(No Model.)

J. H. TORNEY, Jr.

TOY.

No. 533,758. Patented Feb. 5, 1895.

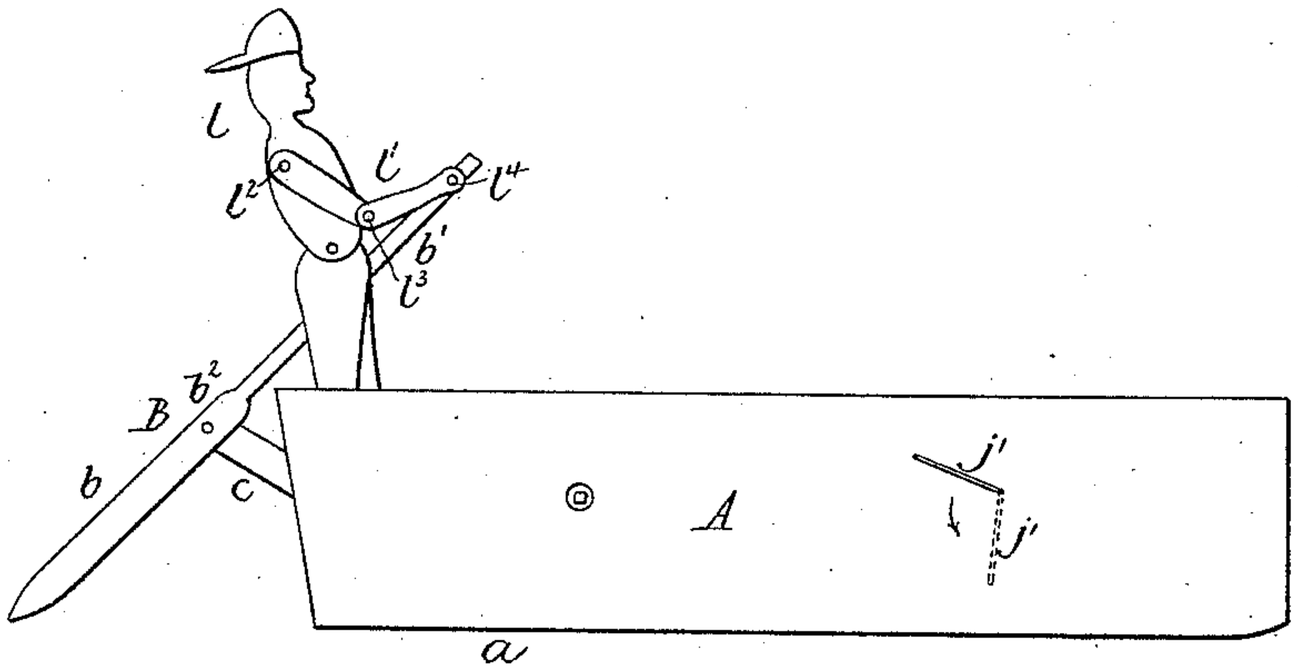

Fig. 1.

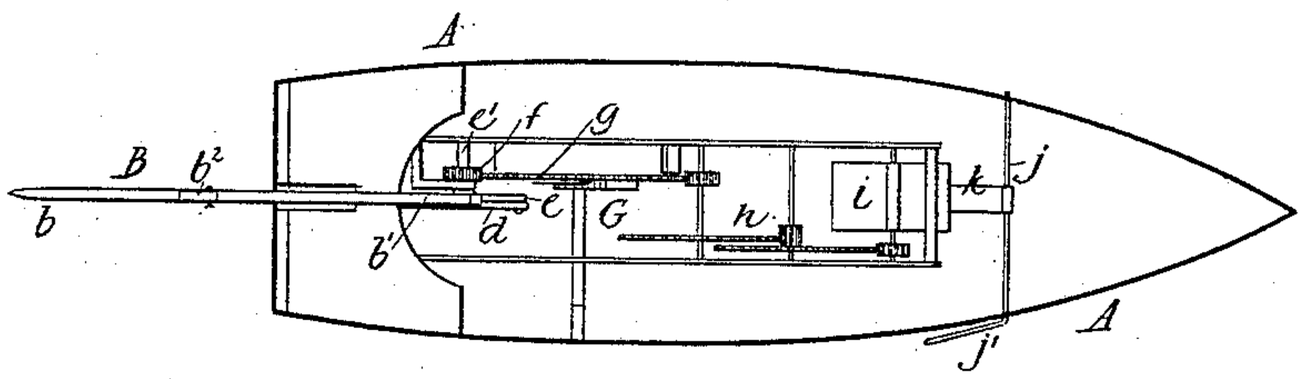

Fig. 2.

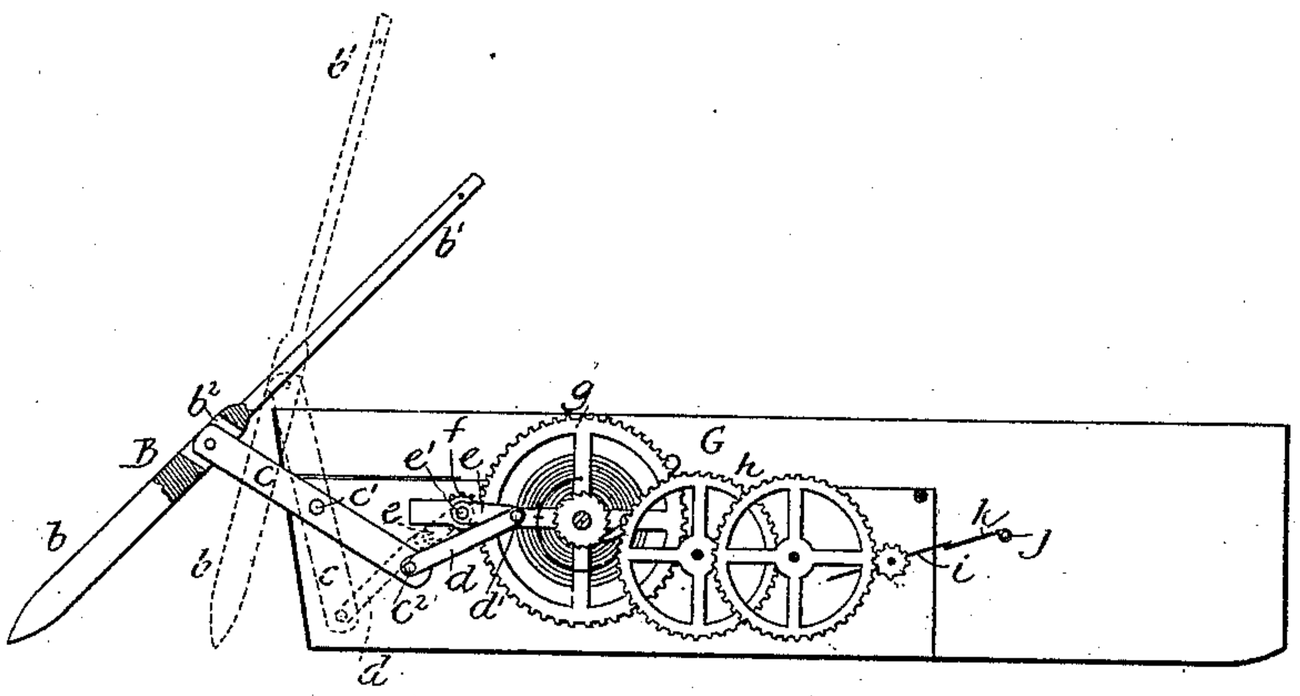

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. TORNEY, JR., OF WASHINGTON, DISTRICT OF COLUMBIA.

TOY.

SPECIFICATION forming part of Letters Patent No. 533,758, dated February 5, 1895.

Application filed March 20, 1894. Serial No. 504,450. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. TORNEY, Jr., a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Toys; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to toy boats and the like and especially to that class thereof wherein the propulsion is effected automatically by spring actuated mechanism arranged within the toy.

It is the object of the invention to provide a lever for propelling the toy and simple but effective means for imparting to said lever, which is preferably arranged at the rearward end of the toy, a movement such as will cause its lower free end to engage the surface over which the toy passes, intermittently, with a view to propelling the toy at intervals after the manner of the movement of a row boat.

To this end the invention consists in a propelling lever having its lower end pointed or serrated to insure its engagement with the surface of a floor or table, in a rocking lever pivoted at one end to the propelling lever and having at its other end crank connections with spring actuated mechanism provided with a governor; in a device for locking and unlocking the spring actuated mechanism, and in a figure actuated by the movements of the propelling lever.

The invention also consists in the construction, relative arrangement and operation of the several parts of the improved toy all of which will fully and clearly appear from a reading of the subjoined description taken in connection with the accompanying drawings which form a part of this specification, and in which—

Figure 1 is a side elevation of a boat embodying my improvement. Fig. 2 is a plan view of the same, and Fig. 3 is a vertical central longitudinal sectional view.

In the drawings I have shown my invention as applied to a boat, but it will be obvious that the same is equally applicable to other objects.

Referring to the drawings by letter, A denotes the boat, the bottom *a* of which is straight and smooth and is raised slightly at the bow to insure its movement over a plain surface. If desired however the bottom may be provided with ribs or runners, and I may employ rollers or wheels in connection therewith.

B denotes the propelling lever which answers in the instance shown, the purpose of an oar or pole, and which is arranged in the stern. The lower end or blade *b* is heavier than the handle *b'*, and is pointed to engage the surface over which the boat travels. At b^2 the lever is slotted and receives the outer end of a rocking lever *c* which is pivoted therein as shown. This lever *c* is pivoted at *c'* and its inner end is pivotally connected at c^2 to one end of an arm *d* which has its other end connected at *d'* to a crank *e* secured to a shaft *e'*. This shaft carries a pinion *f* which meshes with the great wheel *g* of the spring actuated mechanism G.

h is a train which carries a governor *i* by which the mechanism is controlled.

j is a shaft journaled in the sides of the boat which carries a plate or arm *k* which is moved into the path of the governor by an arm *j'* and the mechanism locked thereby. By turning the arm into the position shown in dotted lines the governor is released and the mechanism is allowed to run.

The operation is as follows: The spring actuated mechanism being first wound by a suitable key and set free, the crank is caused to revolve and carry therewith the arm *d* which in turn rocks the lever *c*. The lower end of the lever B being heavier than its upper end the lever has a constant tendency to assume a vertical position, and hence to abut against the surface over which the boat passes, and when the outer end of the lever *c* is at its highest point the lever B is only slightly inclined from the perpendicular. As this end of the lever *c* moves downward and rearward, the lever B is moved thereby and its point being in engagement with the surface of the floor or table is fixed and the constant change of angle of said lever causes a forward movement of the boat. In other words the lower

end of the lever B becomes the fulcrum, the power is represented by the combined action of the two levers and the boat is the weight. When the end of the lever *b* is at its lowest point the angle of the lever B is the greatest and a continuation of the operation causes the end of the lever *c* to move upward and forward which carries the lower end of lever B forward free of the surface, and this end thus has practically a reciprocating motion. At each rearward movement of the lever B the boat is propelled forward and its motion ceases during the forward movement of said lever.

In the stern of the boat is secured in any suitable manner a figure *l* of a man or boy which is operated by the handle of the oar during its movements in a manner to imitate the movements of a rower. The arm or arms *l'* of this figure are pivoted thereto at l^2 and is made in two parts and pivoted together at l^3. The hand is pivoted at l^4 to the upper end of the handle of the oar, and through this connection the arm is caused to bend and straighten respectively with the rearward and forward movements of the handle. In this manner the movements of the figure are rendered very lifelike and may be made still more natural by providing a rocking motion to the entire figure, and if desired to the head.

Various modifications may be made in the toy, and as already stated instead of a boat, any other object may be employed in connection with the invention, as for instance a wagon or other wheeled toy or a sled or toboggan.

I claim as my invention—

1. In a toy of the character set forth, the combination with a body, of a pivoted propelling lever located at the rear of said body and having a lower weighted end running to an engaging edge, and an upper portion movably attached to a figure located in said body, a second lever pivotally secured to said propelling lever, an arm having said second lever movably connected thereto, a shaft having a crank at one end to which the said arm is movably secured, and spring actuated mechanism for driving said shaft, said propelling lever having a slot in the weighted portion thereof into which the outer end of said second lever extends, and the body having a rear slot for the projection therethrough and operation therein of the second lever, substantially as described.

2. In a toy of the character set forth, the combination of a body having a slot at the rear end thereof, a lever normally arranged at a slight angle to a horizontal plane and pivotally mounted in the rear of said body and having a portion thereof projecting through said slot, mechanism for rocking said lever, and a propelling lever having a lower weighted end provided with an engaging edge and an upper lighter portion movably attached to a figure, said propelling lever being alternately operated to approach and recede from the rear end of said body, substantially as described.

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

JOHN H. TORNEY, JR.

Witnesses:
W. T. NORTON,
J. ROSS COLHOUN.