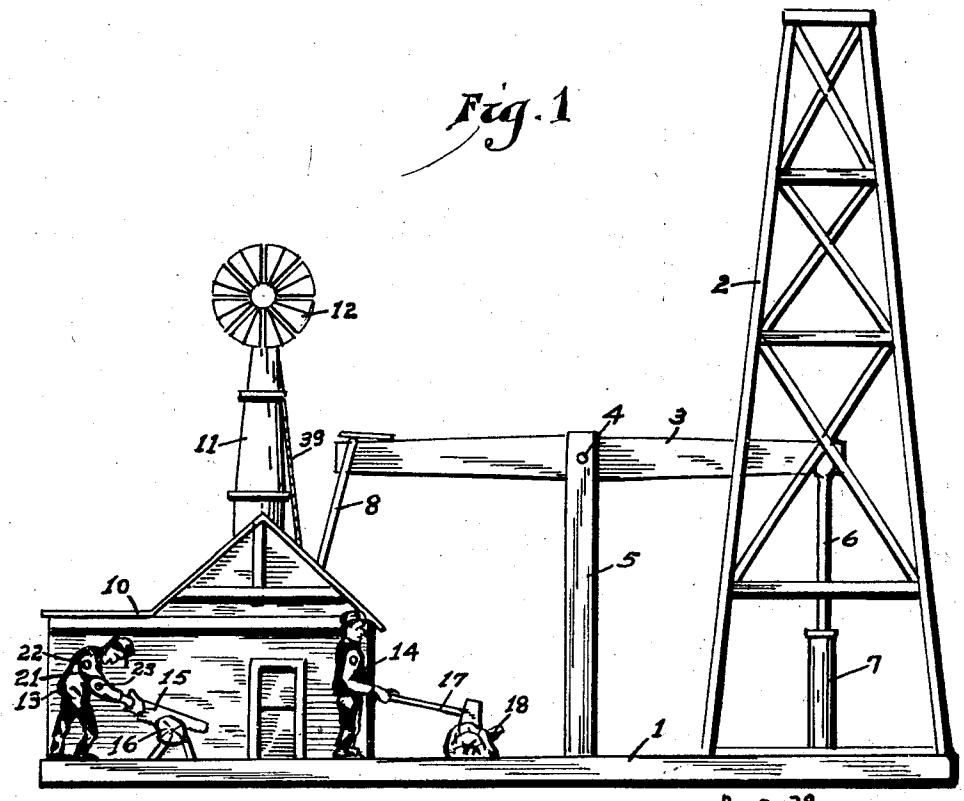
Aug. 9, 1927. 1,638,467

P. P. BARIE

MECHANICAL TOY

Filed Oct. 30, 1925

Fig. 1



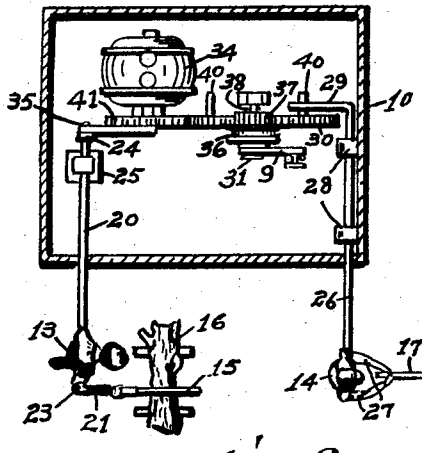


Fig. 2

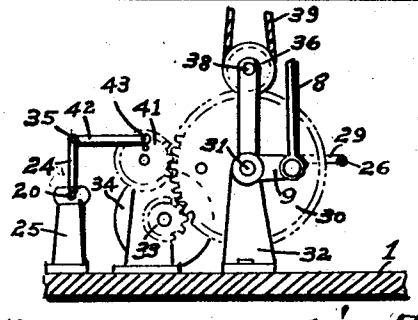


Fig. 3

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UNITED STATES PATENT OFFICE.

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MECHANICAL TOY.

Application filed October 30, 1925. Serial No. 65,753.

My invention relates to a mechanical toy and important objects thereof are to provide a device of the type stated, in a manner as hereinafter referred to, which will operate to figuratively represent a plurality of industrial activities, which is simple in its construction and arrangement, strong, durable, compact, entertaining and comparatively inexpensive to manufacture.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention hereinafter disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing wherein like numerals of reference designate corresponding parts throughout the several views:—

Figure 1 is a side elevational view of a mechanical toy in accordance with my invention.

Figure 2 is a top plan view of the operating mechanism therefor.

Figure 3 is a side elevational view of the operating mechanism.

Referring in detail to the drawing 1 denotes a flat rectangular base upon the forward end of which is erected a representation of a pumping oil well structure. The latter comprises a derrick 2 and a walking beam 3 suitably pivoted, as at 4, for oscillatory movement at the top of the standard 5. The latter has its lower end fixed to the base 1. The forward end of the walking beam 3 is provided with a pivoted pumping rod 6 which extends into the well 7 mounted in the base 1 in the derrick 2. The rear end of the walking beam 3 is pivoted to the connecting rod 8, which latter is pivotally connected at its lower end to the crank arm 9 of the operating mechanism, to be described, to impart an oscillatory movement to the walking beam 3.

A power house 10, enclosing the operating mechanism, is mounted on the rear end of the base 1 and is provided with a tower 11, which latter supports a wind mill 12 positioned at the upper end thereof.

A manikin sawyer 13 and a manikin chopper 14 are fixed to the base 1 in front of the power house 10. The manikin sawyer 13 is positioned in rear of the manikin chopper 14, and the former is provided with a saw 15 operating on a log 16, and the latter is provided with an ax 17 operating on a log 18. The logs 16 and 18 are fixed to the base 1 in front of respective manikins 13 and 14. The log 18 is provided with a small metal plate 19 disposed at the point of contact with the ax 17, so when a blow is struck thereon by the latter the same will be distinctly audible. During the operation of the toy the sawing and chopping operation are accurately simulated by the respective manikins 13 and 14 in a manner to be described.

The manikin sawyer 13 is actuated by a horizontally extending operating rod 20, the outer end of which is pivoted in the shoulders of the sawyer 13 and fixed to the outer arm 21 of the latter, as indicated at 22. The arm 21 is pivotally jointed at the elbow as shown at 23, and the hand thereof is fixed to the rear end of the saw 15. The inner end of the operating rod 20 is formed with a vertically disposed rocker arm 24 and is journaled in the bearing bracket 25 disposed within the power house 10.

The manikin chopper 14 is actuated by a horizontally extending operating rod 26, the outer end of which is pivoted in the shoulders of the chopper 14, and the arms 27 of the latter are fixed to the rod 26 to shift therewith. The rod 26 is suitably journaled in the bearing brackets 28 and the inner end thereof is formed with an angularly disposed horizontally disposed arm 29. The forward end of the arms 27 or the hand thereof is fixed to the ax 17.

The operating mechanism for the device is mounted on the base 1 and is enclosed by the power house 10. The operating mechanism consists of a large driving gear 30 fixed on a shaft 31 suitably journaled for rotation in the bearing bracket 32. The driving gear 30 is in mesh with and driven by the pinion 33 of the driving motor 34. The latter may be electrically or spring operated as desired.

The outer end of the shaft 31 carries a fixed crank arm 9 which is pivotally connected to the lower end of the connecting rod 8 whereby an oscillatory motion is imparted to the associated walking beam 3 during the operation of the device and effecting the oil well pumping operation.

A pulley 36 and a comparatively small

gear 37 are fixed on the shaft 38 at the top of the driving gear 30. The gear 37 is in mesh with and driven by the driving gear 30, thereby rotating the shaft 38 and the pulley 36 fixed thereon. The windmill 12 is driven by a belt 39 operating on the pulley 36 and on a pulley on the windmill supporting shaft.

The driving gear 30 is provided on its inner side with a pair of fixed diametrically disposed pins 40. The latter are positioned adjacent to the periphery of the driving gear 30, and are adapted to engage the arm 29 of the operating rod 26 to impart an intermittent operation to the manikin chopper's ax 17. During the operation of the device the driving gear 30 will rotate in the clockwise direction and during such rotation the pins 40 will alternately engage the arm 29 whereby the ax 17 will be slowly elevated until the engaging pin 40, in its travel, passes and clears the arm 29. Upon release of the latter, in the manner described, the ax 17 will drop by gravity and audibly impact against the metal plate 19, on the log 18.

A gear 41 is suitably journaled at the rear of driving gear 30 and is in mesh with the latter. The connecting rod 42 has its forward end eccentrically pivoted, as at 43 to the gear 41 and its rear end pivotally connected, as at 35, to the upper end of the rocker arm 24. The operation of the gear 41 will actuate the rocker arm 24 and associated operating rod 20 to impart a reciprocating movement to the saw 15.

In the operation of the device. as illustrated and described, the walking beam 3 will make one upward and one downward oscillatory movement during each revolution of the driving gear 30, and the manikin chopper 14 will strike two blows with his ax 17 during one revolution of the driving gear 30. By providing more than a pair of pins 40 the number of such blows may be increased accordingly. The size of the gears 37 and 41 relatively to the driving gear 31 will, of course, determine the respective speeds of the windmill 12 and of the reciprocating motion of the saw 15.

It will here be noted that the mechanical toy herein described and illustrated is merely illustrative of what is now thought to be the best embodiment thereof and that changes, variations, and modifications thereof may be resorted to that best meet conditions found in practice and which come within the scope of the claim hereunto appended.

What I claim is:

In combination, a mechanical toy comprising a base, a motor provided with a pinion and mounted on said base; a drive shaft journaled for rotation on said base; a driving gear fixed on said drive shaft and meshing with said pinion; a crank arm fixed to one end of said drive shaft; a derrick including a walking beam supported on said base; a connecting rod pivotally connected with said crank arm and with said walking beam for imparting an oscillatory movement to the latter; a small gear journaled for rotation and disposed at the top of the driving gear and meshing with the latter; a pulley fixed to said small gear to rotate therewith; a tower supporting a wind mill and mounted on said base; said windmill provided with a pulley; a belt operating on said first and last mentioned pulleys for imparting rotatory motion to said windmill; a pair of diametrically disposed, laterally extending pins fixed in said driving gear; a manikin chopper, including a jointed portion supported on said base; a pivotally mounted operating rod connecting with said manikin chopper and engaging with said pair of pins for intermittently imparting an upward movement to the jointed portion of said mannikin chopper, and permitting of the downward movement of said jointed portion of the said mannikin chopper by gravity; a gear suitably journaled for rotation and meshing with the rear end of said driving gear; a mannikin sawyer, including a jointed portion, supported on said base; a pivotally mounted operating rod connecting with said mannikin sawyer; and a connecting rod eccentrically pivoted to said rearwardly disposed gear and pivotally connected with said last mentioned operating rod for imparting a reciprocating movement to the said jointed portion of said mannikin sawyer.

In testimony whereof I affix my signature.

PHILLIP P. BARIE.