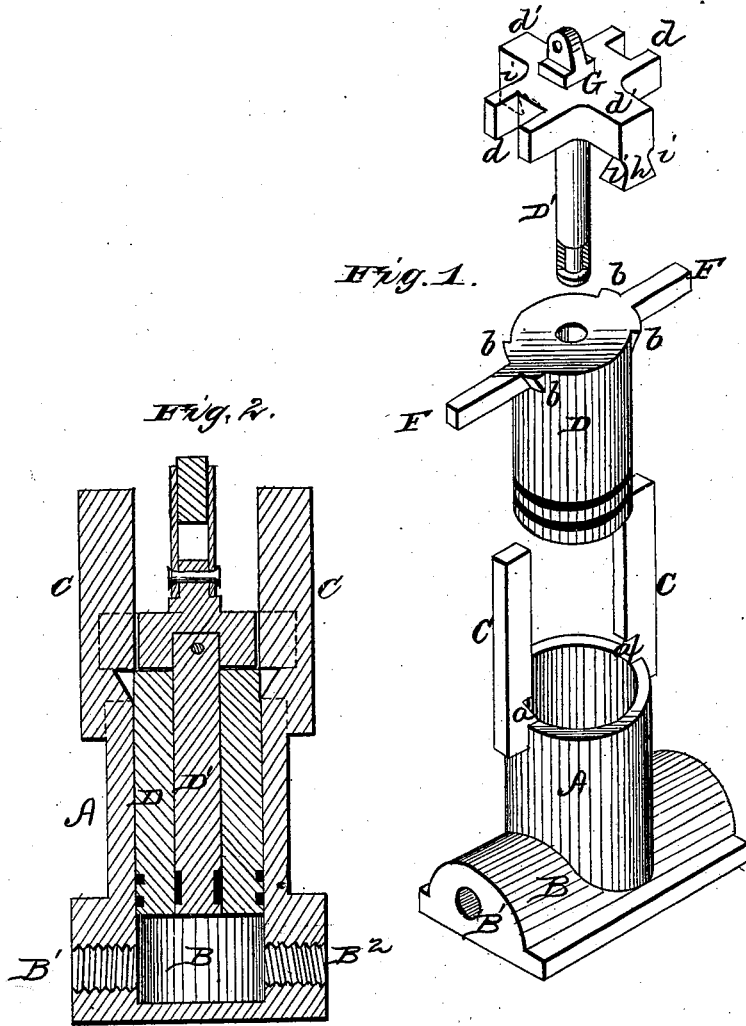


S. STUCKY.  
Pump.

No. 209,086.

Patented Oct. 15, 1878.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

STEPHEN STUCKY, OF LINCOLN, ALABAMA.

## IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **209,086**, dated October 15, 1878; application filed March 8, 1878.

*To all whom it may concern:*

Be it known that I, STEPHEN STUCKY, of Lincoln, in the county of Talladega and in the State of Alabama, have invented certain new and useful Improvements in Pumps; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a pump, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a detailed perspective view of my pump, showing the different parts separated. Fig. 2 is a central vertical section of the pump, showing the parts connected in position.

A represents the pump-cylinder, open at the top, and attached at the bottom to a base, B, in which B<sup>1</sup> is the inlet and B<sup>2</sup> the outlet.

The cylinder A is provided with two upwardly-projecting arms, C C, formed on their inner sides with notches *a a*, as shown.

D represents the first plunger, which is packed in suitable manner and fits the cylinder A. This plunger is at the top formed with two horizontal arms, F F, having on each side next to the plunger an inclined lug or projection, *b*.

The plunger D is made hollow, and in the same fits a second plunger, D', also suitably packed. This second plunger may also be made hollow to receive a third plunger, and so on, as many as may be desired. In such case all the intermediate plungers should be provided with the arms F and notches *a*, made in the arms C for each one.

The last or smallest plunger in the series is provided with a head, G, having two forked arms, *d d*, to fit over the arms or standards C C, and also two other arms, *d' d'*, at right angles with the arms *d d*. The arms *d'* have each a lug, *h*, extending downward, and on each side thereof are one or more notches, *i*, according to the number of plungers used. In the drawings I have only shown two plungers.

The operating-lever is connected to an ear or lug in the center of the head G.

This pump is operated by hand or other power, and I have principally designed it for use with a cotton-press; but it may, of course, be applied to any purpose where a variable hydraulic pressure may be desirable. Ordinarily I use a pump with three plungers of different sizes.

In pressing cotton the duty which the pump is required to perform makes it necessary to provide some ready means by which to increase and decrease both the power and speed of the operation. While the cotton is loose in the press the larger plunger can be used. Now, as the density of the cotton increases the resistance also increases, when the larger plunger is locked down and the next smaller one continued in operation, when it in turn is locked down and the smallest one continued until the operation is completed.

By turning the plunger D, by means of the handles F, so that two of the lugs will enter the notches *i* on the arms of the head G, it will readily be seen that the plungers work as one, or, in other words, that the larger plunger is doing the work. By now turning the plunger D so that the other two lugs, *b*, will enter the notches *a* on the standards C, said plunger becomes locked stationary, and the second plunger only is operating, the first plunger then virtually forming the cylinder in which the second plunger works.

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

The combination of a pump-cylinder, two or more plungers of different sizes, placed one within the other, and suitable locking devices, whereby the larger plunger may be locked in place, and the next smaller continue in operation, and so on, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of March, 1878.

STEPHEN STUCKY.

Witnesses:

FRANK GALT,  
J. M. MASON.