

J. A. FLINT.
TORPEDO.
APPLICATION FILED OCT. 16, 1920.

1,389,190.

Patented Aug. 30, 1921.

2 SHEETS—SHEET 1.

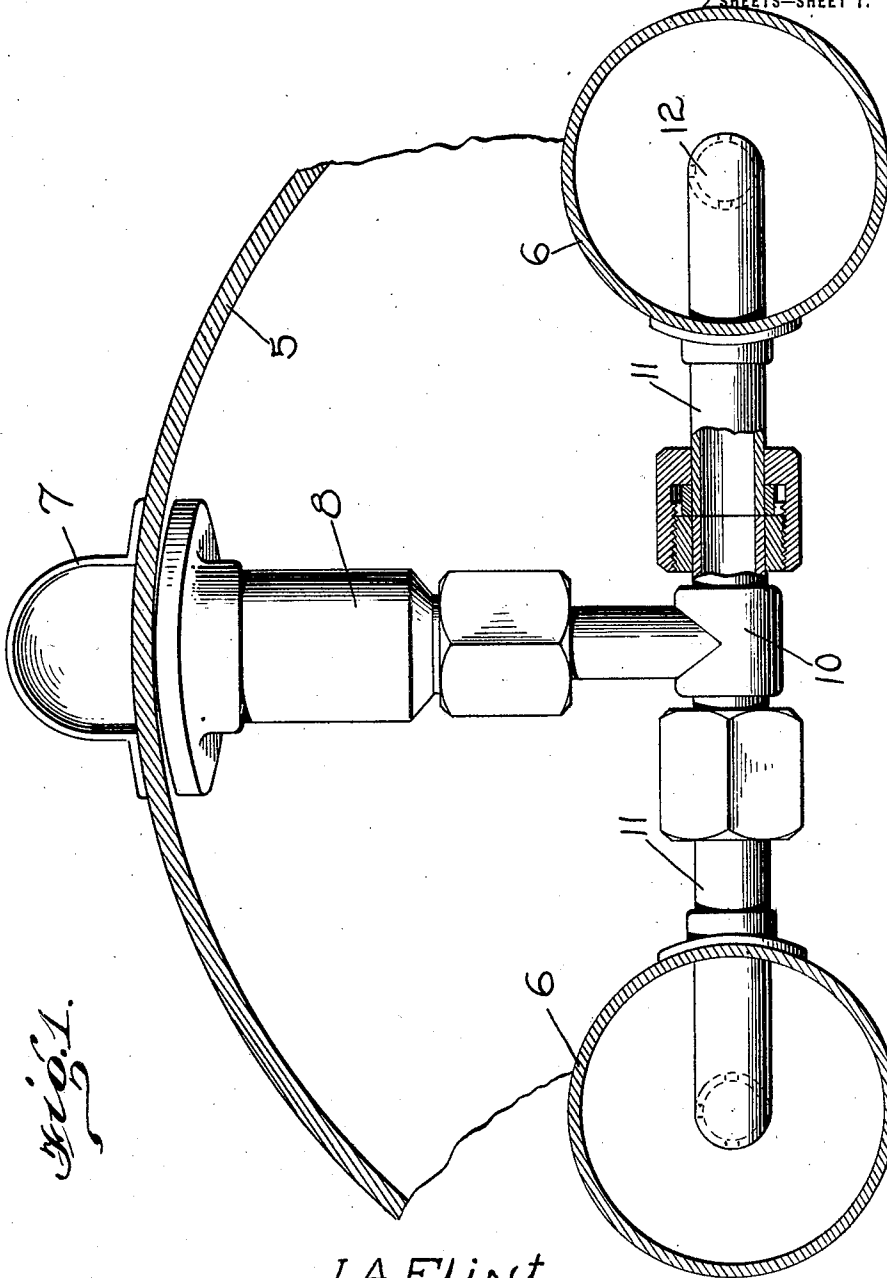


Fig. 1.

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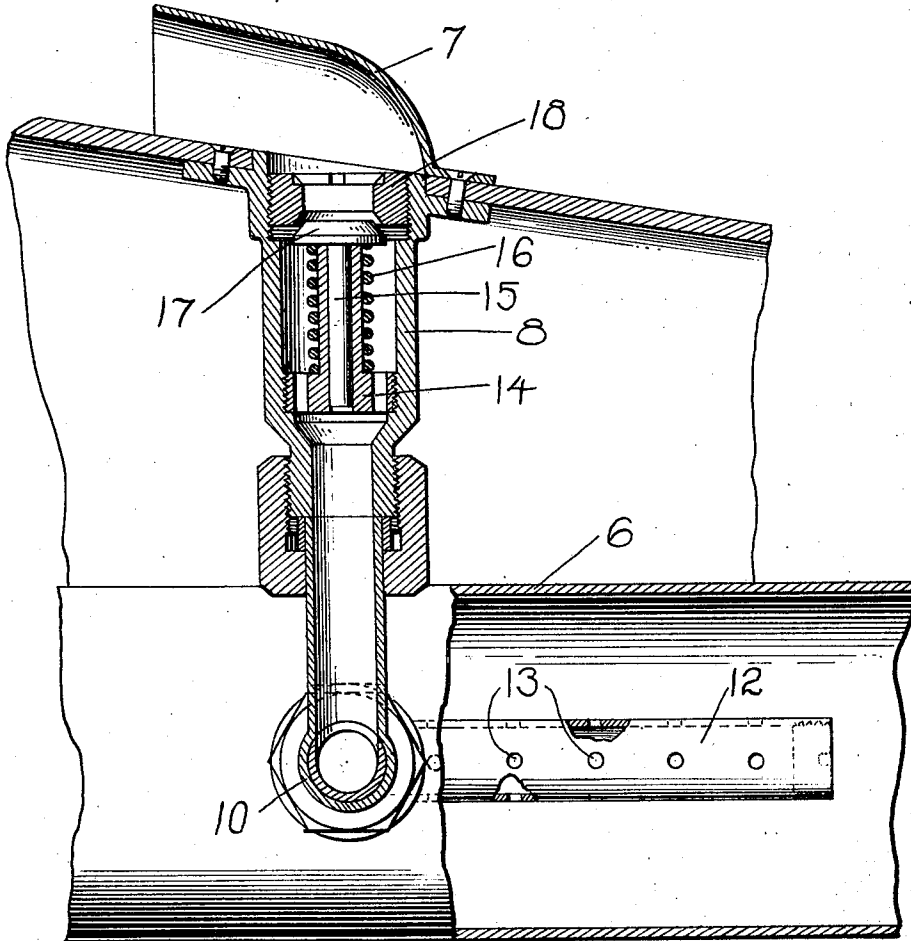
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2 SHEETS—SHEET 2.

Fig. 2.



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JAMES A. FLINT, OF DENVER, COLORADO, ASSIGNOR TO THE GOVERNMENT OF THE UNITED STATES.

TORPEDO.

1,389,190.

Specification of Letters Patent.

Patented Aug. 30, 1921.

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To all whom it may concern:

Be it known that I, JAMES A. FLINT, a citizen of the United States, residing at Denver, Colorado, have invented new and useful Improvements in Torpedoes, of which the following is a specification.

This invention relates to improvements in torpedoes and more particularly to improvements in that type of automobile torpedo now in general use by the Navy.

One of the objects of the present invention is to provide an improved torpedo of the above general character in which the wake produced by such torpedo when under way would be materially reduced.

A further object is to provide a simple and practical mechanism applicable to torpedoes adapted to cool the exhaust gases from the motive means thereby to reduce the visibility of the wake produced by the torpedo.

A further object is to provide mechanism of the last above mentioned character which may be easily and quickly applied to torpedoes now in general use without materially adding to the weight or requiring rearrangement of parts as now used.

A further object is to provide a simple and practical water spray device adapted to cool the exhaust gases passing from motive means through the after body and thus minimize the amount of steam or smoke issuing therefrom.

With these and other objects in mind, some of which will be in part obvious and in part hereinafter pointed out more in detail, attention is directed to the accompanying sheet of drawings forming part of this specification and in the several views of which corresponding reference characters denote similar parts. In this drawing,

Figure 1 is a transverse sectional view taken through the after-body of the torpedo showing such parts as are necessary to fully understand the invention.

Fig. 2 is a central, longitudinal sectional view showing us part of one of the exhaust pipes in the section.

Referring now to the drawing in detail, 5 denotes the upper part of the torpedo shell which is preferably the after-body section while 6 indicates the two main exhaust pipes leading from the source of power preferably the turbines now in general use. These pipes extend from the engine compartment

directly aft through the after-body at each side of the center line and discharge at approximately the extreme end of the torpedo, the construction being well-known to those familiar with the art.

The present invention resides more particularly in the device hereinafter described adapted to conduct sea water from the torpedo into these exhaust pipes where it preferably issues in the form of spray to cool the exhaust gases thereby reducing the volume of the gases and materially eliminating any smoke or steam which would otherwise discharge from the tail of the torpedo and produce a wake visible at some considerable distance.

This device comprises a scoop 7 secured to the outside of the after-body of the torpedo as shown more clearly in Fig. 2 having and connecting with a pipe 8 extending downwardly to a T-connection 10 branching to either side by pipes 11 which pass through the exhaust pipe 6 and connect with the rearwardly extending spray pipe 12 provided with perforations 13 as indicated. Within the pipe 8 is a perforated block 14 having a stem 15, around which is coiled a spring 16 normally urging a valve 17 upwardly into engagement with an adjustably threaded valve seat 18. Normally this valve is closed against the seat by the action of the spring 16 but the force of water entering through the scoop 7 will depress this valve against the action of the spring allowing the water to pass through the perforated block 14 to the spray pipes 12 as indicated.

By rotating either the valve block or the valve seat the degree of pressure required to open the valve may be regulated as desired.

It is believed that the operation of this device and its purpose will be fully understood by those skilled in the art from the above description and no further statement is necessary.

The invention is of simple and practical construction, reliable and efficient in use and operation and is adapted to accomplish, among others, all of the objects and advantages herein set forth.

What I claim is:

In a torpedo, in combination, two exhaust tubes extending longitudinally at opposite sides of the after-body, a centrally disposed vertical pipe, branch pipes at one end there-

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of extending to each exhaust tube, spray pipes longitudinally disposed centrally in said exhaust tubes and communicating with said branch pipes, a valve at the opposite end of said vertical pipe, a scoop on the outside of said torpedo adapted to direct water downwardly into said vertical pipe against the valve and spring means adapted to hold the valve closed until overcome by the pressure of the water there- 10 against.

Signed at Denver, Colorado, this 21st day of July, 1920.

JAMES A. FLINT.