

No. 870,174.

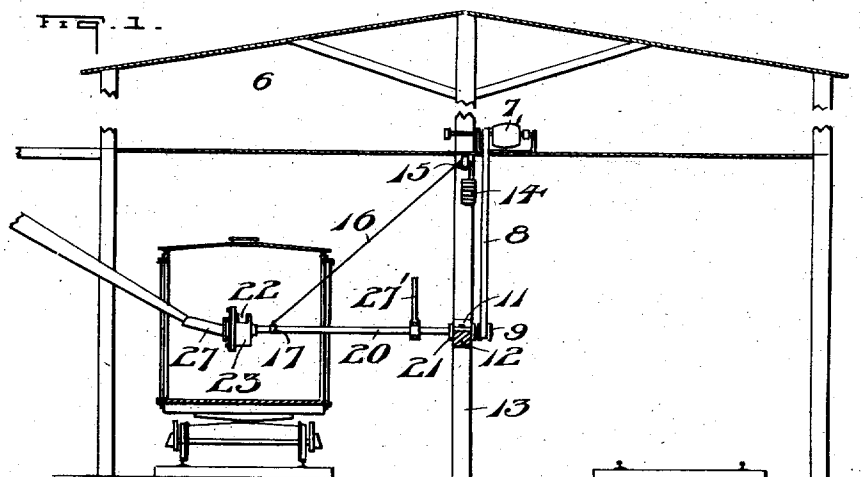
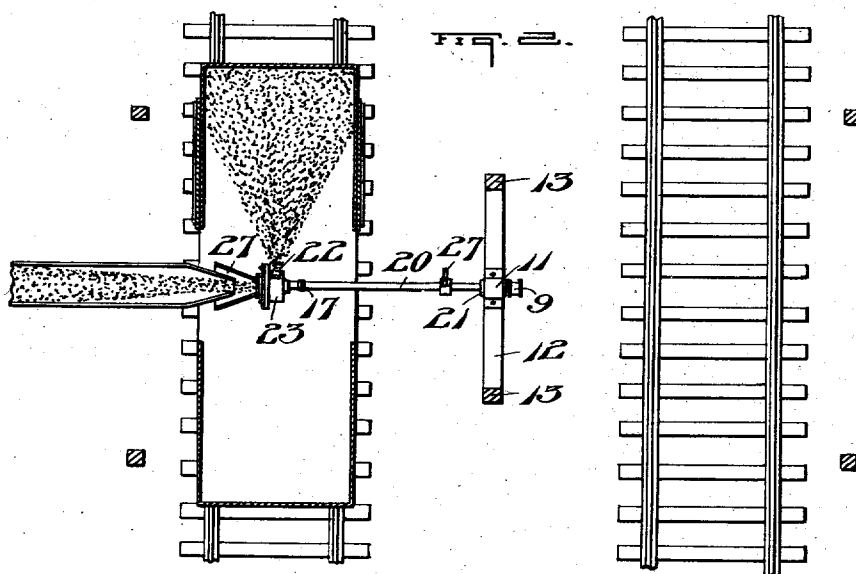
PATENTED NOV. 5, 1907.

J. H. HUHN & C. F. ICE.

ROTARY SHOVEL FOR LOADING CARS.

APPLICATION FILED DEC. 16, 1904. RENEWED JUNE 30, 1906.

2 SHEETS—SHEET 1.



Witnesses:
J. C. Hoffmann,
D. L. Davis

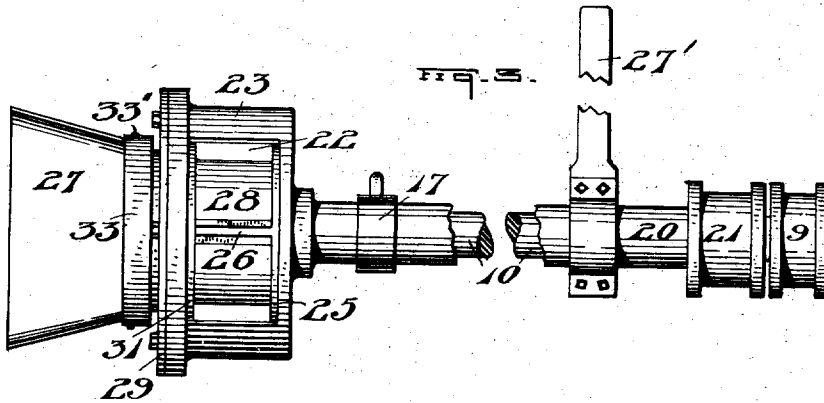
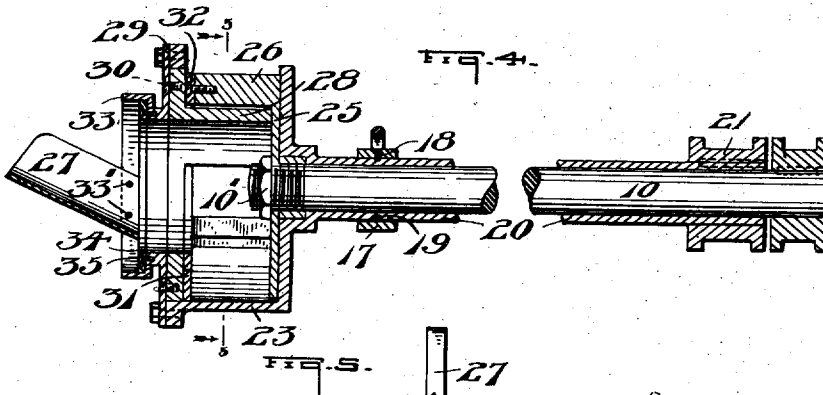
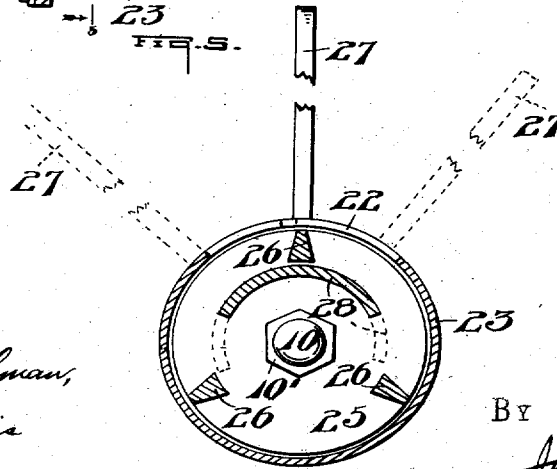
Inventors
J. H. Huhn
 BY *C. F. Ice*
John Ireland
 Attorney

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J. P. Hoffmann,
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J. H. Huhn
C. F. Ice
By John Ireland
Attorney

UNITED STATES PATENT OFFICE.

JOHN H. HUHN AND CHARLES F. ICE, OF FAIRMONT, WEST VIRGINIA, ASSIGNORS TO FAIRMONT BOX CAR LOADER COMPANY, OF FAIRMONT, WEST VIRGINIA, A CORPORATION OF WEST VIRGINIA.

ROTARY SHOVEL FOR LOADING CARS.

No. 870,174.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Application filed December 16, 1904. Serial No. 237,098. Renewed June 30, 1906. Serial No. 324,206.

To all whom it may concern:

Be it known that we, JOHN H. HUHN and CHARLES F. ICE, citizens of the United States of America, residing at Fairmont, in the county of Marion and State of West Virginia, have invented certain new and useful Improvements in Rotary Shovels for Loading Cars, of which the following is a specification.

My invention relates to an improvement in rotary shovels for the purpose of loading coal, grain, sand and other products into freight cars, vessels and granaries.

By the employment of my device it is not necessary when loading for a person to be in the inclosure distributing the produce; as that is accomplished from the outside of same a feature I will describe in detail in the body of my specification.

With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawing forming part of the specification, wherein like characters denote corresponding parts in the several views and in which:—

Figure 1. is a cross-section of a coal tippie showing my improved device as applied when in use for loading freight cars. Fig. 2. is a longitudinal view showing my device delivering in freight car. Fig. 3. is a top plan view of my rotary shovel. Fig. 4. is a longitudinal section view. Fig. 5. is a cross-section taken on line 5—5 of Fig. 4.

I have illustrated in Figs. 1. and 2 one method of applying my improved rotary shovel in conjunction with a coal tippie 6, but the same may be used for various purposes.

Arranged at any suitable place in the shed we employ operating means and as illustrated in the drawings use a motor 7, with belt connection 8, to pulleys 9, keyed on rotary shaft 10.

I show the device fixed in bearing 11, mounted on cross piece 12, supported by uprights 13, and the free end is held horizontal by a counter balance weight 14, supported from a roller bearing 15, fixed to the floor of the tippie the other end of cable 16, is fastened to a rotary collar 17, provided with a key 18, that fits into groove 19, of casing 20.

Screwed on the shaft 10, and locked by jam nut 10', is a disk 25, and formed thereon are series of tapered lugs 26, these in the course of rotating carry the product from the chute 27, around and over circular deflector 28, to the opening 22. The deflector is fastened to the plate 29, by counter sunk screws 30, and always assumes the same relative position to the opening 22, as shown in full and dotted lines of Fig. 5, and its function is only

to serve as a deflector for the product after the tapered lugs or conveyers have carried it the desired distance.

To take up the wear in usage and also to strengthen the lugs there is inserted a ring 31, between the ends of the lugs and the deflector which is secured thereto by counter sunk screw 32.

The chute is riveted to a rotary ring 33, as at 33', and held thereon by a ring 34, which is secured to the plate 29, by screws 35, this will permit of a rotary movement of the ring 33, to which the chute is secured and it will always remain in the same position as that shown in the drawings no matter in what direction the opening 22, is directed.

Keyed on the end of casing 20, is a pulley 21, which serves as a roller bearing and rests in bearing block 11, this is to allow the operator to direct the opening in the delivery head 23, in any direction desired as shown by the use of lever 27', clamped to the casing 20.

The various conditions under which my rotary shovel can be used is self evident. In this case I have shown the motor provided with two pulleys this is for the purpose of rigging my device so as to load on both sides.

Having fully described the invention what I claim as new and desire to secure by Letters Patent is,—

1. In combination, a head having an opening, a disk within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs on the disk and a deflector within the head.

2. In combination, a head, having an opening a disk within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs on the disk and a deflector within the head in line with the opening and being so positioned that the delivery lugs pass around the outer surface thereof.

3. In combination, a head having an opening, a disk within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs on the disk and a deflector within the head and a chute carried by the head and emptying therein.

4. In combination, a head having an opening, a disk within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs, on the disk, a deflector within the head and a chute loosely carried by the head and emptying therein.

5. In combination, a head having an opening, a rotatable shaft leading within the head and loosely supporting the head, a disk within the head and secured to the shaft, delivery lugs carried by the disk and a deflector within the head.

6. In combination a head having an opening, a suitable shaft leading within the head and loosely supporting the head, a disk within the head and secured to the shaft, delivery lugs carried by the disk and a deflector within the head and means for turning the head on the rotatable shaft.

7. In combination, a head having an opening, a disk within the head, means for rotating the disk, delivery lugs carried by the disk and a deflector within the head.

8. In combination, a head having an opening, a disk within the head, means for rotating the disk, delivery lugs on the disk, a cap for the head, and a deflector carried by the cap extending within the head.

5 9. In a box car loader, the combination of a rotatable casing having an axially arranged material-receiving opening and a peripherally arranged material-discharge opening, a rotary shovel within said casing, means for rotating material through the said axially arranged receiving opening, a rotary shovel within said casing, means for rotating said shovel, and means for rotating said casing to position its discharge opening as desired.

10 10. In a box car loader, the combination of a rotatable casing having a material-receiving opening and a peripheral material-discharge opening, a rotary distributor within said casing, a chute swiveled to said casing and adapted to direct material through said material-receiving opening irrespective of the position of adjustment of said discharge opening, means for rotating said distributor, and
15 20 means for rotating said casing to position its discharge opening as desired.

11. In a box car loader, the combination of a rotatable casing having material-receiving and discharge openings, a chute swiveled to said casing and arranged to direct ma-

terial through said material-receiving opening, and a rotary distributor within said casing. 25

12. In a box car loader, the combination of a casing having material-receiving and discharge openings, a deflector arranged within said casing, and a rotary distributor arranged therein. 30

13. In a box car loader, the combination of a casing having material-receiving and discharge openings, a deflector arranged within said casing, and a rotary distributor arranged therein and having distributing blades adapted to travel around said deflector. 35

14. In a box car loader, the combination of a casing having material-receiving and discharge openings, a concavo-convex deflector arranged within said casing, and a rotary distributor arranged therein and having distributing blades adapted to travel around said deflector. 40

In testimony whereof I affix my signature in the presence of two witnesses this 15th day of Dec., 1904.

JOHN H. HUHN.
CHARLES F. ICE.

Witnesses:

JOHN NOLAND,
J. P. APPLEMAN.

Correction in Letters Patent No. 870,174.

It is hereby certified that in Letters Patent No. 870,174, granted November 5, 1907, upon the application of John H. Huhn and Charles F. Ice, of Fairmont, West Virginia, for an improvement in "Rotary Shovels for Loading Cars," an error appears in the printed specification requiring correction, as follows: In line 8, page 2, the words "a rotary shovel within said casing, means for rotating" should be stricken out, and the words *a chute swiveled to the casing and arranged to direct* inserted instead; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 17th day of March, A. D., 1908.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.

8. In combination, a head having an opening, a disk within the head, means for rotating the disk, delivery lugs on the disk, a cap for the head, and a deflector carried by the cap extending within the head.

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