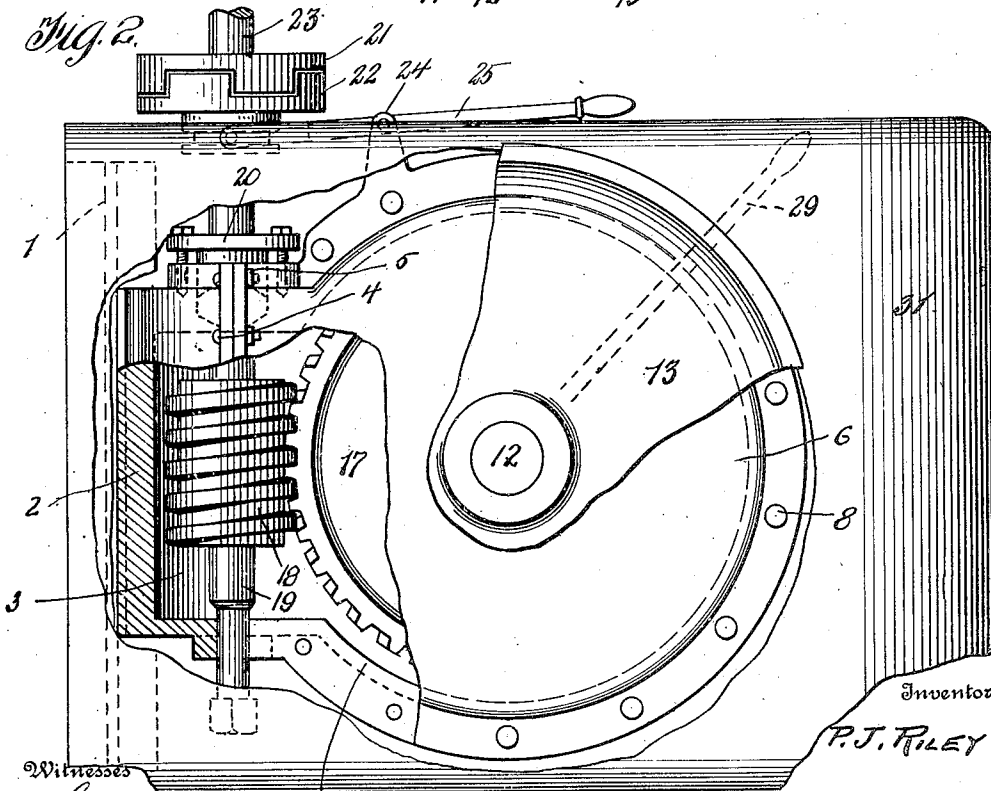
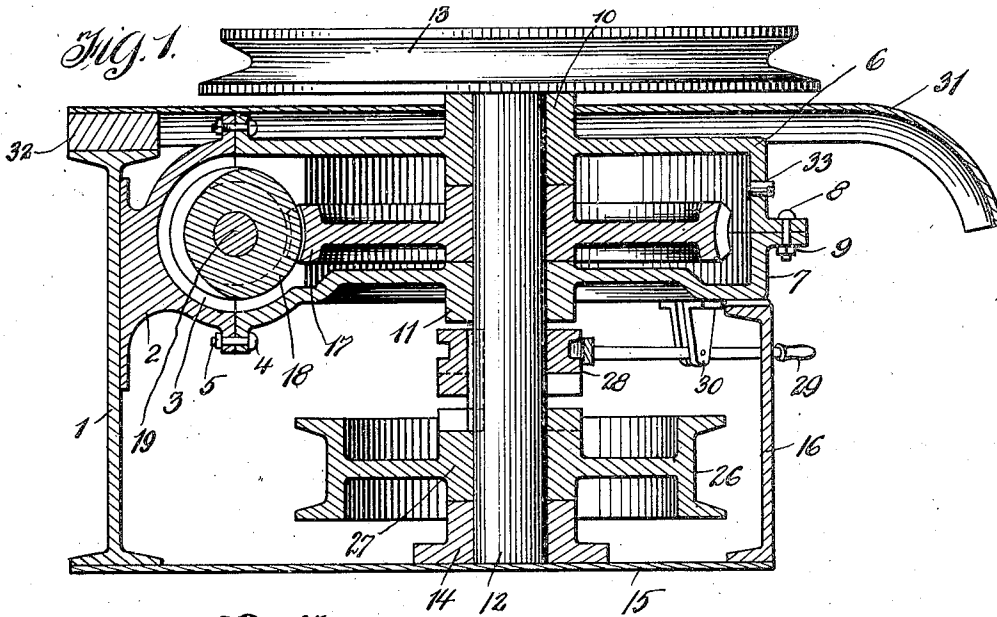


P. J. RILEY.
CONVEYER FOR MINES.
APPLICATION FILED MAR. 12, 1909.

942,750.

Patented Dec. 7, 1909.



Witnesses

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PATRICK J. RILEY, OF HALLSVILLE, WEST VIRGINIA.

CONVEYER FOR MINES.

942,750.

Specification of Letters Patent.

Patented Dec. 7, 1909.

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To all whom it may concern:

Be it known that I, PATRICK J. RILEY, a citizen of the United States of America, residing at Hallsville, in the county of McDowell and State of West Virginia, have invented certain new and useful Improvements in Conveyers for Mines, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to conveyers for mines, and the object of my invention is to provide a motor driven wall conveyer for guiding a cable from a mine room to the entry thereof, whereby boxes or buckets carried by said cable can be tilted to dump the contents thereof into cars or similar receptacles located in the entry of the mine.

Another object of my invention is the provision of novel means in connection with a wall conveyer of a mine, whereby the cars of a mine can be intermittently moved, as the same are filled, the movement of said cars being controlled by a mechanism used in connection with the wall conveyer.

25 A further object of this invention is to provide a wall conveyer for mines, wherein the transmission of the conveyer is located in a dust proof casing capable of containing a lubricant, thus insuring a positive operation of the conveyer.

30 A still further object of this invention is to provide a wall conveyer that can be anchored at the junction of a room and mine entry to support a movable cable at an angle or corner point within a mine and permit of coal being conveyed from inaccessible parts of a mine to the entry thereof.

35 To this end, I have devised a simple, inexpensive and durable conveyer that will be hereinafter described in detail and claimed.

Referring to the drawings, Figure 1 is a vertical longitudinal sectional view of the conveyer, and Fig. 2 is a plan of the same partly broken away and partly in section.

45 In the accompanying drawings, 1 designates an I-beam. Suitably secured to the side of this beam is a housing 2 having a semi-cylindrical recess 3 formed longitudinally thereof. Secured to the housing 2 by bolts 4 and nuts 5 is a sectional gear casing, said casing comprising two horizontal cylindrical sections 6 and 7 secured together by bolts 8 and nuts 9.

55 The sections 6 and 7 are provided with vertical alining bearings 10 and 11 for a vertical revoluble shaft 12, the upper end of

which is provided with a grooved sheave 13, while the lower end thereof extends into a bearing 14, carried by a horizontal plate 15 suitably connected to the I-beams 1, the opposite edge of said plate being connected to the section 7 by a channel bar 16.

Upon the shaft 12 between the bearings 10 and 11 is mounted a horizontal gear wheel 17 meshing with a worm 18 mounted upon a shaft 19 journaled in the longitudinal recess 3 of the housings 2. The shaft 19 extends through a stuffing box 20, carried by the housing 2 and the sectional casing and is coupled through the medium of clutch members 21 and 22 to a motor driven shaft 23. The sectional casing is provided with an extension 24 for a fulcrumed clutch actuating lever 25, this lever being loosely connected to the shaft 19 and the worm 18 carried thereby can be easily controlled.

Located upon the shaft 12 above the bearing 14 is a grooved sheave 26 having the hub 27 thereof conforming to a clutch member adapted to be engaged by another clutch member 28 slidably keyed upon the shaft 12. The clutch member 28 is moved through the medium of the clutch operating lever 29 fulcrumed in the hangers 30 carried by the sections 7 of the gear casing. This lever is loosely connected to the clutch member 28, similar to the connection of the lever 25 of the clutch member 22, whereby said clutch members can easily rotate with their respective shafts.

Supported between the sectional gear casing and the grooved sheave 13 is an apron 31, said apron having the rear edge thereof suitably connected to a block 32 mounted upon the I-beam 1.

The section 6 of the gear casing is provided with a threaded opening for a plug 33, the plug being removed to fill the gear casing with a lubricant.

In operation, a rotary movement transmitted to the shaft 12 through the medium of the worm 18 causes the curved sheave 13 to rotate. A bucket cable (not shown) extending around said shafting will be moved to swing the buckets thereof around the edge of the apron, and through the medium of the clutch operating lever 25, the shaft 13 can be stopped to allow the buckets carried by the cable to be emptied into pit cars arranged at the wall conveyer. In order that the pit cars can be intermittently moved, as the same are filled to place another empty car in position,

a hauling cable or chain (not shown), can be attached to the sheave 26 and the clutch operating lever 29 moved, whereby the driven shaft 12 will revolve the sheave 26 and wind the hauling cable or chain thereon.

An important characteristic of my invention is the gear casing inclosing the transmission mechanism of the conveyer, this casing preventing dust and the forces of nature from deteriorating the transmission mechanism.

While in the drawings forming a part of this application, there is illustrated the preferred embodiments of my invention, I would have it understood that the details of construction can be varied or changed as to the shape, proportion and manner of assembly without departing from the spirit of the invention.

Having now described my invention, what I claim as new, is:—

1. In a wall conveyer for mines, the combination with a motor driven shaft, and a worm located upon said shaft, of an I-beam; a channel bar, a gear casing supported by said I-beam and said channel bar, and comprising a housing and a sectional horizontal casing, a vertical shaft journaled in said casing, a gear wheel mounted upon said shaft and meshing with said worm, a grooved sheave mounted upon the upper end of said shaft, a grooved sheave loosely mounted upon the lower end of said shaft, a clutch member for controlling the operation of said loosely mounted sheave, clutch members controlling the operation of said worm, and a horizontal apron arranged above said gear casing, substantially as, and for the purpose herein described.

2. In a wall conveyer for mines, the combination with a motor driven shaft, and a worm located upon said shaft, of an I-beam, a channel bar, a gear casing supported by

said I-beam and said channel bar and comprising a housing and a sectional horizontal casing, a vertical shaft journaled in said casing, a gear wheel mounted upon said shaft and meshing with said worm, a grooved sheave mounted upon the upper end of said shaft, a grooved sheave loosely mounted upon the lower end of said shaft, a clutch member for controlling the operation of said loosely mounted sheave, and clutch members controlling the operation of said worm, substantially as, and for the purpose herein described.

3. A wall conveyer comprising a driven shaft, a gear casing adapted to contain a lubricant, and surrounding said shaft a driven worm journaled in said casing, a gear wheel mounted upon said shaft and meshing with said worm, a grooved sheave fixed upon the upper end of said shaft above said casing, a sheave loosely mounted upon the lower end of said shaft below said casing, a clutch mechanism for controlling the operation of said loosely mounted sheave, and an apron arranged between said gear casing and said fixed shaft.

4. A wall conveyer comprising a driven shaft, a gear casing adapted to contain a lubricant, and surrounding said shaft a driven worm journaled in said casing, a gear wheel mounted upon said shaft and meshing with said worm, a grooved sheave fixed upon the upper end of said shaft above said casing, a sheave loosely mounted upon the lower end of said shaft below said casing, and a clutch mechanism for controlling the operation of said loosely mounted sheave.

In testimony whereof I affix my signature in the presence of two witnesses.

PATRICK J. RILEY.

Witnesses:

B. C. BURR,
J. S. RILEY.