Oct. 20, 1931. T. WILKES 1,828,268

CONVEYER

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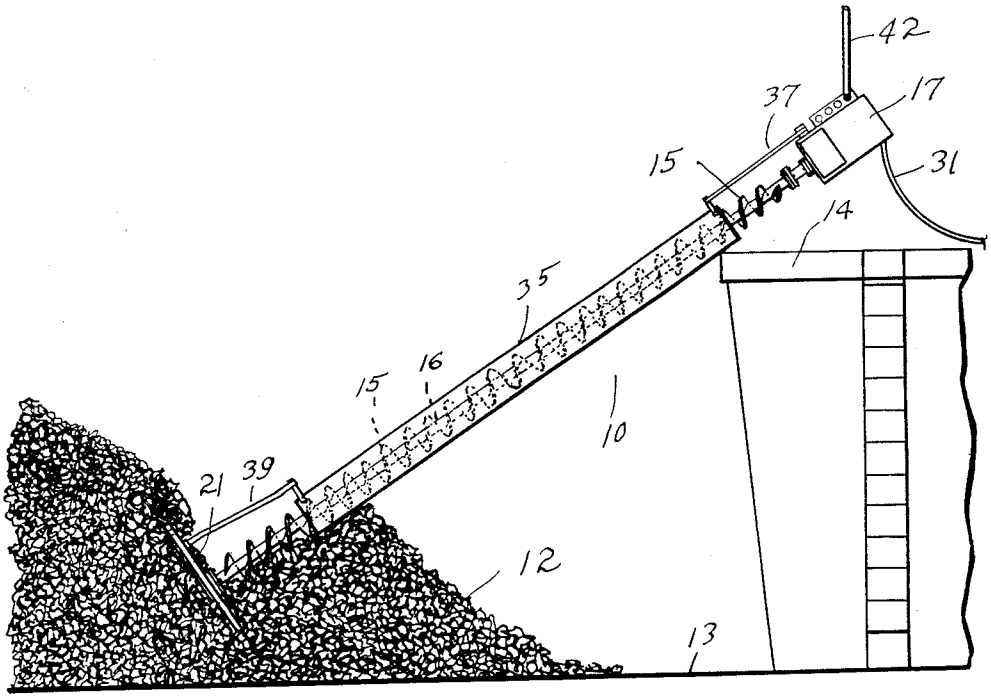


Fig. 1.

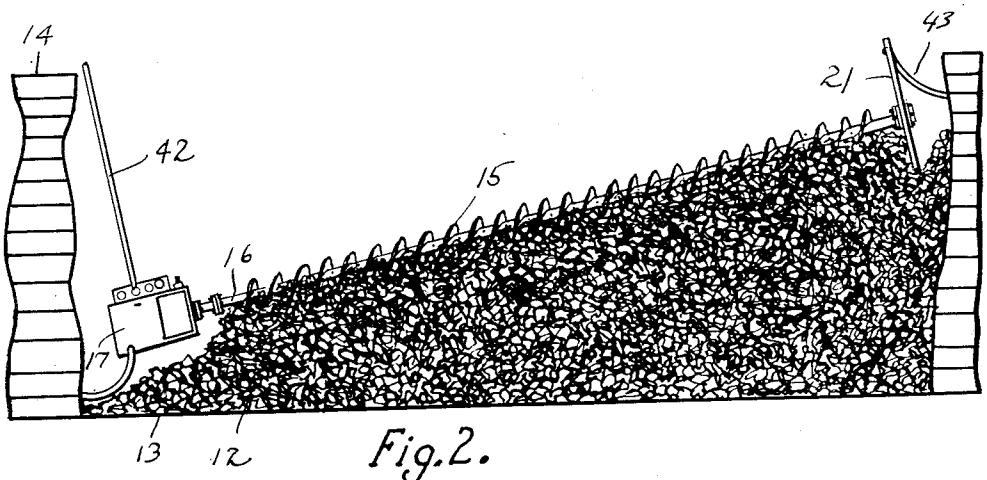


Fig. 2.

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CONVEYER

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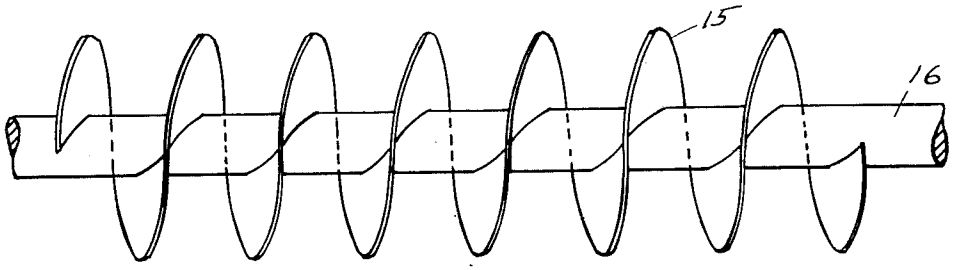


Fig. 3.

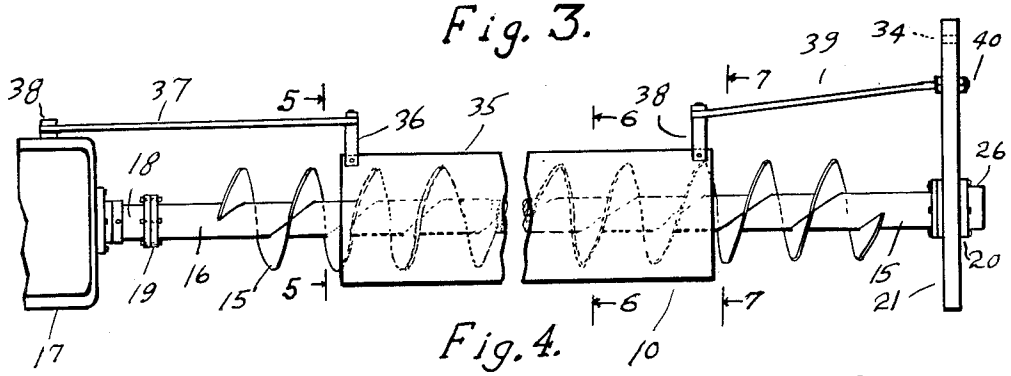


Fig. 4.

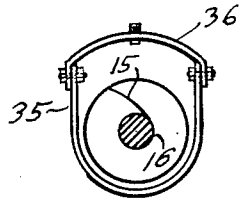


Fig. 5.

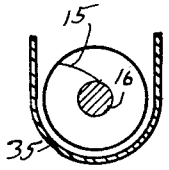


Fig. 6.

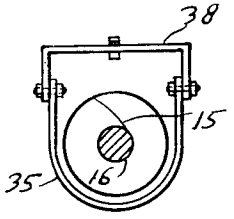


Fig. 7.

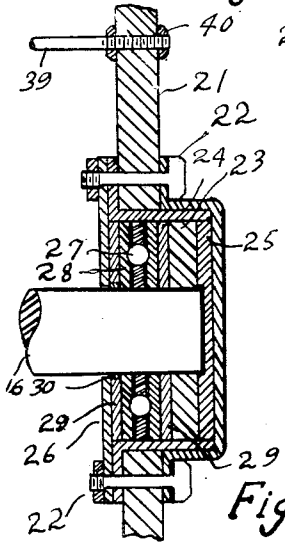


Fig. 8.

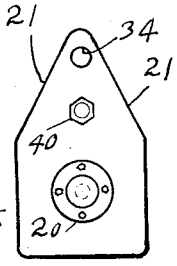


Fig. 9.

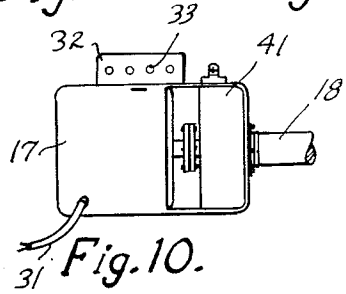


Fig. 10.

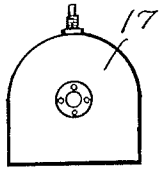


Fig. 11.

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UNITED STATES PATENT OFFICE

TRAUB WILKES, OF NEW YORK, N. Y.

CONVEYER

Application filed February 2, 1931. Serial No. 513,011.

This invention relates to an improved conveyer for loading or trimming coal, sand, gravel or the like.

It is an object of this invention to provide a conveyer which may be used for easily trimming or leveling coal or the like in bins so as to distribute the coal about the bin as may be desired.

A further object of this invention is to provide an easily attachable and detachable gutter which may be used with the conveyer when it is desired to use the device as a loader for moving coal, sand, gravel or the like from one elevation to another, as from the surface of the ground into a railroad car, automobile truck or the like.

With the foregoing and other objects in view, as will hereinafter become apparent, this invention comprises the following constructions, combinations and arrangements of parts set forth and disclosed in the following specification within the scope of what is claimed and their equivalents and illustrated on the accompanying drawings. In the drawings,

Figure 1 is a plan view of this invention in operation for loading coal or the like from one elevation to a higher elevation.

Figure 2 is a plan view of this invention with the gutter omitted and used for trimming or leveling coal or the like within a bin.

Figure 3 is a detached view of the operating spiral.

Figure 4 is a view of the spiral with the gutter attached thereto.

Figures 5, 6 and 7 are sections on lines 5—5, 6—6, and 7—7 respectively of Figure 4.

Figure 8 shows an enlarged cross-sectional view of the end plate and bearing for the free end of the spiral.

Figure 9 shows a view of the end plate looking from the left of Figures 4 and 8.

Figure 10 shows a side view of the motor end of the spiral, and

Figure 11 shows an end view of the motor end of the spiral.

There is shown at 10 in Figure 1 the conveyer comprising one form of this invention as used for loading coal 12 from the surface of the ground 13 to a higher elevation for discharging into a bin 14. This conveyer 10, as separately shown in Figure 4, comprises the spiral 15 on the shaft 16. A motor 17 having the motor shaft 18 is joined at 19 to the shaft 16 for rotating the spiral. The other end of shaft 16 is journaled in the bearing 20 fixed in the free end plate 21 by means of the bolts and nuts 22. Affixed to this end of shaft 16, as by a set screw or other suitable means (not shown) is a disc 23 which is carried between the babbitt or bearing metal members 24 and 25 in the bearing housing 26. Ball bearings 27 in the ball races 28 serve as a further anti-friction means and are held in place by a washer 29 having a babbitt or bearing metal ring 30.

The motor 17 has a cable 31 acting as a conductor leading to a source of power to operate the spiral. A projecting flange 32 is affixed to the top of the motor housing and has a series of openings 33 therein for connecting a rope or chain 42 thereto to assist in moving it about in operation, and the plate 21 likewise has an opening 34 therein to receive a rope or chain 43.

A gutter 35, preferably U-shaped and of sheet iron, is adapted to be easily attached to or detached from the foregoing mechanism. The gutter 35 has a cross bar 36 bolted at one end, and an end bar 37 on the cross bar 36 is bolted to the motor housing at 38. A yoke 38 is bolted to the other end of the gutter 35, and a bar 39 affixed to the yoke is bolted through the end plate 21 at 40.

A gear box 41 containing a reduction gearing between the motor 17 and the shaft 18 provides for the spiral 15 turning at a suitable speed.

When it is desired to use the conveyer for loading coal into a bin, or removing it to a higher elevation, it is placed as shown in Figure 1. The rope or chain 42 is used to hold the motor end in the proper position over the bin 14, and the other end is so allowed to rest in the coal. On the power being turned on, the spiral 15 will rotate and convey the coal along the inside of the gutter 35 until it reaches the upper end, whereupon it will drop in the bin, it being understood that the

distance between the motor 17 and the free plate end 21 is about 15 to 20 feet, although conveyers of any appropriate size may be made.

When it is desired to use the conveyer as a trimmer or leveler, the gutter 35 is unbolted therefrom and the conveyer is used as shown in Figure 2. The ropes or chains 42 and 43 are used to drag the conveyer to the proper positions, and when the power is turned on, the spiral 15 will rotate and draw the coal toward the motor or lower end, thus trimming or leveling the surface of the coal.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

A conveyor for coal comprising a shaft, a spiral affixed about said shaft, a plate at one end of said shaft, a bearing member in said plate for said shaft, an electric motor at the other end of said shaft, a gearing box for operating said shaft from said motor, a U-shaped gutter adapted to be placed about said spiral, a cross bar detachably affixed to one end of said gutter, an end bar on said cross bar, means for affixing the end bar to the motor housing, a yoke detachably affixed to the other end of the gutter, an end bar on said yoke, and means for bolting the latter end bar to said plate.

In testimony whereof I affix my signature.

TRAUB WILKES.