Oct. 21, 1947. E. K. BAKER 2,429,384

PUMP

Filed Jan. 30, 1946

FIG. 2

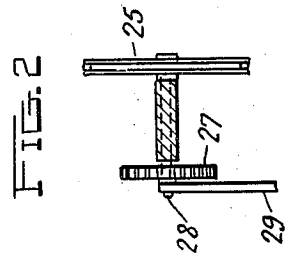
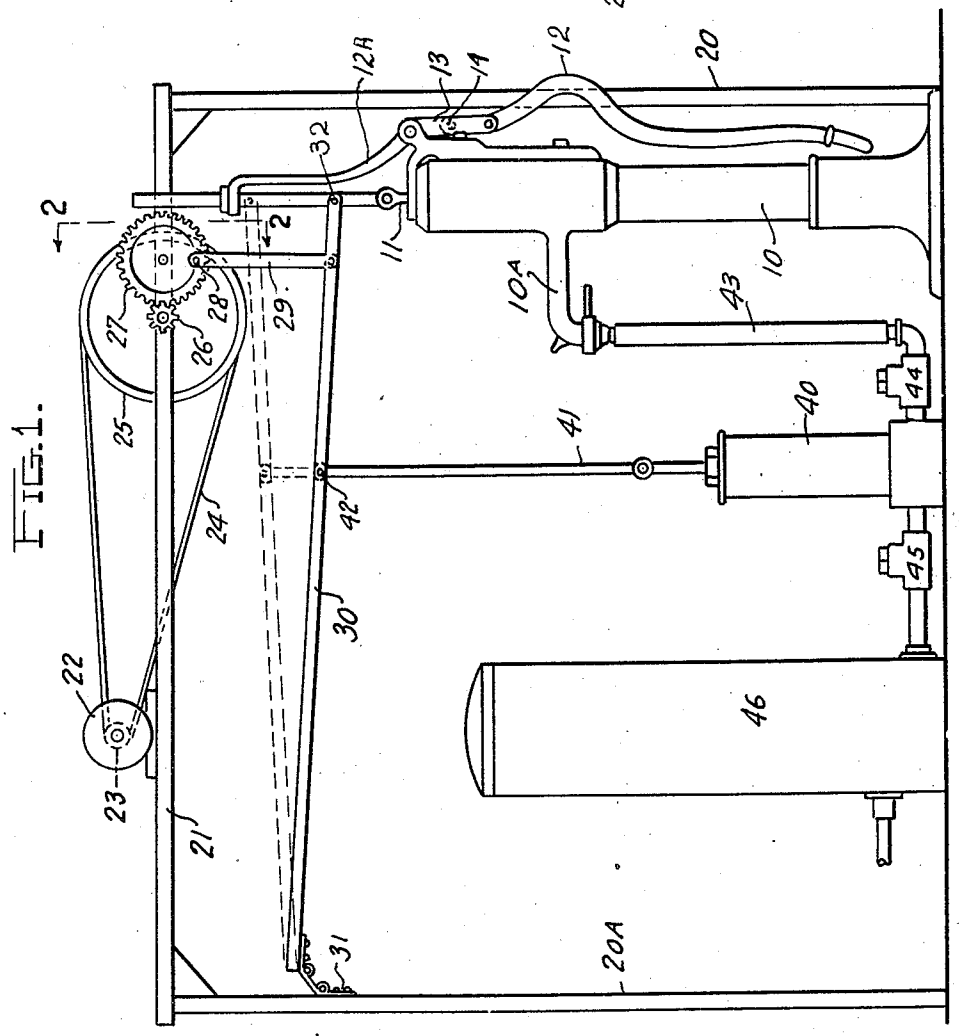


FIG. 1.



INVENTOR.
Erle K. Baker

BY Hauke & Hardesty

ATTORNEYS

Patented Oct. 21, 1947

2,429,384

UNITED STATES PATENT OFFICE

2,429,384

PUMP

Erle K. Baker, Detroit, Mich., assignor to Baker Axle Company, Cleveland, Ohio, a corporation of Ohio

Application January 30, 1946, Serial No. 644,363

1 Claim. (Cl. 103—5)

1

The present invention relates to pumps and more specifically to pump operating means.

Among the objects of the invention is pump operating means which is adapted to be applied to existing hand operated lift pumps to enable the delivery of the water under pressure.

Another object is a pump rig or operating means including a pressure pump adapted to operate in series with the lift pump.

Another object is a pump rig which, while permanently installed adjacent the lift pump, may be quickly disconnected so that the lift pump may be hand operated, and may be just as easily and quickly connected again for power operation.

Other objects and advantages will be apparent to those skilled in the art upon reference to the following description and the accompanying drawings in which

Fig. 1 is a side elevation of the pump rig and pump.

Fig. 2 is a section on line 2—2 of Fig. 1.

In the drawings, an ordinary lift pump is shown at 10, this being provided with the usual pump cylinder and water pipe extending down in the well and not shown.

The pump plunger is as usual operated by the rod 11 extending down through the pump body and reciprocable by means of the handle 12, this being a lever fulcrumed on the link 13 and connected to rod 11, or an extension, by the usual clevis and pin 14. The rod 11 is as usual guided in a suitable upright 12A.

Erected adjacent the pump 10 is a frame consisting of uprights 20—20A, and an upper cross member 21 supported thereon; and, on the frame, preferably on the cross member 21 is supported an electric motor 22 carrying a small pulley 23, which through belt 24 is adapted to drive a large pulley 25.

The latter, pulley 25, is carried on one end of a short shaft, extending across frame member 21 in suitable bearings, on the other end of which is fixed a small pinion 26 meshing with a large pinion 26 also mounted on member 21.

The pinion 27 is provided with a suitable eccentrically located pin 28 adapted to coact with a pitman 29 extending down to a suitable pivotal connection with a lever 30, which is pivoted to frame upright 20A at 31, the pivot means being a short link so as to allow a small longitudinal movement of the lever in its reciprocation by pitman 29. The other end of lever 30 will be pivoted, as at 32, to the pump plunger rod 11, or an extension thereof from which the handle 12 is preferably detached. The same opening in

2

rod 11 may be used for the pin which connects either the handle or the lever 30.

Operation of the motor 22 will of course reciprocate the pump plunger and thereby lift water from the well in which the pump is installed. In order, however, to deliver such water under sufficient pressure, a second pump 40 is used and the plunger 41 of this is also connected pivotally, as at 42, to the lever 30, so that the two pumps 10 and 40 are actuated simultaneously by the motor 22.

An easily detachable flexible conduit 43 extends from the delivery spout 10A of pump 10 to the intake valve 44 of pump 40 and from the outlet valve 45 of the latter a suitable conduit leads to a pressure storage tank 46, from which the water may, of course, be piped to the point or points of use.

The capacity of the pump 40 should be such as to accommodate the delivery from pump 10, and by arranging the two pump plungers as indicated, the weight of the plunger in pump 10 assists the pumping action of pump 40.

If, for any reason, the motor 22 becomes inoperative, the pump 10 may be quickly put into operation merely by disconnecting the lever 30 and connecting the pump handle 12 and at the same time disconnecting the conduit 43 from the pump.

Further, it is obvious that pump 40 may, if desired, be set in a suitable pit below the frost line and that the tank 46 may be located wherever is desirable and convenient.

I claim:

In combination with a conventional hand operated reciprocating plunger containing lift pump, means for providing delivery under pressure, said means consisting of a frame, a motor mounted thereon, a lever pivoted at one end to said frame, actuating means connecting said motor and lever whereby to oscillate the latter, a pressure pump operably connected to said lever, means on said lever to connect the same with the plunger of said lift pump, and conduit means for connecting the delivery means of said lift pump to the inlet of said pressure pump.

ERLE K. BAKER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,571,915	Frier	Feb. 2, 1926