(No Model.) 2 Sheets—Sheet 1.

P. H. GILL.

Floating Elevator.

No. 231,556. Patented Aug. 24, 1880.

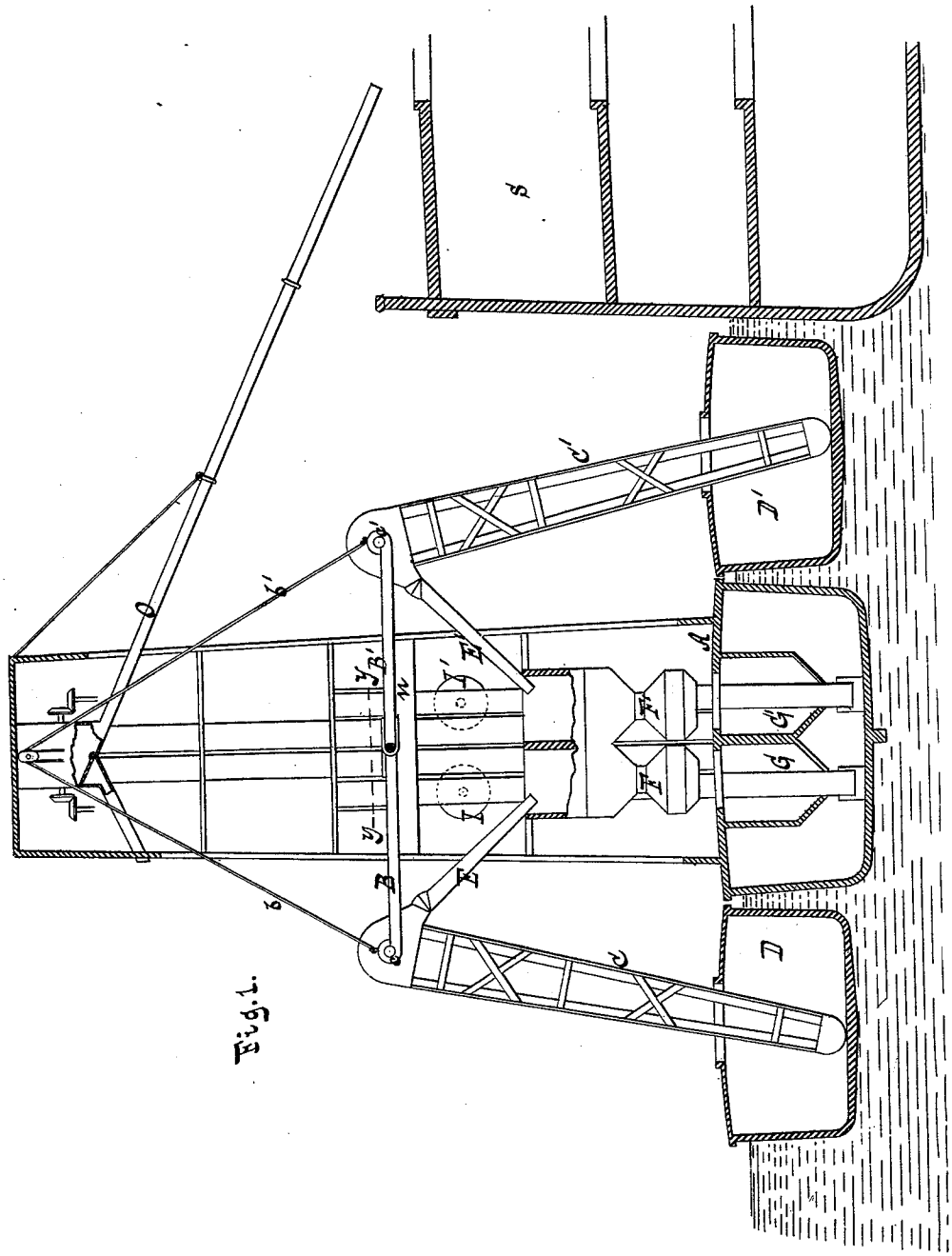

Fig. 1.

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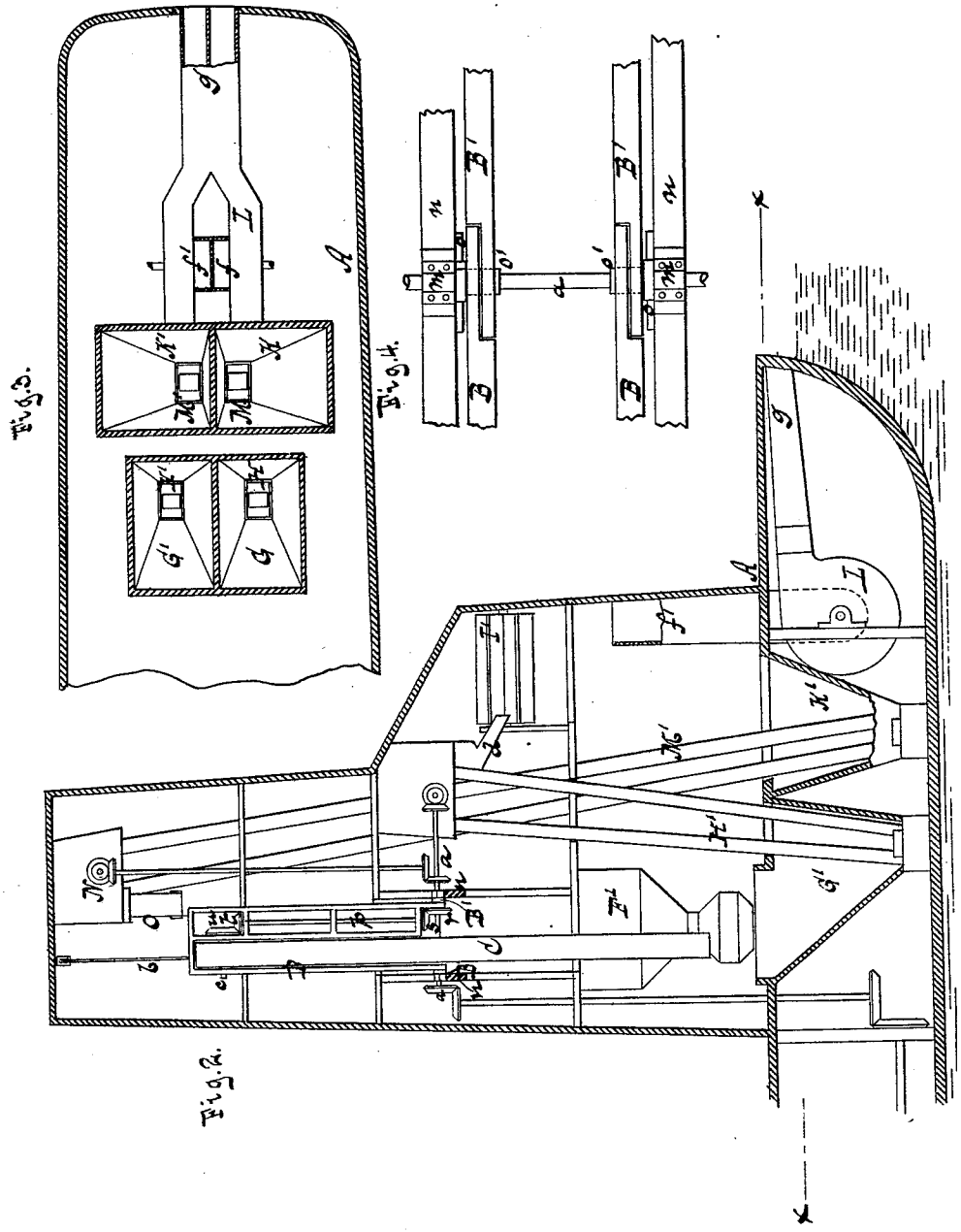

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UNITED STATES PATENT OFFICE.

PHILLIP H. GILL, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND EDWARD G. BURGESS, OF MONT CLAIR, NEW JERSEY.

FLOATING ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 231,556, dated August 24, 1880.

Application filed July 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, PHILLIP H. GILL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Floating Elevators, of which the following is a specification.

This invention consists in the combination, in a floating elevator, of two elevators adapted to elevate grain simultaneously from two boats, suitable devices for weighing the grain elevated from each boat separately, suitable mechanism for cleaning the grain, and one or more elevators for elevating the clean grain and for discharging the same into one or more ships, so that much time is saved in handling the grain, and the grain received from the two boats can be separately discharged into different ships or mixed before it is so discharged.

This invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a transverse section of my elevator in position to transfer grain simultaneously from two boats to a ship. Fig. 2 is a longitudinal section of the elevator. Fig. 3 is a horizontal section of the same. Fig. 4 is a similar section in the plane *y y*, Fig. 1, on a larger scale than the previous figures.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates the boat and elevator-house, which contains the machinery for operating the several parts of my elevator. Said house is provided with two frames, B B′, which swing on a shaft, *a*, and the position of which is controlled by ropes *b b′*, so that they can be let down to a horizontal position, as shown in Fig. 1, or swung up to a vertical position, as shown in Fig. 2.

The outer ends of the frames B B′ form the bearings for shafts *c c′*, from which are suspended the legs for two elevators, C C′, and on which are mounted pulleys, which support the elevator-belts, and suitable cog-wheels for imparting motion to said elevators. If the frames B B′ are swung out to a horizontal position the lower ends of the elevators C C′ can be made to descend into boats D D′, which are supposed to be loaded with grain, and by imparting to the elevator-belts the required motion the grain from both boats can be elevated simultaneously.

The shaft *a* has its bearings in boxes *m m*, fastened to traversers *n n*, Fig. 4, and to said traversers are firmly secured eye-plates *o o*, through which extends the shaft *a*, the tubular projections *o o′* of which form the bearings for the frames B B′, so that the shaft *a* is relieved from all strain to which it would be exposed if said frames were made to turn directly on it. Said shaft *a* is geared together with the shafts *c c′* by shafts *p*, Fig. 2, and bevel-wheels *r s t u*, the shafts *p* being mounted in the frames B B′ so that they do not get out of gear with the shaft *a* when said frames are swung up or down. Each of said elevators is provided with a discharge-spout, E or E′, which conduct the grain from said elevators into weighing devices F F′ of any suitable construction, such as generally used on grain-elevators or in grain-storing houses. From these weighing devices the grain drops down into bins G G′ in the elevator-boat, and from these bins the grain is raised separately by elevators H H′, which are provided each with a discharge-spout, *d*, (see Fig. 2,) for conducting the grain into a screen, I or I′, separate screens being shown in the drawings, one for each of the elevators H and H′. As the grain discharges from these screens it drops down into bins K K′, Figs. 2 and 3, and during its fall it is exposed to a suction-blast produced by a fan-blower, L, so that the chaff is separated from the good grain, said chaff being sucked in through the suction-spouts *f f′* and driven out at the stern of the elevator-boat through the discharge-spout *g*.

From the bins K K′ the clean grain passes into elevators M M′ and is raised into a box, N, whence it discharges through one or more spouts, O, into the ship S, Fig. 1.

If it is desired to mix the grain taken from the two boats D D′ the discharge of both the elevators M M′ is caused to run together in the box N, and thence discharged through one and the same spout, and said box is provided with a gate or valve, which can be so adjusted that the discharge of both elevators will run together or will be kept separate.

It will be seen from the above description that in the example shown in the drawings the grain is elevated separately from the two boats, weighed separately, cleaned separately, and then elevated again separately into the box N, whence it may be discharged separately or mixed.

My elevator may, however, be so constructed that the grain, after having been elevated separately from the two boats and weighed separately, may be mixed during the process of cleaning, the clean grain from both boats being collected in one and the same bin, K, from which it is raised by a single elevator and then discharged into the ship.

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

1. The combination, in a floating elevator, of two elevators, C C′, adapted to elevate grain simultaneously from two boats, devices for weighing the grain elevated from each boat separately, mechanism for cleaning the grain after it has been weighed, and one or more elevators for elevating the clean grain and for discharging the same either separately or mixed into one or more ships, substantially as herein shown and described.

2. The combination, in a floating elevator, of two elevators, C C′, shafts *c c′*, supporting said elevators, frames B B′, supporting said shafts, a shaft, *a*, round which both frames B B′ are made to swing, and suitable gearing for transmitting motion from the shaft *a* to the elevator-shafts *c c′*, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

PHILLIP H. GILL. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.