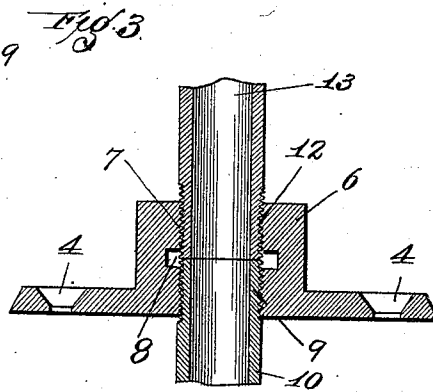
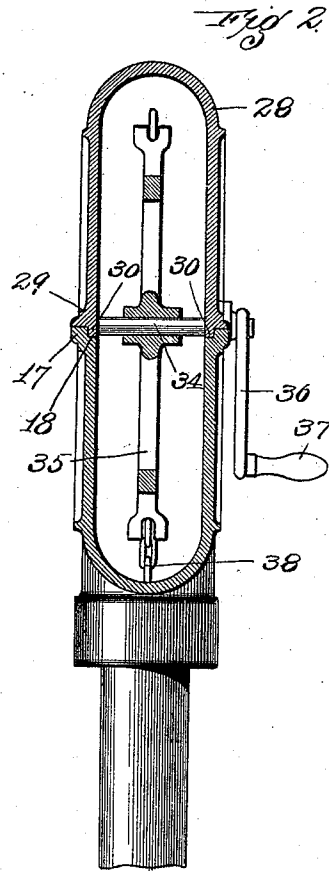
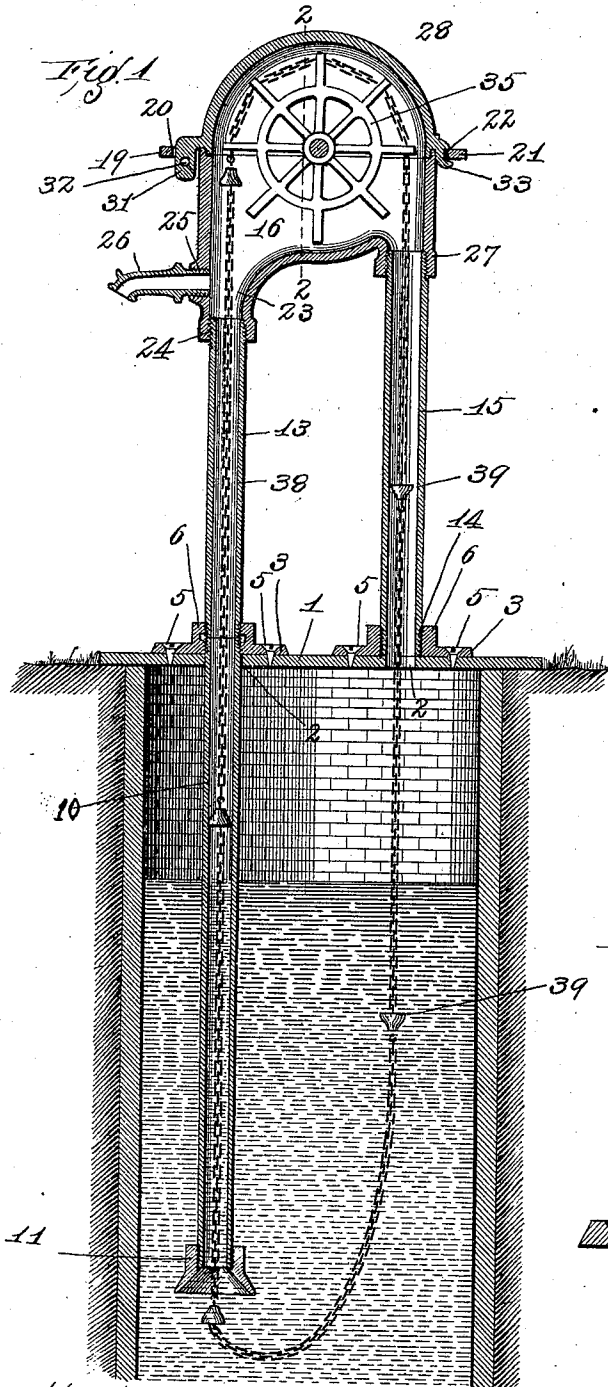


(No Model.)

C. D. BENNETT & W. M. DALY.
PUMP.

No. 574,702.

Patented Jan. 5, 1897.



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UNITED STATES PATENT OFFICE.

CHARLES D. BENNETT AND WILLIAM M. DALY, OF KIRKWOOD, MISSOURI.

PUMP.

SPECIFICATION forming part of Letters Patent No. 574,702, dated January 5, 1897.

Application filed August 5, 1895. Serial No. 558,252. (No model.)

To all whom it may concern:

Be it known that we, CHARLES D. BENNETT and WILLIAM M. DALY, of the city of Kirkwood, St. Louis county, State of Missouri, have invented certain new and useful Improvements in Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to an improved pump; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a vertical sectional view of our improved pump, the same being shown in position over a well. Fig. 2 is an enlarged vertical sectional view taken approximately on the indicated line 2 2 of Fig. 1. Fig. 3 is an enlarged cross-sectional view showing the collar connecting two of the tubes of my improved pump.

Referring by numerals to the accompanying drawings, 1 indicates the usual platform or covering that is located immediately over the well or cistern, and formed in said platform a suitable distance apart is a pair of apertures 2. Located upon the platform 1 is a pair of disks 3, the same being provided with apertures 4, through which pass ordinary screws 5 for holding said disks to the platform 1. Formed integral with and extending upwardly from the centers of each of these disks 3 are blocks 6, through which pass vertically-arranged screw-threaded apertures 7, and the disks or blocks are so arranged upon the platform 1 as that these apertures 7 coincide with the apertures 2 in the platform 1.

Formed at the center in one of the blocks 6 is an annular groove 8, and the screw-threaded aperture 7 through the block and disk in which this annular groove 8 is located is somewhat smaller than is the screw-threaded aperture through the opposite block and disk. Seated in the screw-threaded portion of the aperture 7 through the disk and block below this annular groove 8 is the upper screw-threaded end 9 of the pump-tube 10, the same extending downwardly into the well or cistern a suitable distance and being provided on its lower end with a collar 11, the lower end of the same flaring downwardly and outwardly. Seated in that portion of the screw-

threaded aperture 7 above the annular groove 8 is the lower screw-threaded end 12 of a tube 13, the same being of the same diameter as is the tube 10, and the lower edge of said tube 13 engages directly against the top edge of the tube 10, thus forming a tight joint between said tubes and leaving no sharp edges against which the flexible disks or buckets located on the pump-chain may engage. Seated in the screw-threaded aperture 7 that passes through the opposite block and disk is the lower screw-threaded end 14 of the tube 15, the same being of a greater diameter and also longer than is the tube 13. The upper ends of these tubes 13 and 15 are screw-threaded.

16 indicates a metallic casing, the same being in plan view in the form of an elongated ellipse and provided around the top edge with an annular flange 17, in the top inner edge of which is formed a groove or cut-away portion 18. Extending laterally from the annular flange 17 at one end of the casing 16 is a lug 19, in which is formed an aperture 20, and extending laterally from the opposite end of said casing 16 is a lug 21, in which is formed an aperture 22. Depending from the casing 16 below the end on which the lug 19 is formed is a hollow arm 23, in the lower end of which is a screw-threaded aperture 24, in which the upper screw-threaded end of the tube 13 is seated. Formed in the front wall of this hollow arm 23 and immediately above the point where the upper end of the tube 13 terminates is a screw-threaded aperture 25, in which is located the exteriorly-screw-threaded rear end of a pump-spout 26. Upon the opposite end of the casing 16 or immediately below the lug 21 is formed a depending annular flange 27, the interior of which is screw-threaded and in which the upper screw-threaded end of the tube 15 is seated. This annular flange 27 occupies approximately the same plane as does the under side of the casing 16. Therefore the upper end of the tube 15 is in a plane slightly above that occupied by the pump-spout 26.

28 indicates a metallic cap for the casing 16, the lower edge of said cap being of the same form and size as is the upper edge of said casing, and said cap is provided on its lower edge with a flange 29, from which de-

pendes a tongue 30 of such form and size as that it may be readily seated in the seat or groove 18, formed in the flange 17 on top of the casing 16. The cap 28 is semicircular in form when viewed in side elevation, and formed integral with one end of said cap 28 is a depending lug 31, that passes through the aperture 20 in the lug 19, and formed in said depending lug 31 is an aperture 32, through which may be passed a key or other suitable fastening device. Depending from the opposite end of the cap 28 is a lug or projection 33, the same being slightly hook-shaped, and said lug 33 normally rests in the aperture 22 in the lug 21.

Journalled transversely within the casing and between the upper edges of said casing and the lower edges of the cap 28 is a shaft 34, on which is fixed an ordinary pump-wheel 35. A crank 36 is fixed upon the end of the shaft 34, that projects through the casing, and an ordinary handle 37 is fixed upon the lower end of said crank. An ordinary endless pump-chain 38, carrying flexible disks or buckets 39, passes around this wheel 35, downwardly through the tube 15, through the space between the lower end of the tube 15 and the flaring collar 11, and upwardly through the pump-tube 10 and tube 13. The diameter of the flexible disks or buckets 39 is such that they will fit the inner diameter of the tubes 10 and 13. As the tube 15 is of a larger diameter than is said tubes 10 and 13 said disks or buckets will not be subject to any wear as they pass downwardly through said tube 15.

The flaring collar 11, located at the bottom of the pump-tube 10, prevents the disks or buckets from engaging against the lower edge of said pump-tube as they enter the same. By forming the annular groove 8 in the block 6 the meeting ends of the pump-tube 10 and tube 13 are allowed to closely engage with one another to form a tight joint for the purposes hereinbefore mentioned.

The pump-spout 26 being located in a lower plane than is the upper end of the tube 15, the water drawn upwardly through the tube 13 and pump-tube 10 will readily discharge through said spout.

If it be desired to remove the cap 28 for any reason whatever, the operator removes the key that is located in the aperture 32 in the lug 31 and swings said cap 28 upwardly, the lug 33 acting as a pivot or hinge in the aperture 22 in the lug 21.

As all joints between the various tubes and

casing and disks are screw-threaded, a pump of our improved construction may be very easily and expeditiously put together or taken apart, and said pump is very compact, presents a neat and finished appearance, and possesses superior advantages in point of simplicity, durability, and general efficiency.

We claim—

In a chain-pump, a head consisting of the metallic casing 16, the flange 17 extending around the outer surface and upper edge of said casing, said casing also having the cut-away portion 18 extending around the inner face of its upper edge and inside of the flange 17, the lug 19 extending laterally from the flange 17 at one end of said casing, the lug 21 extending laterally from said lug at the opposite end of said casing, said lugs being vertically perforated, the hollow arm 23 extending downwardly from said casing from the side to which the lug 19 is attached, the lower end of said arm being interiorly screw-threaded, the pump-spout 26 screw-seated in the upper outer side of said hollow arm 23, the interiorly-screw-threaded annular flange 27 depending from the end of said casing opposite to the hollow arm 23, the upper end of said flange 27 being slightly above the plane of the pump-spout 26 and there being a wall formed by the lower side of the casing 16 extending from the upper edge of said flange 27 to the upper edge of the hollow arm 23, said wall sloping slightly toward the pump-spout, the metallic cap 28 designed to fit upon the upper edge of the casing 16, the tongue 30 depending from the lower inner edge of said cap and fitting in the cut-away portion 18, the lug 31 depending from the front end of said cap and designed to fit in the aperture in the lug 19, said lug 31 being horizontally perforated below said lug 19, the hook-shaped lug 33 depending from the rear end of said cap and designed to engage in the aperture in said lug 21, there being horizontally-alined bearings transversely of said casing and between its upper edge and the lower edge of the cap and approximately in the longitudinal center thereof, substantially as herein specified.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES D. BENNETT.

WILLIAM M. DALY.

Witnesses:

E. E. LONGAN,
MAUD GRIFFIN.