

Nov. 5, 1946.

A. FINN ET AL

2,410,646

WHEELED TOY

Filed July 13, 1945

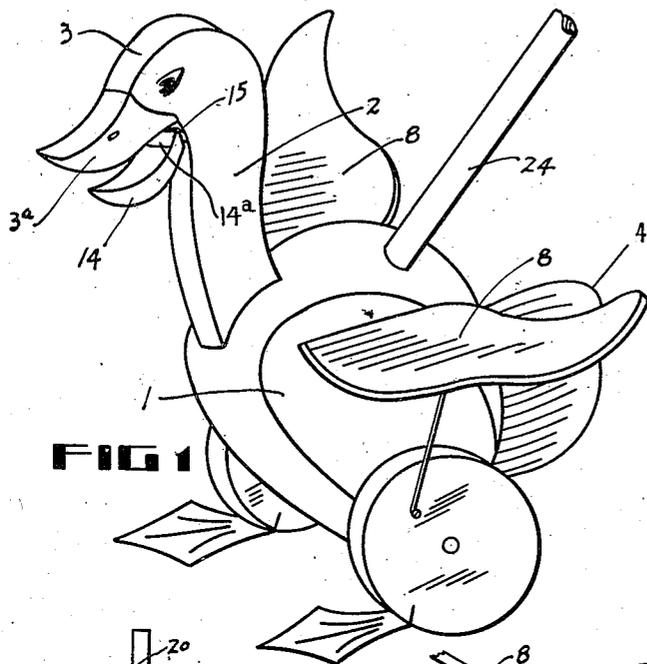


FIG 1

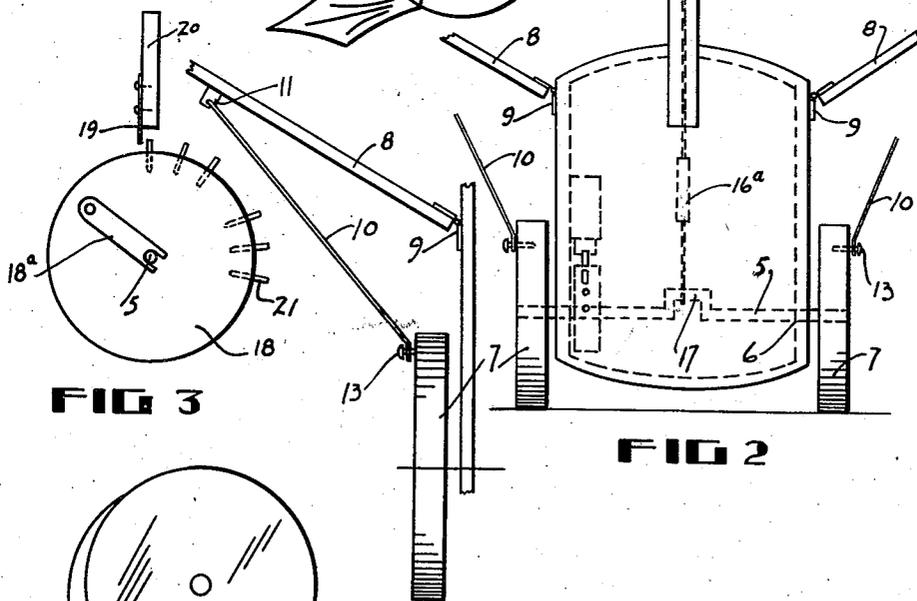


FIG 2

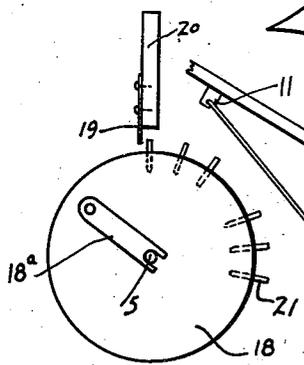


FIG 3

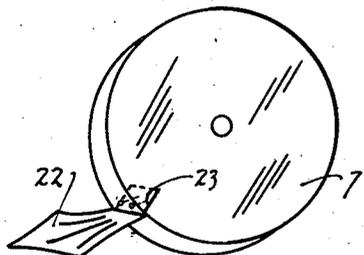


FIG 4

FIG 5

ALFRED FINN
LOUIS ROSTOKER
INVENTORS
by *Smith & Mayhew*
Attorney.

UNITED STATES PATENT OFFICE

2,410,646

WHEELED TOY

Alfred Finn, Leaside, and Louis Rostoker,
Toronto, Ontario, Canada

Application July 13, 1945, Serial No. 604,868

2 Claims. (Cl. 46—104)

1

This invention relates to a wheeled toy, constructed to simulate the appearance, movement and sound of an animal, and more particularly to a novel sound producing mechanism to be used in conjunction therewith.

One object of this invention is to provide a sound producing mechanism which is capable of producing intermittent sounds simulating animal voices, and which is actuated by the movement of the wheeled toy.

Another object of this invention is to provide means whereby in a wheeled toy constructed to simulate the appearance of a bird, the rotation of the wheels simultaneously flaps its wings, opens and closes its jaws, and operates the sound producing mechanism.

Another object of this invention is to provide means whereby an intermittent sound is produced only when the jaws of the animal body are open.

A further object of this invention is to provide a toy of the class described which is of simplified construction and is inexpensively manufactured.

Other objects of this invention will hereinafter appear in the detailed description of a preferred embodiment that follows and are illustrated in the accompanying drawing in which,

Figure 1 is a perspective view of a wheeled toy constructed to simulate a duck;

Figure 2 is a front elevation showing the mechanism;

Figure 3 is a side elevation of the sound producing mechanism;

Figure 4 is a perspective view of a wheel with a piece simulating a foot attached thereto; and

Figure 5 is a fragmentary front elevation showing the actuating mechanism for one wing.

In the drawing like numerals of reference indicate corresponding parts in the different figures.

In the drawing, 1 is a hollow body in the shape of a duck. The body 1 is provided at its forward end with a neck 2 and head 3, and at its rear end with a tail 4. The head 3 is formed with a forwardly extending upper bill 3a and has eyes on opposite sides thereof.

A crankshaft 5 having a crank 17 therein extends through the body 1, with a portion of the crankshaft extending beyond the body on both sides. The crankshaft is journaled in circular openings 6 in both sides of the body. Wheels 7 are rigidly fixed to the portions of the crankshaft extending beyond the body so that the rotation of the wheels rotates the crankshaft.

Wings 8 are hinged to the walls of the body at 9. Rods 10 are pivotally attached to the wings at

2

11, and are loosely connected by means of eyes at their other end on pins 13 eccentrically mounted on the wheels. The rotation of the wheels causes the rods to raise and lower the wings in a flapping movement.

A lower jaw or bill 14 is hinged by means of a pin 15 to the head 3 of the body. Projecting inwardly from the base of the bill within the hollow head is a lug 14a. A rod 16 is fixed at one end to the lug 14a and at the other end is rotatably mounted on the U-shaped portion 17 of the crankshaft 5. The rotation of the crankshaft due to the rotation of the wheels causes the rod 16 to pivot the lower bill 14 about the pin 15 so as to open and shut the lower bill with respect to the upper bill 3a. A threaded coupling 16a is provided on the rod 16 for adjusting the movement of the bill.

The sound producing mechanism comprises a disc 18 attached to the crankshaft 5, inside the hollow body by means of a forked strip of brass 18a soldered to the crankshaft and pinned to the disc, and a metal strip 19 fastened to a block 20 which is fixed to the interior wall of the body. Six spaced apart pins 21 project from the peripheral surface of the disc 18 and are arranged in two series of three each, the spaces between the series being greater than the spaces between the projections within each series and one of the spaces between each series being considerably smaller than the other. The rotation of the disc 18 with the crankshaft causes the pins 21 to impinge on the metal strip 19 and produce two intermittent sounds for each rotation of the disc.

By making the strip 19 of .015 inch spring steel, the block 20 of Bakelite, and the pins 21 of metal, the "quack-quack" sound of a duck can be produced.

By arranging the pins 21 along less than half the circumference of the disc 18 and by co-ordinating the motion of the rod 16 which opens and closes jaw or bill 14 with the motion of the disc, the sound producing mechanism produces sounds simultaneously with the opening of the jaw or bill and only while the jaw is open. By co-ordinating the wing flapping means with the sound producing mechanism the sounds will be emitted as the wings are raised as is the case with a live duck.

Pieces 22 of flexible material, such as leather, shaped and marked to simulate duck's feet are secured in grooves 23 in each wheel 7. These pieces are so positioned on the wheel that they pass under the wings as the wings are in the raised position.

3

When the toy is pushed along a plane surface by means of a stick 24, the rotation of the wheels flaps the wings and simultaneously, by means of the crankshaft 5 which it rotates, opens and closes the jaw or bill 14 and produces the "quack-quack" sound while the jaw is open by operating the sound producing mechanism.

While the invention has been drawn and described with reference to a specific embodiment, it is to be understood that it is not to be limited thereto, but is to be construed broadly and restricted solely by the scope of the appended claims.

What we claim as our invention is:

1. A toy comprising a body simulating a bird, 15 wheel means for supporting the body, a crankshaft including a crank adapted to be rotated by the rotation of the wheels, wings horizontally hinged to opposite sides of the body, means to raise and lower the wings comprising a link piv- 20 otally connected to the wheels, a jaw hinged to the body, means for opening and closing the jaw, comprising a link pivotally connected to said wheels, and sound producing mechanism comprising a vibratory plate attached to the body 25 and a disc mounted so as to rotate with the crankshaft and having projections extending outwardly from its peripheral surface, said projections being spaced apart along less than half the circumference of the disc and being arranged

4

in series, the spaces between the series being considerably longer than the spaces between the projections within each series, said projections being adapted to impinge in succession on the plate so as to produce intermittent sounds, the 5 rotation of the wheels being adapted to simultaneously flap said wings, open and close the jaw, and operate the sound producing mechanism to produce intermittent sounds only when the jaw 10 is open.

2. A toy comprising a body simulating an animal, wheel means for supporting the body, a crankshaft adapted to be rotated by the rotation of the wheels, a vibratory plate member attached to the body, and a disc mounted so as to rotate with the crankshaft and having pins extending outwardly from its peripheral surface, said pins being equidistantly spaced apart in alignment 20 along substantially less than half the circumference of the disc and being arranged in two series, the spaces between the series being considerably longer than the spaces between the pins within each series, and said pins being adapted to impinge in succession on the plate, and said 25 plate not engaging any projections between said series so as to produce two separated sounds for every rotation of the disc.

ALFRED FINN.
LOUIS ROSTOKER.