

No. 756,519.

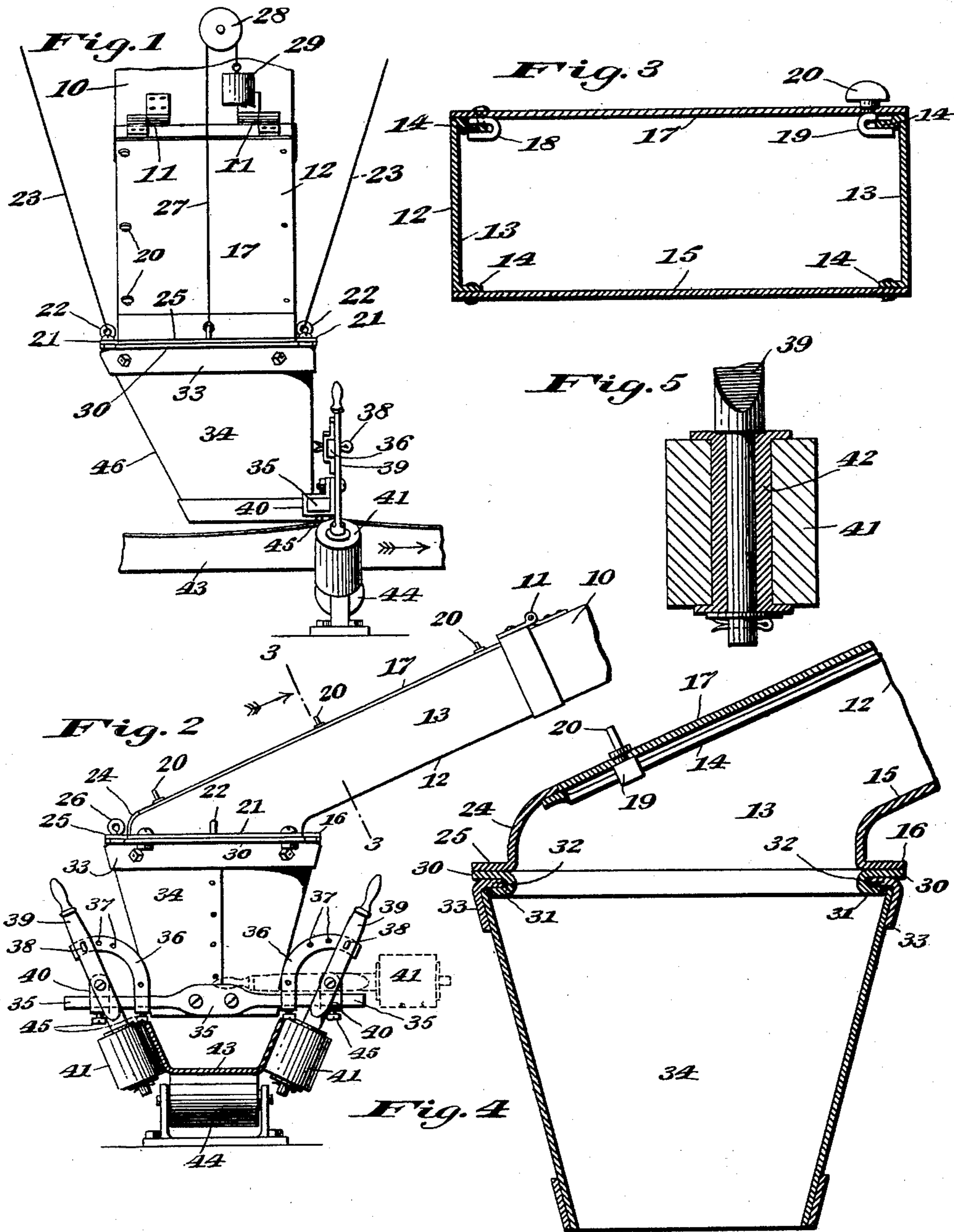
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TRANSFER SPOUT FOR GRAIN, ORE, OR THE LIKE.

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NO MODEL.



Witnesses

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TRANSFER-SPOUT FOR GRAIN, ORE, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 756,519, dated April 5, 1904.

Application filed December 17, 1903. Serial No. 185,559. (No model.)

To all whom it may concern:

Be it known that I, PETER O. OLSON, a citizen of the United States, residing at South Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Transfer-Spouts for Grain, Ore, or the Like, of which the following is a specification.

This invention relates to improvements in a transfer-spout, and while it is more especially intended to be used in elevators for conducting grain to and depositing it on a suitable conveyer by means of which it may be delivered to any one of a series of points or receptacles, yet it is applicable for use in connection with conveyers for transferring ore, coal, and like materials from one receiving-point in different directions or to different places; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a spout of the above-named character which shall be so constructed that its parts may be readily adjusted with respect to the conveyer so as to deposit grain or other material thereon when it is traveling in any direction and in such a manner as to prevent the escape of dust and the material falling off the conveyer at its sides or edges.

Another object is to provide a transfer-spout which shall be simple and inexpensive in construction, strong, durable, and effective in operation, and shall carry adjustable means for turning up and thus holding the edges of the conveyer, as well as guiding it.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a front view in elevation of a transfer-spout embodying my invention, showing a portion of the conveyer located thereunder. Fig. 2 is a side view in eleva-

tion thereof, illustrating by dotted lines the position to which the guide-rollers for the belt may be turned when it is desired to shift the position of the discharging-nozzle. Fig. 3 is a cross-sectional view of the spout, taken on line 3 3 of Fig. 2 looking in the direction indicated by the arrows. Fig. 4 is an enlarged central sectional view of a portion of the spout and the rotary nozzle, and Fig. 5 is a sectional view of one of the guide-rollers for the conveyer.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The reference-numeral 10 represents a portion of a chute which communicates at one of its ends with a bin or other source of supply (not shown) and is usually supported in an inclined and fixed position. To the lower end of the chute 10 is secured, by means of hinges 11, the spout 12, which in the present instance is shown as being rectangular in form, but which may be of any shape and size to correspond with the lower portion of the chute 10, with which it communicates. When rectangular in shape, it is preferably made of two side pieces 13, having intumed flanges 14 at their upper and lower edges. To the lower flanges is secured a bottom piece 15, which has an outwardly-extending flange 16 located at its lower end. A top 17, provided on its inner surface near one of its edges with a series of forked projections 18 to receive one of the flanges 14 on the upper portion of one of the side pieces, is located on the top edges of said side pieces, as is clearly shown in Fig. 3 of the drawings. The top 17 is provided on the inner surface of its edge opposite that on which the projections 18 are located with a series of catches 19, each of which is pivotally secured on the top 17 and has a stem 20, to be used for turning the same, so that it may be caused to engage or disengage the flange 14 on one of the side pieces of the spout. By thus securing the top 17 in place it is apparent that it may be readily removed, so that access may be had to the interior of the spout. The lower end of each of the side pieces 13 is provided with an outturned flange 21, which has at about its middle an eyelet 22, to each

of which is secured one end of a supporting cord or wire 23, the other end of which may be attached to a suitable support.

As shown in Figs. 2 and 4 of the drawings, the lower portion of the spout 12 is provided at its front end with a transverse piece 24, which extends from one of the side pieces 13 to the other and has an outturned flange 25, which is provided with an eyelet 26, to which is secured one end of a cord 27, which passes over a suitably-supported pulley 28, and has attached to its other end a weight 29 for counterbalancing the spout, so that it may be raised or lowered when desired. Secured to the lower surfaces of the flanges 16; 21, and 25 is a plate 30, which has a central opening and is provided with a downturned and outwardly-projecting annular flange 31 to engage an inturned flange 32 on the upper portion of an annular band 33, which is secured to the upper portion of the discharging-nozzle 34, which is circular in shape, but tapers toward its lower end. Secured horizontally on the lower portion of the nozzle is a bar 35, on which is adjustably mounted near each of its ends a segmental arm 36, each of which has a series of openings 37 to receive pins 38, used for securing the levers 39 in the proper position, which levers are fulcrumed on clips 40, adjustably secured on the bar 35 near each of its ends. Journaled on the lower portions of each of the levers 39 is a roller 41, each of which is preferably provided with a bushing 42, of Babbitt metal or other suitable material. From the foregoing and by reference to the drawings it will be seen and clearly understood that by rotating the nozzle 34 the guide-rollers for the conveyer 43, which may be of any suitable kind, but preferably in the form of a belt, and which may be supported on horizontal rollers 44, may be brought into position so as to receive the belt or conveyer therebetween, when by adjusting the levers 39 to the proper angle it is apparent that the edges of the belt or conveyer will be bent upwardly, as is clearly shown in Fig. 2 of the drawings, so as to prevent the grain or other material falling off its sides or edges. When it is desired to rotate the nozzle, one of the levers 39 may be turned on its fulcrum to the position shown by dotted lines in Fig. 2, when it will be out of the way of the belt or conveyer, as is apparent.

By movably mounting the arms 36 and the clips 40 on the supporting-bar 35 it is evident that their positions may be changed so as to regulate the distance between the rollers 41 on the levers, thereby enabling more or less

of the conveyer to be turned up at its edges. The said arms and clips may be fixed on the bar 35 by means of set-screws 45 of the ordinary type.

It will be observed in Fig. 1 that the discharging-nozzle 34, as well as being tapered, has a portion of its wall inclined, as at 46, for the purpose of discharging the material in the direction of the travel of the conveyer, thus preventing clogging, and as the lower end of the nozzle is located a slight distance above the conveyer it is apparent that the escape of dust will be prevented.

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

1. The combination with a spout, of a discharging-nozzle rotatably secured thereto and communicating therewith, a bar secured horizontally on the nozzle, a lever fulcrumed on said bar near each of its ends, and a roller journaled on the lower portion of each of said levers, substantially as described.

2. The combination with a hinged and counterbalanced spout, of a discharging-nozzle rotatably secured thereto and communicating therewith, a conveyer-guide mounted on the lower portion of the nozzle and comprising two levers fulcrumed at a distance apart, a roller journaled on the lower portion of each lever, and means to adjust the inclination of the levers, substantially as described.

3. The combination with a spout, of a discharging-nozzle rotatably secured thereto and communicating therewith, a conveyer-guide mounted on the lower portion of the nozzle and consisting of two levers fulcrumed at a distance apart, a roller journaled on the lower portion of each of the levers, and means to adjust the position of the levers as well as to regulate their inclination, substantially as described.

4. The combination with a spout, of a discharging-nozzle rotatably secured thereto and communicating therewith, a bar secured horizontally on the nozzle, a curved arm adjustably secured on the bar near each of its ends, a clip adjustably secured on said bar near each of its arms, a lever fulcrumed on each of said clips, a roller journaled on the lower portion of each of the levers, and means to adjustably connect the levers to the curved arms, substantially as described.

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