

No. 752,651.

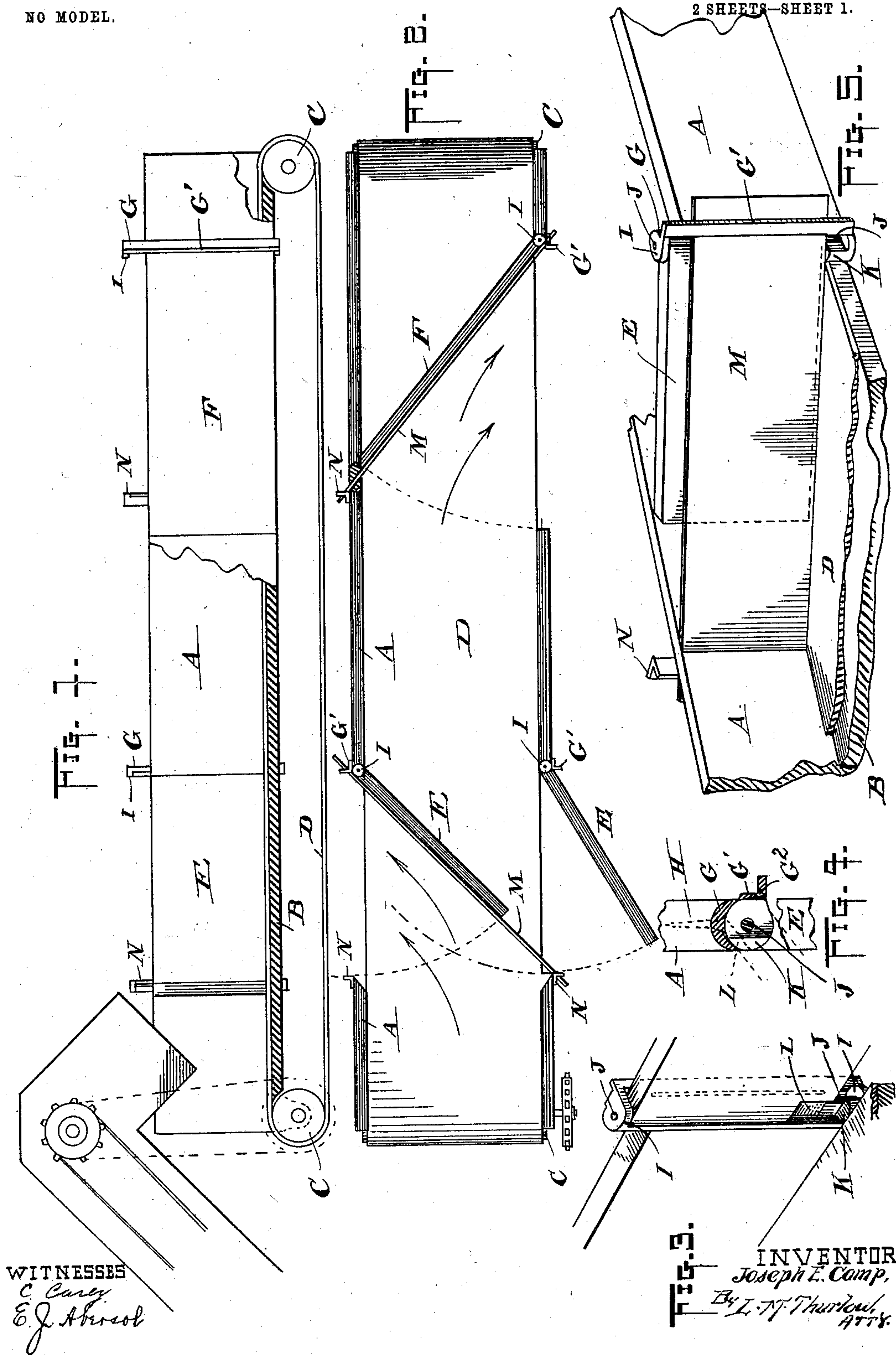
PATENTED FEB. 23, 1904.

J. E. CAMP.  
GRAIN CONVEYER.

APPLICATION FILED JAN. 19, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



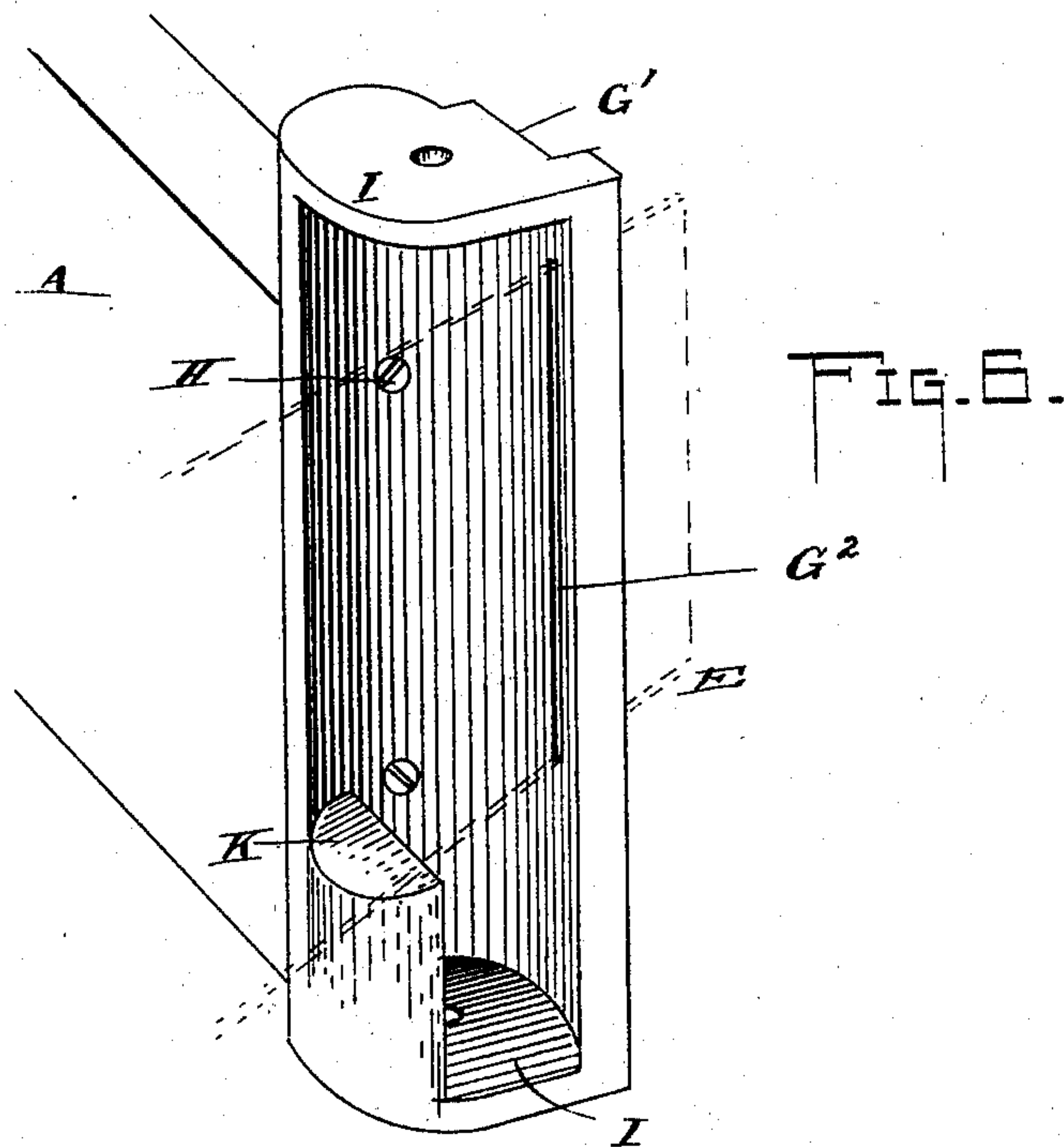
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WITNESSES  
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# UNITED STATES PATENT OFFICE.

JOSEPH E. CAMP, OF WASHINGTON, ILLINOIS.

## GRAIN-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 752,651, dated February 23, 1904.

Application filed January 19, 1903. Serial No. 139,722. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH E. CAMP, a citizen of the United States, residing at Washington, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Grain-Conveyers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to  
10 which it appertains to make and use the same.

This invention pertains to improvements in conveyers of that class employed in handling grains.

The object of the present invention is to provide a conveyer means whereby it will be capable of delivery at either side thereof by opening a door at the side at which the delivery is to be made and throwing said door back against the opposite side of the conveyer,  
20 whereby the grain is made to impinge thereon and made to pass out through the doorway.

Still another object of the invention is to provide a deflecting plate or slide for insertion through both the sides of the conveyer in front of the open door for receiving the grain and causing it to flow out of the opening made by said door, all of which will be clearly pointed out in the following specification, aided by the accompanying drawings,  
30 in which—

Figure 1 is a sectional elevation of the conveyer, showing an elevator for delivering grain thereinto. Fig. 2 is a plan view of the conveyer, showing the doors therein and the slides therefor. Fig. 3 is a perspective view of a portion of the conveyer and a portion of a door therefor, showing a hinge for the latter. Fig. 4 is a plan view in part section of that shown in Fig. 3. Fig. 5 is a perspective view  
40 of a portion of the conveyer, showing the door and slide. Fig. 6 is a perspective view of a casting, showing a slot therein for the reception of a deflecting-plate.

My conveyer consists of the sides A and the bottom B, forming the body, these parts being secured rigidly together. At each end of the conveyer thus constructed is journaled a roller C, over which runs a belt D, having a perfectly-plane surface—i. e., without any  
50 slats or carrying means. Said belt is intend-

ed to be carried along on the bottom B of the conveyer, as shown in Figs. 1 and 5. At intervals along the sides door-openings are cut, as indicated in Fig. 2, these openings being above the bins into which it is desired that grain should be delivered. While I have  
55 shown a short length of the conveyer with several openings close together, it is only done in this manner to better show the invention in a limited space, and it must therefore be understood that it is intended to have the device of any length desired.

At the left of Fig. 2 are shown two openings opposite each other and provided with the doors E, adapted to swing both in and out,  
65 as indicated by broken lines in that figure. At another place in said Fig. 2 is shown a single door F, adapted to swing inside the conveyer and thrown back against the farther side thereof, as shown. All of the doors, whether located opposite one another or placed  
70 singly, are provided with a peculiarly-constructed hinge. It consists of a body G, in the shape of a crescent, secured by screws H, Fig. 4, to the end of the side A, which is grooved to receive said hinge. The door which is pivoted to said hinge is rounded, so as to fit into the body G, and an ear I at the top and bottom of the latter serve to support a pivot-pin J,  
80 which passes vertically through the door, as will be understood. On the bottom ear is a lug or extension K, which extends upward, as shown in Figs. 3 and 5. The door is notched at L to correspond with this lug, so that said door when shut or in its normal position can  
85 pass down at the outside of the bottom B, it being understood that the sides instead of being set upon the bottom are secured to the sides of the same, as shown. It will be seen, then, that the doors when closed are dropped  
90 down at the side and when open must be raised above the bottom and the belt lying thereon before they can be adjusted. The lug K described is made to rise to the level of the top surface of the belt D, and in opening the door inward it must be raised up high enough to  
95 allow the lower edge thereof to swing, and when swung inward said lower edges will rest upon the lug. Fig. 4 will show this to be true, the broken lines representing the door and the  
100



recess or notch L. The hinge is made of sufficient height to permit the door to be raised, as shown by Fig. 3. In Fig. 2 the single door is made of a length sufficient to extend entirely  
 5 across the conveyer and form an angle that will cause the grain to be pushed out of the opening as the belt moves along beneath the door. It is clear that the intention is to provide a smooth belt that will just pass under  
 10 the door. The grain is carried in a continuous and unceasing stream toward and against the door and must as a matter of course be swept from the belt and pushed out of the opening into the desired receptacle. The door  
 15 may be merely thrown open and left without securing means, since the pressure of grain against it will keep it pushed back in the position shown, or a covering of metal may be used, if desired, that will prevent wearing out  
 20 the wood of which the door is composed.

When using the short doors E, some means must be employed to deflect the grain, and therefore I provide a plate M, which can be angled across the conveyer and held in place  
 25 in front of the door, as shown. This plate may also be used for the single door, above described. Formed with the hinge G is an outer wall G', through which is cut a slot G<sup>2</sup>, so placed that the plate may be pushed there-  
 30 through and into a similar slot (not shown) in an angle-piece N, secured to the opposite side A opposite the hinge of the door at that side. It will thus be seen that the plate is firmly held in the desired position to accomplish the  
 35 desired end. The slots in each portion are not extended lower than the upper surface of the belt, so that the plate is held at just the desired level to do the work desired of it. In the case of the doors E the wall G' of the  
 40 hinges G are set sufficiently away from the outer surfaces thereof to permit them to open only far enough to permit the plate to be pushed through the portion N, as will be understood. The single door F is never carried  
 45 outside the conveyer, as the doors E are, and in consequence the matter of setting the wall G' away is unnecessary. It is obvious that the plates may be employed alone and the doors eliminated, if desired.

50 Obviously changes of one kind or another may be made in the construction of the conveyer and the means for supporting and hinging the doors without departing from the intent of my invention, and therefore

55 I claim—

1. A conveyer for distributing grain comprising the sides and closed fixed bottom, a smooth belt running along the said bottom for carrying the grain, and deflecting-plates  
 60 extending across the conveyer in close proximity to the belt in an angling manner there being openings in the sides of the conveyer through which the grain is caused to pass by said plates.

65 2. A conveyer consisting of the sides and

bottom, a smooth belt running along such bottom on which the grain is delivered and carried, there being door-openings in the said sides of the conveyer through which the grain is delivered, and deflecting-plates close to the  
 70 openings and angling across the conveyer and belt for deflecting the grain through such openings by being carried thereagainst by the said belt.

3. A conveyer for grain comprising the  
 75 sides, the fixed bottom to which the sides are secured, an endless belt adapted to run through said conveyer on the bottom thereof for carrying the grain, deflecting-plates extending  
 80 across the conveyer in close proximity to the belt, and means for holding the same in place, there being openings in the sides of the conveyer for exit of the grain as set forth.

4. In a conveyer, the sides A, the bottom B, the belt D adapted to run therethrough upon  
 85 the said bottom, for carrying the grain, the doors E, F in the sides of the conveyer, the hinges G for the same and the deflecting-plates M for interrupting the flow of grain and causing it to pass out through the door-openings  
 90 all arranged substantially as set forth and described.

5. A conveyer consisting of the sides and bottom, a roller at each end of the bottom the upper periphery thereof being flush with the  
 95 top surface of the said bottom, an endless smooth belt running over said rollers and dragging upon the bottom, there being openings in the sides of the conveyer, doors permanently hinged in the openings and adapted  
 100 to be raised to swing inward above the belt to form a deflecting member for grain carried on the belt to force the grain out through the opening left by said door.

6. A conveyer consisting of the sides and  
 105 bottom, a smooth belt adapted to drag on the bottom, there being openings in the sides of the conveyer, doors permanently hinged in said opening for tightly closing the same, said doors adapted to rise from the bottom of the  
 110 conveyer to the height of the top surface of the belt and swing inward to cross said belt in an angling direction substantially as described and for the purposes set forth.

7. A conveyer consisting of the sides and  
 115 bottom, a smooth belt adapted to drag on the bottom, there being openings in the sides of the conveyer, doors permanently hinged in the openings for tightly closing the same when desired and adapted to rise to the top of the  
 120 belt and swing across the same in an angling direction, means for sustaining the door in the raised position to permit the belt to pass under substantially as described.

8. A conveyer comprising the sides and bot-  
 125 tom, a smooth belt adapted to drag upon the bottom, there being openings in the sides, doors permanently hinged in the openings and adapted to rise to the top of the belt and swing thereover as described and for the purposes  
 130



explained, a bracket at each corner of the openings there being slots therein and a deflecting-plate occupying position in two of the diagonally-located slotted brackets for the purposes set forth.

9. A conveyer comprising the sides and bottom, a belt therefor, there being openings in the sides, deflecting-plates diagonally crossing the belt from opening to opening and verti-

cally-slotted brackets at each opening for receiving and holding the plates in position substantially as set forth and described.

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

JOSEPH E. CAMP.

Witnesses:

FRANK HUNGERFORD,  
L. M. THURLOW.