

Dec. 11, 1923.

1,477,412

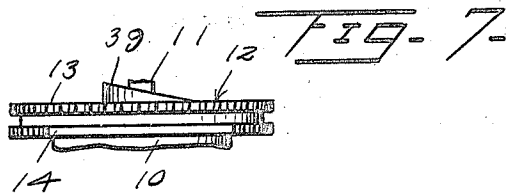
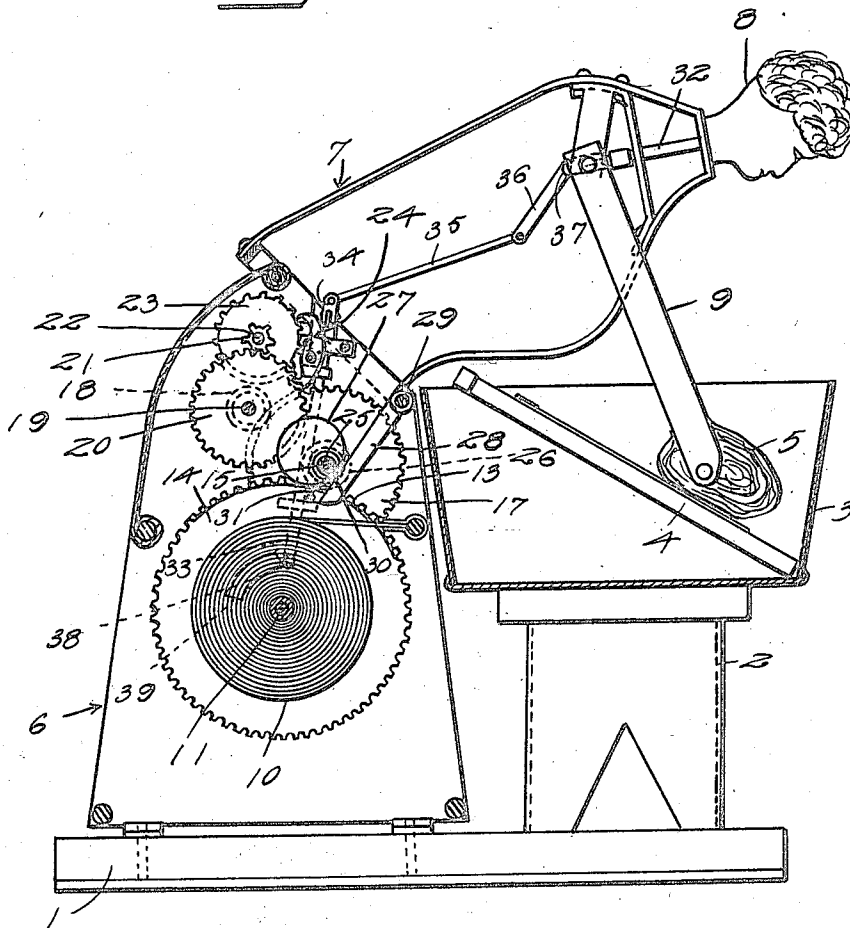
R. R. ADAMS

MECHANICAL FIGURE TOY

Filed Nov. 7, 1922

2 Sheets-Sheet 1

FIG. 1.



Inventor
R. R. Adams.

By *A. H. Humphreys, Jr.*
Attorney

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R. R. ADAMS

MECHANICAL FIGURE TOY

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Fig. 5.

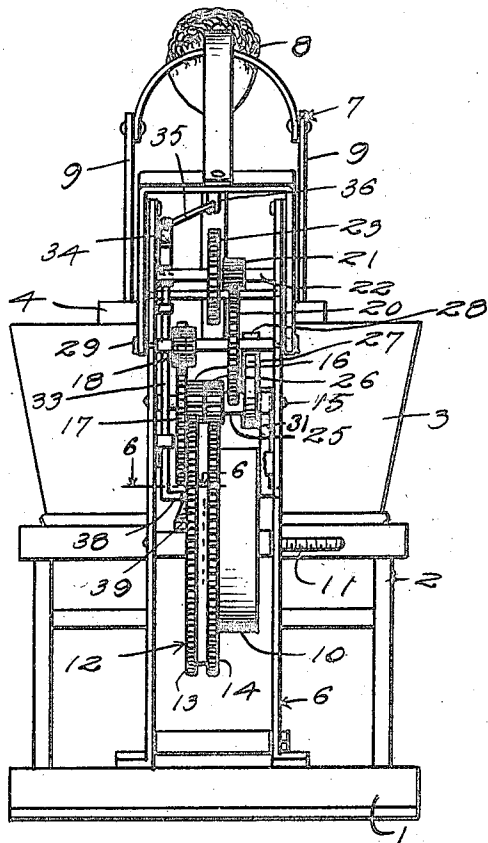


Fig. 4.

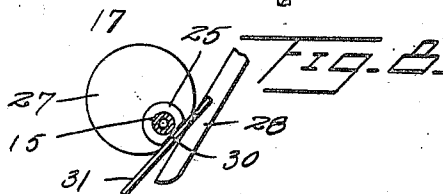
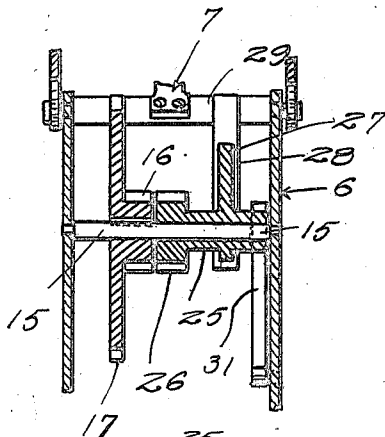


Fig. 3.

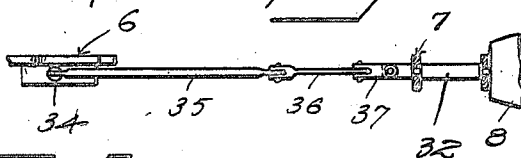


Fig. 2.

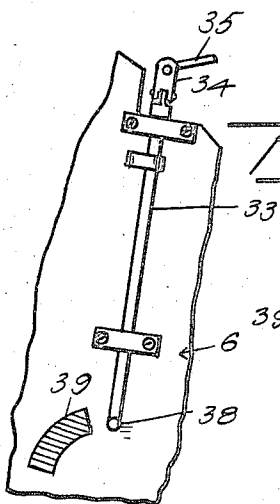
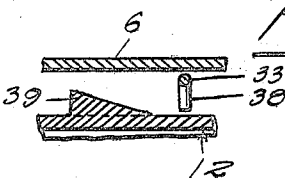


Fig. 6.



Inventor

R. R. Adams

334 *[Signature]* Attorney

UNITED STATES PATENT OFFICE.

ROBERT R. ADAMS, OF CINCINNATI, OHIO.

MECHANICAL-FIGURE TOY.

Application filed November 7, 1922. Serial No. 599,572.

To all whom it may concern:

Be it known that I, ROBERT R. ADAMS, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Mechanical-Figure Toys; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention has relation to an article which partakes of the nature of a toy and which is adapted for use as an advertising medium, since it may be utilized to demonstrate the difference between washing clothes by hand and the modern method by machine, the device representing a pail or tub mounted upon a bench or stand, a washboard therein, and the figure of a woman in the act of washing clothes by rubbing the same over the washboard, the upper portion of the figure being adapted to reciprocate and the head mounted to turn independently, the operating mechanism being such that during the turning of the head the upper portion of the body remains stationary.

Other objects and advantages will be apparent and suggest themselves as the nature of the invention is understood.

While the drawings illustrate an embodiment of the invention it is to be understood that in adapting the same to meet different conditions and requirements, various changes in the form, proportion and minor details of construction may be resorted to without departing from the nature of the invention.

Referring to the accompanying drawings forming a part of the application,

Figure 1 is a side view, parts being broken away,

Figure 2 is a detail view of a portion of the connection between the head and the drive member,

Figure 3 is a top plan view of the parts shown in Figure 2,

Figure 4 is a sectional detail of a portion of the train of gearing,

Figure 5 is a rear view with the plate removed,

Figure 6 is a detail section on the line 6—6 of Figure 5,

Figure 7 is a detail edge view of the drive member, and

Figure 8 is an enlarged detail side elevation of the cam, showing the flattened portion of the sleeve and the leaf spring cooperating therewith.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawings by like reference characters.

The device when constructed on a comparatively small scale is designed as a toy, but when full size or nearly so is adapted for advertising purposes to direct attention to the difference between the old way of washing clothes by hand and the modern method of washing the same by machine. In either adaptation of use, the device involves substantially the same construction and arrangement of parts which includes a base 1, a bench or stand 2, a tub or pail 3, a washboard 4 within the tub or pail and a figure representative of a woman in the act of washing clothes by hand, said figure being mounted on the base 1 to one side of the bench 2 and tub 3 with a rubber 5 adapted to operate over the washboard 4 in simulation of rubbing clothes thereover.

In the present instance, the figure is shown as comprising a lower portion 6 which is fixed and an upper portion 7 which is pivoted and adapted to oscillate in substantially the same manner as the upper portion of a person performing the operation of washing clothes by hand. The upper portion 7 includes a head 8 which is movable therewith and mounted to turn independently thereof, and a pivoted member 9 representing the arms and hands which carry the rubber 5. As the upper portion 7 of the figure vibrates or oscillates, the head 8 and pivoted member 9 move therewith and the rubber 5 moves up and down over the washboard 4. The parts 6 and 7 may be of any preferred construction and may be draped or finished in any manner to represent a wash woman. In the present instance, the lower portion 6 contains a motor and operating mechanism whereby the upper portion 7 is oscillated and the head 8 turned. The motor and operating mechanism may be of any preferred construction, depending upon the specific structure, finish and adaption of the device.

As shown, the motor embodies a clock spring 10, winding shaft 11 and drive member 12 mounted upon the winding shaft 11 and having the usual ratchet connection

therewith common to spring motors. The drive member 12 includes a continuous toothed portion 13 and a mutilated or interrupted toothed portion 14, the teeth being provided either as a part of the member 12 or independently thereof as preferred, whereby to provide an integral structure or a composite structure as found most advantageous. A shaft 15 receives a pinion 16 and a gear wheel 17, the elements 16 and 17 being connected for simultaneous rotation and the pinion 16 being in mesh with the continuous toothed portion 13 of the drive member 12. The gear wheel 17 is in mesh with a pinion 18 fast to a shaft 19 upon which is mounted a gear wheel 20 which in turn meshes with a pinion 21 secured to a shaft 22 which carries a scape-wheel 23 with which cooperates a pallet lever 24, whereby the speed of the motor and train of gearing is controlled. A sleeve 25 is loosely mounted upon the shaft 15 and is provided with a pinion 26 and a cam 27. The pinion 26 is in the plane of the mutilated or interrupted toothed portion 14 of the drive member 12 so as to be intermittently actuated by the latter. The cam 27 cooperates with an arm 28 which is fast to the pivot 29 of the upper portion 7 of the figure whereby to vibrate or oscillate the same. A portion of the sleeve 25 is flattened at one side as indicated at 30 and cooperates with a flat spring 31, whereby to hold the sleeve 25 and parts 26 and 27 stationary during the interval of travel of the interrupted portion of the toothed part 14 of the member 12 past the pinion 26 and during this interval, the upper portion 7 of the figure is stationary and the head 8 is turned to one side and resumes its normal position.

The head 8 is secured to the projecting end of a shaft 32 which is journaled to the upper portion of the part 7. A vertical shaft 33 is journaled to the lower part 6 of the figure and is coupled to the shaft 32 so as to turn the latter and the head 8. The shafts 32 and 33 being differently positioned may be connected in any manner for simultaneous rotation and, as shown, a plurality of links 34, 35, 36 and 37 are utilized for this purpose and are representative of and may be replaced by a flexible shaft of any nature. The lower end of the vertical shaft 33 is laterally offset as indicated at 38 and normally projects within the path of a cam 39 carried by the drive member 12, said cam being located opposite the interrupted toothed portion 14 of the drive member so as to effect a turning of the head 8 during the interval that the upper portion 7 of the figure is stationary.

What is claimed is:

1. In a device of the character specified, a figure including a pivoted portion and a

head carried by the pivoted portion and mounted to receive an independent rotary movement, a drive member including a continuously toothed portion and an interrupted toothed portion, actuating means for imparting a vibratory movement to the pivoted portion of the figure including a cam adapted to be intermittently driven by the interrupted toothed portion of the drive member, and actuating means for effecting a turning of said head and including a cam associated with the continuously toothed portion of the drive member, the parts being disposed whereby to effect a turning of the head during the intervals of rest between the vibrations of the pivoted portion of the figure.

2. In a device of the character specified, a figure including a pivoted portion and a head carried thereby and mounted to receive an independent rotary movement, a drive member including a continuously toothed portion and an interrupted toothed portion, a train of gearing including an escapement and driven by means of the continuously toothed portion of said drive member, power transmitting means between the said head and drive member including a cam whereby the head is intermittently rotated, and power transmitting means between the said pivoted portion of the figure and the interrupted toothed portion of the drive member whereby said pivoted portion of the figure is vibrated during the intervals of rest or inaction of the said head.

3. In a device of the character specified, a figure including a pivoted portion and a head carried thereby and mounted for independent rotary movement, a drive member including a continuously toothed portion and an interrupted toothed portion, a train of gearing including an escapement in mesh with the continuously toothed portion of the drive member, a sleeve having a flattened side, a spring coacting with the flattened side of the sleeve, a pinion fast to the sleeve and adapted to be intermittently operated by the interrupted toothed portion of said drive member, a cam fast to said sleeve, power transmitting means between the pivoted portion of the figure and said cam to be intermittently actuated thereby, a cam carried by the drive member, and power transmitting means between the said head and the cam of the drive member to be intermittently actuated thereby to effect a rotary movement of the head during the intervals of rest of the pivoted portion of the body.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT R. ADAMS.

Witnesses:

FOSTER T. CLARK,
ALBERT W. JACOBS.