

Feb. 19, 1946.

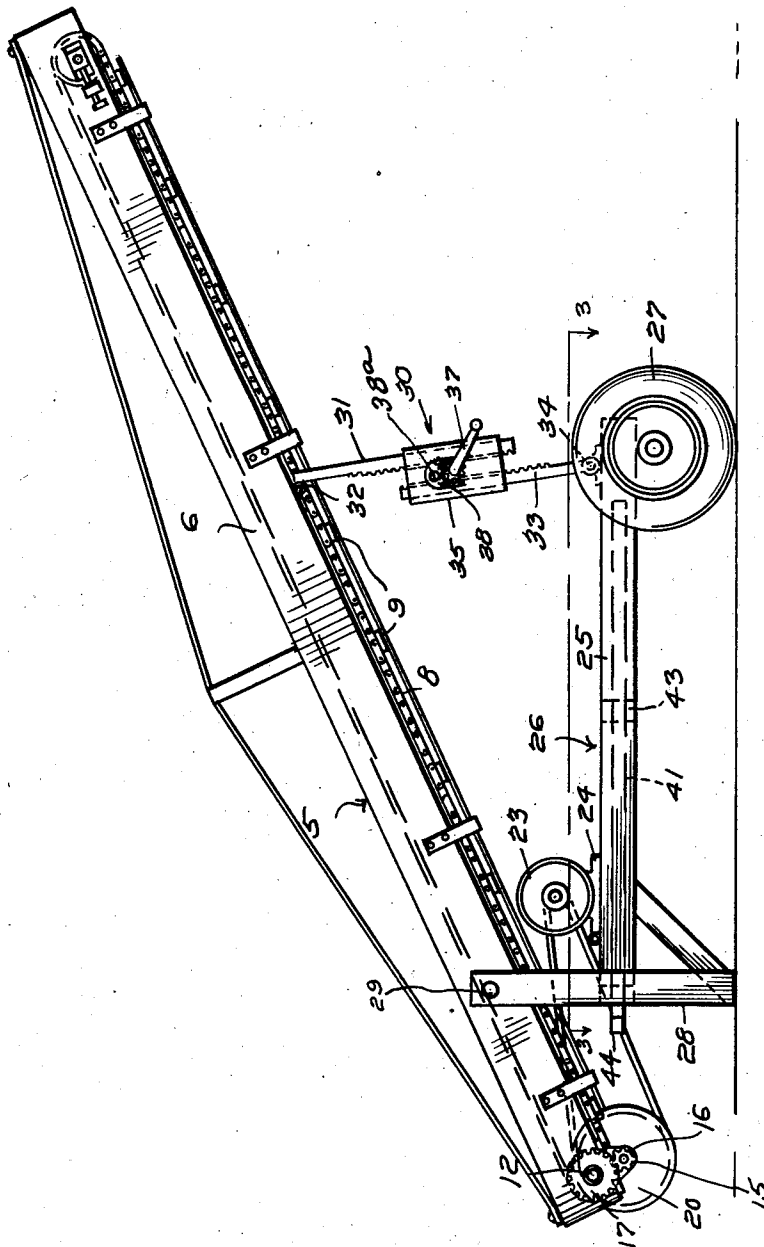
V. R. SMITH

2,395,075

ELEVATOR

Filed Feb. 27, 1943

3 Sheets-Sheet 1



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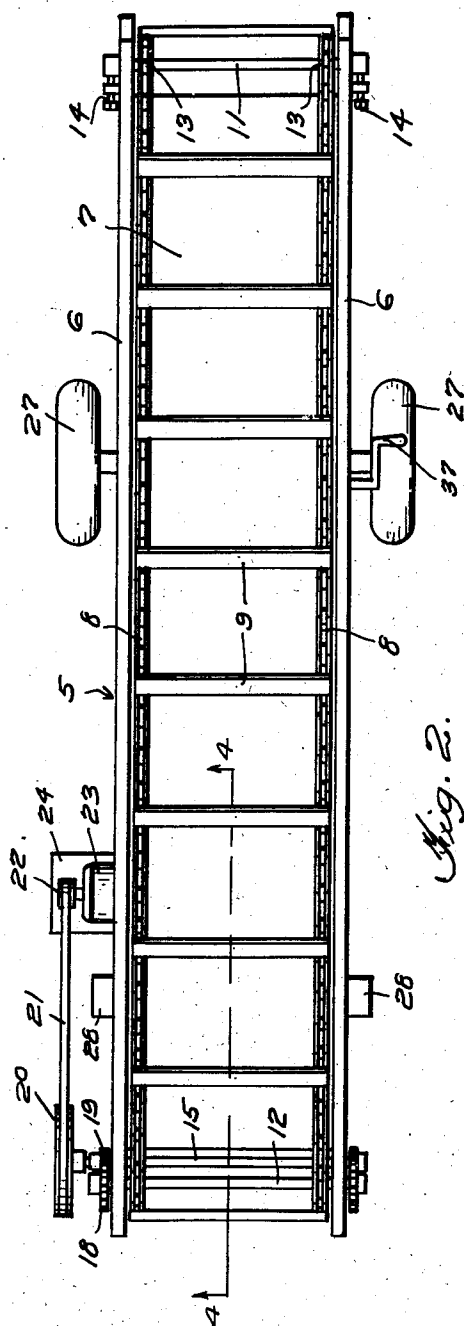
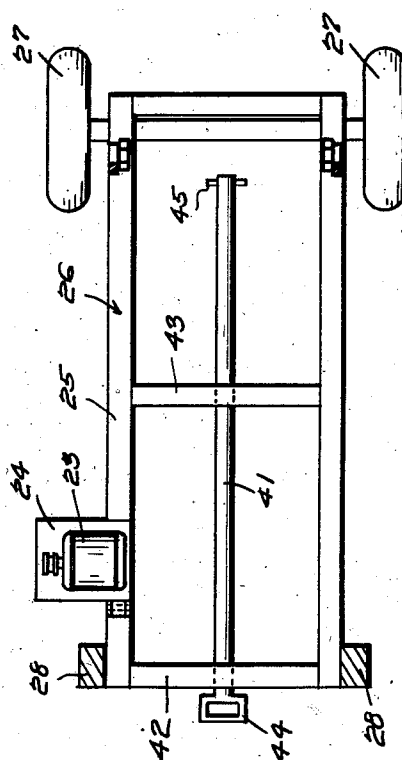
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ELEVATOR

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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

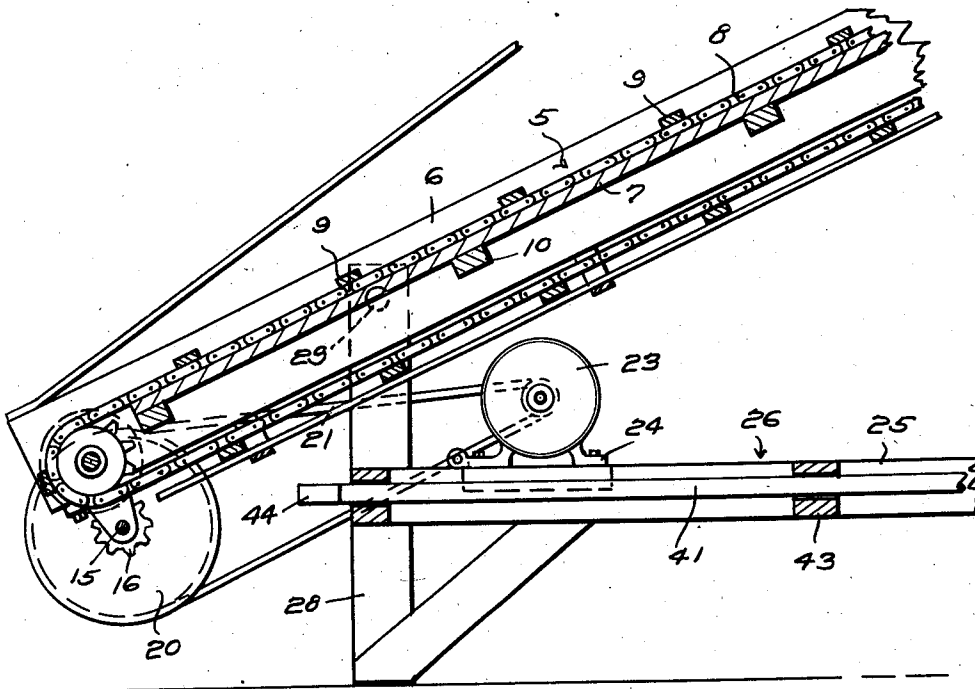


Fig. 4.

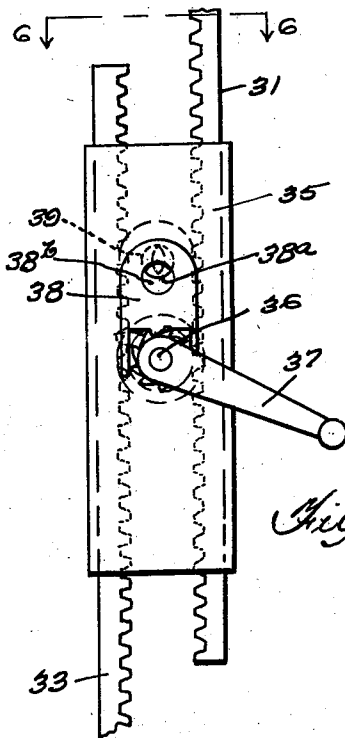


Fig. 5.

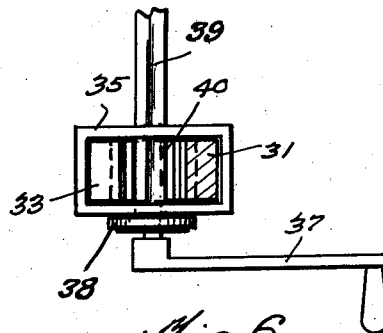


Fig. 6.

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UNITED STATES PATENT OFFICE

2,395,075

ELEVATOR

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Application February 27, 1943, Serial No. 477,414

1 Claim. (Cl. 198-233)

This invention relates to new and useful improvements in elevators adapted to carry various materials such as bales of hay and other farm produce from a low level to a higher one such as to a barn loft.

The principal object of the present invention is to provide an elevator of the character stated which can be very conveniently moved about and adjusted to the desired height.

Another important object of the invention is to provide an elevator of the character stated which can be manipulated by a single person with ease and efficiency.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings—

Figure 1 represents a side elevational view of the elevator.

Figure 2 is a top plan view.

Figure 3 is a sectional view taken substantially on the line 3-3 of Figure 1.

Figure 4 is a fragmentary vertical sectional view taken substantially on the line 4-4 of Figure 2.

Figure 5 is a fragmentary side elevational view of the adjusting means.

Figure 6 is a sectional view taken substantially on the line 6-6 of Figure 5.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the elevator comprises an elongated conveyor generally referred to by numeral 5. This conveyor comprises a pair of side walls 6, 6 between which is a floor 7 along which ride the top flights of a pair of conveyor chains 8, 8 connected by bale or other material moving slats 9. Cross bars 10 between the side walls 6, 6 serve to assist in supporting the floor 7.

Transversely extending shafts 11, 12 are at the upper and lower ends of the conveyor 5, the upper shaft 11 having sprocket wheels 13, 13 for the chains 8 and suitable adjusting means 14 whereby the shaft 11 can be adjusted for controlling the tautness of the chains 8.

Under the shaft 12 is a second shaft 15 on which is a pinion 16 meshing with the gear wheel 17 on one end of the shaft 12. There is another gear 18 on the other end of the shaft 12 meshing with a second pinion 19 on the shaft 15. The shaft 15 has a pulley wheel 20 at one end thereof over which a belt 21 from a small pulley 22 is trained, this pulley 22 being driven by an electric motor 23 situated on a platform 24 carried by the frame 25 of a truck 26, which truck

has wheels 27, 27 at one end thereof and leg members 28, 28 at its opposite end. As shown in Figure 1, the legs 28 extend upwardly above the truck 26 and the conveyor 5 is fulcrumed thereon as at 29.

The means for adjusting the inclination of the conveyor 5 comprises a pair of depending rack bars 31, 31 each hingedly secured at its upper end as at 32 to the corresponding side wall 6. The adjusting means further comprises a pair of upstanding rack bars 33, 33 each hingedly secured as at 34 to the frame 25 of the truck 26.

Each rack bar 33 in conjunction with its companion depending rack bar 31 has a guide sleeve 35 of substantially rectangular cross section and through these sleeves a shaft 36 is disposed and has a hand crank 37 at one end thereof. Numeral 38 denotes a slide block notched at its lower end for receiving the shaft 36, this shaft being square as shown by portion 39 in Figure 6, the block securing the shaft against rotation when the block is engaged therewith. The slide block 38 has an opening 38b therein and this opening receives an elliptical end portion 38a of shaft 39, which when rotated by handle or the like will serve to elevate the block so as to disengage the same from a notched wheel on the shaft 36 and permit free rotation of the shaft 36.

Inside of the sleeve 35 is a gear 40 which meshes simultaneously with the opposed teeth of the rack bars 31, 33. The shaft 36 extends through both of the sleeves 35 and the gears 40 are located on the same shaft. Obviously, by turning the hand crank 37, both sets of adjusting devices are actuated simultaneously for raising or lowering the conveyor 5.

A draft bar 41 is slidably disposed through cross members 42, 43 forming part of the frame 35 and can be pushed to the out of the way place shown in Figure 3 when not in use.

When the tongue bar 41 is to be used, the same can be pulled out so that its eye end 44 will be exposed and in this position a cross pin 45 disposed through the opposite end of the bar will abut the cross member 43.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

An elevator of the character described comprising a truck, wheels supporting the truck at

one end thereof, leg members for supporting the other end of the truck and rising above the truck, a conveyor unit rockably mounted on the upper ends of the legs, and adjusting means between the truck and an intermediate portion of the conveyor unit, said conveyor unit being fulcrumed on said legs adjacent one end of the conveyor unit, said adjusting means comprising rack bars

pivoted respectively to the truck and to the conveyor unit and with one end of the bars overlapping each other, a pinion engaging the racks of the bars, manual operating means for the pinion to move the bars in opposite directions, and means for locking the pinion against movement to secure the bars in an adjusted position.

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