Nov. 12, 1935. H. W. SAUER 2,020,803

TOY MAGNET CRANE

Original Filed March 24, 1932 2 Sheets-Sheet 1

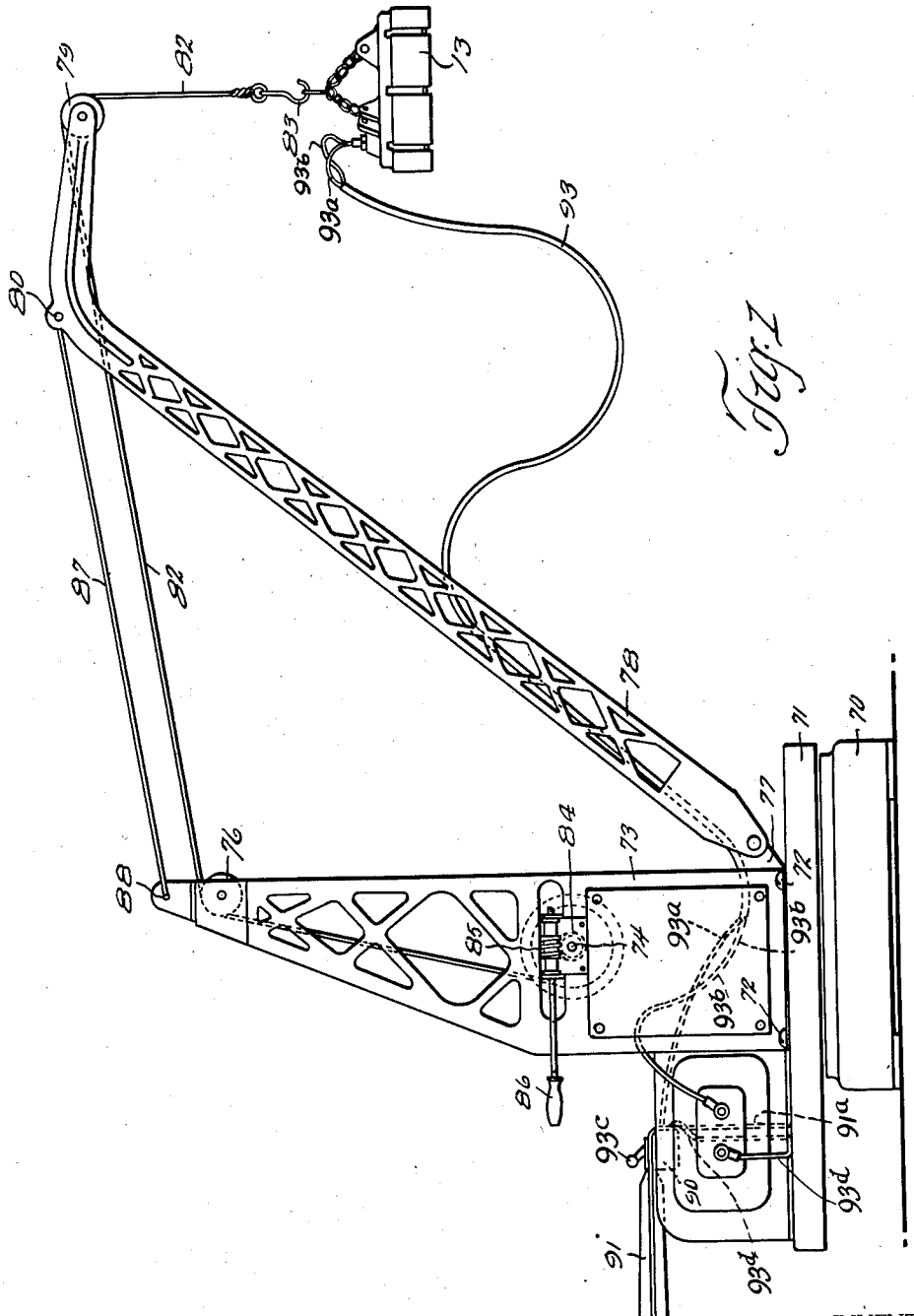


Fig. 1

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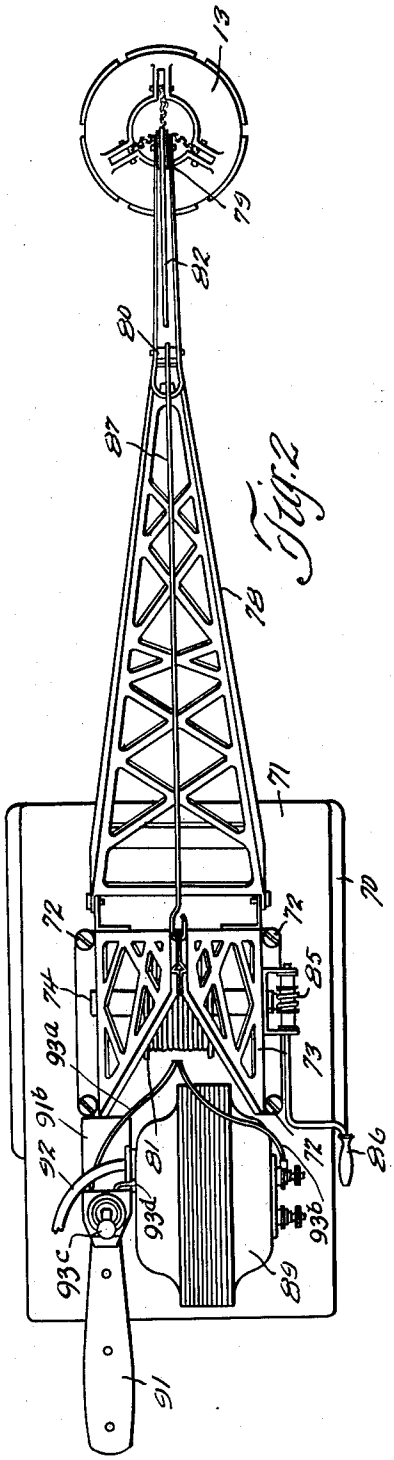


Fig. 2

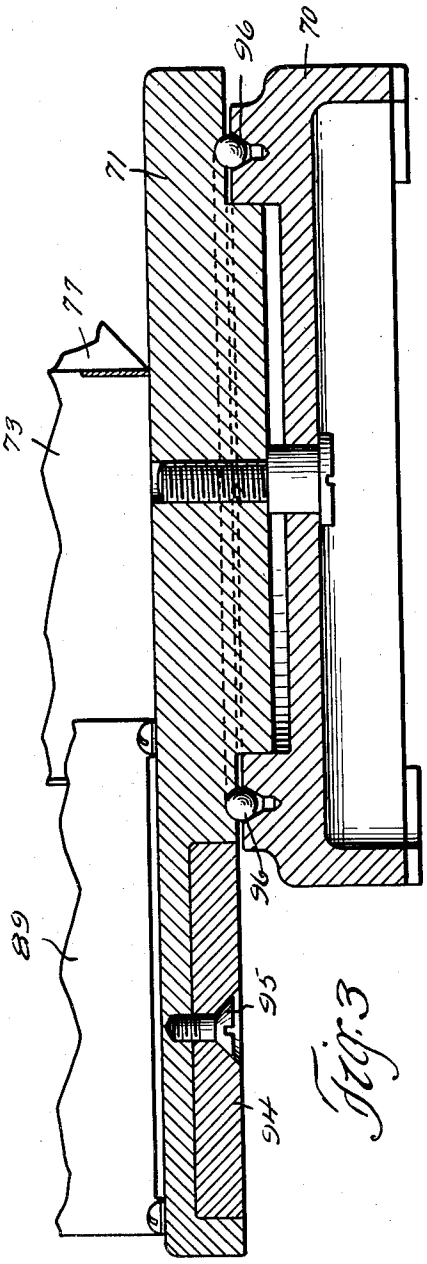


Fig. 3

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2,020,803

UNITED STATES PATENT OFFICE

2,020,803

TOY MAGNET CRANE

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Original application March 24, 1932, Serial No. 600,939. Divided and this application January 29, 1934, Serial No. 708,795

3 Claims. (Cl. 46—37)

This invention relates to a toy magnet crane, and particularly to one having the general external appearance and many of the mechanical characteristics of larger devices such as might be used for handling scrap iron or the like.

The principal object of the invention is to provide a toy of the type indicated which will be entertaining and instructive and at the same time durable, cheap and accessible as to its operating parts.

Other and more limited objects will become apparent from the following description when taken in connection with the accompanying drawings in which Fig. 1 is a side elevation; Fig. 2 is a plan view; and, Fig. 3 is a detail section on a large scale taken centrally through the base and the lower platform.

Referring now to the dawings, the numeral 70 indicates a base on which is mounted a platform 71. Secured centrally to the platform 71 as by screws 72 are a pair of spaced uprights 73 converging to contact at the top, as best seen in Fig. 2. Journaled in the uprights 73 is a winding drum shaft 74. Journaled in the uprights 73 adjacent the top is a pulley and shaft 76. Pivotally connected to projections 77 on the uprights 73 is a crane member 78 which is provided with a pulley 79 at its opposite end and with a transverse pin 80 extending between the two parts thereof adjacent the highest point. Mounted upon the shaft 74 is a winding drum 81 upon which is wound a cable 82 which passes over the pulleys 76 and 79 and terminates in a hook 83 upon which is suspended a magnet 13. Mounted upon the shaft 74 is a worm gear 84 which meshes with a worm 85 operated by a hand crank 86. By turning this crank in opposite directions, the magnet may be elevated or lowered. A rod or wire 87 provided at each end with a hook connects the pin 80 with the upper extremity of the members 73 passing through an opening 88 therein. Mounted upon the platform 71 on the portion thereof which overhangs the base 70 is a transformer 89. The output of the transformer is connected in series with the magnet 13 and a switch 90 carried by a handle member 91 mounted upon and spaced above the platform 71. The member 91 is mounted on the platform by a vertical portion 91^a and an attaching portion 91^b which is secured to the platform thereby spacing the handle 91 above the platform. Current is supplied to the transformer 89 by suitable extension cord 92 connected to the house current and to the primary winding of the transformer 89. Current is supplied from the transformer to the magnet 13 by means of a flexible cable 93. The cable 93 contains conductors 93^a and 93^b. Conductor 93^b is connected to one side of the secondary winding of the transformer 89 while that 93^a is connected to one side of the switch 93^c. The other side of the switch 93^c is connected to the other side of the secondary winding by conductor 93^d. The base 70 and platform 71 may be made of aluminum or similar light metal and the platform may have in addition to the transformer a counter-balancing member 94 of heavier metal, such as lead, connected thereto by the screw 95. The platform and base will be rendered easily movable with respect to each other by ball bearings 96, as clearly indicated in Fig. 3.

The lifting magnet employed is preferably of the construction shown in my copending application Serial No. 600,939, filed March 24, 1932, of which this is a division.

In view of the foregoing it will be clear that I have provided a device which is well adapted for its intended purposes and while I have shown and described a preferred embodiment, I wish it understood that I am limited only in accordance with the appended claims and the prior art.

Having thus described my invention, what I claim is:

1. In a device of the class described, a base, a platform mounted for rotation on said base, a pair of spaced uprights mounted on said platform and converging toward the top, a winding drum journaled between said uprights, means including a hand crank for rotating said winding drum, a crane member pivoted adjacent said platform, means connecting said uprights with said crane member for positioning the latter, an electromagnet, a cable connecting said magnet and said winding drum, there being pulleys carried by said uprights and said crane member and said cable passing over said pulleys, a handle carried by said platform for rotating the same about said base, a switch carried by said handle at the platform end thereof, a source of current and conductors connecting said switch and said magnet in series with said source and both said handle and said hand crank extending in a direction opposed to that in which said crane extends whereby said handle and switch may be manipulated by one hand of the operator while the hand crank is manipulated by the other.

2. In a magnetic toy, a base, a platform mounted for rotation upon said base and having a por-

tion extending therebeyond, a crane mounted upon said platform and extending over the edge thereof in a direction opposed to said projection, a handle carried by said projection, a switch carried by said handle near the point of attachment thereof to said projection and means including a hand crank for manipulating said crane, said crank and said handle extending in the same direction whereby said handle and switch may be manipulated by one hand of the operator and said hand crank by the other.

3. In a device of the class described, a base, a platform mounted for rotation thereon, a handle mounted upon said platform for rotating the same, a switch carried by said handle, an electric lifting magnet, means carried by said platform for suspending said magnet, a source of current and conductors connecting said switch and said magnet in series with said source said handle having a portion contacting and attached to said platform, an upright portion and a horizontal gripping portion, said switch being mounted on the gripping portion adjacent the vertical portion whereby said handle and switch may be manipulated by the same hand of the operator.

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