(No Model.)

C. H. NEWBURY.

MECHANICAL MOVEMENT.

No. 326,052. Patented Sept. 8, 1885.

Fig. 1.

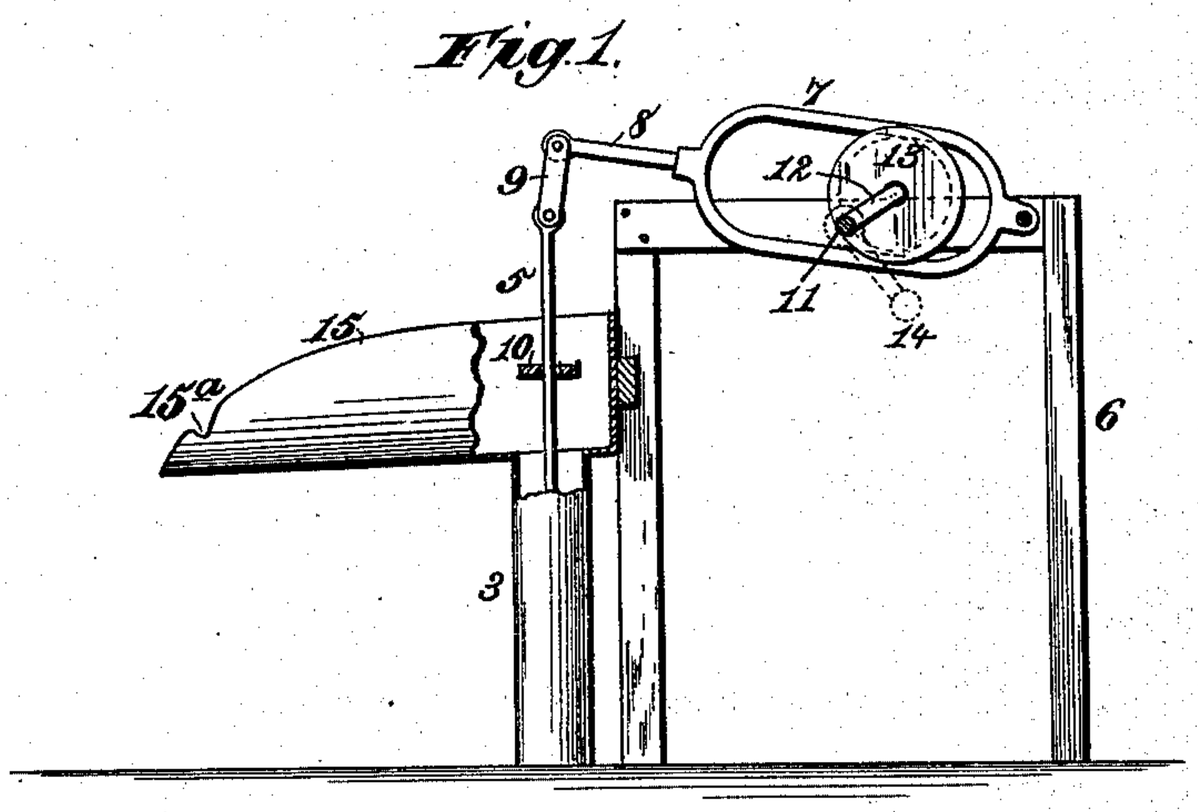
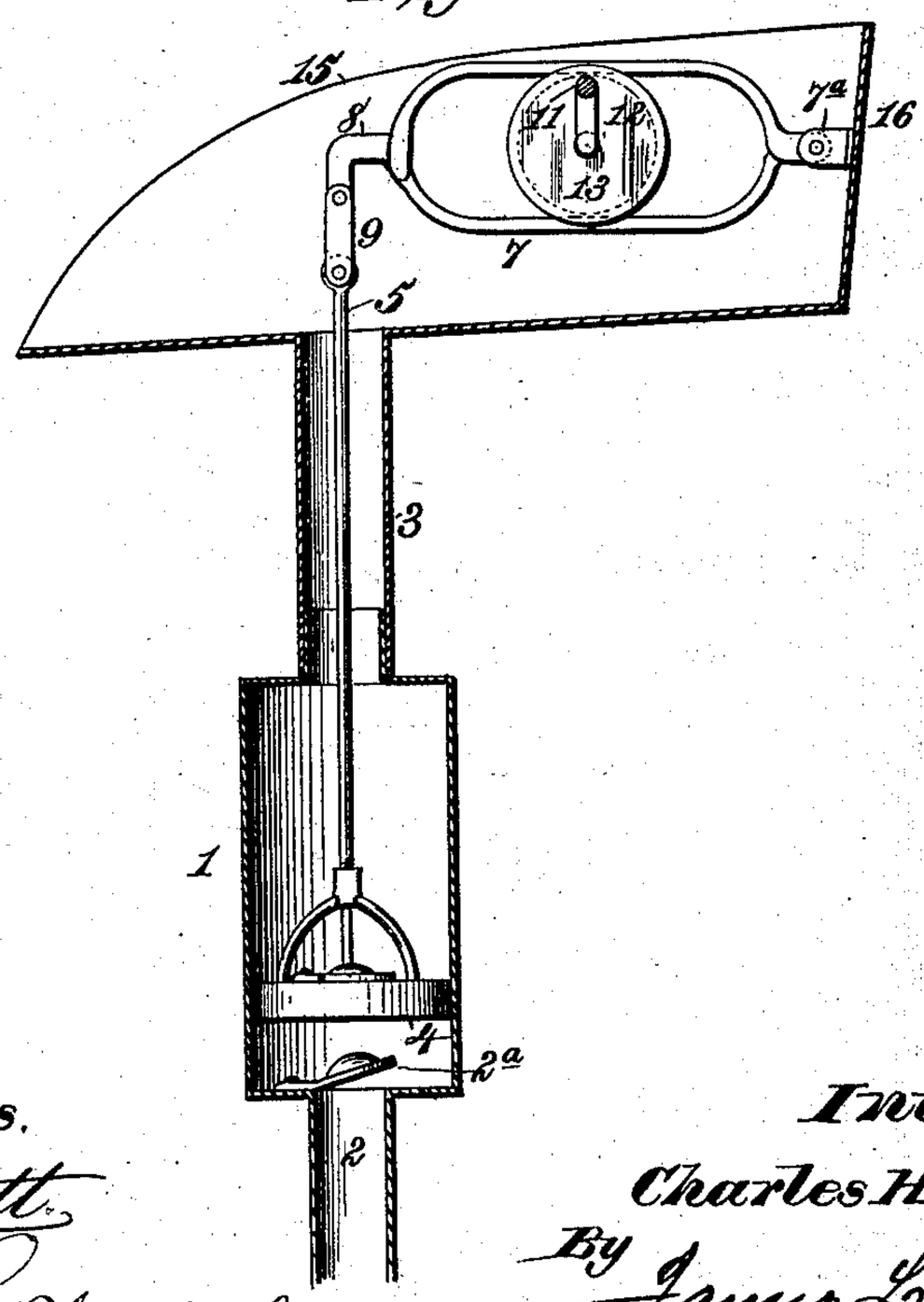


Fig. 2.



Witnesses.
Robt Ennett.
J. A. Rutherford

Inventor.
Charles H. Newbury.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

CHARLES H. NEWBURY, OF MERRILL, WISCONSIN, ASSIGNOR OF ONE-HALF TO DAVID PHINNEY, OF SAME PLACE.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 326,052, dated September 8, 1885.

Application filed March 10, 1885. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. NEWBURY, a citizen of the United States, residing at Merrill, Lincoln county, Wisconsin, have invented new and useful Improvements in Mechanical Movements, of which the following is a specification.

My invention relates to that class of mechanical movements for converting rotary into reciprocating motion; and it is my purpose to provide a simple and comparatively inexpensive mechanism which is especially adapted for operating pumps of all classes.

My invention consists in the several novel features of construction and combinations of parts hereinafter fully set forth, and definitely pointed out in the claims annexed to this specification.

Referring to the drawings, Figure 1 is a side elevation showing the operative parts, a portion of the supporting-frame being broken away to fully show the construction. Fig. 2 is a central vertical section of the apparatus.

In the said drawings the reference-numeral 1 denotes a pump-cylinder of any known and suitable construction, having a suction-pipe, 2, which enters said chamber below, and a delivery-pipe, 3, which rises from the upper end thereof. Within the cylinder is arranged a piston, 4, having a connecting-rod, 5, which passes up through the delivery-pipe.

Upon a suitable support, 6, arranged a little in rear of the delivery-pipe, is pivotally mounted a yoke or oval frame, 7, having at the end opposite its pivotal support an arm, 8, which is connected with the rod 5 by means of a link, 9, whereby true vertical reciprocation may be imparted to the rod, the latter being guided, if desired, by a support, 10.

Within the supporting-frame 6 is journaled a shaft, 11, having a crank, 12, and upon the horizontal connecting portion of said crank is mounted a friction-wheel, 13, having a grooved periphery, and of a diameter about equal to or a little less than the width of the yoke 7. The position of the shaft 11 and the throw of the crank 12 are such that by revolving the former the friction-wheel will move from end to end of the yoke, thereby producing a complete reciprocation of the latter at each revolution of the shaft, and actuating the pump-piston. The shaft may be turned by power or by a hand-crank, 14.

In applying this device to a pump, it will be convenient to mount upon the upper end of the delivery-pipe 3 a trough or spout, 15, having the delivery-pipe opening into its bottom between the closed rear end and the open forward end. The yoke 7 may be pivoted upon a bearing, 7^a, mounted upon the rear wall, 16, of the trough, and the shaft 11 has bearing in the side walls of the trough.

By this construction a simple, efficient, easily-operated, and comparatively inexpensive pumping mechanism is provided, which will give excellent results.

It is evident that the invention may be used for many other purposes where it is desired to convert continuous rotary into rectilinear reciprocating motion.

A valve, 2^a, is placed in the cylinder 1 to close the lower or suction pipe, 2.

The trough 15 may, if desired, be provided with a notch, 15^a, to receive the bail of a vessel into which the water is pumped.

What I claim is—

1. In a mechanical movement, the combination, with a yoke or oval frame having pivotal support at one end, of a shaft passing through said yoke and having a crank carrying a grooved friction-roll engaging with it, and means for imparting revolution to said shaft, substantially as described.

2. In a mechanical movement, the combination, with a yoke or oval frame having pivotal support at one end, of a shaft passing through said yoke and having a crank, a friction-wheel carried thereby, and having a grooved periphery engaging with the frame, a link pivoted to the free end of the frame, and a connecting-rod pivoted to the link, substantially as described.

3. In a mechanical movement for operating pumps, the combination, with a pump-cylinder and a pipe leading therefrom, of a trough

mounted upon said pipe, a yoke or oval frame pivotally mounted on the closed end of said trough, a shaft passing through the yoke and having a crank, a roll carried by the crank and having a grooved periphery engaging with the frame, and a connecting-rod linked to the end of the frame and moving in the pipe, substantially as described.

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

CHARLES H. NEWBURY.

Witnesses:
ALMON A. HELMS,
J. H. PARKER.