

(No Model.)

E. S. RICHARDS.
GRAIN TRANSFERRING APPARATUS.

No. 308,095.

Patented Nov. 18, 1884.

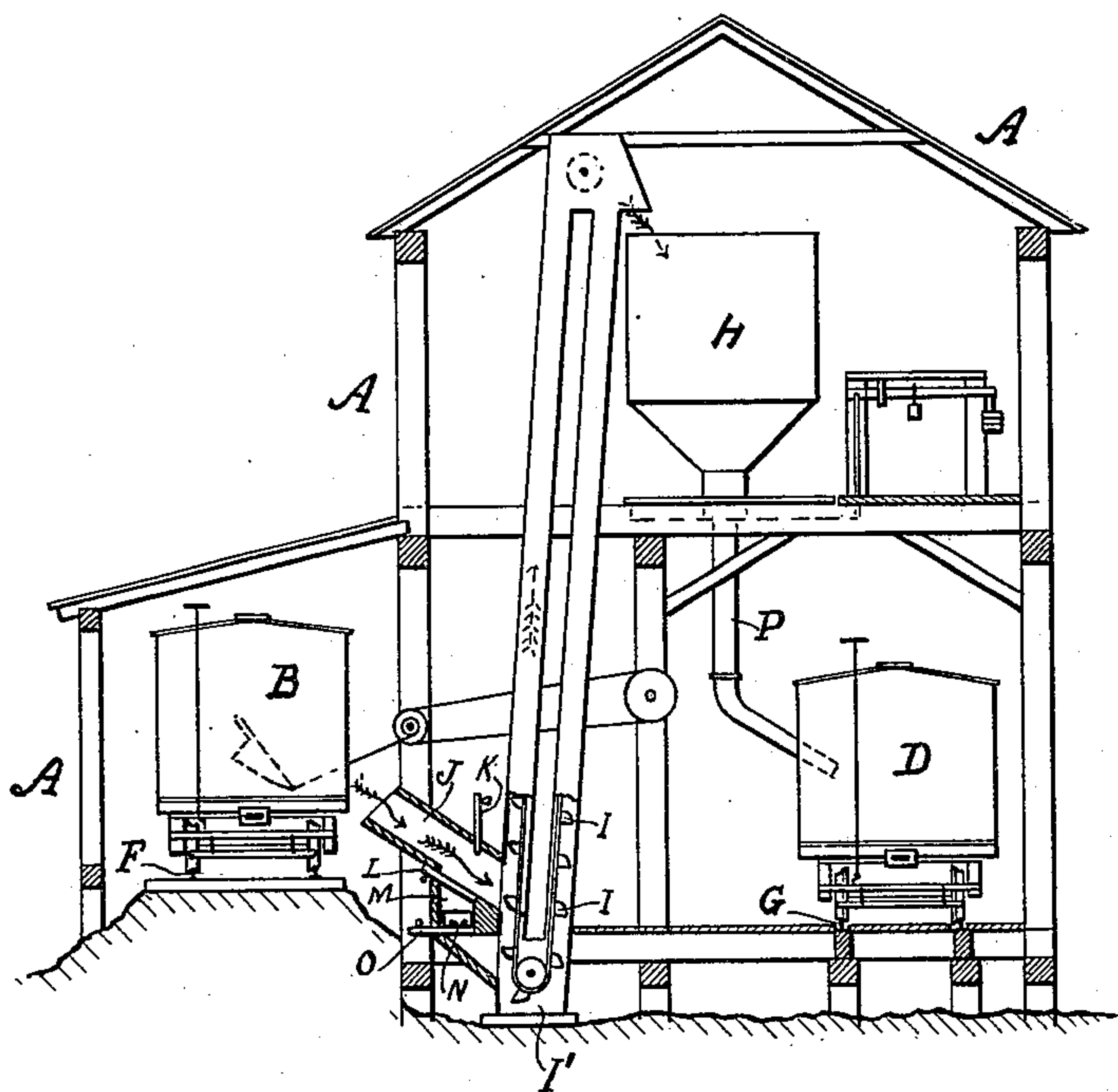


Fig. 1.

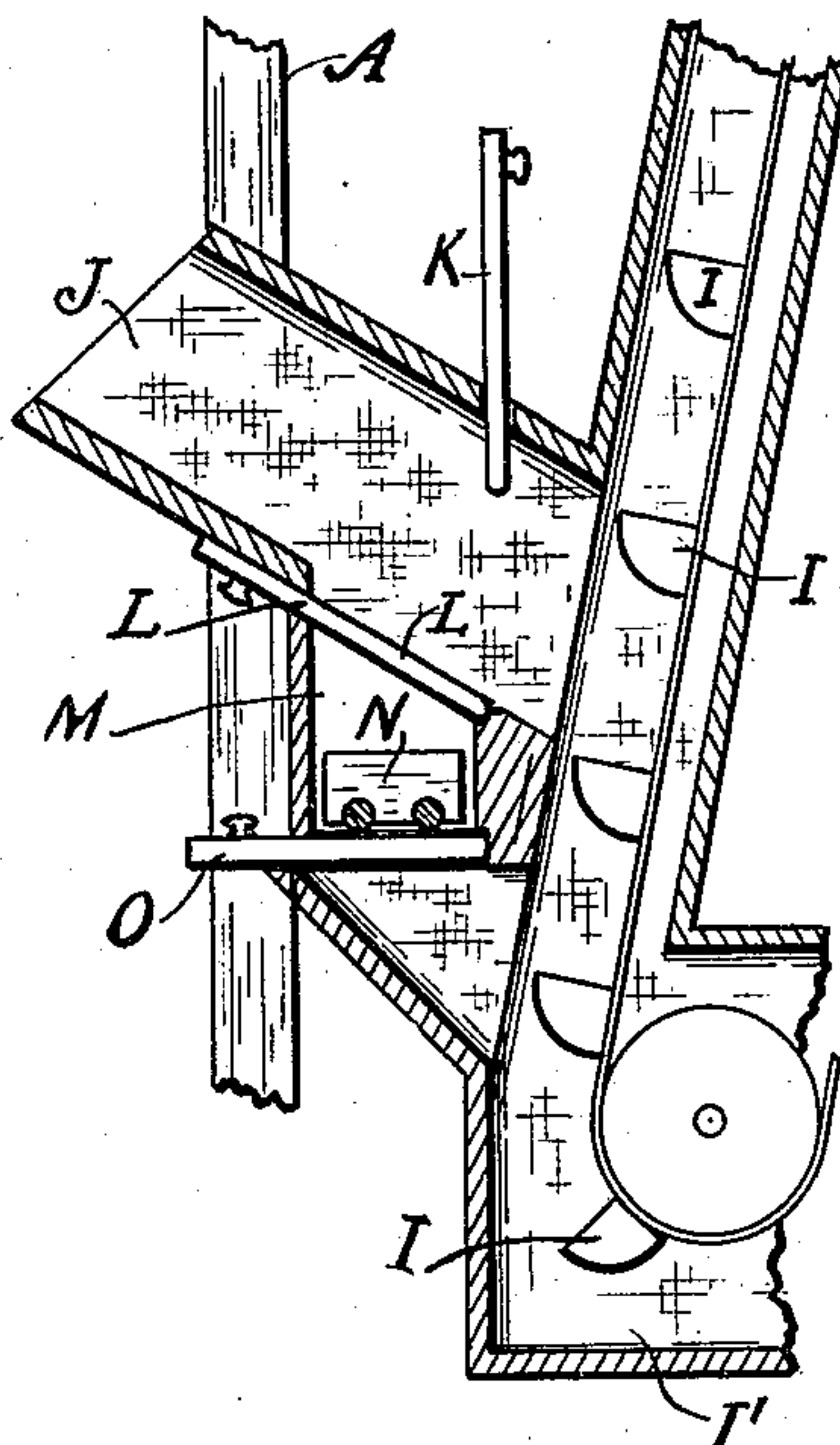


Fig. 2.

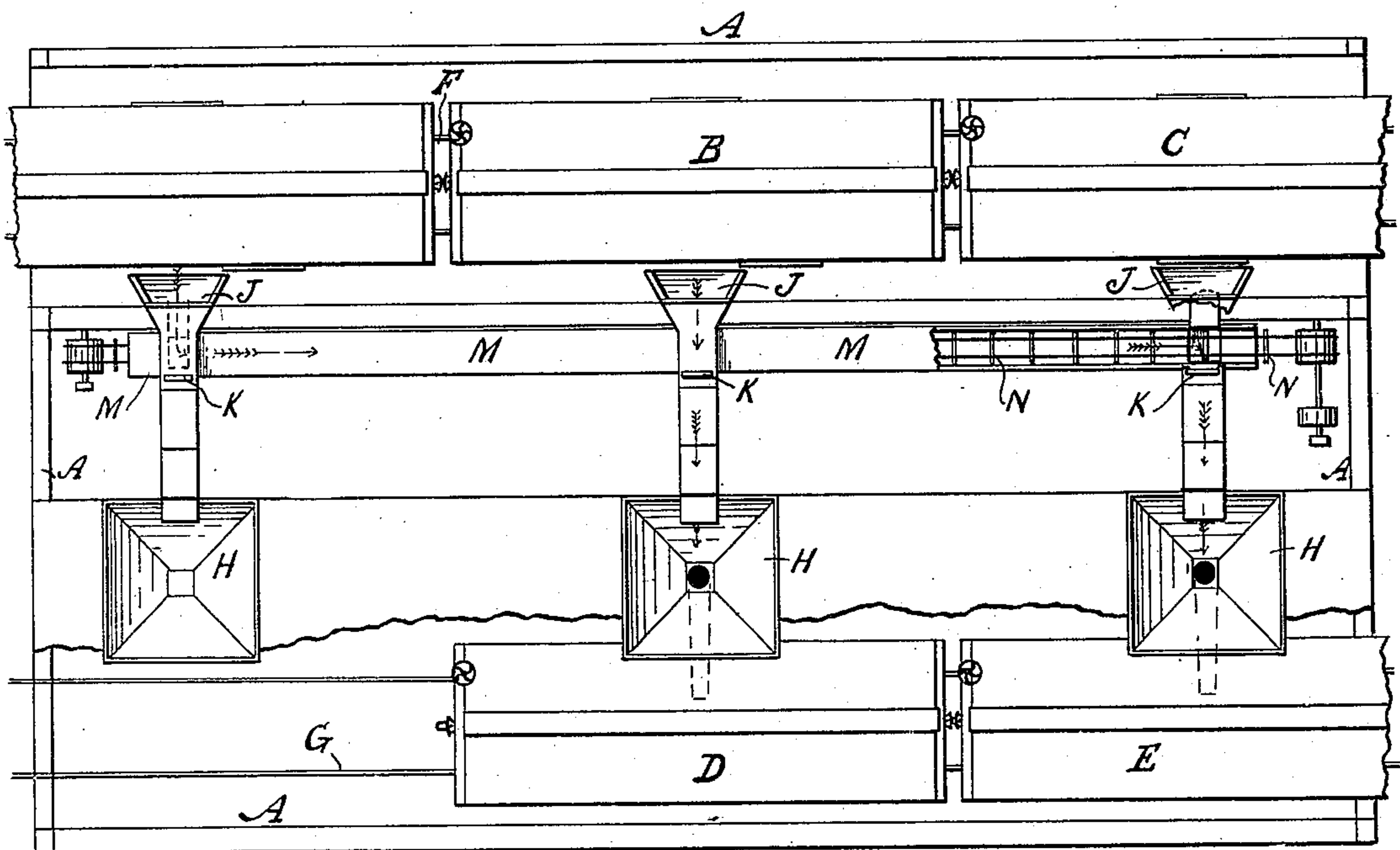


Fig. 3.

Witnesses:
J. B. Halpenny.
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per F. F. Warner—
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UNITED STATES PATENT OFFICE.

EDWARD S. RICHARDS, OF CHICAGO, ILLINOIS.

GRAIN-TRANSFERRING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 308,095, dated November 18, 1884.

Application filed February 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. RICHARDS, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grain-Transferring Apparatus, of which the following, in connection with the accompanying drawings, is a specification.

In the drawings, Figure 1 is a sectional elevation of the building containing the transferring apparatus, and also showing some of the apparatus as broken away or in section. Fig. 2 is a sectional detail, enlarged, of a portion of the transferring apparatus, and Fig. 3 is a top or plan view of the apparatus.

Like letters of reference indicate like parts.

The purpose of my invention is to provide improved means for transferring and weighing grain without mixing different lots or loads with each other, thus preserving the identity of each lot while it is being transferred from one car to another.

A represents a fixed or stationary building for inclosing and supporting the apparatus.

B, C, D, and E represent railway grain-cars on tracks F and G, respectively, which enter the building.

H H are fixed or stationary and elevated hopper-scales located in the upper part of the building.

I I are elevator-buckets arranged and operating for elevating grain from a boot, I', into one of the hoppers, there being a series of buckets for each hopper.

J is a chute entering one of the legs through which the elevator-buckets move, and K is a door or valve for shutting off the chute J from communication with the said leg.

L is a door or valve in the under side of the chute J.

M is a conveyer way or box, and N is a conveyer moving horizontally therein.

O is a slide or valve through which the way M communicates with the boot I'.

P is a discharge-spout depending from the bottom of the hopper, and arranged to discharge the contents of the hopper into a car, as indicated in Fig. 1, it being understood that the bottom of the hopper is provided in the usual manner with a slide or valve.

I actuate the elevators and the conveyer by

means of any suitable power and driving-gear, or in any well-known way.

I transfer and weigh the grain in the following manner: The car to be unloaded—for example, the car B—is drawn upon the track F and allowed to stand in such a position that the door will be directly opposite the chute J. If the grain is to be transferred to a car opposite or about opposite the car B—for example, to the car D—I close the door or valve L and open the valve K. The grain is then shoveled from the car by means of a steam-shovel, or otherwise, into the chute J, from which it passes into the elevator-leg through which the buckets move upward. The grain is thus elevated and discharged into the hopper of the hopper-scales located for discharging its contents into the car D. That hopper has its valve closed while being filled, and when full the grain therein is weighed and discharged into the car intended to receive it.

The operation, so far as now described, is complete, and the grain has been weighed and transferred so as not to be mixed with other grain or lots of grain. It may sometimes happen, however, that it may be either necessary or desirable to transfer the grain from one car to another not opposite the car to be unloaded; in other words, I may wish to transfer the grain from the car B to the car E when the said cars are arranged with relation to each other as represented in Fig. 3. In such case I close the door or valve K and open the door or valve L and set the conveyer in operation. I also open one of the slides or valves O in the conveyer-way, the valve so opened permitting the conveyer-way to communicate with the boot forming a part of the elevating apparatus for elevating the grain into the hopper discharging into the car E. By this means the grain discharged into the conveyer-way will be carried to the open door O, pass through that door, be elevated, discharged into a hopper, and weighed, and then discharged into the car E.

The conveyer I employ only for the purpose of enabling me to transfer the grain to a car not opposite the car being unloaded; but it will be perceived that some of the principal features of my invention will be brought into use if the elevators and hopper-scales are not

5 duplicated, and that the grain may be transferred and weighed without being mixed with other grain when only one elevator and hopper-scale are employed. In the latter case the conveyer is not essential, and is only essential for the purposes described.

Mill-feed and seeds, coal, ores, or minerals, as well as grain, may in like manner be transferred and weighed.

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

1. The combination of a fixed or stationary building, the tracks F and G, an elevator apparatus, an elevated hopper-scales having a fixed or stationary hopper provided with a valve or slide in its bottom, and a discharge-spout, P, adapted and arranged for discharging the grain directly from the said hopper into a car, substantially as specified and for the purposes set forth.

2. The combination of a fixed or stationary building, the tracks F and G, two or more elevating apparatus, a series of two or more elevated hopper-scales having fixed or stationary hoppers each having a valve or slide in its bottom, the discharge-spouts P P, adapted and arranged for discharging the grain directly from the said hoppers, respectively, into a correspondingly-arranged car, a horizontal conveyer, the chutes J J, having therein the doors or valves K and L, and the slides or doors O O, all arranged, substantially as shown and described, with relation to each other and for the purposes set forth.

35 In testimony that I claim the foregoing as my own I hereto affix my signature in presence of two witnesses.

EDWARD S. RICHARDS.

Witnesses:

F. F. WARNER,

J. B. HALPENNY.