

UNITED STATES PATENT OFFICE.

MICHEL BRUNIQUEL, OF PARIS, FRANCE.

METHOD OF INCREASING THE ENERGY OF A FLUID-MOTOR IN MOTOR-DRIVEN TORPEDOES.

1,154,609.

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No Drawing.

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To all whom it may concern:

Be it known that I, MICHEL BRUNIQUEL, engineer, residing at 43 Rue de la Federation, Paris, in the Republic of France, have
5 invented certain new and useful Improvements in Methods of Increasing the Energy of a Fluid-Motor in Motor-Driven Torpedoes; and I do hereby declare the following to be a full, clear, and exact description
10 of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In motor driven torpedoes operated by means of compressed air, a superheater is
15 employed for increasing the energy available for the propulsion, and consequently increasing the speed and power of these engines. This superheater is inserted in the pipe which connects the air reservoir with
20 the motor, and in it is ignited a preferably liquid combustible, such as petrol, spirit or the like, conveyed automatically under pressure. The energy produced by this combustion is added to that of the compressed air.
25 This increase of energy is limited by considerations of the strength of the constructional materials at high temperatures. Also in certain of these superheaters in order further to increase the available energy without reaching too high temperatures, a portion of the heat evolved by the combustion of the liquid combustible or the like is employed for vaporizing water conveyed also
30 under pressure into the superheater.

35 This invention has for its object a process which enables the quantity of gaseous fluid released in the combustion chamber to be increased in a certain proportion according to requirements, and which consequently allows the energy of the fluid motor to be
40 notably increased. This process consists in injecting into the superheater, oxygenated water (hydrogen peroxid) of suitable strength (to be determined for each particular case), which being vaporized will pro-

duce oxygen and steam, while releasing a certain quantity of heat. The oxygen insures a more complete combustion of the combustible, and if the strength is suitably selected will enable a larger quantity of the
50 latter to be burnt. For this reason the energy available in the motor will be increased in a proportion dependent on the strength of the hydrogen peroxid employed, more particularly by employing a peroxid, which
55 is sufficiently rich in oxygen, air might be dispensed with and the mixture of peroxid and combustible burnt in a combustion motor. Further as the peroxid only solidifies at low temperatures, it has a great advantage over the ordinary water at present
60 employed for torpedoes which are required to work in winter or in cold countries.

Having now particularly described and ascertained the nature of my said invention
65 and in what manner the same is to be performed, I declare that what I claim is:

1. The process of increasing the energy supplied to a motor driven by compressed fluid which consists in subjecting such fluid
70 while on its way to the motor, to the heat of a suitable fuel in combustion while injecting hydrogen peroxid into the sphere of combustion.

2. The process of increasing the energy
75 supplied to a motor driven by compressed fluid which consists in burning a suitable fuel in such fluid while on its way to the motor, and simultaneously mingling hydrogen peroxid with the same, whereby the
80 temperature is suitably controlled while a suitable proportion of oxygen is supplied to prevent resultant impairment of combustion.

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

MICHEL BRUNIQUEL.

Witnesses:

DE WITT C. POOLE, Jr.,
EMILE MATHIS.