A mechanical toy for children, the toy consisting of a mechanical drive that is mounted on a toy vehicle such as a farm tractor, the drive consisting of a frame on which is mounted a rotatable spool or drum operated through gearing by a hand crank, and an anchor pivotally attached to the frame.

1 Claim, 3 Drawing Figures
HAND-CRANK TOY WINCH

This invention relates generally to children's toys. More specifically, it relates to mechanical toys.

A principal object of the present invention is to provide a hand-crank toy winch that gives toys operational activity so that when children play with the toys, there is a greater realism for them.

Another object is to provide a hand-crank toy winch which gives greater activity to a toy so that the child's attention is absorbed for a longer time with the toy, and which is educational by demonstrating mechanical movements produced by natural physical laws.

Another object is to provide a hand-crank toy winch which can be incorporated by a manufacturer into any various toy such as a farm or ranch tractor, toy wrecker, truck, hook and ladder fire engine or the like; or wherein the mechanism may be retained as a separate unit by itself or as a part in a line or group of farm toys.

Other objects are to provide a hand-crank toy winch which is simple in design, inexpensive to manufacture, rugged in construction, easy to use, and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing, wherein:

FIG. 1 is a side view of a farm tractor toy shown including the present invention attached thereto.

FIG. 2 is a top view of the hand-crank toy winch shown per se.

FIG. 3 is a side view thereof.

Referring now to the drawing in detail, the reference numeral 10 represents a hand-crank toy winch according to the present invention that is mountable to a toy vehicle such as the farm tractor 11.

The winch 10 includes a main frame 12 of U-shape and which at one end has aligned openings 13 for receiving a pin 14 that is supported in corresponding openings of the tractor. The frame 12 is stationarily secured to upright 15 and to diagonal braces 16 therebetween. Pillow blocks 17 mounted upon opposite sides of the frame 12 form journals for a shaft 18 on which a rotatable spool or drum 19 is mounted. A radially extending flange 20 is integral with each opposite end of the spool so to retain therebetween a string wound up upon the spool. One of the flanges has gear teeth 21 that are engageable with teeth of a gear 22 affixed on a crank shaft that is slidable in bearings 23 of the frame 12 so that the gear 22 can engage the teeth 21 as well as a hold-back 24 which is flat, flexible and solidly mounted to frame 12. The hold-back allows the drum to rotate forwardly only. The end of the crank shaft is bent to form a crank handle 25. When the crank shaft is pushed inward, the gear 22 disengages from teeth 21 as well as the hold-back so to allow the drum to be freely rotated in either direction. One end of a string 26 is secured to the drum and the string is wound on or off the drum by turning the crank handle.

An anchor 27 consists of parallel arms 28 attached pivotally free their one ends on cross pin 29 mounted on the frame 12, the other ends of the arms being affixed to anchor plate 30 that can be lowered down to the ground 31 for anchoring or bracing the toy when the winch is pulling in a load. An anchor pin 32 mounted on frame 12 is slidable so to engage opening 33 of the anchor plate and thus hold the anchor up off the ground when not in use. A hook 34 on the string end can be engaged in opening 33 so to lift the anchor by the winch.

Thus a new toy mechanism is provided.

I claim:

1. In a hand-crank toy winch, an assembly attachable to a toy vehicle, said assembly including a U-shaped main frame securable at one end to said vehicle, a pivotable anchor secured to said frame, and said frame supporting a hand-cranked winch unit, said anchor comprising a pair of pivotable arms which at their one ends are secured to a flat anchor plate extending transversely and in a generally vertical flat plane which at a ground level is slightly tilted upwardly backward, said winch unit including a spool or drum rotatable on a pin supported by said frame, flanges at each end of said spool or drum, one of said flanges being toothed and engageable by a gear secured on a crank shaft slidable in said frame, said gear being engageable with a hold-back mounted on said frame.

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