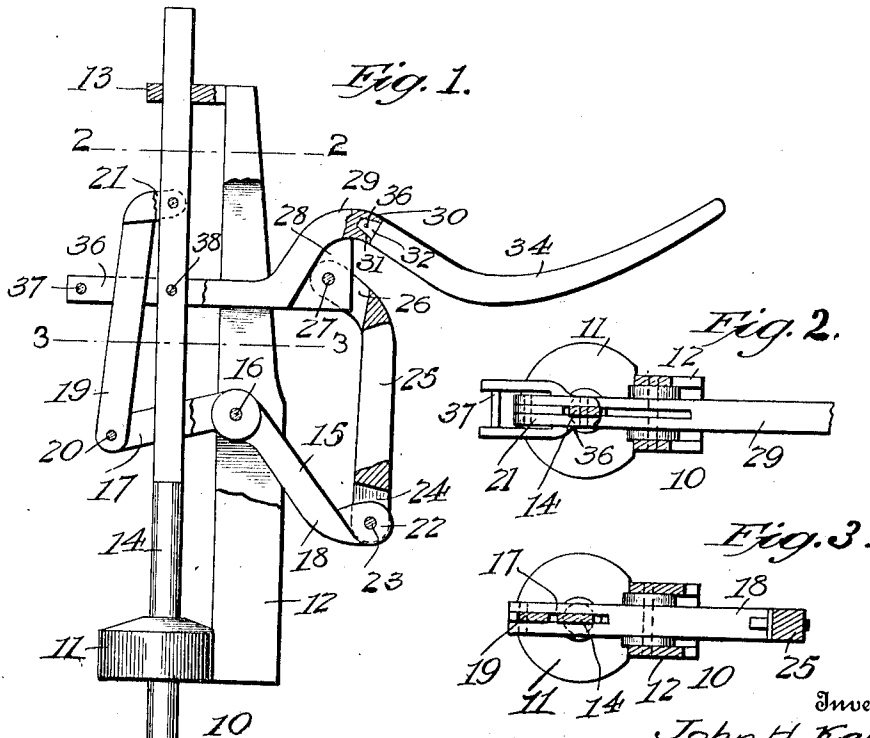


J. H. KANE.
PUMP.

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Witnesses
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UNITED STATES PATENT OFFICE.

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PUMP.

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To all whom it may concern:

Be it known that I, JOHN H. KANE, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented new and useful Improvements in Pumps, of which the following is a specification.

My invention is in the nature of an improvement on the pump illustrated in U. S. Patent, Number 847,004 granted to me March 18, 1907.

The object of the invention is to provide an improved pump of this character having in view increased practicability, and effectiveness, and with this object in view the invention consists in the improved construction, arrangement and combination of the parts of a pump which will be hereinafter fully described and afterward specifically claimed.

In order that the invention may be readily comprehended, I will proceed to specifically describe the construction and operation thereof as illustrated in the accompanying drawing in which—

Figure 1 represents in side elevation, a pump constructed in accordance with my invention, partially in section and with parts broken away. Fig. 2 represents a detail transverse sectional view on the plane indicated by the broken line 2—2 of Fig. 1, and Fig. 3 represents a similar view on the plane indicated by the broken line 3—3 of Fig. 1.

Like reference characters mark the same parts in all of the figures.

The invention may be used in connection with any of the usual types of pump stock, a conventional representation of the upper portion of one being shown in Figs. 1, 2 and 3, and designated by the numeral 10, the head 11 of which carries a side standard 12, the upper end of which is provided with an inwardly extending horizontally arranged guide loop 13, through which the pump piston rod extends. A compensating lever 15 has a pivotal connection 16 to the rear of its central portion to said standard 12, and has forwardly and rearwardly, relatively inclined portions 17—18, respectively, the portion 17 being shorter than the portion 16 and being bifurcated and extending on both sides of the pump piston rod 14 and projecting beyond the same, and between its outer end, the lower end of a long link 19 is piv-

oted to the compensating lever, such pivotal connection being indicated by the numeral 20. The upper ends of the link 19 are turned or offset and provided with a yoke 21 which is pivoted to the pump rod 14. The outer end of the front portion 18 of the compensating lever 15 is outturned or offset as at 22, and has a pivotal connection 23 with the bifurcated end 24 of a link 25, the other end of said link 25 being inturned and bifurcated, as indicated at 26 and pivotally connected, as at 27, at double the distance from the pump rod as is the pivot 16 of the compensating lever, to a depending portion or bracket 28 of an operating lever or handle 29, the rearwardly extending portion of which handle is down turned as at 30, and has a tapering socket 31 formed in its end for the reception of a similarly shaped plug 32 carried by a handle 34, the parts being held together by a pin 36 or the like.

The operating handle 29 has a forward extension 36 which straddles the pump rod 14 and the link 19, the outer end of the same being projected beyond said link and having a pivot opening 37 adapted for connection with a windmill, or other suitable source of reciprocatory power. Said operating handle has a pivot connection 38 with the piston rod 14 at a point below the connection 21 of the link 19 with the rod.

It will be observed that the fixed pivot of the compensating lever is only about one third of the distance of the pivot 27 of the handle from the rod, measured horizontally; that the handle end 18 of the compensator is longer than the working end 17; that the link 19 connecting the compensating lever with the pump rod has an offset top end 21 to connect it with the pump rod to permit the link to lie close to the rod at the extremes of the stroke of the handle and the pump rod; that while the fixed pivot of the compensating lever is on one side of the pump rod, the link connecting it with the pump rod has its connection with the compensating lever on the opposite side of the pump rod and as a consequence the arc in which the pivotal connection between the compensator and the pump rod link moves, is about parallel with the pump rod, never departing any appreciable distance therefrom, and causing the pump rod link to move always in a line substantially parallel with the

pump rod; that the two pivots 22 and 27 of the link 25 connecting it with the compensating lever and the handle, respectively, are far removed from the vertical plane of the fixed pivot 16 of the compensating lever, thereby avoiding all dead centering and affording much greater leverage and ease of operation; that there are no stop, or limiting pins; and that the points of connection of the pump rod with the handle and the link 19, respectively, are widely separated and the link and handle are not connected with each other.

The pump as now constructed, operates easily, freely, and rapidly, there being no obstructing parts and no dead centers, the power exerted being practically applied rather than decreased by an impracticable construction and combination of parts.

Having thus described my invention, what I claim as new is:

A pump comprising a stock, a reciprocatory pump rod parallel therewith, a compensating rod pivoted to the stock having its rear shorter portion bifurcated and straddling the rod and its longer front portion

offset at its forward end, a handle pivoted to the pump rod above the fixed pivot of the compensating lever, a link having an offset upper end pivoted to the pump rod above and at a distance from the pivotal connection of the handle with the rod, its lower end being pivotally connected with the rear end of the compensating lever, a pivot carried by the handle at a much greater distance horizontally from the pump rod than that of the fixed pivot of the compensating lever, and a link pivotally connected at its upper end with the pivot carried by the handle and at its lower end to the offset front end of the compensating lever, the fulcrum pivot of the compensating lever being at all times an appreciable distance out of the line connecting the pivots connecting the front link with said lever and the handle.

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

JOHN H. KANE.

Witnesses:

J. W. BLOOD,
RALPH R. HALL.

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