P. C. BLAISDELL.

COAL POCKET.

APPLICATION FILED MAY 8, 1911.

1,021,757.

Patented Apr. 2, 1912.

2 SHEETS—SHEET 1.

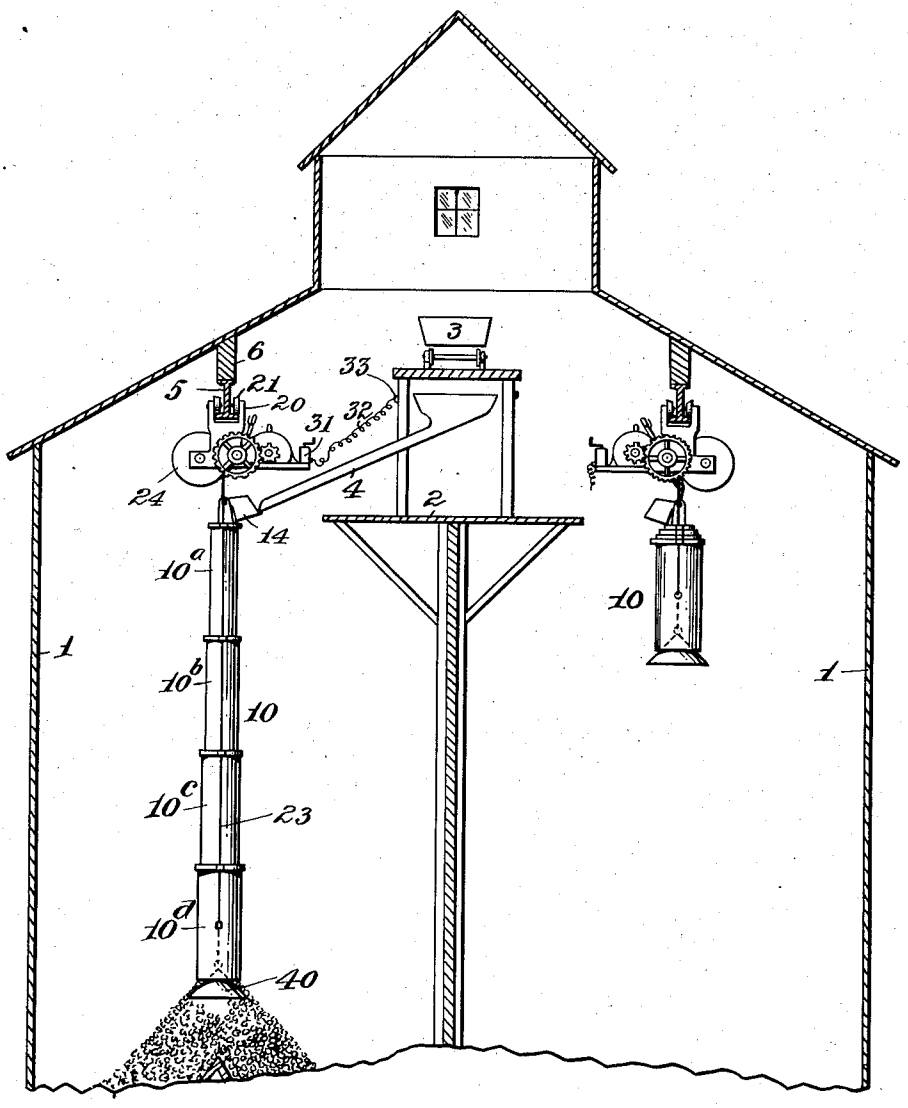

Fig. 1.

Attest:

Edna A. Mineland

M. A. Westervelt

Inventor:

Philo C. Blaisdell

by William R. Baird his Atty.

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Fig. 2.

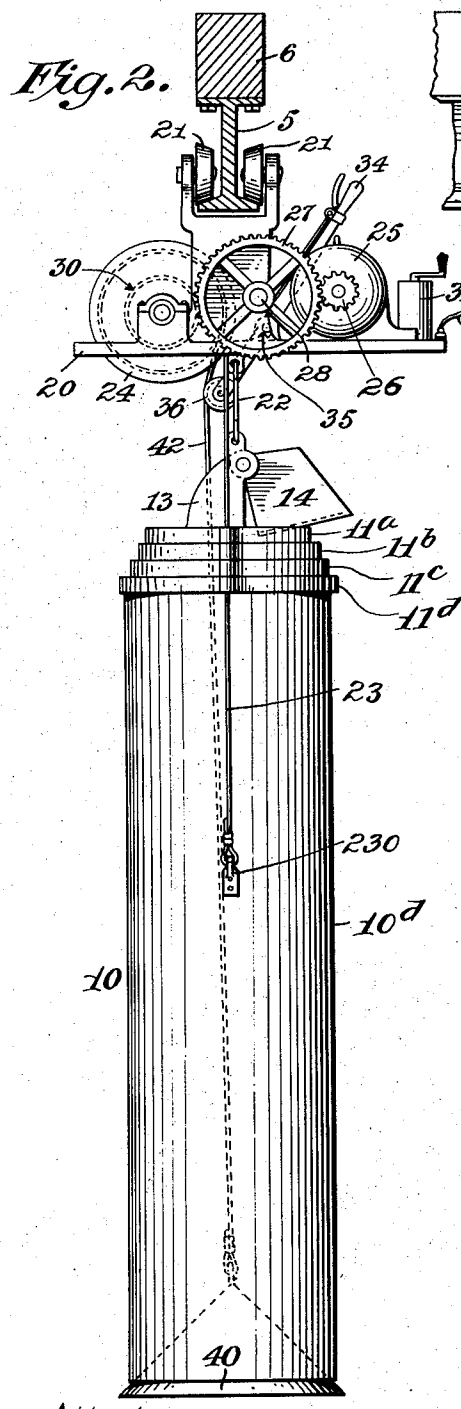
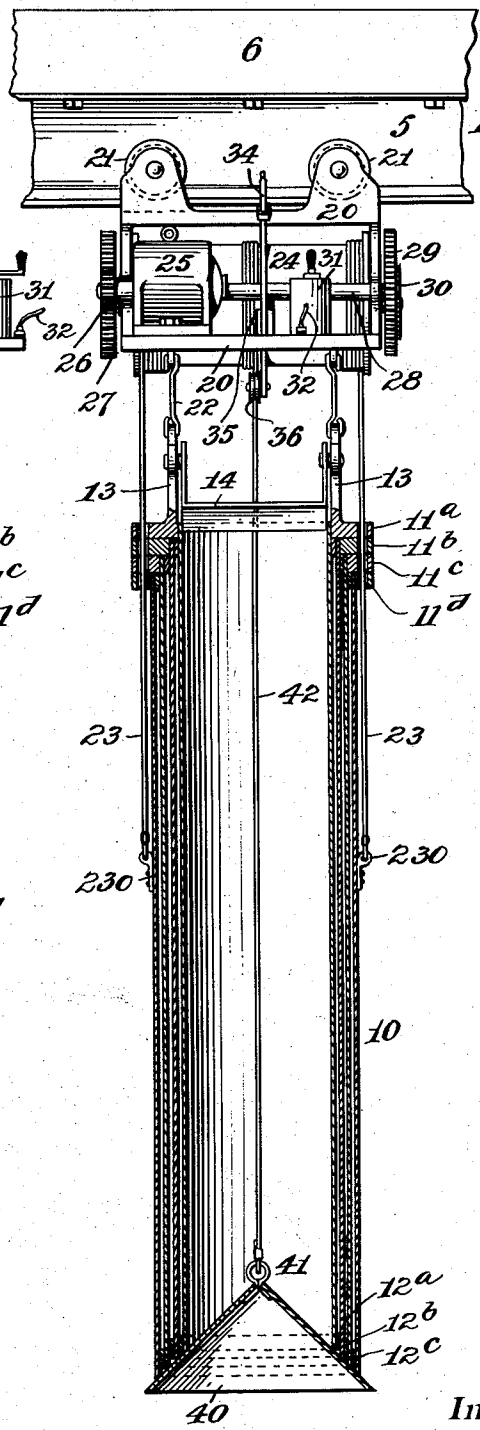


Fig. 3.



Attest:

Edna A. Moreland

M. A. Westervelt

Inventor:

Philo C. Blaisdell

by William R. Baird his Atty.

UNITED STATES PATENT OFFICE.

PHILO C. BLAISDELL, OF NEW YORK, N. Y.

COAL-POCKET.

1,021,757. Specification of Letters Patent. Patented Apr. 2, 1912.

Application filed May 8, 1911. Serial No. 625,737.

To all whom it may concern:

Be it known that I, PHILO C. BLAISDELL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Coal-Pockets, of which the following is a specification.

This invention relates to coal pockets and more particularly to the means for filling the same and its novelty consists in the construction and adaptation of the parts, as will be more fully hereinafter pointed out.

Coal pockets are now commonly filled from cars, conveyers or buckets which bring the coal to the top of the pocket whence it is dumped into the different bunkers or bins of which the pocket is composed. If the coal falls for any distance, and it usually does if the pocket is of practical size, it is splintered or broken and much dust is formed, causing a loss. The purpose of my invention is to deliver the coal within the pocket at any desired place and at any desired level in a continuous stream, or at least with a flowing and substantially without any falling movement, and this I do by providing a telescopic chute forming a continuous conduit from the source of supply to the point of discharge, with other adjuncts and conveniences as herein described.

In the drawings Figure 1 is a vertical section and partial side elevation of a portion of a coal pocket embodying my invention. Fig. 2 is an enlarged side elevation of the telescopic chute and its support. Fig. 3 is a transverse vertical section of the same.

In the drawings 1 is a coal pocket having the usual side walls and upper story.

2 designates a longitudinal platform on which it is intended that the operator who manipulates the machinery should stand and which is supported in any suitable way from the framework of the pocket or independently as may be preferred.

3 indicates a car or other means for bringing the coal into the pocket, and 4 is an inclined spout or chute suitably secured in place and adapted to receive the coal from the car 3. These parts are usual in the art and need no further or other description.

Suspended from any suitable part of the structure for instance the beam 6 is a track 5 which in the form shown is in the form of an I-beam, on the upper surface of the lower flange of which there are adapted to run conical wheels or rollers 21 pivoted in and secured to a carriage 20, on which the parts to be described are supported. The track formed of the I-beam 5 is arranged the entire length of the structure and the carriage is adapted to roll along the track and to be stopped at any desired point. The conical wheels 21 being situated on both sides of the web of the beam there is no tendency to derailment of the carriage. On the carriage 20 is mounted an electrical motor indicated at 25 and operated from a controller 31 supplied with current from a suitable conductor indicated at 32 and controlled by a switch 33. On the end of the motor shaft is a pinion 26 adapted to mesh with a gear 27 rigidly mounted on a shaft 28 on the opposite end of which is a gear 29 meshing with a pinion 30 on the shaft of which is mounted a drum 24. By the train of mechanism described the rotation of the drum 24 is controlled from the handle of the controller 31. Wound around the drum 24 are two cables 23, one at each end and at its center is another cable 42.

Suspended from the carriage 20 by two links 22 is a bail 13 between which is hingedly mounted a guide 14. From this bail there is suspended the first or uppermost unit 10^a of a telescopic tubular chute collectively designated by the numeral 10. This unit is provided with an upper facing ring 11^a and a lower facing ring 12^a. Surrounding the unit 10^a is a second telescopic unit 10^b having an upper facing ring 11^b and a lower facing ring 12^b; surrounding this is a third telescopic unit 10^c having an upper facing ring 11^c and a lower facing ring 12^c, and surrounding this is a fourth telescopic unit 10^d having an upper facing ring 11^d. The tubular unit 10^a is supported from the carriage directly. The tubular unit 10^d is supported from the carriage by means of the cables 23 which are wound around the drum 34 and which cables are pivoted to ears 230 at the outside of this unit. The facing ring 11^c rests upon the ring 11^d, and 11^b rests upon 11^c. It is obvious that lowering the cable 23 will lower the tubular unit 10^d and raising it will elevate such unit and with it the units 10^c and 10^b. This form of tubular units and sup-

ports is the one which I prefer, but it is obvious that the units intermediate the outer and inner tubes may be independently supported by separate cables or other suitable means from the carriage 20.

A peculiar valve is provided for the bottom of the multiple or telescopic tube 10. It comprises a conical shell 40 secured at its apex 41 from the cable 42. The edges of this tube rest snugly against the lower edges of the different tubular units and close the multiple tube effectually.

Pivoted at 35 on the carriage 20 is an operating lever 34 provided at its lower extremity with an idler wheel 36 which is grooved and contacts with the cable 42. The cable 42 and cables 23 being on the same drum they all move vertically at the same rate of speed, and the relative length of these cables is not varied except when the lever 34 is pulled downward; and this movement forces the idler 36 against the cable 42 and pulls the latter slightly upward and holds the valve 40 tightly against the lower edge of the telescopic chute 10.

In the operation of the device, the parts are placed first in the position shown at the right in Fig. 1, the telescopic chute being at its uppermost position and the valve 40 being closed. The inner unit 10^a of the chute is first filled with coal from the car 3 by allowing the coal to slide down the spout 4 and over the guide 14. The drum 34 is then unwound to lower the units 10^b, 10^c and 10^d slowly as fast as the coal enters the chute until the facing ring 11^b of the unit 10^b contacts with the facing ring 12^a of the unit 10^a and prevents the further downward movement of the unit 10^b. In a similar manner the unit 10^b and then the unit 10^d is lowered until the entire chute is extended its full length and is in the position shown at the left in Fig. 1. It will then be full of coal. The lever 34 is then moved to move the idler 36 away from the cable 42 and the valve 40 is thus lowered and the coal permitted to escape. The sides of this valve are inclined to the horizontal at about the average angle of repose for coal and the coal therefore slides out of the chute easily and with little grinding or breakage.

It will be understood of course that variations may be made in the form, size and number of the parts and to some extent in their relative arrangement without departing from the principle of the invention.

What I claim as new is:—

1. In an apparatus of the kind described, a telescopic chute, in combination with a discharge valve of greater width than the chute suspended below the lower discharge end thereof, said valve being of inverted cone shape to engage the walls of the discharge end of the chute when the valve is drawn upward, and means for moving the valve with respect to the chute comprising a cable and a lever adapted to be moved against the cable to vary its effective length.

2. In an apparatus of the kind described, a telescopic coal chute, means for suspending it vertically, a valve of inverted cone shape suspended below the lower or discharge end of the chute, and also suspended vertically below and against the bottom of the chute, means for moving the chute suspending means and valve suspending means simultaneously and at the same rate, and further means for moving the valve relative to the chute.

3. In an apparatus of the kind described, a telescopic coal chute, means for suspending it vertically, a valve also suspended vertically against the bottom of the chute and means for moving the chute, suspending means and valve suspending means simultaneously, comprising a drum supporting both means in common.

4. In an apparatus of the kind described, a telescopic coal chute, means for suspending it vertically, a valve also suspended vertically against the bottom of the chute and means for moving the chute, suspending means and valve suspending means simultaneously, comprising a drum supporting both means in common, and further means for moving the valve relative to the chute.

5. In combination, a telescopic chute, cables for supporting the chute, a drum around which the cables are adapted to be wound, a valve of inverted cone shape and greater diameter than the chute adapted to close the chute at the bottom, and a cable by which valve is supported wound around the same drum.

6. In combination, a telescopic chute, cables for supporting the chute, a drum around which the cables are adapted to be wound, a valve of inverted cone shape and greater diameter than the chute adapted to close the chute at the bottom, a cable by which valve is supported wound around the same drum, means for rotating the drum, and other means for varying the relative length of the valve cable with respect to the chute cable.

7. In combination, a telescopic chute, cables for supporting the chute, a drum around which the cables are adapted to be wound, a valve of inverted cone shape and greater diameter than the chute adapted to close the chute at the bottom, a cable by which valve is supported wound around the same drum, means for rotating the drum, other means for varying the relative length of the valve cable with respect to the chute cable comprising an operating lever, and an idler wheel carried by the lever and adapted to contact with the valve cable.

8. In combination a carriage, a drum journaled thereon, three cables wound upon and depending from said drum, a telescopic

chute comprising outer lower and inner upper tubes, the outer lower tube being supported by the two outer cables, a valve in the lower end of the chute supported by the middle cable, links depending from the carriage, and a bail carried by the links and supporting the upper inner tube.

In testimony whereof I have affixed my signature in presence of two witnesses.

PHILO C. BLAISDELL.

Witnesses:
E. W. SCHERR, Jr.,
ALAN C. MCDONNELL.