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MOTION CONVERTING MEANS
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3,130,592

FIG. 1

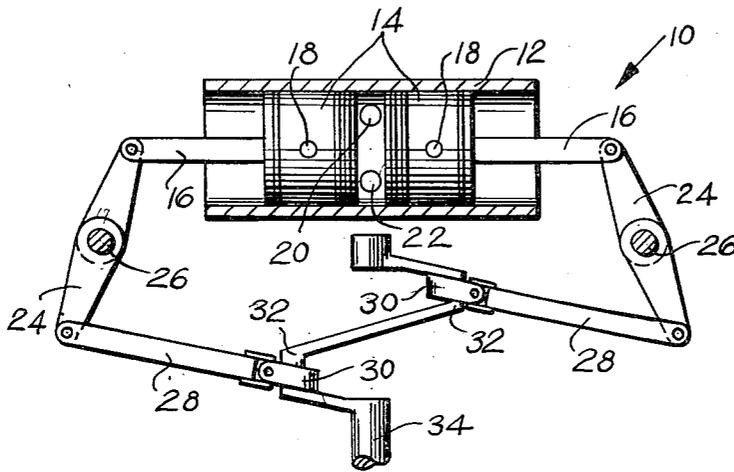
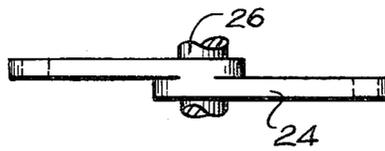


FIG. 2



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MOTION CONVERTING MEANS
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1 Claim. (Cl. 74-40)

This invention relates to engines and more particularly to an internal combustion engine.

It is an object of the present invention to provide an extremely efficient internal combustion engine having reaction type pistons for efficiently transmitting power resulting from combustion of fuel to the crank shaft of the engine.

A further object of the present invention is to provide an internal combustion engine of the above type which is extremely efficient, effective, smooth running, and adaptable for all types of use.

Other objects of the invention are to provide a motor which is of simple construction, has a minimum number of parts, is inexpensive to manufacture and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a longitudinal cross sectional view of a motor made in accordance with the present invention in actual use; and

FIGURE 2 is an enlarged fragmentary plan view of certain parts of the present invention.

Referring now more in detail to the drawing, an internal combustion engine 10 made in accordance with the present invention is shown to include a main cylinder 12 open at both ends and slidably supporting a pair of opposed pistons 14 therewithin. Each piston 14 is provided with a piston rod 16 pivotally mounted thereupon by means of wrist pins 18 for reciprocating longitudinal movement in opposite directions between the opposite ends of the cylinder 12 and the center thereof which is provided with a fuel inlet valve 20 and an exhaust outlet valve 22.

The outer ends of the piston rods 16 are pivotally connected to one end of a pair of rock levers 24 rotatably supported upon cross shafts 26. The opposite ends of the rock arms 24 are connected by means of

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pivot pins to crank levers 28 rotatably mounted by means of bearings 30 at their opposite ends to offset throws 32 of a crank shaft 34.

It will thus be recognized that with proper timing of fuel injection, ignition, and fuel exhaust, the opposed pistons 14 will move in opposite directions, fully utilizing the explosive force of the fuel, to effect reciprocation of the rock arms 24 and continuous rotation of the crank shaft 34, thus transmitting energy in a most efficient and effective manner. Of course, minor considerations, such as offsetting the throws sufficiently to prevent locking of the engine at dead center and the like, may be employed to insure smooth running and efficient operation of the engine during use.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

What I claim as new and desire to protect by Letters Patent of the United States is:

In a motion converting device the combination of a pair of rock arms pivotally supported at their middle portions, one end of said rock arms being linearly reciprocally driven and the opposite end of each of said rock arms being pivotally connected to displaced throws of a crank shaft forming a link in the transmission of power to said driven crank shaft, a transverse shaft extending through the middle portion of each of said rock arms for pivotally supporting said rock arms and each of said transverse shafts being on an axis which is perpendicular to the axis of said crank shaft, said opposite end of each of said rock arms being pivotally connected to one end of a link, the opposite end of each of said links being connected pivotally free to a pin mounted on each of said displaced throws, said pin having an axis which is parallel to each of said transverse shafts and perpendicular to said axis of said crank shaft.

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