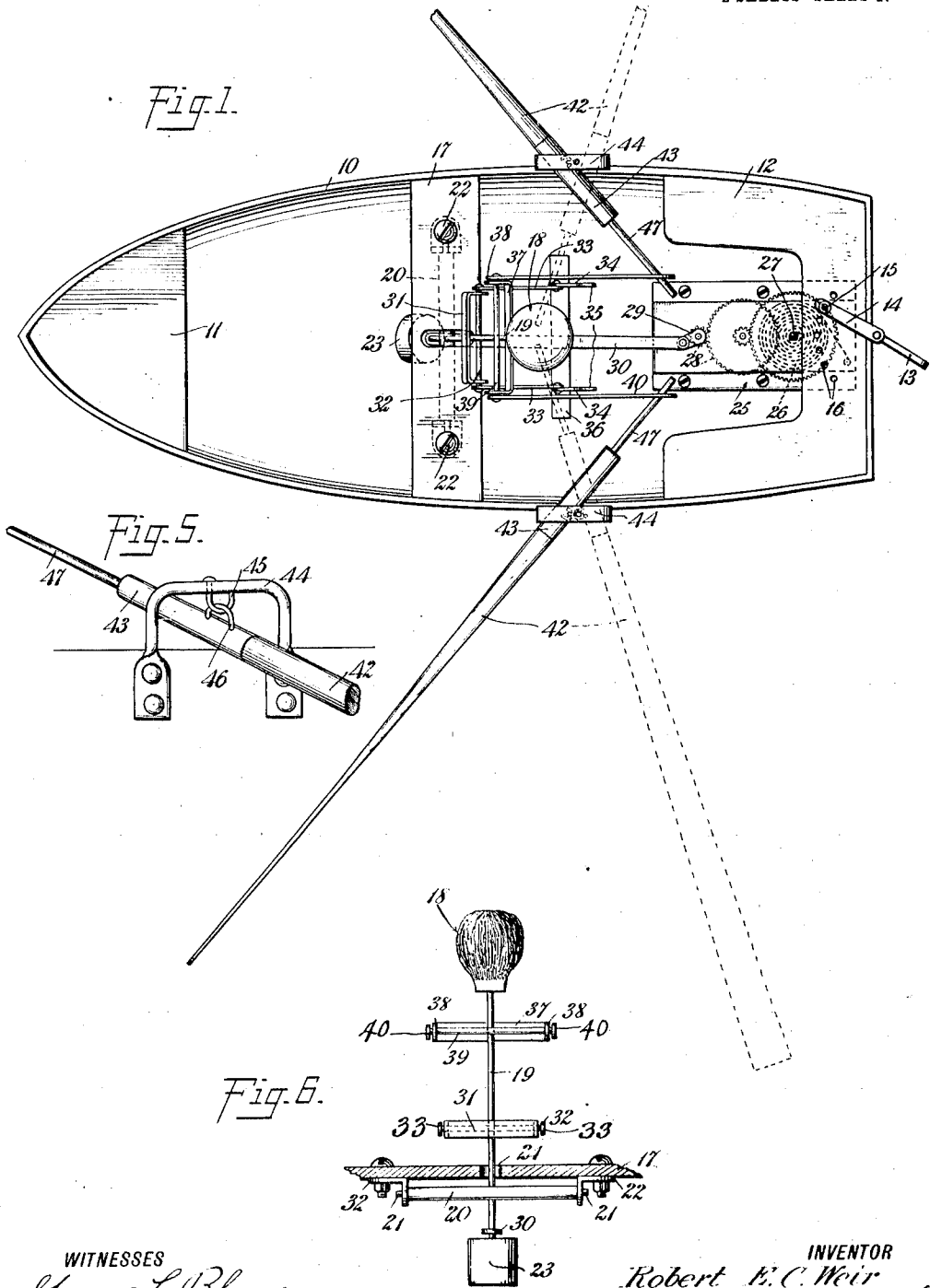


R. E. C. WEIR.  
 MECHANICAL ROWBOAT.  
 APPLICATION FILED NOV. 6, 1913.

1,112,954.

Patented Oct. 6, 1914.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2.

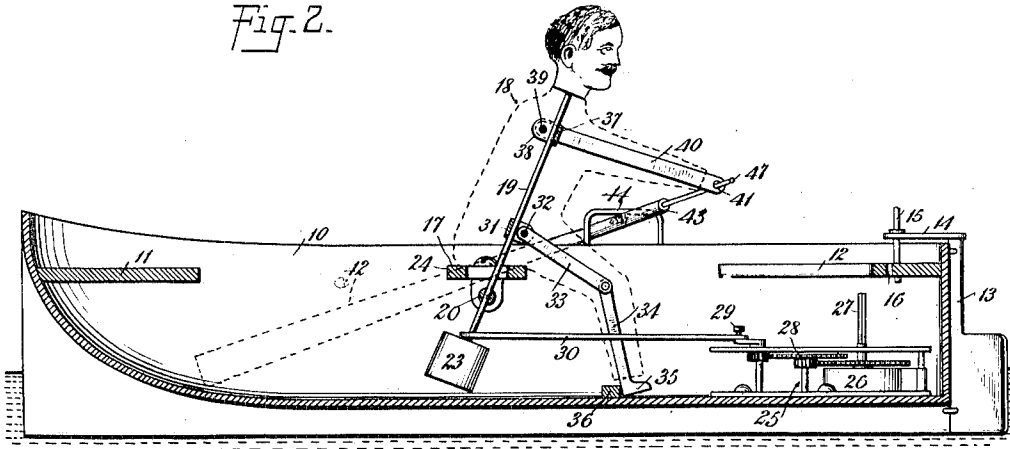


Fig. 3.

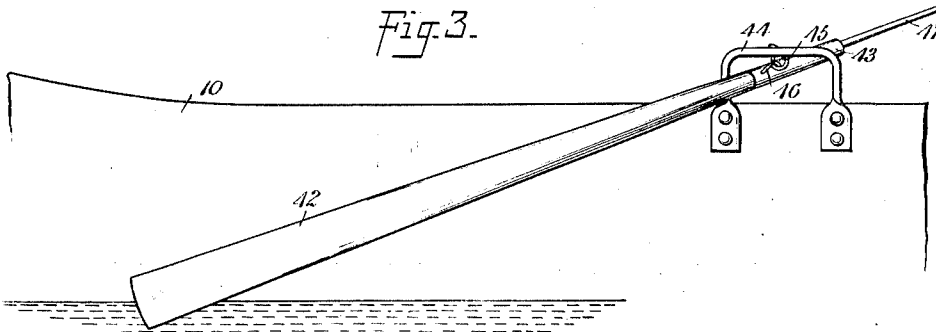
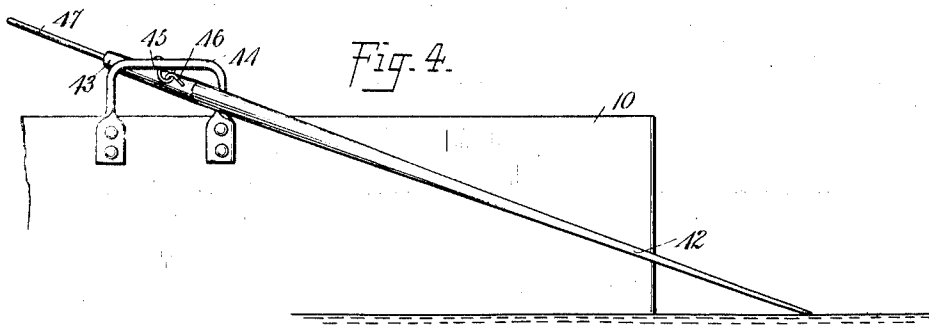


Fig. 4.



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# UNITED STATES PATENT OFFICE.

ROBERT E. C. WEIR, OF NEW YORK, N. Y.

MECHANICAL ROWBOAT.

1,112,954.

Specification of Letters Patent.

Patented Oct. 6, 1914.

Application filed November 6, 1913. Serial No. 799,458.

To all whom it may concern:

Be it known that I, ROBERT E. C. WEIR, a subject of the King of Great Britain, and a resident of the city of New York, South Ozone Park, Woodhaven, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Mechanical Rowboat, of which the following is a full, clear, and exact description.

This invention has special reference to improvements in toys and more particularly to an improved mechanical rowboat.

An object of the invention is the provision of an improved mechanical rowboat, in which a dummy, in the representation of a person, is pivotally supported and adapted to be oscillated by a novel connection with a spring or other motor, mounted in the hull near the stern, or otherwise, while the dummy consists of a novel arrangement of pivotally connected parts to permit a natural movement as in the act of rowing; there being oars attached to the arms of the dummy to cause the propulsion of the boat.

A further object of the invention is to provide in connection with a dummy as described, oars slidably connected to the arms of the dummy and supported in a novel manner so as to effect feathering action of the oars when the latter are operated, which in conjunction with a suitable motor are designed to cause the continuous propulsion of the boat for a considerable length of time.

A still further object of the invention is to provide a rudder with an arm adapted to be held in an adjusted angular position for causing the boat to take a desired course, so as to adapt the device to be used in a vessel of small area or for directing the boat from one particular place to another, in carrying out the interesting and enjoyable benefit to be derived therefrom.

With the above and other objects in view the invention resides more particularly in the peculiar combination and arrangement of parts, which will be illustrated as a preferred embodiment in the accompanying drawings, and described in the specification.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a mechanical rowboat constructed in accordance with the invention, the oars being shown in full lines at the beginning of the power stroke, or vice versa, in dotted lines; Fig. 2 is a vertical longitudinal sectional view through the boat, with certain of the parts in elevation; Fig. 3 is an enlarged side elevation of a fragmentary portion of the boat shown in Fig. 1, with the oar in the position indicated in solid lines in Fig. 1, except that the oars are shown after having entered the water; Fig. 4 is a similar view, but showing the oar at the opposite limit of its movement at the beginning of the return stroke; Fig. 5 is a fragmentary side elevation with the oar shown in its normal position, except that it is disposed in angular relation to the side of the boat; Fig. 6 is a vertical sectional view taken transversely of the dummy support, dummy being shown in elevation.

Referring to the drawings, numeral 10 indicates the hull of the boat, which may be provided with a seat 11 at the bow, and a seat 12 at the stern, both of said parts being disposed below the top edge of the hull as shown. A rudder 13 is suitably pivoted or hinged at the stern of the boat and has a forwardly projecting arm 14 adapted by means of a vertical slidable pin 15 carried thereby at its free end, to be engaged with either of a plurality of apertures 16 in the seat 12. These apertures are arranged concentrically relative to the pivot of the rudder, so as to be engaged by the pin whereby the rudder may be held in a predetermined angular position relative to the boat, either to the right or left, or directly rearwardly so as to cause the boat to be guided in a curved or straight path as shall be desired.

Mounted transversely of the hull 10 at point substantially midway of the length thereof is a seat or support 17 for a dummy 18 shown in the representation of a person, it being obvious that it may take various forms. This dummy consists of a pendant upright 19, pivoted at a point below its vertical center to a horizontal pivot member 20 supported at its reduced ends 21, in bearing brackets 22 removably bolted or otherwise secured to or through the seat 17. The pendant upright 19 carries at its lower end a counterbalancing weight 23, and also operates through a slot 24 through the seat 17, in a direction longitudinal with respect to the hull, so as to permit the pendent up-

right to oscillate longitudinally with respect to the hull.

To cause the oscillation of the pendent upright, the latter is connected to a motor mounted in the hull at the stern of the boat, such a motor being in the present instance shown as a spring motor 25, having an operating spring 26 designed to be wound by a key shaft 27 and having a suitable train of gears 28 mounted on shafts journaled in the casing of the motor; one of these shafts is provided with a crank disk or crank 29, which through the instrumentality of a connecting rod or pitman 30 is connected to the pendent upright, so that as the motor operates and the crank rotates the pendent upright will be oscillated and the dummy similarly shifted therewith. The dummy further consists of a transverse section or cross member 31 mounted on or secured to the pendent member projecting equally distant on either side of the pendent upright, and having rearwardly bent apertured ears at its ends, through which is engaged a pivot 32 for the pivotal attachment of jointed leg imitating members consisting of thigh sections or links 33 and sections or links 34 pivoted thereto. The feet portions 35 of which are designed to be normally disposed in the rear of a cross member or tread piece 36 to cause the parts 33 and 34 to execute a proper pivotal movement when the device is actuated so as to properly illustrate the movements of the lower limbs in the rowing action.

Fixed to the pendent upright at a space distanced above the cross member 31 is a shoulder forming cross member 37, having at its ends forwardly projecting apertured ears 38, through which a transverse pivot 39 is journaled, while fixed to the extremities of said pivot are arms 40, having apertures 41 near their free ends as shown. The oars are indicated by the numeral 42 and are preferably of wood, or similar light material, except at the points where they are mounted near the inner end, where they are provided with weighted metallic portions 43 serving as counterbalancing weights tending to normally raise the bladed ends of the oars and adapted to cause them to travel more lightly over and through the water, during the feathering action, to be subsequently explained. The oars are supported for feathering movement during their oscillation with the dummy by means of inverted U-shaped supports or oar locks 44, which are provided at central points with depending loops 45 disposed in interlocking engagement with loops 46 attached to the weighted portions of the oars or near the outer ends of such weighted portions, so as to allow free up and down movement of the oars during their actuation, as well as to permit them to be swung or turned for-

wardly or rearwardly with respect to the depending loop to cause them to feather during their oscillation.

The oars 42 are provided at their inner ends with reduced portions or extensions 47, which slidably engage the apertures 41 and the arms 40, so that during the forward and backward movement of the arms as the body is oscillated, the oars will be similarly operated, the arms traveling or sliding upward and forward on the reduced portions or extensions of the oars in a substantially oval path to propel the boat, and during this operation the weighted portions 43 of the oars will cause the arms to swing downwardly ahead of the figure on the return stroke. When the figure commences the power stroke and the body is oscillated rearwardly the arms are raised with the body due to the circular motion of the latter on the pivot 20, and the arms will also be raised slightly by centrifugal motion due to the quick rearward thrust or motion of the body by the motor on the pivot 39, such motion being transmitted to the oars through the arms as the latter travel in a substantially oval or circular path and the oars enter and are drawn through the water, while the operation of the oars in the water will serve as governors to regulate the unwinding of the operating mechanism, so that the period of operation of the latter is somewhat lengthened. In the position of the device shown in Fig. 2 the oars will take the position shown in Fig. 3 and the solid line position shown in Fig. 1, the dummy being poised forwardly against the action of the counterbalancing weight 23, and the oars being shifted on their pendant supports or loops, so that the faces of the oars or the blade portions thereof will be presented against the water and caused to exert a propelling action. During the continued movements of the dummy with the mechanism, toward the bow of the boat, while still on the power stroke, the oars will retain their position such as described and gradually move to the position shown in Fig. 4 and the dotted line positioned in Fig. 1, passing through the intermediate or normal position shown in Fig. 5, thereby bringing the oars out of the water with the blade portions face upward, so that during the continued oscillation of the dummy with the arms freely sliding on the reduced portions or extensions of the oars, the latter will be shifted on their operative or return strokes barely touching the water in a feathering action, so as to offer no resistance to the advancement of the boat.

From the foregoing description in connection with the accompanying drawings, it will be apparent that the mechanical row-boat constructed in accordance with the invention will be strong and durable and not

likely to get out of working order, but more than this the propelling mechanism is so adjusted and regulated that the boat will be propelled to the maximum of efficiency with a uniform speed, the power or strength of the motor, in the present instance illustrated as a spring motor, will be conserved so that the boat will operate for a considerable length of time.

10 Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A mechanical rowboat embodying the combination of a hull and a motor therein; 15 of a dummy arranged in the hull and embodying a pendent upright pivoted in the hull, a counterbalancing weight at the lower end of the upright, legs pivoted to the upright, arms also pivoted to the upright, and 20 oars carried at the side of the hull and connected to the arms.

2. A mechanical rowboat embodying the combination of the hull and a motor therein, 25 of a dummy arranged in the hull and embodying a pendent upright pivoted in the hull, a counterbalancing weight at the lower end of the upright, legs pivoted to the upright, arms also pivoted to the upright, oars carried at the side of the hull and connected to the arms, said oars having reduced 30 portions slidably engaged with the arms and pendent supports for the oars carried by the sides of the hull.

3. The combination with the hull of a boat 35 and a seat arranged transversely of the same and provided with a slot extending longitudinally of the hull, of a transverse pivot supported beneath the seat, a pendent upright fixed to the pivot below the seat and 40 extending through the slot, a motor having a crank, a connection between the crank and upright, a cross member attached to the upright, arms pivoted thereto and having apertured end portions, inverted U-shaped 45 brackets attached to the sides of the hull, oars having weighted portions near their inner ends and reduced inner extensions slidably engaged in the apertures of the arms, said weighted portions serving to counter- 50 balance the weight of the blade portions of the oars, and interlocking loops carried by the supports and weighted portions of the oars to cause the oars to feather during their oscillation with the upright.

55 4. The combination with the hull of a boat and a seat arranged transversely of

the same and provided with a slot extending longitudinally of the hull, of a transverse pivot supported beneath the seat, a pendent upright fixed to the pivot 60 below its vertical center, a motor having a crank, a connection between the crank and upright, a cross member attached to the upright, arms pivoted thereto and having apertured end portions, inverted U- 65 shaped brackets attached to the sides of the hull, oars having weighted portions near their inner ends and reduced inner extensions slidably engaging the apertures of the arms, said weighted portions serving to 70 counterbalance the weight of the blade portions of the oars, interlocking loops carried by the supports and weighted portions of the oars to cause the same to feather during their oscillation with the upright a counter- 75 balancing weight at the lower end of the upright, a second cross member fixed to the upright, hinged leg sections pivoted to the last mentioned cross member and a foot piece for engagement with the foot portions of 80 said leg sections.

5. The combination with a hull and oar supports fixed to the sides of the hull, said supports including depending loops, of oars 85 having loops in interlocking engagement with the first mentioned loops to adapt the oars for movement in a substantially oval path to cause them to feather when oscillated and motor operative mechanism 90 mounted in the hull for oscillating the oars.

6. The combination with a hull and oar supports fixed to the sides of the hull, said supports including a depending loop, of 95 oars having loops in interlocking engagement with the first mentioned loops to adapt the oars for movement in a substantially oval path to cause them to feather when oscillated, motor operative mechanism mounted in the hull for oscillating the oars, said 100 means embodying the representation of a person with pivoted arms movably connected with the inner ends of the oars and counterbalancing means at the inner ends of the oars acting to elevate the blade portions thereof on the return stroke. 105

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT E. C. WEIR.

Witnesses:

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PHILIP D. ROLLHAUS.