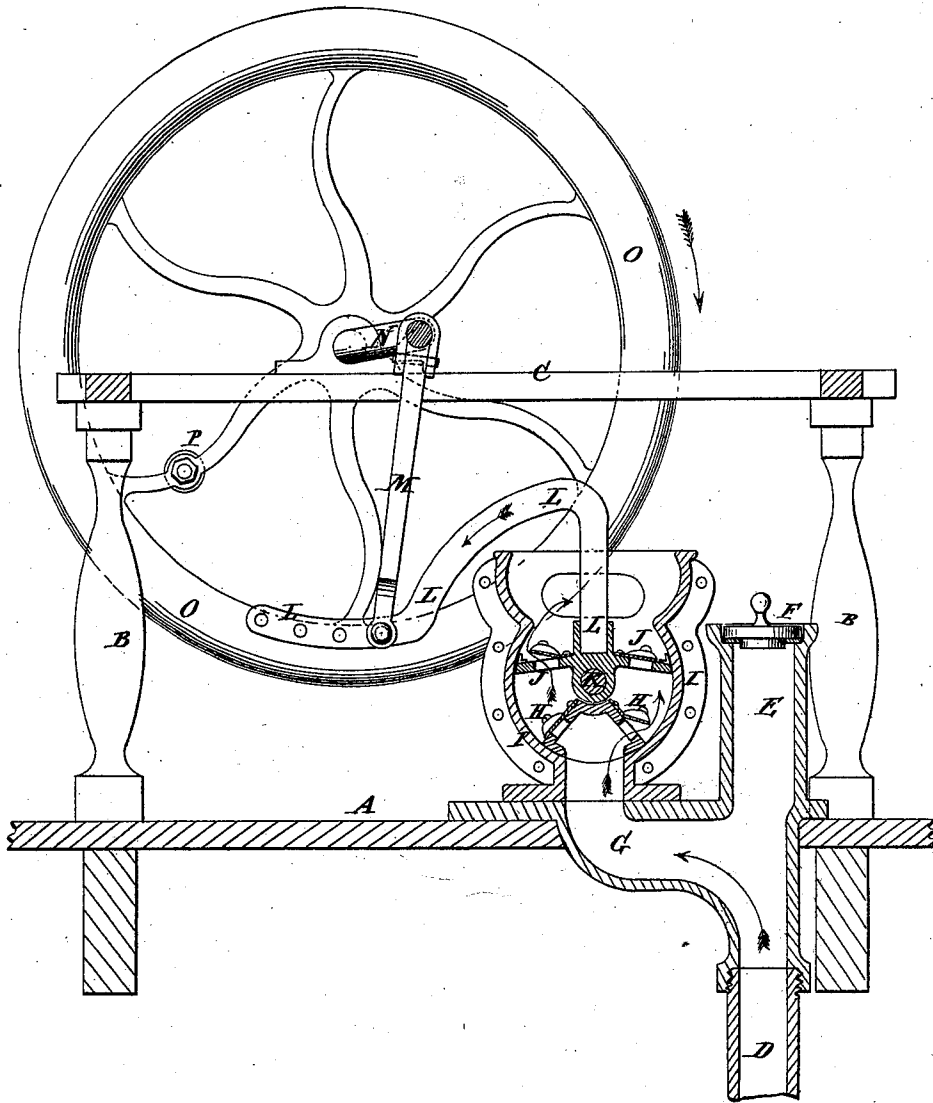


G. W. JOHNSON.

PUMP.

No. 173,223.

Patented Feb. 8, 1876.



WITNESSES:

A. W. Almqvist
Alex F. Roberts

INVENTOR:

Geo. W. Johnson
BY *Mumford*
ATTORNEYS.

UNITED STATES PATENT OFFICE

GEORGE WASHINGTON JOHNSON, OF YARMOUTH, CANADA.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 173,223, dated February 8, 1876; application filed December 18, 1875.

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON JOHNSON, of Yarmouth, in the county of Yarmouth and Province of Nova Scotia, and Dominion of Canada, have invented a new and useful Improvement in Pumps, of which the following is a specification:

The figure is a vertical section of my improved pump.

The object of this invention is to improve the construction of the pump known as the "Sluthour" pump, so as to adapt it to be used on shipboard, and in other places where the pump should work continuously without danger of stoppage or delay from choking, which will allow any obstruction to be conveniently removed from the valves or suction-pipe, to enable the pump to work smoothly, without jar or shock, to enable the pump to be conveniently sounded, and to enable an even motion of the pump-buckets to be produced when worked by a crank and fly-wheel.

The invention consists in the air-chamber placed directly over the suction-pipe, made with an open top, and provided with a detachable cover; in the branch pipe connecting the suction-pipe and the air-chamber with the pump; and in the curved or bent lever, in combination with the buckets, the pump, and the connecting-rod, pivoted to the crank of the shaft of the fly-wheel, as hereinafter fully described.

A represents the deck, B the stanchions, and C the fife-rail. D is the suction-pipe. E is the air-chamber, which is placed directly above and in line with the suction-pipe D. The air-chamber E is made with an open top, which is closed with a close-fitting cover, F, so that by removing the cover F the pipe D may be sounded or obstructions removed from it, and so that the arm or a suitable instrument may be passed, through the branch pipe G, into the space beneath the valves H, to remove any

obstructions that may have lodged there. I is the pump body or barrel, which is made semi-cylindrical in form, and in the lower part of which are secured the two valves H, opening upward. J are the two buckets, in each of which is a valve, and which are rigidly connected, and work upon a shaft, K. The ends of the shaft K are secured to the walls of pump I. To the buckets J is rigidly attached the end of the lever L. The lever L rises above the mouth of the pump I, is curved downward to, or nearly to, the level of the pivot of the buckets J, and is then bent outward, and to it is pivoted the end of the connecting-rod M.

Several holes are formed in the lever L to receive the pivoting-pin of the connecting-rod M, to enable the stroke of the pump to be regulated as required. The upper end of the connecting-rod M is pivoted to the crank of the shaft N, to which is attached a fly-wheel, O, which may have a handle, P, attached to it to adapt it to serve as a crank-wheel.

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

1. The air-chamber E, placed directly over the suction-pipe D, made with an open top, and provided with a detachable cover, F, in combination with pump I, substantially as herein shown and described.

2. The branch pipe G, connecting the pipe D and the air-chamber E with the pump I, in combination with pump I, substantially as herein shown and described.

3. The curved or bent lever L, in combination with the buckets J, the pump I, and the connecting-rod M, pivoted to the crank of the shaft N of the fly-wheel O, substantially as herein shown and described.

GEORGE WASHINGTON JOHNSON.

Witnesses:

CHAS. H. BRYANT,
JOHN R. YOUNG.