

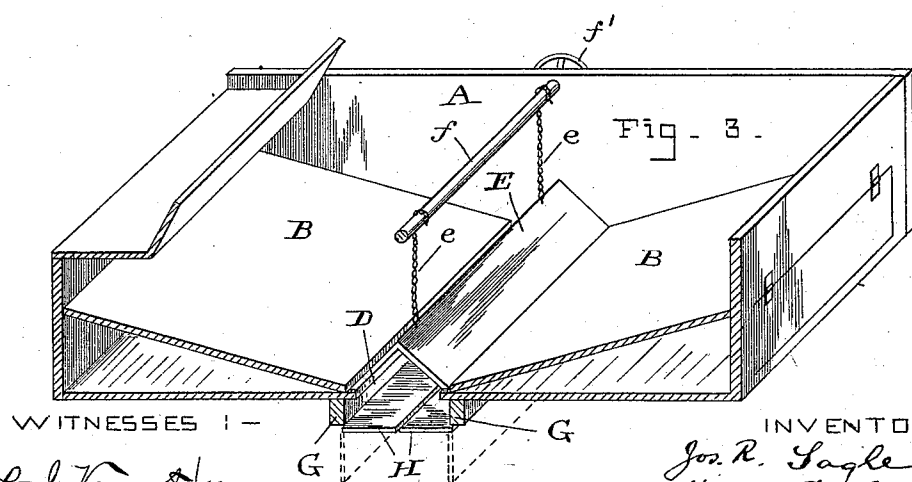
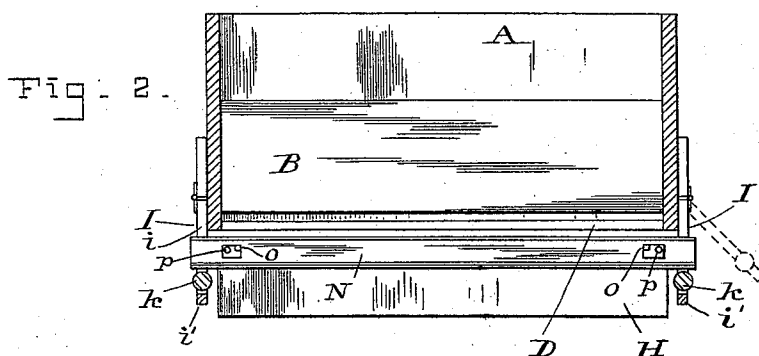
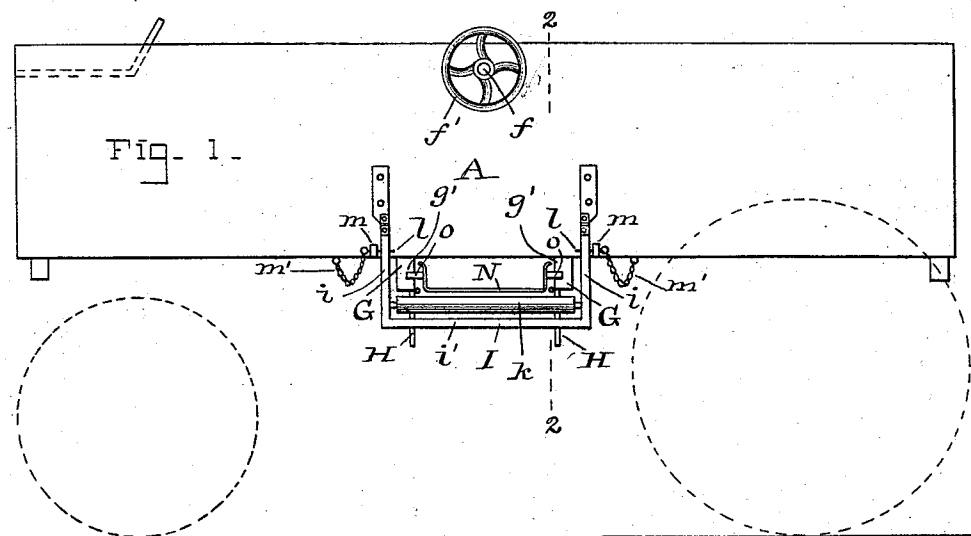
(No Model.)

2 Sheets—Sheet 1.

J. R. SAGLE & H. TAYLOR.
COAL WAGON.

No. 532,289.

Patented Jan. 8, 1895.



WITNESSES:—

L. L. Van Horn,
Charles B. Mann Jr.

INVENTORS:—

Jos. R. Sagle
Henry Taylor
By Chas B. Mann
ATTORNEY.

(No Model.)

2 Sheets—Sheet 2.

J. R. SAGLE & H. TAYLOR.
COAL WAGON.

No. 532,289.

Patented Jan. 8, 1895.

Fig-5-

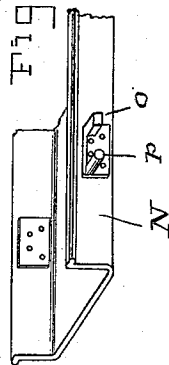


Fig-4-

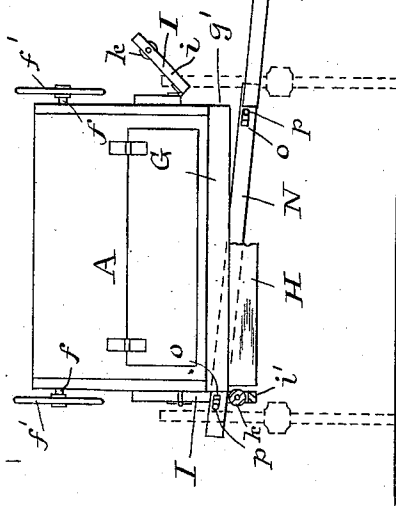
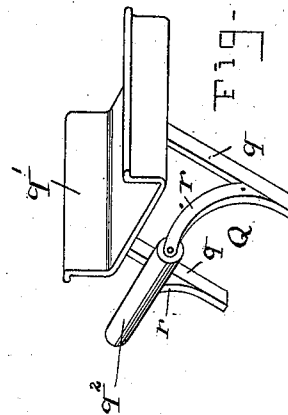


Fig-6-



WITNESSES :-

L. I. Van Horn.
Charles B. Mann Jr.

INVENTORS:

Jos. R. Sagle
Henry Taylor
By Chas B. Mann

ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH R. SAGLE AND HENRY TAYLOR, OF BALTIMORE, MARYLAND.

COAL-WAGON.

SPECIFICATION forming part of Letters Patent No. 532,289, dated January 8, 1895.

Application filed September 25, 1894. Serial No. 524,061. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH R. SAGLE and HENRY TAYLOR, citizens of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Coal-Wagons, of which the following is a specification.

This invention relates to improvements in coal delivery wagons.

10 The object of the invention is to combine with the delivery-chute of a coal wagon means whereby to facilitate the discharge of the coal where the chute has but a very slight inclination.

15 The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of part of a coal wagon embodying the invention. Fig. 2 is a vertical cross-section of the same on the line 20 2—2 of Fig. 1. Fig. 3 is a perspective view showing a vertical longitudinal section of the wagon-body. Fig. 4 shows an end view of wagon and the delivery-chute in position for discharging the coal into the basement-window of a house. Fig. 5 is a view of one end of the chute-head. Fig. 6 shows the roller-bracket and the stationary chute-end or section.

In the accompanying drawings, A, designates the wagon-body having an interior bottom, B, inclining from both ends to the center, and a central transverse discharge opening, D, through the bottom. An inverted V-shaped cover, E, or discharge regulator closes 35 the said opening and is connected by chains, e, with a roller, f, journaled in the sides of the wagon and having a wheel or crank, f', whereby to turn it. By winding the chains up on this roller the cover, E, may be raised 40 to allow the coal to pass out of the discharge opening, and the distance between the said cover and the discharge opening may be varied so as to discharge more or less coal through said opening. A transverse bar, G, 45 extends crosswise of the under side of the wagon-body at each side of the discharge-opening, and a sheet-iron deflector apron, H, is hinged to each bar, for a purpose to be described.

50 The means provided for facilitating the flow or movement of the coal through the

chute, where said chute has but a very slight inclination, will now be described.

The wagon-body is provided on each side with a hanger, I, comprising two vertical rods, 55 i, hinged or pivoted at top to the side of the wagon-body so as to allow the lower part to swing up, and the two rods, i, are connected at their lower ends by a horizontal bar, i'. A horizontal roller, k, is journaled in the said 60 vertical rods of the hanger just above the horizontal bar. The hanger is prevented from swinging by a pin, l, passed through a lug, m, on the side of the wagon and also through the vertical rods, i, of the hanger. 65 When not employed to hold the hanger the pins are supported by chains, m', attached to the wagon-body. This pivoting of the hangers is necessary in order to enable the ends of the chute-head to be brought in position to 70 rest on the rollers, k, when not in use, and to release the end of the chute when it is desired to discharge coal.

The conducting chute may be formed of two or more sections, N, N'. The section, N, 75 which we term the chute-head, when not in use is supported below the transverse discharge opening, D, by its ends resting on the rollers, k, of the pivoted hangers, I, as shown in Fig. 2. This chute-head at each end on opposite 80 sides has a buffer-lug, o, to collide or butt against the ends, g', of the bar, g, and a handle or hand-grasp, p, whereby to impart an endwise vibrating motion to the entire chute, as will be presently described. 85

In Figs. 4 and 6, a roller bracket, Q, is shown the object of which is to support the lower end of the delivery-chute, N', during the operation of discharging the coal and while vibrating. The bracket comprises two 90 inclined supporting standards, q, carrying a short stationary chute-section, q', and two curved arms, r, projecting from the standards in the ends of which a roller, q², is journaled.

In Fig. 4 the coal wagon is shown in position 95 for discharging the coal into the basement-window of a house.

The coal wagon is brought with its side adjoining the sidewalk. The pivoted hanger, I, at that side is released from the pins, l, and 100 swung upon its hinges out of the way, as shown in said figure. The roller-bracket, Q, is placed

on the sidewalk adjoining the basement-window, S, of the house and the stationary chute-section, *g*, thereof rests upon the window-sill and projects through the window into the basement. One end of the chute-section, *N'*, is now firmly connected with the free end of the chute-head, *N*, and the other end rests upon the roller, *q*², and projects over the stationary short section, *q'*. Thus it will be seen that the wagon-body is not elevated prior to discharging the coal, and that the delivery-chute has but a slightly-inclined position, not sufficient for discharging the coal into the basement-window, S, by its own gravity. By means, however, of the means for producing the vibratory motion of the chute a forward shove or impetus is given to the coal in the chute which causes the coal to traverse or move along the chute to the place of discharge.

By observing the drawings, Fig. 4, it will be seen that when the wagon is in position for discharging the coal, one end of the delivery chute-head, *N*, rests upon the roller, *k*, of that hanger which is farthest from the sidewalk and the other end is connected with the chute-section, *N'*, and the lower end of this section rests upon the roller, *q*², of the bracket, *Q*. Thus the chute has a roller support at each end. Now by grasping the handles, *p*, and giving an endwise reciprocating or vibratory movement to the chute on the said roller supports, each forward motion will cause the lugs, *o*, to collide or butt against the ends, *g'*, of the bars, *G*, and produces a shock which causes the coal to traverse or move along the chute as fast as it discharges from the central transverse opening, *D*.

The deflector-aprons, *H*, prevent the coal, as it discharges from the opening, *D*, into the chute, from falling off at the sides of the chute.

While we have described our invention as it is specifically shown in the drawings, it is obvious that certain details of construction may be varied without departing from our invention as hereinafter claimed.

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

1. In a coal wagon, the combination of the wagon-body having a discharge opening through its bottom; buffer-bars, *g*, rigidly secured to the wagon-body adjoining the said discharge opening; a movable delivery chute extending crosswise below the wagon-body and below said discharge opening and provided with buffer-lugs, *o*, which, when a vibratory movement is given to the chute, will collide with the said buffer-bars; and means to support the high end of the chute under

the said discharge opening and allow it to have an endwise vibratory movement, whereby the collision of the lugs with the bars will produce a shock or concussion which will cause the coal to traverse or move along the chute, substantially as described.

2. The combination of the wagon-body having an interior bottom inclining from both ends to a center discharge opening; a buffer-bar at each side of the discharge opening; a pivoted deflector apron below the wagon-body at each side of and hanging pendent below the said opening; an inverted V-shaped cover or discharge regulator, *E*, above the discharge opening and vertically movable to open and close the said discharge opening; means for raising and lowering the said cover; and a delivery-chute having position below the discharge opening and provided with buffer-lugs, *o*, whereby, by imparting an endwise vibratory movement to the chute and bringing the said buffer-lugs into collision with the buffer-bars, a shock or collision will be produced which will cause the coal to traverse or move along the chute.

3. The combination of the wagon-body, *A*, having a discharge opening; buffer-bars, *g*, on the wagon-body adjoining the discharge opening; a bracket, *Q*, provided with a roller, *q*²; a hanger, *I*, on the side of the wagon-body; and a chute having its lower end resting on the said roller of the bracket and its upper end resting on the hanger, and provided at this latter end with buffer-lugs, *g*, coacting with the said buffer-bars on the wagon-body.

4. The combination of the wagon-body having a central discharge opening in its bottom; a hanger on each side of the wagon-body and pivoted so as to permit its lower end to tilt up; and a chute-head having its ends resting on the pivoted hangers below the said transverse opening.

5. The combination of the wagon-body having a transverse discharge opening in its bottom; buffer-bars, *g*, adjoining the said discharge opening; a delivery-chute provided with buffer-lugs, *o*, to collide with the said buffer-bars; means for supporting one end of the chute under the discharge opening and allowing it to have an endwise vibratory movement; and a handle or hand-grasp, *p*, on the chute whereby to impart endwise vibratory movement to said chute.

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

JOSEPH R. SAGLE.
HENRY TAYLOR.

Witnesses:

CHARLES B. MANN, Jr.,
THOS. C. BAILEY.