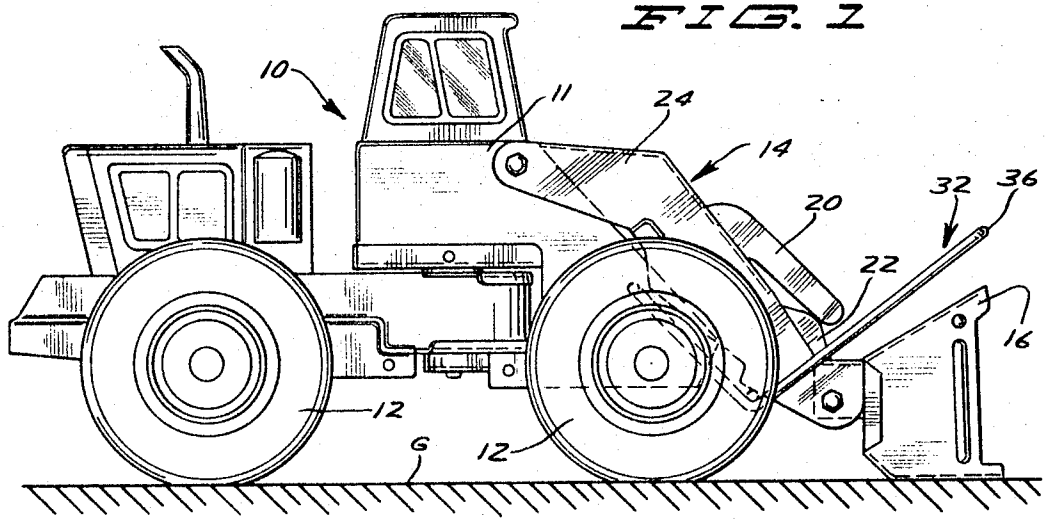
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TOY LOADER

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FIG. 1



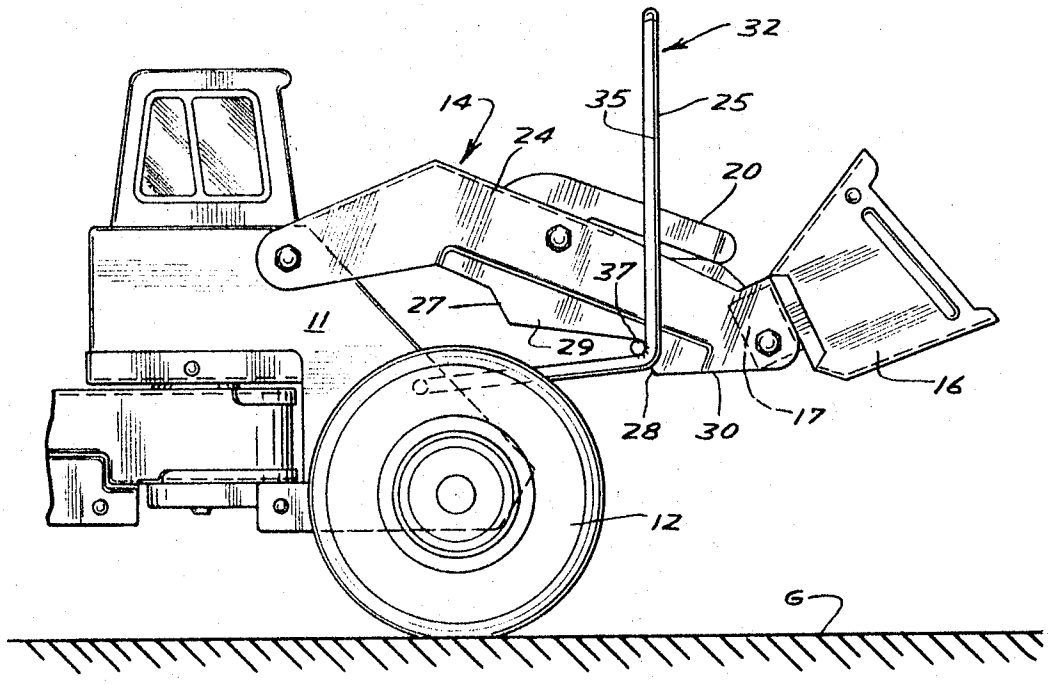


FIG. 2

INVENTORS
RONALD R. PAULY
THEODORE H. ZBIKOWSKI
BY
Carlson, Carlson, Sturdl Wicks
ATTORNEYS

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FIG. 3

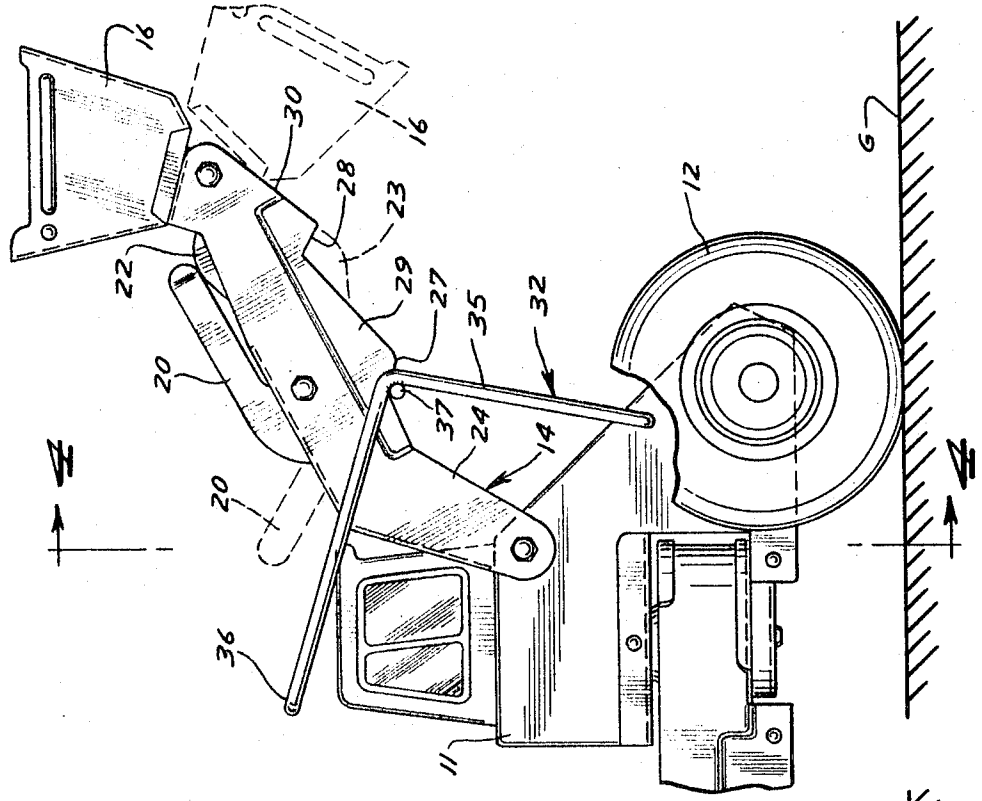
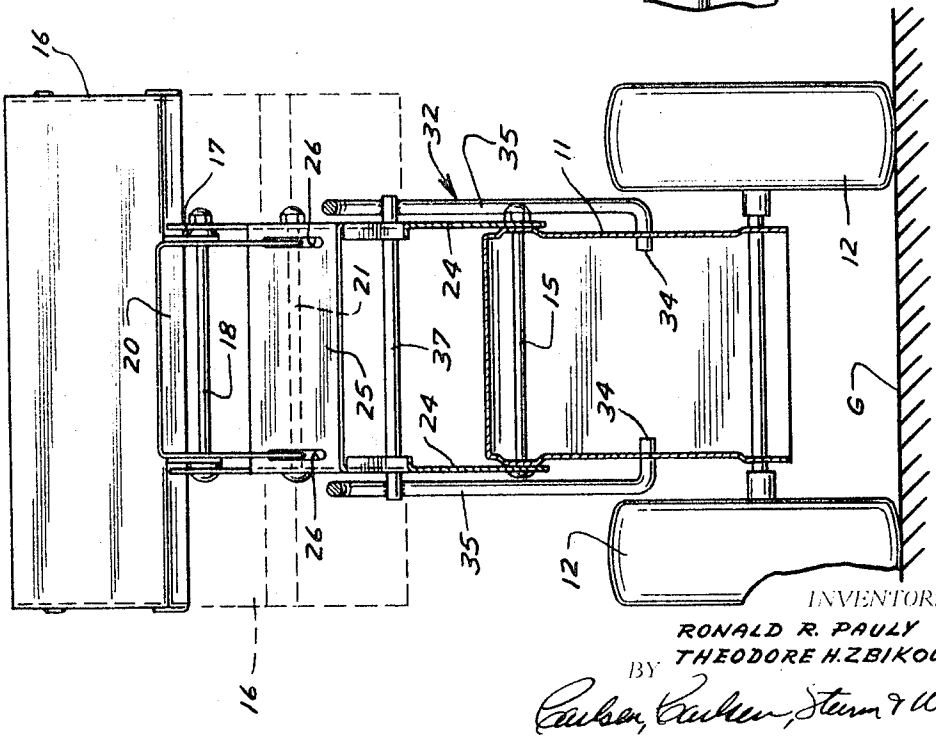


FIG. 4



INVENTORS
RONALD R. PAULY
THEODORE H. ZBIKOWSKI
BY
Parker, Parker, Stern & Wicks
ATTORNEYS

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TOY LOADER

Ronald R. Pauly, Mound, and Theodore H. Zbikowski, Plymouth, Minn., assignors to Tonka Corporation, Mound, Minn., a corporation of Minnesota

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Int. Cl. A63h 17/12, 17/00
U.S. Cl. 46—40 4 Claims

ABSTRACT OF THE DISCLOSURE

A toy loader having a body mounted on ground wheels and a scoop bucket supported at the outer end of a boom having its inner end pivoted to the body for raising and lowering movement. A control lever pivoted to the body has a sliding connection with the boom to effect such raising and lowering and catch means are provided on the boom along the sliding connection and engageable by a latch on the lever to releasably lock the boom in different positions.

The manufacturers of toy vehicles and implements attempt to simulate as much as possible the real machine in both appearance and operation. Earth moving loaders are provided with relatively large scoop buckets mounted on the outer end of a vertically swingable boom. The bucket may be lowered against the ground where it can scoop up dirt or other material, then raised to an intermediate position for transport or to a high position where it might be dumped to unload its contents into a truck box or the like.

It is desirable that the boom and bucket assembly in a toy loader also be adjustable between the aforementioned positions. However, it is equally desirable that the mechanism for moving the boom be simple, durable and easy and safe for a small child to operate.

It is accordingly the object of the present invention to provide a toy loader with a vertically swinging bucket carrying a boom and a single control lever for swinging the boom and automatically locking it in various positions.

The invention broadly comprises a loader having a body, a boom having its inner end pivoted to the body on a horizontal axis and carrying a scoop bucket on its outer end, a control lever pivoted to the body on an axis parallel to the boom pivot and having a portion thereof in sliding engagement with the boom whereby as the control lever is moved about its pivot the boom will be selectively raised or lowered about its pivot and there being catch means on the boom engageable by said lever portion to releasably lock the boom at various positions.

The above mentioned and additional object of the invention will be brought to light during the course of the following specification, reference being made to the accompanying drawings, in which

FIG. 1 is a side elevation of a toy loader embodying the novel boom and control lever design and showing the boom in lowered position with the bucket in contact with the ground.

FIG. 2 is also a side elevation of the front portion of the loader with the boom and bucket in an intermediate or transport position.

FIG. 3 is similar to FIG. 2 but shows the boom and bucket in its highest position. The bucket dump position is shown in broken lines.

FIG. 4 is a transverse vertical section through the loader taken on line 4—4 of FIG. 3.

Referring now more particularly to the drawings reference numerals will be used to denote like parts or structural features in the different views. The toy vehicle denoted generally at **10** has a body **11** supported over the

ground G by ground wheels **12**. Caterpillar tracks might also be used. An elongated boom denoted generally at **14** has its rear or inner end portion pivotally connected to the body **11** by means of a cross shaft **15**. At its forward or outer end the boom **14** carries a scoop bucket **16** which is pivoted to the boom by means of a bracket **17** and cross shaft **18**.

A bucket control **20** is pivoted to the boom **14** for movement about a transverse axis by means of a shaft **21**. Each of the shafts **15**, **18** and **21** has a head at one end and a lock nut on the other end to secure it in place. Suitable linkage **22** connects control **20** with the bracket **17** whereby when the control **20** is swung rearwardly about the axis of shaft **21**, the bucket **16** will tilt forwardly as denoted in broken lines in FIG. 3. The bucket dumping mechanism forms no part of the present invention except for the fact a portion **23** (FIG. 3) of the linkage **22** projects below the boom **14** when the bucket **16** is in dumped position.

Boom **14** actually has an inverted U-shape transverse configuration with the elongated side plates **24** having their upper edges interconnected by a cross plate **25** which is apertured as at **26** to receive the legs of the control **20**. The lower edge of each of the side plates **24** is formed with longitudinally spaced rearwardly facing shoulders **27** and **28** with the shoulders on each side plate being in transverse alignment with the corresponding shoulder on the other. Immediately forward of the respective shoulders **27** and **28** the lower edges of the side plates **24** are provided with straight gradual inclines as denoted at **29** and **30**.

The control lever for raising and lowering boom **14** about the shaft **15** is denoted generally by the numeral **32**. It is formed of a length of metal rod or heavy wire having a bail configuration with its ends **34** bent inward and coaxially journaled in the body **11** below and slightly forward of shaft **15** but on an axis parallel thereto. From portions **34** the lever **32** has L-shaped legs **35** which extend outwardly, then upwardly in parallelism one on either side of boom **14** to a central connecting portion **36** which forms a handle. A latch rod **37** interconnects legs **35** in the area of the bends therein.

Operation of the loader will now be understood. In FIG. 1 it is in dozing and loading condition with bucket **16** locked and opening forwardly to gather material from the ground surface therein. Boom control lever **32** is in forward position. The boom and bucket may then be raised to the position shown in FIG. 2 by the operator grasping the handle **36** and swinging it rearwardly. As latch rod **37** swings upwardly it will move along the lower edges of the boom side plates **24** in a relatively rearward direction along edge portions **30** until it engages behind the shoulders **28** which form a catch. The boom is then releasably locked in the transport position of FIG. 2. With continued rearward swinging movement of the lever **32**, the latch rod **37** will move along the boom edge portions **29** raising the boom to the position shown in FIG. 3 where the rod **37** engages behind shoulders **27** forming another catch to releasably lock the boom in that position.

The child playing with the toy may then wish to dump the bucket **16** and this may be done by swinging the bucket control **20** rearwardly causing linkage **22** to tilt the bucket forwardly about the axis of shaft **18**. As this takes place the portion **23** of the linkage **22** swings downwardly between the boom side plates **24** to a position, shown in FIG. 3, where it provides a deflector to the rear of the shoulders **28**. Accordingly, as the operator moves handle **36** forwardly to again lower the boom, the latch rod **37** will slide off of shoulders **27** and the boom and bucket will gravitationally descend until the bucket contacts the ground, with rod **37** sliding forwardly over shoul-

ders **28** due to the position of the link portion **23**. The bucket control **20** may then again be moved forwardly to return the bucket to a forwardly opening or loading position as shown in FIG. 1.

The boom control lever **32** and the configuration of the lower edges of the boom side plates **24** provide a boom raising and lowering mechanism which is simple, fast and positive to operate, durable and safe. There is very little chance for small fingers to be caught or pinched. The structure accordingly economically and effectively carries out the aforementioned objectives.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims.

Having now therefore fully illustrated and described our invention, what we claim to be new and desire to protect by Letters Patent is:

1. In a toy loader, a loader body mounted on ground wheel means, an elongated boom having one end pivoted to the body on a horizontal axis for raising and lowering of the boom, a bucket mounted on the other end of the boom, a lever having one end pivoted to the body below the boom pivot but on a parallel axis thereto, said lever having a handle at its other end, a latch member on the lever intermediate the pivot and handle in sliding engagement with the boom to raise and lower the boom as the lever is manually moved about its pivot, and a shoulder on the boom along the path of said sliding engagement and facing toward the boom pivot to provide a catch means engageable by said latch member when the boom is in raised position to releasably lock the boom in such position.

2. The subject matter of claim **1** wherein the boom is provided with two of said shoulders spaced longitudinally thereon whereby the boom may be locked in two different elevated positions.

3. The subject matter of claim **1** wherein said lever comprises a section of metal rod bent in a generally

U-shape with the handle at the bight portion thereof and the legs thereof disposed on either side of the boom and the ends of the wire pivoted to the body on a common axis, said latch member extending crosswise and connecting the legs of the rod section.

4. In a toy loader, a loader body mounted on ground wheels for forward and reverse movement, an elongated boom extending forwardly from the body and having its rear end pivoted to the body for raising and lowering movement of the boom, a bucket mounted at the forward end of the boom, a control lever having a pair of legs disposed one on each side of the boom and extending generally fore and aft, the rear ends of the legs being pivoted to the body on a common axis parallel to the boom pivot, the forward ends of the legs being rigidly interconnected by a handle extending crosswise over the boom, a latch rod on the lever intermediate the leg pivot and handle having a sliding connection with the boom to raise or lower the boom as the handle is raised or lowered, and the boom having a catch along the path of the sliding connection for releasably engaging the rod to lock the boom in a raised position.

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LOUIS G. MANCENE, Primary Examiner

H. DINITZ, Assistant Examiner

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