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C. J. POTTER
ADJUSTABLE DELIVERY SPOUT FOR
BULK-MATERIAL DELIVERY TRUCKS

2,675,932

2 Sheets-Sheet 1

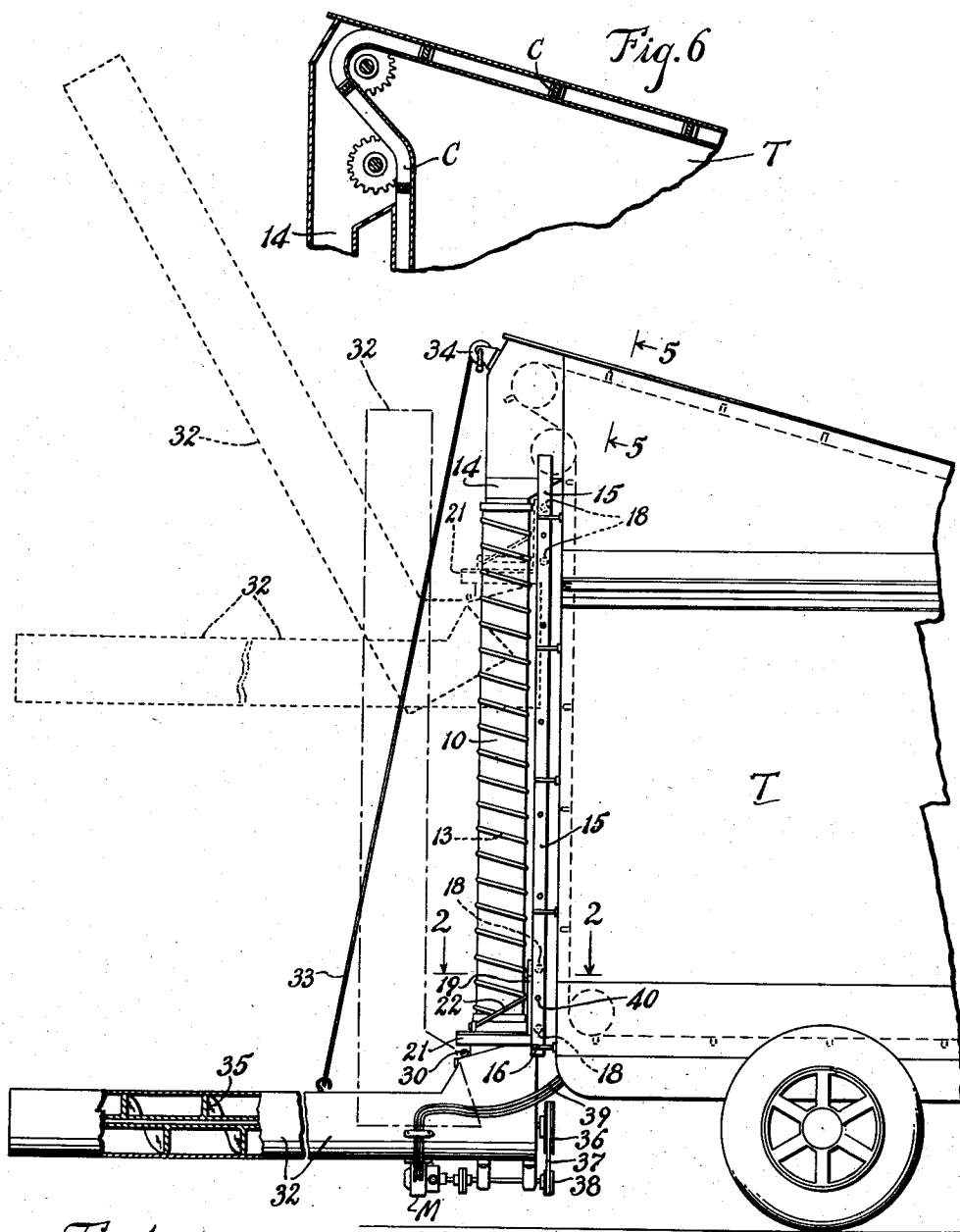
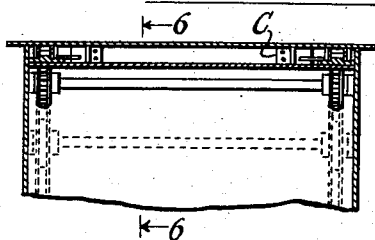


Fig. 1

Fig. 5



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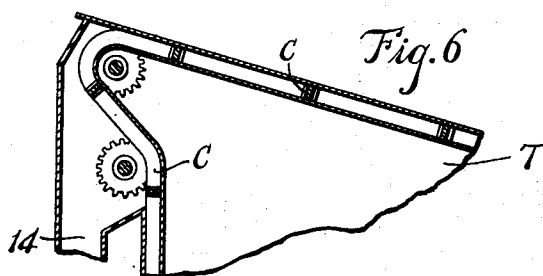


Fig. 6

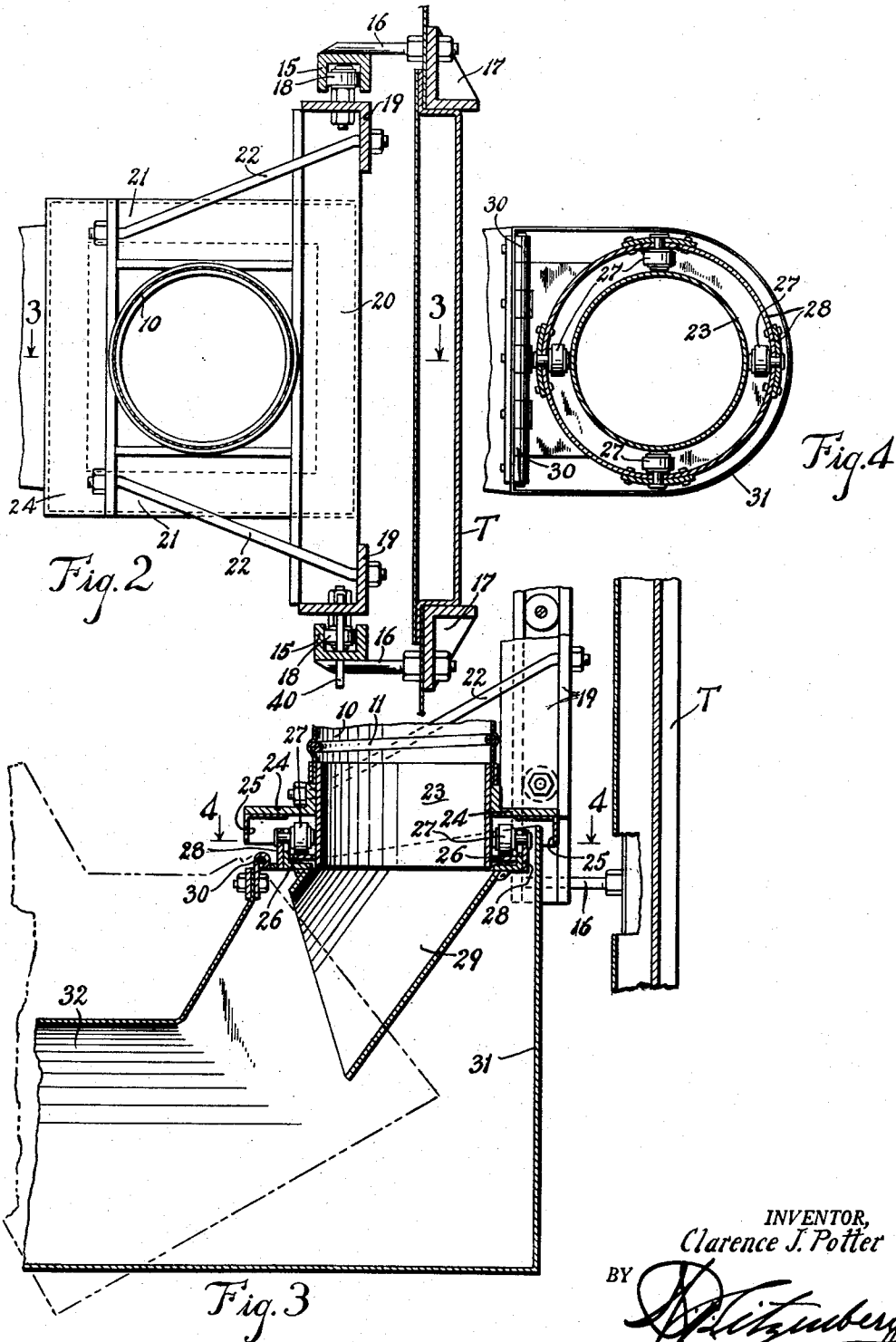
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UNITED STATES PATENT OFFICE

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ADJUSTABLE DELIVERY SPOUT FOR BULK-MATERIAL DELIVERY TRUCKS

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This invention relates to adjustable delivery spouts for bulk-material delivery trucks, and more particularly to a new and useful mechanism whereby the attached, or hinged, end of a delivery spout can be raised and lowered, thus making it possible for the discharge end of said delivery spout to be more easily raised into delivery places of greater elevation.

An object of this invention is to provide in combination with a bulk-material delivery truck having a traveling conveyor mechanism as a part thereof for conveying material from the bottom of the body of said truck to the top thereof, of a feed spout and a vertical receiving chute from which said material is delivered to an adjustable or swinging delivery spout.

Another object of this invention is to provide a collapsible vertical receiving chute for material to be delivered to the delivery spout, and the lower end of which delivery spout is movably connected so as to be raised and lowered with said collapsible vertical chute, and can be swung on its own hinge or pivotal connection to position the discharge end of said delivery spout.

Another object of this invention is to provide in combination with the body of a bulk-material delivery truck, a delivery spout having its connected and receiving end adjustably mounted so as to be raised and lowered bodily relative to said truck body, with means therein for moving material therethrough to the discharge end thereof, and the discharge end thereof movable up and down and sidewise to position said discharge end of said delivery spout for delivering the material.

Other objects and advantages will be seen from the following detailed description of one practical embodiment of the invention, taken with the accompanying two sheets of drawings, in which:

Figure 1 is a side elevation of the rear portion of a bulk-material delivery truck, showing a vertical receiving chute and a hinged connected delivery spout connected with the lower end thereof;

Figure 2 is an enlarged horizontal sectional view, taken on line 2--2, through Fig. 1;

Figure 3 is a vertical sectional view taken on the line 3--3 of Fig. 2;

Figure 4 is a cross sectional view taken on line 4--4 of Fig. 3;

Figure 5 is a fragmentary cross sectional view of a portion only of the top of a bulk-material delivery truck body, taken on line 5--5, on Fig. 1; and

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Figure 6 is a fragmentary sectional view taken on line 6--6 of Fig. 5.

Referring now more in detail to the drawings, my invention is here shown mounted on the rear end of a bulk-material delivery truck, designated as a whole T, and which can be of any desired size or type.

Mounted on the rear end of this particular truck body I have a vertical receiving chute 11, made of any suitable collapsible material, such as canvas or other suitable fabric, as 12, with a coiled spring 13 therein, whereby said chute can be collapsed endwise without injury thereto and which is always kept extended by said inner coiled spring.

At the top of the body of said truck and as a part thereof is a hopper-like feed spout 14, as seen in Fig. 1, and also shown in Fig. 6.

This construction and arrangement of a truck for moving material therein from the floor thereof to said feed spout at the top of the body of the truck, forms the subject matter of another application, and need not be described here, except to indicate that an endless conveyor C carries the material to said feed spout 14.

Two vertical channel members 15, 15 are mounted on the rear of the truck body, as by means of supporting and spacing bolts 16, 16, shown clearly in Fig. 2, connected with the rear of the truck body, as by means of corner members 17, 17. These channel members face each other at opposite sides of the structure and form guideways for the rollers 18, 18, at the opposite sides of the supporting base for the lower end of said vertical, collapsible chute 10, said supporting base including two angle members 19, 19, carrying said rollers, and secured to a cross member 20, having a projecting platform 21 thereon, supported by means of two brace rods 22, 22, to move up and down with the lower end of said vertical chute 10 in a manner to be described.

The lower end of said vertical chute 10 is fitted over a cylindrical section 23, fitting into the center of the platform 21, as indicated and supported by means of angle members 24, 24, secured thereto and to the short vertical angle member 19, forming a part of the platform structure. A further angle frame, as 25, is shown secured to the under side of the member 24, and forms the outer surrounding edge of said platform structure and covers the mechanism thereunder.

Secured around the lower edge of said cylindrical section 23, is a supporting flange, as 26,

forming a support and track for a plurality of supporting rollers, as 21, 27, having bearings in an outer ring member 28, outside the cylindrical section 23, as seen in Fig. 4. Said rollers 21, 27, are secured to the upper end of a discharge spout 29, under the lower end of the vertical chute, and said short cylindrical section 23, as seen in Fig. 3, to turn on said flange member or track 26, for a purpose now to be described.

Hingedly supported under said discharge spout 29, as at 30, is the large receiving end 31 of a swinging and turning delivery spout 32, which can be raised and lowered at its outer end without interrupting the feed from the spout 29 into said delivery spout 32, as will be understood from the full line positions in Fig. 3, and also the light broken lines showing the relative positions when the outer end of the delivery spout has been raised, as also seen in light lines, Fig. 1. By means of the rollers 21, 27, said discharge spout 29 and said hinged delivery spout 32 can be swung around a vertical axis, as well as to be raised and lowered on the horizontal axis at 30, by means of a cable 33, and windlass 34, or any other suitable and convenient means.

Mounted in the delivery spout 32 is a screw propeller 35, shown operated from a large pulley 36, driven by a belt 37 from a power driven smaller pulley 38, as will be understood from Fig. 1, also showing a hydraulic motor M, with pipes, as 39, leading to any suitable source of hydraulic power.

The light dot and dash lines, and the light dotted lines, Fig. 1, show two adjusted positions of said delivery spout 32. It can be raised bodily with its connections with the lower end of the vertical collapsible chute 10, said chute collapsing as it is raised by reason of the fabric and spring construction.

As one means for holding said delivery spout 32, and said collapsed chute 10 is a raised position, as shown in the dotted line position in Fig. 1, I have provided the channel members 15, 15, at opposite sides of the platform structure, with holes, and insert a pin, as at 40, Fig. 2, where said pin is shown inserted through the channel member 15 and also the corner member 19 on the platform structure which supports the lower end of the collapsible vertical chute. Other means can be provided for holding said parts in their raised or adjusted positions.

Thus I have provided, in combination with a bulk-material delivery truck, a hopper-like feed spout at the top thereof, with a collapsible vertical chute to receive material from said feed spout, with a delivery spout, hingedly connected at its attached end with said vertical chute so as to be raised and lowered as said collapsible chute is raised in its collapsed condition. I do not, however, limit the invention to the details of construction and arrangement shown for de-

scriptive purposes, except as I may be limited by the hereto appended claims forming a part of this specification.

I claim:

1. The combination with a bulk-material delivery truck, a vertical and collapsible chute mounted thereon to receive material in its upper end, a supporting base for the lower end of said collapsible chute, said supporting base having guide means therefor, whereby it can be raised and lowered, collapsing the lower end of said chute, a feed spout rotatably mounted and connected with the lower end of said vertical chute to receive material therefrom, a delivery spout pivotally connected with said feed spout to rotate therewith, said delivery spout being movable on its pivot to raise and lower its free discharge end, material moving means in said delivery spout for moving material therethrough from said feed spout, means for driving said means, and means connected with said delivery spout for raising and lowering its free end, and also for raising said supporting base and the lower end of said vertical chute as it collapses.

2. The combination with a bulk material delivery truck having a body to receive said material and having a rotatable short open end delivery pipe for the discharge of material from said body, of a vertically swinging and rotatable delivery spout, having its end of elbow form, the attached end of said delivery spout being hingedly connected at one side adjacent the outer side of the end of said discharge pipe, said elbow end being large enough to swing over the end of said discharge spout, said attached end being also rotatably supported on ring members, whereby to rotate with said short open end delivery pipe about a vertical axis, the hinged and rotatable end of said delivery spout being open and surrounding the end of said discharge pipe, having means between it and said discharge pipe to prevent spilling of material over the meeting edges thereof, as material passes from said discharge pipe to said rotatable and swinging delivery pipe.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
36,193	Nimbs	Aug. 12, 1862
718,921	Davis	Jan. 20, 1903
758,739	Culp	May 3, 1904
888,459	Bolinski	May 26, 1908
1,011,048	Gardner	Dec. 5, 1911
1,144,386	Schroder	June 29, 1915
1,258,377	Stuart	Mar. 5, 1918
1,809,796	Beardsley et al.	June 9, 1931
1,812,328	Faber	June 30, 1931
2,296,014	Benzel, Sr. et al.	Sept. 15, 1942
2,490,241	Smith et al.	Dec. 6, 1949
2,573,193	Goldsberry	Oct. 30, 1951
2,585,169	Potter	Feb. 12, 1952