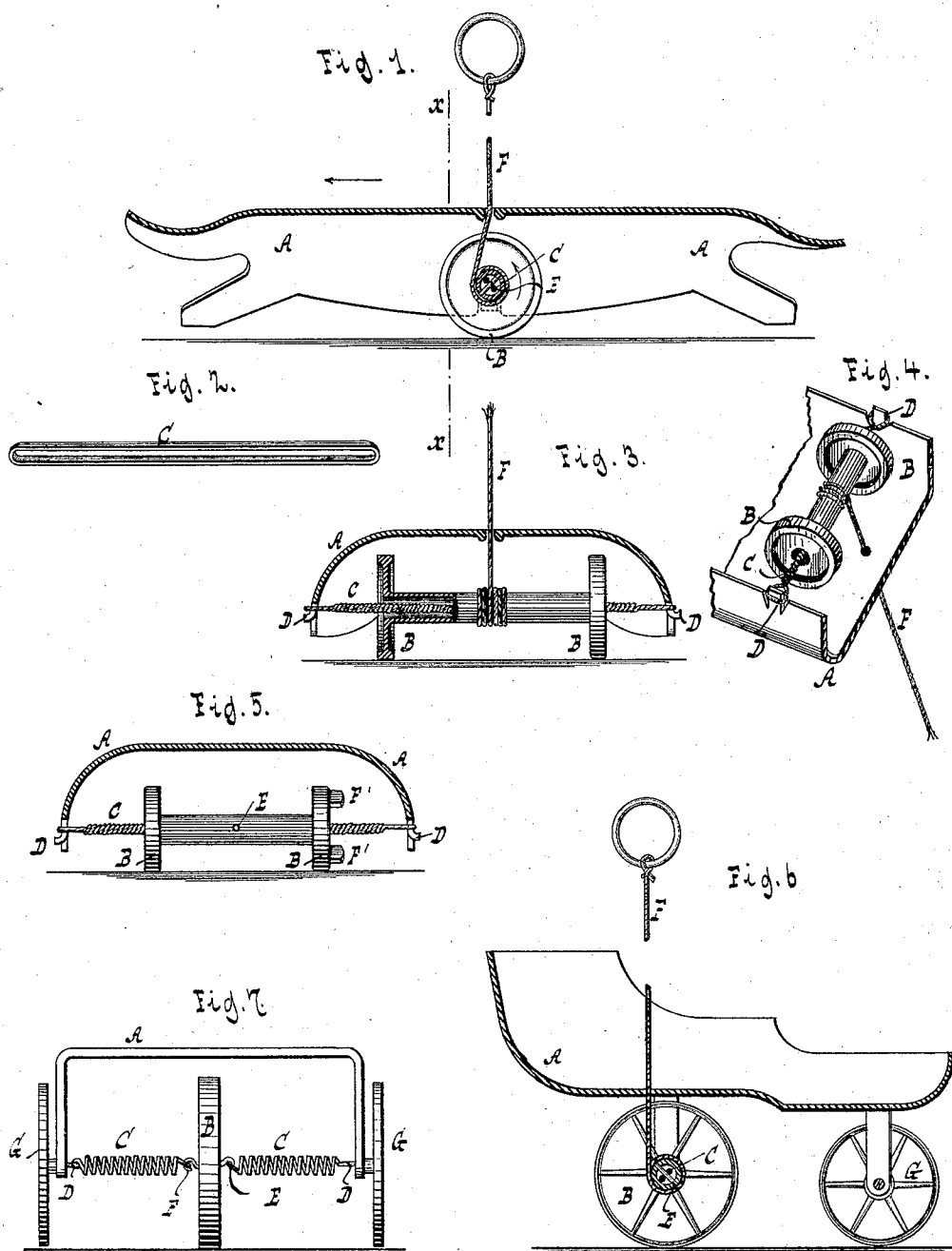


(No Model.)

R. TEICHMANN.
MOTOR.

No. 368,499.

Patented Aug. 16, 1887.



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RICHARD TEICHMANN, OF BROOKLYN, NEW YORK.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 368,499, dated August 16, 1887.

Application filed April 7, 1887. Serial No. 231,030. (No model.)

To all whom it may concern:

Be it known that I, RICHARD TEICHMANN, a citizen of the German Empire, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Motors, of which the following is a specification.

This invention relates to improvements in motors for toys and other articles, as set forth in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal central section of a toy. Fig. 2 is a detail view of an actuator. Fig. 3 is a section in the plane xx , Fig. 1. Fig. 4 is an inverted perspective view of part of a toy. Fig. 5 is a transverse section of a modification. Fig. 6 is a longitudinal section of a modification. Fig. 7 is an end view of a modification.

Similar letters indicate corresponding parts.

In the drawings, the letter A indicates the body of the toy. The body A may have different forms, as desired. For example, in Fig. 1 is indicated a turtle, and in Fig. 6 a carriage.

B is a wheel, motor, or propeller. An actuator, C, is connected to the propeller B. A simple form of actuator is a band of india-rubber or elastic material, as indicated in Fig. 2. The actuator is secured to the body A by suitable means—such, for example, as lugs or eyes D, engaging the actuator. Said actuator is also secured to the propeller B. When the propeller B is rotated—as, for example, in the direction of the arrow shown on the propeller in Fig. 1—the rotation of the propeller will twist the actuator to a state of tension. If the toy is then placed on the ground, the rotation of the propeller produced by the tension of the actuator will cause the body A to move. The propeller is so arranged that it will engage the ground, so as to drive the body A.

A winding device—such as a string or connection, F—is secured to and wound about the propeller B, or about its core or axle, in such a way that when the string F is drawn off the propeller the propeller is rotated to subject the actuator to tension. When the string F is released, the tension of the actuator moves the propeller, so as to wind up the string F, and also to propel the body A. The body A is of such weight that when the string F is drawn

off from the propeller the propeller will be rotated and twist or stretch the actuator. The actuator can thus be readily wound up or stretched by raising the body A from the ground, grasping the free end of the string, and letting the body A fall to the ground. The descent of the body winds up the actuator.

In place of a string the winding device may be made in the form of lugs F', as seen in Fig. 5, which lugs can be grasped to rotate the propeller and to subject the actuator to tension. In the drawings, Fig. 5, a pin, E, is shown as securing the propeller B and actuator C, so that the rotation of the propeller will cause tension of the actuator.

In addition to the propeller B, the body A may have rotary supports or wheels G, as seen in Fig. 6. By having the body A located above the propeller, so as to surround and conceal the propeller B in whole or in part, as seen in Figs. 1 and 3, an ornamental appearance of the device can be secured.

In place of the supports G being placed as shown in Fig. 6, the supports G may be placed as seen in Fig. 7—that is, on line with the axis of rotation of the propeller B.

In place of an elastic band, C, a spring or springs, C, Fig. 7, can be used as an actuator. The actuator C, in place of being secured to the propeller B by a pin, E, as seen in Fig. 5, can be secured to the propeller by any other suitable fastening device, E, such as an eye, as seen in Fig. 7. By placing the supports G on the axis of rotation of the propeller the body A can rock or oscillate on the propeller B and on the supports G, which may be desirable in some kinds of toys.

In Fig. 1 the propeller B is shown as being placed below the center of gravity of the body A, and the orifice or passage in the body A, through which the string F passes, is placed near the center of gravity of the body A. A result of this arrangement is that if the body A is suspended by the string F said body will be in such position that upon descending to the surface to be traversed the periphery of the wheel or propeller B will be at once caused to come into contact with said surface. The wheel B thus does not waste any of its power, as would be the case if the wheel B revolved without having its periphery in contact with said surface, in which latter case the wheel B

would revolve without imparting the desired motion to the body A.

What I claim as new, and desire to secure by Letters Patent, is—

5 1. The combination of the vehicle-body A with the propeller-wheel B, arranged entirely beneath the said body below its center of gravity for protecting said wheel and supporting
10 and moving the body on the surface to be traversed, and the torsional spring located under the body and connected to the body and wheel in line with and parallel to the axle of the latter, said wheel by rotating in one direction
15 twisting the spring and placing it under torsional tension to propel the wheel and the vehicle-body above it on the surface to be traversed, substantially as and for the purposes described.

2. The combination, with a body, A, the
20 propeller-wheels B, and the tubular axle of the propeller-wheels for supporting and moving the body on the surface to be traversed, of a torsion-spring, C, connected with the body and passing through the propeller-wheels and
25 their axle, and a string or its equivalent con-

nected with said axle for rotating the propeller-wheels to twist the spring and place it under torsional tension for propelling the body and wheel on the surface to be traversed, substantially as described.

3. The combination, with a body, A, and a propeller-wheel, B, below the center of gravity of said body for supporting and moving said body on the surface to be traversed, of a torsion-spring connected with the body and propeller-wheel in line with and parallel to the
35 axis of said wheel, and a string or its equivalent made to enter a passage at or near the center of gravity of said body, and adapted to rotate said propeller-wheel to twist the spring
40 and place it under torsional tension for propelling the body and wheel on the surface to be traversed, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

RICHARD TEICHMANN.

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.