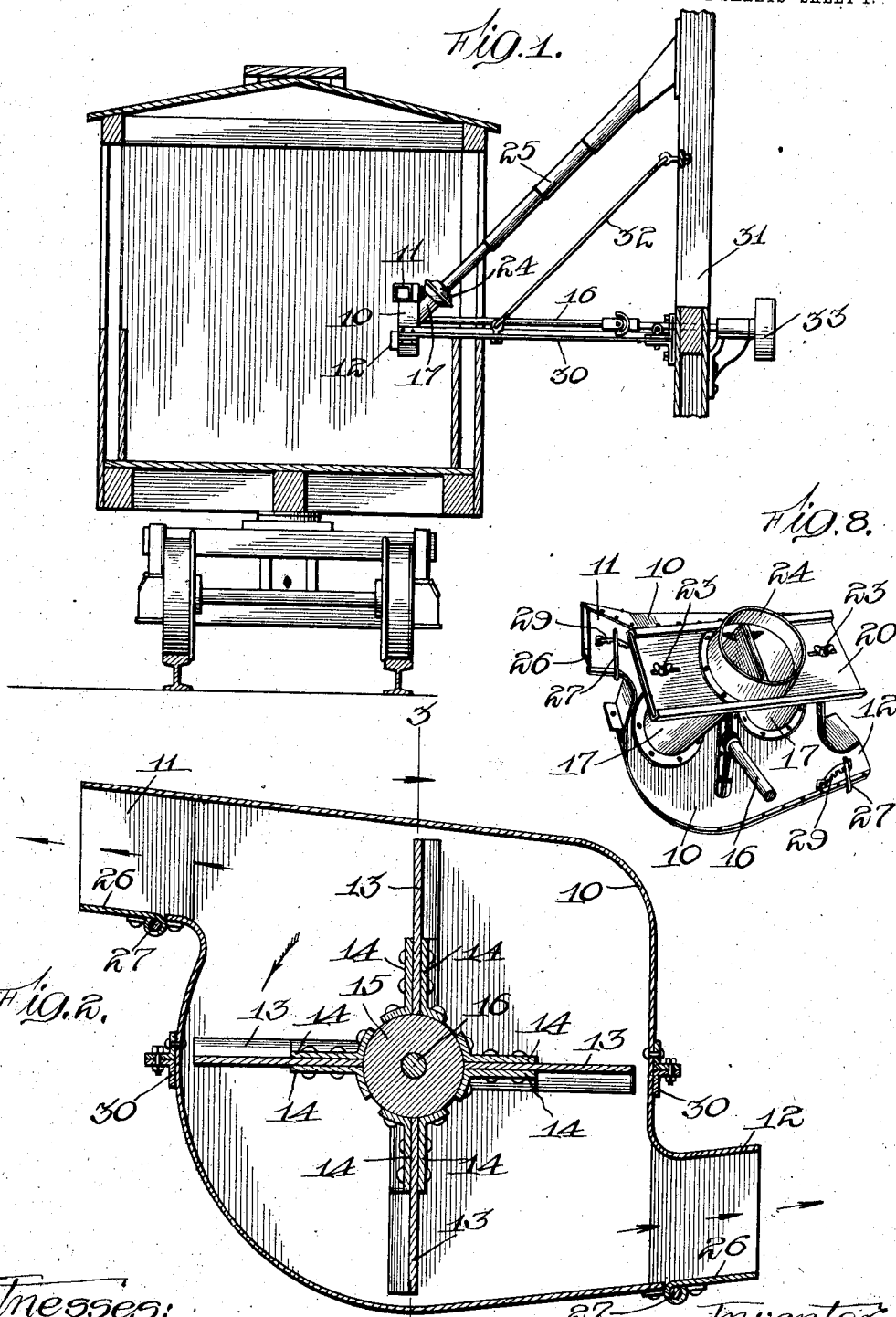


No. 834,331.

PATENTED OCT. 30, 1906.

T. J. SKILLIN.
GRAIN DISTRIBUTING DEVICE.
APPLICATION FILED MAR. 22, 1906.

2 SHEETS—SHEET 1.



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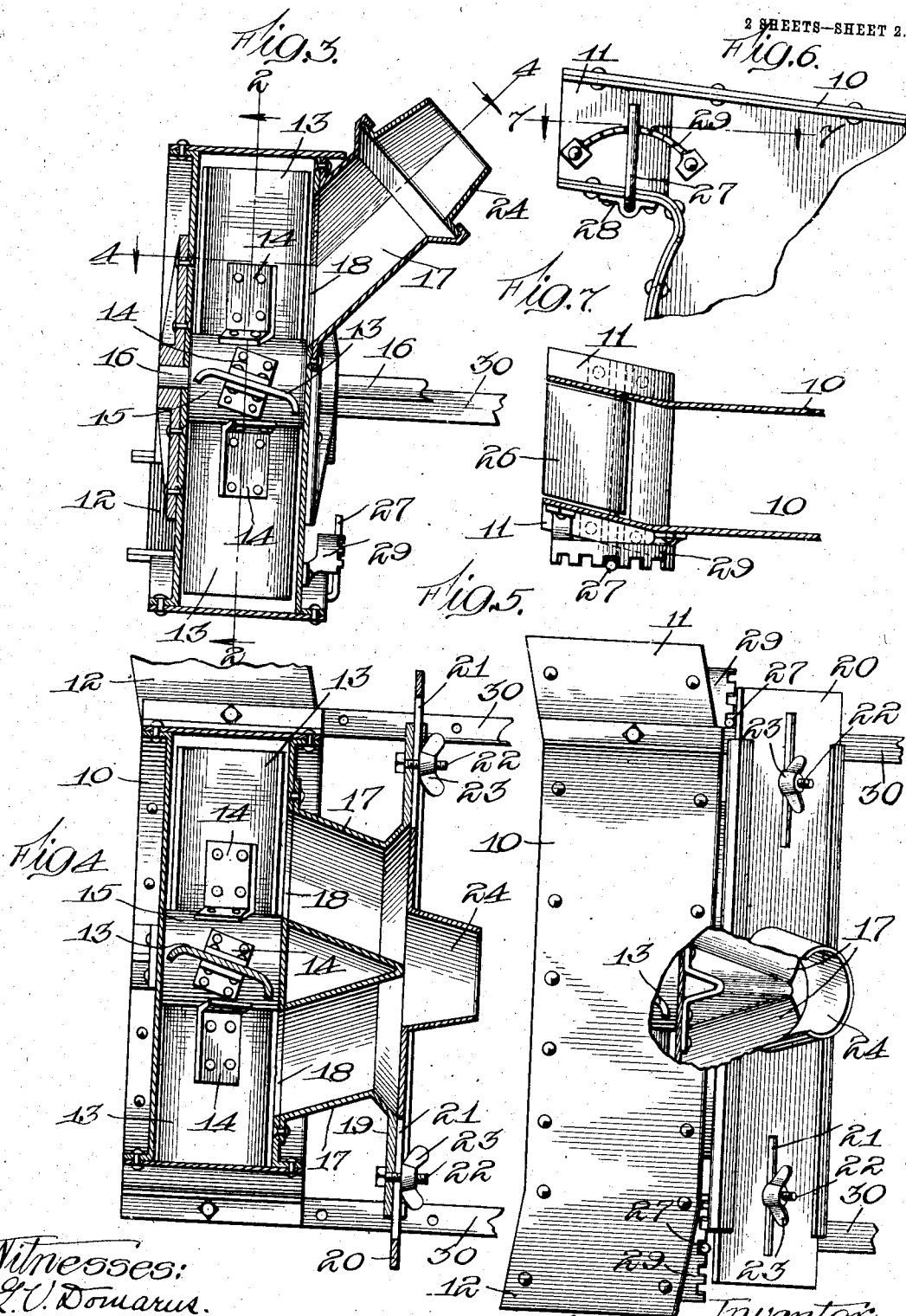
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

THOMAS J. SKILLIN, OF OAK PARK, ILLINOIS, ASSIGNOR TO SKILLIN & RICHARDS MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

GRAIN-DISTRIBUTING DEVICE.

No. 834,331.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed March 22, 1906. Serial No. 307,518.

To all whom it may concern:

Be it known that I, THOMAS J. SKILLIN, a citizen of the United States, residing at Oak Park, Cook county, State of Illinois, have invented certain new and useful Improvements in Grain-Distributing Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to devices for filling box-cars or other receptacles with grain, such grain being received through a suitable spout from an elevator or other place of storage.

The invention comprises a shell or casing into which the grain is received and from which it is discharged through suitable outlets by means of a set of blades affixed to a rotatable shaft.

One of the leading objects of my invention is to provide a device of this character that can be located at one side of a car just within the usual central doorway and have the grain that is discharged therefrom directed toward the vertical centers of the end walls of the car. This is of very considerable importance, inasmuch as when the device is located in the center of the car, as has heretofore been the ordinary practice, it is very often difficult or impossible to get the required pitch or inclination to the spout through which the grain is delivered to the device from an elevator. I accomplish this object by providing the device with two fixed discharges, each laterally inclined in the same direction. I have further improved such devices in various details of construction, all as hereinafter more specifically pointed out and described. That which I believe to be new will be pointed out in the claims.

In the drawings, Figure 1 is a central vertical section through a car-body, showing my improved device in connection therewith. Fig. 2 is a longitudinal vertical section taken on the line 2 2 of Fig. 3. Fig. 3 is a vertical cross-section taken on the line 3 3 of Fig. 2. Fig. 4 is a section taken on line 4 4 of Fig. 3. Fig. 5 is a top or plan view, partly broken away. Fig. 6 is a detail, being a side elevation of a portion of the shell or casing of the device and showing the means for effecting an adjustment of the movable plate in the bottom of one of the discharge

ends of the device. Fig. 7 is a section taken at line 7 7 of Fig. 6. Fig. 8 is a perspective view, the parts being shown on a smaller scale than in Figs. 2 to 7, inclusive.

Referring to the several figures of the drawings, in which corresponding parts are indicated by like reference characters, 10 indicates a shell or casing formed, as shown, of top, bottom, and side plates suitably riveted together, said parts being so shaped as to provide projecting open ends 11 and 12, forming passages through which grain fed into the device, as hereinafter described, can be discharged, 11 indicating the upper discharge and 12 the lower discharge. As clearly shown in Fig. 5, these projecting ends 11 and 12, that form the discharge-passages, are laterally inclined, the inclination of both being toward the same side and such lateral inclination being sufficient to direct streams of grain issuing therefrom toward and against the vertical central portions of the end walls of the car, so that the grain thus deposited at the ends of the car will tend to be equally distributed toward each side of the car. These discharges 11 and 12 are, as will be understood from the foregoing description, fixed so as not to be movable from one side to the other independently of the shell or casing. With the discharges so constructed and properly inclined the device when set just within a doorway of a car will need no attention, but will properly direct the grain at all times, so as to insure the formation of proper piles at the ends of the car and, as before explained, will at the same time be in position within the car to permit of the spout leading from the elevator having the greatest amount of pitch or inclination.

As shown, the plates that form the upper and lower walls of the shell or casing are suitably curved, so as to offer the least resistance to the movement of the grain within the shell or casing. Within the shell or casing is mounted a series of blades 13, bolted to suitable brackets 14, that in turn are bolted to a hub 15, that is secured upon the end of a shaft 16, journaled in the side plates of the shell or casing 10, the plates being preferably set at a slight angle, as best shown in Fig. 3.

17 17 indicate two short pipes located on opposite sides of the shaft 16 and both secured to one of the side plates of the shell or casing.

10. These pipes are inclined upwardly and converge toward each other, as best shown in Figs. 5 and 8. They form passages through which grain is fed to the interior of the shell or casing, such grain passing from the pipes into the casing through openings 18 in the side wall of the shell or casing around which openings the pipes are placed. Formed with these pipes 17 at their outer ends, or suitably secured thereto, is a flange 19, upon which rests a damper in the form of a flat plate 20, which is movable back and forth, being preferably guided in its movement by guides formed on the side edges of the flange 19. The damper-plate 20 is provided with slots 21, through which and through holes in the flange 19 pass screw-threaded bolts 22, upon which are screwed nuts 23. By means of these nuts the damper-plate can be held in any position to which it is adjusted. In the center of this damper-plate 19 is formed a large opening around which, on the upper face thereof, is a collar 24, adapted to receive the lower end of a spout, such as 25, through which grain is discharged from an elevator or other receptacle. Each of the projecting ends 11 and 12, that form the laterally-inclined discharge-passages, is provided with a plate 26, secured near its rear edge to a rod 27, journaled in suitable brackets 28, which rod has one end turned up (see Figs. 6 and 7) and engages any one of the notches of a curved rack 29, bolted to the side plate of the shell or casing. By turning this rod the plate 26 can be turned as desired to regulate the size of the opening through which the grain passes, and by giving it an upward inclination the stream of grain flowing from it can be directed upward, as desired, toward the roof of the car.

30 indicates two supporting-bars to which the shell or casing 10 is adapted to be attached and held projected into the car, near one side thereof, as shown in Fig. 1. The inner ends of these supporting-bars are attached in any suitable manner to a wall of the elevator, said wall being indicated by 31, or to any other suitable support, to which said support are also attached two stay-rods 32, that are connected at their lower ends to the bars 30 to hold such bars in proper horizontal position.

33 indicates a driving-pulley on the shaft 16, to which power is adapted to be applied to turn such shaft, and the set of blades 13 carried thereon. The spout 25 and the devices for supporting the casing and the shaft for rotating the blades in such casing are to be of such construction and arrangement as will permit of their being readily removed or turned out of the way to permit of the removal from a car of the distributing device connected with them.

From the foregoing description it will be seen that with the set of blades 13 in the shell or casing 10 rapidly revolving and with

grain being permitted to flow into said shell or casing the grain that enters by the pipe adjacent to the upper discharge 11 will be forced by the blades out of the lower discharge 12, while the grain that enters through the pipe 17, that is located adjacent to the lower discharge, will be forced out through the upper discharge 11, and thus two constant streams of grain will be forced out of the shell or casing toward opposite ends of the car, and by reason of the lateral inclination of the two discharge ends such streams of grain will be directed toward the vertical central portions of the end walls of the car, thereby insuring the formation of even piles simultaneously at both ends of the car.

If for any reason it is desired to have more grain deposited at one end of the car than at the other, the damper-plate 20 can be readily moved to accomplish this end, and by such movement grain can be partially or wholly cut off from either of the passages 17, and the damper-plate can be so moved at any time without stopping the flow of grain from the elevator through the spout 25.

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

1. In a device of the character described, the combination with a shell or casing, of revoluble blades therein, said shell or casing having a plurality of feed-openings and a plurality of laterally-inclined fixed discharge-passages, substantially as described.

2. In a device of the character described, the combination with a shell or casing, of revoluble blades therein, said shell or casing having two feed-openings an upper laterally-inclined discharge-passage and a lower laterally-inclined discharge-passage, said discharge-passages being at opposite sides of said shell or casing and both being inclined in the same lateral direction, substantially as described.

3. In a device of the character described, the combination with a shell or casing, of revoluble blades therein, said shell or casing having a feed-opening and a laterally-inclined fixed discharge-passage, substantially as described.

4. In a device of the character described, the combination with a shell or casing, of revoluble blades therein, said shell or casing having two discharge-openings and two feed-openings, a pipe leading to each feed-opening, and a movable apertured damper-plate over the outer ends of said pipes adapted to regulate the amount of material passing through both feed-openings, substantially as described.

5. In a device of the character described, the combination with a shell or casing, of revoluble blades therein, said shell or casing having two discharge-openings and two feed-openings, a pipe leading to each feed-opening, a movable apertured damper-plate over the

outer ends of said pipes adapted to regulate the amount of material passing through both feed-openings, and means carried by said damper-plate for the attachment of an elevator-spout, substantially as described.

5 6. In a device of the character described, the combination with a shell or casing, of revoluble blades therein, said shell or casing having two discharge-openings and two feed-
10 openings, said feed-openings being located in one of the sides of the shell or casing, two out-

wardly and upwardly extending pipes leading to said feed-openings, said pipes converging at their outer ends, and a movable apertured damper-plate over the outer ends of
15 said pipes adapted to regulate the amount of material passing through both feed-openings, substantially as described.

THOMAS J. SKILLIN.

Witnesses:

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