No. 663,801.

Patented Dec. 11, 1900.

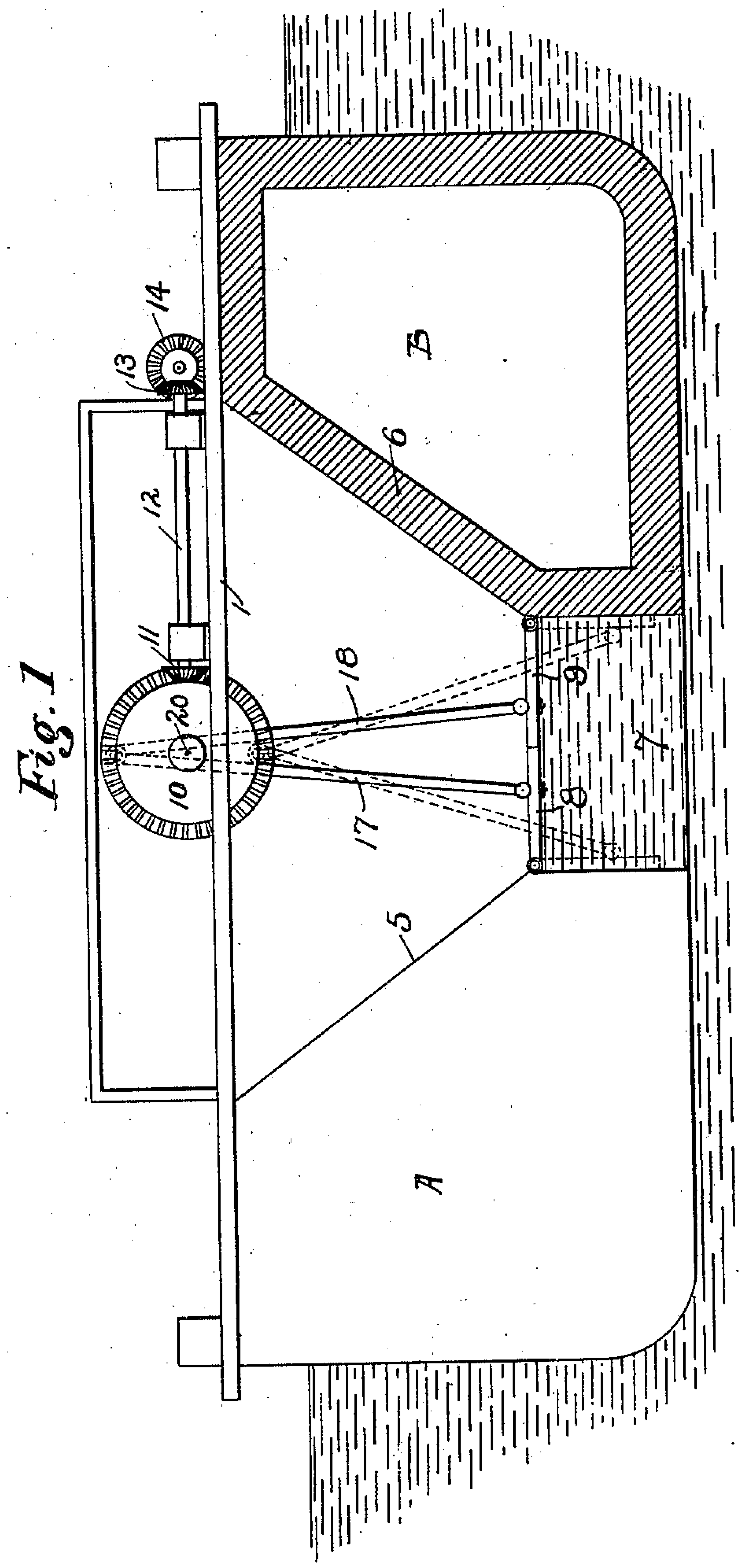
G. D. BARNEY.

DUMPING SCOW.

(Application filed Nov. 24, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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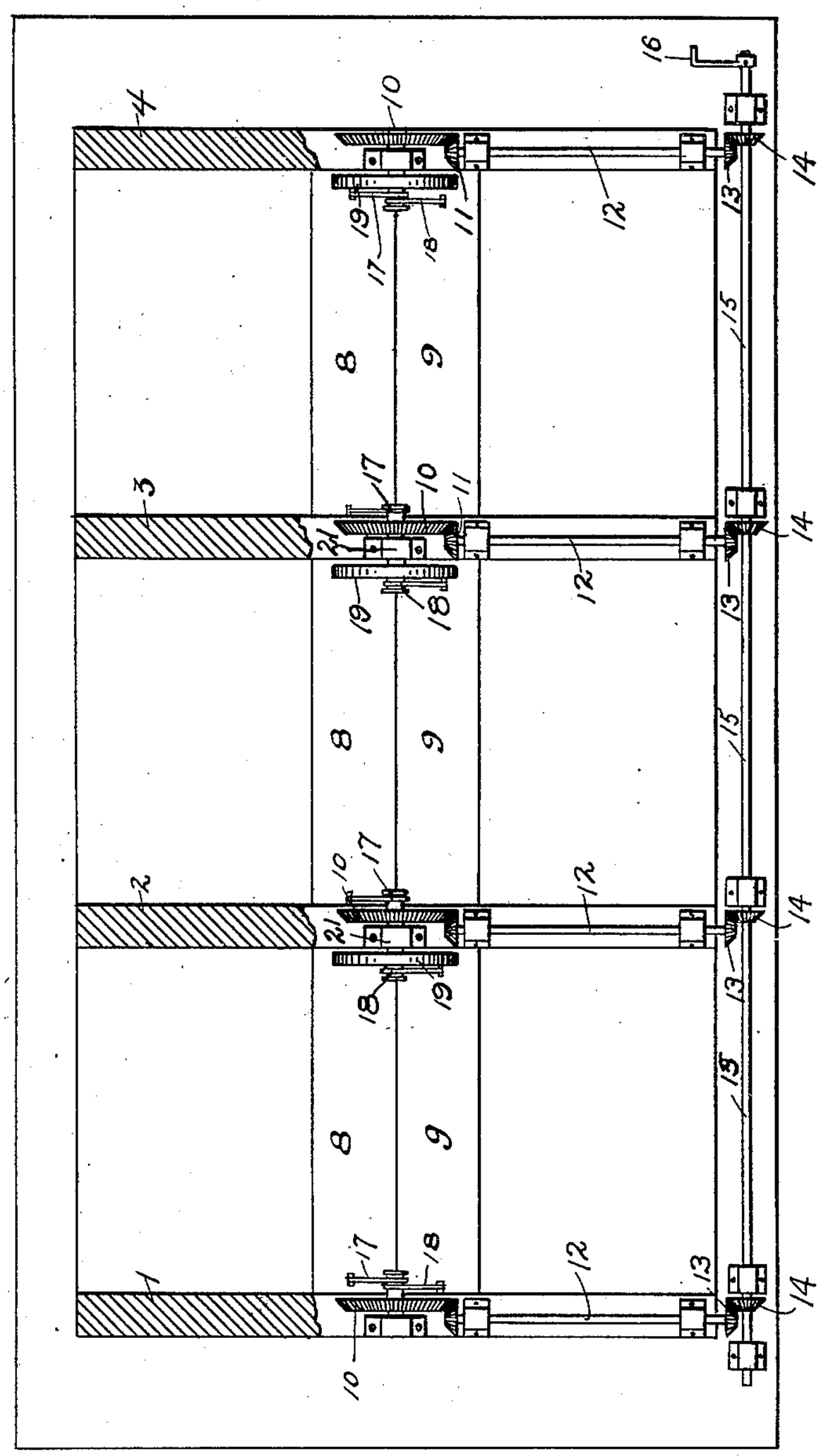

Fig. 2.

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GEORGE D. BARNEY, OF NEW YORK, N. Y.

DUMPING-SCOW.

SPECIFICATION forming part of Letters Patent No. 663,801, dated December 11, 1900.

Application filed November 24, 1899. Serial No. 738,129. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. BARNEY, a citizen of the United States, residing at the city of New York, (Brooklyn,) in the county of Kings and State of New York, have invented certain new and useful Improvements in Dumping-Scows, of which the following is a full, clear, and exact specification.

This invention relates to dumping-scows, and is particularly applicable to scows used for carrying mud.

The object of the invention is to construct a simple inexpensive scow which shall be capable of having its load easily and quickly dumped and the various parts of which shall possess great strength, and, further, to locate the operative parts in a convenient manner and to so arrange them that they operate smoothly, undue strain upon them being avoided. To these ends and also to improve generally upon devices of the nature indicated, my invention consists in the various matters hereinafter described and claimed.

My invention will be more particularly described hereinafter with reference to the accompanying drawings, in which—

Figure 1 is a sectional end view of the scow constructed in accordance with my invention, and Fig. 2 is a plan view of the same.

Referring more particularly to the drawings, A and B represent suitable pontoons firmly and rigidly connected together by bulkheads 1 2 3 4. The inner walls 5 and 6 of the pontoons should slope toward each other, substantially as illustrated in Fig. 1, in order to form a suitable hold in which to place the load to be carried by the scow. The walls 5 and 6 approach each other near or at the bottom of the pontoons, leaving an open space 7 of suitable width between the pontoons. Extending the length of the boat or, if preferred, only the length of one or more of the compartments between the bulkheads are the doors 8 and 9, hinged, respectively, on the two pontoons and adapted to swing together, as illustrated in the full lines in Fig. 1, to form the bottom of the hold. Mounted on one or more of the bulkheads is a gear-wheel 10, with which pinion 11 engages. Pinion 11 is fixed to a shaft 12, extending along the bulkhead to a suitable part, preferably the side of the scow, where it has fixed to its other end a pinion 13, which engages a similar pinion 14, mounted upon a shaft 15, which preferably extends the length of the boat and carries the other pinions 14 14 14, engaging pinions 13 13 13. The shaft 15 is adapted to be rotated by any suitable means. Ordinarily a number of radial holes are formed in the shaft or a pulley carried thereby, whereby the shaft may be turned by the insertion of handspikes in said holes. In the drawings I have shown a conventional handle 16 to illustrate that the shaft should be provided with means to rotate the same. Connecting-rods 17 and 18, attached at one end to the respective doors 8 and 9, are connected at their other ends to the gear-wheels 10 or other suitable parts. If desired, both of these rods 17 and 18 can be attached directly to one of the said wheels 10, as illustrated in Fig. 2, such structure being convenient when the wheel carrying said rods happens to be an end wheel, as that upon the bulkhead 1; but such structure is not wholly satisfactory for the reason that as the shaft 20 carrying said wheel 10 is a short one when the entire strain exerted upon the doors by the load is exerted upon one end only of said shaft the shaft tends to tilt and bind in its bearing 21. In order to obviate this difficulty, the shafts 20 upon the intermediate bulkheads have the wheels 10 mounted upon them at one side of the bearing 21, while upon the opposite side of said bearing is mounted a wheel or disk 19, and one of the rods, as 17, is pivoted upon the wheel 10, while the other rod, as 18, is pivoted upon the disk 19, the said pivot-points being in the same relative location upon both the wheel 10 and the disk 19. Each of the rods 17 and 18 being attached to a door, an equal strain is exerted upon each end of the shaft 20, and binding of the same by reason of a tendency to tilt is thereby rendered impossible.

In the operation of the scow the gear-wheel 10, and consequently the disk 19, is turned so that the rods 17 and 18 are drawn up, as illustrated in Fig. 1, and so that the doors 8 and 9 will be closed. The scow is then loaded by dumping the mud or the load into the hold. Inasmuch as when the doors 8 and 9 are closed the point on the gear-wheels 10 and disks 19, to which the rods 17 and 18 are at-

tached, is directly above the axis or shaft 21 no matter how great a load is placed upon the scow there will be no tendency to rotate the gear-wheel and open the doors. To dump the load, the shaft 15 is rotated just enough to move the point on the gear-wheel and the disk to which the rods 17 and 18 are attached beyond its center, when the weight of the load will be sufficient to pull down the rods and open the doors. The doors are closed by rotating the shaft 15 until the rods are in their uppermost position.

It will be observed that in the construction above described all the working parts are below the deck of the scow and are therefore not likely to become damaged. Furthermore, the entire load of the scow is dumped at once and evenly. If, however, for certain reasons it is desired to dump a portion of the load, this can be easily arranged by making the length of the doors equal to the length of the compartments between the bulkheads.

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

1. In a scow or the like having dumping-doors, a shaft and a connecting-rod supported upon said shaft at each side of its bearing and having connection with a door, said shaft being adapted in its rotation to operate said doors through the agency of the said rods; substantially as described.

2. In a scow or the like having dumping-doors, a shaft, a member mounted upon said shaft at each side of its bearing and adapted to turn therewith, and a rod eccentrically pivoted to each of said members, each of said rods being connected to a door; substantially as described.

3. In a scow or the like having dumping-doors, a shaft, a wheel mounted upon said shaft at each side of its bearing and adapted to turn therewith, and a rod eccentrically pivoted to each of said wheels, each of said rods being connected to a door and having its point of connection with its wheel in the same radial line, whereby when the said doors are closed, the said points of connection lie in substantially the same vertical line including the said shaft; substantially as described.

4. In a scow or the like having a bottom opening provided with dumping-doors, a bulkhead extending across said opening, a wheel mounted upon said bulkhead, connection between said wheel and the doors for operating the latter by the former, and a shaft also mounted upon said bulkhead and extending in the direction of the same, said shaft having operative connection with the said wheel and being provided with means whereby said shaft can be rotated; substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE D. BARNEY.

Witnesses:

O. C. BURGDORF,

C. V. EDWARDS.