A. Rowe,

Water Wheel,

No. 61,362. Patented Jan. 22, 1867.

Fig. 2.

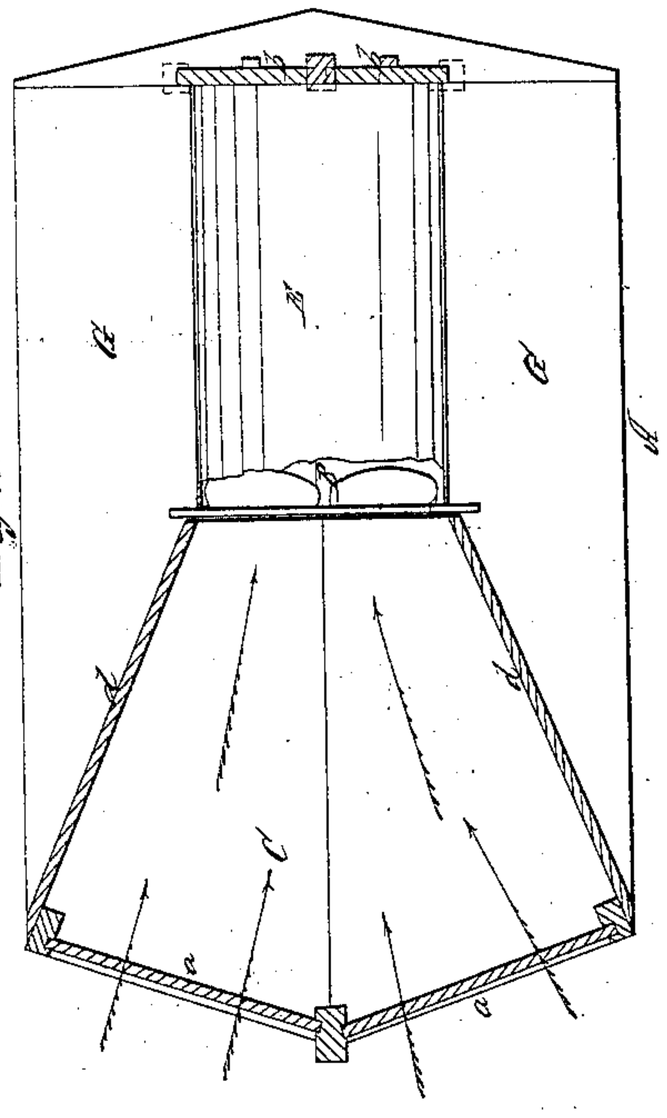


Fig. 3.

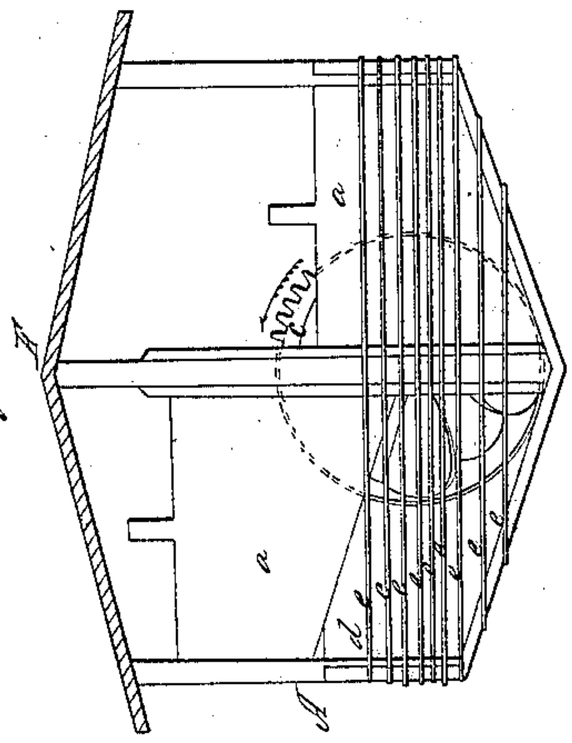
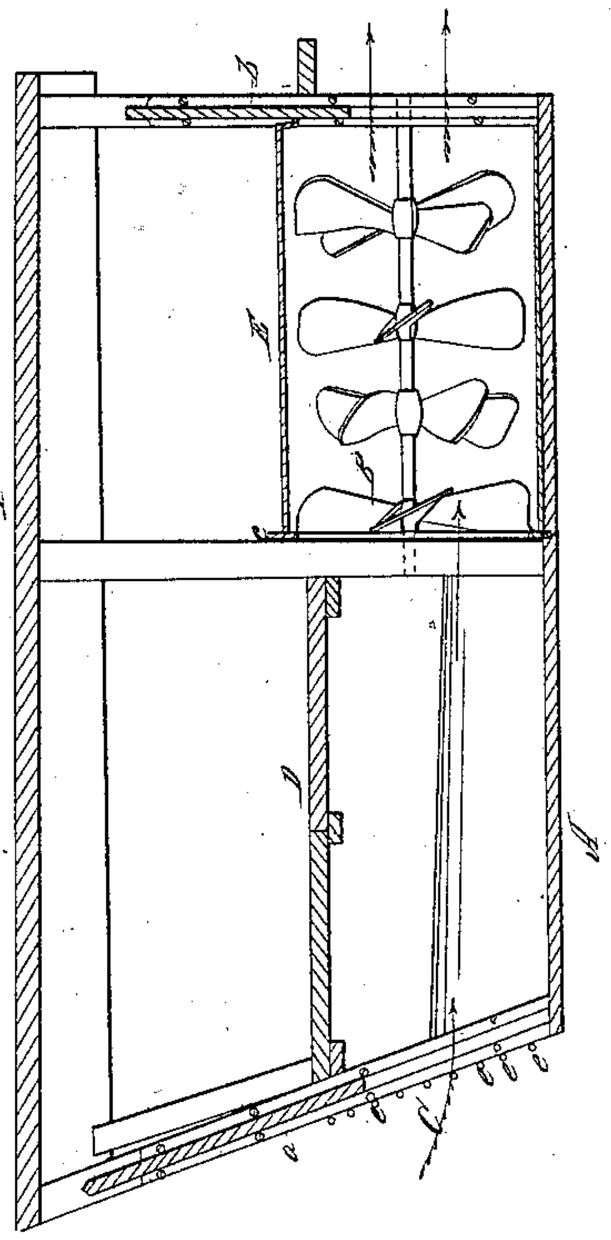


Fig. 1.



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Letters Patent No. 61,362, *dated January* 22, 1867.

IMPROVEMENT IN PORTABLE WATER POWER.

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, ABRAM ROWE, of Macomb, in the county of McDonough, and State of Illinois, have invented a Portable Hydraulic Motor; 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, and to the letters of reference marked thereon.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

Figure 1 is a longitudinal vertical section.

Figure 2, a top plan view; and

Figure 3, a front end view.

The nature of my invention consists in arranging within or in connection with a boat or platform, a water-wheel, to be operated by the current of the stream, when the boat is stationary, for the purpose of driving machinery of any kind, and which, at the same time, is capable of being moved with the boat from one locality to another, at will, thus producing a portable hydraulic motor.

In order to apply my invention, I build a boat of any required size, but preferably of considerable width. In the central rear portion of this boat, A, I place longitudinally a cylindrical case, E, which is open at both ends, and within which is located a screw, B, as shown in fig. 1. This screw may consist of a series of propeller blades attached to a shaft, as there represented, or it may be formed of a continuous spiral blade, as may be found most efficient in practice. Both the front and rear ends of the boat A are left open, and are provided with gates that may be closed whenever desired—*a* representing the gates at the front and *b* those at the rear. The gates *a*, at the front, occupy the entire width of the boat, and a partition, *d*, extends from the front outer sides of the boat back to the front end or mouth of the case E, these partitions converging as they approach the case E, as shown in fig. 2. By these means a trumpet or open-mouthed chute is formed, to receive a large volume of water, and direct it on to the wheel. It will, of course, be necessary to submerge the hull of the boat sufficiently to permit the water to enter at the front end, as represented in fig. 1; and, to prevent it from sinking, the compartments G may be made water-tight. If desired, or found necessary, these compartments may be divided into a series of smaller ones, and they be so arranged that water may be admitted to one or more of them, in order to submerge it to the desired depth. Attached firmly to the end of the shaft of wheel B is a cog-wheel *c*, as shown in figs. 1 and 3, by which motion may be imparted to any machinery that it is desired to operate. By these means I produce an apparatus that can be moved from place to place, wherever desired, and its mechanism be operated by the current of the stream; the boat, of course, being anchored or otherwise rendered stationary when it is intended to operate the machinery. A deck or flooring, D, is provided for locating the machinery upon, and for other purposes; and a series of rods, *e*, are stretched across the mouth of the chute C, to prevent logs or other trash from entering and injuring the wheel.

The uses to which my invention may be applied are various. By placing on the boat a saw-mill, it may be towed up streams bordered with forests, and the timber along the banks be cut, hauled on board, and converted into lumber, and then conveyed to market, or wherever needed for use, without unloading or rehandling. In like manner, by these means, grain can be gathered along a stream, and converted into flour, for market, or for the use of the inhabitants, by placing on board a grist-mill, and operating it by the means above described. In a similar manner cotton grown in the vicinity of streams may be ginned and baled by suitable machinery placed on board, and operated by the apparatus, and then conveyed to market on the same boat. It is specially adapted for use on streams subject to great rise and fall, or excessive floods, and where, for that reason, it is difficult or expensive to build and maintain dams—this apparatus adapting itself readily to any rise or fall of the stream.

I am aware that a wheel similar to mine has before been used enclosed in a case; and I am also aware that spiral wheels have been used in connection with two boats as a motive power, and these, therefore, I do not claim; but, having thus described my invention, what I claim, is—

1. A portable hydraulic motor for operating machinery, consisting of the propeller or screw-wheel B enclosed in a case, E, and located in the central bottom portion of a boat, A, as herein shown and described.

2. In combination with the wheel E, arranged as shown, I claim the sluice C in the front end of the boat, having its sides converging, as represented.

ABRAM ROWE.

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