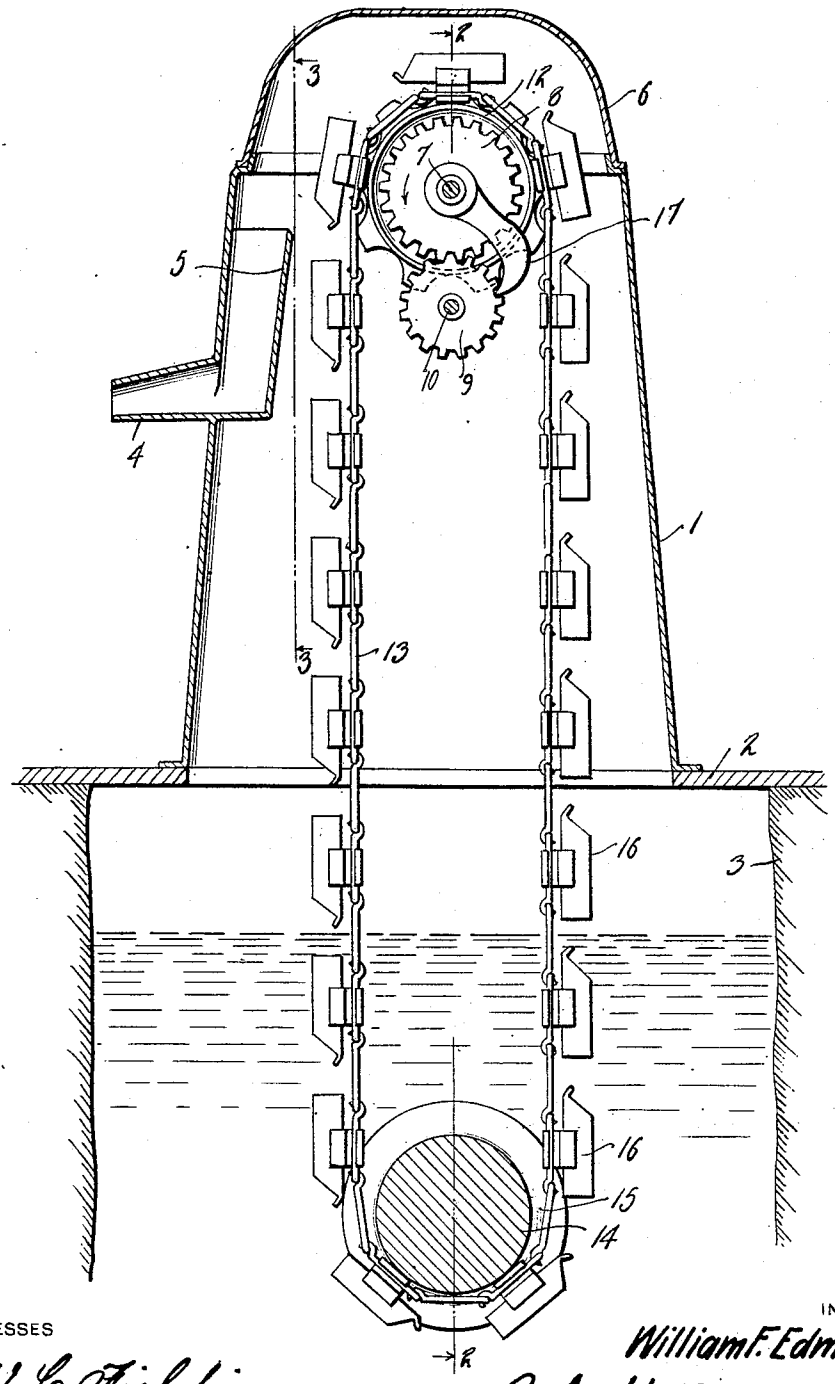
W. F. EDMONDSON.

CHAIN PUMP DRIVING MECHANISM.

APPLICATION FILED NOV. 12, 1917.

1,304,033. Patented May 20, 1919.



WITNESSES

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CHAIN-PUMP DRIVING MECHANISM.

1,304,033. Specification of Letters Patent. Patented May 20, 1919.

Application filed November 12, 1917. Serial No. 201,559.

To all whom it may concern:

Be it known that I, WILLIAM F. EDMONSON, a citizen of the United States, residing at Wellington, in the county of Sumner and State of Kansas, have invented certain new and useful Improvements in Chain-Pump Driving Mechanism, of which the following is a specification.

This invention relates to pumps and more particularly to an improvement in the driving mechanism for chain pumps, the primary object being to provide a simple arrangement of gearing for the purpose of operating the pump.

In the drawings:

The figure is a vertical section through a pump constructed in accordance with my invention.

The supporting casing 1 is secured on a platform 2 mounted above the well 3 in the usual manner. This casing is provided, in its front wall, with a discharge spout 4 which communicates with the receiving hopper 5 which is open at its upper end. The casing is normally closed by a removable cover 6 mounted thereon.

A shaft 7 is rotatably mounted in casing 1 adjacent the upper end thereof. A spur gear wheel 8 is secured on an operating shaft 10 rotatably mounted in the casing in vertical alinement with shaft 7. The operating shaft 10 is rotated by a crank handle secured on one end thereof in a manner common to chain pumps. By rotating shaft 10 rotation will be imparted to shaft 7 through pinion 9 and gear 8.

A sprocket wheel 12 is secured on shaft 7 adjacent gear 8. This sprocket wheel receives an endless chain 13 passed over the same, this chain being of hooked link construction and the links being of such size as to receive the teeth of sprocket 12. A grooved weight wheel 14 is mounted at the lower end of chain 13, this wheel being provided with an annular groove 15 of sufficient depth and breadth to accommodate the chain and the buckets 16 carried thereby. When the shaft 10 is rotated in a clock-wise direction, the shaft 7 and consequently sprocket wheel 12, will be rotated in a counter-clock-wise direction so as to move the buckets 16 through the water in the well and elevate them, the buckets discharging into the receiving hopper 5 as they pass over the sprocket wheel, the water flowing through spout 4 in the well known manner. Reverse rotation of shaft 7 is prevented by a gravity pawl 17 which is loosely mounted on the shaft and engages spur pinion 9. During this operation, the weight wheel 14 serves to maintain both runs of the chain 13 taut thus insuring accuracy of operation and that the buckets 16 will be properly filled as they are drawn through the water in the well.

What I claim is:

A chain pump driving mechanism comprising a drive shaft provided with a sprocket having the pump chain trained thereon, a gear mounted on the shaft adjacent the said sprocket and carrying a pawl suspended from the shaft to swing at one side of the said gear, a second shaft provided with a pinion meshing with the said gear and having its teeth adapted for engagement with the end of the said pawl to permit movement of the pinion only in one direction.

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

WILLIAM F. EDMONDSON.

Witnesses:

ALTA HASTIE,

W. H. STOFFELBACH.

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