(No Model.)

H. W. JONES.

PUMP ATTACHMENT.

No. 567,272. Patented Sept. 8, 1896.

Fig. 1.

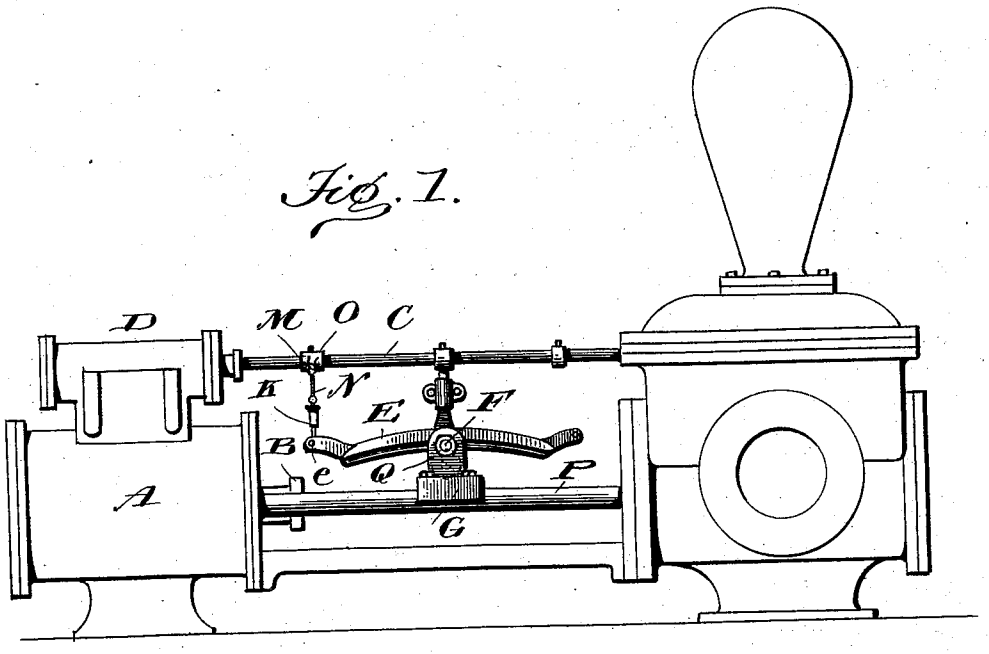


Fig. 2.

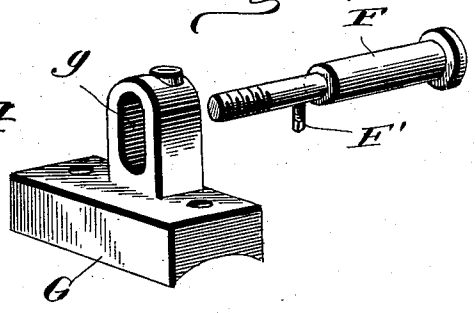


Fig. 4

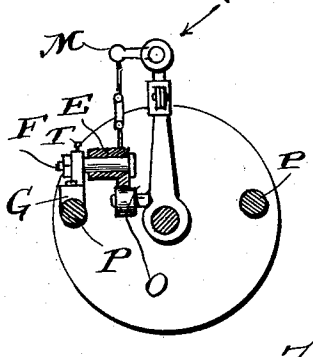
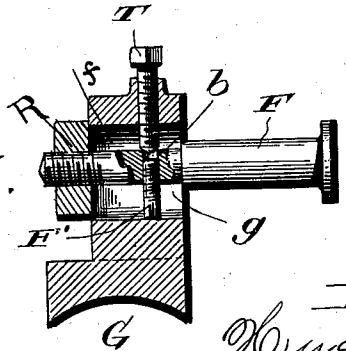


Fig. 3.



Witnesses:
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A. L. Hough

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Atty.

UNITED STATES PATENT OFFICE.

HUGH W. JONES, OF PLYMOUTH, PENNSYLVANIA.

PUMP ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 567,272, dated September 8, 1896.

Application filed May 2, 1896. Serial No. 590,003. (No model.)

To all whom it may concern:

Be it known that I, HUGH W. JONES, a citizen of the United States, residing at Plymouth, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Pump Attachments; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in attachments for steam-pumps, and especially to a pump in which mechanism is provided to cause a partial rotary motion to the piston connected to the cut-off valve which reciprocates in the steam-box, this rotary motion being produced by a rocking lever which has suitable crank-and-lever connection with the said piston-rod, and actuated by a roller carried by the piston attached to the reciprocating head in the steam-cylinder.

More particularly, my invention relates to the provision of an attachment to a steam-pump of the character described, by which the said rocking lever may be adjusted so as to take up wear on the roller when the latter becomes worn, so as not to throw the valve, or to rotate the same sufficiently to do effective work.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and arrangement of the parts, as will be hereinafter more fully described, and then specifically defined in the appended claims.

I clearly illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of a steam-pump having my attachment secured thereto. Fig. 2 is an enlarged detail view of the casting, having an elongated aperture therein, in which the adjusting-bolt is held. Fig. 3 is a sectional view through the casting to show the set-screws carried therein. Fig. 4 is a cross-section through the piston-rods, casting, and rock-shaft.

Reference now being had to the details of the drawings by letter, A designates a steam-cylinder in which works a piston-rod B, and C is a valve-rod which reciprocates a cut-off valve within the steam-chest D. This valve-rod C is designed to make a partial rotary movement as it is reciprocated, so as to effectually operate valves, whereby the said piston-head is first brought into proper position to take steam, and which piston is then driven by the steam independent of the engine, this rotary movement being common in valve-operating mechanisms, as, for instance, in the Knowles patent, No. 36,656, of October 14, 1862, and which forms no part of this invention. This rotary movement is effected by means of the rocking lever E, which is pivoted on the bolt F, held within the elongated aperture *g* of the casting G. One end of the said rocking lever, as at *e*, is pivoted to a rod K, which in turn is connected to an arm M through the medium of the rod N. This arm M is rigidly secured to the collar O, which is keyed to the valve C.

The casting G is bolted or otherwise secured to the rod P, and a roller Q is journaled on a projecting portion of the piston-rod B, and the under side of the rock-shaft E is designed to travel on this roller, said roller being adapted, as the piston-rod carrying the same is reciprocated, to contact with the under side of the pivoted lever E to rock the same, thus causing the valve-rod C to make partial rotary movements in its forward-and-backward movement.

The bolt F, on which the rock-shaft is journaled, is mounted in the elongated aperture of the casting and is held thereto by means of the nut R, and the contracted end of the bolt behind the screw-threads is apertured at *f* to receive the set-screw F′, whereby the bolt may be lowered when the roller working under the rocking lever becomes worn.

T is a binding-screw, carried in a screw-threaded aperture in the upper portion of the casting through into the elongated aperture, and the lower end of this screw T is adapted

to bind against the upper side of the bolt to hold the same against the set-screw in an adjusted position.

From the foregoing it will be seen that by my improvement I am able to readily adjust the rocking shaft to compensate for any wear on the roller, so as to cause the valves to perfectly operate.

Having thus described my invention, what I claim to be new, and desire to secure by Letters Patent, is—

1. In an adjusting feature for a rocking shaft of a pump of the character described, the combination with a casting having an elongated aperture, a stub shaft or bolt adjustably held therein, of the piston-rod B, the roller carried thereon, of the rock-shaft mounted on the said bolt, the valve-rod C, and connections between same and the rock-shaft, whereby, as the piston-rod B is reciprocated the valve-rod C is caused to make a partial rotary movement, substantially as shown and described.

2. In combination with the casting G provided with an elongated aperture, a bolt F, a set-screw carried in a perforation in said bolt, a binding-screw mounted in the casting and adapted to bear against the bolt to retain the same in an adjusted relation, substantially as shown and described.

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

HUGH W. JONES.

Witnesses:
JOHN GOLIGHTLY,
J. W. HARRIS.