

N^o 2847



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PROVISIONAL SPECIFICATION.

An Improvement in Gas or Oil Motor Engines.

We, FRANCIS CRUMPTON NUNN, of Eastnor, Sydenham Hill, in the County of Surrey, Civil Engineer, and THOMAS HYLER WHITE, of Grove Iron Works, Carshalton, also in the County of Surrey, Engineer, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to a compact arrangement of gas or oil motor engines wherein the moving parts are well balanced.

For this purpose, the cylinder, which is conveniently horizontal, is fitted with two pistons connected to cranks on two shafts each having on it a flywheel and a pinion. The two pinions gear with an intermediate wheel of double the diameter of the pinion, this wheel being on a shaft which works the valve gear.

10 The cranks on the two shafts are so set that the two pistons approach each other in their instroke, and recede from each other in their outstroke. Between them are the combustion chamber and the inlet and exhaust valves.

Dated this 8th day of February 1899.

15

ABEL & IMRAY,
Agents for the Applicants.

COMPLETE SPECIFICATION.

An Improvement in Gas or Oil Motor Engines.

We, FRANCIS CRUMPTON NUNN, of Eastnor, Sydenham Hill, in the County of Surrey, Civil Engineer, and THOMAS HYLER WHITE, of Grove Iron Works, Carshalton, also in the County of Surrey, 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:—

25 This invention relates to a compact arrangement of gas or oil motor engines wherein the moving parts are well balanced as we shall describe referring to the accompanying drawings. Fig. 1 is a longitudinal section, Fig. 2 is a plan of an engine according to our invention Fig. 3 is a transverse section to an enlarged scale on the line 3—3 of Fig. 2.

30 The cylinder *a* which is conveniently horizontal, is fitted with two pistons *b b* connected to cranks *c c* on two shafts *d d* each having on it a fly wheel *e e* and a pinion *f f*.

The two pinions gear with an intermediate wheel *g* of double the diameter of the pinion this wheel being on a shaft *h* which by means of a cam *k*, works the exhaust valve *l*.

[Price 8d.]

Nunn and White's Improvement in Gas or Oil Motor Engines.

The cranks *c c* on the two shafts *d d* are so set that the two pistons *b b* approach each other in their instroke, and recede from each other in their outstroke. Between them are the combustion chamber the inlet valve *m* and the exhaust valve *l*.

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

Gas or oil motor engine having two pistons moving in opposite directions in one cylinder, and connected to cranks on two fly-wheel shafts which have pinions gearing with a wheel twice their diameter on a medial valve shaft, substantially 10 as described.

Dated this 8th day of November 1899.

ABEL & IMRAY,
Agents for the Applicants.

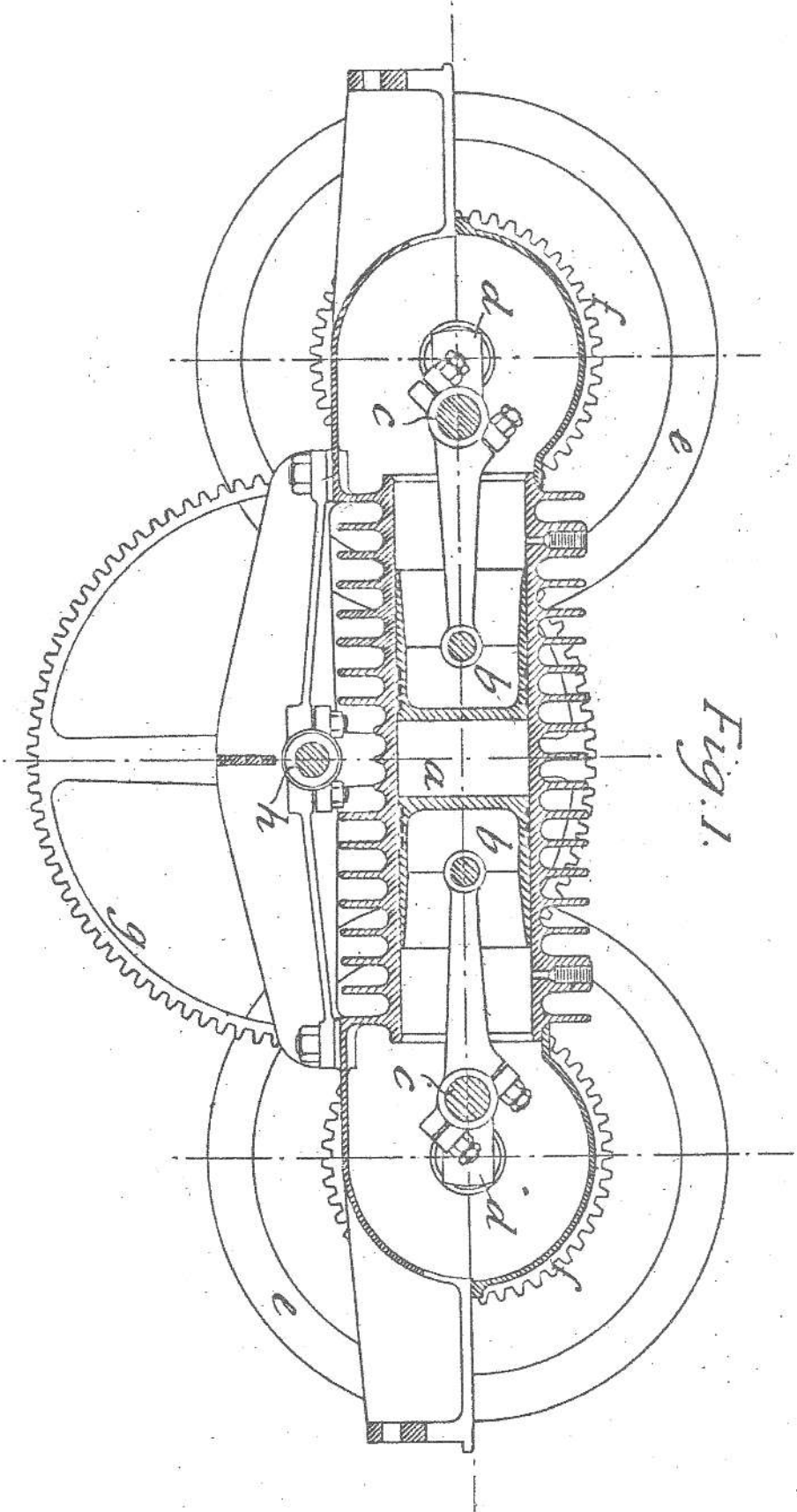


Fig. 1.

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

Fig. 2.

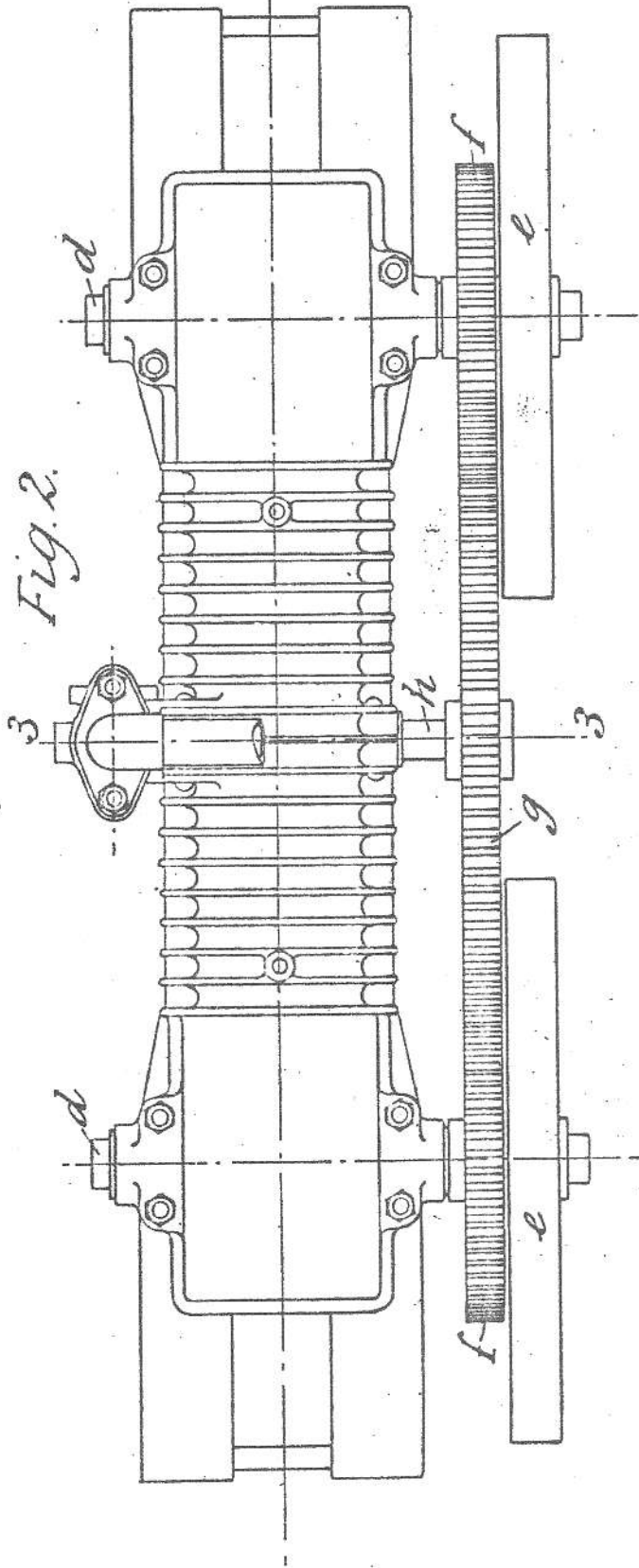
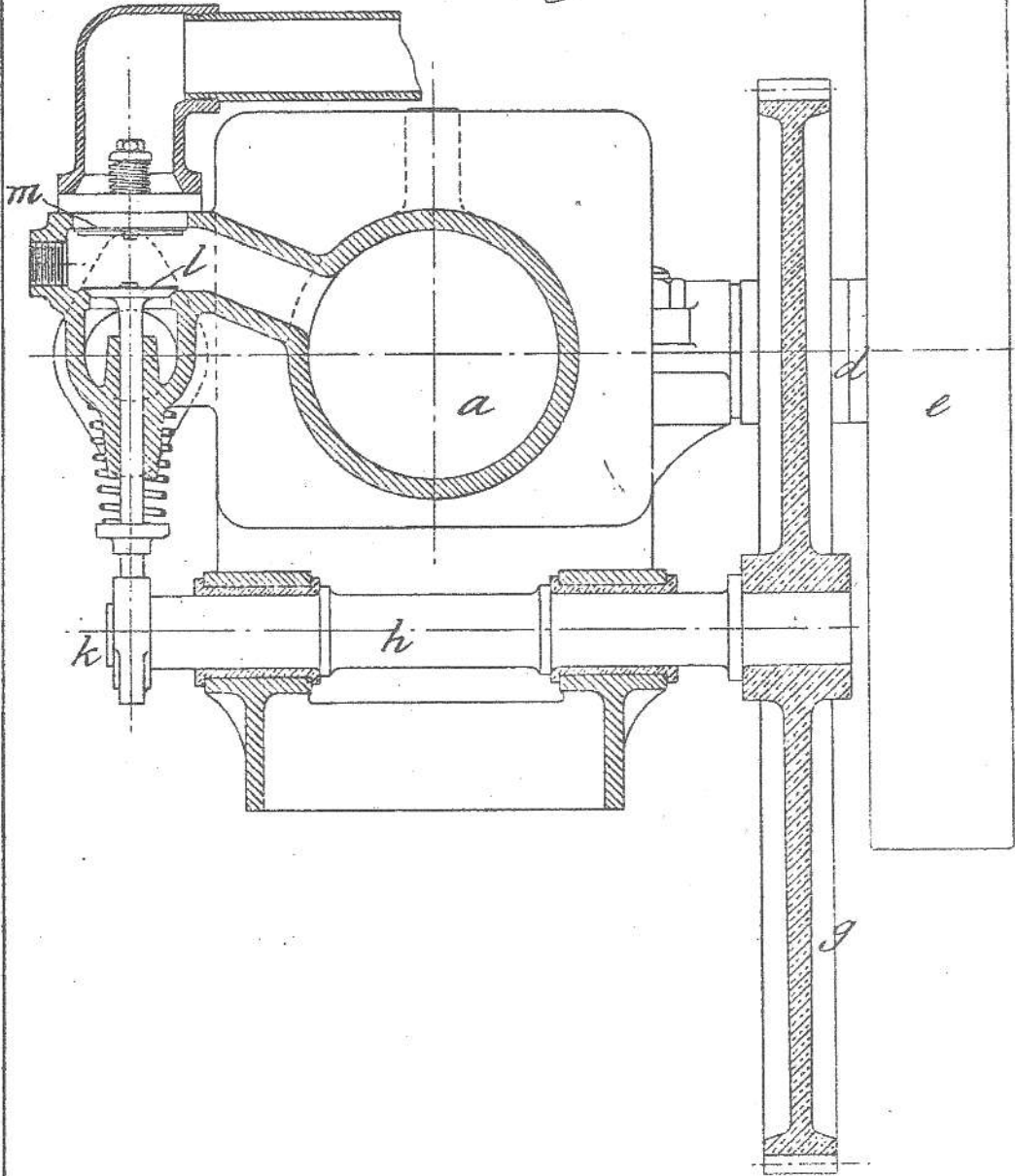


Fig. 3.



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