Jan. 14, 1930. W. THOMAS 1,743,939

GRAIN ELEVATOR SPOUT

Filed May 8, 1929 2 Sheets-Sheet 1

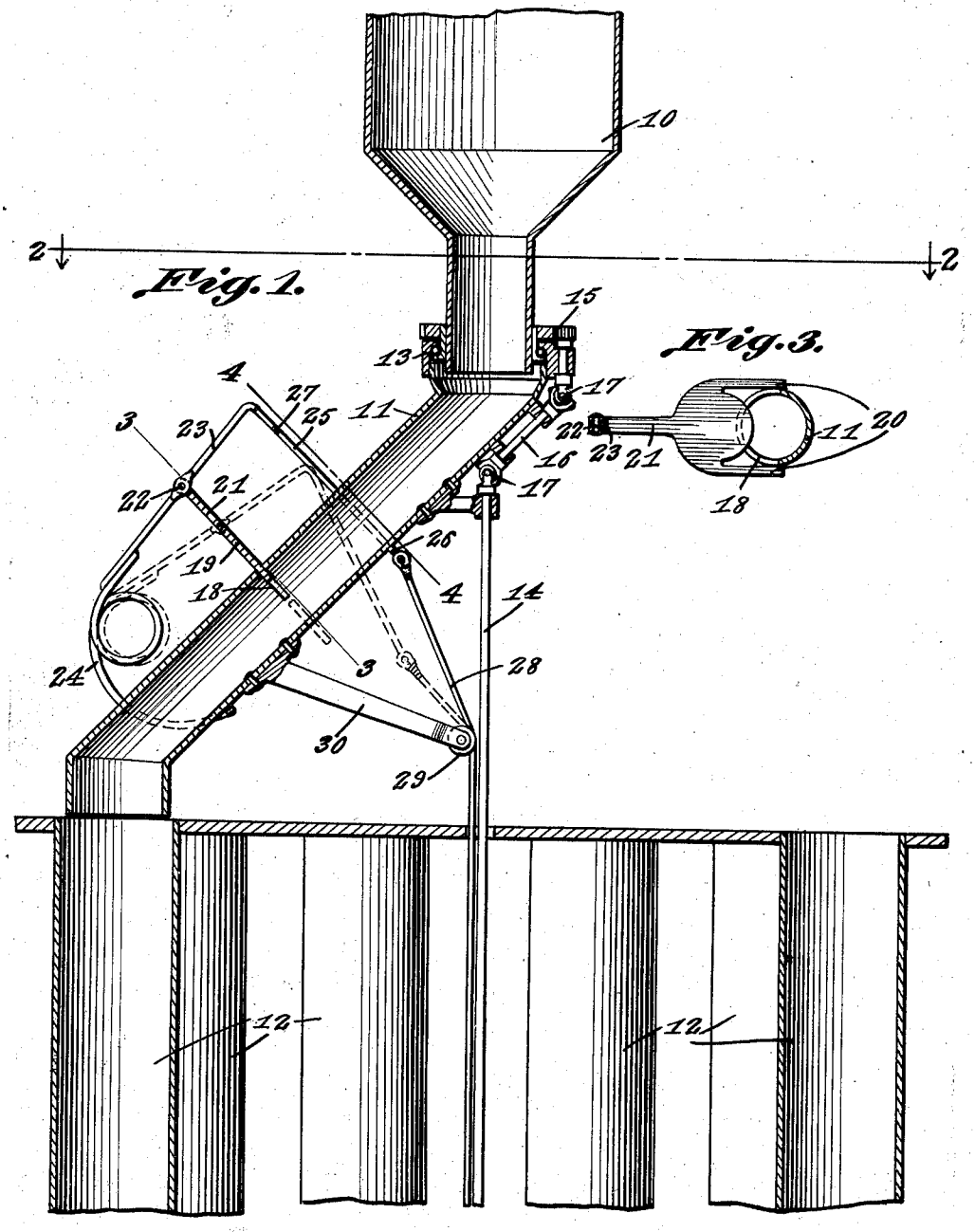

Fig. 1.

Fig. 3.

William Thomas, INVENTOR

BY Victor J. Evans

ATTORNEY

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Fig. 2.

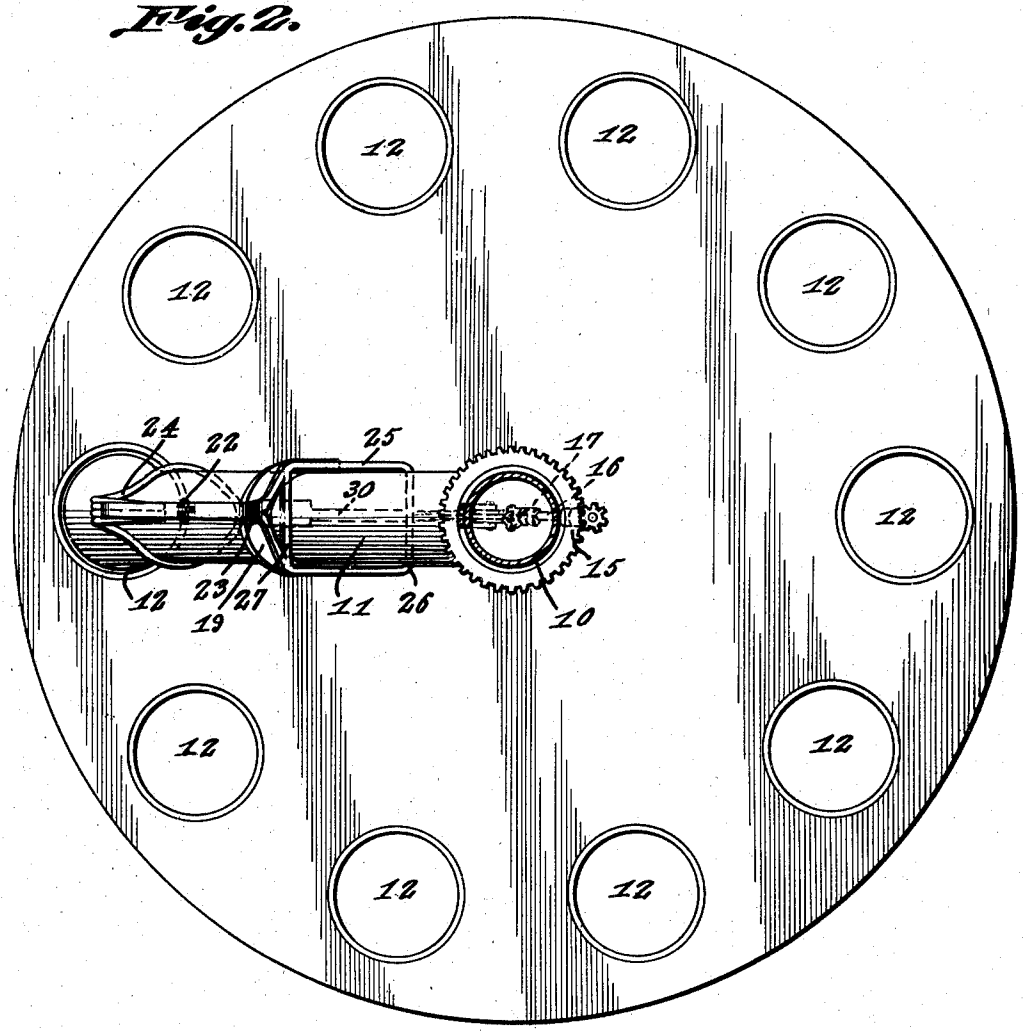
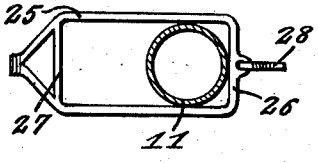


Fig. 4.



William Thomas, INVENTOR

BY Victor J. Evans

ATTORNEY

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UNITED STATES PATENT OFFICE

WILLIAM THOMAS, OF PETERSBURG, NEBRASKA

GRAIN-ELEVATOR SPOUT

Application filed May 8, 1929. Serial No. 361,476.

This invention relates to grain elevators and has especial relation to elevator discharge spouts, whereby the grain may be directed into any one of a number of bins.

An object of the present invention is to provide a grain discharge spout with means for controlling the discharge of grain, so that when transferring the discharge from one bin to another, the flow of grain may be conveniently shut off, and mixing of the grain in various bins thereby prevented.

Another object of the invention is the provision of means of the above character which are positive and reliable in use, and may be readily and conveniently controlled.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is a sectional view illustrating a fragmentary portion of a grain elevator and grain bins, with the invention applied to the grain discharge spout.

Figures 2, 3 and 4 are sectional views taken respectively on the lines 2—2, 3—3 and 4—4 of Figure 1.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates a portion of a grain elevator through which extends a discharge spout 11, the latter being designed to direct grain into any one of a number of bins 12. For this purpose, the spout 11 is rotatable and the bins are circumferentially arranged so that the tops of the bins will be disposed in the path of movement of the lower end of the spout 11 and grain may be directed from the elevator into any one of the bins.

The upper end of the discharge spout 11 may be mounted for rotation as indicated at 13 and rotary movement may be effected through the medium of a shaft 14 and gearing 15, the latter being connected with the shaft 14 by means of a short shaft 16 and universal joints 17. Any suitable means may be provided for rotating the shaft 14.

The invention resides particularly in means for controlling the discharge of grain through the spout 11 and for this purpose, the spout is transversely slotted as shown at 18 and slidable within this slot is a flat plate or valve 19. As shown this valve is movable transversely of the spout 11 and is provided with guide fingers 20 which engage opposite sides of the spout.

Extending from the valve 19 is an arm 21 and pivotally secured to the outer end of this arm as shown at 22 is an arm 23. One end of this arm has secured thereto a spring 24 which acts to yieldingly force the valve outward or to an open position so that grain may freely flow through the spout.

The pivotal connection 22 between the arm 23 and the valve 19 is substantially central of the length of said arm and extending from the other end of the arm is a yoke 25. This yoke includes spaced parallel arms which are connected by cross bars 26 and 27 and as the yoke 25 surrounds the spout 11, outward or opening movement of the valve 19 will be limited by contact of the bar 26 with the spout as shown in Figure 1 of the drawings.

In order to move the valve 19 inward to shut off the flow of grain through the spout, a cable or other flexible member 28 is connected to the bar 26 and extends downward over a guide pulley 29. This pulley is mounted at the outer end of a bracket 30 which is secured to the spout.

From the foregoing description and accompanying drawings it will be seen that when the valve is in its normally open position as shown in Figure 1, grain may pass freely from the elevator into one of the bins 12. When it is desired to transfer the discharge of grain to another bin, the cable or flexible member 28 is pulled downward so that the valve 19 will be forced inward against the spout and interrupt the flow of grain. The spout may then be adjusted to another bin for the discharge of grain. By this means, grain is prevented from flowing into the wrong bin and becoming mixed with grains of other character.

The invention is susceptible of various

changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. In a discharge spout for grain elevators, a normally open spring carried valve mounted for sliding movement transversely of the spout, a yoke enclosing the spout, and means pivotally connecting the yoke and valve to control the operation of the latter and means to actuate the yoke.

2. In a discharge spout for grain elevators, a valve slidable transversely of the spout to control the passage of grain therethrough, an arm pivotally connected to the valve, a spring connected to one end of said arm to yieldingly hold the valve in open position, a movable yoke enclosing the spout and connected to the other end of the arm to limit opening movement of the valve, and means to move the yoke to close the valve.

In testimony whereof I affix my signature.

WILLIAM THOMAS.