

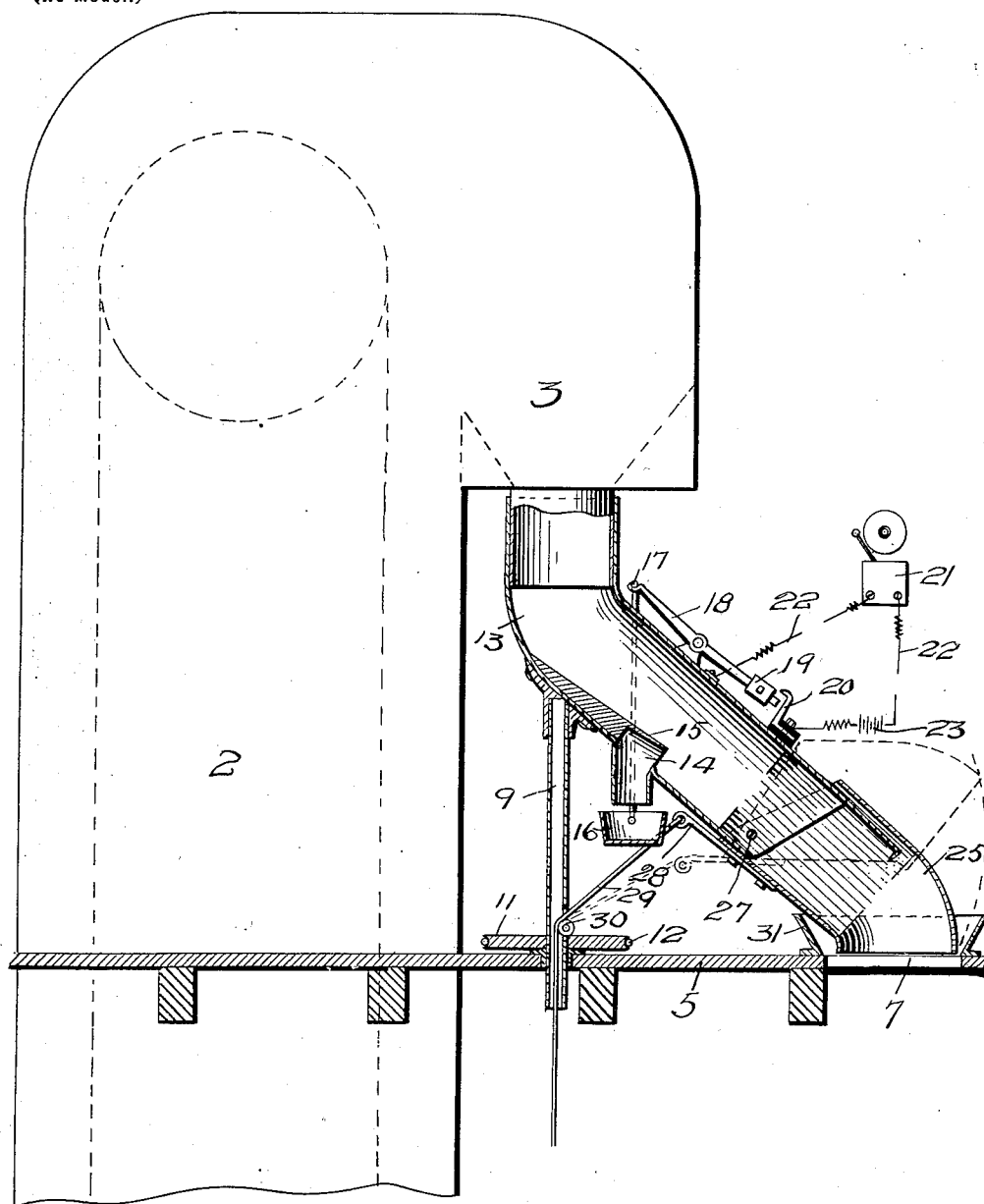
No. 649,702.

Patented May 15, 1900.

R. J. MOULTON.
GRAIN DISTRIBUTER.

(Application filed Nov. 10, 1899.)

(No Model.)



WITNESSES

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RANDOLPH J. MOULTON, OF MINNEAPOLIS, MINNESOTA.

GRAIN-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 649,702, dated May 15, 1900.

Application filed November 10, 1899. Serial No. 736,466. (No model.)

To all whom it may concern:

Be it known that I, RANDOLPH J. MOULTON, of Minneapolis, county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Grain-Distributers, of which the following is a specification.

This invention relates to improvements in grain-distributers designed for use in connection with grain-elevators; and the object I have in view is to provide means for giving an alarm or notifying an attendant when any bin with which the distributor is connected has become filled with grain.

The invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

The drawing forming part of this specification is a side elevation of a portion of a grain-elevator leg and head with my improved grain-distributor applied thereto.

In the drawing, 2 represents a portion of a grain-elevator leg, and 3 the head through which the grain is delivered into a swiveled distributing-spout. These distributing-spouts are usually located upon the machinery-floor or near the top of the elevator-building, and they conduct the grain from the elevator-head to suitable openings leading to the different bins. I have shown in the drawing the usual floor 5, arranged over the bins or a portion thereof, and I have shown one of the openings 7 in the floor. A number of such openings are generally used, arranged in a segment of a circle, so that the distributing-spout may be turned from one opening to another. It is usual to place a swivel-spout on the under side of the elevator-head, which spout is preferably supported by a suitable standard 9, to which is secured a wheel or pulley 11, and a cable 12, passing around this pulley, extends to the lower floor of the elevator or to any other convenient point and is so arranged that the attendant or operator may, through means of the cable, turn the spout 13 that I have here shown is swiveled upon the head and supported by the standard 9 in the usual manner. I provide the spout 13 with an overflow-opening 14, which is covered by a suitable plate 15, the lower end of said plate being raised above the lower

wall of the spout. Below the opening 14 I preferably provide a small pan or receptacle 16, supported by a bail 17 upon a pivoted lever 18. This lever is preferably provided with an adjustable counterweight 19. An insulated contact-point 20 is arranged in position to be engaged by the end of the lever 18 when the receptacle 16 is depressed. The lever 18 and the contact-point 20 are arranged in an electrical circuit with a suitable bell 21 by means of conductors 22 and battery 23. This bell may be located on the lower floor of the elevator in another building, or at any other convenient or desired point. So long as the grain passes freely through the distributor none of it escapes through the opening 14. When the bin with which the distributor is connected becomes filled with grain, the grain backs up in the distributing-spout and flows out under the plate 15, through the opening 14, and falls into the receptacle 16. This causes said receptacle to be depressed, turning the lever 18 upon its pivot, closing the circuit, and sounding the bell or alarm and notifying the attendant that the bin with which the distributor is then connected is full of grain.

I also prefer to construct the distributor with a pivoted lower section 25, having, preferably, a curved lower end to properly direct the grain through the opening in the floor 5. This lower section of the distributor is rectangular in cross-section and is preferably connected to the main section, the lower end of which is also rectangular in cross-section, by a suitable pivot or pivots 27. An arm 28 is also connected to the lower section 25, and a cord 29, connected to this arm, extends over a suitable pulley 30 and to the bottom of the elevator or the main floor or to any other convenient point. By pulling downward on the cord 29 the lower section 25 of the distributor is raised into the position indicated by dotted lines in the drawing, thereby clearing the collar 31, which may be used around the opening 7 in the floor. With the lower section raised into this position it will serve as a gate to shut off the flow of the grain through the distributor. The distributor may then be turned to connect with another bin, and while it is being so turned none of the grain will be permitted to flow out on the floor 5.

While I have shown and described the pivoted lower section in connection with the distributing-spout, I make no claim in this application to the invention, as said section forms the subject-matter of a divisional application, executed February 9, 1900, filed February 12, 1900, Serial No. 4,952.

I do not limit myself to the details of construction herein shown and described. Instead of using an electrical signal or alarm I may use a mechanically-operated signal that is operated by the movement of the receptacle 16 or I may permit the grain to run from the opening 14 to a point on the main floor of the elevator, where it will attract the attention of the attendant or operator, and thus serve to give notice of the filling of the bin.

I claim as my invention—

1. A gravity grain-distributor provided in its walls with an overflow-opening, a receptacle into which the grain passes from said overflow-opening, and an alarm arranged to be operated by the movement of said receptacle.

2. A grain-distributor provided with an overflow-opening, an inclined plate extending over said opening and having its lower end

raised above the lower wall of the distributor, whereby as the grain backs up in the distributor it is permitted to escape under said plate and through said opening and means for signaling the attendant when grain escapes through said opening, substantially as described.

3. A gravity grain-spout, provided in its walls with a hole or opening through which the overflow of grain may pass and means arranged below said spout and actuated by the weight of the falling grain for signaling the attendant that grain is escaping through said opening, substantially as described.

4. A grain-distributor provided with an overflow-opening, in combination, with a movable receptacle, adapted to receive grain passing through said overflow-opening, a pivoted lever upon which said receptacle is supported and an alarm or signal adapted to be operated by the movement of said lever.

In testimony whereof I have set my hand this 6th day of November, 1899.

RANDOLPH J. MOULTON.

In presence of—

RICHARD PAUL,
A. C. PAUL.