

No. 636,616.

Patented Nov. 7, 1899.

E. H. BARTON.
PUMP ROD CONNECTION.

(Application filed Apr. 28, 1899.)

(No Model.)

Fig. 1.

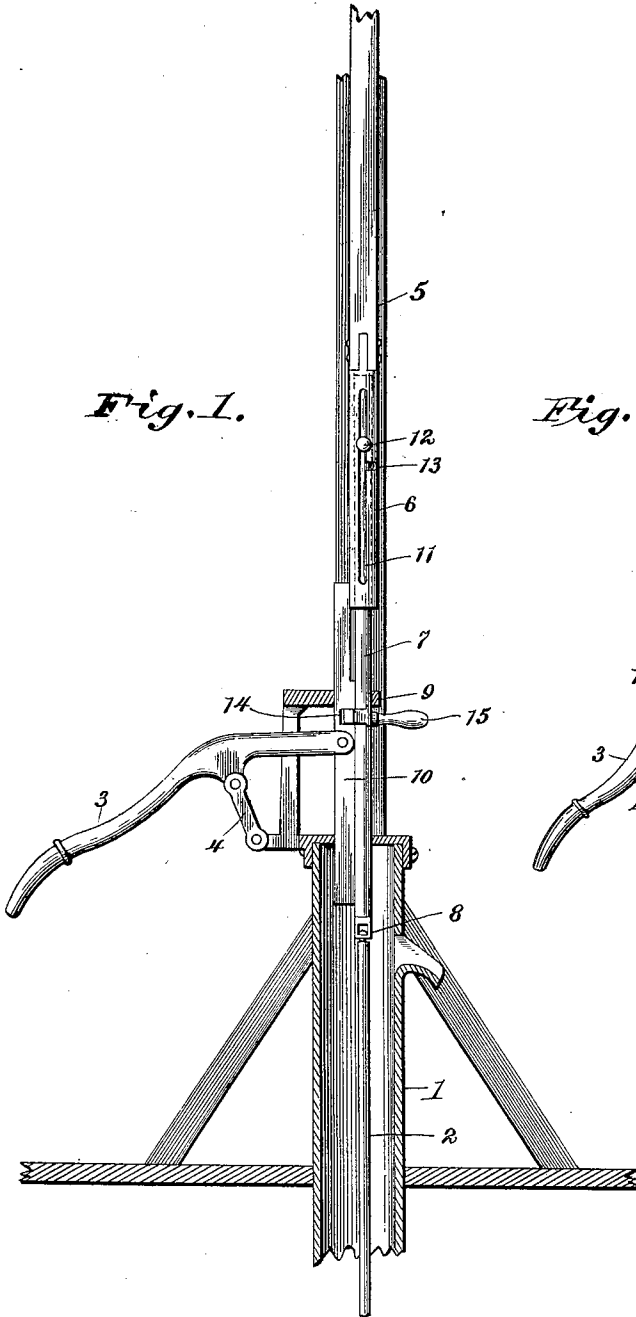
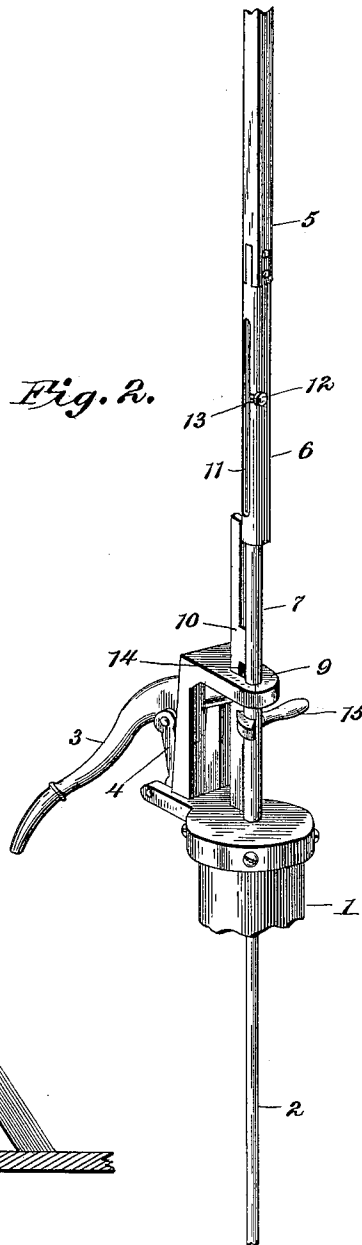


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD H. BARTON, OF STURGIS, MICHIGAN, ASSIGNOR OF ONE-HALF TO
SOLON W. EVERHART, OF SAME PLACE.

PUMP-ROD CONNECTION.

SPECIFICATION forming part of Letters Patent No. 636,616, dated November 7, 1899.

Application filed April 28, 1899. Serial No. 714,822. (No-model.)

To all whom it may concern:

Be it known that I, EDWARD H. BARTON, a citizen of the United States, residing at Sturgis, in the county of St. Joseph and State of Michigan, have invented a new and useful Pump-Rod Connection, of which the following is a specification.

My invention relates to a pump-rod connection by means of which a pump-rod may be connected with either a manually-operating device or a motor, such as a wind-motor; and the object in view is to provide a simple and efficient device of this class wherein the change of connection from one power to the other may be accomplished with facility and whereby the parts when in one adjustment are not liable by accident to be altered in position.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side view of a pump mechanism provided with a pump-rod connection constructed in accordance with my invention. Fig. 2 is a detail view in perspective of the coupling, showing the parts in the reversed position from that indicated in Fig. 1.

Similar reference characters indicate corresponding parts in both figures of the drawings.

1 designates the upper portion of a pump-casing; 2, the upper end of a pump-rod; 3, an ordinary pump-operating handle or lever mounted upon a swinging link 4, and 5 the lower portion of a reciprocatory windmill or other motor rod. Connected with the lower end of the motor-rod is a tubular guide 6, in which is fitted the upper end of a reciprocatory and revoluble coupling-rod 7, which extends downward through a guide-opening in the cap of the pump-casing and is connected by means of a swivel 8 with the pump-rod, whereby the coupling-rod may be turned without affecting the pump-rod. Said coupling-rod also extends through a guide-opening in a bracket 9, supported by the pump-casing or other fixed object, and the adjacent end of the handle or pump-lever operates in

a vertical slot in said bracket and is thereby guided to cause it to travel in a path parallel with the direction of movement of the pump-rod. The inner end of the handle or lever is pivotally connected with a reciprocatory manually-operable bar 10, also fitted in suitable guide-openings in the cap of the pump-casing and in said bracket, and is adapted for movement in a path parallel with the coupling-rod. The sleeve or guide 6 is longitudinally slotted, as shown at 11, and operating therein is a lateral stud or projection 12 on the coupling-rod, and, furthermore, said sleeve or tubular guide is provided with an offset or seat 13, into which said projection or stud may be moved to connect the coupling-rod (and hence the pump-rod) with the motor-rod for simultaneous reciprocatory movement. Also, the coupling-rod is provided at an intermediate point with a projection for engagement with a notch or seat 14 in the manually-operated bar to connect said bar with the coupling-rod and pump-rod for simultaneous movement. Said projections or studs, which are designed for respective engagement with said sleeve and manually-operated bar, are arranged in such relative positions that when one is engaged the other is disengaged. The coupling-rod is preferably provided with a radial handle or grip 15 to facilitate the turning thereof to cause the alternate engagement of the projections or studs with the seats provided in the manually-operated and motor-actuated members of the mechanism.

When the upper projection or stud of the coupling-bar is in operative engagement with the motor-actuated member, the coupling-rod is free to reciprocate independently of the manually-operated member, and by turning said coupling-rod through an angle of approximately ninety degrees (the lower projection or stud of said rod having first been alined horizontally with the seat in the manually-operated member) the upper projection or stud will be disengaged from the motor-actuated member, while the lower projection or stud will be engaged with a seat in the manually-operated member, thus releasing the motor-actuated member and adapting the mechanism to be operated by hand-power.

From the above description it will be seen that the coupling which we have provided is simple and that when arranged for either manual or motor actuation forms a direct means of communicating motion to the pump-rod.

When the manually-operated member is disengaged from the coupling-rod, the weight of the handle or pump-lever causes the elevation of said bar until the seat or notch therein is arranged in the plane of the guide-opening in the bracket, whereby accidental engagement of the lower projection or stud of the coupling-rod therewith is prevented. Furthermore, said lower projection or stud is preferably of segmental construction in plan to avoid accidental disengagement thereof from the seat in the manually-operated reciprocatory bar when the parts are connected for manual operation.

Furthermore, it will be understood that in practice various changes in the form, proportion, size, and minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described my invention, what I claim is—

1. The combination with a pump-rod, of a manually-operated reciprocatory member, a motor-actuated reciprocatory member, and a coupling-rod having a swivel connection with the pump-rod, and provided with lateral projections for engagement respectively and alternately with seats in said manually-operated and motor-actuated members, substantially as specified.

2. The combination with a pump-rod, of a manually-operated reciprocatory member

consisting of a bar having a laterally open seat or notch, a motor-actuated reciprocatory member having a sleeve provided with a longitudinal slot and a communicating lateral offset or seat, and a coupling-rod mounted for reciprocatory and rotary movements, having a swivel connection with the pump-rod, operating at its upper end in said sleeve, and provided with lateral projections or studs adapted for respective and alternate engagement with said seats of the reciprocatory bar and sleeve, substantially as specified.

3. The combination with a pump-rod, of a guide-bracket, a manually-operated member consisting of a reciprocatory bar mounted in a guide in said bracket and provided with a lateral seat or notch, a motor-actuated member having a longitudinally-slotted sleeve provided with an offset or seat communicating with its slot, a coupling-rod having a swivel connection with the pump-rod, extending through a guide in said bracket and fitted at its upper end in said sleeve, a lateral pin or stud carried by said coupling-rod to operate in the slot of the sleeve, and adapted to engage said lateral offset or seat thereof, a segmental projection or stud carried by the coupling-rod for engagement with said seat of the reciprocatory bar when the first-named projection or stud is out of engagement with the offset or seat in the sleeve, and an operating-handle carried by the coupling-rod, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD H. BARTON.

Witnesses:

J. C. CURTS,
DAVID KANE.