

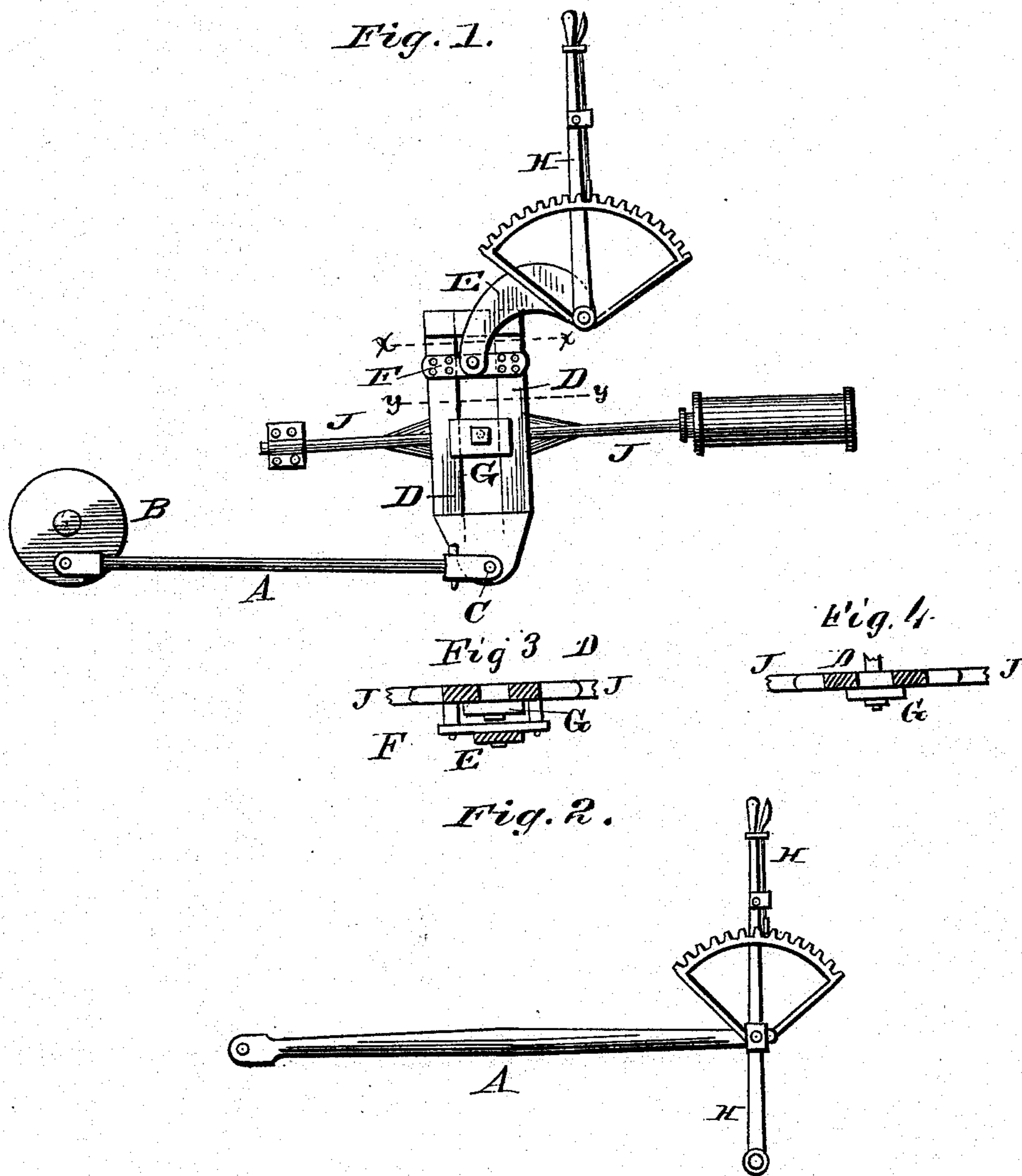
(No Model.)

J. BUNDY.

PUMP STROKE REGULATOR.

No. 283,070.

Patented Aug. 14, 1883.



Witnesses:

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UNITED STATES PATENT OFFICE.

JEPHTHA BUNDY, OF BARNESVILLE, OHIO.

PUMP-STROKE REGULATOR.

SPECIFICATION forming part of Letters Patent No. 283,070, dated August 14, 1883.

Application filed April 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, JEPHTHA BUNDY, of Barnesville, in the county of Belmont and State of Ohio, have invented certain new and
5 useful Improvements in Attachments to a Force-Pump for Regulating the Stroke of the Piston; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying
10 drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a side elevation indicating, as a diagram, my improved link-motion. Fig. 2
15 shows a mode of transmitting motion to the links by hand from the cab of a locomotive. Fig. 3 is a cross-section through Fig. 1, taken in the plane indicated by dotted line *x x*. Fig. 4 is a cross-section through the same figure, taken in the plane indicated by dotted
20 line *y y*.

This invention relates to a new and improved link-motion, which is especially designed for feeding water to the boiler, but which may
25 be used for other purposes, which will be fully understood from the following description, when taken in connection with the annexed drawings.

My object is to regulate the length of stroke
30 of the piston-rod of a force-pump acting directly upon an engine, whether it be a locomotive or stationary engine. The attachment can be applied to the air-pump which is now used for actuating air-brakes on a railroad-
35 car.

By the invention which I will hereinafter describe the stroke of the pump can be regulated to work to its full capacity, or reduced to any desired quantity, and when it is necessary the pump can be brought to rest. These
40 movements are effected by my device without jar or concussions. By this invention I have complete control of the strokes of the pump, and consequently the boiler can be supplied
45 with water at any time, regardless of the speed of the engine.

It will be seen that my link-motion can be attached to all engines, whether of the locomotive or stationary kind, where a pump is
50 used for supplying the boiler with water.

In the annexed drawings, A designates a connecting-rod, which can be operated by a wrist-pin on an eccentric, by a crank, or by a cross-head at B, and connected at C to the

lower end of the link D. This link is connected 55 to the lifting-arm E by a pin or bolt in the center of the cross-block F. The cross-block F is blocked out or set far enough from the link D to allow it to pass the slide-block G, as this link is depressed by means of the lever H 60 and lifting-arm E.

When the link D is depressed until it rests on the slide-block G, the centers or connecting-bolts are opposite and the pump piston-rod J ceases to move while the engine is in 65 motion. The slide-block G is constructed with flanges on one side, and by reason of its being connected to the pump piston-rod J by a bolt the link is confined to its place. The slide-block has a rocking motion upon the pivotal 70 bolt which connects it with the pump piston-rod J, which allows it to accommodate itself to the motion of the link D as the link is raised and lowered.

It is evident from what I have above de- 75 scribed that the link-motion can be operated from the cab of a railroad-engine by using a long pitman-rod, as shown in Fig. 2, connected to the hand-lever H.

Having described my invention, what I claim 80 as new, and desire to secure by Letters Patent, is—

1. The combination, with a pump-cylinder, of the piston-rod thereof, the slide G, the oscillating link to which said slide is applied, 85 the pitman A, the eccentric, the cross-block, the lifting-arm E, the toothed sector, and the lever latch arm, all constructed and adapted to operate substantially in the manner and for the purposes described. 90

2. The combination of the rectilinear reciprocating piston-rod, its flanges fitted in the guides of the link D, the cross-head F, secured to the link, the pitman-rod connected to the lower end of the link, the lifting-arm 95 connected to the shaft of the hand-lever H, the toothed segment, and a latching device applied to said hand-lever, all constructed and adapted to operate substantially in the manner and for the purposes described. 100

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

JEPHTHA BUNDY.

Witnesses:

BENJAMIN MACKALL,
M. P. DAWSON.