

C. B. KING & C. B. WESTON.

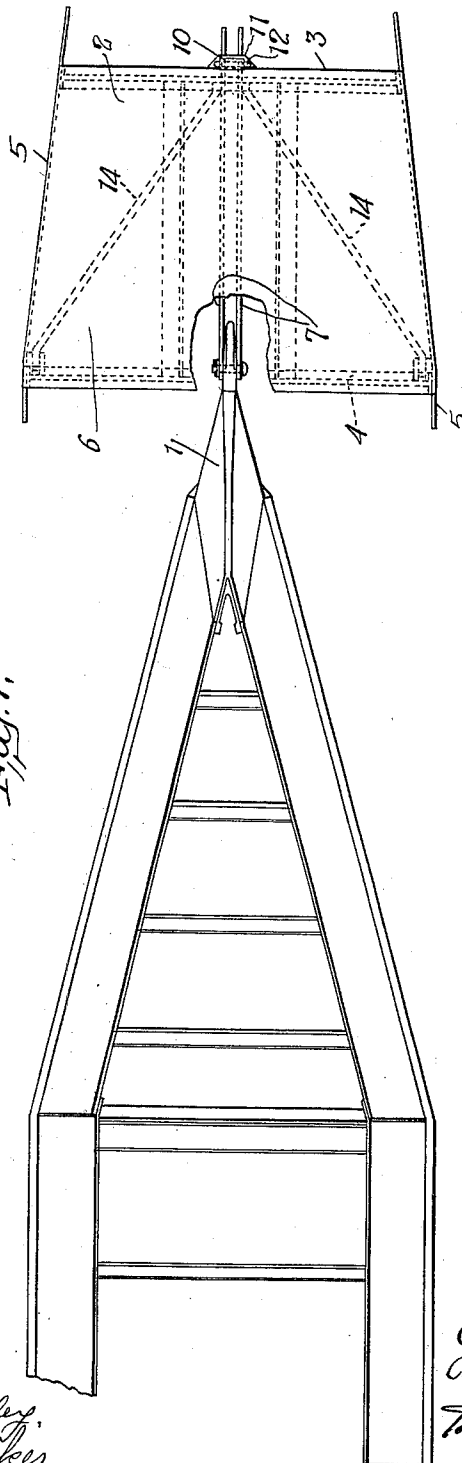
BALLAST UNLOADER.

APPLICATION FILED JUNE 12, 1911.

1,043,844.

Patented Nov. 12, 1912.

2 SHEETS—SHEET 1.



Witnesses

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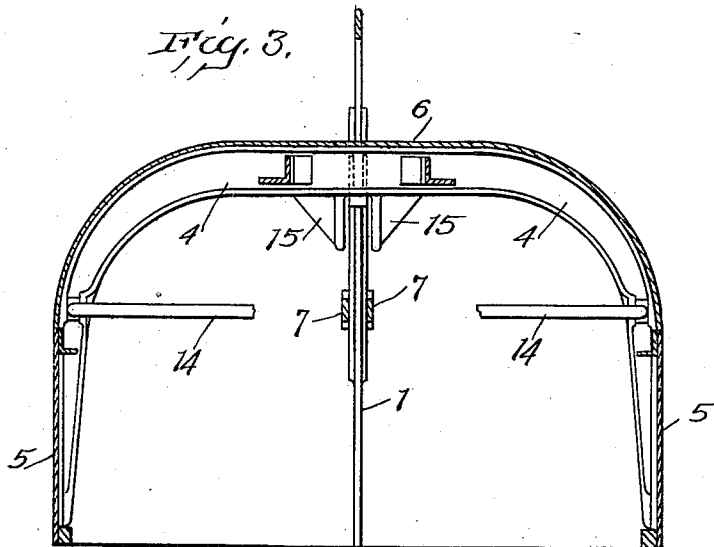
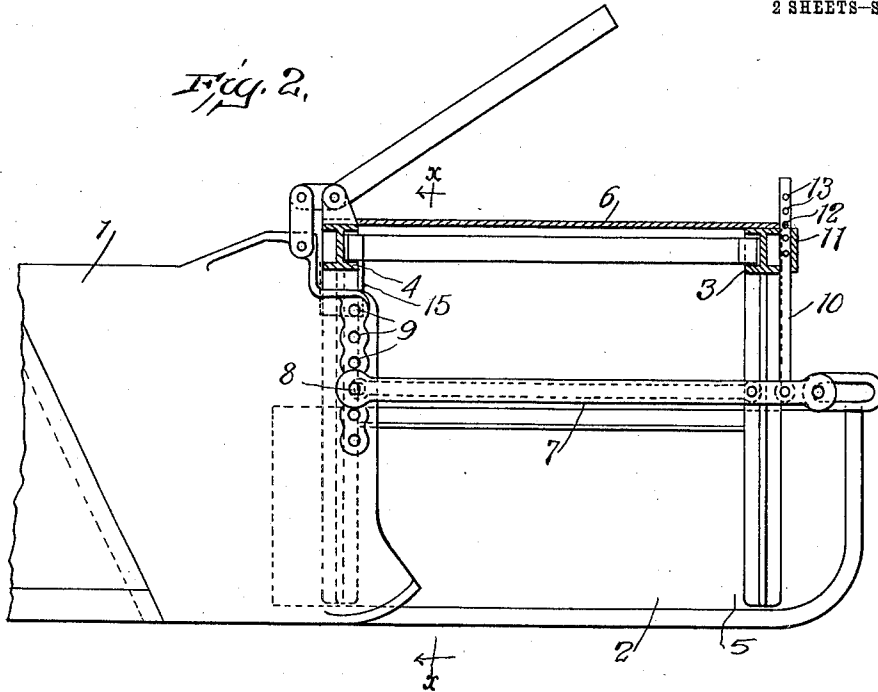
Attorneys

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 BALLAST UNLOADER.
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES B. KING AND CLARENCE B. WESTON, OF MARION, OHIO, ASSIGNORS TO THE
MARION STEAM SHOVEL COMPANY, OF MARION, OHIO, A CORPORATION OF OHIO.

BALLAST-UNLOADER.

1,043,844.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed June 12, 1911. Serial No. 632,544.

To all whom it may concern:

Be it known that we, CHARLES B. KING and CLARENCE B. WESTON, citizens of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Ballast-Unloaders, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to ballast unloaders and more particularly to propelling the pilots of such unloaders.

In a well known type of unloader it has been customary to cause the nose of the plow to engage the rear portion of the pilot and push the pilot ahead of the plow. This construction on the whole is very satisfactory, but, under certain conditions, the pushing action is objectionable.

The object of the present invention is to overcome these objections without eliminating any of the desirable features of the earlier device.

To this end it is a further object of the invention to provide suitable connections between the pilot and the draft mechanism for the plow to cause the pilot to be pulled by said draft mechanism; and further, to provide suitable means to center the pilot with relation to the nose of the plow.

In the accompanying drawings, Figure 1 is a top, plan view of the forward portion of the plow showing the pilot connected therewith; Fig. 2 is a longitudinal, sectional view taken centrally through the pilot showing the nose of the plow in elevation; and Fig. 3 is a transverse, sectional view, taken on the line *x x* of Fig. 2 and looking in the direction of the arrows.

In these drawings we have illustrated one embodiment of our invention and have shown the same as applied to an unloader comprising a plow 1 and a pilot indicated as a whole by the reference numeral 2. This pilot may be of any suitable construction but is here shown as comprising a frame, preferably consisting of front and rear arches 3 and 4 connected one to the other and having secured thereto fender plates or side members 5 which constitute runners upon which the pilot travels, as well as fender plates. The arches 3 and 4 may be braced one against the other in any suitable manner, such, for example, as by arranging a curved plate of metal, as shown at 6, be-

tween the arches and rigidly connecting the same thereto. Suitable wraff mechanism is connected to the nose of the plow 1 and extends forward to a point in front of the pilot where it is adapted to be connected to the hauling cable for actuating the plow. As here shown this draft mechanism comprises a draft bar 7 consisting of two parallel members adjustably connected to the nose of the plow by means of a pin 8 adapted to extend through any one of a series of apertures 9 formed in said nose. The forward end of the draft bar 7 is adjustably supported from the pilot, and, in the present instance, this is accomplished by means of a rod 10 pivotally connected to the draft bar near its forward end and extending upward through an apertured lug 11 carried by the front arch of the pilot. A suitable stop is secured to the rod 10 above the lug 11 to limit the downward movement of the forward end of the draft bar. In the present instance this stop comprises a pin 12 adapted to pass through any one of a series of holes 13 in the rod 11.

A suitable connection is provided for connecting the pilot to the draft mechanism for the plow to cause the pilot to be pulled ahead of the plow. In the present construction this connection comprises two draft rods 14 connected to the pilot near the rear end thereof, converging forwardly and connected with the draft bar 7 near the forward end of the pilot. Preferably, the draft rods 14 are pivotally connected to the rear arch 4 of the pilot at a point between the upper and lower limits of adjustment of the rear end of the draft bar 7, thus permitting the draft bar to be adjusted without materially affecting the pull on the pilot.

It is also desirable that the pilot and the plow should be maintained in such relative positions that the nose of the plow will at all times occupy a position substantially midway between the upright portions of the rear arch. To so center the nose of the plow without interfering with the necessary relative movements of the plow and the pilot we have provided the rear arch 4 of the pilot with depending lugs 15 arranged on opposite sides of the nose of the plow and serving to prevent lateral movement of the pilot or the plow relatively one to the other, but allowing relative vertical movement of the same.

The operation of the device will be readily understood from the foregoing description and it will be apparent that the propelling means for the plow is so connected with the pilot as to exert a direct pull upon the latter and cause the same to be moved ahead of the plow, thereby entirely eliminating the pushing action of the plow against the pilot.

While we have herein shown one form of our invention it will be understood that this is chosen for the purpose of illustration only and that we do not wish to be limited to the details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. In an unloader, the combination, with a plow and a pilot arranged in front of said plow, of propelling means connected with said plow, and a connection between said propelling means and said pilot in front of the connection between said propelling means and said plow.

2. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft device having independent connections with said plow and said pilot.

3. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft device, and separate connections between said draft device and the nose of said plow and the rear portion of said pilot.

4. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft bar, means to connect said draft bar with said plow, and connecting devices extending between said plow and said pilot.

5. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft bar connected with said plow, extending forward through said pilot, and connecting devices secured to the rear portion of said pilot and secured to said draft bar near the forward end of said pilot.

6. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft bar adjustably connected with said plow and extending forward

through said pilot, and connecting devices secured to the rear portion of said pilot between the upper and lower limits of adjustment of said draft bar and also secured to said draft bar near the forward end of said pilot.

7. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft bar having its rear end adjustably connected to said plow and its forward end adjustably supported from said pilot, and a draft rod connected with the rear portion of said pilot on the opposite sides of the nose of said plow, converging forwardly and connected with said draft bar.

8. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft bar for imparting a forward movement to said plow, and draft rods connecting said pilot with said draft bar.

9. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of means to impart forward movement to said plow, connecting device between said pilot and said means, and means to center said pilot with relation to said plow.

10. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft bar connected with said plow, and extending forwardly therefrom, draft rods connecting said pilot with said draft bar, and means to center said pilot with relation to said plow.

11. In an unloader, the combination, with a plow, and a pilot arranged in front of said plow, of a draft bar connected with said plow and extending forwardly therefrom, draft rods connected with the rear portion of said pilot on opposite sides of said draft bar, converging forwardly and connected with said draft bar, and lugs depending from said pilot on opposite sides of a portion of said plow to center said pilot with relation to said plow.

In testimony whereof, we affix our signatures in presence of two witnesses.

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Witnesses:

HARRY L. Cox,

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