



# UNITED STATES PATENT OFFICE.

JOHN E. WALSH, OF NEW YORK, N. Y.

## IMPROVEMENT IN GRAIN-ELEVATORS.

Specification forming part of Letters Patent No. 207,323, dated August 20, 1878; application filed July 24, 1878.

*To all whom it may concern:*

Be it known that I, JOHN E. WALSH, of the city, county, and State of New York, have made certain Improvements in Elevators for Elevating Grain or other Substances, of which the following is a specification:

My invention relates to that kind of elevator for taking the grain or similar substances from the hold of a canal-boat or vessel and elevating the same into a loft in a store-room, or for transferring the grain from one vessel or a canal-boat into the hold of another vessel; and it consists in the construction of a portable frame or carriage having a sliding and a fixed elevator-case thereon, and the necessary devices for operating the same, to transfer the grain from one location to another, and during such transfer to air, weigh, and clean the same, as will be fully hereinafter described.

In the drawing, Figure 1 represents a side view of the portable elevator; Fig. 2, a transverse view; and Fig. 3 is a top view of same.

A represents the framing that supports the elevators. B are the sills that support the frame A, and in or under which are inserted any desired number of wheels, *b*, upon which the framing A and the elevators are supported, and become portable or movable from place to place.

C is an elevator-case, having within it the necessary pulleys, and endless belt with buckets thereon, to dip up and raise the grain from the hold of a boat or vessel, or from a car. Elevator C is constructed to slide up and down in the framing A, so that when it is not in use it is forced up, and its lower end will be above the tread of wheels *b*.

The elevator C is raised or lowered by any known mechanical device, such as rope E and pulley *e*, and is held to be at any desired height.

*e* is the delivery-spout to elevator C, which delivers the grain raised by the elevator into hopper F, thence into the weighing-hopper G, where it is weighed, and then discharged into chamber H, to be subjected to a cooling and cleansing current of air from fan-blower H', through pipe *h'*, then into hopper I and spout

*i*, into the receiving-hopper at the bottom of elevator J, thence to be hoisted by elevator J to any desirable height, and delivered through spout *j'''*, to be distributed in any direction, or to be spouted into the hold of an adjacent vessel.

The elevator C is put in motion by any device that will be effective, such as the train of gear-wheels *d' d'' d' d''* and shaft *d<sup>3</sup>*, and driven by power applied to pulley *d* on shaft D; and the elevator J is operated through a similar train of wheels, *j'*, and shaft *j*, and the blower H is rotated by a pulley on its shaft, driven by a belt or other device, all from a common motive power situated at a convenient point with relation to the portable frame A and elevators, and the vessel, boat, or car from which the grain is to be taken.

In operation, this portable elevating device is placed upon the deck of a vessel or boat, X, or roof of a car, the elevator C lowered into the grain, and the gearing put in motion to operate the elevators and blower, as previously described, and when the grain is elevated and passed through the weighing, airing, and cleansing devices it is still further elevated, where it can be spouted in any direction or into any bin in store-house or hold of a vessel.

The intermediate devices, such as the weighing-hopper G and the air or cooling chamber H, may be dispensed with; but I prefer to use them in transferring the grain.

Having thus described my invention, what I claim is—

1. The portable frame A, having the elevating devices C and J, and the intermediate weighing-hopper G and cooling-chamber H, substantially as and for the purposes described.

2. The sliding elevator C, in combination with the high fixed elevator J, substantially as and for the purposes described.

3. The fan-blower H' and chamber H, in combination with the sliding elevator C, substantially as and for the purposes described.

JOHN E. WALSH.

Witnesses:

VICT. VINCENT,  
PATRICK J. SMITH.