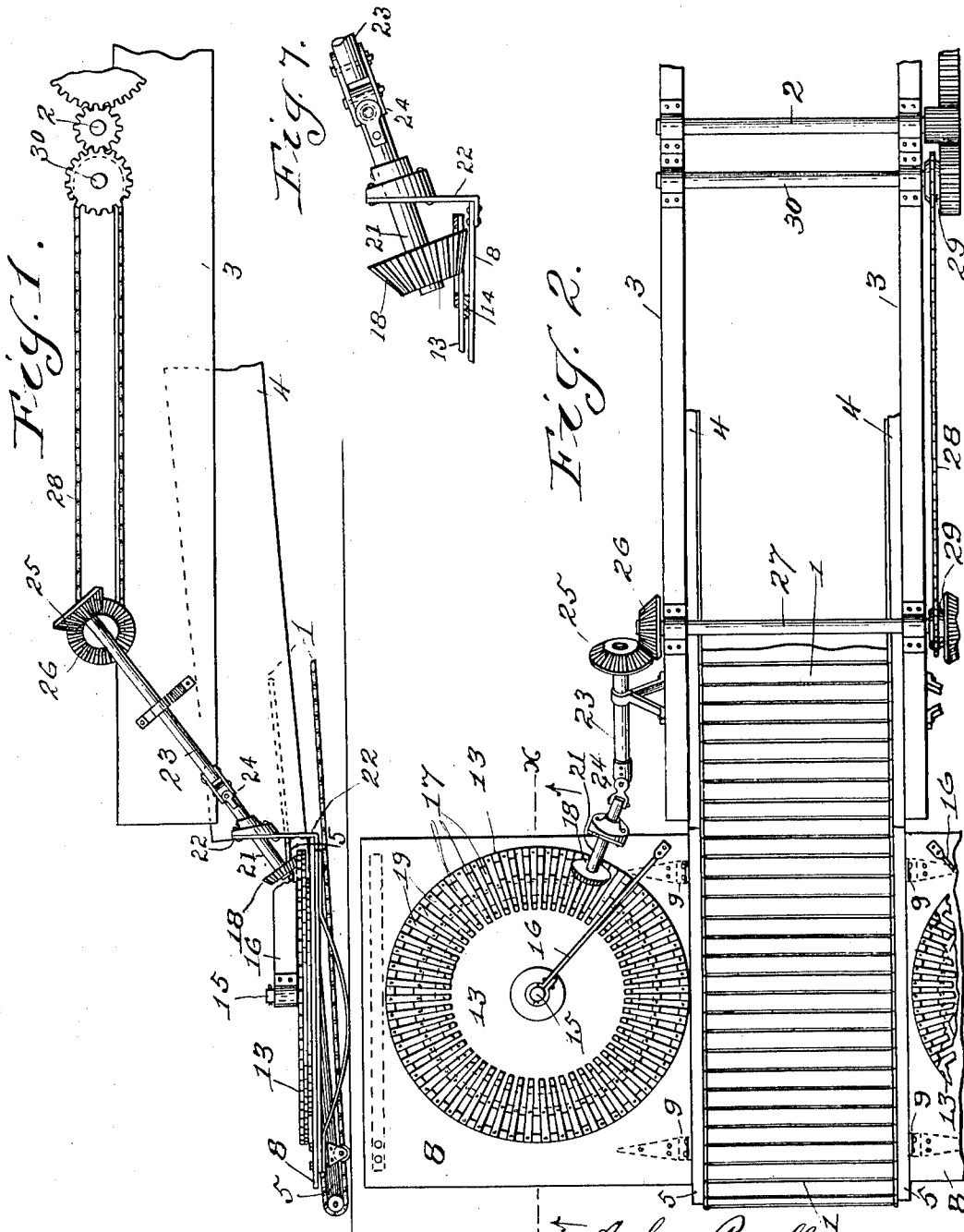


A. POWELL.
COAL LOADING MACHINE.
APPLICATION FILED MAY 25, 1912.

1,061,778.

Patented May 13, 1913.

2 SHEETS-SHEET 1.



Witnesses:

Wm. E. Volk Jr.
C. L. Bell

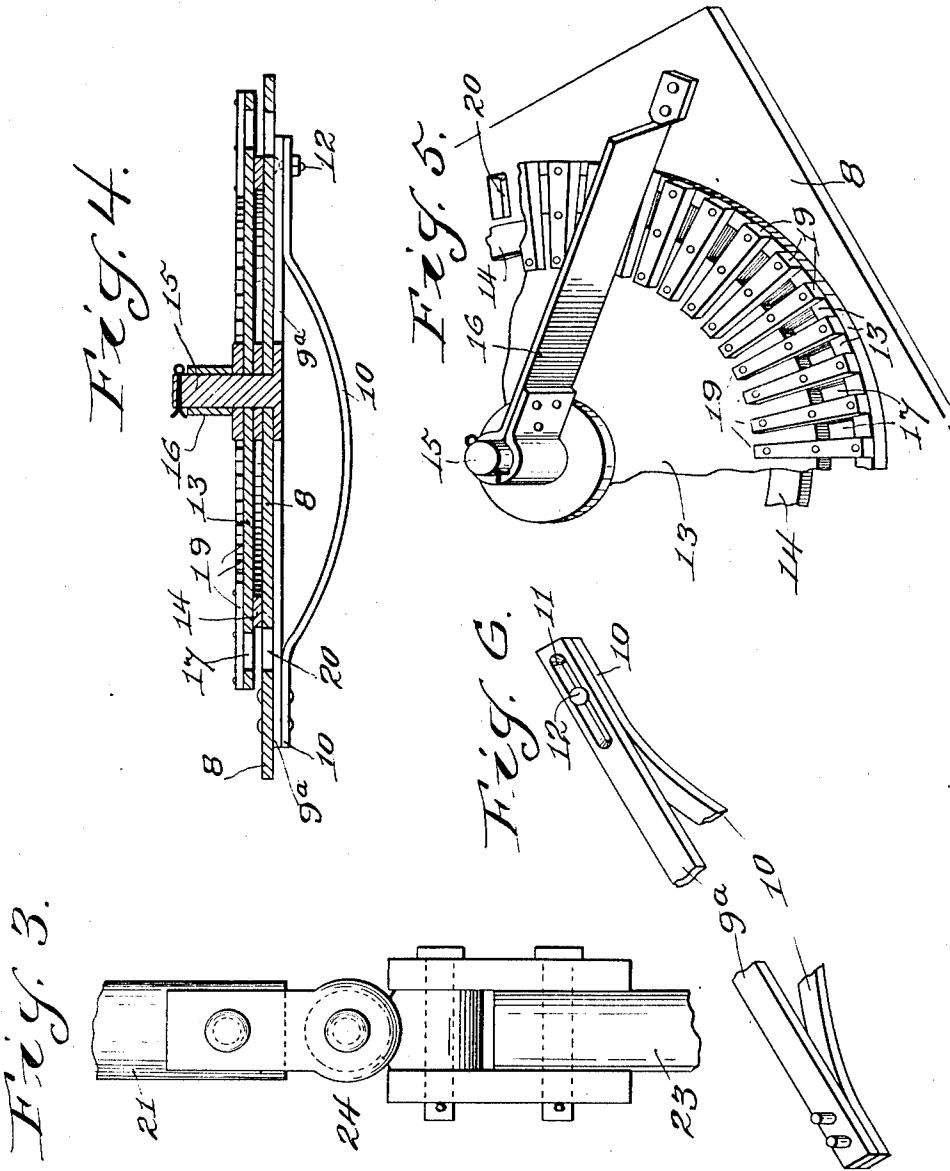
Andrew Powell,
Inventor.
By Robert Whidman & Co.
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UNITED STATES PATENT OFFICE.

ANDREW POWELL, OF UNIONTOWN, PENNSYLVANIA.

COAL-LOADING MACHINE.

1,061,778.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed May 25, 1912. Serial No. 699,810.

To all whom it may concern:

Be it known that I, ANDREW POWELL, a citizen of the United States, residing at Uniontown, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Coal-Loading Machines, of which the following is a specification.

This invention relates to coal loading machines used in connection with coal mining, and the invention pertains especially to side wings such as shown attached to the endless conveyer frame of my patent issued August 30, 1910, No. 968,881.

The object of this invention is to provide the said side wings with mechanism for discharging coal from the wings onto an endless coal conveyer.

A further object of the invention is to provide the side wings of a conveyer frame with a revoluble coal table for catching the mined coal and for discharging the coal onto a loading conveyer during a coal mining operation.

A still further object of the invention is to provide revoluble tables at each side of the coal receiving end of the conveyer-frame, and to furnish special means for revolving the tables so that the coal falling on the tables will be directed toward and discharged upon the conveyer.

Various other objects, advantages, and improved results are attainable in the practical application of the invention, as will be hereinafter fully described.

In the accompanying drawings forming part of this application:—Figure 1— is a side elevation of the forward or front portion of a machine showing the application of the invention thereto. Fig. 2— is a top plan view partly broken away. Fig. 3— is an enlarged detail elevation of the universal shaft coupling. Fig. 4— is an enlarged sectional view taken on the dotted line $x-x$ of Fig. 2. Fig. 5— is a perspective view of a portion of a wing and a portion of a table. Fig. 6— is a perspective view of one of the wing supports partly broken away. Fig. 7 is a detail elevation, partly broken away, showing a pinion and shaft connection.

The same reference characters denote the same parts throughout the several views of the drawings.

Only such portions of a mining machine carriage or coal loading machine, its conveyer, and conveyer driving gearing, are

shown and described herein, as are necessary to illustrate the invention and its application to such machines.

The endless conveyer 1, is operated by a driven shaft mounted on the rear end of a carriage, (not shown), and between the sides 3 of the carriage, a conveyer frame 4 is located, and the frame 4 has a front or forward extension 5, around which the conveyer 1 is revolved so as to convey coal through the carriage for the purpose of loading it. The extension 5 is provided with a pair of platform wings 8, which are hinged at 9 to the sides of the extension 5 so as to project laterally from the side edges of the conveyer 1. The wings 8 are each provided with a pair of supporting bars 9^a and 10 fixed together and to the under side of the wings at one end. The other end of the bar 9^a has a slot 11, and the other end of the bar 10 has a bolt 12, fitting the slot for adjusting the bar 10, which is bowed to form a rest or support for the wings, and the bar 10 is of sufficient resiliency to permit of its being contracted and expanded by means of the said slot and the said bolt, in adjusting and fixing the wings in operative position.

Each platform or wing 8 is provided with a circular table 13, onto which the coal drops as it is mined. Both tables being of the same construction, and their attachments and means for operating them being the same, only one of the tables, its attachments and means for operating it will be described in detail. The wings 8, are provided with a circular track 14, and the table is revolubly mounted by means of a central post or pivot 15, which projects from the table and through one end of a guard or fender 16 extending across the table and having its other end secured to the wing so as to permit the table to be revolved between the fender and the wing for discharging the coal onto the conveyer 1, in a loading operation. The table is preferably composed of plate metal having elongations or slots 17 therethrough near its periphery and forming a circular rack for a bevel gear 18, hereinafter more particularly referred to, and the rack portion of the table is provided with ribs or strips 19 between the slots 17, for bracing this portion of the table. The track 14 excludes the coal or particles thereof from the space within the track and between the table and the wing, and the wing has openings 20, therethrough under the rack, so as to pre-

vent the coal or particles thereof, which may pass through the slots, from lodging between the track and the wing, and from clogging the track. The teeth of the gear 18, project through the slots 17 far enough to assist in the dislodgment of coal particles from under the track.

The gear 18 is mounted on and revolved by a shaft 21, supported above the wing by a journal bracket 22, and said shaft is connected with a shaft 23, by means of a universal coupling 24, so as to permit the wings to be adjusted, as hereinbefore explained, and so as to permit the gear 18 to be swung out of working position when the wings are folded inwardly one upon the other while the machine is not in operation, or during transportation thereof. The shaft 23 extends upwardly from the coupling 24 at an angle thereto and is provided with a bevel gear 25, meshing with a like gear 26, on a shaft 27, which is driven by a sprocket chain 28, operated by sprocket wheels 29 and a shaft 30 geared with the shaft 2 connected with a driven shaft. It will be seen that there is an angle-shaft 23, on each side of the machine, and that the gear 25 of each of the shafts 23 meshes with the gears 26 so as to revolve the tables 13 in opposite directions, whereby the body of coal upon the tables is brought in contact with the guards or fenders 16, and thereby discharged from the tables onto the conveyer 1.

It should be understood that the conveyer and the tables are operated together and by the same source of driving power, so that the tables revolve continuously during the running of the conveyer.

I do not wish to be understood as limiting the invention in the matter of connecting the wings with the conveyer; to the particular mechanism for imparting motion to the tables; nor to any special means for mounting the tables in connection with a fender-bar fixed across the tables; but reserve the right to make such changes and variations herein as may come within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a loading machine, a longitudinal conveyer, a revoluble table at the side of and adjacent to the conveyer for receiving loose material and discharging the same upon the conveyer, an annular rack upon the receiv-

ing face of the table, an adjustable support for the table, a yieldable pinion carried by the support and engaging the rack, means for deflecting the material from the table, and means for operating the pinion and the conveyer in unison.

2. In a loading machine, a longitudinal conveyer, a revoluble table at the side of and adjacent to the conveyer for receiving loose material and discharging the same upon the conveyer, an annular rack upon the receiving face of the table, an adjustable support for the table, a yieldable pinion carried by the support and engaging the rack, a deflecting plate for the table and extending from the axis of the table over the rack and secured to the support, and means for operating the pinion and the conveyer in unison.

3. In a loading machine, a platform, a horizontal table revolubly mounted on the platform for receiving loose material, a longitudinal conveyer traveling adjacent to the periphery of the table for receiving the said material from the table, an adjustable support for the platform, a rack formed on and extending around the receiving face of the table, a deflecting-plate extending from the axis of the table over the rack and secured to the platform, a yieldable pinion mounted on the platform and meshing with the rack and adapted to follow the rack in adjusting the platform, and means for operating the pinion and the conveyer in unison.

4. In a loading machine, the combination with a conveyer, and a conveyer frame, of means for catching loose material and discharging the same upon the conveyer, comprising a swinging platform connected with each side of the frame, a table revolubly mounted on each platform adjacent to the sides of the conveyer, a stationary deflecting plate attached to each platform and projecting at an angle from said frame in opposite directions, an annular rack on each table, pinions meshing with the racks to revolve the tables under the said plates for discharging the loose material onto the conveyer, and means for operating the pinions and the conveyer in unison.

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

ANDREW POWELL.

Witnesses:

FRANK MATYNS,
THOS. BLAHO.