V. B. TOWNSEND.

Floating Velocipede.

No. 94,362. Patented Aug. 31, 1869.

Fig 3.

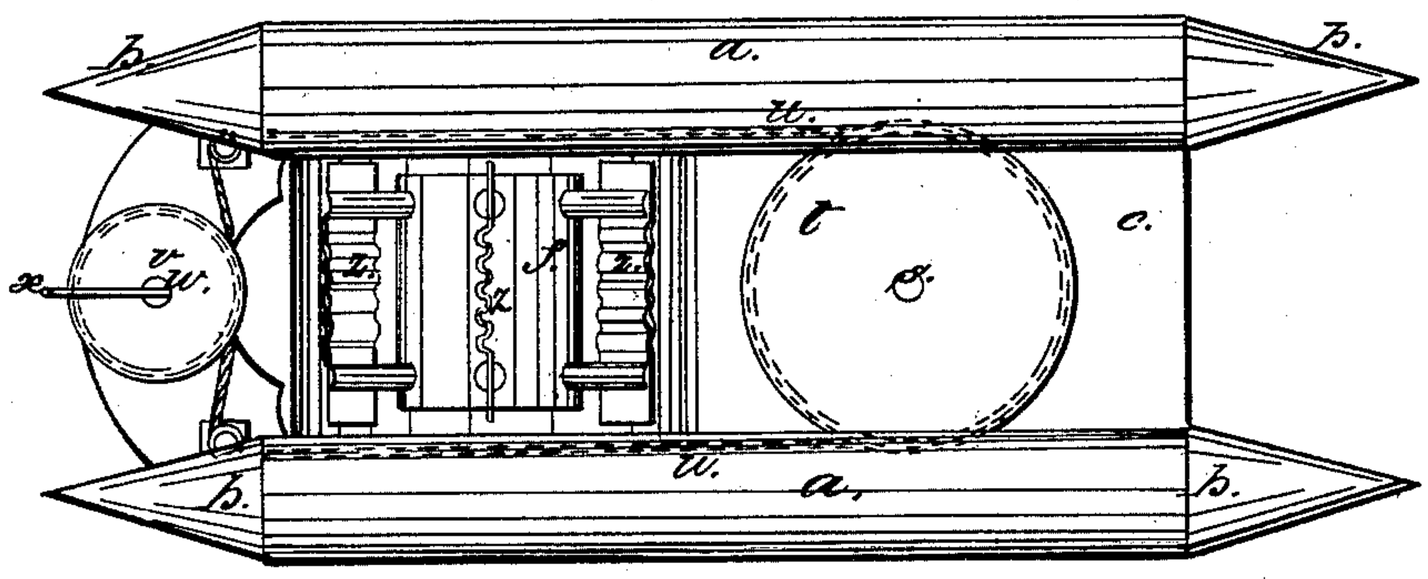


Fig: 2.

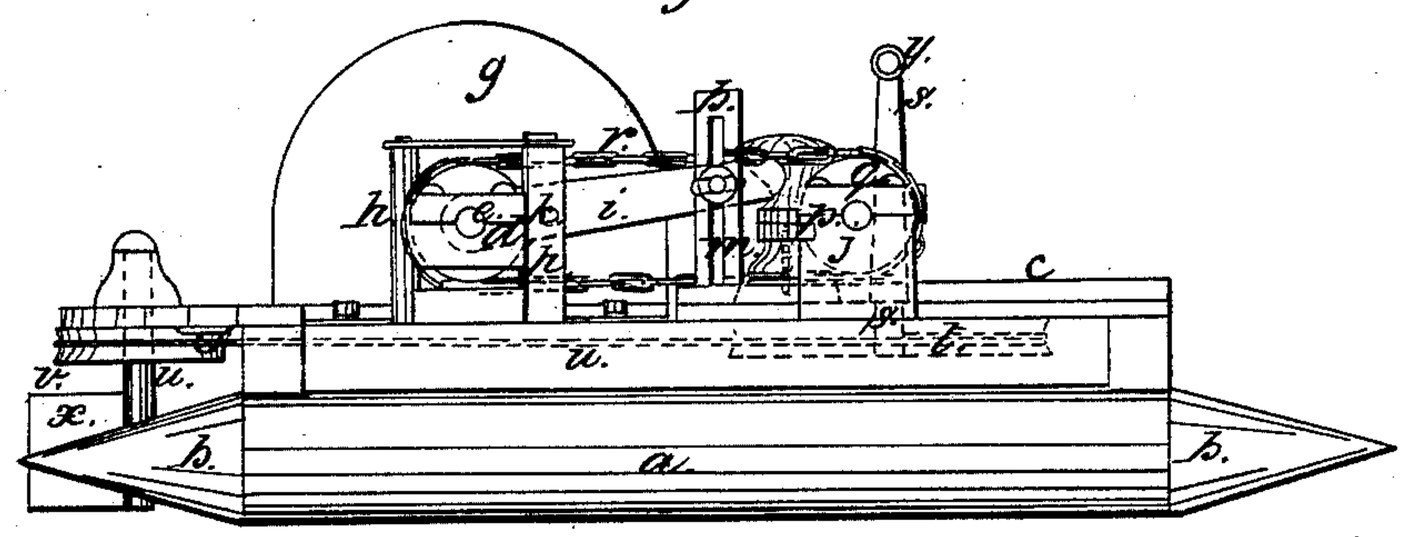
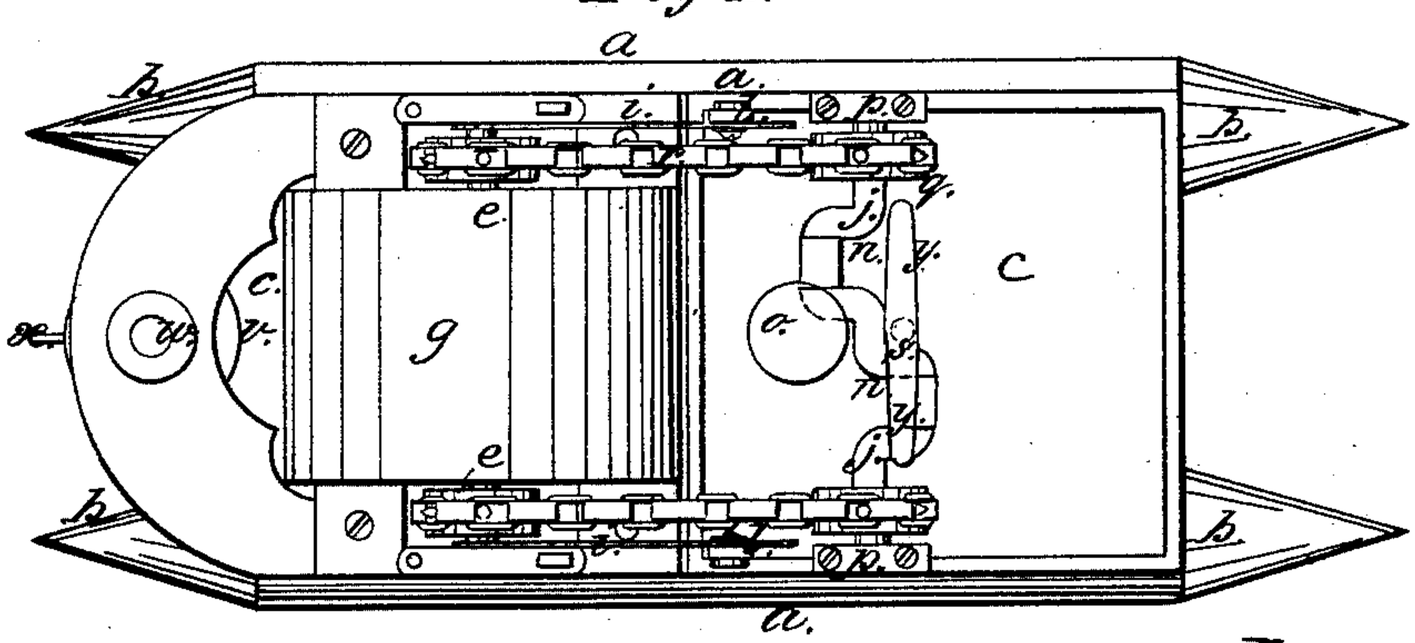


Fig: 1.



Witnesses:
M. W. Frothingham
C. Warren Brown.

Inventor.
V. B. Townsend
by his Atty
Crosby Halstead & Gould

United States Patent Office.

V. B. TOWNSEND, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 94,362, *dated August* 31, 1869.

IMPROVEMENT IN FLOATING VELOCIPEDES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, V. B. TOWNSEND, of Worcester, in the county of Worcester, and State of Massachusetts, have invented an Improvement in Propelling Paddle-Wheel Boats; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

The invention relates to mechanism for propelling boats by muscular exertion; the invention consisting primarily, in combining, with a paddle-wheel boat, or with a deck supported upon long pointed hollow cylinders, a paddle-wheel, the floats of which extend from one cylinder to the other, or across the boat, such paddle-wheel being connected to and driven by a foot-actuated crank-shaft, forward of which is a post or tiller, which is connected to, and by being turned, actuates the rudder.

The drawings represent a boat embodying my improvement.

A shows the boat in plan.

B is a side elevation, and

C is a bottom view of it.

a a denote two long, hollow, water-tight cylinders, preferably made of sheet-iron, and each terminating at its opposite ends in conical or wedge-shaped points, *b*.

Upon the tops of these two cylinders rests a deck or platform *c*, upon the opposite sides of which are bearings, *d*, for supporting the axis *e* of a paddle-wheel, *f*, which extends across and through the deck, and is covered by a wheel-house, *g*.

Each box or bearing, *d*, slides vertically between guides, *h*, and the axle is hung upon two levers, *i*, each turning on a fulcrum, *k*, projecting from the adjacent guide *h*, the opposite ends of each lever being bolted to an upright, *l*, in which is a slot, *m*, by means of which the two levers may be fixed in position.

By means of the two levers, the paddle-wheel may be raised or lowered, so as to dip more or less into the water.

j denotes a cranked shaft, having two pedal-cranks, *n n*, for the alternate action of the feet of the operator of the boat, who sits upon a stool, *o*, placed between the shaft *j* and the wheel-house.

The ends of this shaft are journalled in stationary bearings, *p*, and near one end of the shaft is a sprocket-wheel or pulley, *q*, the teeth of which mesh into and actuate a chain, *r*, by which the shaft *j* is connected to the paddle-wheel shaft.

Just forward of the crank-shaft *j* is a tiller-post, *s*, which, extending through, and having a bearing in the deck, has at its foot a grooved pulley, *t*, connected by a chain or band, *u*, to a grooved pulley-wheel, *v*, fixed upon the rudder-post *w*, which extends up through the deck, and carries at its foot the rudder *x*.

At the top of the tiller-post are handles, *y*, and the person sitting upon the stool *o*, and actuating the crank-shaft with his feet, grasps with his hands the two handles *y*, and thus readily steers the boat as he propels it by his feet, the rotation of the crank communicating movement to the paddle-wheel shaft, and the rotation of the paddle-wheel effecting the movement of the boat, as will be readily understood.

Each blade of the paddle-wheel is preferably composed of a plate, *z*, of corrugated metal, fastened to the ends of spokes projecting from a hub or cylinder as seen at C.

By this construction it will be obvious that the boat may be easily driven forward by muscular human power, the dip of the paddle-blades being regulated in accordance with the weight upon the boat or the speed or ease with which it may be desirable to propel the boat.

Instead of placing the paddle-wheel midships, it may be at the stern, but I prefer the arrangement shown.

I claim, in combination with a boat or deck, supported upon long, hollow, water-tight cylinders, the paddle-wheel extending across the boat or through the deck, from cylinder to cylinder, or approximately thereto, such paddle-wheel being connected to and driven by a cranked shaft, placed forward of the wheel-house, and having pedal-cranks actuated as described, and the rudder being connected to a tiller placed forward of the cranked axle, and so that its handles are in position to be grasped by the person who drives the axle-cranks with his feet, the combination and arrangement of the mechanism being substantially as shown and described.

Also, in combination with the foregoing, the paddle-wheel shaft, made adjustable as to height, substantially as described.

V. B. TOWNSEND.

Witnesses:

V. P. TOWNSEND,

SAMPSON AUSTIN.