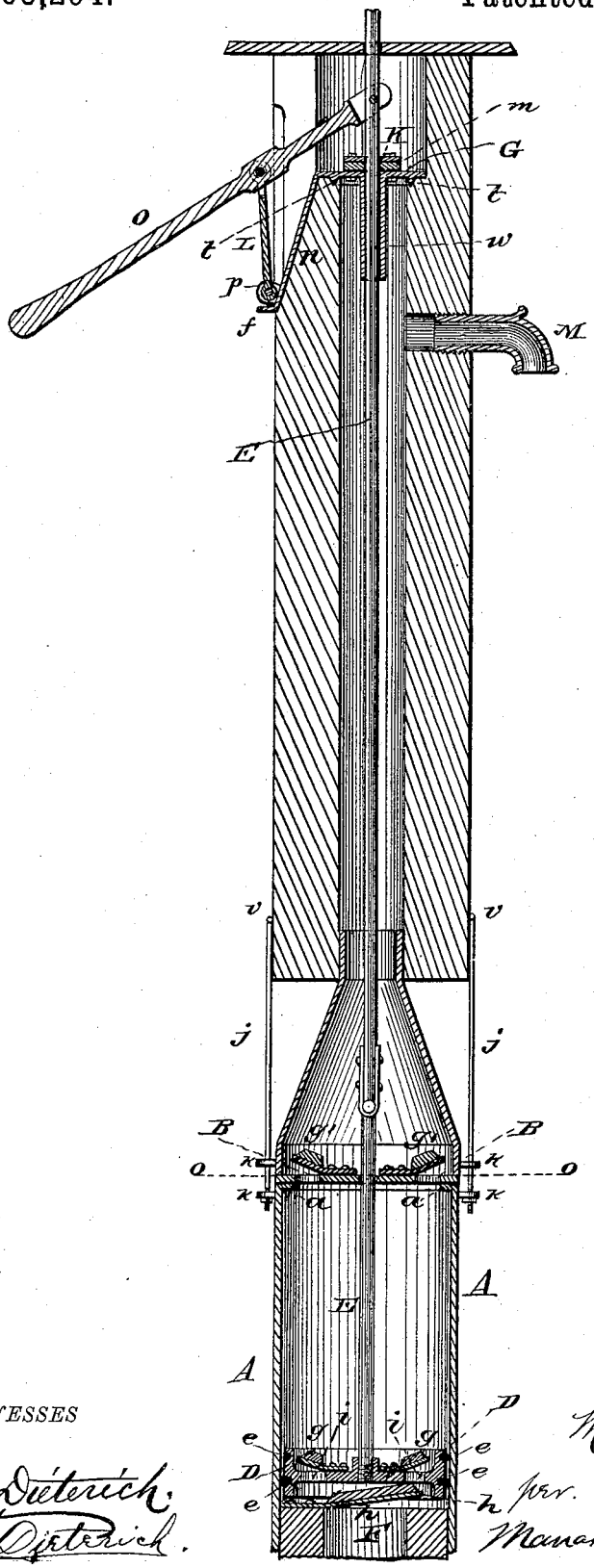
(No Model.)

M. F. McNELLY.

FORCE PUMP.

No. 263,294. Patented Aug. 22, 1882.



WITNESSES

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M. FRANK MCNELLY, OF STERLING, ILLINOIS, ASSIGNOR OF ONE-HALF TO WILLIAM A. MCCUNE, OF SAME PLACE.

FORCE-PUMP.

SPECIFICATION forming part of Letters Patent No. 263,294, dated August 22, 1882.

Application filed December 23, 1881. (No model.)

To all whom it may concern:

Be it known that I, M. FRANK MCNELLY, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Single-Acting Submerged Force-Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in single-acting force-pumps; and the novelty consists in the details of the construction of the head of the pump and the combination therewith of the handle and piston-rod, all as will now be more particularly set out and claimed.

It is intended that the cylinder of my pump shall be submerged.

The drawing is a vertical sectional elevation of my invention, showing the internal construction and arrangements of all its parts.

A, below the line *o o*, is an ordinary pump-cylinder bored entirely smooth on its inner surface, and above the line *o o* such cylinder is contracted inward to such a size as to render the top of the cylinder sufficiently small to permit of its being snugly fitted into the ordinary pump-stock, or, where provided with a thread, to be screwed into gas or other suitable pipe desired to be used in lieu of the common pump-stock. The cylinder A is divided into two portions at the line *o o*, and these are united, as now indicated in the drawing. In the plate B intervening between these ends are the openings covered by valves *g' g'*. The plunger D is fixed on the lower end of the piston-rod E. In this plunger are apertures *i*, which are covered by valves *g*.

Into the bottom of the cylinder A, I insert forcibly the hollow wooden plug F, which plug rests upon the bottom of the well and may be of any length desired. A strainer is placed in or near the bottom of the plug to keep gravel or other solid matter from entering the cylinder. On the upper end of this hollow plug I place the common clack-valve *h*.

The piston E works perpendicularly through the center of plate B.

At such distance as I deem desirable above the discharge-spout M in my pump I let into the pump-stock from the top, after cutting away the bore of the pump-stock sufficiently to let it in, the solid head G, which is made larger in circumference than the actual bore of the pump-stock. This head rests upon and is screwed to the ledges formed by said cutting away of the upper part of the bore of the pump-stock. Through the center of this head is a hole which admits the piston-rod, but does not allow any more play therein than is necessary. Cast to the lower face of this head, and integral therewith, is the annular tube *w*, which extends downward to any point desired above the discharge-spout. Outside of this tube *w* is the small V-shaped annular rim *t*, cast to the head G, and which may be placed at any desired distance between the periphery of the head G and the tube *w*, being sufficiently near the periphery of the head G to enable me to drive said rim *t* solidly into the ledge formed by the cutting away of the upper part of the bore in the pump-stock. Such head is also provided with the leg *n*, which slants outwardly and downwardly along a groove cut into the pump-stock for that purpose to the outer surface of the pump-stock. It is provided with the ears *p p* and seat *f*. This leg is firmly screwed to the pump-stock. Through the ears *p p* is a bolt, which passes through the lower end of the standard L, which oscillates upon such pin and works in and is supported by the seat *f*. This standard L is placed upright and parallel to the pump-stock and piston-rod E, and is slotted at its upper end to receive the pump-handle O, to which it is bolted. The forward end of the pump-handle being bolted to the piston-rod and the standard L being free to oscillate upon the pin through the ears *p p* prevents all cramping of the piston-rod where it passes through the head G. On top of this solid head and around the hole for the piston-rod I place a

small gasket, *m*, which I hold in place by a small annular plate, K, screwed through the gasket to the head G, the purpose of which gasket is to prevent leakage of air or water around the piston-rod.

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

1. In a pump, the head G, provided with an annular tube, *w*, rim *t*, leg *n*, ears *p p*, seat *f*, and handle L, substantially as and for the purposes set forth.

2. In a pump, the head G, provided with an annular tube, *w*, rim *t*, and leg *n*, as described, combined with the piston-rod E and handle O, substantially as and for the purposes set forth.

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

M. FRANK McNELLY.

Witnesses:
W. M. DILLON,
J. A. MORGAN.