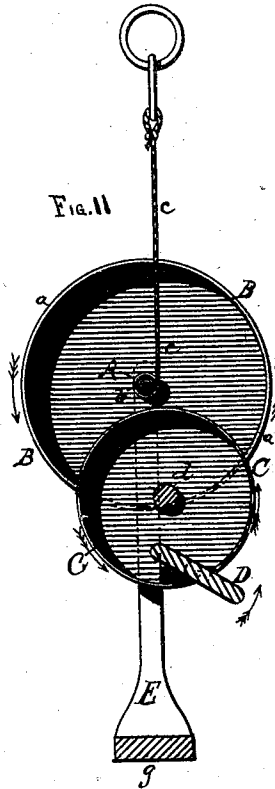
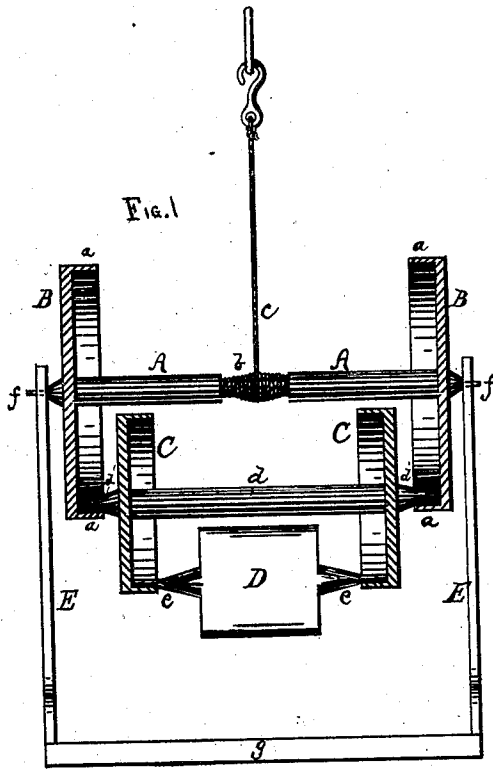


W. GIFFORD.
MECHANICAL TOY.

No. 174,515.

Patented March 7, 1876.



WITNESSES.

C. N. Woodward.

T. A. Parsons

William Gifford,
INVENTOR, BY
J. R. Drake Atty.

UNITED STATES PATENT OFFICE.

WILLIAM GIFFORD, OF WELLSVILLE, NEW YORK.

IMPROVEMENT IN MECHANICAL TOYS.

Specification forming part of Letters Patent No. **174,515**, dated March 7, 1876; application filed January 22, 1876.

To all whom it may concern :

Be it known that I, WILLIAM GIFFORD, of Wellsville, in the county of Allegany and State of New York, have made certain Improvements in Mechanical Toys, of which the following is a specification :

This invention consists in two wheels with inside flanges, and around whose axle, in the center, is wound a cord or thread, by which it is suspended, running down by its own weight, and imparting motion thereby to a second set of wheels, only smaller than the first, which are set on an axle with projecting beveled ends, which run in the flanges of the first wheels. A third axle, also having beveled ends, and provided with a flat fly-wheel, runs in the flanges of the wheel above, and is weighted, so as to act as a counter-weight, and as it revolves it operates against the too quick action of the other wheels. This fly is ornamented, as are the wheels, and as they revolve slowly, give a very peculiar and novel effect. To the outside ends of the first axle is hung a frame, on which any kind of ornamental weight may be set, which further prevents the too rapid running down or unwinding of the cord, all as hereinafter fully explained.

In the drawings, Figure 1 is an elevation in cross-section, showing the position of the wheels, their axles, and the fly. Fig. 2 is a central vertical section.

A represents the first axle, and B B the wheels, having inside flanges *a a*. The center *b* of the axle is made smaller, and around it is wound the cord or thread *c*. The end of this is attached to any desirable place, and the wheels, thus suspended, revolve and run down by their own weight, gradually unwinding the cord. To prevent it doing this too fast, and, at the same time, to increase the attractiveness of the toy, a second set of wheels, C C, on an axle, *d*, having pointed or beveled ends *d' d'*, is arranged below the first set, the beveled ends *d' d'* running in the flanges *a a* of the first wheels B B. The movement of the first imparts motion to the second set of wheels, only making the running down more gradual. To still further retard the motion and make it even and gradual, a weighted fly, D, with beveled ends *e e*, is operated in connection

with the lower set of wheels *c c*, the beveled ends *e e* running in the flanges of said wheels, as clearly shown in Fig. 1. As the upper set gradually unwinds, the second set revolves, though by its weight retarding the movement of the first set. These sets of wheels may be multiplied to as great a number as desired. The lower or fly wheel, which aids in keeping the movement regular, may be brightly ornamented, or by using glass in its construction a very pretty effect is obtained. In addition to these, a frame, E, is set on projecting pins *f f'* of the axle A, and on the lower bar *g* may be set a doll, or any kind of figure or ornament, (the weight being properly graduated,) which aids in making it still more ornamental. These, hung in a window, or other place in which the unwinding cord is almost invisible, makes a curious mechanical puzzle, as to the source of the movements of the various wheels and fly.

But one set of wheels and one fly are necessary to make this mechanical toy, though the multiplication of the wheels gives it a more curious and ornamental look.

The motion to the upper set of wheels may be imparted by a weight, if desired, or a wound-up spring; but I prefer the cord, as being simpler.

I claim—

1. A mechanical toy composed of one or more sets of wheels, B C, the beveled ends of the axles of each set running in the inside flanges of the wheels above it, the upper wheels receiving motion from the cord *c* unwinding from the first axle A, and the lower set of wheels having a fly-wheel, D, the beveled ends *e e* of which run in the flanges of the lower wheels, substantially as specified.

2. In combination with the axle A and wheels B B, the frame E, in which any ornamental weight may be set, substantially as specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WM. GIFFORD.

Witnesses:

J. R. DRAKE,
T. H. PARSONS,