Aug. 2, 1949. G. E. BROWN 2,478,084

MECHANICAL TOY SHOVEL

Filed Aug. 7, 1947 2 Sheets-Sheet 1

Fig. 1.

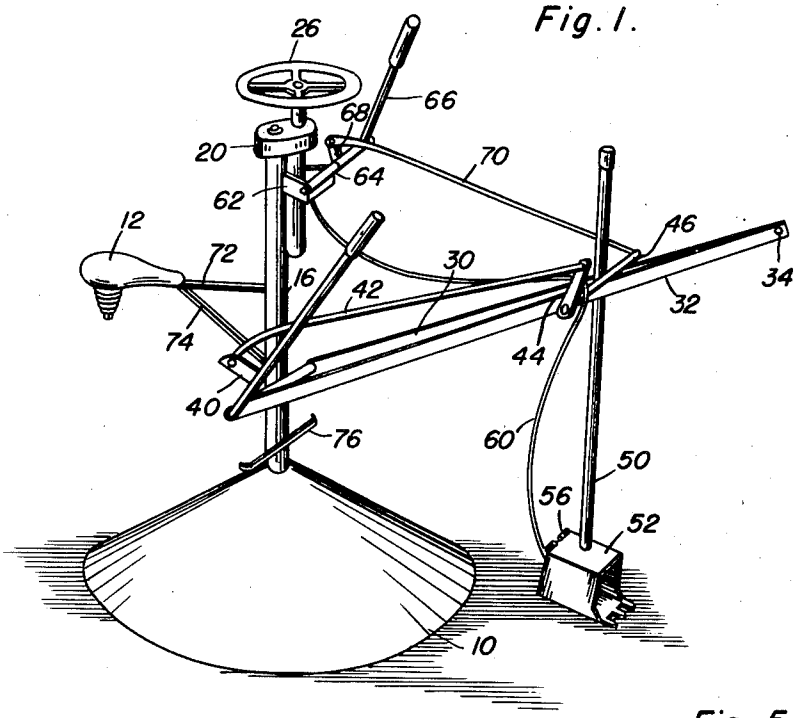


Fig. 4.

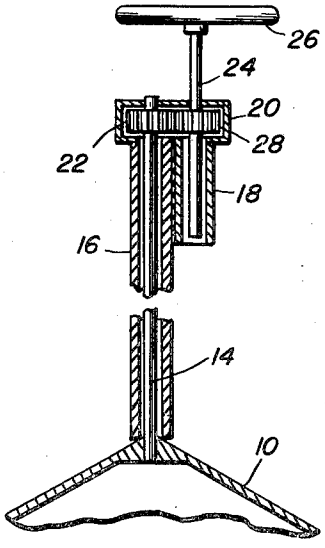
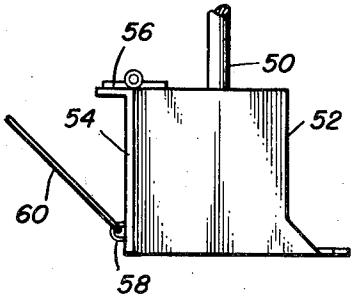


Fig. 5.



Inventor

George E. Brown

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

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Filed Aug. 7, 1947 2 Sheets-Sheet 2

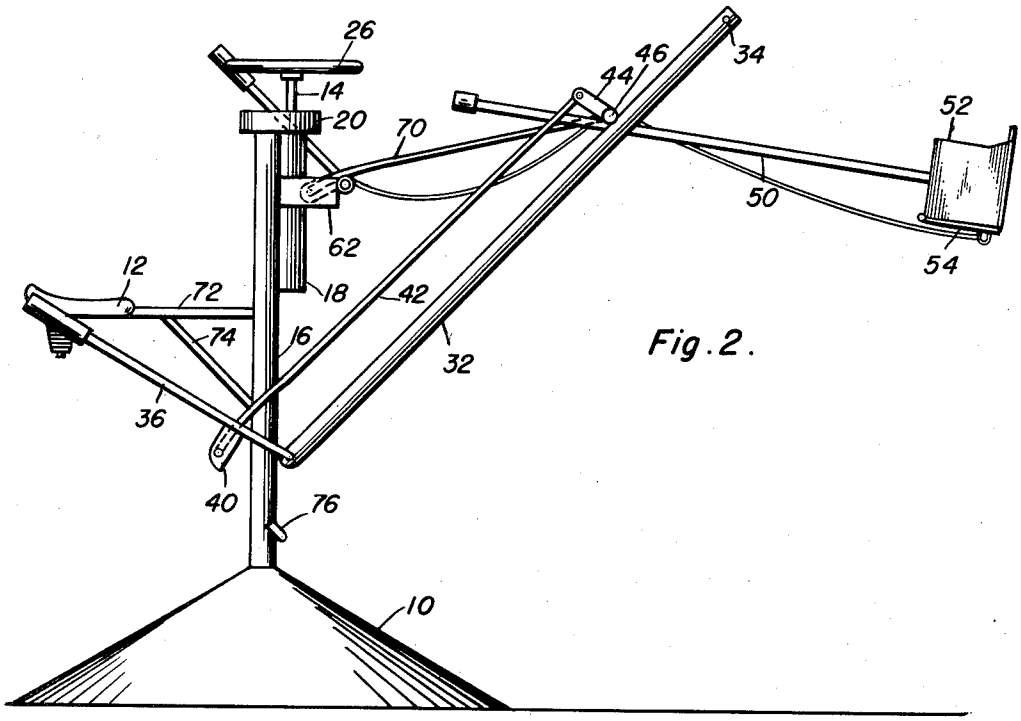
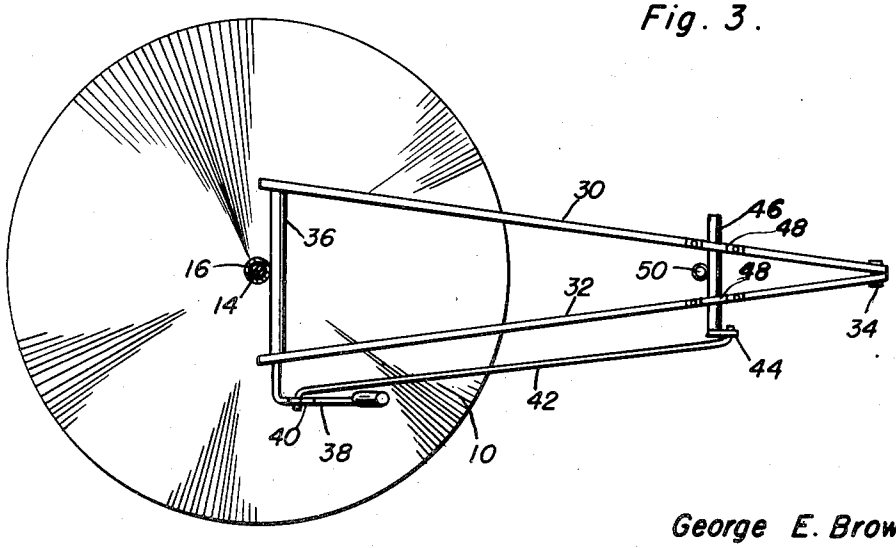


Fig. 2.

Fig. 3.



Inventor

George E. Brown

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

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MECHANICAL TOY SHOVEL

George E. Brown, Sacramento, Calif.

Application August 7, 1947, Serial No. 767,152

2 Claims. (Cl. 214—138)

1

This invention appertains to novel and useful improvements in amusement devices, particularly those adapted to be used by children.

An object of this invention is to simulate a mechanical shovel including a simulation of many of the operative motions thereof.

Another object of this invention is to provide means for carrying out the above mentioned function.

Another purpose of this invention is to provide a pivotally mounted boom which may be further pivoted about a standard or support by manipulating a steering wheel.

Another purpose of this invention is to provide a pivotally mounted shovel on the said boom and closure means on the said shovel actuated by pulling a cord or chain.

Another purpose of this invention is to provide a seat which moves in relation to the movement of the said boom.

Another purpose of this invention is to provide an extremely simple, inexpensive device of the character described which is commercially feasible.

Ancillary objects and novel weatures will become apparent in following the description of the preferred embodiment of the invention, illustrated in the accompanying drawings, wherein.

Figure 1 is a perspective view of the preferred form of the invention;

Figure 2 is an elevational side view of the invention disclosed in Figure 1;

Figure 3 is a sectional view of the invention shown in Figure 2, illustrating certain details of construction;

Figure 4 is a longitudinal sectional view showing particularly the steering mechanism forming part of the invention; and

Figure 5 is a side view of the shovel utilized in this invention.

Referring now in detail to the illustrated, preferred embodiment of the invention, reference is made primarily to Figure 2 wherein there is disclosed a base 10 which may be of any suitable configuration.

Of course, as mentioned hereinbefore, the present invention is a device conducive of enjoyment to children. Accordingly, the preferred embodiment of the invention has been developed with a view toward entertaining safety features wherein a child may operate the invention without exposing himself to the likelihood of falling any great distance from the seat 12. As is well known, the majority of children are awed by large machines such as steam shovels, steam rollers, and

2

the like. Accordingly, a device which is operative for digging holes, lifting impedimenta and other similar purposes has been developed. The actuation of the preferred embodiment of the invention simulates a conventional steam shovel wherein movement is disclosed.

A rod 14 projects from and is secured to the base 10, and a housing 16 is rotatably journaled about the said rod 14. Fixed to the said housing 16 by any suitable means such as welding or the like is another housing 18 which will be referred to as a case for distinguishing purposes. A cap 20 communicates the said case 18 and housing 16 and serves the purpose of a gear box.

A gear 22 is rigidly secured to the rod 14 and is received in the cap 20. Then, a shaft 24 extends through the cap 20 and into the case 18. This shaft 24 may be rotatively journaled by any suitable conventional means including bearings. A steering wheel 26 is rigidly secured to one end of the said shaft 24. Also received on the said shaft 24 is a planetary gear 28 which is meshed with the relatively stationary gear 22.

Going to Figure 4, it will be noted that by this construction, rotation of the said steering wheel 26 will effect rotation of the housing 16 including the case 18 and cap 20.

A boom is secured to the said housing 16 adjacent the lower portion thereof. This boom may be composed of a pair of converging arms 30 and 32, respectively, which are secured at their junction by utility of a rivet, bolt, or the like 34. At the opposite end of the said legs 30 and 32 there is a provided a cross member 36 which is rigidly secured to the said housing 16. Means for journaling the legs 30 and 32 extend into this cross member 36 and may be lugs, a hollow shaft, or the like. Also, an arm or crank 38 is journaled in the said cross member 36 and has a bracket 40 extending therefrom. An arcuate pitman 42 is secured to the said bracket 40 and terminates in a small link 44.

This small link 44 is secured to a rod 46 which is journaled on the boom. Upon actuation of the crank 38, the bracket 40, pitman 42, and consequently the rod 46 is moved. The movement of the said rod 46 is obviously rotational.

Noting Figure 3, it will be seen that suitable, conventional brackets 48 are utilized for the purpose of journaling the rod 46 on the boom elements 30 and 32, respectively. Also, it is seen that a shovel-retaining member 50 is rigidly secured to the said rod 46. Now, it is appreciated that upon rotation of the rod 46, the shovel-re-

taining member **50** is urged pivotally about the axis of the said rod **46**.

A shovel **52**, simulating the mechanical shovel utilized in large-scale operations, is secured to the terminal portion of the said member **50**. A gate **54** is provided at one portion of the said shovel **52** and is used as a closure means pertinent to an associated aperture therein. Means for resiliently biasing the said gate **54** to a closed position is provided. This means is preferably a plurality of conventional spring-hinge elements **56** common to screen doors and the like.

A hook **58** may be fixed to a selected portion of the gate **54** and a cord **60** secured thereto. This cord is obviously used for the purpose of actuating the gate **54** against the biasing force of the spring-hinge members **56**.

A pair of brackets **62** are secured to the said case **18** and a shaft **64** is rotatively journaled thereon. The shaft **64** also has an actuating lever **66** fixed thereto, or if desired, integral therewith. A bracket **68** is secured to the shaft **64** and an arcuate pitman **70** secured thereto. The opposite end of the pitman is rotatively journaled in the end of the rod **46** and is utilized for the purpose of lifting and lowering the boom. Of course, the cord **60** may be secured to any selected element, preferably the bracket means **62**.

A pair of arms **72** and **74**, respectively, are secured to the housing **16** and converge to form a truss-like member. Received at the terminal portion of this truss-like member is a conventional seat **12**, similar to the type utilized in bicycles. Of course, since the said seat **12** is connected with the housing **16**, upon rotation of the said housing, the seat, boom and shovel will be rotated simultaneously. Positioned adjacent the lowermost portion of the said housing **16** is a cross bar **76** provided for the purpose of receiving a child's feet thereon. This cross bar is obviously also rotatable along with the housing **16**, to which it is fixed.

While there has been described and illustrated only the preferred embodiment of the present invention, it is apparent that various departures may be made therefrom without departing from the purview of the invention. Accordingly, limitation is sought only in accordance with the scope of the following claims.

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

1. An amusement device comprising a stand having a rod projecting therefrom, a housing positioned on said stand, means associated with said rod for turning said housing, a boom pivoted to said housing, means for raising and lowering said boom, a shovel pivoted to said boom, means for pivotally actuating said shovel, said housing turning means including a stationary gear on said rod, a planetary gear in said housing engageable with said stationary gear and means for imparting torque to said planetary gear thereby turning said housing, a gate hingedly mounted on said shovel, means for resiliently biasing said gate to a closed position, and an actuation cord secured to said gate.

2. An amusement device comprising a stand having a rod projecting therefrom, a housing positioned on said stand, means associated with said rod for turning said housing, a boom pivoted to said housing, means for raising and lowering said boom, a shovel pivoted to said boom, means for pivotally actuating said shovel, said housing turning means including a stationary gear on said rod, a planetary gear in said housing engageable with said stationary gear and means for imparting torque to said planetary gear thereby turning said housing, a gate hingedly mounted on said shovel, means for resiliently biasing said gate to a closed position, an actuation cord secured to said gate, said boom raising and lowering means including a shaft secured to said housing, means for rotating said shaft and means for connecting said shaft to said boom.

GEORGE E. BROWN.

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