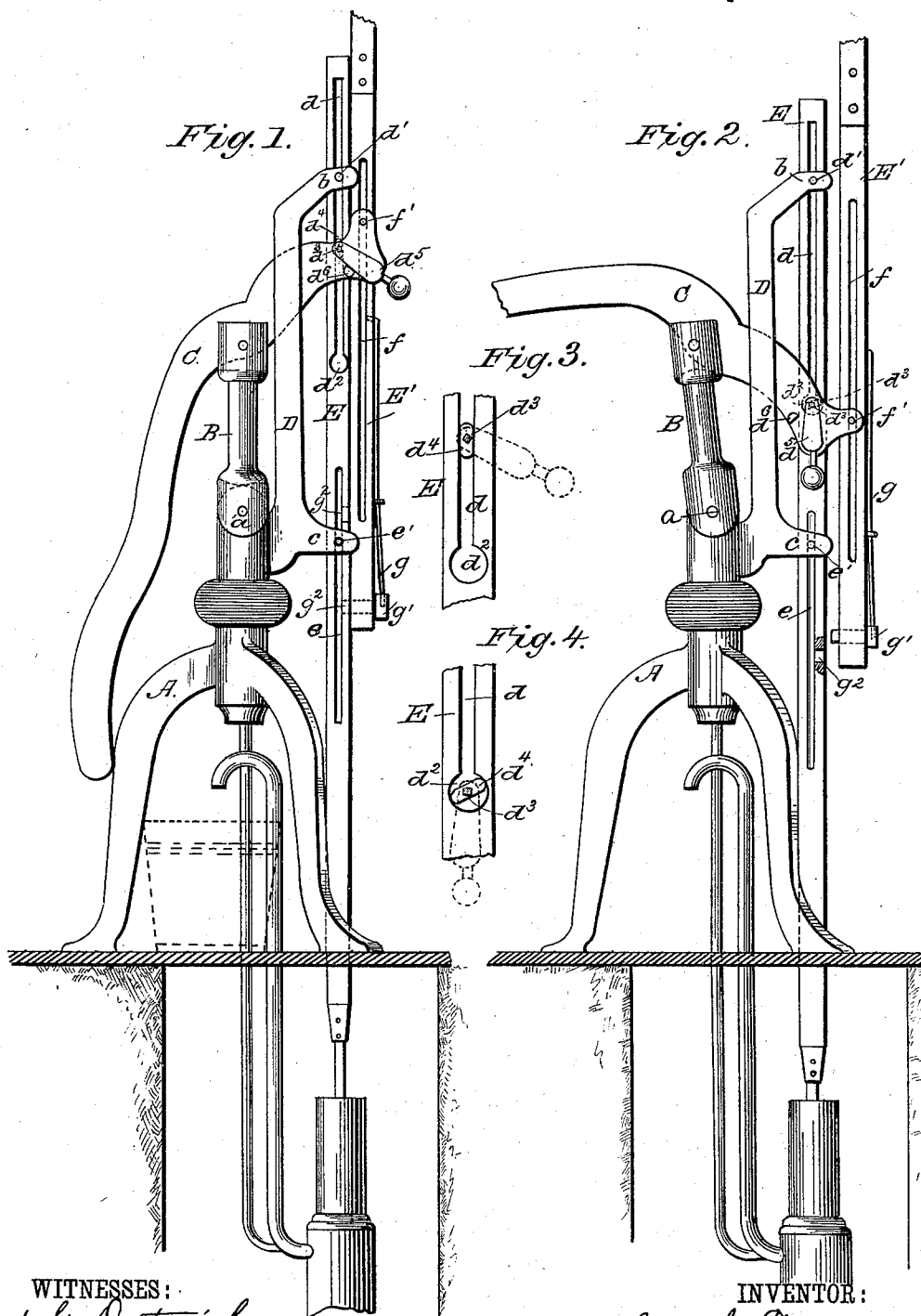


(No Model.)

H. G. BOTT.
PUMP.

No. 366,072.

Patented July 5, 1887.



UNITED STATES PATENT OFFICE.

HARRY G. BOTT, OF THOMASVILLE, PENNSYLVANIA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 366,072, dated July 5, 1887.

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To all whom it may concern:

Be it known that I, HARRY G. BOTT, of Thomasville, in the county of York and State of Pennsylvania, have invented a new and useful Improvement in Pumps, of which the following is a specification.

The object of my invention is to provide a form of pump designed to be connected to and operated by the pitman-rod of a wind-wheel or be operated by hand, and so constructed and arranged as to permit it to be operated by hand without disconnecting it from the wind-wheel, or vice versa.

It consists in the peculiar construction and arrangement of parts, which I will now proceed to describe with reference to the drawings, in which—

Figure 1 is a side elevation showing the position of parts for the transmission of power from the windmill to the pump; and Fig. 2 is a side elevation showing the position of parts in which the pump is arranged for independent operation by hand without interfering with the wind-wheel connections. Figs. 3 and 4 are details.

A represents a tripod or frame for the pump, which is fastened upon the platform over the well.

B is an upright pivoted upon the top of the tripod upon a horizontal pin, *a*, so as to tilt. In the upper end of this upright is fulcrumed the pump-handle C, which is in the nature of a lever.

D is a rigid vertical extension from the tripod-frame, which is slotted to allow the pump-handle to pass through it and be guided therein, and which extension has a pair of lugs, *b*, above, and *c* below, between which reciprocates the section E of a compound pitman-rod, E E'. The section E is slotted longitudinally at *d* and *e*, to receive guide-pins *d'* and *e'*, which pass through the lugs *b c*. The section E' of the compound pitman is also slotted longitudinally at *f*, to receive the pin *f'*, which passes through the upper end of the pump-handle, the said upper end of the pump-handle being slotted vertically to receive between its branches the two sections of the compound pitman. The section E' is connected to the pump-

piston in the well, and this compound pitman is so constructed and arranged that when the pump-handle is down, as in Fig. 1, or in a nearly-vertical position, the two sections of the pitman work together as one rod; but when the pump-handle is elevated, as in Fig. 2, and oscillated about a horizontal line, the two sections of the pitman separate, the one, E', connecting with the wheel being thrown out, while the other is locked to the pump-handle for independent operation. This result is carried out as follows: At the bottom of the slot *d* in section E of the pitman is formed an enlarged circular opening, *d'*, Figs. 3 and 4. Hung in bearings in the upper end of the pump-handle is a short rock-shaft, *d''*, having a rigid block or cross-head at *d'* attached to it, which plays in the slot *d* and opening *d'*. To this rock-shaft is attached a pendent weight, *d'''*, which is acted upon by a lug, *d''''*, Fig. 1, on the pump-handle. On the lower end of the section E' of the pitman is a spring, *g*, which is connected to a locking-bolt, *g'*, that passes transversely through the section E' and into a recess, *g''*, of section E, locking the two together. The action of these parts is as follows: When the handle of the pump is down and nearly vertical, as in Fig. 1, then the two sections of the pitman lie flat against each other and are locked together by the bolt *g'*, which is forced by the spring *g* into the recess *g''*. In this position of the handle, also, the lug *d''''* presses against the weight *d'''* and rocks the shaft *d''* until the block or cross head rests longitudinally in the groove *d*, as in Fig. 3. It will be seen, therefore, that in this position the slot *f* in section E' of the pitman moves freely over the pin *f'* in the pump-handle, and the slot *d* in the section E moves freely over block or cross head *d'*, and the pump-handle remains passive while the two sections E E' of the pitman reciprocate as one and transmit the power of the wind-wheel to the pump-piston below. When, however, it is desired to pump water by hand, no special adjustment or disconnection of the wind-wheel is required, but the pump-handle is raised to about the horizontal line, as in Fig. 2, and is oscillated above and below this line. The effect of this is as follows: The movement of the pump handle

throws the section E' of the pitman away from E, allowing E' to reciprocate freely without doing any work. At the same time, also, this movement of the pump-handle takes the lug d^b away from weight d^c and allows this to drop to a vertical position, as in Fig. 4, which turns the rock-shaft d^3 and throws the cross head d^4 into a horizontal or transverse position in the opening d^2 at the bottom of groove d , and this makes a pivotal connection between the pump-handle and section E of the pitman, which connects with the pitman-rod, whereby the oscillation of the pump-handle is made to reciprocate the pitman-section E and the attached piston-rod. To restore the parts to their former position, the pump-handle is simply lowered until lug d^b deflects weight d^c and throws the cross-head d^4 into a longitudinal position in slot d , and the same motion brings the section E' of the pitman against E and locks them together, so that they both freely reciprocate without moving the handle.

To permit the action thus described, it is necessary that the fulcrum of the pump-handle should have an adjustment, and hence it is placed in the top of the tilting upright on the tripod-frame.

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

30 1. A compound pitman made in two sections lapped or extending past each other, locking devices for connecting them together, a single lever-handle extended across both sections of the pitman at their lapped ends

and having a sliding connection with both of said sections, and means for locking the handle to one of said sections, as described. 35

2. A compound pitman made in two sections and slotted, as described, locking devices for connecting said sections, combined with a single lever-handle extending across both sections of the pitman and having a sliding connection playing in the slots of both sections of the pitman, whereby the latter are separated when said lever is raised to a horizontal position, and an automatic locking device for connecting the lower pitman-section and the lever-handle when the latter is raised, substantially as shown and described. 40 45

3. A compound pitman made in two slotted sections, arranged parallel to each other and provided with spring locking devices, a slotted or channeled lever-handle extending across and embracing both pitman-sections, and a gravity locking device for connecting the lever-handle to the lower pitman-section when the said handle is raised, substantially as shown and described. 50 55

4. The combination of the pitman-sections E E', having spring locking mechanism and slots d , d^2 , e , and f , the lever-handle C, with lug d^b and rocking cross-head and weights d^4 d^c , the pump-frame with extension D, and the tilting upright B, substantially as described. 60

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Witnesses:

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EDWD. W. BYRN.