G. ZAHORSKY.

TOY CRANE.

APPLICATION FILED JULY 17, 1920.

1,404,254. Patented Jan. 24, 1922.

Fig. 3.

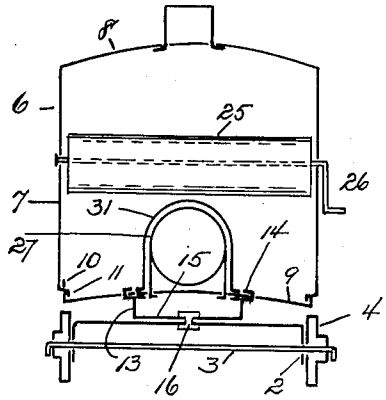


Fig. 2.

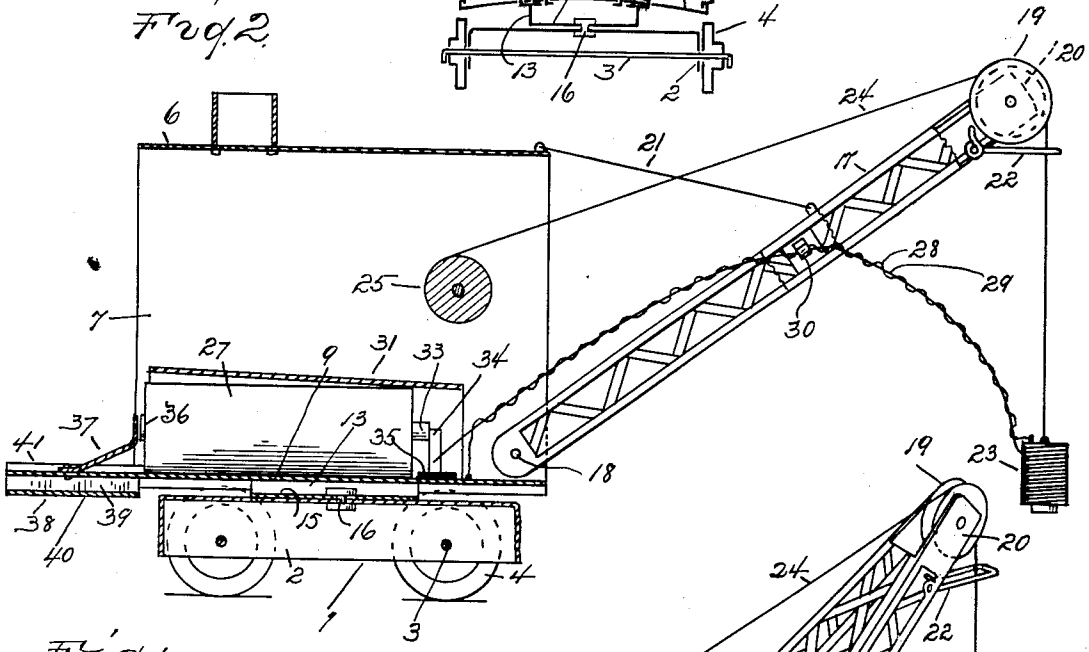
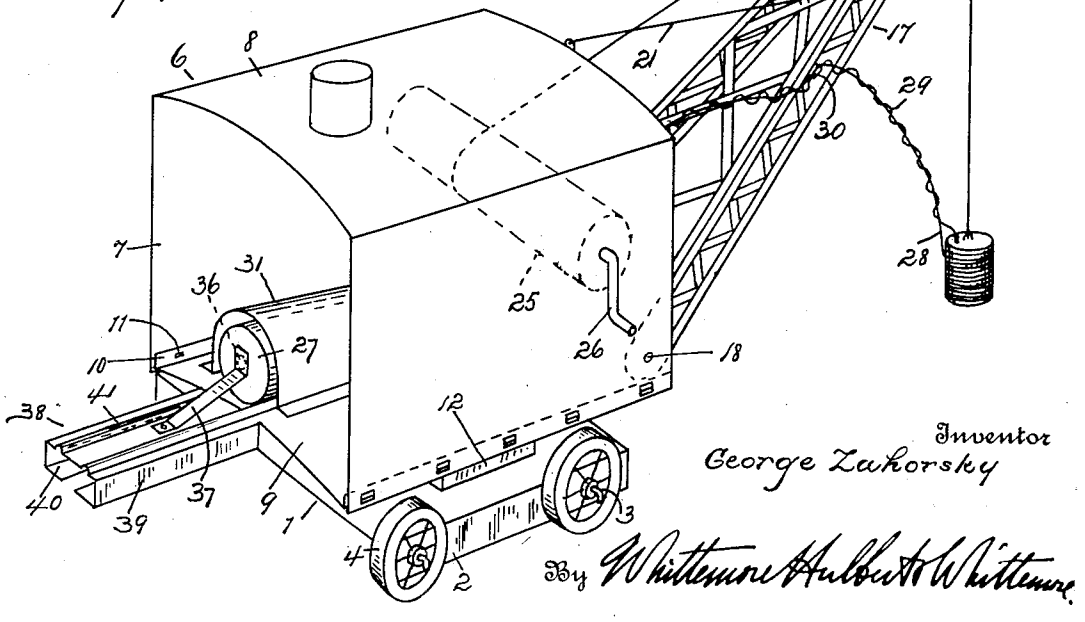


Fig. 1.



Inventor

George Zahorsky

By Whittemore Hulbert & Whittemore

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE ZAHORSKY, OF DETROIT, MICHIGAN.

TOY CRANE.

1,404,254. Specification of Letters Patent. Patented Jan. 24, 1922.

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To all whom it may concern:

Be it known that I, GEORGE ZAHORSKY, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Toy Cranes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to toys and refers particularly to toy cranes. One object of the invention is to provide a simple structure which simulates a usual construction of working crane. Another object is the production of a structure, the parts of which can be formed of stampings. Further objects of the invention reside in the novel arrangements and combinations of parts, as more fully hereinafter set forth.

In the drawings:

Figure 1 is a perspective view of a toy crane embodying my invention;

Figure 2 is a longitudinal section therethrough;

Figure 3 is a rear elevation thereof.

1 is the truck having the depending side flanges 2. 3 are shafts extending through the side flanges and having at their opposite ends the wheels 4, the rims of which extend above the platform 5 of the truck. 6 is a housing having substantially the appearance of a working crane cab, and comprising the side walls 7 connected by the integral top 8, and the base 9. This base is transversely arched to reinforce the same and has the upright side flanges 10, which are slotted for receiving the struck out tongues 11 at the lower ends of the side walls 7, whereby the side walls are secured to the base.

For the purpose of permitting of rotation of the housing 6 relative to the truck 1, the standard 12 is provided, having upright side flanges 13 with tongues 14 at their upper edges, which extend through suitable slots in the base 9, and are clinched thereover for securing the standard to the flooring. The base 15 of this standard is pivotally connected to the platform of the truck as at 16. The side flanges 13 are of sufficient height to raise the base above the wheels 4 so that upon rotation of the housing, it will not come into contact with the wheels.

17 is the hoist arm of channel cross section and preferably of increasing width from its outer to its inner end. This arm is pivotally connected at its inner end, as at 18, to the side walls 7, and has at its outer end the pulley or sheath 19 located between the side flanges 20 of the arm and pivoted thereto. For holding the arm in various positions of vertical adjustment, there is a flexible connection 21 between the arm and the top 8 of the housing. 22 is a guide near the outer end of the arm, comprising a U-shaped member beneath the pulley or sheath for guiding the flexible connection passing thereover.

23 is an electro-magnet to which is connected the flexible connection 24 which extends over the pulley or sheath 20 and is connected to the hoist drum 25, which is located within the housing 6 and is rotatably mounted upon its side walls 7. 26 is a crank fixedly secured to this hoist drum and located outside of the housing for winding or unwinding the flexible connection 24 upon the hoist drum. 27 is a battery, such as a dry cell, removably mounted within the housing 6 and adapted to be connected to the electro-magnet 23 by means of the electrical connections 28 and 29 which pass over the struck out tongue 30 bent to form a hook upon one of the side flanges 21 of the hoist 17. The battery is removably held in place by means of the clip 31, the walls of which converge forwardly to tightly engage the battery upon the latter being forced into the clip. This clip is suitably secured to the base 9 of the housing, as by means of the tongues 32 extending through suitable slots in the base and clinched thereover. The forward end contact 33 of the battery is adapted to engage the contact 34 mounted upon the base and insulated therefrom by the insulation 35. The electrical connection 29 is connected to this contact. The rear contact 36 of the battery is adapted to be electrically connected to 28 by means of the resilient tongue 37 pivoted upon the handle 38 which is integral with the base 9, the electrical connection 28 being connected to the forward end of the base. Thus to magnetize the electro-magnet 23, it is necessary merely to depress the resilient tongue 37, when the circuit will be completed from the forward contact 33 of the battery through the contact 34, electrical connection 29, the winding upon the electro-magnet 23, the electrical connection 28, the base 9 of the housing, the resilient tongue, 37, and the rear contact 36. To break the circuit, it is simply necessary

to remove the thumb or finger from the resilient tongue 37 when the latter will spring away from the rear contact 36.

In order to reinforce the handle 38 and at the same time make the same less dangerous, when gripped to manipulate the toy crane, and of better appearance, it has the depending side flanges 39 terminating in the inwardly extending flanges 40. The handle 38 and base 9 are also reinforced by the longitudinally extending beads or corrugations 41, which further position the battery 27.

Due to pivoting, the resilient contact 37, upon the handle 38, the contact may be rotated to permit of ready removal of the battery 27.

The housing 6 with its base 9, clip 31, standard 12, truck 1, wheels 4, hoist arm 17, and pulley or sheath 19, may all be formed of pressed sheet metal, thereby decreasing the cost of manufacture. Furthermore, these parts and particularly the hoist arm 17, may be apertured to decrease their weight.

What I claim as my invention is:

1. In a toy crane, the combination with a housing, of a hoist arm mounted thereon, an electro-magnet adapted to be carried by said arm, and a battery within said housing and adapted to be electrically connected to said electro-magnet.

2. In a toy crane, the combination with a housing and a hoist drum mounted thereon, of a hoist arm mounted upon said housing, an electro-magnet carried by said arm, a flexible connection secured to said electro-magnet and hoist drum and passing over said hoist arm, a battery within said housing, and means for electrically connecting said battery to said electro-magnet.

3. In a toy crane, the combination with a housing and a hoist drum mounted therewithin, of a hoist arm pivotally mounted upon said housing and having a rotatable pulley at its outer end, an electro-magnet, a flexible connection between said electro-magnet and hoist drum passing over said pulley, a battery mounted within said housing, and means for yieldably electrically connecting said battery with said electro-magnet.

4. In a toy crane, a housing comprising integral side walls and top and a base, said base having upwardly extending side flanges connected to said side walls and being transversely arched.

5. In a toy crane, the combination of a housing comprising integral side walls and top, and a base, said base having upwardly extending side flanges connected to said side walls and being upwardly arched toward its longitudinal center, and a handle at one end of said base.

6. In a toy crane, the combination with a base, of a clip secured to said base and having tapering side walls for detachably receiving a battery, a contact mounted upon said base and insulated therefrom, said contact adapted to engage a contact of the battery, and a resilient tongue electrically connected to said base and adapted to engage a second contact of the battery.

7. In a toy crane, the combination with a truck and wheels upon said truck extending above the platform thereof, of a housing rotatably mounted upon said truck and a U-shaped standard having the base of its U pivotally connected to the platform of said truck and having tongues at the upper edges of its side flanges engaging in slots in the base of said housing and clinched thereover.

8. In a toy crane, the combination with a base, of a hoist arm mounted thereon, a drum carried by said base, an electro-magnet carried by said arm, a flexible connection between said magnet and drum passing over said arm, and a handle at one end of said base provided with an electrical contact.

9. In a toy crane, the combination with a hoist arm, of a pulley rotatably mounted thereon, and a guide for the flexible member passing over said pulley, comprising a U-shaped member embracing the flexible member below said pulley.

10. In a toy crane, the combination with a base, of a housing mounted thereon, a hoist arm and an electro-magnet carried by said arm, of a handle integral with said housing and reinforcing beads in said handle and base.

In testimony whereof I affix my signature.

GEORGE ZAHORSKY.