

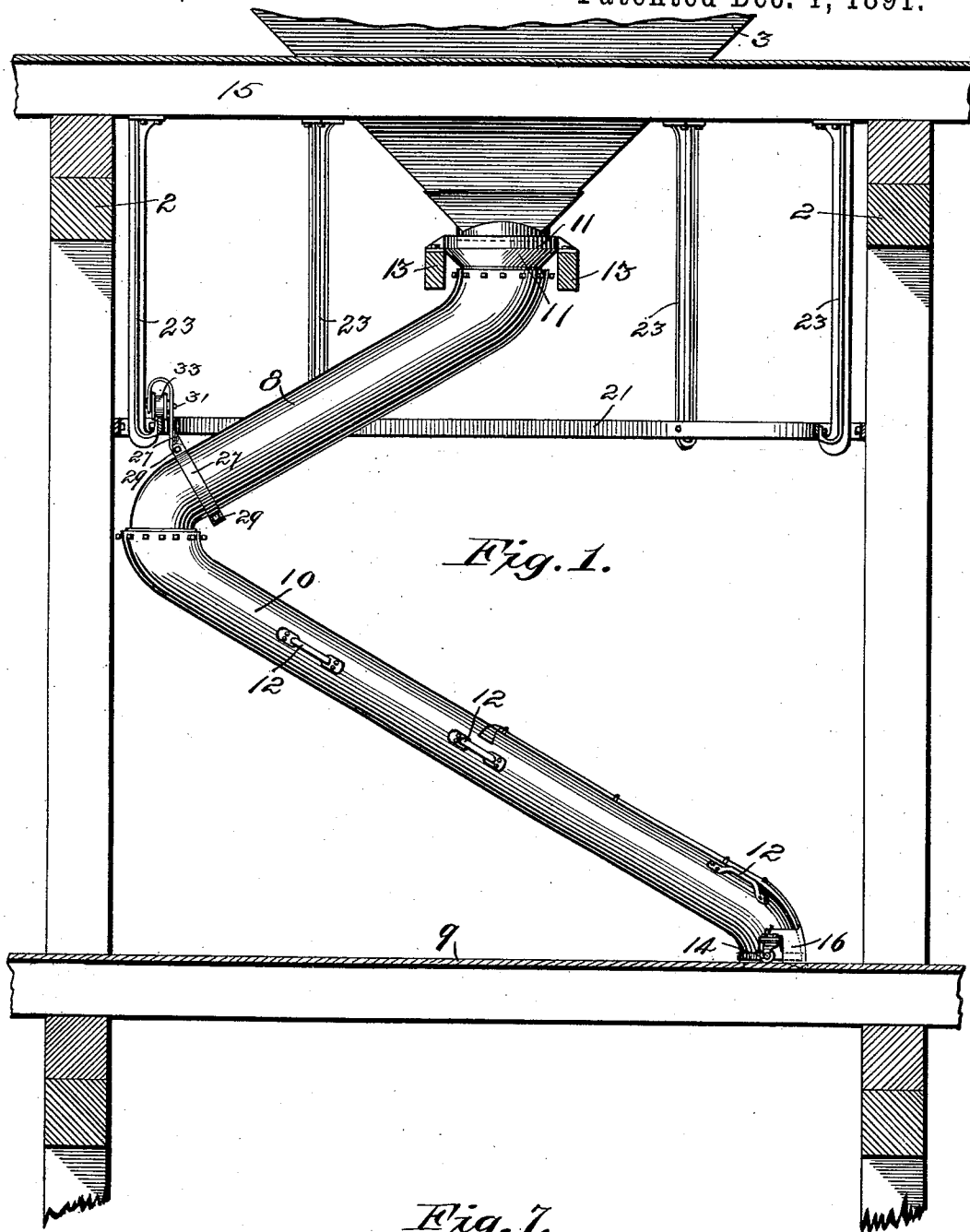
(No Model.)

3 Sheets—Sheet 1.

E. D. MAYO.

DOUBLE SWIVEL GRAIN DISTRIBUTING SPOUT.

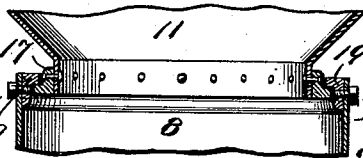
No. 464,101.

Patented Dec. 1, 1891.

Witnesses,

C. E. Van Doren,

F. S. Lyon.



Inventor,

Edward D. Mayo.

By Paul & Merwin
Attorneys.

Attorneys.

(No Model.)

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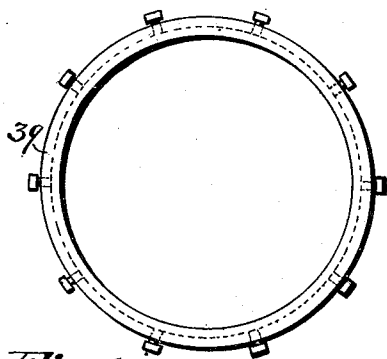
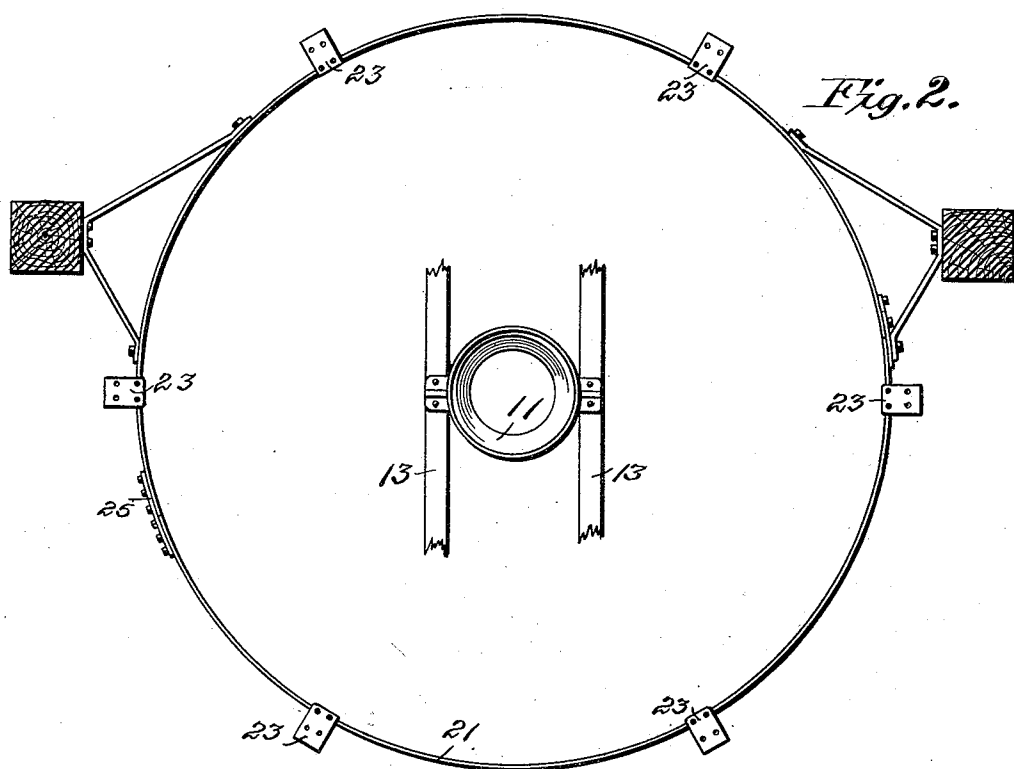
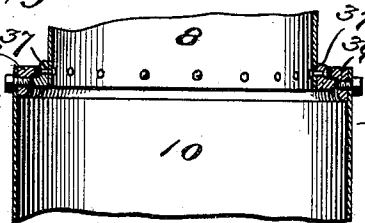


Fig. 4.

Witnesses. ³⁷
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(No Model.)

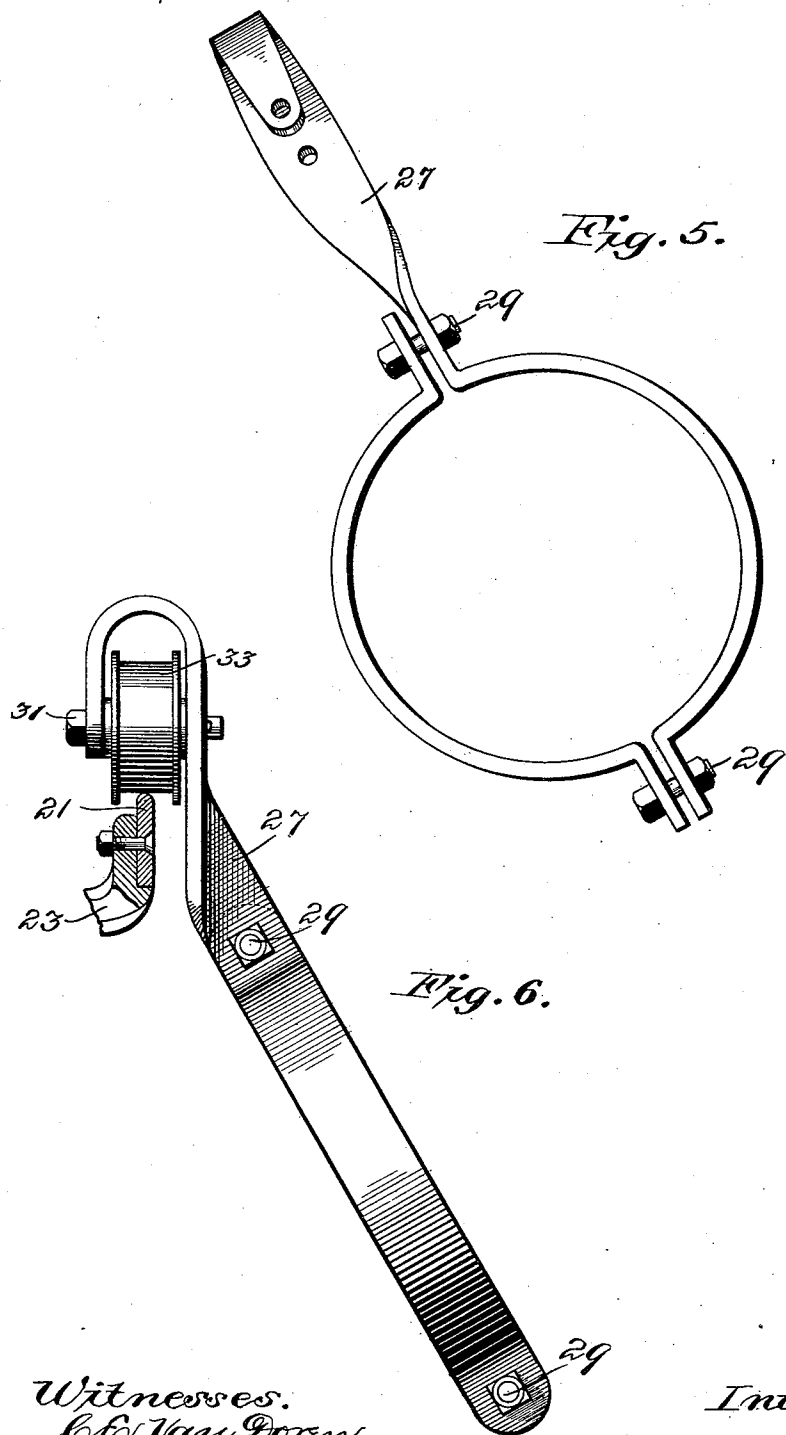
3 Sheets—Sheet 3.

E. D. MAYO.

DOUBLE SWIVEL GRAIN DISTRIBUTING SPOUT.

No. 464,101.

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Witnesses.
C. B. Van Doren,
F. J. Lyon.

Inventor,
Edward D. Mayo,
By Paul Mowin Attys.

UNITED STATES PATENT OFFICE.

EDWARD D. MAYO, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO BARNETT
& RECORD, OF SAME PLACE.

DOUBLE-SWIVEL GRAIN-DISTRIBUTING SPOUT.

SPECIFICATION forming part of Letters Patent No. 464,101, dated December 1, 1891.

Application filed August 15, 1891. Serial No. 402,755. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. MAYO, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Double-Swivel Grain-Distributing Spouts, of which the following is a specification.

This invention relates to improvements in grain-distributing spouts designed especially for use in grain-elevators; and the invention is particularly applicable for use in connection with a scale-hopper, and it is adapted to conduct the grain from the scale-hopper to any one of a series of grain-bins.

The invention consists, generally, in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a transverse vertical section of the spout-supporting devices, with an elevation of a spout constructed in accordance with my invention. Fig. 2 is a plan view of the circular supporting-track. Figs. 3 and 4 are details of the lower spout-support, showing the manner of securing the lower spout to the upper. Figs. 5 and 6 are details of the clamp that is connected to the lower end of the upper spout-section, and showing the supporting-roller arranged thereon. Fig. 7 is a detail of the upper spout-support.

In the drawings, 2 2 represent the timbers or beams forming a portion of the elevator and providing means for supporting my improved spout.

3 represents the scale-hopper, which is of ordinary construction and supported in the usual way. Arranged below this hopper is the double distributing-spout, which is adapted to receive the grain from the scale-hopper and conduct it to any one of a series of openings in the floor 9. Below the scale-hopper is a ring or head 11, that is of circular form, and through which the grain passes as it leaves the hopper. This ring is arranged immediately below the hopper and is secured upon the horizontal beams or strips 13, that are in turn supported from the main beams 15, from which the circular track, hereinafter referred to, is supported, so that any settling or change

of position of the beams 15 will cause an equal change of position of both ends of the upper spout-section, so as not to interfere with the free working of the spouts. The head or ring 11 is provided with a horizontal flange 17, and the upper spout-section 8 is provided with a horizontal flange 19, that overlaps and lies upon said flange 17. The flange 19 forms a support for the upper end of the spout-section 8, and this flange is adapted to turn freely upon the flange 17 of the ring 11, and it may also rise off from the flange 17 should such movement be necessary in the free operation of the spout. A circular track 21 is supported by hangers 23 from the beams 15, this track being concentric with the ring 11 and the upper end of the spout-section 8, but being arranged at a considerable distance below said ring 11. The ends of the track are secured together by means of a plate 25, whose upper edge is below the upper edge of the track, so as not to interfere with the movement of the wheel or truck, as hereinafter described. The hangers 23 are connected to the track 21 by having their lower ends upturned, as shown in Fig. 1, and bolted or riveted to the track 21, so as to leave the upper edge of the tracks projecting above said upturned end of the hanger. A clamp 27, consisting of two half-rings having the ends secured together by bolts 29, are arranged to clasp the lower end of the spout-section 8, and one of said rings is extended upward and then curved down and forms a bearing for the axle-pin 31 of the wheel or truck 33. This wheel 33 rests upon the track 21, and thereby supports the lower end of the spout-section 8, as shown in Fig. 1. This wheel is of greater width than the track 21, and as the flange 19 fits loosely upon the flange 17 of the ring 11 the spout-section 8 is capable of considerable lateral movement upon its supports, so as to allow for irregular portions of the track. The lower end of the upper spout-section is provided with an outwardly-projecting horizontal flange 37, corresponding to the horizontal flange upon the ring 11, and the upper end of the lower spout-section is provided with an inwardly-projecting horizontal flange 39, corresponding to the horizontal flange 19 at the upper spout-section. The lower spout-section 10 is preferably

provided with one or more handles 12, by means of which both of said spouts may be moved to any desired position. The lower end of the lower spout-section 10 is preferably provided with the supporting rolls or casters 14, that are secured to said spout, and are adapted to rest upon the floor and support the lower end of said spout-section while it is being moved from one position to another.

10 The lower end of the section 10 is preferably curved downward and provided with the pivoted hood 16, which is adapted to drop down a short distance into an opening in the floor, as indicated by dotted lines in Fig. 1, and thereby preventing any of the grain from running out under the end of the spout. It will be seen that both of the spouts have a swinging movement upon the rings or flanges that support their upper ends. The upper sections 20 may be turned upon the ring 11, and may also be given a slightly lateral movement. By swinging the upper spout-section its lower end is carried around, being supported upon the track 21, and thereby the upper end of the lower spout-section is carried with it.

25 Then the lower spout-section may be turned about the lower end of the upper spout-section, and thereby the spout may be arranged to distribute the grain to any point within a large radius.

I claim as my invention—

1. The combination, with the supporting-ring 11, provided with a horizontal flange 17, of the upper spout-section 8, provided with a horizontal flange resting upon said flange 17, the horizontal flange 37 upon the lower end of said spout-section, and the lower spout-section 10, provided with the horizontal flange 39 at its upper end, resting upon the flange

37 upon said upper spout-section, whereby each of said spout-sections is capable of a rotative and a lateral movement upon its support.

2. The combination, with the ring 11, secured upon a stationary support, of a spout-section having its upper end rotatively secured upon said ring, a circular track concentric with said ring, a wheel or truck provided with a clamp that is secured to the lower end of said spout-section and rests upon said ring, and the lower spout-section having its upper end rotatably secured to the lower end of said first-named section, substantially as described.

3. The combination, with the beams 15, of the beams 13, supported therefrom, the ring 11, secured upon said beams 13, the hangers 23, secured upon the beams 15, the circular track 21, supported upon said hanger, and the inclined spout having its upper end rotatably secured upon said ring 11 and its lower end provided with a truck resting upon said track 21, and the lower spout-section having its upper end rotatably secured to the lower end of said first-named section, substantially as described.

4. The combination, with a suitable supporting-ring, of a spout-section having its upper end rotatably secured to said ring and its lower end suspended upon a track that is concentric with said ring, substantially as described.

In testimony whereof I have hereunto set my hand this 5th day of August, 1891.

EDWARD D. MAYO.

In presence of—

F. S. LYON,

C. E. VAN DOREN.