum, the piston-rod connected to said handle, the barrel 27 having the flange 45 thereon projecting between the surfaces 14 and 46, and means for clamping said annulus 41 and the barrel 27 upon the base in any desired position of angular adjustment.

5. In a pump, the combination of the base-piece 5 having the annular bearing-surface 14 thereon and the apertures 17 therein, with the annulus 41 having the bearing-lugs 40 thereon and the annular surface 46 on its under side, the swinging fulcrum 36 having its lower end pivoted in the lugs 40, the handle 32 pivoted in the upper end of the fulcrum, the piston-rod connected to said handle, the barrel 27 having the flange 45 thereon projecting between the surfaces 14 and 46, the annular gasket 22 between the flange 45 and the bearing-surface 46, and means, such as the bolts 43 passing through the apertures 17, for clamping the annulus 41 and the barrel 27 upon the base in any desired position of angular adjustment.

6. In a pump, the combination of the base-piece 5 having the annular bearing-surfaces 12 and 14 thereon and the aperture 8 therethrough, with the annulus 41 having the bearing-lugs 40 thereon and the annular bearing-surface 46 on its under side, the swinging fulcrum 36 having its lower end pivoted in the lugs 40, the handle 32 pivoted in the upper end of the fulcrum, the piston-rod connected to said handle, and the barrel 27 having the flange 45 thereon projecting between the surfaces 14 and 46, the check-valve consisting of the leather annulus 22 fitting between the flange 45 and the bearing-surface 14 and having the weighted flap-piece 23 coöperating with the bearing-surface 12 and the aperture

8, and means for clamping said annulus 41 and the barrel 27 upon the base in any desired position of angular adjustment.

7. In a pump, the combination of the base-piece 5 having the annular bearing-surfaces 12 and 14 thereon separated by the annular channel 13 and the aperture 8 therethrough, with the annulus 41 having the annular bearing-surface 46 on its under side, the barrel 27 having the flange 45 thereon projecting between said surfaces 14 and 46, the check-valve consisting of the leather annulus 22 fitting between the flange 45 and the bearing-surface 14 and having the weighted flap portion 23 connected thereto and coöperating with the bearing-surface 12 and the aperture 8, and means for clamping said parts together in any desired position of angular adjustment.

8. In a pump, the combination of the base-piece 5 having the annular bearing-surfaces 12 and 14 thereon separated by the annular channel 13, and having the aperture 8 therethrough, with the annulus 41 having the bearing-lugs 40 thereon and the annular bearing-surface 46 on its under side, the swinging fulcrum 36 having its lower end pivoted in the lugs 40, the handle 32 pivoted in the upper end of the fulcrum, the piston-rod connected to said handle, the barrel 27 having the flange 45 thereon projecting between the bearing-surfaces 14 and 46, the check-valve consisting of the annular leather gasket 22 fitting between the flange 45 and the surface 14 and having the weighted central flap portion 23 coöperating with the bearing-surface 12 and the aperture 8, and means for clamping said parts together in any desired position of angular adjustment.

9. In a pump, the combination of the base-piece 5 having the annular bearing-surfaces 12 and 14 thereon separated by the annular channel 13 and having the aperture 8 in the center thereof, and the segmental apertures 17 near the edge thereof; with the annulus 41 having the bolt-holes 42 therein and the annular bearing-surface 46 on its under side, the barrel 27 having the flange 45 thereon projecting between said surfaces 14 and 46, the check-valve consisting of the leather annulus 22 placed between the flange 45 and the surface 14 and having the central weighted flap portion 23 coöperating with the surface 12 and the aperture 8, and the bolts 43 passing through the apertures 17 and the bolt-holes 42 for securing said parts together in any desired position of angular adjustment.

10. In a pump, the combination of the base-piece 5 having the annular bearing-surfaces 12 and 14 thereon separated by the annular channel 13 and having the aperture 8 at the center thereof and the segmental apertures 17 near the edge thereof, with the annulus 41 having the bearing-lugs 40 thereon and the annular bearing-surface 46 on its under side, the swinging fulcrum 36 having its lower end pivoted in the lugs 40, the handle 32 pivoted in the upper end of the fulcrum, the piston-rod connected to said handle, the barrel 27 having the flange 45 thereon projecting between the surfaces 14 and 46, the check-valve consisting of the leather annulus 22 placed between the flange 45 and the surface 14 and having the weighted flap portion 23 coöperating with the aperture 8 and the surface 12, and the bolts 43 passing through bolt-holes in the annulus 41 and the apertures 17 in base-piece for securing said parts together in any desired position of angular adjustment.

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