(No Model.)

J. W. WILSON.

DUMPING BOAT OR SCOW.

No. 279,683. Patented June 19, 1883.

Fig 1

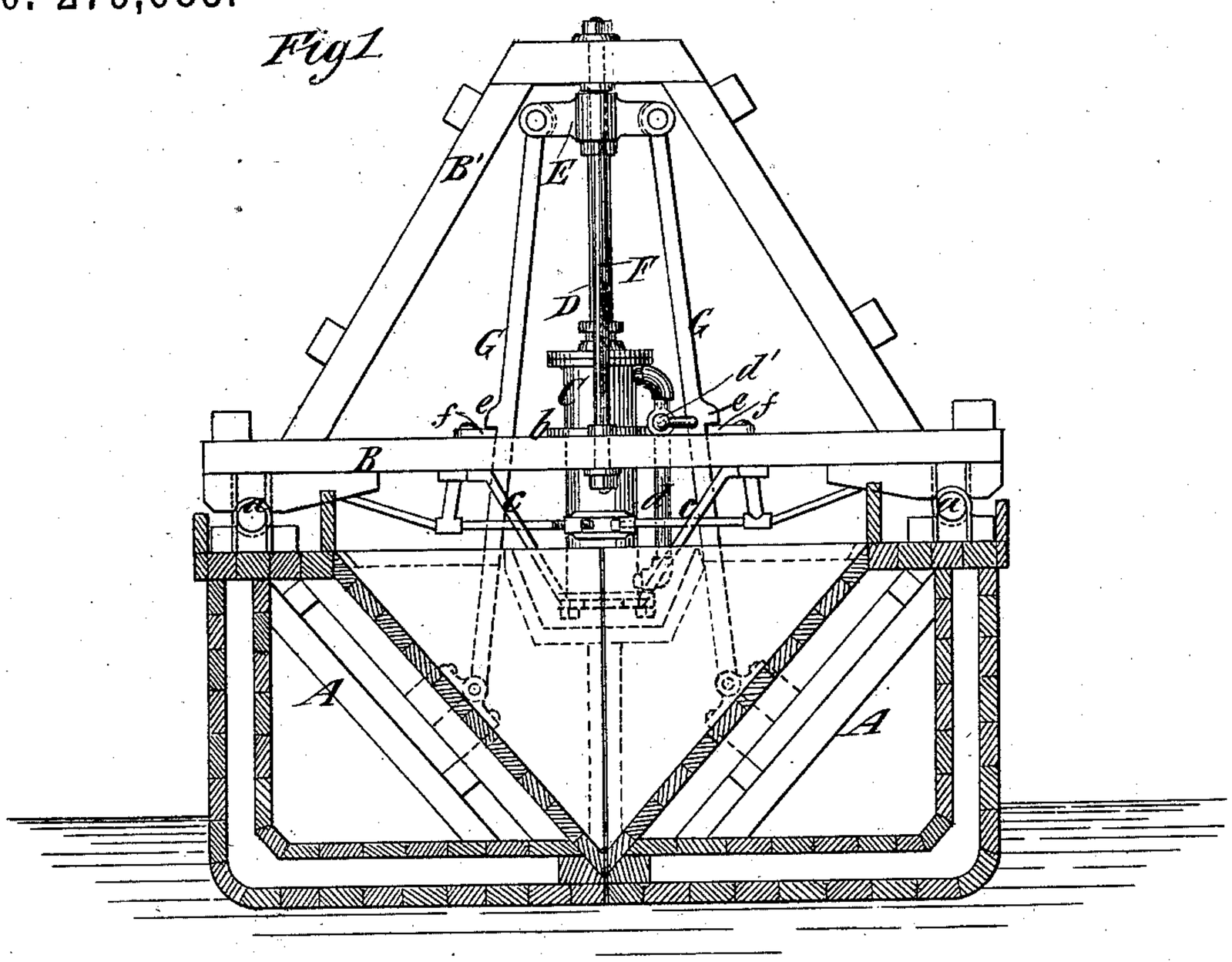
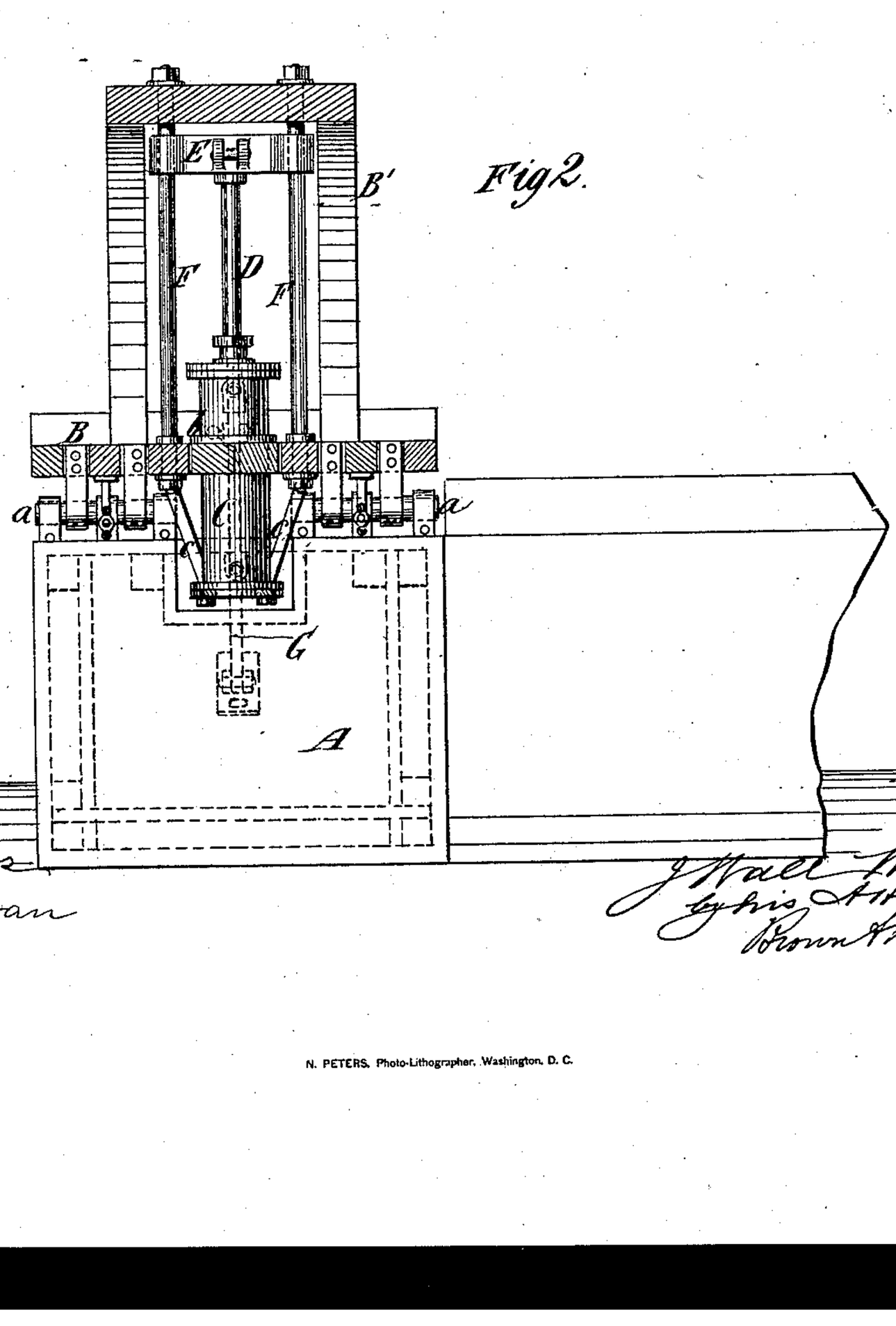


Fig 2.



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J. WALL WILSON, OF NEW YORK, N. Y.

DUMPING BOAT OR SCOW.

SPECIFICATION forming part of Letters Patent No. 279,683, dated June 19, 1883.

Application filed March 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, J. WALL WILSON, of the city and county of New York, in the State of York, have invented a new and useful Improvement in Dumping Boats or Scows, of which the following is a specification.

My invention relates to a dumping boat or scow which comprises two pontons or floats hinged at their upper and outer longitudinal edges, so as to swing downwardly and outwardly to dump a load between them, and to return together again to receive a load upon them. It is necessary that said two pontons or floats should move simultaneously in swinging outward and returning, and as a heavy load upon them would cause them, when released, to swing downward and outward with great rapidity and momentum, it is necessary to retard them or to employ resistance devices to check their movement.

My invention consists in the combination, with the two pontons or floats of a dumping boat or scow of the kind described, of a cylinder and piston, the cylinder being capable of receiving water or other fluid to resist the movement of the piston, and devices connecting said pontons or floats with said piston, whereby they are prevented from moving without imparting a corresponding movement to the piston. The cylinder is or may be provided with a pipe or conduit, which forms a means of communication between the spaces therein on opposite sides of the piston, and which affords provision for the circulation of fluid from end to end of the cylinder; and in said pipe or conduit I may place a cock or valve, which may be adjusted to regulate the passage of fluid through said pipe or conduit, or to close the said pipe or conduit altogether, so as to hold the piston immovable, and so lock the pontons or floats in place, whether they be closed or open. The piston-rod may have fixed to it a cross-head which moves upon suitable guides, and rods may be employed to connect the cross-head with the pontons or floats. The piston-rod, cross-head, and rods then constitute the means whereby the pontons or floats are connected with the piston. All the above-described features form a part of my invention.

In the accompanying drawings, Figure 1 is a transverse vertical section of a dumping boat or scow embodying my invention, and Fig. 2 is a longitudinal section thereof.

Similar letters of reference designate corresponding parts in both figures.

A A designate the two pontons or floats, and B B′ designate a platform or deck portion and a frame-work, which may be placed at each end of the boat or scow, and which is composed of heavy timbers strongly braced and trussed. The pontons or floats A are hinged at their outer and upper longitudinal edges, by means of pins or pintles *a*, to the platform or deck portions B, and their upper surfaces are inclined downward and inward toward each other. Upon such inclined surfaces they receive their load, and hence when the scow is to be and is being loaded the pontons or floats must be held strongly together, and when the load is to be dumped they must be allowed to swing apart and dump or drop the load between them. The pontons or floats are here shown as secured together to receive their load.

Upon the platform or deck portion B is fixed a cylinder, C, of a size proportionate to the size of the boat or scow. This cylinder may have a flange, *b*, which rests upon the platform or deck portion, and braces *c*, extending downward to its lower end. The cylinder C is fitted with a piston, the rod D of which, as here shown, projects through the upper head of the cylinder C, and is connected with a cross-head, E. The said cross-head E is adapted to work upward and downward upon guides or guide-rods F, which are secured at their upper ends in the frame B′ and at their lower ends in the platform or deck portion B.

G designates two rods which are connected at their lower ends to the two pontons or floats, and at their upper ends to the cross-head E. It will therefore be seen that the pontons or floats cannot move or swing either outward or inward without a corresponding movement of the piston in the cylinder C, and if the movement of said piston is prevented or retarded the movement of the pontons or floats will be correspondingly controlled. The two ends of the cylinder C are here connected by a pipe or conduit, *d*, in which is a cock, *d′*.

In the operation of these devices the cylinder is filled with water or other fluid, and as the piston moves up or down of course the

water or fluid will be circulated from one end to the other of the cylinder if the cock or valve *d'* be opened. If said clock or valve be closed there can be no such circulation, and the piston cannot move. Consequently the pontons or floats will be also locked. When the pontons or floats are together in position to receive their load, as shown in Fig. 1, the piston is at its highest position in the cylinder C, and the cock or valve *d'* is closed, so as to prevent any movement of the piston.

If it is desired to lock the floats or pontons additionally, I may provide lugs or projections *e* on the rods G, and stops or bolts *f*, which may be turned or moved under these lugs or projections to hold the pontons or floats against swinging or moving downward.

When it is desired to dump the load the cock or valve *d'* is opened more or less, and the pontons or floats will swing downward as fast as the water or fluid escaping from below the piston will permit. The speed or movement of the pontons or floats is therefore controlled and retarded by the water or fluid in the cylinder, and their movement may be varied by more or less closing the cock or valve *d'*. When the load is dumped the buoyancy of the pontons or floats would naturally cause them to return or swing inward and upward. If the cock or valve *d'* be closed the instant the load is dumped, this will be prevented, and the pontons or floats will be held open, and the boat or scow may be towed ahead, thus washing out or freeing the boat or scow from any light refuse or débris which does not at once sink.

In lieu of having the ends of the retarding-cylinder connected by a pipe or conduit, the lower or one end of the cylinder might be provided with an adjustable discharge-orifice; but in such case the cylinder and piston would control or retard the pontons or floats in their opening movement only.

I have before stated that the buoyancy of the pontons or floats will cause them to swing or come together after dumping the load; but if the buoyancy be not sufficient for such purpose any form of gearing may be provided for drawing them together.

I have here shown only one retarding-cylinder. The boat or scow may have a single cylinder located at the middle of its length or at either end, or a cylinder at each end, if desired; and where more than one cylinder is used their valves should all be connected, so as to be operated in unison.

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

1. The combination, with the two pontons or floats of a dumping boat or scow, hinged at their upper and outer longitudinal edges, and adapted to swing downward and outward to dump the load between them, of a cylinder and piston, the cylinder being capable of receiving water or other retarding-fluid, and devices connecting the said piston with the pontons or floats, substantially as and for the purpose described.

2. The combination, with the two hinged pontons or floats, of the retarding-cylinder and piston, a pipe or conduit connecting the ends of said cylinder and provided with a cock or valve, and devices connecting said pontons or floats with said piston, substantially as described.

3. The combination of the pontons or floats A A, the platform or deck portion B, the retarding-cylinder C and its piston, the piston-rod D, the cross-head E, the guides F, and the connecting-rods G, all organized for operation substantially as herein described.

4. The combination of the pontons or floats A A, the retarding-cylinder C and its piston, the piston-rod D, the cross-head E, the guides F, the connecting-rods G, provided with lugs or projections *e*, and the bolts or stops *f*, all substantially as described.

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