W. W. BODINE AND H. L. PATRICK.

PLUNGER ROD.

APPLICATION FILED JULY 18, 1919.

1,335,361. Patented Mar. 30, 1920.

Fig. 1.

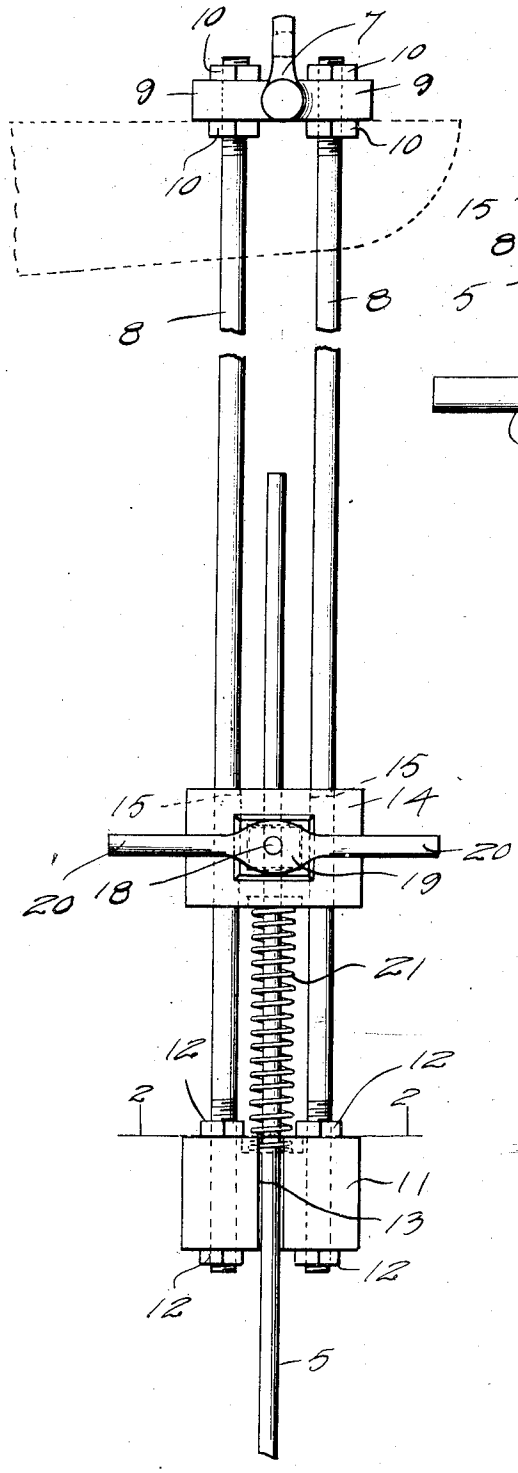


Fig. 3.

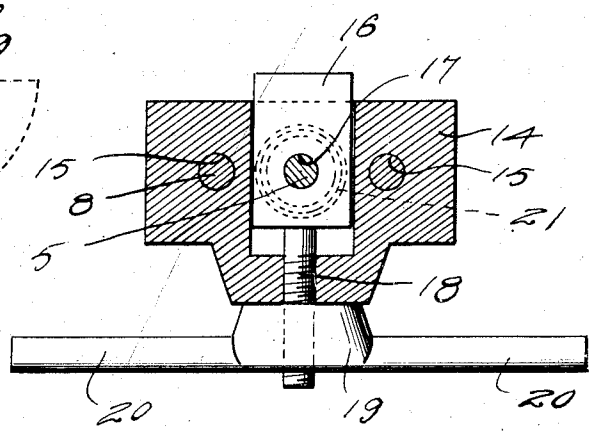
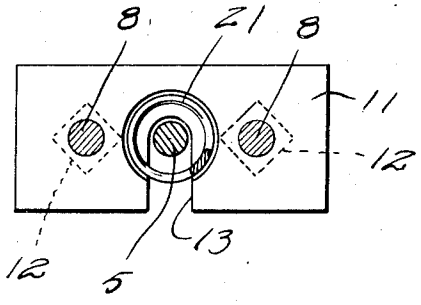


Fig. 2.



Inventors
W. W. Bodine
H. L. Patrick

By Randolph & Otty.

UNITED STATES PATENT OFFICE.

WILLIAM W. BODINE AND HOUSTON L. PATRICK, OF OILTON, OKLAHOMA.

PLUNGER-ROD.

1,335,361. Specification of Letters Patent. Patented Mar. 30, 1920.

Application filed July 18, 1919. Serial No. 311,714.

To all whom it may concern:

Be it known that we, WILLIAM W. BODINE and HOUSTON L. PATRICK, citizens of the United States, residing at Oilton, in the county of Creek and State of Oklahoma, have invented certain new and useful Improvements in Plunger-Rods; and we 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.

Our invention relates to improvements in pumps adapted for extracting fluids from the ground.

An important object of this invention is to provide a well pump having cushioning means interposed in the plunger rod for lessening the strain on the upward movement of the plunger rod.

A further object of the invention is to provide novel means for mounting the cushioning means for the plunger rod of the pump whereby the same may be readily applied or removed for purpose of replacement and so forth.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this application and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a front elevation of a plunger rod embodying our invention,

Fig. 2 is a horizontal section taken on line 2—2 of Fig. 1, and,

Fig. 3 is a plan view of a locking block embodied in the invention.

In the drawing wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates a plunger rod of a well pump. The plunger rod is connected to a beam or other source of power 6 through the medium of a cross T 7. The cross T 7 has connected thereto a pair of spaced parallel rods 8. Laterally projecting shoulders 9 are carried by the cross T 7 and are provided with openings receiving the upper end portions of the rods 8. Locking nuts 10 are arranged on opposite sides of the shoulders 9 and have threaded engagement with the upper end portions of the rods 8. The lower end portions of the rods 8 extend through a cross head 11 and are connected thereto by nuts 12. The cross head 11 is provided with an opening 13 opening out through its upper and lower sides and out through one vertical side. The plunger rod 5 is extended through the opening 13 and is adapted to be applied and removed through the open vertical side of the opening 13. The upper end portion of the plunger rod 5 is adjustably extended through a second cross head 14 having openings 15′ receiving the spaced parallel rods 8 for sliding movement. A locking block 16 clearly shown in Fig. 3 is provided with an opening 17 receiving the upper end portion of the plunger rod 5. The locking block 16 is provided with a screw threaded shank 18 receiving a locking member 19 having a pair of handles 20. Upon tightening the locking member 19 on the shank 18, the block 16 is forced into gripping engagement with the upper end portion of the rod 15 and retains the same in an adjusted position. A coil spring 21 of a reasonable stoutness is arranged between the cross heads 14 and 11 and is adapted for alleviating the strain on the plunger rod 5 on its upward movement. As the result of the pressure of the fluid on the plunger head, the cross head 14 may partake of a downward movement with relation to the rod 8 on the upward movement of the plunger rod.

When it is desired to remove the plunger rod, the same may be readily done by passing the plunger rod out through the open vertical side of the opening 13.

While we have shown and described the preferred embodiment of our invention, it is understood that such minor changes in arrangement and construction of parts may be made as will remain within the spirit of the invention and the scope of the appended claims.

Having thus described our invention, what we claim is:—

1. A pump including a plunger rod, upper and lower cross members, spaced rods connecting the upper and lower cross members, said lower member having an opening slidably receiving said plunger rod, a cross head slidably carried by said spaced rods and receiving the upper end portion of said plunger rod, a block carried by said cross head and having a screw threaded shank, a locking handle carried by said shank, and a cushioning element disposed between said cross head and said lower cross member.

2. A pump including a plunger rod,

spaced rods extending upon opposite sides of the plunger rod, a cross head slidably carried by the spaced rods and provided with a cutout forming a pocket intermediate the spaced rods, a block slidably mounted in the pocket for movement transversely of the cross head and provided with a threaded stem extending through the cross head, the plunger rod extending through the cross head and through the block, and a locking element screwed upon the outer end portion of the threaded shank.

3. A pump including spaced rods, a cross head slidably mounted upon the rods and provided with a cutout forming a pocket intermediate the rods, a block slidably mounted in the pocket for movement transversely of the cross head, a plunger rod extending between the spaced rods and through the cross head and a block slidably mounted therein, and means for adjusting the block in the cross head and retaining the block in an adjusted position for clamping engagement with the plunger rod in firm engagement with the cross head.

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

WILLIAM W. BODINE.
HOUSTON L. PATRICK.

Witnesses:
R. E. CAMPBELL,
F. W. POSEY.