E. BERLINER.

FLYING TORPEDO.

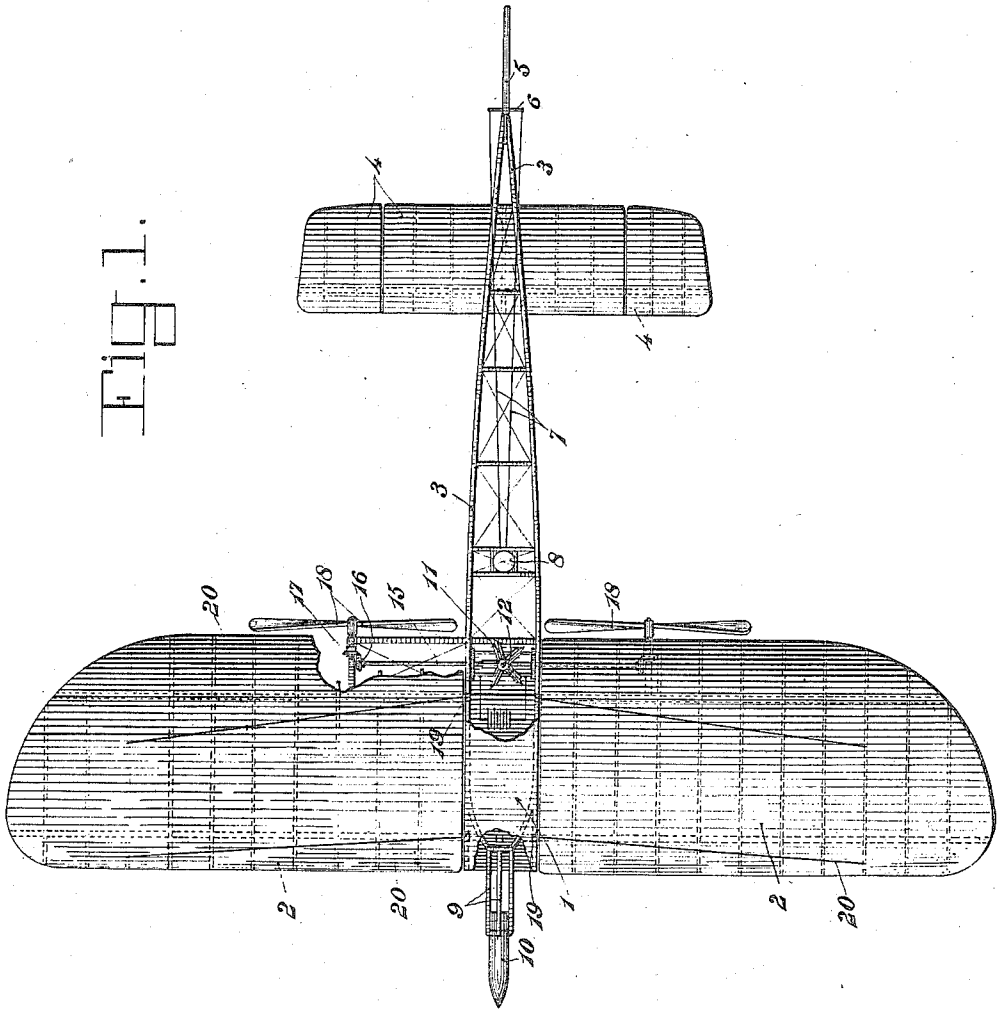
APPLICATION FILED SEPT. 30, 1909.

1,228,522.

Patented June 5, 1917.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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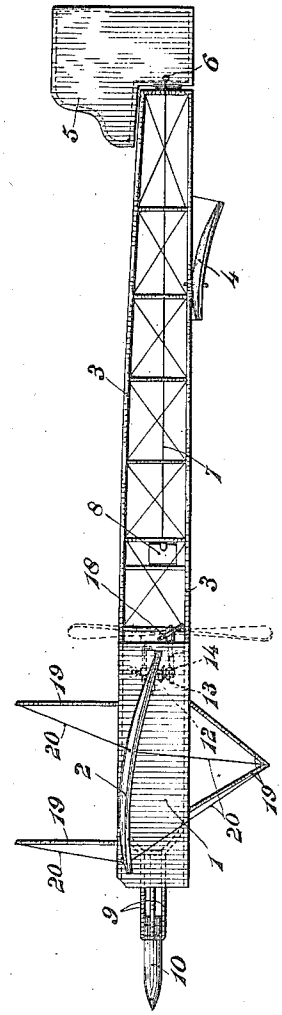
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

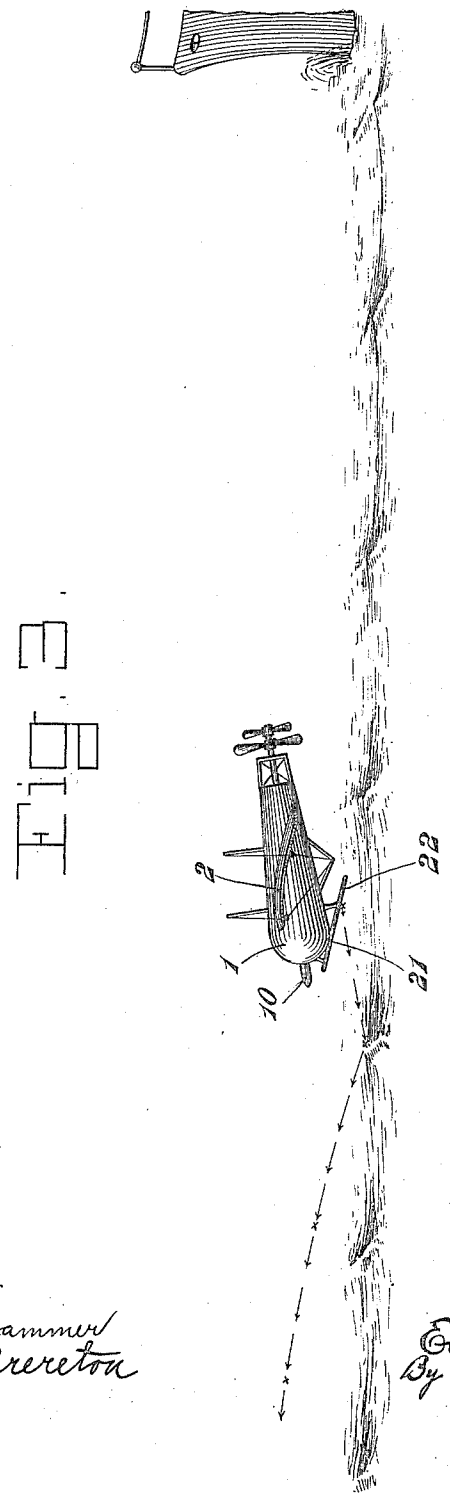


Fig. 3.

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UNITED STATES PATENT OFFICE.

EMILE BERLINER, OF WASHINGTON, DISTRICT OF COLUMBIA.

FLYING TORPEDO.

1,228,522. Specification of Letters Patent. Patented June 5, 1917.

Application filed September 30, 1909. Serial No. 520,293.

To all whom it may concern:

Be it known that I, EMILE BERLINER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Flying Torpedoes, of which the following is a description, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon.

The invention relates to new and useful improvements in flying torpedoes.

An object of the invention is to provide a flying torpedo which may be driven through the air, and which is provided with mechanism for maintaining the same in the air so long as it is in motion.

A further object of the invention is to provide a flying torpedo of the above character with self propelling means.

A further object of the invention is to provide a flying torpedo of the above character with guiding means, so that said torpedo may be directed through the air and against the upper part of a ship or the like, if desired.

These and other objects of the invention, will in part be obvious, and will in part be hereinafter more fully described.

In the drawings which show by way of illustration one embodiment of the invention;

Figure 1 is a top plan view of my improved flying torpedo.

Fig. 2 is a side view of the same; and

Fig. 3 is a side view of a modification.

The flying torpedo consists as herein shown, of a body portion 1, from which projects lateral planes 2, 2. These planes are of the usual construction found in aeroplanes, and while I have shown in the drawings only one plane on each side of the body portion 1 of my device, it will be obvious that any desired number of planes may be used, or other means provided, which will maintain the body portion of the flying torpedo in the air, when the same is under motion.

The body portion 1 is provided with a rearwardly extending skeleton frame 3, and near the rear end of said frame is a horizontal plane 4, which extends laterally each side of a central line passing through the aeroplane. Said horizontal plane 4 is provided with the usual hinged tips which may be thrown up or down in order to maintain the equilibrium of the aeroplane.

At the rear end of the skeleton frame 3 is a rudder 5, which is secured thereto in any desired way. Said rudder 5 as herein shown, has laterally projecting arms 6, to which may be attached wires or cords 7, extending to any suitable steering apparatus 8. The steering apparatus may be manually set before the torpedo is launched, so as to guide the same in any desired direction, or it may be automatically controlled during flight in any of the well known ways used in connection with submerged torpedoes, or it may be operated by a conductor trailing behind or by wireless telegraphy.

Within the forward end of the body portion 1, I have provided as herein shown, forwardly projecting spring arms 9, within which is adapted to be placed the torpedo 10 having its nose or capped end projecting forwardly so that if the aeroplane be propelled against an object, the torpedo would be exploded.

As a means for propelling the flying torpedo, I have provided a motor 11, which as herein shown, is of the rotary explosive engine type, such as shown in my Patent #928,842, granted March 31st, 1909. Said motor is mounted so that the cylinders rotate about a vertical axis and serves through its gyroscopic action, to keep the aerial torpedo level.

The vertical shaft of the motor carries a crown gear 13, meshing with a similar gear 14 on a cross shaft 15. The cross shaft 15, carries at each end a crown gear 16, meshing with a similar crown gear 17. The crown gears 17 are each carried by a short shaft mounted in bearings supported by laterally projecting brackets on the main frame of the flying torpedo frame, and each shaft carries propelling blades 18. The motor will be operated in the usual manner and through the shaft and gear connection will in turn operate the propelling blades to propel the flying torpedo through the air.

The laterally projecting planes 2, 2, and the auxiliary horizontal plane 4 will maintain the torpedo in the air and said torpedo may be directed or guided by means of the rudder through the steering mechanism.

As a means for strengthening the laterally projecting planes 2, I have provided the main support or body portion 1, with

posts 19 from which run suitable stay ropes or wires 20, which are secured to the planes near their outer ends.

While I have shown and described a specific construction for supporting, propelling and guiding a torpedo, it will be understood that I do not wish to be limited to the details of construction herein shown, and that said details may be varied in many ways without departing from the spirit of my invention.

The essential features of the invention, consist in the means for maintaining the flying torpedo in the air, while it is in motion, together with some means for propelling the torpedo and guiding the same so that said flying torpedo may be maintained in the air any desired length of time and guided in any desired direction. In this sense the flying torpedo is self controlled.

In Fig. 3 is shown a form of flying torpedo adapted for use on the water, the body portion 1, being rounded at the end, as shown at 21, to cause it to have a skipping motion when it strikes the water. It may be desirable also to add a special plane or planes, as 22, to assist in this skipping movement.

This provision for skipping movement is advantageous because it makes the device more difficult to be hit by rapid fire guns from the ship being attacked.

Having thus particularly described my invention, what I claim as new and desire to secure by Letters Patent is:—

A self controlled flying torpedo including in combination, a body portion, laterally projecting planes, a torpedo proper mounted on said body portion and projecting in front of said planes, and means for propelling said body portion, said body portion having an inclined water plane or planes to cause skipping on the surface of the water at frequent and regular intervals.

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

EMILE BERLINER.

Witnesses:
MARGARETE BLEIFELD,
HENRY BERLINER.