

No. 818,225.

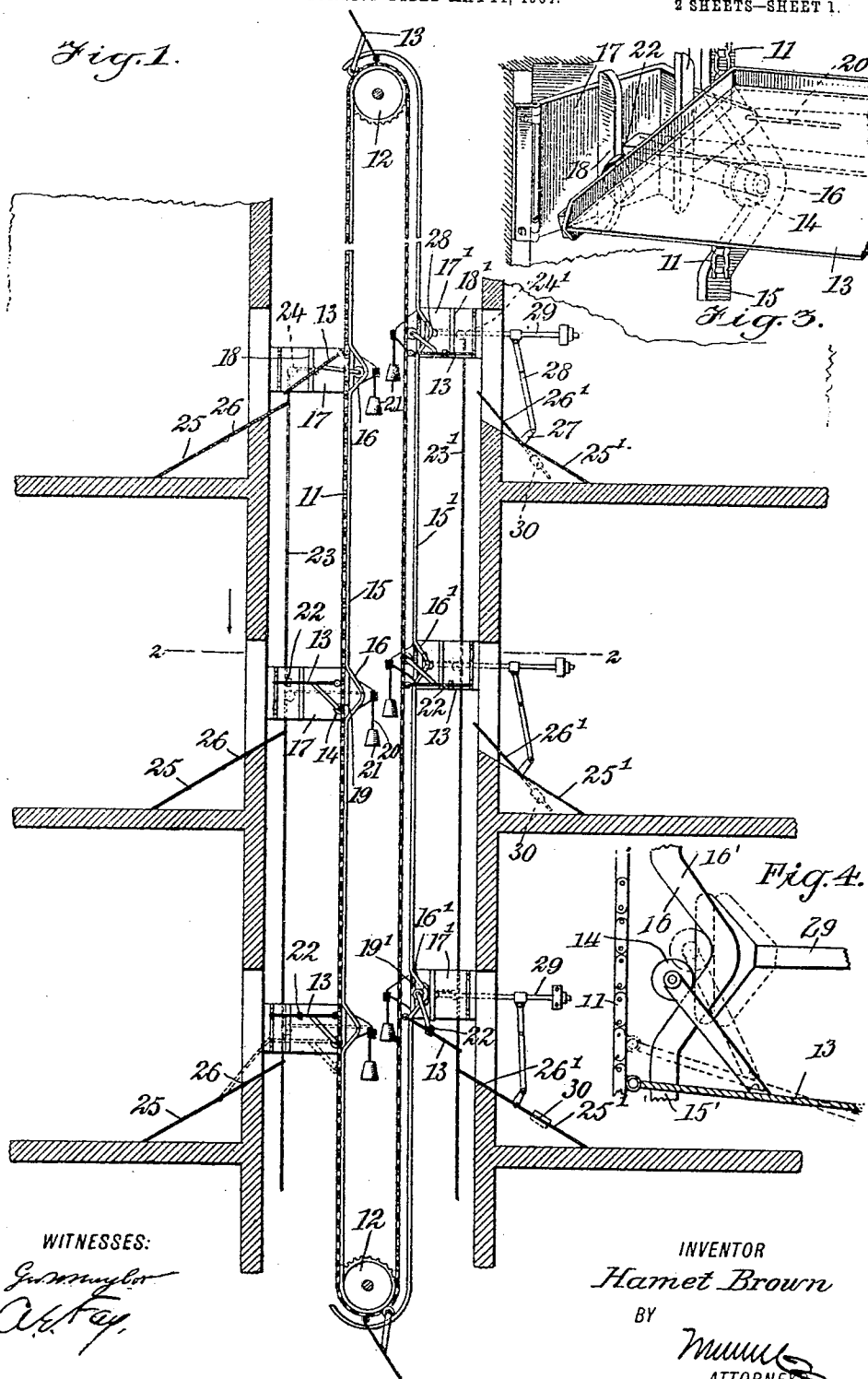
PATENTED APR. 17, 1906.

H. BROWN.
CONVEYER.

APPLICATION FILED MAY 14, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

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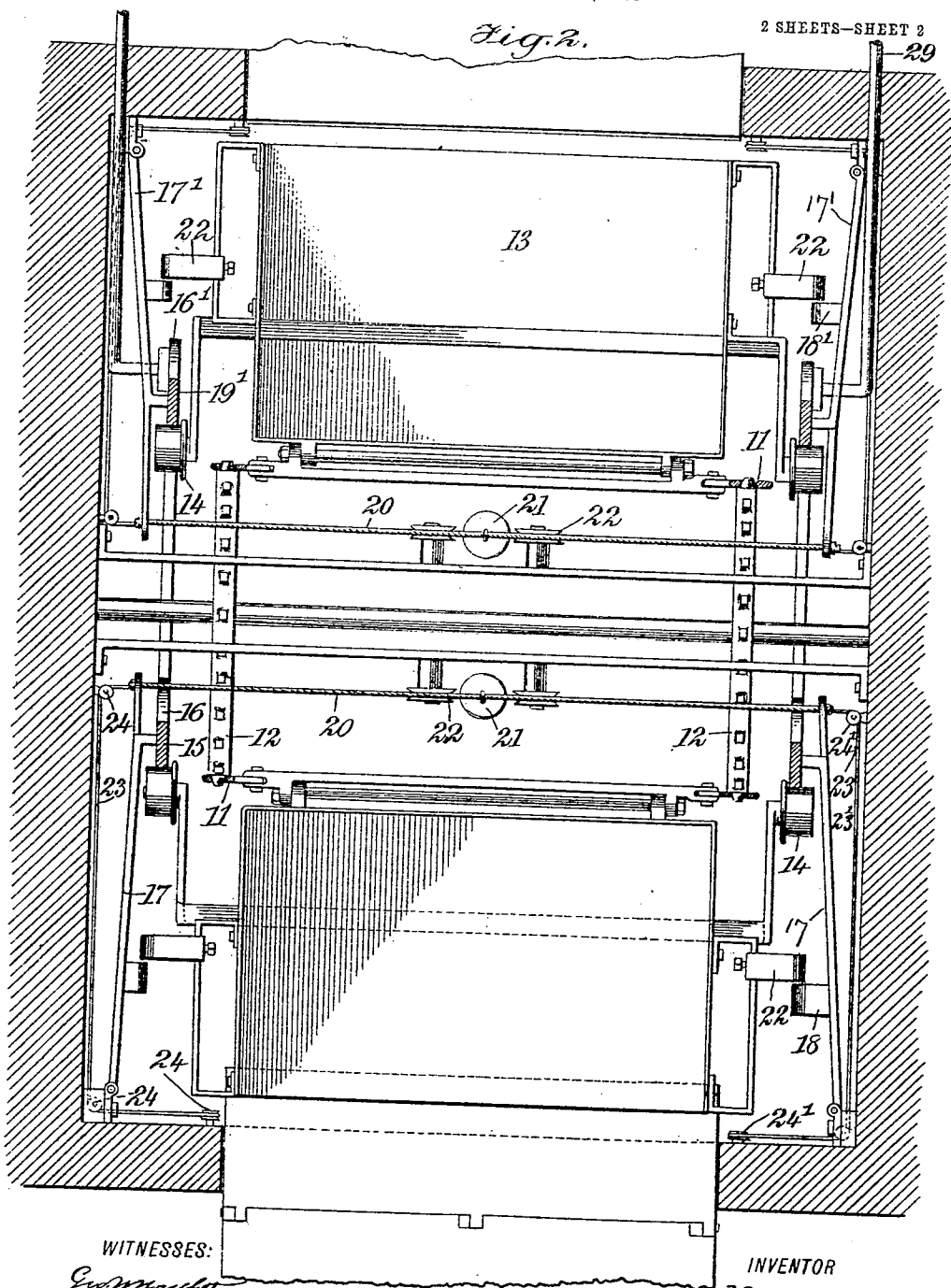
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2 SHEETS—SHEET 2



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UNITED STATES PATENT OFFICE.

HAMET BROWN, OF NEW YORK, N. Y.

CONVEYER.

No. 818,225.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed May 14, 1904. Serial No. 207,941.

To all whom it may concern:

Be it known that I, HAMET BROWN, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Conveyer, of which the following is a full, clear, and exact description.

My invention relates to a conveyer of that class known as "vertical" conveyers which is provided with a series of horizontal pans or shelves for carrying the material to be transferred.

The principal object of the invention is to provide automatic means for depositing the material upon the desired floor of a building whether the material is being raised or lowered.

Certain other subsidiary objects of the invention will be disclosed in the course of the following description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical sectional view of a building, showing an elevator-shaft with a preferred form of my invention located therein. Fig. 2 is a horizontal sectional view on the line 2 2 of Fig. 1. Fig. 3 is a fragmentary view in perspective of a portion of the device, and Fig. 4 is a fragmentary view of parts shown in Fig. 1 on an enlarged scale.

In the drawings, 11 represents the endless chain or belt conveyer operated and controlled by means of sprocket-wheels 12. The conveyer is provided with a series of pivoted pans or shelves 13, each of which has a projecting arm upon one side thereof, having a roller 14 designed to pass along in contact with a track 15 on one side of the conveyer and a similar track 15' upon the other side. These two tracks are so arranged as to keep the shelves or pans in horizontal position throughout their travel with the conveyer except at such places as it is desired to deposit the material being transferred. For the purpose of permitting this discharge of the material offsets 16 16' are made in both tracks. It will be obvious that when the rollers 14 come to a place where there is no straight track and they are obliged to follow these offsets on account of the weight of the material on the pans the pans will be allowed to assume an inclined position and discharge

their contents, as shown, on the third floor at the left and on the first floor at the right in Fig. 1. It is desirable, however, that the device be arranged in such a manner that the pans will not be moved out of the horizontal position except at the desired floor or floors. For this purpose pivoted plates 17 17' are provided at each floor and on both sides of the conveyer. Each of these plates is provided with a bar 18 18', no two of the bars being located in the same vertical position. Each of the plates is also provided with a section of track 19 19', designed when the plates are brought to a position against the track 15 15' to close the gap made by the offset 16 16', and consequently furnish a continuous track for the roller 14. These pivoted plates are normally held in such position as to cause the track-sections 19 19' to close the gaps formed by the offset portions of the tracks by means of cords, ropes, or chains 20 and counterweights 21. In order to provide for automatically swinging these plates out from this position, so that the pans will be caused to discharge their contents at the desired floor, an adjustable lug 22 is attached to each pan. These lugs will be so adjusted as to come in contact with the bar 18 or 18' at the floor upon which it is desired to discharge the material. As illustrated in Fig. 3, the lug 22 upon coming in contact with the bar 18 will force the plate 17 upon its pivot away from the track 15 and allow the roller 14 to pass into the offset part, so that the pan will be caused to drop backwardly on its pivot and discharge its contents. Upon passing down upon the other side of the conveyer a similar operation will take place at the desired floor. Of course the lug 22 will pass by the bars on the plates on the other floors without interfering with them, and continuous tracks will be furnished for the roller 14 by means of the sections 19 and 19'.

In order to provide for the operation of the device by hand, a flexible connection 23 and 23' is joined to each of the plates 17 and 17'. These connections pass over pulleys 24 and 24' and reach down to a position where they can be worked by the operator, so as to remove the plates 17 and 17' from their positions next to the tracks at any desired place and time, thus causing the discharge of the material upon the desired floor.

Upon the left-hand side of the shaft illustrated in Fig. 1, or, in other words, upon the ascending side of the conveyer, are chutes 25

upon each floor, and to them are pivoted plates 26. It will be seen by this construction that the pans ascending will when in horizontal position cause the plates 26 to be moved on their pivots, as shown in dotted lines at the bottom of the figure, and that they will naturally fall back by gravity after the pans have passed; but, as shown at the top of the figure, when the pans are caused to discharge their contents the plates 26 will project toward the pans far enough to receive all of the material discharged therefrom. Upon the descending side of the conveyer, however, such a simple arrangement could not be placed, and consequently the chutes 25', although having the pivoted plates 26' similar to the plates 26, are necessarily provided with other operating means, which comprises a lug 27, attached to each plate 26', and a pivoted lever 28, pivotally attached to each lug. This lever 28 is in turn attached to a reciprocating rod 29, which is designed to be operated by the rollers 14 when they enter the offsets at which the ends of the rods 29 are located. This operation causes the levers 28 and the lugs 27 to move in such a manner as to make the plates 26' assume the position shown on the first floor at the right in Fig. 1 while the pan is dumping. Immediately after the pans pass, the weight, 30, carried by the plate 26', returns the chute to normal position, as shown on the second and third floors. On those floors at which it is not designed to have the pans discharge their contents the rollers 14 not entering the offset 16' will not come into contact with the ends of the rods 29, but will permit them to remain in their normal position while the pans pass.

Although I have described a particular construction which illustrates my invention, it will be obvious that the latter may be embodied in many other forms and that many modifications may be made therein. It will also be obvious that a mere reversal of the construction illustrated would be within the scope of my invention. For example, the offsets 16 could be on the opposite side of the track, in which case the pans would be tilted upwardly and the conveyer could be loaded while going up on the left side. This arrangement could be applied also to the right-hand side.

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

1. An endless conveyer having pivoted pans, a track therefor, a series of offsets in said track, a pivoted plate located adjacent to each offset, a section of track on each plate, means for holding said plates against the track, comprising a counterweight, and means for temporarily removing said plates from said tracks.

2. A vertical conveyer having pivoted pans, a guiding-track, offsets in said track, guiding devices located adjacent to said offsets, means on the conveyer for engaging said guiding devices and causing said pans to be automatically dumped at the offsets, and a flexible connection for controlling each guiding device.

3. A conveyer having movable pans thereon, a guiding-track therefor, a series of offsets in said track, a pivoted plate located adjacent to each of said offsets, a section of track on each plate, a rib on each plate, and means on each of said pans for cooperating with said ribs to cause the pans to be dumped.

4. A conveyer, having movable pans thereon, a guiding-track therefor, a series of offsets in said tracks, a pivoted plate located adjacent to each of said offsets, a section of track on each plate, a rib on each plate, said ribs on the several plates being located out of vertical alinement with each other, and means on said pans for cooperating with said ribs, to cause the pans to be dumped.

5. A conveyer having movable pans thereon, a guiding-track therefor, a series of offsets in said track, a pivoted plate located adjacent to each of said offsets, a section of track on each plate adapted to be moved into said offsets and form a continuous track with the main track, a rib on each plate, said ribs on the several plates being located out of vertical alinement with each other, and an adjustable lug on each of said pans adapted to come into contact with certain of said ribs to cause the pans to be dumped in the desired position with respect to the conveyer.

6. A conveyer having pans thereon, a guiding-track, a series of plates located adjacent to the track, a section of track on each plate, a rib on each plate, said ribs on the several plates being located out of vertical alinement with each other, and means connected with the pans for engaging said ribs.

7. A conveyer having movable pans, a guiding-track, a series of offsets in said track, a plate located adjacent to each of said offsets, a section of track on each plate, and means connected with the pans and cooperating with the plates for causing the pans to be dumped.

8. The combination of a conveyer, having pans, a movably-mounted discharge-chute, having a portion thereof adapted to project into the path of the pans, means for automatically moving the chute in the path of the pans, and means for rendering said moving means inoperative.

9. The combination of a conveyer having pans, a discharge-chute pivotally mounted on a stationary support and having a portion thereof projecting into the path of the pans, and means for automatically moving the chute out of the path of the pans, said means

comprising a rod connected to the chute and means on the conveyer for reciprocating the rod.

5 10. The combination of a conveyer, having pans thereon, a series of movably-mounted discharge-chutes, and means operable by the conveyer for automatically moving any of said chutes into the path of movement of the pans when a pan approaches the chute.

10 11. The combination of a conveyer, having pans thereon, a series of movably-mounted discharge-chutes, means operable by the conveyer for automatically moving any of said chutes into the path of movement of the pans when a pan approaches the chute, and means for holding the other chutes out of the path of movement of the pans.

15 12. The combination of a conveyer, hav-

ing pans, a series of movably-mounted discharge-chutes, means for moving any of said 20 chutes into the path of movement of said pans, means for holding the other chutes out of the path of the pans, means for dumping each pan when it approaches a chute extending into the path thereof, and means for ren- 25 dering the last-named means inoperative when a pan approaches a chute held out of said path.

In testimony whereof I have signed my name to this specification in the presence of 30 two subscribing witnesses.

HAMET BROWN.

Witnesses:

JNO. E. LARNEY,
JNO. M. RITTER.