Convention Application for a Patent

I, Francisco Feraire Fabrejet, of Teodoro Llorente, 24 Barcelona, Spain

hereby apply for the grant of a Patent

for an invention entitled "INTRA MANIFOLD FOR INTERNAL COMBUSTION ENGINES"

which is described in the accompanying complete specification.

This application is a Convention application and is based on the application numbered 176,907 for a patent or similar protection made in Spain on 5th February 1972.

My address for service is: Callina Newton, Patent Attorneys, of 48-50 Bridge Road, Richmond, State of Victoria, Commonwealth of Australia.

Dated this 1st day of February, 1973.

FRANCISCO FERAIRE FABREJAT

By his Patent Attorneys:

CALLINA AND NEWTON

To The Commissioner of Patents.
COMMONWEALTH OF AUSTRALIA

Patents Act 1952-66

Declaration in Support of
(a) A Convention Application
(b) An Application
for a Patent or Patent of Addition

In support of the application, a Convention Application made by

(c) FRANCISCO PERAIRE FABREGAT

for a patent, an application for an invention entitled:

(d) "INTAKE MANIFOLD FOR INTERNAL COMBUSTION ENGINES"

1/FR (c) Francisco Peraire Fabregat
of Teodoro Llorente, 24 Barcelona, Spain.

do solemnly and sincerely declare as follows:—

1. (a) I am/ am the applicant(s) for the patent/apparition.

(b) I am the actual inventor(s) of the invention referred to in the basic application.

2. (c) The basic application(s) as defined by Section 141 of the Act was/were made in Spain on the 5th day of February, 1972 by me, Francisco Peraire Fabregat.

3. (d) I am/ am the actual inventor(s) of the invention referred to in the basic application.

4. The basic application referred to in paragraph 2 of this Declaration was the first application made in a Convention country in respect of the invention the subject of the application.

Declared at Barcelona, Spain this 19th day of January, 1973.

SIGN

HERE

To: The Commissioner of Patents.
COMMONWEALTH OF AUSTRALIA
PATENTS ACT 1952-1969

COMPLETE SPECIFICATION
(ORIGINAL)

FOR OFFICE USE

Class 66:5

Application Number: 51753 73
Lodged: 2. a 73

Record No: FO2 8 81/00/ Form 8510.

Complete Specification—Lodged: 2. a 73
Accepted: 15/06/72
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Priority:
5.2.72 Spain 176,907

Related Art:
233,5025 661
456,022 665
2976830 665

TO BE COMPLETED BY APPLICANT

Name of Applicant:
FRANCISCO PERALES FABREGAT

Address of Applicant:
Teodoro Llorente, 24 Barcelona, Spain

Actual Inventor:
FRANCISCO PERALES FABREGAT

Address for Service:
Care of Callinan and Newton, Patent and Trade Mark
Attorneys, of 48-50 Bridge Road Richmond, in the
State of Victoria, Commonwealth of Australia

Complete Specification for the invention entitled:
"INTAKE MANIFOLD FOR INTERNAL COMBUSTION ENGINES"

The following statement is a full description of this invention, including the best method of performing it known
to me:-

*Note: The description is to be typed in double spacing, in a type face, in an area not exceeding 9" in depth and 6½" in width, on
tough white paper of good quality and it is to be inserted inside this form.
This invention relates to an improved intake manifold for use in internal combustion engines and which will provide appreciable improvement in engine performance over that obtained with conventional manifolds.

According to the present invention an intake manifold for internal combustion engines, is provided, on the internal wall of the main duct connecting the carburettor to the manifold and/or on the internal wall of each of the branch ducts connecting the manifold to the engine block, a series of radial fins having a predetermined rake relative to the duct axis. The arrangement stated provides, during operation of an engine to which the manifold is fitted, that turbulence will be imparted to the air-fuel mixture passing therethrough, thereby contributing to its atomization with more complete combustion of the air-fuel mixture may be achieved in the engine cylinders and any CO discharged with the engine exhaust gases is kept to a minimum. The radial fins may be formed integrally with the manifold or may be formed on a separate member or bush and fixed in position in the manifold main duct or branch ducts.

In order that the invention may be readily understood reference will now be made to the accompanying drawings illustrating a practical embodiment of an inlet manifold constructed in accordance with the present invention.
In these drawings:

Figure 1 is a plan view of an intake manifold for a conventional internal combustion engine, partly in section, and

Figure 2 is a sectional view at an enlarged scale of one of the intake manifold ducts on line II-II of Figure 1.

As illustrated, the intake manifold for an internal combustion engine, according to the invention, comprises duct -1- for coupling to the carburettor and branch ducts -2-2'-2''-2'''- which are connected to the intake passages of the engine block.

The feature of the present invention is that each of said branch ducts -2-2'-2''-2'''- integrally carry on its internal surface a series of fins -3- radially arranged and having a predetermined rake in respect of the duct axis and which imparts to the air-fuel mixture, on passage therethrough a special turbulence thereby contributing to its atomization with the consequent advantages of CO reduction in the exhaust gases, power increase and fuel consumption decrease as a more complete combustion in the cylinders is obtained.

It will be apparent that the invention may be incorporated in forms of inlet manifolds other than that illustrated and which differ in detail only.

Furthermore, the radial ribs may be formed on a separate member or bush and adapted to be located and fixed in the duct
or ducts of the intake manifold, which may be of various types and the radial fins or the member carrying the fins may be made in any shape and size, and of materials most convenient, without departing from the spirit and scope of the invention.
CLAIMS
The claims defining the invention are as follows:

1. Intake manifold for internal combustion engines, wherein there is provided, on the internal wall of the main duct connecting the carburettor to the manifold and/or on the internal wall of each of the branch ducts connecting the manifold to the engine block, a series of radial fins having a predetermined rake relatively to the duct axis and which are adapted to impart turbulence to the air-fuel mixture passing therethrough thereby contributing to its atomization with consequent more complete combustion thereof in the engine cylinders.

2. Intake manifold for internal combustion engines as claimed in claim 1 and wherein the radial fins are formed integrally with the manifold.

3. Intake manifold for internal combustion engines as claimed in claim 1 and wherein the radial fins are formed in a separate member or bush and fixed in position in the manifold.

4. Intake manifold for internal combustion engines constructed and arranged substantially as herein described and with reference to the accompanying drawings.

DATED this 1st day of February, 1973.

FRANCISCO PERALTE FABREGAT
By his Patent Attorneys:
CALLIHAN AND NEWTON
DRAWINGS