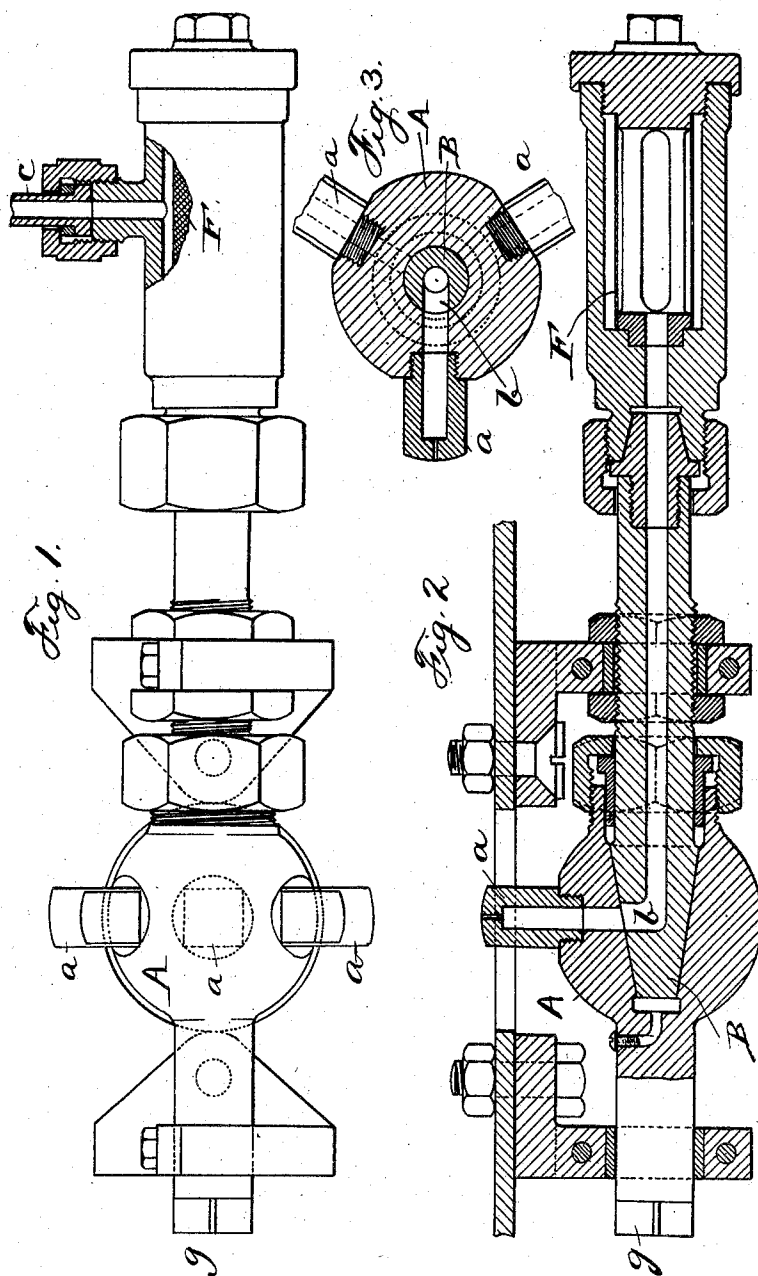


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ADJUSTABLE BURNER FOR LIQUID FUEL.
APPLICATION FILED AUG. 9, 1909.

981,119.

Patented Jan. 10, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

ENRICO ROSSI, OF TRIEST, AUSTRIA-HUNGARY.

ADJUSTABLE BURNER FOR LIQUID FUEL.

981,119.

Specification of Letters Patent.

Patented Jan. 10, 1911.

Application filed August 9, 1909. Serial No. 512,008.

To all whom it may concern:

Be it known that I, ENRICO ROSSI, a citizen of Austria-Hungary, and resident of Triest, Austria-Hungary, have invented certain new and useful Improvements in Adjustable Burners for Liquid Fuel, of which the following is a specification.

In steam boilers which are adapted for use with crude oil the disadvantage is experienced that with a light steam duty the burner has to be shut off from time to time and on steam being required the burner has to be turned on again. Such repeated cutting off and turning on of the burners has the disadvantage that the furnace and parts of the boiler in contact with the cold air current are cooled, which has as a result poor utilization of the heat generated, varying expansion of the material of which the boiler is constructed and consequent injury to the same.

In order that the boilers may be heated continuously during the time they may be in use and that the fuel may be fed continuously to the furnace at a pressure as uniform as possible and with correspondingly uniform atomization of the fuel, for the purpose of obtaining the best results from the boiler and for utilizing the fuel to a reasonable extent, it has been proposed especially with naphtha burners to construct an adjustable burner the rotatable casing of which carries nozzles of different bores in order to feed the fuel mixture to the furnace by using a nozzle which will suit the conditions of load at the moment. In these previously known burners total interruption of the fuel supply must take place on interchanging the burners in order to prevent inflammable particles of fuel dropping off the nozzle which has just been taken out of action. This objection is removed according to the invention by mounting (screwing) the nozzles directly on the casing surrounding the fuel supply bodies.

In the accompanying drawing which illustrates the invention Figure 1 is an elevation, Fig. 2 a horizontal and Fig. 3 a vertical section of my improved burner.

The burner casing A carries directly *i. e.* without the intermediary of connecting pipes several nozzles *a* with bores of different size and is pivotally arranged about the rigidly mounted central piece B. The latter (B) is preferably constructed in the form of a cock plug and is provided with a channel *b* having an outlet opening at the side nearest the combustion chamber. The fuel entering at *c* flows through a fine filter F arranged in suitable manner, toward the channel *b* and from there through that nozzle which at the time faces the furnace. By simply rotating the casing A, for example by means of a key fitting on a square projection *g* on the casing on varying extraction of steam from the boiler, the nozzle is interchanged by a single handle and the nozzle corresponding to the amount of steam required at the moment is used.

By mounting the nozzle directly on the casing the escape of fuel from that nozzle moving out of action at the moment if not quite prevented is at least reduced to a quantity negligible in practice. The spraying of the fuel on the outer wall of the furnace during the interchange of burners is prevented as this interchange takes place before total closing or opening of the supply passage.

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

In a device of the character described, the combination with a fixedly-mounted member provided with a channel for supplying fuel, of a burner casing rotatably mounted upon the said fixed member, and a series of nozzles mounted on said rotatable casing, said nozzles having bores of varying sizes and adapted to communicate with the channel in the fixed member when the said casing is rotated.

Signed at Triest, Austria-Hungary, this 16th day of July A. D. 1909.

ENRICO ROSSI.

Witnesses:

GEORGE BAKER,
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