

Patented April 11, 1876.

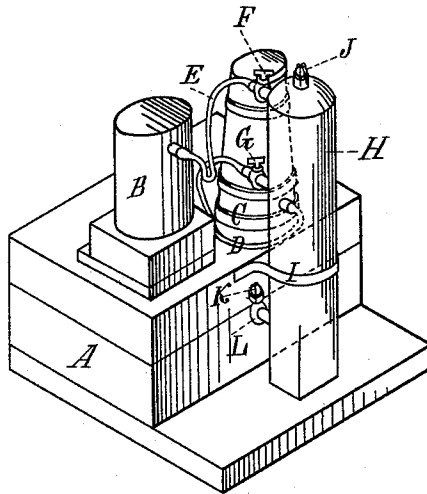
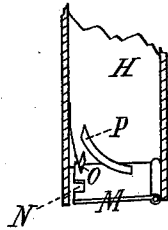


Fig.1.



. Fig. 2.

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UNITED STATES PATENT OFFICE.

DANIEL MOOR, OF WATERVILLE, MAINE.

IMPROVEMENT IN DREDGING-MACHINES.

Specification forming part of Letters Patent No. 175,868, dated April 11, 1876; application filed March 20, 1876.

To all whom it may concern:

Be it known that I, DANIEL MOOR, of Waterville, in the county of Kennebec, State of Maine, have invented a certain new and useful Improvement in Dredging-Machines, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is an isometrical perspective view, and Fig. 2 a sectional view showing the lower valve mechanism of the receiver.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates to that class of dredging-machines which are operated by steam; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

The nature and operation of my invention will be readily obvious to all conversant with such matters from the following description:

In the drawing, A represents the base to which the working-parts are attached; B, the steam-chest or generator; C, the cold-water tank or reservoir, and H the receiver or exhaust chamber. The receiver is connected to the water-tank by the pipe D, and to the generator by the pipe E. These pipes are flexible, and are respectively provided with stop-cocks G F. A valve, M, is disposed in the lower end of the receiver H, and so arranged as to open either inwardly or outwardly as required, a spring, P, preventing it from being caught and not closing when the receiver is raised, and a spring catch, O, working in the notch N, holding the valve in position to retain the contents of the receiver and prevent the same from being unduly discharged. In the use of my im-

provement the valves M, G, and F are closed, and the receiver inserted in the water until its lower end rests upon the bed to be dredged. The valve F is then opened and steam admitted through the pipe E, forcing the air from the receiver through the outwardly-opening valves K J. When the air is expelled and the receiver filled with steam, the cock F is closed and G opened, letting a stream of cold water into the receiver, thereby condensing the steam, producing a vacuum, and closing the valves K J. A vacuum being thus produced within the receiver and all ingress to the same closed except through its lower end, the atmospheric pressure acting upon the water will force the valve M inwardly and fill the receiver with mud, gravel, and such substances as constitute the water-bed. The receiver is then raised in any convenient manner, the pipes D E yielding sufficiently to enable this to be readily performed, when the valve M is opened and the contents discharged, an ordinary induction-valve (not shown) being provided near the top of the receiver to let in the air and facilitate the operation; or steam may be let into the receiver above the contents for the purpose of discharging the same by means of any suitable mechanism. It will be obvious that in place of the last-named valve the valve J may be furnished with a "pry-up" lever to accomplish the same purpose; also that the valve K may be dispensed with if preferred.

Having thus explained my invention, what I claim is—

The improved dredging machine described, consisting of the steam-chest B, water-tank C, pipe E provided with the stop-cock F, pipe D provided with the stop cock G, and receiver H, provided with the valves K J M, combined and arranged to operate substantially as and for the purpose set forth and specified.

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Witnesses:

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