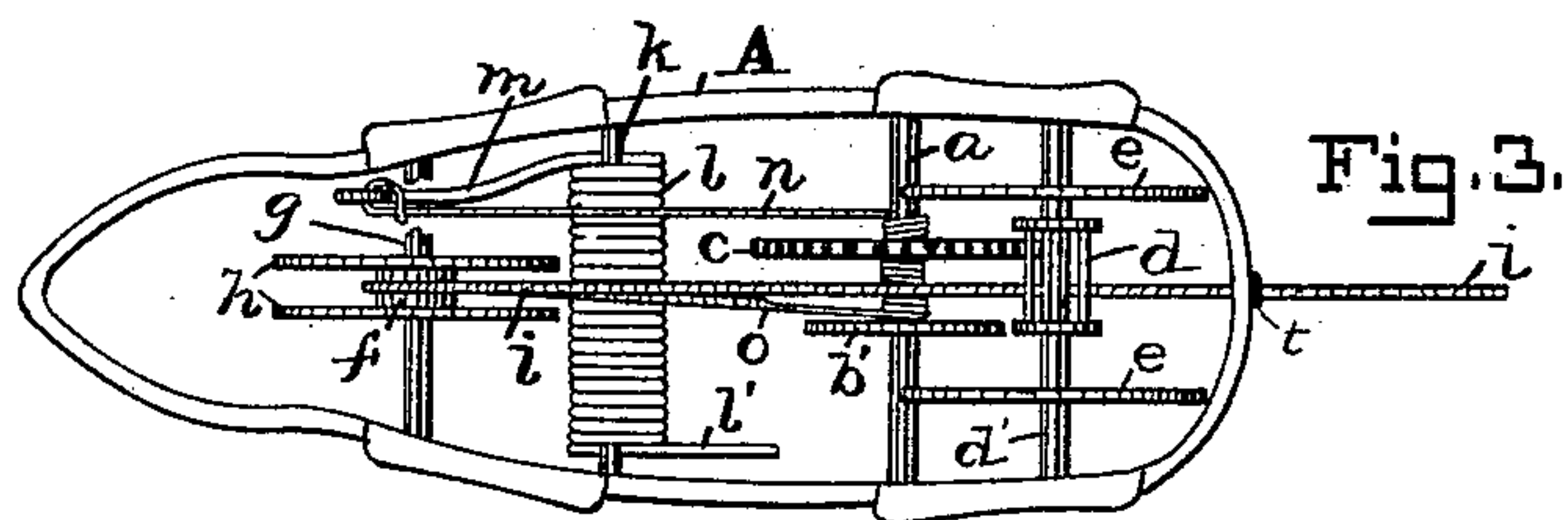
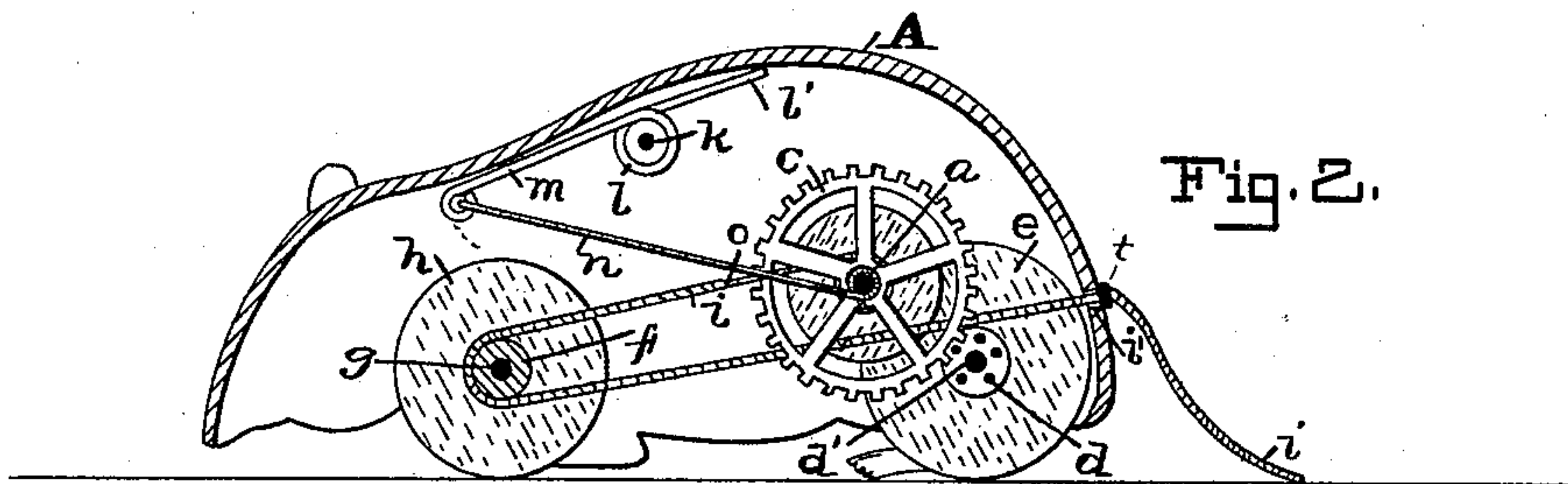
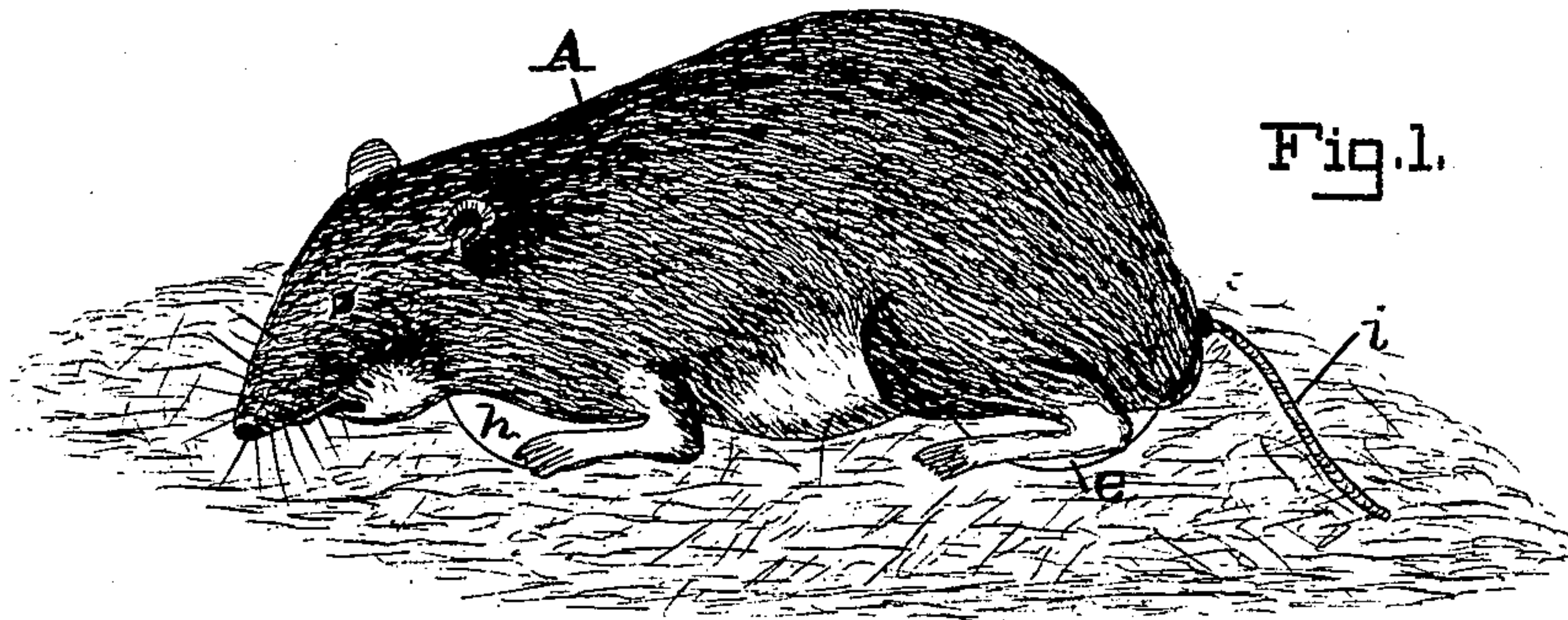


(No Model.)

J. P. CAULFIELD.  
WHEELED TOY.

No. 470,860.

Patented Mar. 15, 1892.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES P. CAULFIELD, OF BALTIMORE, MARYLAND.

## WHEELED TOY.

SPECIFICATION forming part of Letters Patent No. 470,860, dated March 15, 1892.

Application filed July 3, 1891. Serial No. 398,331. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES P. CAULFIELD, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have  
5 invented certain new and useful Improvements in Wheeled Toys, of which the following is a specification.

This invention relates to an improvement in automatic wheeled figure toys, and is illustrated in the accompanying drawings, in  
10 which—

Figure 1 represents a side view of my improved toy; Fig. 2, a longitudinal section, and Fig. 3 a bottom view.

15 The letter A designates a shell made of suitable material and shaped to represent the figure of an animal, preferably a mouse. In this shell is journaled a cross-shaft *a*, which carries fixed to it a gear-wheel *c*. The gear-wheel meshes into a pinion *d*, fixed on a shaft  
20 *d'*, journaled at the rear end of the shell and carrying a pair of disks *e*, which comprise the rear wheels on which the toy travels. At the forward end of the shell A is located a pulley  
25 *f* on a shaft *g*, having high side flanges or disks *h*, which comprise the front wheels of the toy. A cord *i* is connected at one end to the shaft *a* and winds upon the same, said shaft having a flange *b'* to prevent the cord  
30 from slipping laterally. This cord is carried over and around the pulley *f* at the forward end of the shell A and thence rearwardly again and out through a hole *i'* in the back end of the shell. That part of the cord which  
35 will be seen on the outside of the shell is provided of sufficient size to represent the tail of a mouse.

At a suitable point in the shell A, I locate a stationary shaft *k*, on which is placed a  
40 coiled spring *l*, having projecting ends, one of which *l'* bears against the inside wall of the shell to hold the spring while it is wound up and the other *m* extends in the opposite direction and comprises an arm, having attached  
45 to its extremity one end of a cord *n*, the other end of which cord is connected to the shaft *a*, said cord adapted to wind on said shaft in an opposite direction to that in which the cord *i* winds.

50 My preferred way of arranging the cords in the shell is as follows: I take a small cord and attach it at the end to the spring and

then carry it to the gear-wheel *c*, to which it is made fast and then wrapped around the shaft *a*. A thicker cord is then joined to the  
55 small cord at *o*; and this thick cord passes around the pulley *f* and through the rear end of the shell A.

From the above description it will be clear that upon drawing out the cord *i*, which represents the mouse's tail, it will be unwound  
60 from the shaft *a* and will revolve the same. As this takes place the cord *n* is wound upon said shaft *a* and pulls down the arm *m*, compressing the spring *l*. Now the toy should  
65 be placed upon some suitable flat surface, and upon releasing the cord *i* the arm *m* is drawn back by the spring *l* and unwinds the cord *n* from the shaft *a*, revolving the latter and the  
70 gear-wheel *c*. The said gear-wheel imparts motion to the pinion *d* and disk-wheels *e*, which impel the toy. At the same time the cord *i* is rewound on the shaft *a*, ready to be  
again drawn out to wind up the spring, a knot  
75 or button *t* on the tail outside the shell preventing the free end of the cord from being accidentally drawn into the shell any farther  
than just enough to permit the spring *l* to expand and to exert its full force upon the arm *m*.

It will be obvious that the driving mechanism can be so geared as to cause the toy to  
80 travel a considerable distance before the spring runs down.

The actuating parts are well concealed within the shell of the toy, and the projecting  
85 end of the winding cord appears as the animal's tail. Hence the toy has much the appearance of a real mouse, both in looks and movements; and it is evident that so long as the tail is extended or drawn out the motive  
90 power will be held in abeyance, so that it is not necessary to place the device upon the floor as soon as it is wound up, as would be the case if the momentum of a fly-wheel which  
95 is put in motion by the rapid drawing out of the impelling-cord were the motive power; nor is it necessary to draw the cord out rapidly, as would be required with the fly-wheel; neither is it necessary to have a special separate piece that is liable to be lost—as a key—  
100 for winding up the spring.

Another advantage arising from locating the spring *l* in the upper portion of the shell, as shown, is that it permits of the arm *m* be-



ing made nearly as long as the height of the shell, which gives it a good leverage and permits of its being moved through one-fourth of a circle, or ninety degrees, without having its lower end come in contact with the floor, and it also permits of the spring being provided with many coils that are placed side by side across the body of the animal or shell, which gives the spring great power and enables it to propel the device quite a distance, thereby adapting the motive power to small shells, as a mouse, &c.

It will of course be understood that the shell of the toy may represent some other animal than a mouse.

The purpose of passing the cord *i* around the pulley at the front part of the shell is to take up the length of thick cord. It is not desirable to have this thick cord wind on the drum.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a shell, of traction-wheels journaled therein, a shaft across the shell, provided with a gear-wheel adapted to operate the traction-wheels and move the shell forward, a coiled spring in the top of the shell, one end of which bears against the shell and the other end is formed into an arm, which is shorter than the height of the shell, a cord secured to the free end of the arm at one end and to the shaft at the other and adapted to

be wound around said shaft, and a cord secured to and wound around the shaft and adapted to be unwound therefrom, whereby the other cord is wound upon the shaft and the end of the arm of the spring is drawn toward the shaft, substantially as set forth.

2. The combination, with a shell in the form of a mouse and provided with a hole in the rear portion, of traction-wheels for supporting the shell, the forward one of which is grooved around its periphery, a gear-wheel within the shell to the rear of the forward traction-wheel and engaging with and adapted to operate the traction-wheels and propel the shell forward, a spring-motor for operating the gear-wheel, one end of which is formed into an arm, a small cord secured to the free end of the arm and wrapped around the shaft of the gear-wheel, and a larger cord secured to the free end of the small cord and passed around the groove in the front wheel and extended through the hole in the case, whereby the free end of the larger cord is adapted to form the tail of the mouse and be used as a means for winding up the motor within the shell, substantially as set forth.

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

JAMES P. CAULFIELD.

Witnesses:

JNO. J. MADDOX,

F. P. DAVIS.