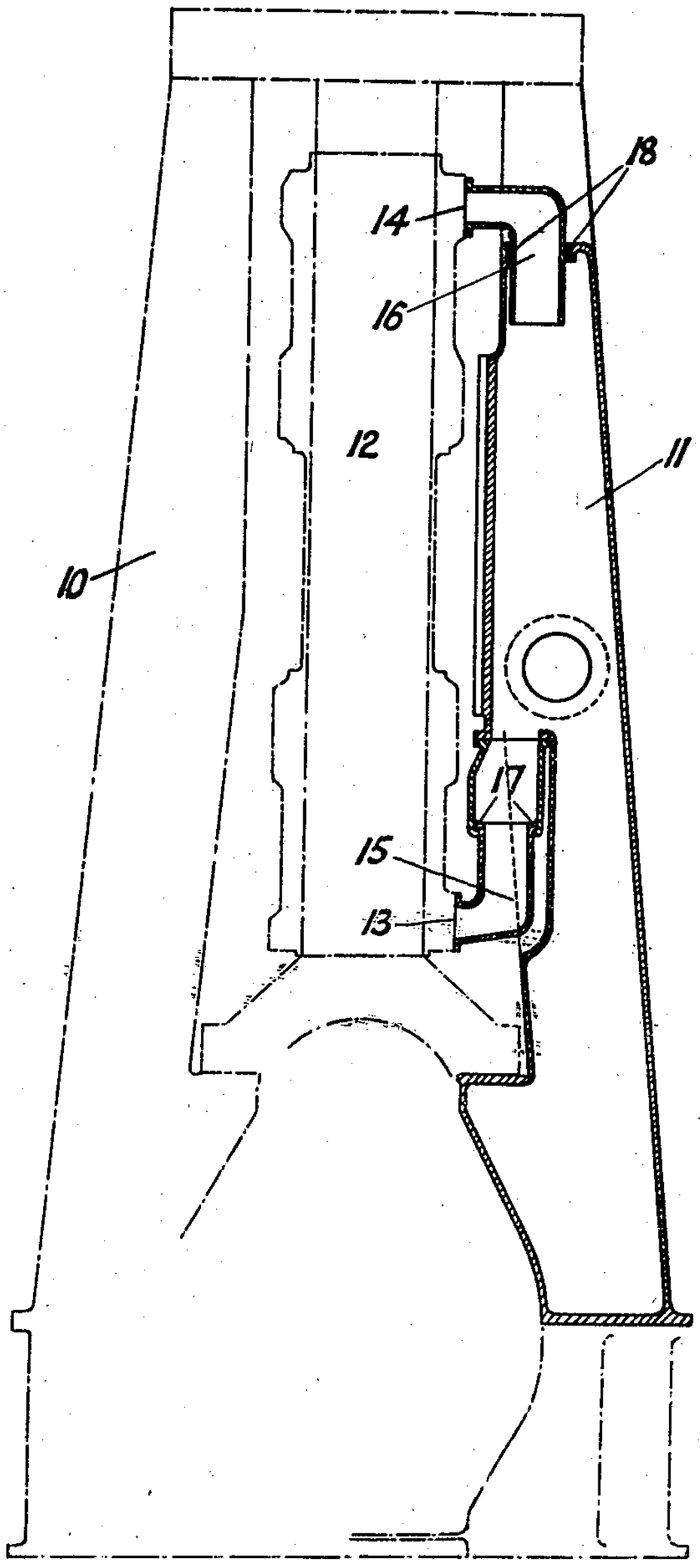
Nov. 18, 1924.

1,516,448

J. C. M. MACLAGAN

INTERNAL COMBUSTION ENGINE

Filed March 28, 1923



INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN CAMPBELL MACCALL MACLAGAN, OF DRUMCHAPEL, SCOTLAND, ASSIGNOR TO NORTH BRITISH DIESEL ENGINE WORKS, (1922) LIMITED, OF GLASGOW, SCOTLAND.

INTERNAL-COMBUSTION ENGINE.

Application filed March 28, 1923. Serial No. 628,232.

To all whom it may concern:

Be it known that I, JOHN CAMPBELL MACCALL MACLAGAN, a subject of the King of Great Britain and Ireland, and a resident of Drumchapel, Scotland, have invented certain new and useful Improvements in Connection with Internal-Combustion Engines, of which the following is the specification.

This invention relates to internal combustion engines in which the engine unit is supported by a frame or structure comprising two box section columns in the same plane as the centre line of the cylinder, the invention relating particularly to the two-stroke cycle type of such engines described in the earlier patent specification No. 1,436,596 of November 21, 1922, in which the cylinder moves on two fixed heads and has for its object to provide improved means for receiving and supply scavenging air to the end or ends of the moving cylinder of that engine.

According to the invention one of the columns is used as a receiver for the compressed air. The moving cylinder has near its outer end, or ends if double acting, scavenging air inlet ports controlled by a fixed piston-like combustion head or heads, as in the construction shown in the patent above referred to. These air ports are served by a manifold or manifolds moving with the cylinder and telescoping through a packing gland or packing glands into the air containing column.

Parts of a double-acting engine unit of the type referred to sufficient to show an example of the present invention are shown in sectional elevation on an accompanying sheet of explanatory drawings.

The engine unit is of the two-stroke cycle type described in the applicant's patent hereinbefore referred to, in which there is a cylinder moving synchronously or substantially so, and in the same direction, with a double-acting piston within it, and fixed piston-like combustion heads at opposite ends of the cylinder with which the cylinder coacts all in known manner.

As shown in the drawing, this engine unit is supported by a frame or structure comprises two hollow columns 10 and 11 in the same vertical plane as the cylinder 12. One of these columns 11 is used as a receiver for compressed air to be supplied to the ends of the moving cylinder 12 through scavenging air inlet ports 13 and 14 which are controlled by the fixed piston-like combustion heads (not shown) hereinbefore referred to. These air inlet ports 13 and 14 are served by manifolds 15 and 16 moving with the cylinder 12 and parallel to the axis thereof. These manifolds telescope through packing glands 17 and 18 into the air containing column 11.

What I claim is:—

1. In an internal combustion engine unit of the type in which the cylinder moves on two fixed heads, a hollow supporting column serving as a receiver for compressed air, an inlet port in the cylinder and a manifold serving said ports and making sliding joint with the air containing column.

2. In an internal combustion engine unit of the type in which the cylinder moves on two fixed heads, a hollow supporting column serving as a receiver for compressed air, inlet ports at the opposite ends of the said cylinder, and a manifold serving each of said ports and making sliding joint with the air containing column.

In testimony whereof I have signed my name to this specification.

JOHN CAMPBELL MACCALL MACLAGAN.