

UNITED STATES PATENT OFFICE.

TIMOLEONE BATTISTINI, OF GENOA, ITALY.

FLUID FOR PROMOTING COMBUSTION.

SPECIFICATION forming part of Letters Patent No. 700,888, dated May 27, 1902.

Application filed December 28, 1901. Serial No. 87,556. (No specimens.)

To all whom it may concern:

Be it known that I, TIMOLEONE BATTISTINI, a subject of the King of Italy, residing at Genoa, Italy, have invented a certain new and useful Fluid for Promoting Combustion, of which the following is a specification.

The object of the present invention is to provide for the economic combustion of fuel in such a way that its calorific or heating power is materially increased at a very small expenditure for time, labor, and materials, while at the same time the grate, fire-tubes, and other parts of the boiler and furnace are uninjured and the amount of smoke given off is materially diminished.

To these and other ends hereinafter set forth, the invention, stated in general terms, comprises a fluid intended for application to the fuel for promoting combustion and which contains material adapted when heated to yield oxygen, so as to consume thoroughly the volatile and other ingredients of the fuel, and also a retaining material for preventing the escape of the volatile and other matters from the fuel, so that they can be burned under the influence of the oxygen-yielding material.

The fluid of the invention comprises a solution of one part of nitrate of sodium and two parts of carbonate of sodium, the said parts being measured by weight. The solution may be made in water and is applied by sprinkling or otherwise bringing it into contact with the fuel, which may be either soft or hard coal or charcoal or other similar material. The fuel is permitted to dry before it is burned and after it has been treated with

the solution or fluid, as described. The purpose of the sodium nitrate, which when heated yields oxygen, is to supply oxygen for effecting better combustion of the fuel than has heretofore been attained, and the purpose of the sodium carbonate is to prevent the escape of combustible matters from the fuel, so that they are consumed by the oxygen given off in the manner described. The effect of the solution is to materially increase the calorific power of the fuel, and there is nothing given off that can in any way deleteriously affect the furnace or other parts with which the products of combustion come into contact. Of course the sodium carbonate and sodium nitrate may be separately dissolved and separately applied, although it is usually more convenient to make them in one solution.

It will be obvious to those skilled in the art to which the invention relates that modifications may be made in details without departing from the spirit thereof.

Having thus described the nature and objects of the invention, what I claim as new, and desire to secure by Letters Patent, is—

A fluid for promoting combustion which comprises a solution consisting of one part by weight of nitrate of sodium and two parts by weight of carbonate of sodium, substantially as specified.

In testimony whereof I have hereunto signed my name.

TIMOLEONE BATTISTINI.

In presence of—

W. J. JACKSON,
K. M. GILLIGAN.