

(No Model.)

A. W. THIERKOFF.
FORCE PUMP.

No. 565,646.

Patented Aug. 11, 1896.

Fig. 1.

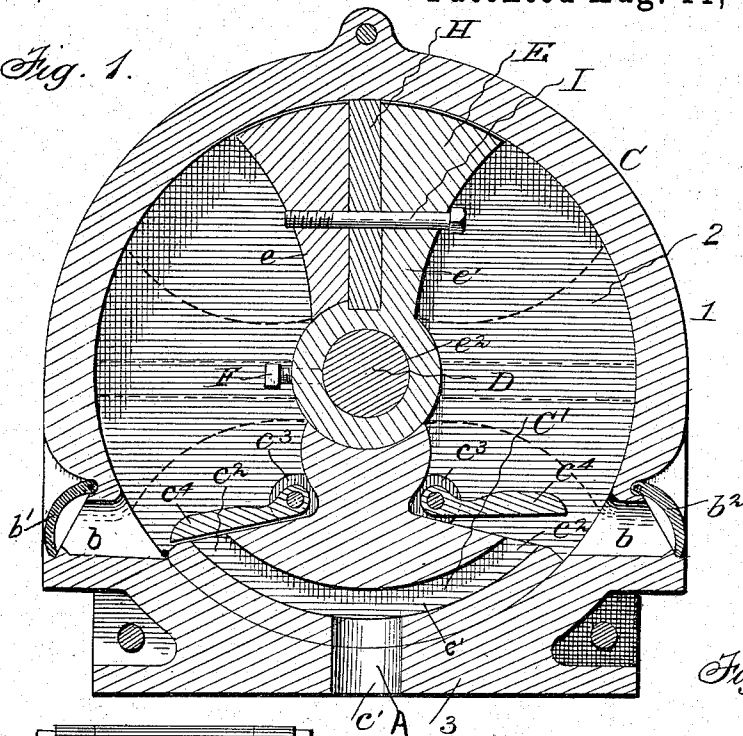


Fig. 3.

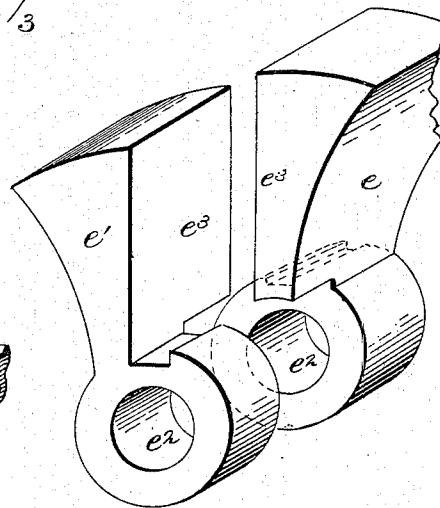
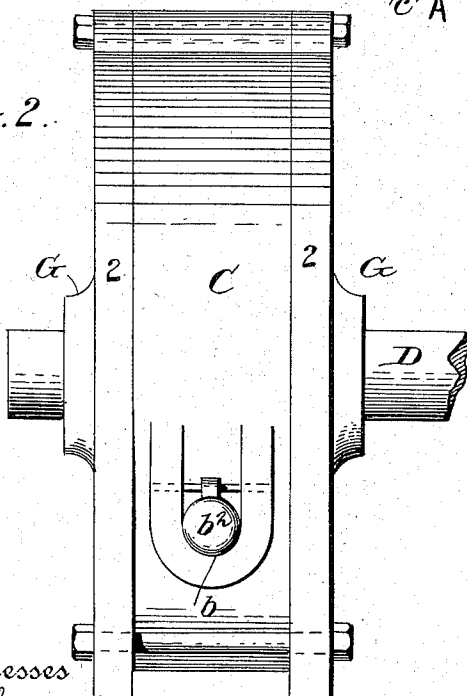


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

ANTHONY W. THIERKOFF, OF REDDING, CALIFORNIA.

FORCE-PUMP.

SPECIFICATION forming part of Letters Patent No. 565,646, dated August 11, 1896.

Application filed October 18, 1895. Serial No. 566,125. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY W. THIERKOFF, a citizen of the United States, residing at Redding, in the county of Shasta and State of California, have invented certain new and useful Improvements in Force-Pumps; 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.

My invention relates to force-pumps of the rotary or oscillatory type.

The object of the invention is to provide a pump of this character which shall be comparatively simple of construction, durable in use, and one which will permit of the ready removal of the packing when worn for replacing it with new.

With these objects in view, the invention consists of certain features of construction and combinations of parts which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal sectional view through the pump. Fig. 2 is an end view. Fig. 3 is a detail perspective view of the sweep, showing the parts thereof separated.

In the drawings, 1 denotes the pump-cylinder, having heads 2 bolted thereto and a base 3.

A denotes the inlet to the cylinder, and *b* the outlets, having oppositely-opening check-valves *b'* and *b''*.

D denotes a shaft which extends through the cylinder and is supported in boxes G on the heads thereof.

C denotes the valve-casing, which is provided with a waterway C', having an inlet *c'*, which communicates with the inlet A of the cylinder, and with outlets *c''*, which communicate with the outlets *b* of the cylinder.

Pivoted between ears *c''* of the valve-casing are flat valves *c''*, which are adapted to open and close the outlets *c''* of the valve-casing.

E denotes a sweep which is secured to the shaft D and is adapted to raise the water into the cylinder and force it therefrom to the places of consumption. This sweep consists of two parts *e e'*, which are provided at their inner ends with apertures *e''*, through which the shaft D passes, and to which one part *e'*

is secured by a set-screw F. The upper ends of the parts *e e'* are curved to conform with the curvature of the cylinder, while the inner faces of the parts are straight, as shown at *e''*.

A packing H is placed between the straight faces of the parts *e e'* and is held therein by a screw I, which passes transversely through the sweep and the packing. When it is desired to renew the packing, all that it is necessary to do is to remove one of the heads of the cylinder to remove the screw I, which will allow the part *e* of the sweep to be swung to one side, thereby allowing the packing to be withdrawn and a new packing inserted, and secured in position by the screw I.

It will be noticed that the upper end of the valve-casing is concaved and fits tightly against the inner ends of the sweep and forms a water-tight connection therewith, so that no water can escape between the two.

In operation, the shaft being rocked back and forth by any suitable means, the sweep will be oscillated to the position shown in dotted lines, which movement of the sweep will raise the water into the cylinder and force it out, the valves working alternately in the usual and well-known manner.

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

In a force-pump, the combination with the pump-cylinder, having an inlet-port and valve-controlled outlet-ports, a valve-casing having an inlet-port communicating with the aforesaid inlet-port, and valve-controlled outlet-ports communicating with the aforesaid valve-controlled outlet-ports, and an oscillatory sweep mounted upon the shaft, extending through said pump-cylinder, and consisting of two counterpart sections, one of which is fixed to said shaft and the other of which is loose thereupon, a packing located between the inner faces of said sections, and means for securing the sections of said sweep together and to the packing, substantially as set forth.

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

ANTHONY W. THIERKOFF.

Witnesses:

F. M. HACKLER,
JAMES G. ESTESS.