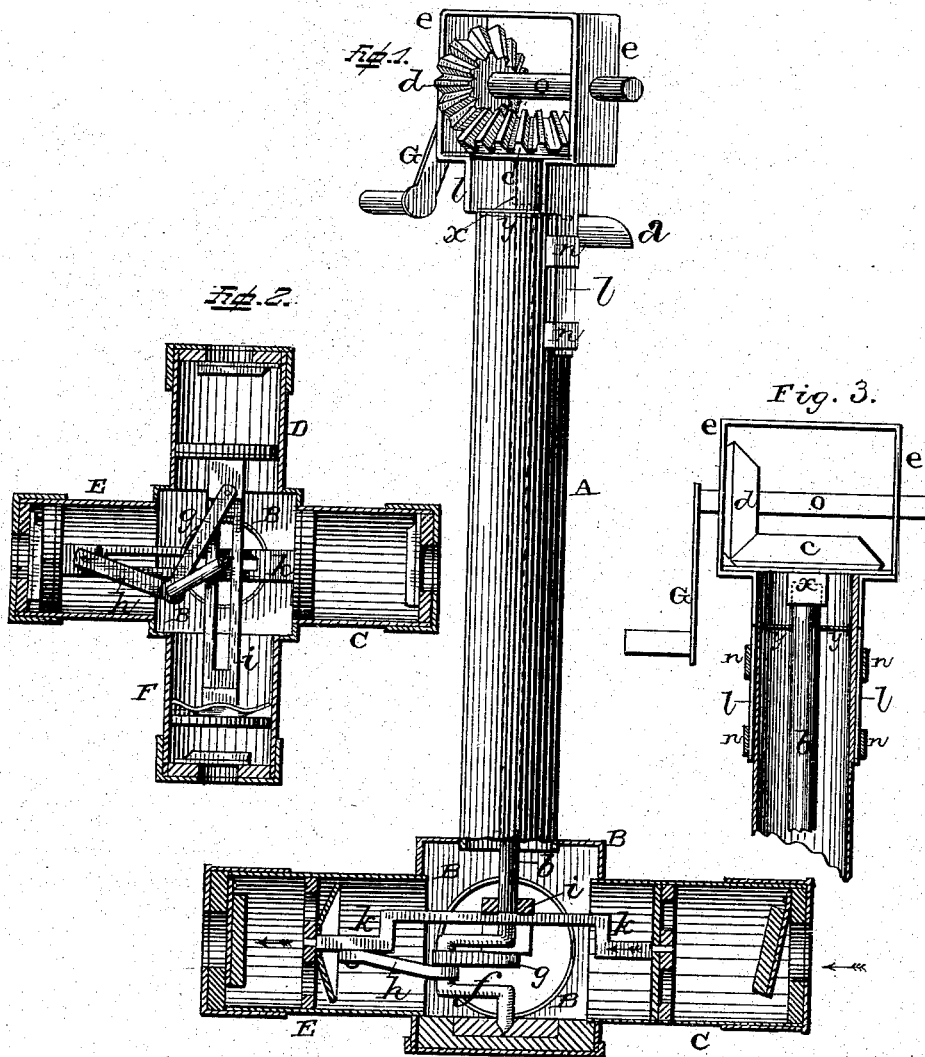


(No Model.)

W. C. ATHEY.  
PUMP.

No. 263,834.

Patented Sept. 5, 1882.



Witnesses.  
*W. C. Athey*  
*W. A. Kern*

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# UNITED STATES PATENT OFFICE.

WILLIAM C. ATHEY, OF FAYETTE CITY, PENNSYLVANIA.

## PUMP.

SPECIFICATION forming part of Letters Patent No. 263,834, dated September 5, 1882.

Application filed May 8, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM C. ATHEY, a citizen of the United States, residing at Fayette City, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Pumps, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in pumps; and it consists in an arrangement by which four plungers in as many cylinders at right angles to each other are worked simultaneously by one crank, producing an uninterrupted stream of water, as will be fully described hereinafter.

The accompanying drawings represent my invention. Figure 1 is a side elevation, partly in section. Fig. 2 is a horizontal section. Fig. 3 is a side elevation of the removable top.

A represents a vertical cylinder of any suitable length, and which has its lower end secured upon the top of the box B. Passing up through the center of this cylinder is the shaft *b*, which has its lower end centered in a suitable bearing in the bottom of the center of the box B, while its upper end is held in position by a plate, *y*, (shown in dotted lines in Fig. 1,) just above the discharge spout *a*.

The upper end of the shaft *b* is squared, so as to receive a correspondingly-shaped collar, *x*, which is formed as a part of or secured to the beveled wheel *c*. This wheel *c* is swiveled in the removable frame *e*, which rests upon the top of the cylinder A, and which is provided with the stems *l*, which extend down upon opposite sides of the cylinder and pass through the keepers *n* for the purpose of holding the frame *e* in position.

The wheel *d* is secured to the shaft *o*, which passes through the frame, and to one of the ends of this shaft is secured the crank G. The frame *e*, with the gearing, is made readily removable from and attachable to different cylinders, so that it can be removed from one pump and applied to another, whereby one set of gearing will answer for a number of different pumps.

The crank-shaft *b* reaches down to the center of the bottom of the box B, where it is pivoted.

On the crank *f* are two pitmen, *g* and *h*, each jointed to a plunger-rod in one of two adjoining cylinders, E D, and to each of these plunger-rods is attached a slotted plunger-rod, *i k*, crossing one another at right angles, and riveted, one to each of the plungers, in the remaining two cylinders, C F. Thus by turning the crank G the rod *b* and crank *f* are set in motion, and through them the plungers in their respective cylinders C D E F. The plungers are perforated plates fitting accurately to the cylinders, with inside coverings of leather or rubber that act like valves and require no packing.

This pump is mainly intended for coal-boats, but will be found equally useful for steamboats or other places where water has accumulated and is to be rapidly removed. Requiring no packing, it is at all times ready for service and delivers water in an uninterrupted stream in quantities proportionate to the diameters of the cylinders.

Having thus described my invention, I claim—

1. In a pump, the combination of the cylinder A, crank-shaft *b*, having its upper end squared, frame *e*, having means for attachment to the cylinder, gearing *c d*, collar *x*, and crank, substantially as shown.

2. In a pump, the combination of the cylinder A, box B, and cylinders radiating therefrom with the crank-shaft *b f*, valved pistons which are united together in pairs by suitable rigid connections, and the pitman-rods *g h*, substantially as described.

3. In a pump, the combination of a series of cylinders, pistons which are connected together in pairs by slotted rods, an operating crank-shaft, and a pitman for each slotted rod, substantially as set forth.

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

WM. C. ATHEY.

Witnesses:

ALFRED B. TROTH,  
WILLIAM F. WILSON.