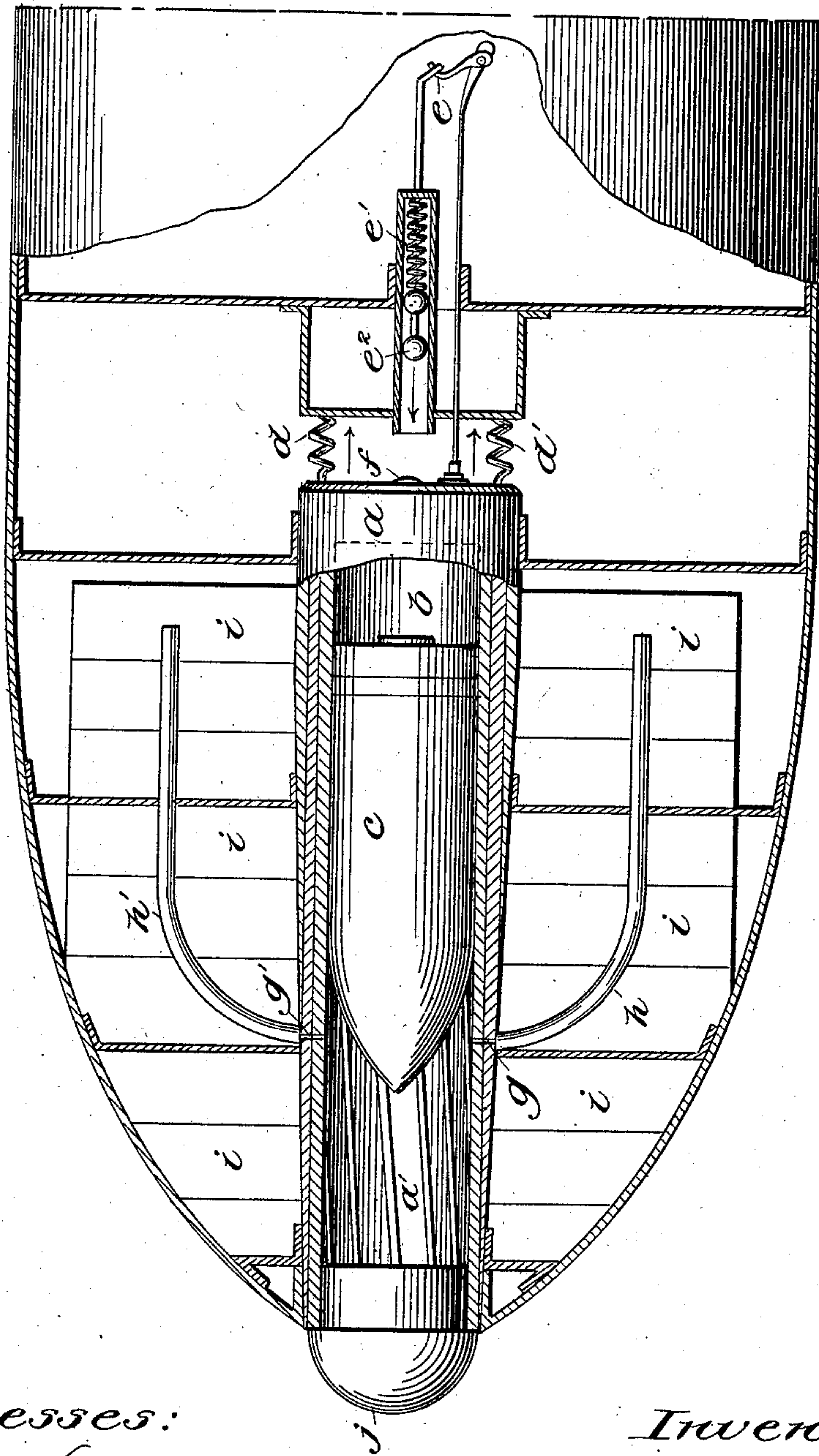


W. M. DOUGLAS.
AUTOMOBILE TORPEDO.
APPLICATION FILED FEB. 10, 1908.

998,475.

Patented July 18, 1911.



Witnesses:
J. D. Thayer
Henry M. Brown

Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM M. DOUGLAS, OF GALVESTON, TEXAS, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO NATIONAL TORPEDO COMPANY, OF NEW YORK, N. Y., A CORPORATION OF
MAINE.

AUTOMOBILE TORPEDO.

998,475.

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To all whom it may concern:

Be it known that I, WILLIAM M. DOUGLAS, a citizen of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented certain new and useful Improvements in Automobile Torpedoes, of which the following is a specification.

This invention has reference to submarine torpedoes carrying a gun for their offensive weapon, either alone or in combination with an explosive charge of gun-cotton.

The invention will be explained in connection with the accompanying drawing, in which the figure shows a side elevation, partly in longitudinal section, of the head of a torpedo.

The gun *a* with its charge *b*, and projectile *c*, is secured in the head of the torpedo in such a manner that when the muzzle, through stopper *j*, strikes the hull of a vessel aimed at, the force will drive the gun *a* in against the tension of springs *d*, *d'*, sufficiently to unhook or release the catch or trigger *e* and allow spring *e'* to carry the exploding mechanism or hammer *e²* against a primer *f*. The gun *a* and exploding means are held in position by braces or struts as shown.

The action above referred to will explode the powder charge *b* and discharge the projectile *c*, through the rifled tube *a'*, and when the base of the projectile *c* passes openings or vents *g*, *g'*, it will uncover these openings in the tube *a*, *a'* and, as such openings or vents lead to cylinders of inflammable explosive *h*, *h'* embedded in disks of gun-cotton *i*, *i*, (preferably moist) which surround the gun *a*, the flames will fire the explosive in the cylinders *h*, *h'* and explode the gun-cotton immediately after the projectile *c* leaves the muzzle of the gun. The stopper *j*, will be driven from its position by the compression of air in the tube *a'* as the projectile *c* moves forward, and said projectile will enter the thin plating forming the underwater structure of the vessel struck below the armor belt, the explosion of the shell taking place immediately.

The projectile is caused to explode within the hull of the vessel struck by a suitable fuse extending through the rear wall of the projectile in accordance with the customary practice in the art.

The size of the gun, its manufacture, and

the size of the projectile may be such as will meet all requirements; also the size of the torpedo and its manufacture may be such as will meet any and all requirements, whether it has a gun alone or a gun combined with a charge of gun-cotton as its means of offense.

It is to be understood that the method hereinbefore set forth will create a zone of weakness in the side of the vessel struck by the projectile *c* before the detonation of the gun-cotton *i*, *i*, takes place and will therefore place the vessel attacked in a peculiarly favorable position for the action of the detonating charge.

It will not require any high velocity to enable the projectile to penetrate the under water plating or skin of the ship.

By the action hereinbefore described, there will be obtained first, the explosion of the charge in the gun, second the thrust of the projectile into the side of the vessel struck, below the armor belt thereof, and the explosion of the projectile within the hull. This refers to the case in which the gun alone is the weapon. If the gun is in combination with a charge of gun-cotton, the explosion of the gun-cotton will accentuate the damage produced.

The gun should be sufficiently strong to carry the projectile demanded and may be rifled to give effective rotation to the projectile.

It is obvious that various modifications may be made in the herein described apparatus which can be used without departing from the spirit of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

1. In a torpedo, the combination with the body thereof, of a gun fixed in said body and provided with a percussive fuse, a bursting charge for said torpedo, a shell provided with a bursting charge, a propelling charge for said shell, means to explode said propelling charge upon impact against a target attacked, means to explode the bursting charge for the shell after said shell is expelled from the gun, and means to explode the bursting charge for the torpedo after said shell has been expelled from the gun.

2. A torpedo containing a bursting charge therefor, a projectile, a propelling charge for said projectile, means to explode said pro-

elling charge, and means to explode the bursting charge subsequent to the expulsion of the projectile from the torpedo.

3. A torpedo, a bursting charge therefor,
5 a projectile, means for propelling said projectile from said torpedo to produce a zone of weakness in the target struck, and means to explode said bursting charge subsequent to the expulsion of the projectile from the
10 torpedo.

4. A torpedo containing a gun barrel and a bursting charge, and means of communication between the interior of said gun barrel and said bursting charge.

15 5. A torpedo containing a gun barrel, a bursting charge surrounding said gun bar-

rel, and one or more flame passages between the interior of said gun barrel and the said bursting charge.

6. A torpedo, a bursting charge therefor, 20 a gun barrel, a propelling charge therein, a projectile, means to explode said propelling charge and means to explode the said bursting charge after the explosion of said propelling charge.

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

WILLIAM M. DOUGLAS.

Witnesses:

HY. M. BROWN,

J. S. FRAGUA.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."