July 21, 1953 A. DE SALVO 2,645,883

SELF-PROPELLED FLOATING TOY

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Fig. 1.

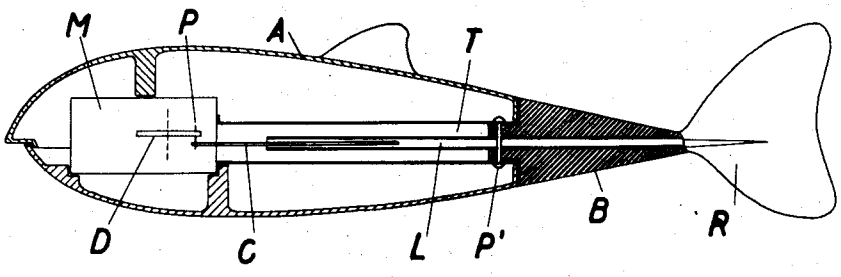
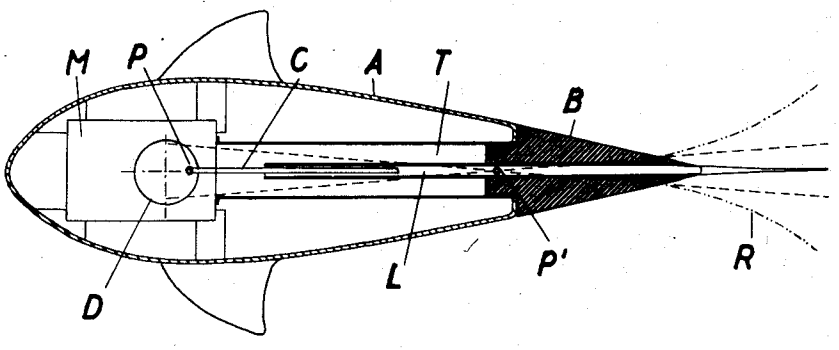


Fig. 2.



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SELF-PROPELLED FLOATING TOY

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2 Claims. (Cl. 46—92)

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This invention relates to self-propelled floating toys, shaped to resemble swimming objects such as fish, animals, small boats, or the like, and aims to provide an improved propelling means which is very easy to drive by means of a spring motor or even, in larger toys, by a small battery-fed electric motor.

The invention is based on the observation of the manner in which a number of fishes proceed by swimming, their propulsion being mainly obtained by rocking their tail. It is also known that light boats may be slightly propelled by rocking their rudder.

The main object of the invention is to manufacture a floating toy adapted to be propelled by a small motor fitted inside of the toy and which, through suitable mechanical means, drives to and fro a rudder-like tail.

A further object of the invention is to provide a very simple and reliable construction permitting to obtain a self-propelled floating toy shaped like a fish and driven by a small spring motor.

Further objects and advantages will appear from the following specification, reference being had to the accompanying drawing in which:

Figure 1 is a diagrammatical vertical section and

Figure 2 is a horizontal section through a fish-like self-propelled swimming toy constituting an embodiment of the invention.

In one of the many possible embodiments as shown, the toy comprises a floating body A which may be made of hollow-watertight rigid material to which a tail portion B is attached so as to permit of its swinging on both sides, as shown by dotted lines in Figure 2. The tail portion B is preferably made of elastic material such as rubber and is hinged to a vertical pin P' fitted near the end of a tubular member T fitted inside of the body A and attached to a spring motor M. This motor drives a crank disk D to the eccentric pin P of which a connecting rod C is hinged.

In the embodiment as shown this connecting rod is in the form of a straight wire slidably fitted within a tubular lever L fulcrumed at the hinge pin P' of the tail and extending into this latter. To the end of this tube a rudder or fish-tail R, preferably made of flexible sheet material, is attached. The flexible tail section B besides carrying the tail proper R acts as a stopper tightly closing the hollow body part A and tubular space T. The flexible tail section B is formed by a compact elastic body as shown.

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In the operation of the toy, when the disk D is rotated by the spring motor, the crankshaft C is reciprocated, which causes the tubular lever L and tail B—R to rock back and forth as shown by dotted lines in Figure 2. This rocking movement of the tail R forces water in a rearward direction and thus promotes a forward motion of the toy which resembles a swimming fish or the like.

Having thus described my invention, I claim:

1. A toy shaped like a swimming object such as a fish, comprising a hollow body closed at its front end and formed at its rear end with an opening, a tube fitted in the opening in the rear end of the hollow body, said tube extending forwardly toward the front closed end of the body, power means enclosed in the forward end of the hollow body including a casing and a crank, the forward end of the tube abutting against the casing to provide a seal, a solid resilient rear end body section formed with a reduced forward end providing a surrounding shoulder, the reduced end of the solid resilient rear body section fitting snugly in the rear open end of the tube and the shoulder abutting against the rear end of the hollow body to form a seal, a vertically disposed fin-like resilient tail formed at the free end of the solid resilient rear end body section, a rod extending through and secured in the solid resilient rear end body section, said rod projecting into the tube, the forward end of the rod being hollow, a connecting rod pivoted to the crank of the power means and loosely reciprocably mounted in the open hollow end of the rod extending from the solid resilient rear end body section, and a vertically disposed pivot pin extending through the rear end of the tube and the rod and the reduced end of the solid resilient rear end body section, whereby when the power means is operated the connecting rod will oscillate the solid resilient rear body section and the vertically disposed resilient tail on the pivot pin and propel the toy forwardly.

2. A toy shaped like a swimming object such as a fish, comprising a hollow body, a tapered solid resilient plug fitted in the rear end of the hollow body and projecting outwardly therefrom, means for securing the plug to the hollow body, a thin flat vertically disposed resilient member extending from and formed with the resilient plug to represent the tail of a fish, a rod extending forwardly from the plug, the forward

end of the rod being hollow, a tube extending from the solid resilient plug into the hollow body, said tube being larger in diameter than the diameter of the rod to permit oscillation of the rod, a pivot pin connecting the plug, the rod and the tube, and means in the hollow body engaging the hollow end of the rod to oscillate the plug and the resilient member on the pivot pin to propel the toy.

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