June 10, 1924. 1,496,800

A. WENANDER

PUMP ATTACHMENT

Filed Aug. 29, 1923

FIG. 2.

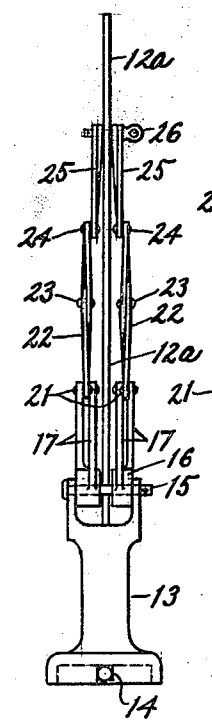


FIG. 1.

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ALBERT WENANDER, OF VALE, ALBERTA, CANADA.

PUMP ATTACHMENT.

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To all whom it may concern:

Be it known that I, ALBERT WENANDER, a subject of the King of England, residing at Vale, Province of Alberta, Canada, have invented certain new and useful Improvements in Pump Attachments, of which the following is a specification.

My invention relates to pumping mechanisms, and the object is to provide a device by which the stroke of the piston of a well pump or other similar pump may be readily changed to correspond to the driving power available or the varying resistance to the pumping.

In the accompanying drawing:—

Fig. 1 is a side elevation of a well pump equipped with my improved device.

Fig. 2 is the upper portion of Fig. 1 seen from left to right.

Referring to the drawing by reference numerals, 5 designates the standard of a well pump secured by bolts 6 upon a platform or base 7 covering a well having a vertical water pipe 8 in the shell or standard 5 at 9 and having its lower end provided with a pump cylinder 10 in which reciprocates a piston 11 having a valve (not shown) and a rod 12 extending up through and guided in a head 13 of the standard and may thereabove have a portion 12^a of flat form. Said head 13 has a cap-shaped lower portion secured by one or more set screws 14 upon the top end of the standard 5.

Pivoted at 15 in the top of head 13, are two mutilated meshing gears 16, each of which carries at least one, but preferably two, normally inclined arms 17 straddling the rod portion 12^a. Fixed to one of said mutilated gears is a pump handle 18, having a weight 19, adjustably held by a screw 20, to counterbalance the weight of the piston and pump rod.

The arms 17 are pivoted at 21 to the lower ends of beam levers 22 which are pivoted together at 23 where they cross each other. The upper ends of said levers are pivoted at 24 to links 25, which by a movable pivot 26 may be pivoted to either one of several holes 27 in the rod 12^a. This lazy-tong arrangement may preferably be alike at two opposite sides of the pump rod and may contain several pairs of cross levers like 22, according to the size and construction of the pump, but the present drawing illustrates the principle involved, and which is this; that when a pump cylinder is made of a certain diameter and long enough to have its piston stroke considerably changed, and such cylinder is placed at various distances below the pump shell and the source of water, and the resistance to the operation of the pump is thereby varied; one need not provide a cylinder of smaller or larger diameter nor a train of gears for matching the motive power to the column of water to be lifted, for he accomplishes the desired result by simply placing the pivot pin 26 in a higher or lower one of the holes 27, for the higher up the pivot is placed the more upright position the parts 22 and 25 will occupy and thereby impart a shorter and more powerful lift to the pump rod, while a lower position of the pin 26 will leave the parts 22—25 in a more leaning or horizontal position, which when the handle is operated, will give the pump rod and piston a longer stroke and will thereby raise more water at a lower pressure where the well is a shallow one.

The device tends to avoid making a different pump for each well of different depth, or for each variation in the resistance a pump has to overcome.

What I claim is:

1. In a pump having a standard, the combination with a pump rod having connection with the piston of the pump, of a pumping handle and a lazy tongs mechanism mounted on the standard and connecting the handle with the pump rod, said pump rod having several pivot holes and the adjacent end of the lazy tongs having a pivot adapted to be placed in either one of said holes, the other end of the lazy tongs having its members provided with meshing gears mounted on the pump standard and one of them operatively connected with the pump handle.

2. The combination with a pump standard of a cap fitted upon and about its top and having means for securing it in place, said cap forming a head and neck guiding the pump rod, a pair of meshing gears mounted on said head and having each one or more arms forming the lower parts of a lazy tong extending upwardly therefrom and having operative connection with the pump rod and means for oscillating said gears and thereby operating the lazy tongs and the pump rod.

In testimony whereof I affix my signature.

ALBERT WENANDER.