

No. 874,636.

PATENTED DEC. 24, 1907.

L. S. STRAIGHT.
CONVEYER.

APPLICATION FILED AUG. 12, 1907.

2 SHEETS—SHEET 1.

Fig. 4.

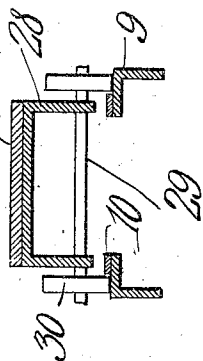
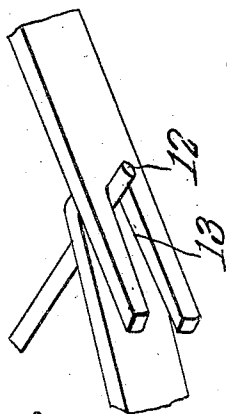
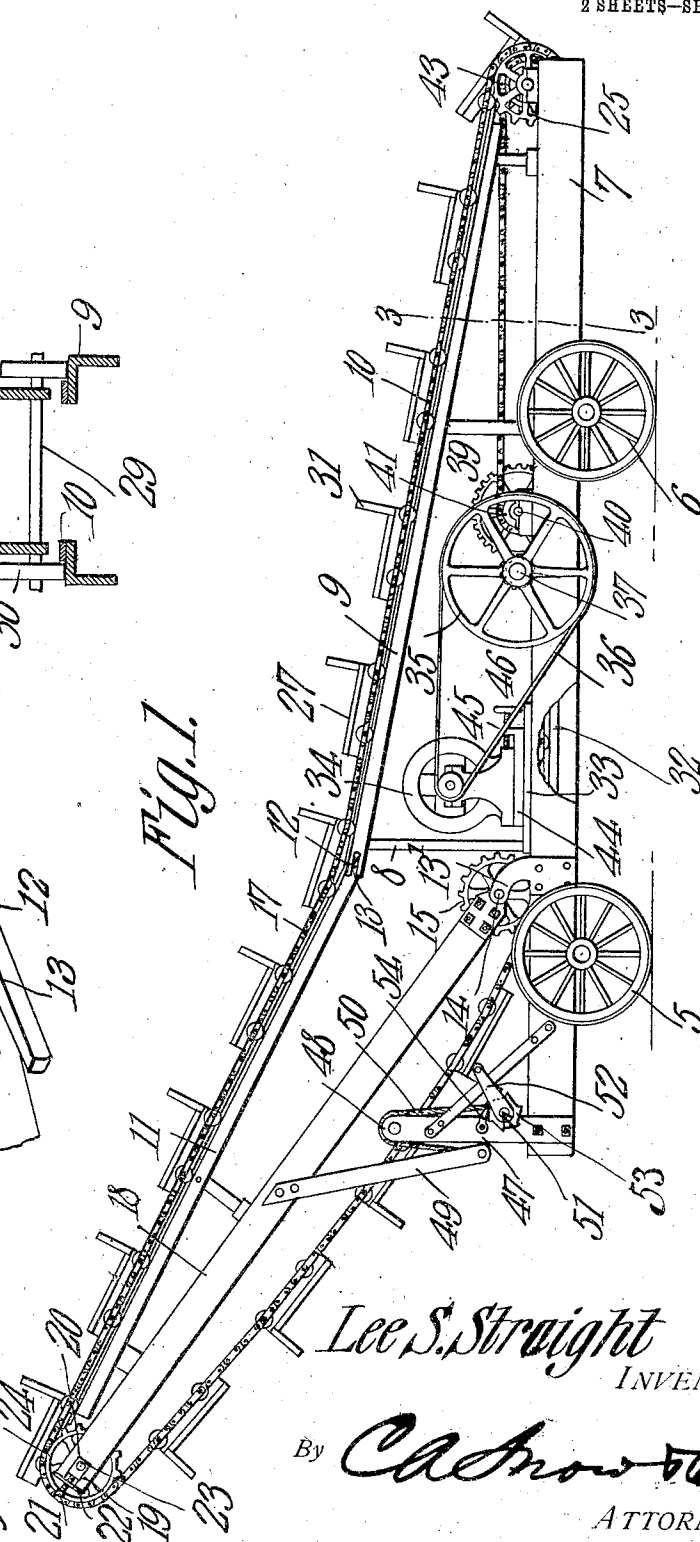


Fig. 6.

Fig. 1.



WITNESSES:

E. J. Stewart
L. A. Allen

Lee S. Straight
INVENTOR.

By *C. A. Snow & Co.*
ATTORNEYS

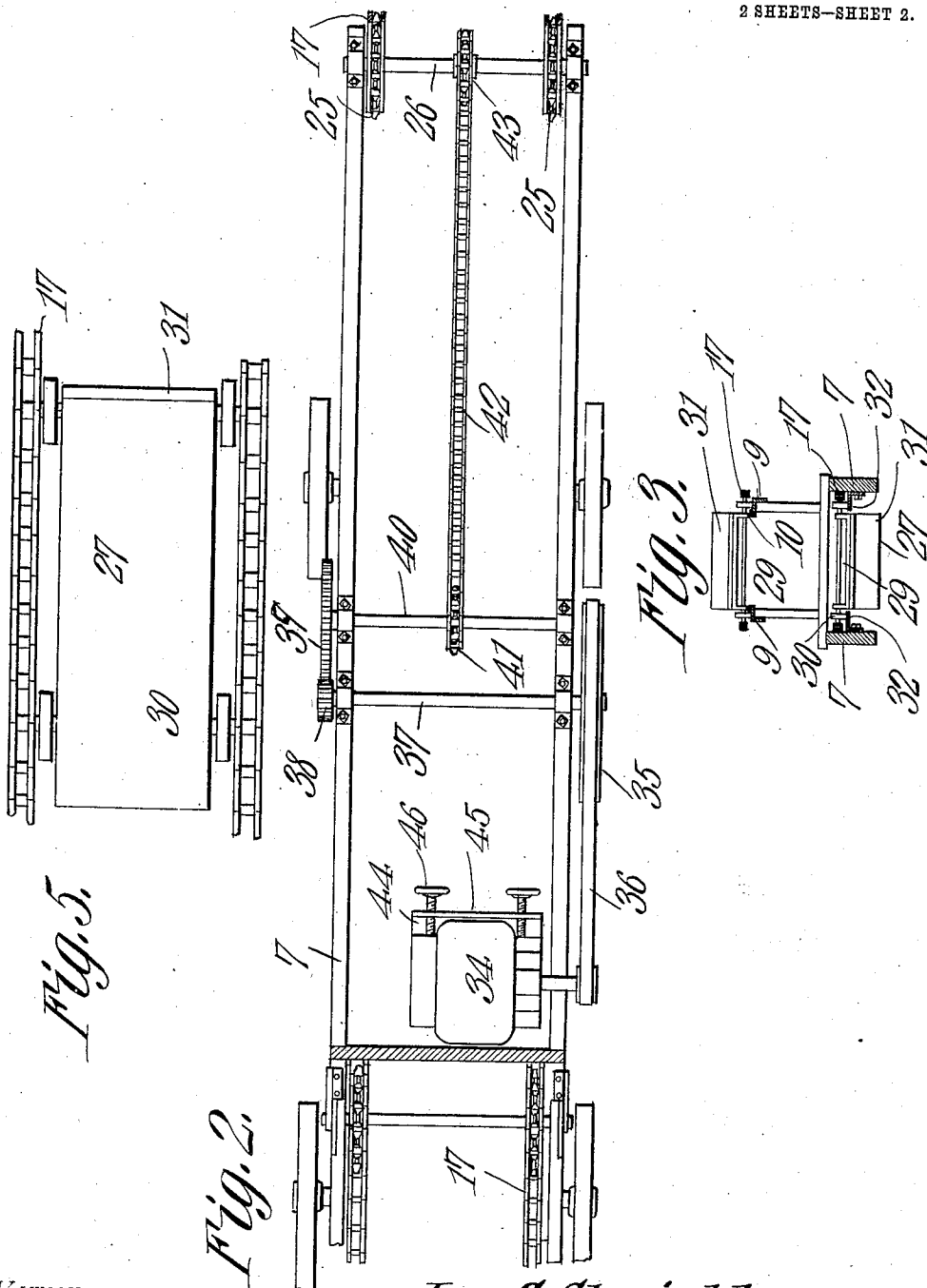
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2 SHEETS—SHEET 2.



WITNESSES:

E. P. Hunt
L. M. Allen

Lee S. Straight INVENTOR.

By *C. A. Snow & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

LEE S. STRAIGHT, OF FONDA, IOWA.

CONVEYER.

No. 874,636.

Specification of Letters Patent.

Patented Dec. 24, 1907.

Application filed August 12, 1907. Serial No. 388,192.

To all whom it may concern:

Be it known that I, LEE S. STRAIGHT, a citizen of the United States, residing at Fonda, in the county of Pocahontas and State of Iowa, have invented a new and useful Conveyer, of which the following is a specification.

This invention relates to endless conveyers and has for its object to provide a strong, durable and thoroughly efficient device of this character especially designed for conveying bricks, tiles, hollow ware and the like to a kiln and also for removing the bricks or other articles from the kiln after the same have been burned or baked.

A further object of the invention is to provide a portable conveyer including a truck having an endless chain mounted for rotation thereon and provided with a plurality of cars adapted to receive the bricks, tiles or other articles to be transferred, said chains being operatively connected with a motor or other source of power carried by the truck.

A further object is to provide means for elevating the forward end of the conveyer so as to permit the discharge of the load at any desired height, and means for preventing accidental displacement of the load when elevating or transferring the latter.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a side elevation of an endless conveyer constructed in accordance with my invention. Fig. 2 is a top plan view of the same, a portion of the endless chain being broken away to show the construction of the truck and its associated parts. Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a sectional view of one of the load supporting cars. Fig. 5 is an enlarged top plan view of one of the cars. Fig. 6 is a detail view illustrating the joint between the main and auxiliary track sections.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved conveyer forming the subject matter of the present invention is preferably mounted on a truck having front and rear axles 5 and 6 connected by spaced longitudinal side members or bars 7, the opposite ends of which are preferably extended longitudinally beyond the wheels of the adjacent axles, as shown.

Bolted or otherwise rigidly secured to the side members 7 are spaced uprights or standards 8 to the upper ends of which are secured the main track sections 9. The track sections 9 are preferably formed of angle iron and are inclined downwardly towards the rear end of the truck, the tread surface of the angle iron being provided with vertically disposed guide flanges 10 for the purpose hereinafter referred to. Pivotaly connected with the forward or elevated ends of the main track sections 9 are auxiliary track sections 11 also preferably formed of angle iron and provided with guide flanges similar in construction to the flanges 10. The adjacent ends of the track sections 9 and 11 are overlapped and pivotally connected by a rod or bar 12 which engages an elongated slot 13 formed in the adjacent end of the auxiliary track section 11, thereby to permit the auxiliary track sections to be adjusted vertically of the truck.

Secured to the side members 7 of the truck at a point adjacent the forward truck wheels are vertically disposed plates or brackets 13' in the free ends of which is journaled a transverse shaft 14 carrying spaced sprocket wheels 15 adapted to engage the sprocket chains 17 constituting the conveyer.

Pivotaly mounted for swinging movement on the shaft 14 is a boom 18 having its upper or free end provided with terminal slots 19 in which are mounted bearing blocks 20, said blocks being adjustable longitudinally of the slots by means of adjusting screws 21 threaded in plates 22 carried by the free end of the boom.

Journaled in the bearing blocks 20 is a transverse shaft 23 carrying spaced sprocket wheels 24 which engage the chains 17 of the conveyer, said chains being also engaged by similar sprocket wheels 25 mounted on a shaft 26 extending transversely of the truck at the rear end thereof, as shown.

Disposed at spaced intervals on the sprocket chains 17 are a plurality of cars 27 adapted to receive the bricks, tiles or other articles to be transferred.

The body of each car is preferably formed of angle iron and journaled in the depending flanges 28 of said angle irons are transverse shafts or axles 29 provided with terminal rollers 30 which travel over the tracks 9 and 11 and bear against the guide flanges 10 so as to prevent accidental displacement of said cars.

Extending vertically from the rear end of each car is a rest or support 31 which receives the load and retains the same in position on the car when elevating or otherwise transferring the same.

Extending longitudinally of the truck and bolted or otherwise rigidly secured to the inner faces of the side bars 7 are angle irons 32 which form tracks or supports for the cars after said cars have been relieved of the load.

Mounted on the bed or platform 33 of the truck is a motor, engine or other suitable source of power 34, said motor being connected to a master wheel 35 through the medium of a belt 36. The master wheel 35 is keyed or otherwise rigidly secured to a power shaft 37 journaled in suitable bearings on the side members 7 of the truck and provided with a terminal pinion 38 which meshes with a gear 39 carried by a corresponding shaft 40 preferably disposed parallel with the shaft 37, as shown.

Secured to the central portion of the shaft 40 is a sprocket wheel 41 having a sprocket chain 42, the latter being also connected with a sprocket wheel 43 secured to the central portion of the transverse shaft 26 so that power may be transmitted from the motor 34 through the medium of the belt and intermediate gearing to the endless conveyer 40 or chain.

As a means for taking up the slack in the belt 36 there is provided an auxiliary platform 44 interposed between the platform 33 and the base of the motor 34, said auxiliary platform being formed with a vertical lip 45 in which is threaded adjusting screws 46, the latter being operatively connected with the base of the motor so that by adjusting the screws 46 the motor may be shifted longitudinally of the auxiliary platform and thus tighten the belt.

Extending vertically from the forward end of the side members 7 are relatively short standards 47 in the free ends of which are journaled suitable rollers or pulleys 48.

Depending from the boom 18 at the standards 47 are inclined arms 49 to the free ends of which are attached suitable ropes or cables 50 which pass over the rollers 48 and are operatively connected with a windlass 51 so that by rotating the crank 52 the auxiliary track section 11 may be adjusted vertically of the truck so as to permit the discharge of the load at any desired height.

The windlass 51 is provided with a ratchet

wheel 53 the teeth of which are engaged by a locking pawl 54 pivotally mounted on the standard 47 so that the auxiliary track section may be locked in adjusted position.

The axles of the cars 27 are preferably extended beyond the adjacent wheels or rollers 13 and are pivotally connected with the links of the sprocket chains 17 whereby the cars are maintained at the proper distance from each other.

In operation the motor is started and the cars successively loaded by placing the bricks, tiles or other articles in position on the cars with the load bearing against the vertical rests or supports 31. As the endless chains are rotated the load of each car will be successively discharged at the upper or free end of the conveyer and said cars caused to travel downwardly and rearwardly into engagement with the lower tracks or angle bars 32 to the rear end of the conveyer and in position to receive another load.

In order to adjust the height of the forward end of the conveyer it is merely necessary to rotate the crank 52 in the manner before described, the slotted connection between the main and auxiliary track sections 9 and 11 permitting free movement of the auxiliary track section during the adjusting operation.

While it is preferred to use the sprocket chains and cars for elevating the load it is obvious that an endless belt having buckets or flights riveted thereto may be employed if desired, the result accomplished being the same in both instances.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. The combination with a truck, of an inclined track secured to the truck and formed of main and auxiliary sections, wheels disposed at the opposite ends of the track, an endless conveyer connecting said wheels and provided with a plurality of load receiving cars, a boom pivotally mounted on the truck and forming a support for the adjacent wheels, means for raising and lowering the boom, and means for rotating the conveyer.

2. The combination with a truck, of a boom pivotally mounted on the truck, a wheel journaled in the free end of the boom, a wheel journaled on the truck frame, an endless conveyer engaging said wheels, an arm depending from the boom, a windlass, a flexible connection between the arm and windlass for raising and lowering the boom, and means for rotating the conveyer.

3. The combination with a truck, of an inclined track mounted on the truck and

formed of pivotally connected sections provided with vertical guide flanges, a boom pivotally mounted on the truck and having a sprocket wheel journaled in the free end thereof, a similar sprocket wheel journaled on the truck frame, a connection between the boom and one of the track sections, sprocket chains engaging the sprocket wheels, load receiving cars secured to the sprocket chains and provided with terminal rollers adapted to bear against the guide flanges, means for raising and lowering the boom, means for locking the boom in adjusted position, and means for rotating the chains.

4. The combination with a truck, of a main track section mounted on the truck and provided with a laterally extending pin, an auxiliary track section pivotally connected with the main track section and provided with an elongated slot for the reception of the pin, an endless conveyer mounted for rotation on the truck, spaced load receiving cars forming a part of the conveyer and provided with rollers adapted to engage said track sections, means for raising and lowering the auxiliary track sections, and means for rotating the conveyer.

5. The combination with a truck, of a main track section mounted on the truck, an auxiliary track section pivotally connected with the main track section, brackets secured to the truck, a transverse shaft connecting said brackets, a boom pivotally mounted on said shaft and extending beneath the auxiliary

track section, a wheel journaled on the free end of the boom, a similar wheel journaled on the rear end of the truck, an endless conveyer connecting said wheels, load receiving cars forming a part of the conveyer and provided with rollers for engagement with the track, stationary track sections secured to the truck beneath the main track sections, means for raising and lowering the auxiliary track section, and means for rotating the conveyer.

6. The combination with a truck, of a boom pivotally mounted on the truck and provided with spaced wheels, similar wheels journaled on the rear end of the truck frame, an endless conveyer engaging said wheels and provided with spaced load receiving cars, a power shaft extending transversely of the truck and having a master wheel on one end thereof and a pinion on the other, a second shaft provided with a gear meshing with the pinion on the power shaft, a sprocket wheel secured to the second shaft, a connection between the sprocket wheel and the endless conveyer, a motor mounted on the truck, and a connection between the motor and the master wheel.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LEE S. STRAIGHT.

Witnesses:

RAY A. WELD,
GUY WILDE.