A. GEBHARDT.

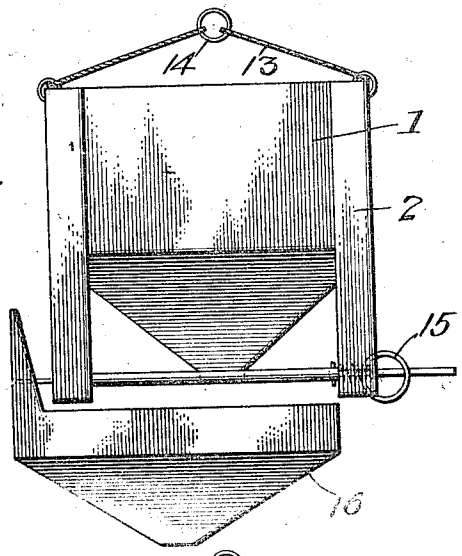
AUTOMATIC GRAIN CARRIER.

APPLICATION FILED MAY 9, 1914.

1,165,499.

Patented Dec. 28, 1915.

Fig. 1.



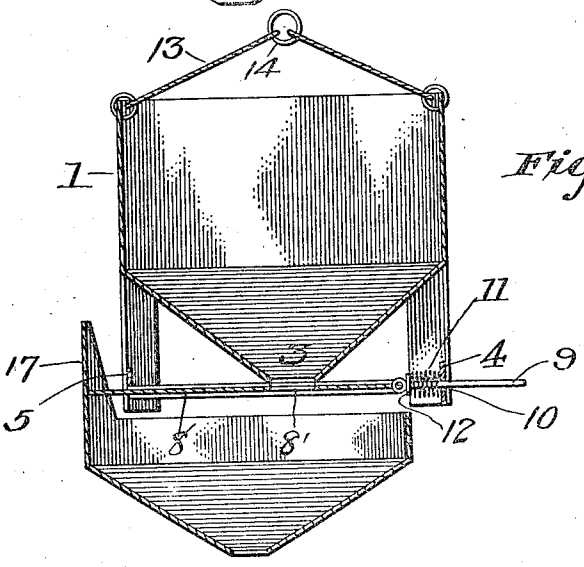
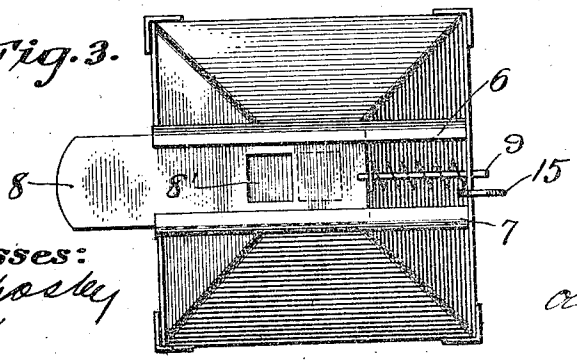


Fig. 2.

Fig. 3.



Witnesses:
A. Thorsley
L. Boppe

Inventor:
August Gebhardt

UNITED STATES PATENT OFFICE.

AUGUST GEBHARDT, OF SCOTIA, NEBRASKA.

AUTOMATIC GRAIN-CARRIER.

1,165,499. Specification of Letters Patent. Patented Dec. 28, 1915.

Application filed May 9, 1914. Serial No. 837,602.

To all whom it may concern:

Be it known that I, AUGUST GEBHARDT, a citizen of the United States, residing at Scotia, in the county of Greeley and State of Nebraska, have invented certain new and useful Improvements in Automatic Grain-Carriers, of which the following is a specification.

This invention relates to improvements in traveling carriers for conveying grain or the like from one point to the other.

The object of the invention is to provide a simply constructed and easily operated device of this character, so constructed as to automatically fill grain or other bins from a point remote from the point where the carrier is loaded.

With this and other objects in view, the invention consists of certain novel features of construction and the combination of parts which will be hereinafter more fully described and claimed.

In the accompanying drawings: Figure 1 represents a side elevation of a carrier constructed in accordance with this invention and shown in position over a receiving hopper; Fig. 2 is a vertical section thereof, and Fig. 3 is a top plan view thereof.

In the embodiment illustrated, a carrier is shown in the form of a square hopper-like structure 1 having supporting legs 2 at its four corners which are here shown made of angle irons, with the terminals thereof extending below the apex of the hopper, having a discharge opening 3 therein. End cross bars 4 and 5 connect the end legs in pairs and are designed to form supports for laterally spaced guides 6 and 7 which extend transversely across the structure on opposite sides of the opening 3 in the apex of the hopper. A closure 8 is mounted to slide in these guides 6 and 7 and is here shown in the form of a rectangular plate having one end rounded and projecting normally beyond the rear end of the hopper for a purpose to be described.

A rod 9 is connected at one end with the other end of the slide 8 and is mounted to slide in an aperture 10 formed in the cross bar 4. A coiled expansion spring 11 is arranged on this rod between the inner wall of the bar 4 and the end edge of the slide 8, a washer 12 being preferably arranged at this end between the spring and the slide to form a wider bearing for the spring. This spring exerts its tension to normally hold the slide in projected position. This slide 8 has an opening 8′ therein which is designed to register with the opening 3 in the bottom of the hopper when the slide is retracted, so as to permit the contents of the hopper 1 to pass out through these registering openings. The spring 11 normally projects the slide 8 and thus positions the aperture 8′ out of register with the aperture 3 in the hopper, thereby closing said hopper and preventing the contents thereof from passing out.

Any suitable supporting means may be provided for the hopper 1, a handle 13 being here shown provided with a ring 14 which is designed to slide on the cable or other track over which the carrier is designed to travel. Another ring 15 is secured to the end of the hopper in which the spring 11 is mounted for withdrawing the hopper by means of a rope or other suitable element not shown, as will be hereinafter more fully described.

A receiving hopper 16 is disposed at any suitable point over the bin to be filled and may be of ordinary construction, the only difference being that it is provided with a bumper 17 at its rear side which projects upwardly into the path of the slide 8 of the carrier so that when the projecting end of the slide comes in contact with said bumper, the slide will be forced inwardly against the tension of the spring 11 and thereby bring the apertures 8′ and 3 into register and permit the discharge of the contents of the hopper 1 into the bin designed to receive it through the hopper 16.

After the contents of the hopper 1 have been discharged, a pull exerted on the ring 15 will move the hopper rearwardly, and thus permit the spring 11 to expand and force the slide outwardly and thereby position its aperture 8′ out of register with the aperture 3 in the hopper, thereby closing the hopper and retaining therein any grain which may not have been discharged, and the hopper is then again ready to be refilled, and is drawn back to the loading point by any suitable means which form no part of this invention.

In the use of this improved carrier, the slide is positioned with its rounded projected end set toward or facing the objective point toward which it is designed to travel. The ring 14 is then engaged with the track or cable designed to carry it and

it is conducted along said cable until it reaches the hopper 16 disposed over the bin into which it is designed to discharge. The movement of the hopper 1 toward the bin into which it discharges, will bring the slide 8 into forcible contact with the bumper 17 and thereby cause said slide to move inwardly into the hopper in the manner above described for discharging the contents thereof.

I claim as my invention:

1. The combination with a receptacle having an upwardly projecting extension at its rear side; of a carrier adapted to be positioned over said receptacle and having an opening into the bottom thereof, a slide mounted in said carrier over said opening and having an aperture therein designed to register with the opening in the carrier when the slide is retracted and to be placed out of register therewith when the slide is projected, a coiled spring mounted to normally project said slide to position it in the path of the upward extension on the receiving receptacle.

2. In an automatically opening grain carrier, the combination of a body having an opening in its bottom, a spring pressed slide operable over said opening and normally projecting beyond said body, said slide having an aperture therein positioned to register with the opening in the body bottom and to be disposed out of register therewith when projected, and means arranged in the path of said slide for retracting it at a predetermined point.

3. An automatically opening carrier comprising a hopper-like structure having an opening in its apex, depending supporting legs, cross bars connecting said legs in pairs, laterally spaced guides mounted on said cross bars and extending transversely across the bottom of said hopper, a plate mounted to slide in said guides and having an aperture therein adapted to register with the opening in the hopper when the slide is retracted, a rod connected at one end with one end of said slide and slidably mounted in one of said cross bars, and a coiled spring mounted on said rod between said cross bar and the end of the slide and adapted to exert its tension to normally force said slide outward and normally close said hopper.

Dated at Scotia, Greeley county, Nebraska, this 20 day of October, A. D. 1913.

AUGUST GEBHARDT.

Witnesses:
FERDINAND GEBHARDT,
MARY GEBHARDT.