Sept. 4, 1928.

1,683,131

L. S. GUNDERMAN

TOY

Filed July 16, 1926

2 Sheets-Sheet 1

FIG.1.

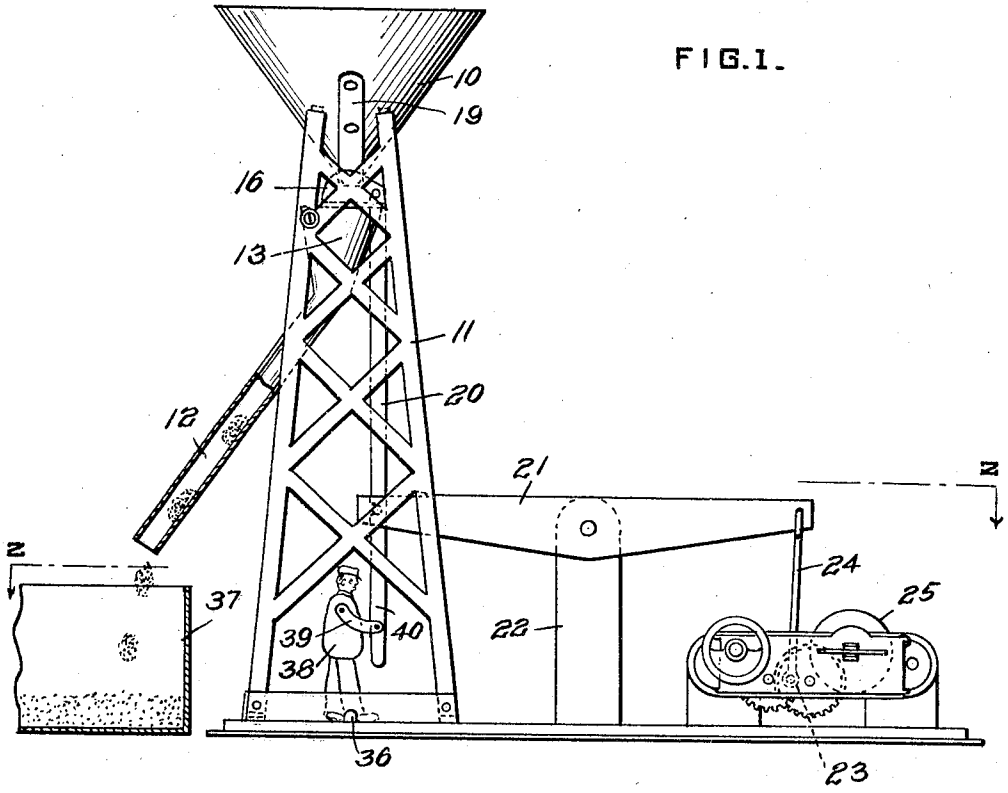
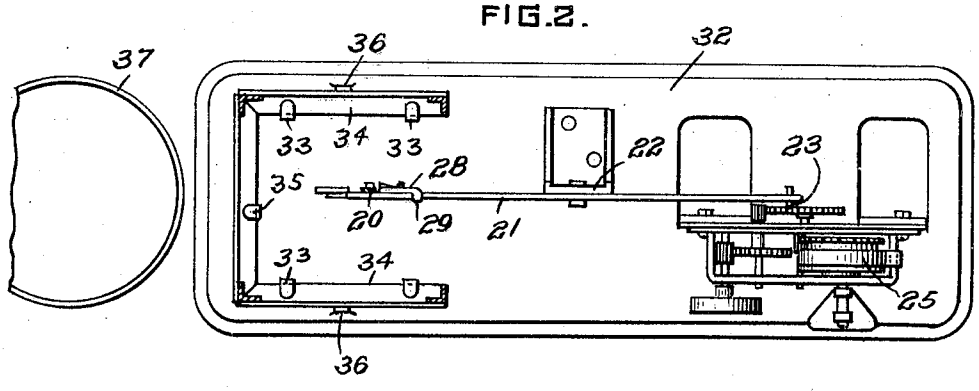


FIG.2.



WITNESSES

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FIG. 3.

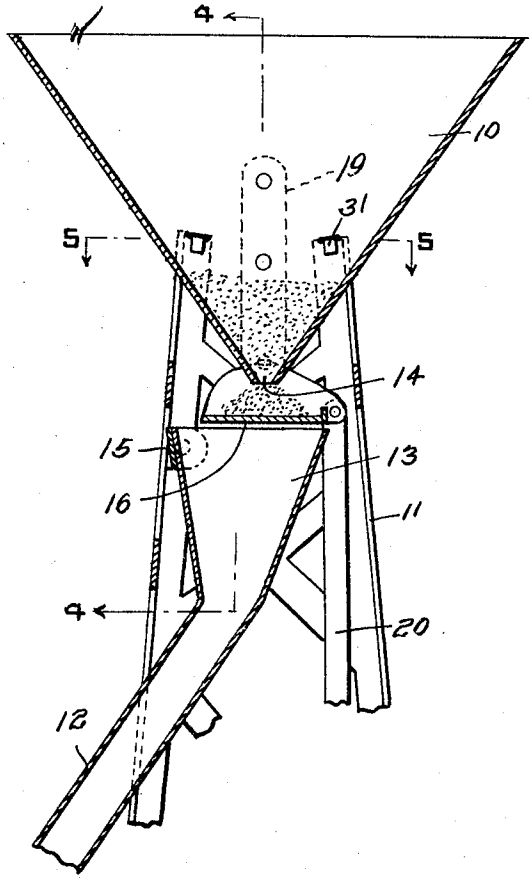


FIG. 4.

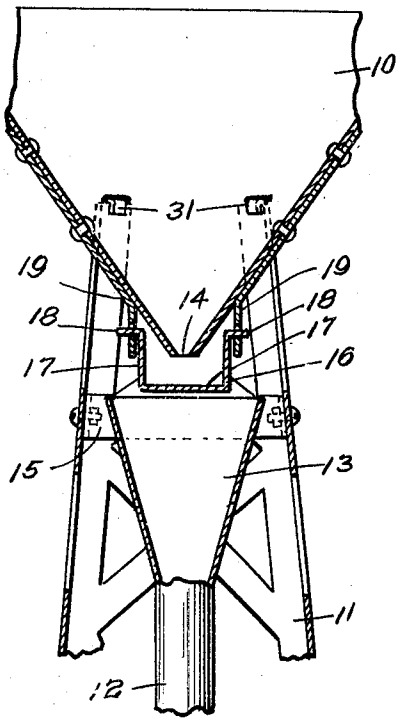


FIG. 5.

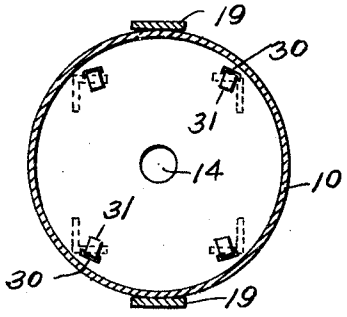


FIG. 6.

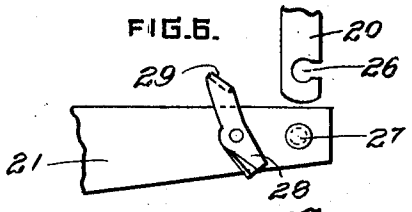
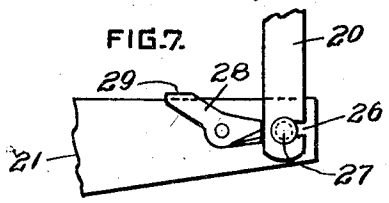


FIG. 7.



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UNITED STATES PATENT OFFICE.

LESTER S. GUNDERMAN, OF PITTSBURGH, PENNSYLVANIA.

TOY.

Application filed July 16, 1926. Serial No. 122,842.

This invention relates to toys and more particularly to toys adapted to simulate such a mechanical operation as that of pumping although not in reality performing such a function.

An object of this invention is to provide a toy of the type set forth of such construction and arrangement as to give the effect of a pump when operated.

A further object is to provide a device of the type described which will be simple in construction, easy and cheap to manufacture and assemble and effective in operation.

These and other objects which will be apparent to those skilled in this particular art are accomplished by means of the invention illustrated in the accompanying drawings, in which Figure 1 is a side elevation of an apparatus provided with one form of this invention. Fig. 2 is a plan view partly in section on the line 2—2 of Fig. 1. Fig. 3 is a vertical sectional view showing certain of the details of the present invention. Fig. 4 is a sectional view on the line 4—4 of Fig. 3. Fig. 5 is a horizontal section on the line 5—5 of Fig. 3 and Figs. 6 and 7 are elevational views of certain details.

The particular embodiment of this invention which has been chosen for the purposes of illustration includes a storage bin or hopper having an outlet orifice through which material placed therein is adapted to flow. A chute which is preferably enclosed is positioned in operative relation to the outlet orifice of the hopper so that material flowing from the hopper descends along the chute. A suitable mechanism is employed in connection with the outlet orifice for permitting only an intermittent flow down the chute. This mechanism is adapted to be operated by any well known form of pump structure such as the walking beam illustrated and the latter is operated by any suitable mechanism. The effect of the operation of such a mechanism as the walking beam in conjunction with the intermittent discharge of material from the end of the chute gives the beholder the impression that the material is actually being pumped.

As illustrated, the invention includes a storage bin or hopper 10 which is placed in an elevated position as, for example, at the top of a suitable tower 11 which may be so formed as to resemble oil or gas well derricks or the like, as illustrated. A tube or enclosed chute 12 is provided with a flaring mouth 13 which is so positioned beneath the outlet orifice 14 of the hopper that material flowing therethrough will fall in the mouth of the tube and flow downwardly therethrough. The tube is secured in position by means of a curved strap 15 secured at opposite ends to the derrick or tower and secured to the mouth 13 intermediate its ends.

A suitable mechanism is employed for intermittently cutting off the flow of material through the hopper orifice. As illustrated, this mechanism includes a tiltable tray 16 having vertical sides 17 formed with outwardly extending fingers 18 by means of which the tray is supported for rocking or tilting movement in diametrically opposed tray supporting brackets 19 secured to opposite sides of the hopper. The tray is adapted to be tilted by means of a connecting link 20 extending downwardly and secured to one end of a walking beam 21 pivoted to an upright 22 and adapted to be rocked by a crank 23 connected to the opposite end of the walking beam by connecting link 24 and driven by any suitable means such, for example, as the spring motor 25. For assembling and packing purposes the lower end of the tray operating connecting rod 20 is detachably secured to the associated end of the walking beam. As illustrated, this is accomplished by providing the link with a slot 26 for engaging the stem of a headed pin 27 on the walking beam. A locking lever 28 having a finger piece 29 is pivoted to the walking beam in such relation to the pin 27 that when in one position, see Fig. 7, the link 20 is locked against removal from engagement with the pin 27 while in the other position, see Fig. 6, the link 20 is allowed sufficient movement to permit removal from the pin 27.

The hopper can be most conveniently and separately mounted upon the tower 11 by means of slots 30 formed in the walls of the hopper for the purpose of receiving securing ears or lugs 31 formed on the tower and adapted to extend through the slots and be bent over so as to hold the hopper in place.

As will be noted from Fig. 2, one side of the base of the tower is open and the tower is removably secured to the base member 32 by ears 33 which are struck up from the metal of the base member and bent horizontally so as to form a slot for receiving

the flanges 34 on the base of the tower. A similar ear 35 constitutes a stop for properly positioning the tower on the base and vertically extending lugs 36 hold the side flanges 34 in position under the securing ears 33. Any form of receptacle 37 may be employed for collecting the material descending the tube or chute 12.

In operation, suitable material such, for example, as sand is placed in the storage bin or hopper 10. The motor 25 is started and the walking beam 21 is oscillated thereby. This causes the cut-off tray 16 to be tilted or rocked in its supporting brackets in such a way as to intermittently cut off the flow of sand through the outlet orifice of the hopper and down the tube, as shown in Fig. 3. The result is that the sand intermittently emerges from the lower end of the tube in successive separate batches which flow therefrom in timed relation to the operation of the walking beam. This results in the impression that the walking beam is actually pumping material through the chute or tube 12.

If desired a toy figure 38 having a movable arm 39 or the like may be positioned on the base member with its movable part connected to the walking beam by a connecting link 40 so as to increase the attractiveness of the toy.

What I claim is:

The combination in a toy including a support of an elevated hopper mounted thereon and provided with an orifice through which material flows from said hopper, of a tube associated with said orifice and extending downwardly therefrom, a tiltable tray located below said outlet for alternately collecting a charge of material while shutting off the flow through said tube and delivering said charge to said tube, an upright mounted on said support, and a walking-beam mechanism for operating said tray including a horizontally-extending lever pivoted to said upright, a motor-operated eccentric mounted on said support, a link connecting one end of said lever to said eccentric, and a tray-operating connecting-rod connecting the other end of said lever to said tray.

In testimony whereof, I have hereunto subscribed my name this 15th day of July, 1926.

LESTER S. GUNDERMAN.