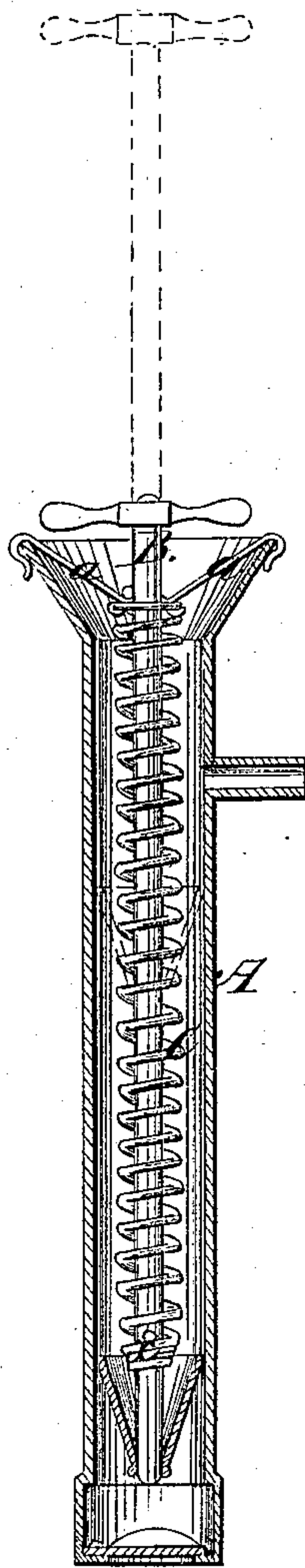
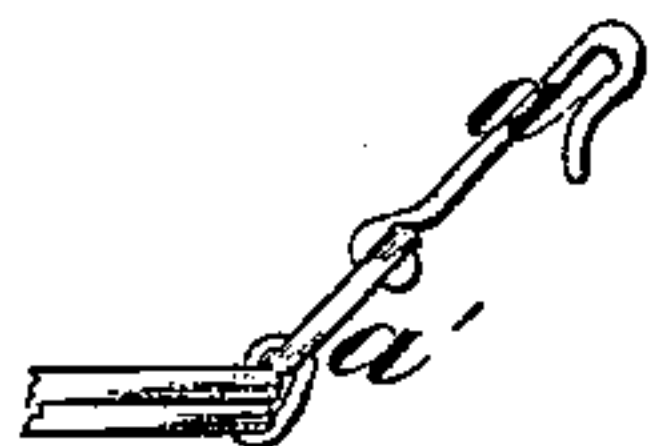


F. C. Wilson,
Ship Pump,
No 102,743, Patented May 3, 1870.

Fig:1.

Fig:2.



Witnesses:

H. H. Cluett
A. A. Billings.

Inventor:

F. C. Wilson
By Wm. Doughton
Att'y

United States Patent Office.

F. C. WILSON, OF WATKINS, NEW YORK.

Letters Patent No. 102,743, dated May 3, 1870.

IMPROVEMENT IN PUMPS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, F. C. WILSON, of Watkins, in the county of Schuyler and State of New York, have invented certain new and useful Improvements in Canal-Boat Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a vertical central section of my invention, showing the piston-rod and spring in elevation.

Figure 2 is an elevation of a mode of connecting the hooks *a* to the spring.

The object and nature of my invention will be understood by reference to the drawings and specification; and

To enable others to make and use the same, I will describe its construction and operation:

It is found in working "boat-pumps" that the labor is greatly lessened by arranging a "spring-pole" so as to assist in raising the piston after it has been pushed down by the operator. The use of the spring-pole, however, is limited, and occasions a considerable loss of time in fitting it up for operation.

In my improvement I use a spiral or other suitable spring, C, within the pump-barrel, and secured to the piston-rod near its lower end by a pin, *x*, passing between the coils and through the rod.

At the upper end the spring C is provided with two or more hooks, *a*, clasped around the upper coil and hooked over the upper edge of the pump-barrel, as shown in fig. 1, for the purpose of supporting and retaining the spring.

The hooks may be attached to a ring, *a'*, and the ring secured to the coil by several smaller wires, as shown in fig. 2.

The operation is as follows:

When the piston is pushed down, the spring is distended, as shown by full lines, fig. 1. Upon the return stroke, the force of the distended spring lifts the piston and the weight of the water above it, partially or wholly relieving the operator. When necessary, the hooks *a* can be detached from the pump-barrel and turned down at the side of the spring, leaving the plunger free to operate in the usual manner, or to drop down into the pump-barrel out of the way.

The advantages of my invention are that it occupies no additional space; that it can be quickly adjusted and put in operation; and that it is cheaply applied to any ordinary boat-pump now in use. It is particularly adapted to boats having hand-pumps, and to any place where it is inconvenient to use a "spring-pole." The lower end of the spring may be coiled quite close, so as to fit the rod, as seen in fig. 1, thereby lessening its liability to become detached.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the detachable suspending-hooks *a*, spiral spring C, and piston-rod B, of a pump, arranged substantially as and for the purposes set forth.

F. C. WILSON.

Witnesses:

F. H. CLEMENT,
WM. S. LOUGHBOROUGH.