

Openbaar gemaakt
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PATENT



SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in and relating to Internal Combustion Engines.

I, CONSTANTIN MUSURUS, of 67, Avenue Victor Hugo, Paris, France, Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 The present invention relates to a valveless monobloc, four-cylinder motor of the type in which the fuel distribution is effected by means of a pair of rotating shafts provided with flats adapted to effect by the rotation on the one hand the introduction of fuel into the cylinders, and on the other hand the passage of the burnt gases from the cylinders to the exhaust.

10 According to the present invention the flats are formed on enlarged portions of the shafts and said portions are enclosed in gas tight ported sleeves prevented from lateral displacement by means of collars.

In order to elucidate the description, reference is made to the accompanying drawing in which the invention is illustrated by way of example:—

15 Figure 1 is an elevation in transverse section of the motor.

Figure 2 is an elevation in partial longitudinal section of the same showing the distribution boxes and two consecutive pistons respectively at the termination of their strokes.

20 Figures 3, 4 and 5 show in elevation, in transverse section and perspective respectively, one of the parts employed for the fuel distribution. The same reference letters apply to the same parts in the various figures.

The motor has four cylinders of which only two, *a*, *b* are represented in the drawing. *c* designates the pistons, *d* the connecting rods which are attached in the ordinary way to a crankshaft *e*.

25 The fuel distribution and exhaust which constitute an essential part of the invention is effected by means of two shafts A, A precisely similar, actuated by the crank shaft *e* by means of pinions *f*, *g*, and by a silent chain *h*. The respective diameters of the pinions are such that the shafts A, A turn at half the speed of that of the crankshaft *e*.

30 Each of the shafts A, A rotates in the upper part of the different cylinders in a recess arranged for this purpose and has, registering with the inlet or the exhaust of each cylinder, a portion of slightly larger diameter on which is arranged a flat C, which when the shaft rotates effects the communication at the desired moment on one side of the cylinders with the induction pipe *l* of the carburetter and on the other side of the cylinders with the exhaust pipe *m*.

35 In order to render it perfectly gas-tight, the portions of the shafts on which are formed the flats C are surrounded by ported sleeves B in which is cut an aperture fitting exactly into the outer form of the flat C in order to allow gas to pass through the latter; these sleeves are held in position by pins to prevent

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them turning independently on the shafts with which they rotate and form a part. Collars N formed on or attached to the shafts A prevent any possibility of the lateral displacement of the segments B.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:— 5

1. In an internal combustion engine of the character in which the fuel distribution is effected by means of a pair of rotating shafts provided with flats adapted to effect by their rotation, on the one hand the introduction of the fuel, into the cylinders, and on the other hand the passage of the burnt gases from the cylinders to the exhaust, the provision of flats on enlarged portions of the shafts, and gas tight ported sleeves enclosing the said portions, said sleeves being prevented from displacement by means of collars. 10

2. The internal combustion engine substantially as described with reference to the accompanying drawings. 15

Dated this 13th day of January, 1919.

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Agents for the Applicant. 20

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

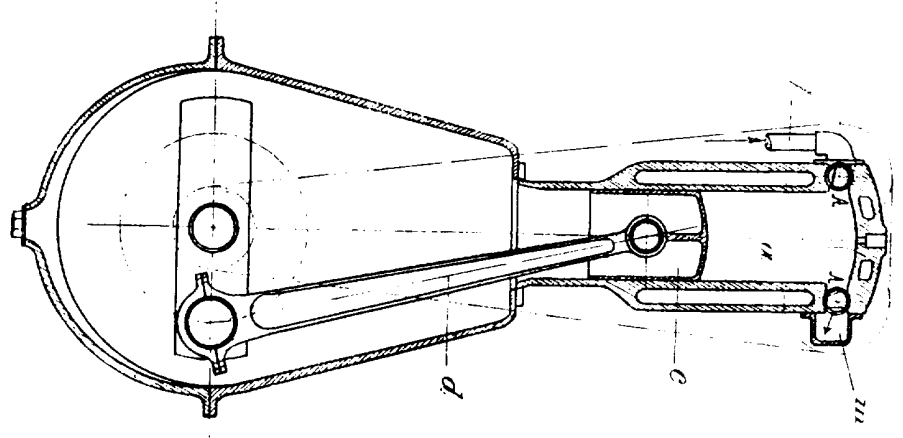


Fig. 2.

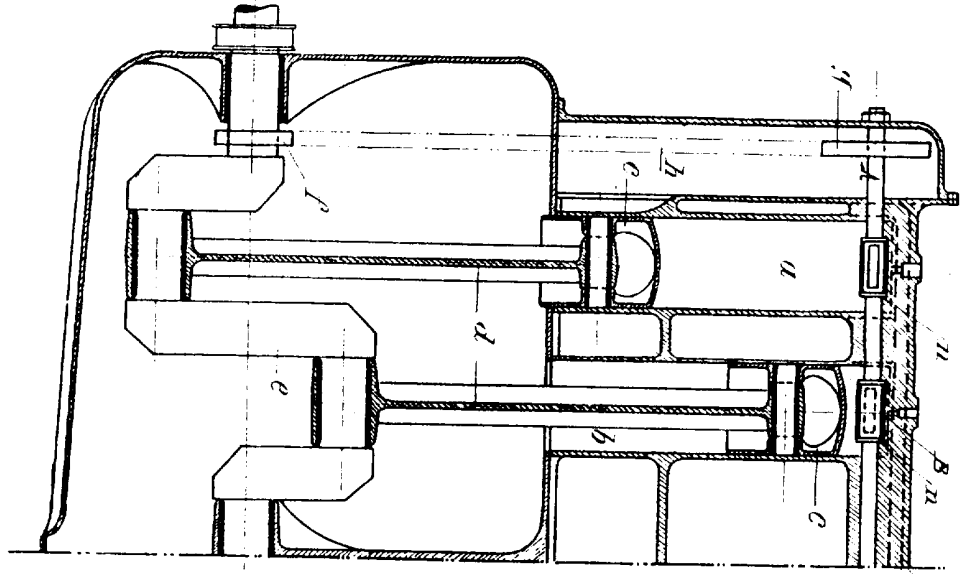


Fig. 3.

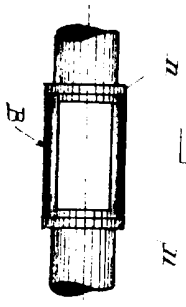


Fig. 4.



Fig. 5.

