

R. F. HERR.
SAND CONVEYING APPARATUS
APPLICATION FILED DEC. 5, 1910.

995,406.

Patented June 13, 1911.

2 SHEETS—SHEET 1.

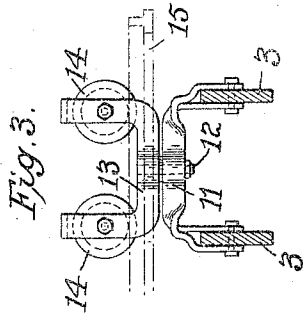
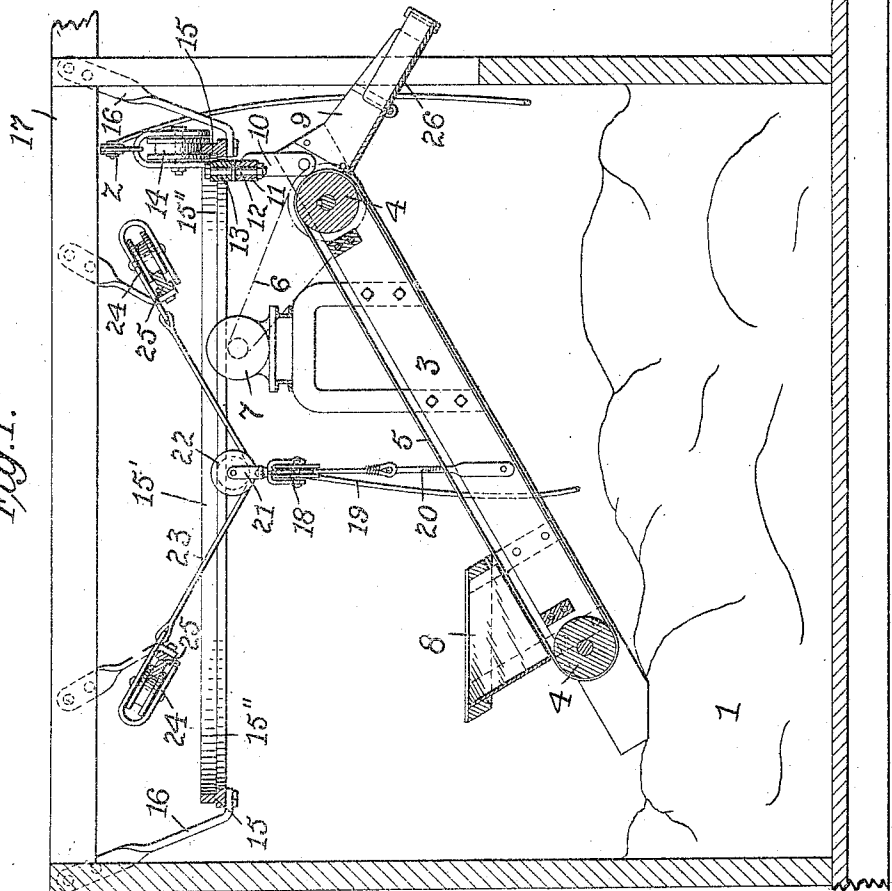


Fig. 1.



Attest:

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Edward N. Sartor

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per Walter D. Mearns, Atty's.

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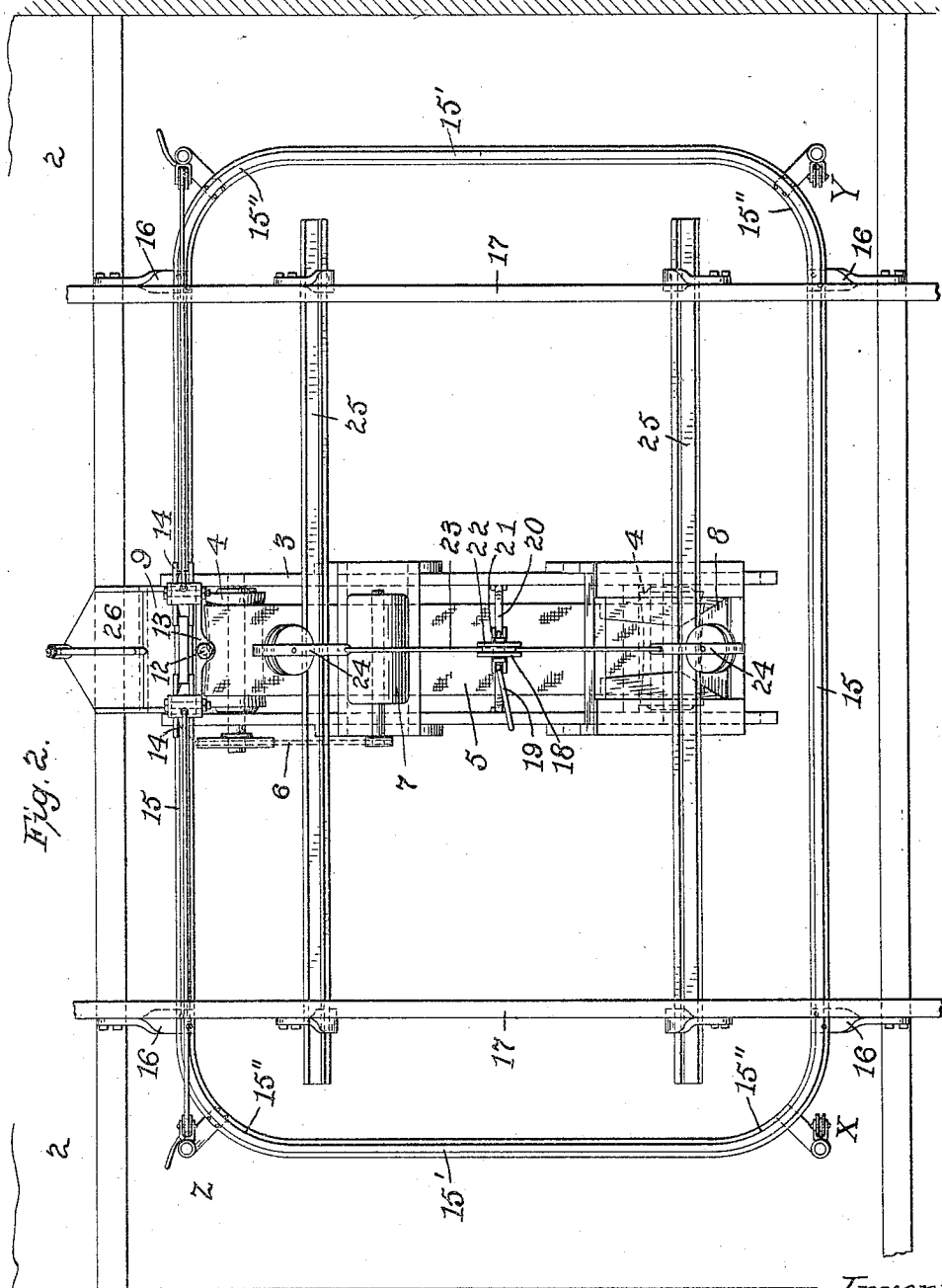


Fig. 2.

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UNITED STATES PATENT OFFICE.

RUDOLPH F. HERR, OF BERKELEY SPRINGS, WEST VIRGINIA.

SAND-CONVEYING APPARATUS.

995,406.

Specification of Letters Patent. Patented June 13, 1911.

Application filed December 5, 1910. Serial No. 595,811.

To all whom it may concern:

Be it known that I, RUDOLPH F. HERR, a citizen of the United States, residing at Berkeley Springs, West Virginia, have invented certain new and useful Improvements in Sand-Conveying Apparatus, of which the following is a specification.

My invention relates to apparatus for handling sand or like material, which is to be heated or dried, and it includes a conveyer mounted to be adjusted to different positions in relation to the pile of sand to be conveyed, so that the workman can move the conveyer to different points, and deliver the sand thereinto to be conveyed thence to the point or to the means where the drying or heating is done.

The invention consists in the features of construction and combination and arrangement of parts hereinafter described and particularly set forth in the appended claims.

In the accompanying drawings Figure 1 is a central vertical sectional view through a conveyer frame with parts in elevation; Fig. 2 is a plan view of the apparatus; and Fig. 3 is a view of a detail relating to the carrier for the upper end of the conveyer.

In these drawings, 1 indicates the pile of sand or other material which is to be conveyed to a steam or heating box indicated generally at 2.

The conveyer comprises a frame 3 having upper and lower drums or rollers 4 mounted therein, over which the conveyer belt 5 passes, the upper drum being driven through connections 6 with an electrical or other motor 7 mounted on a bracket supported on the conveyer frame. At the lower end of the conveyer, which is inclined, as shown in Fig. 1, is a hopper 8 into which the material is shoveled by the workman to be conveyed upwardly and discharged through a chute 9 mounted upon the upper end of the conveyer frame. This end of the frame is pivotally mounted in hangers 10 of a bracket 11 which is swiveled to turn horizontally on a pin 12 carried by a carriage frame 13 which is mounted on wheels 14 adapted to roll on a track 15, the said track, in turn, being supported by hangers 16 from the main frame 17 of the apparatus. This track has front and rear portions shown in the plan view, Fig. 2, connected by transverse portions 15', the connecting portions being curved at the corners, as shown at 15''. By this track the conveyer, at its upper end, can be moved

along from place to place along the track to deliver the material to different points in the steam box, or by lifting the lower end of the conveyer, it may be, as a whole, shifted from place to place, and for thus elevating the conveyer for this shifting action, any suitable form of block and tackle arrangement may be employed, and as one form, I show a pulley 18 over which a rope 19 passes, which rope is connected with the conveyer frame by a bail or other suitable connection at 20. The pulley 18 is swiveled to a pulley frame 21, the pulley 22 of which is supported by a connection 23 extending between pulley brackets 24, the pulleys of which are adapted to roll on tracks 25 suitably supported by the frame. By this means the lower portion of the conveyer may be lifted for the shifting action along the track, and this shifting action will also be partaken of by the pulley frames 24 and the connection 23, so that in its new position, the conveyer frame may be raised and lowered, as conditions may require.

The conveyer frame may be turned to different positions horizontally, in which case it would swing around the swivel bolt 12 before described, and by so swinging the conveyer, its lower end will describe an arc so as to reach different points of the platform upon which the sand is supported. In order to move the conveyer along the track 15, I may employ pulleys at the four corners of the said track over which ropes may be passed to connect with the movable carriage frame 13, so that by applying power to the rope, the shifting of the conveyer will result. Fig. 2 shows a pair of these ropes attached to the movable carriage, and extending in opposite directions over the pulleys. If the conveyer is shifted so as to reverse its position or to lie at right angles to the position shown in Fig. 2, the draft ropes just mentioned may be removed from the pulleys over which they are now shown as passing, and re-threaded again through the proper pulleys to secure a draft of the conveyer frame in either direction as circumstances may require. In other words, if the conveyer is reversed in position from that shown in Fig. 2, the draft ropes will be threaded through the pulleys at X and Y, whereas if the conveyer is moved to be supported on the left hand track section 15', the ropes will be threaded through the pulleys at X and Z.

The chute 9 is pivoted to the conveyer frame so that it may fold back when the conveyer is moved in order that the chute may not strike portions of the main frame, and for this purpose also the chute is provided with a pivoted section at 26, and this also will provide sufficient room or clearance for passing parts of the frame. It will be understood that while I have shown a steam box at only one side of Fig. 1, this steam box may be arranged upon one or more sides of the main frame.

I claim as my invention:

1. In combination a main supporting frame having an elevated track, a carriage mounted on said track, a conveyer having a swiveled connection with said carriage to be swung horizontally, and also having a pivotal connection to move vertically, said conveyer extending in inclined position from the elevated carrier down to its receiving point, hoisting means for the inclined conveyer, including a shifting support for said hoisting means, substantially as described.

2. In combination with a main supporting frame, a track extending around all sides thereof, a carriage supported on the track, a conveyer swiveled to the carriage

to be swung horizontally and also being pivotally connected to swing vertically, said carriage being shiftable to different parts of the said track, substantially as described.

3. In combination with a main frame, a conveyer, a carriage supporting one end of the said conveyer, elevating means for the conveyer to adjust it up or down, and movable carrying mechanism for the said elevating means, with tracks for supporting the carrying means, substantially as described.

4. In combination a main frame, a track extending around different sides thereof, a carriage mounted on the track, a conveyer frame swiveled to the carriage and also having a pivotal connection therewith to move vertically, hoisting means for the conveyer, and shifting carrying mechanism for the hoisting means, substantially as described.

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

RUDOLPH F. HERR.

Witnesses:

CHAS. E. ELY,
JOHN F. HEW.