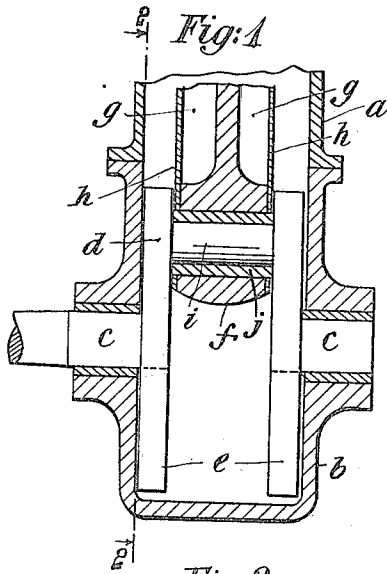
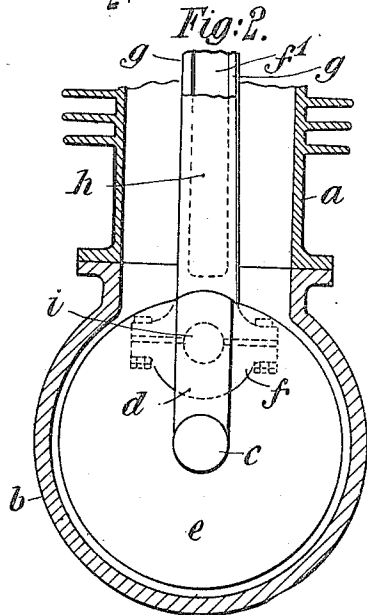
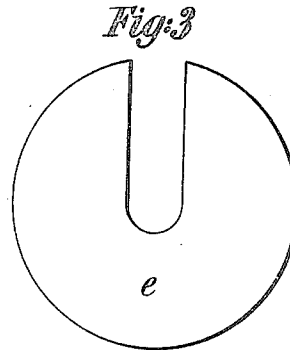


A. M. LOW,
TWO-STROKE INTERNAL COMBUSTION ENGINE.
APPLICATION FILED SEPT. 7, 1915.

1,229,989.

Patented June 12, 1917.



The Inventor.
Archibald Montgomery Low.
By Hugh W. Buchanan
attys

UNITED STATES PATENT OFFICE.

ARCHIBALD MONTGOMERY LOW, OF LONDON, ENGLAND.

TWO-STROKE INTERNAL-COMBUSTION ENGINE.

1,229,989.

Specification of Letters Patent.

Patented June 12, 1917.

Application filed September 7, 1915. Serial No. 49,341.

To all whom it may concern:

Be it known that I, ARCHIBALD MONTGOMERY LOW, a subject of the King of England, residing at London, in England, have invented a certain new and useful Improvement in Two-Stroke Internal-Combustion Engines, of which the following is a specification.

This invention relates to two-stroke internal combustion engines, and the object is to avoid the loss of efficiency in existing engines of this class due to the loss of compression pressure which exists in the crank-case or chamber due to the excess of free space which occurs in said chamber even when the cranks are formed as disks and said disks with the connecting rod occupy the greater part of the width of the crank chamber.

According to this invention I provide a strip of leather or other suitable resilient packing material attached to each side of the connecting rod, between the latter and the crank disks, whereby during the rotation of the crank disks the leather sweeps across their faces so that in the action of the connecting rod in its rotation and reciprocation leakage of gas is reduced between the rod and disks, thus increasing the compression pressure in the crank case and adding to the efficiency of the engine. That is to say, the packing material substantially provides an air tight joint between the connecting rod and the disks, so that upon rotation of the disks the fluid in the space in front of the rod cannot leak between the disks and the rod to the space behind the rod. Thus a blowing or pumping action is created which aids in the compression of the fluid and the efficiency of the engine.

The invention is illustrated in the accompanying drawings, in which Figures 1 and 2 are sections at right angles to each other of the crank case and cylinder of a single cylinder engine, Fig. 2 being a section on line 2—2 of Fig. 1, and Fig. 3 is a detail view.

In said drawings *a* designates the cylinder and *b* the crank case of an internal combustion engine within the latter of which is

mounted the crank axle *c* shown as provided with the conventional form of cranks *d* used in a two-stroke engine.

When such cranks are used each crank is enlarged to form a disk by adding thereto an additional member *e* which is secured thereto as by welding, bolting or otherwise according to requirements. The "big end" *f* of the connecting rod *f*¹ substantially occupies the width between the cranks, and the connecting rod itself is widened so as to occupy the same width by attaching to each side of the flanges *g* of the connecting rod a strip of leather *h* or other appropriate material to make a close fit between the connecting rod and crank disks. *i* designates the crank pin and *j* the bushing therefor usually provided.

Obviously instead of building up the cranks as described to form disks which is done in the case of existing engines, the cranks may be primarily formed as disks, and the other features viz. the enlarged connecting rod and leather strips applied as described, so that the action desired and above referred to is produced.

Having now described my said invention I claim:—

1. In a crank case compression engine the combination with two crank disks of a connecting rod of a width equal to that of the space between said disks, and side plates of resilient packing material secured to the sides of said connecting rod and contacting with the disks.

2. In a crank case compression engine the combination with two crank disks of a connecting rod of a width equal to the space between said disks and side plates of leather on said rod contacting with the disks and adapted to reduce leakage of gas between said rod and disks.

In witness whereof I have signed this specification in the presence of two witnesses.

ARCHIBALD MONTGOMERY LOW.

Witnesses:

C. A. WORTH,
H. D. JAMESON.