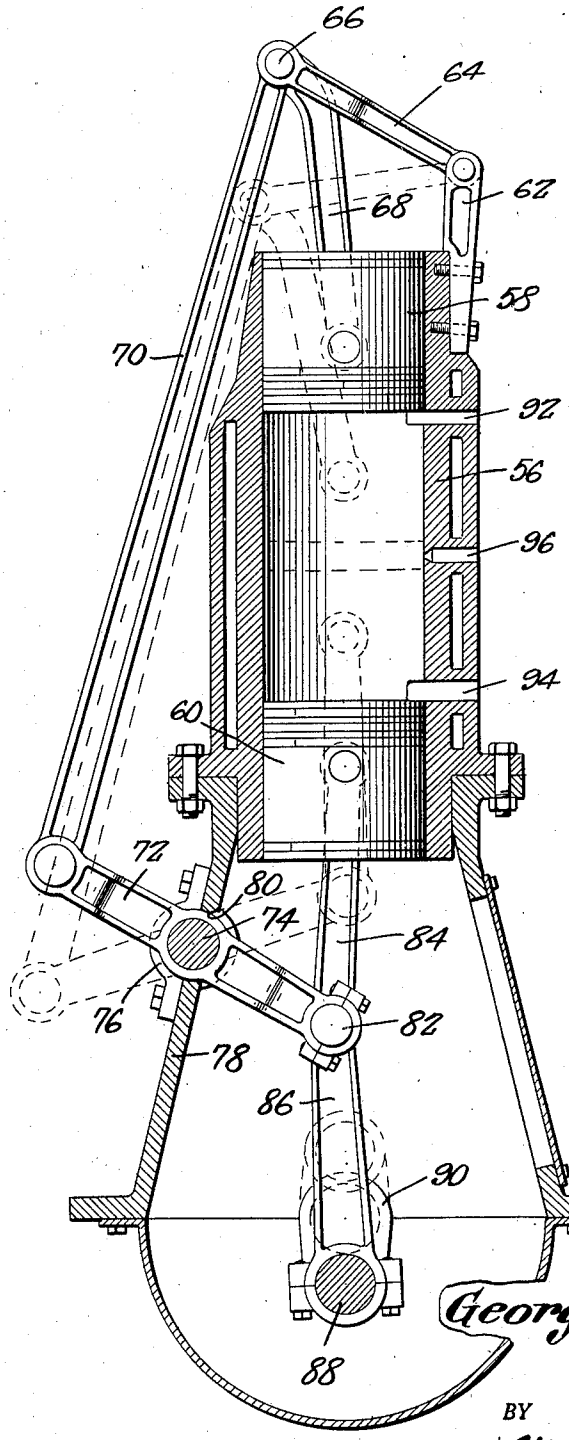
May 29, 1945. G. A. AKERLEY 2,377,200

DIESEL ENGINE

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DIESEL ENGINE

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2 Claims. (Cl. 123—51)

My invention relates to internal combustion engines of the Diesel type, and has among its objects and advantages the provision of an improved engine of the opposed piston type embodying a novel linkage operatively connecting the pistons.

In the accompanying drawing the figure is a vertical sectional view of an engine in accordance with my invention.

In the embodiment of the invention selected for illustration, I make use of a cylinder 56 having pistons 58 and 60 operating in the cylinder. An opening 96 is provided for the fuel injection nozzle, not shown. The cylinder is also provided with a scavenging port 92 and an exhaust port 94.

A bracket 62 is attached to the cylinder 56 and has one end of an arm 64 pivotally connected therewith. The other end of the arm 64 is pivotally connected with a pin 66 to which the upper end of the rod 68 of the piston 58 is also pivotally connected. The upper end of a connecting rod 70 is also pivotally connected with the pin 66 and at its lower end with one end of a rocker arm 72. This rocker arm is pivotally mounted on a pin 74 supported in bearings 76 (only one of which is illustrated) attached to the crankcase 78. An opening 80 is provided in the crankcase for accommodating the rocker arm 72.

The inner end of the rocker arm 72 is pivotally connected with a pin 82 to which the lower end of a rod 84 is connected. This rod is connected with the piston 60. A companion rod 86 has its upper end pivotally connected with the pin 82 and its lower end with a crankpin 88 of a crankshaft 90. The cylinder 56 is provided with a scavenger port 92, an exhaust port 94 and an opening 96 for the fuel injection nozzle, not shown.

In operation, the linkage operatively connects the pistons 58 and 60 for simultaneous movement in opposite directions and equal distances. This linkage is of relatively simple construction.

Without further elaboration, the foregoing will so fully explain my invention, that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

1. In an internal combustion engine, the combination of a cylinder, a crankcase, a crankshaft, first and second pistons slidable in said cylinder, first and second rods pivotally connected with the first and second pistons respectively, an operating linkage including a rocker arm connecting said first and second rods one with the other and with said crankcase to constrain the pistons for simultaneous movement in opposite directions, and a companion rod operatively connecting said second rod with said crankshaft.

2. An internal combustion engine comprising a cylinder, a crankcase, a crankshaft inside the crankcase, first and second pistons slidable in said cylinder, a first rod pivotally connected with the said first piston, a link having one end pivotally connected with said cylinder and its other end with said first rod, a connecting rod having one end pivotally connected with said first rod and said link, a rocker arm mounted on said crankcase, one end of said rocker arm being pivotally connected with the other end of said connecting rod, a second rod pivotally connected with said second piston and with the other end of said rocker arm, and a companion rod pivotally connected with said second arm and said rocker arm and the crankshaft.

GEORGE A. AKERLEY.