July 24, 1923. 1,462,660

J. W. ROLLEFSON

TOY

Filed March 23, 1920

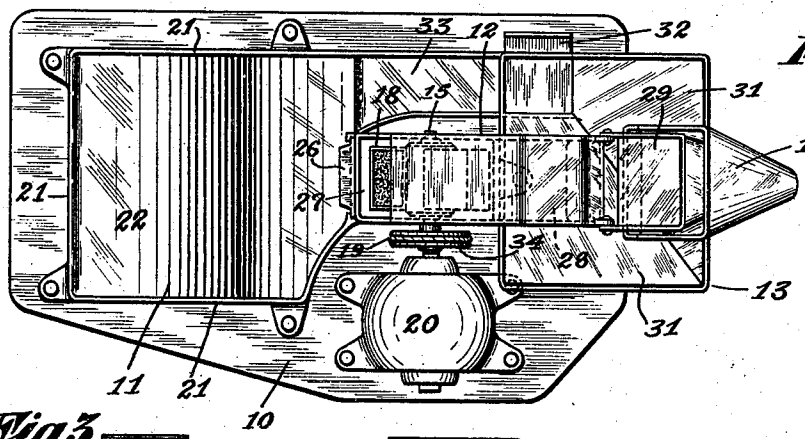


Fig. 2

Fig. 3

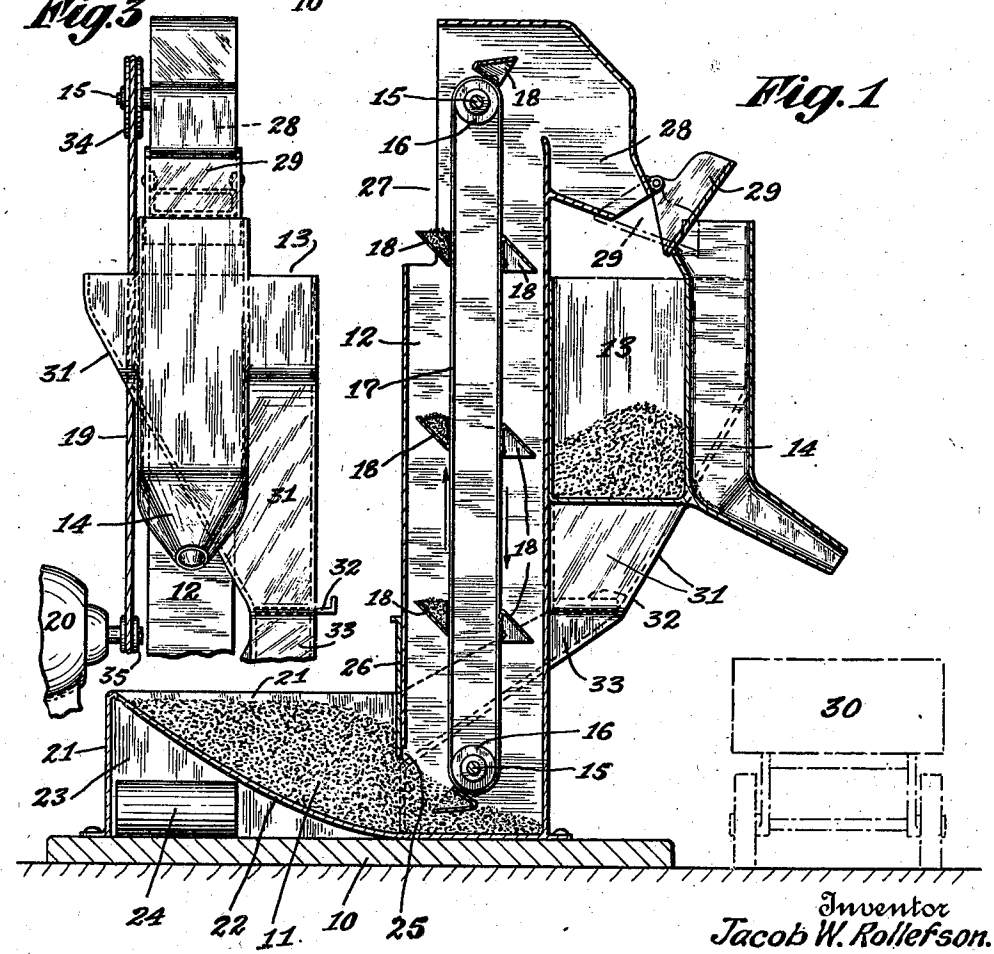


Fig. 1

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UNITED STATES PATENT OFFICE.

JACOB W. ROLLEFSON, OF SEATTLE, WASHINGTON.

TOY.

Application filed March 23, 1920. Serial No. 368,112.

To all whom it may concern:

Be it known that I, JACOB W. ROLLEFSON, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a certain new and useful Improvement in Toys, of which the following is a specification.

My invention relates to improvements in mechanical toys and the object of my invention is to provide a toy of the bucket elevator type that may furnish both amusement and instruction for children who are mechanically inclined.

Another object is to provide a toy that may be used in conjunction with other toys such as cars or wagons for the purpose of increasing the scope of the operation of the same.

A further object is to provide a toy that is adapted to be operated by a small electric motor arranged to receive power from a battery which may be disposed within the base of the toy to thus provide a complete unit.

A still further object of my invention is to provide a toy that is simple in its plan of construction, inexpensive to manufacture, positive in operation and that will not readily get out of order from rough usage.

With the above and other objects in view which will appear as my description proceeds, my invention resides in the novel construction, combination and arrangement of parts hereinafter described and claimed.

I accomplish these objects by devices illustrated in the accompanying drawings, wherein—

Figure 1 is a view in vertical longitudinal section of a toy embodying my invention;

Fig. 2 is a top plan view of the same; and

Fig. 3 is a fragmentary end elevation of the same.

Referring to the drawings, throughout which like reference numerals indicate like parts, I have shown a toy in a form as now preferred by me the principal parts of which are constructed from sheet metal stamped or otherwise shaped into the desired form and subsequently rigidly connected by solder or other suitable means to provide an integral unit as will be readily understood.

The present construction comprises a wooden base plate 10, a receptacle 11, an upright casing 12, a hopper 13, a discharge spout 14, shafts 15, pulleys 16, an endless conveyor belt 17, a plurality of buckets or flights 18, a belt 19 and a motor 20.

The receptacle 11 which is fixedly secured to the upper face of the wooden base 10 comprises side walls 21 and a curved bottom wall 22 forming a chamber 23 in which the batteries 24 for the motor 20 may be disposed.

The upright casing 12 is integral with or otherwise secured to the receptacle 11 and is provided with an opening 25 connecting the receptacle with the interior of the casing; a vertical sliding door 26 is disposed on the casing 12 to close the opening 25 when it is desired to cut off the supply of material or to regulate the flow of the same. The upper end of the casing 12 is cut away as at 27 to obtain access to the interior of the same and also to observe the operation of the mechanism disposed therein.

The upright casing 12 is further provided with a discharge chamber 28 on its upper end with an opening formed therein. A chute 29 is pivotally secured to the outer and lower end of the said chamber adjacent its opening to permit the discharge of the material into the hopper 13 as shown in full lines in Fig. 1 or to discharge the material through the discharge spout 14 to a toy dump wagon or car 30 as shown by dotted lines in Fig. 1, as desired.

The hopper 13 is formed with downwardly converging walls 31 having a door 32 and a trough 33 leading to the receptacle 11 to permit the return of the material to the receptacle when the said hopper 13 is filled or at any desired time.

The shafts 15 are journaled in the side walls of the upright casing 12 adjacent to ends thereof, the pulleys 16 being disposed within the said casing and fixedly secured to the shafts.

The endless belt 17 is mounted on the pulleys 16 in a well known manner and is preferably made of rubber or other resilient material to minimize the slackness usually produced in a mechanism of this type. The buckets or flights 18 are riveted or otherwise fixedly secured in spaced apart relation on said belt.

To provide a driving means for the toy one end of the upper shaft 15 projects beyond the outer wall of the upper casing 12 and is provided with a sheave 34 fixedly secured thereon, the said sheave being connected by a belt 19 to a smaller sheave 35 fixedly secured to the shaft of the motor 20. The motor is rigidly connected to the base 10 of the toy as shown.

In the operation of the toy, the sand or other fine material may be placed within the receptacle and the vertical sliding door adjusted to the desired position to permit the material to flow to the interior of the casing 12 and into the path of travel of the buckets 18 which elevates the material and discharges or deposits the same in the hopper 13 or through the spout 14 to the wagon 30, and as hereinbefore stated the door 32 is opened when desired to permit the return of the material to the receptacle 11 or the wagon or car 30 when loaded is brought around to the said receptacle to dump its load of material.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention pertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as are within the scope of the invention.

What I claim is:

A toy comprising a base plate, a material receiving receptacle secured to the upper face thereof, an upright casing formed integrally with one end of said material receptacle and communicating therewith, a curved bottom wall in said receptacle adapted for feeding material to said casing, conveying mechanism disposed within said casing, means for driving said conveyor mechanism, a discharge chamber formed integrally with the upper end of said casing and upon the side opposite to the said material receptacle, said discharge chamber having an opening formed in the bottom thereof, a hopper carried by said casing and positioned beneath the opening in said discharge chamber, a trough connecting said hopper with said material receptacle for returning the material to the latter, a discharge spout formed integrally with said hopper and spaced outwardly from said discharge chamber, and a chute pivotally connected to said discharge chamber adjacent its opening adapted to selectively deliver material to either the hopper or discharge spout.

In witness whereof, I hereunto subscribe my name this 17th day of March A. D. 1920.

JACOB W. ROLLEFSON.