

1,307,260.

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Fig. 2.

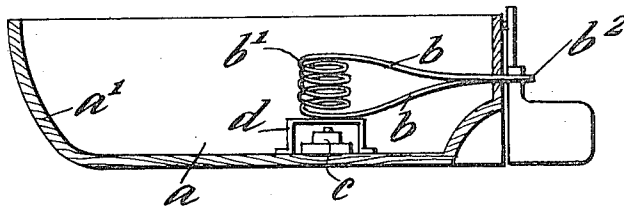
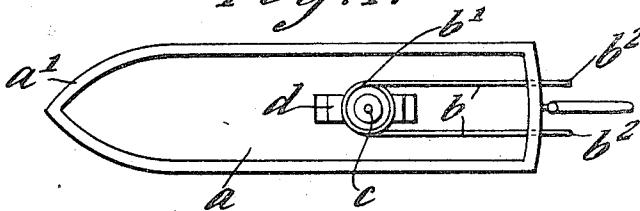


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

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TOY BOAT.

1,307,260.

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Application filed February 4, 1919. Serial No. 274,848.

To all whom it may concern:

Be it known that I, FREDERICK ADOLPHUS LAPPIN, a subject of the King of Great Britain, residing in Middlesborough, England, have invented certain new and useful Improvements in Toy Boats, of which the following is a specification.

My invention relates to improvements in self-propelling toy-boats of the kind in which the propelling device consists of (a) tubing arranged longitudinally of the boat with ends projecting beyond the stern so as to be below the surface of the water in which the boat is floated, and (b) means located below the inner portion of the tubing for heating its contents.

In known toy boats of the above kind the tubing constituting the propelling device comprises two or more separate tubes, the inner ends of which pass into a chamber or vessel appropriately supported within the hull of the boat and a suitable burner or lamp is arranged in the said chamber. In a toy boat according to my invention the propelling device is constituted by one or more pieces or lengths of tubing, each piece being bent intermediate of its ends so as to be substantially of U shape in plan, the two limbs thus formed being disposed longitudinally of the boat with the ends projecting through the stern of the boat, and the heating appliance being disposed below the portion of the piece of the tubing intermediate of its two limbs. These two limbs may be connected by either a simple bend or may be connected together by means of a coiled portion of one or more convolutions.

I will describe my invention with reference to the accompanying drawing in which Figure 1 is a plan of a small or toy boat with the invention applied and Fig. 2 is a longitudinal section.

The hull *a* of the boat, which may be of any appropriate design and size and formed of any suitable material, is fitted with a piece of metallic tubing *b*, or the like, formed and arranged as hereinafter described, and with means or a device *c* for applying heat to a portion of the tubing.

The tubing *b*, whose size is dependent in some measure on the size of the hull, may be of any well known kind having an uninterrupted bore of substantially constant diameter throughout, and is formed or bent into a U shape or into a form resembling that of an ordinary hair pin. Instead of

the portion of tubing between the two straight branches of the U shape piece of tubing consisting of a simple bend, it may, as indicated in the drawing, comprise a coiled portion *b'* which is preferably integrally formed and comprises one or more convolutions, the coil *b'* being vertically disposed and the branches *b* communicating with the upper and lower ends thereof, respectively.

The U-shaped tubing is disposed with its straight branches or limbs in positions lying fore and aft of the hull, the bent or coiled portion being nearer the bow *a'* of the boat.

Each of the two branches of the tubing is of such a length that its free end *b²* projects a short distance astern of the boat. These two tube ends are preferably disposed slightly above the bottom of the coil *b'*, and are so arranged that when the boat is afloat on water they are in close proximity to and below the surface thereof.

In the hull, in proximity to the bent or coiled portion of the tube, a suitable heating device or means is installed. Such means may consist, for example, in a small lamp, a candle, or other convenient heating appliance. In the drawing a small lamp *c* is shown as constituting the heating appliance and disposed beneath a support *d* for the coil *b'*, which support is suitably fixed to the bottom of the hull *a*.

When the boat thus equipped is placed in water and the heating appliance lighted, the resultant projection from one or other or both tube ends of steam, water or air or two or all of these fluid agents, will almost immediately cause it to glide through the water.

For boats of a large size or for purposes of speed a plurality of pieces of tubing with or without coils at the junctions of the limbs may be employed if desired. If necessary more than one heating appliance may be employed.

Having thus described the nature of the said invention and the best means I know of carrying the same into practical effect, I claim:—

1. In a toy boat, propelling means comprising a single length of tube having an uninterrupted bore therethrough from end to end, said tube having two terminal portions or limbs extending longitudinally of the boat and an intermediate bent portion integral with the limbs and bent to form a

coil, the ends of both of said limbs being open and projecting through the stern of the boat below the surface of the water, and means for applying heat to the said coil.

- 5 2. In a toy boat, propelling means comprising a single length of tube of substantially constant diameter throughout having an uninterrupted bore therethrough from end to end, said tube having two terminal
10 portions or limbs extending longitudinally

of the boat and an intermediate bent portion integral with the limbs, the ends of both of said limbs being open and projecting through the stern of the boat below the surface of the water, and means for applying heat to the said bent portion. 15

In testimony whereof I have signed my name to this specification.

FREDERICK ADOLPHUS LAPPIN.