

(No Model.)

J. IMMEL.  
COMBINED GRAIN DUMP AND ELEVATOR.

No. 555,954.

Patented Mar. 10, 1896.

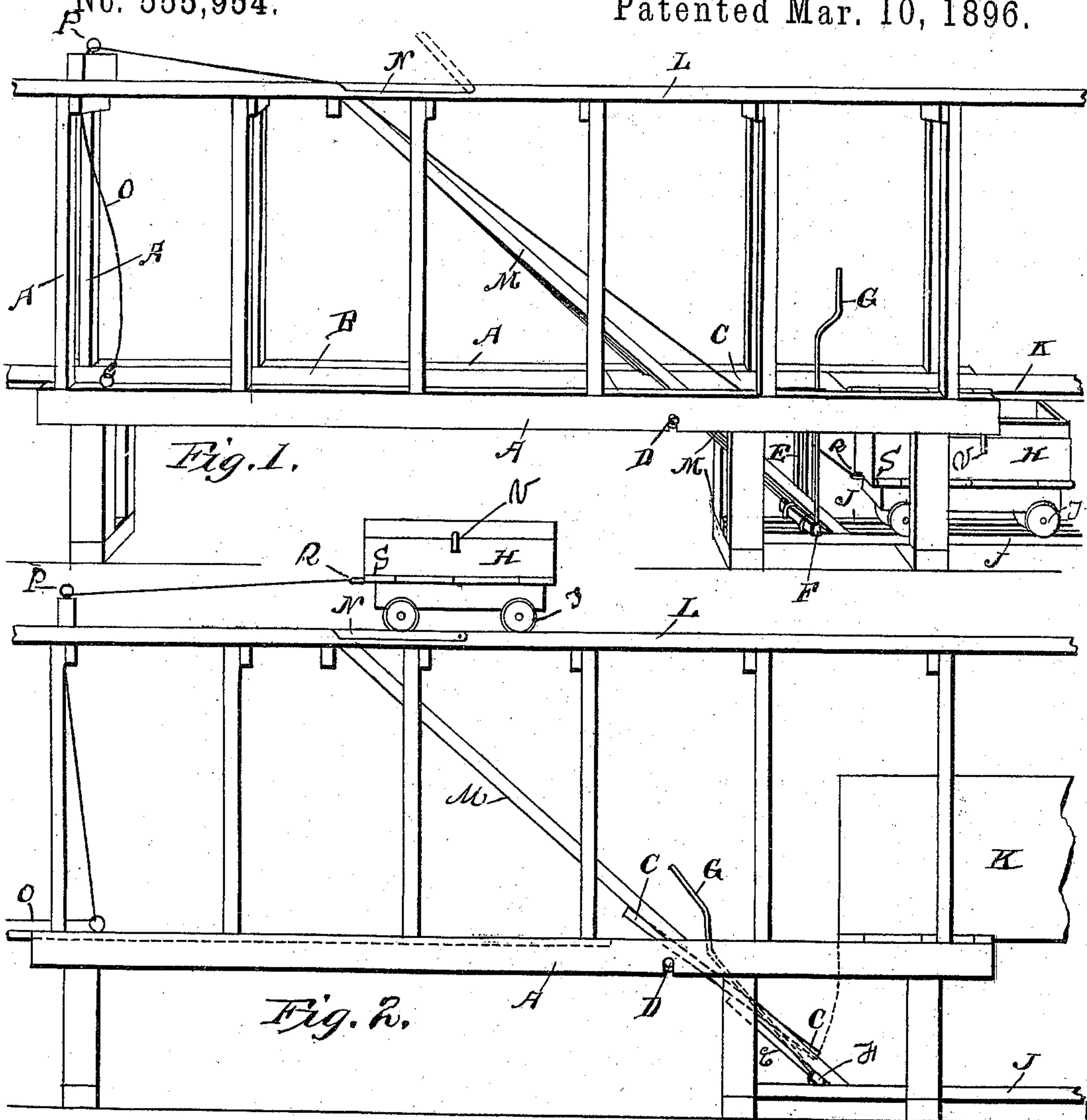


Fig. 1.

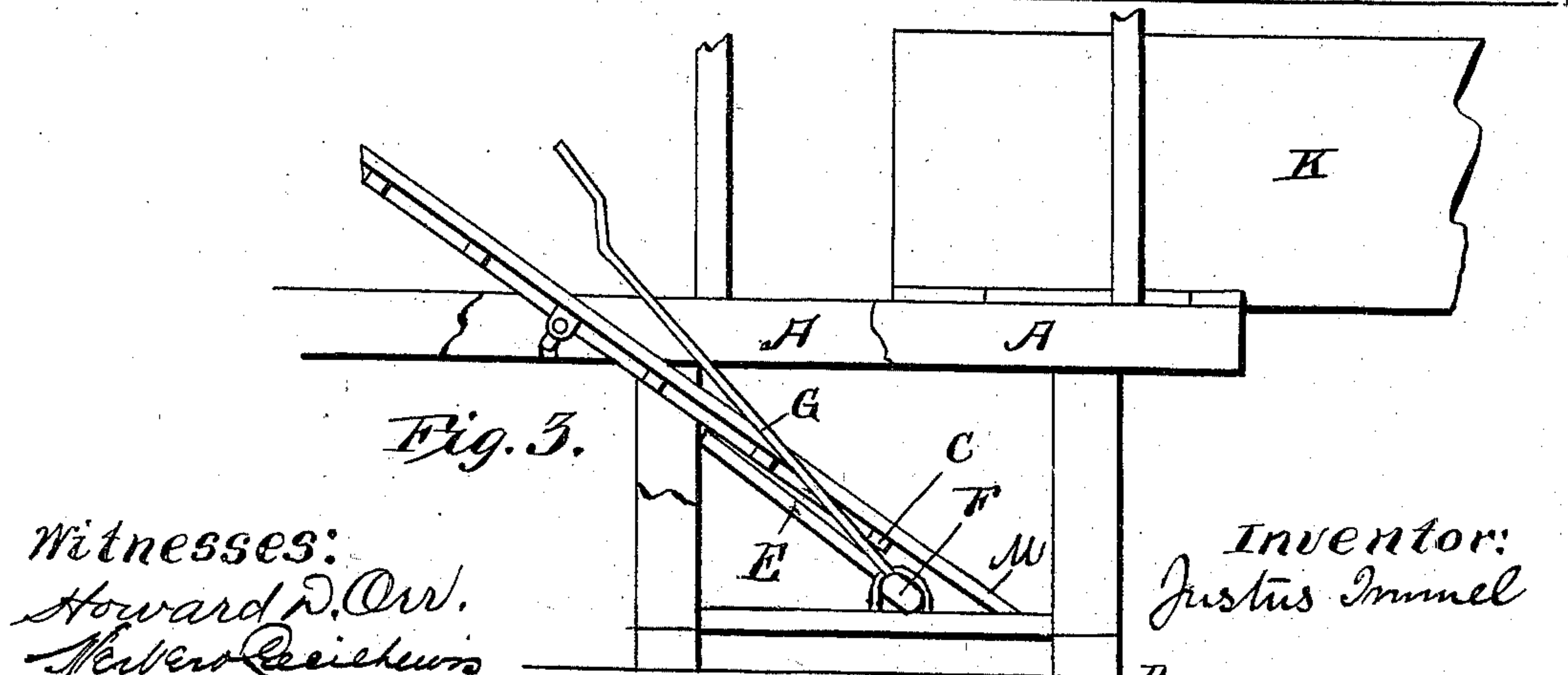


Fig. 2.

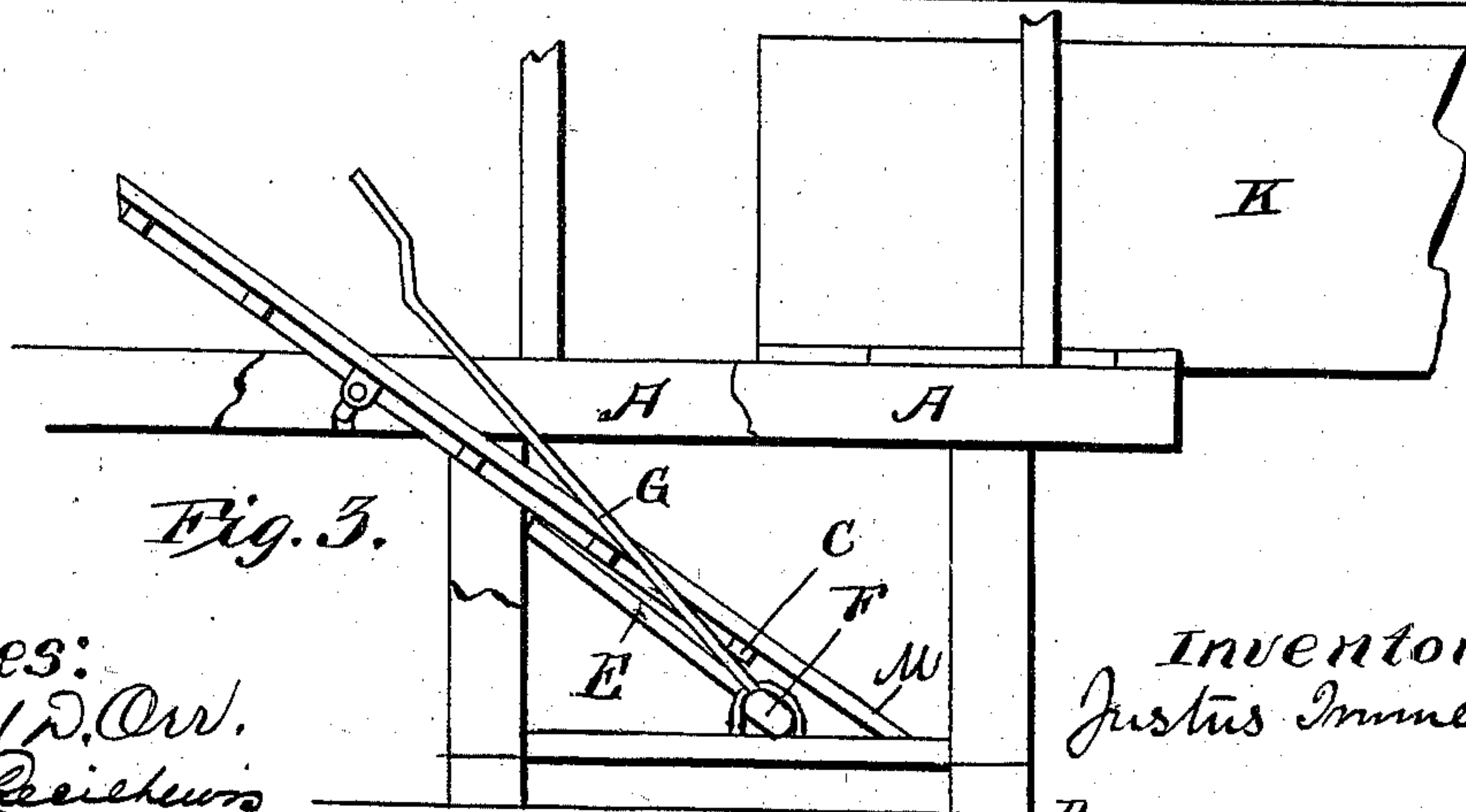


Fig. 3.

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# UNITED STATES PATENT OFFICE.

JUSTUS IMMEL, OF WALNUT, ILLINOIS.

## COMBINED GRAIN DUMP AND ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 555,954, dated March 10, 1896.

Application filed December 16, 1895. Serial No. 572,291. (No model.)

*To all whom it may concern:*

Be it known that I, JUSTUS IMMEL, a citizen of the United States, residing at Walnut, in the county of Bureau and State of Illinois, have invented certain new and useful Improvements in a Combined Grain Dump and Elevator; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to combined and co-operating devices, with the purpose in view of automatically unloading a wagon-load of grain in to a car, elevating the car to and upon a track at any desired elevation, and for the second time automatically discharging the grain through the sides of said car into the receptacle therefor.

One contingency which suggested the origin of assisting machinery is the fact that corn-cribs, in order to make the most of the floor and roof, are being built as high as it is possible to throw corn into them from the wagon, and this necessitates the employment of a full-sized man, and thereby precludes the substitution of boys, who for the purpose of husking are about as efficient as men.

With my invention not only can the boy unload the wagon-box full of ears with the same facility as can a man, but either can accomplish such unloading in a much shorter period of time than is usually consumed and with substantially no manual labor.

Another advantage of my invention is that it will render it feasible to build corn-cribs and granaries much higher than at the present, and thereby save ground-space and require proportionately less floor and roof for such crib or granary.

My invention is equally adaptable to unloading any loose material carried in a wagon-box, and can therefore be utilized to fill cribs and granaries or any kind of bins with any kind of grain or other material which may be transported in wagons or cars.

My invention consists essentially in the co-incident or successive employment of a gangway at the side of or between cribs or bins, a

tilting platform arranged in said gangway to tilt longitudinally thereof, a continuous track at two or more altitudes with intervening and connecting diagonal track, a car adapted to traverse said tracks and a horizontal door or cover over said car when at its lowest position, such door normally forming part of said gangway.

I attain the aforesaid purposes by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of the position of the several devices at the time when the car is about to receive its load. Fig. 2 is the same after the car has been elevated in position to unload laterally into a crib or bin. Fig. 3 is details of the dump and adjacent parts.

Similar letters refer to similar parts in the respective views.

A A represent the opposite inner sides of two series of cribs or bins, between which is provided the road or gang way B. At a suitable point in said gangway is pivotally seated the dump C, being supported mainly by a rocking transverse beam D, journaled at each side of said gangway at or in the sills of the crib or bin. The cross-beam D is placed forward of the center of gravity of the dump C, but the latter is held from casually dropping by the shore E, which is seated on the rock-shaft F, suitably journaled a proper distance below the dump C and adapted, by means of the lever G, which projects upward within convenient reach at one side of the gangway, to be thrown forward diagonally toward the pivot of the dump C to permit the long or rear end of the latter to drop so as to tilt the wagon backward for unloading its contents. The car H is first placed upon the lower track, J J, which is beneath and to the rear of, but adjacent to, the dump C. A hinged door or doors K, over the car H, normally form part of the gangway, but are susceptible of being raised to permit the elevation of the loaded car and its return hereinafter mentioned. The track J J is connected to the track L L, seated at any desired elevation above said gangway, by means of the diagonal track M M, which latter is placed at each side of said gangway and extends from the track J J beneath the gangway to the track L L above it. A sufficient portion N of each



track L L is made in section and pivoted to the inner face of the frame of the bin or crib to permit the car H to pass up to and upon the upper track, L.

5 The operation of my invention is as follows: The car H is placed upon the track J J, the door K over the same being closed into a horizontal position and the shore E upright under the rear end of dump C. The  
10 loaded wagon is then driven over the door K upon the dump C, with the team standing on the stationary portion of said gangway forward of said dump. The door K is raised. The lever G is then thrown forward, which  
15 throws the shore E down between the track M M, when the rear end of the dump C by its own gravity and that of the load thereon tilts backward into the position shown in Fig. 2, which has the effect of turning the  
20 contents of said load into the car H. The wagon is then driven forward, the dump C turning to the horizontal by the draft of the team, but when the wagon is clear of the forward end of the dump the latter tilts back-  
25 ward between the diagonal track M M. The team is then attached to the forward end of a rope O, the opposite end of which is attached to the guide P seated midway between the track-rails L L and at the front  
30 end of the same and intermediately passed over a pulley R seated on the front end of the car H and returned through said guide P. The draft of the team on rope O draws the car H up the incline track M M, the short sectional track N N opening upward to permit  
35 said car to pass through the opening thus created onto the track L L. After the car H has passed to the upper side of the track L L the section N N is thrown down and the original continuity of the track L L restored. The  
40 car H can then be pushed by hand to any point on said track where it is desired to discharge its contents. The lower portion S of each side of the car H is horizontally pivoted at its  
45 lower edge and adapted to drop outwardly and rest upon the wheel T, thus forming lateral chutes to discharge the grain automatically into the adjacent bin or granary. The bottom of the car H can be made descending toward  
50 the sides or either of them, or, if preferred, can be arranged to tilt optionally toward either of the discharge-doors S. A suitable rocking

clasp V, seated in the side of the car H and adapted to be optionally swung over the upper edge of the door S, holds the latter in a closed position. After the car H has been unloaded  
55 it is moved forward by hand to a position in front of the track-section N N, when the latter is opened and the car H returned down the track M M, over the dump C, to its original  
60 position on track J J, when the lever G is thrown backward and the dump C thereby shored up, and door K closed down, when the parts are in place for the admission of another load.  
65

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

1. The combination of the tracks J, J and L, L, and the interconnecting diagonal track  
70 M, M, the sectional pivoted track N, N, normally forming part of the track L, L, the car H, and means substantially as shown for moving said car from said track J, J, up said track M M, to and upon the upper surface of  
75 the track L L, for the purpose described.

2. The combination of a pivoted dump C, rock-shaft F and shore E seated under the rear end of said dump in position to optionally support or release the latter, the lever G  
80 attached to said shaft F in position to oscillate the same, upper track L, L, and lower track J, J, diagonal interconnecting track M, M, seated respectively at each side of said dump, and a car H adapted to be drawn on said track M, M,  
85 through the opening created by the tilting rearwardly of said dump C, substantially as shown and for the purpose described.

3. In a combined grain dump and elevator, the combination of two or more tracks at different altitudes, a diagonal interposed track  
90 leading from one altitude to the other, a tilting dump seated over the lower track and between the diagonal track-rails, the car H, and means substantially as shown for transporting  
95 said car from one of said tracks to the other at a different altitude, substantially as shown and for the purpose described.

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

JUSTUS IMMEL.

Witnesses:

HANS SANDBERG,  
JOHN H. KNIGHT.