C. J. GOTTI.

ADJUSTABLE CRANK FOR INTERNAL COMBUSTION ENGINES.

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934,164. **Patented Sept. 14, 1909.**

Fig. 1.

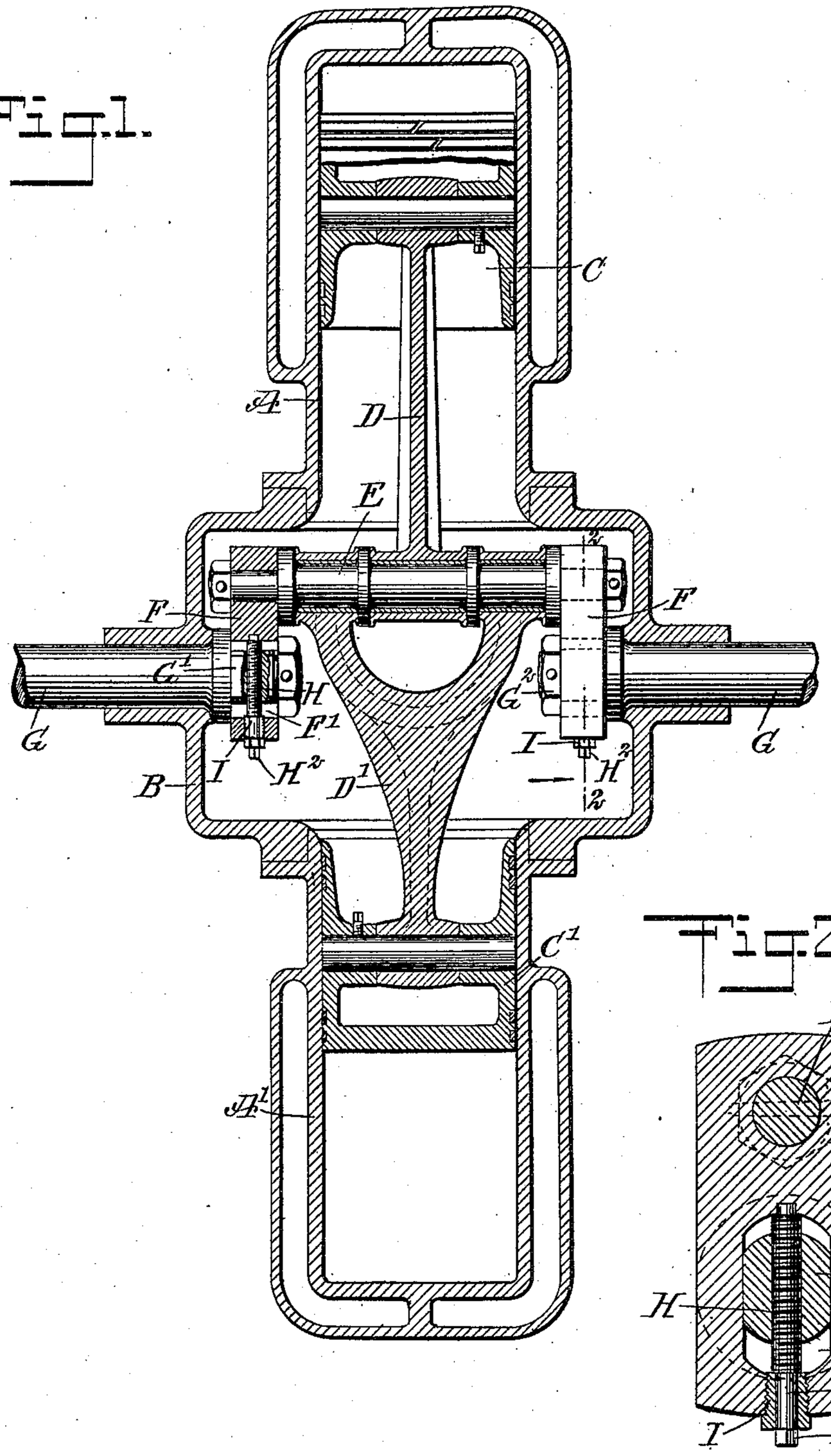

Fig. 2.

WITNESSES

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ADJUSTABLE CRANK FOR INTERNAL-COMBUSTION ENGINES.

934,164. Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed February 16, 1909. Serial No. 478,159.

To all whom it may concern:

Be it known that I, CONRAD J. GOTTI, a citizen of the United States, and a resident of Tuckahoe, in the county of Westchester and State of New York, have invented a new and Improved Adjustable Crank for Internal-Combustion Engines, of which the following is a full, clear, and exact description.

The object of the invention is to provide an adjustable crank for an internal combustion engine, whereby the length of the stroke of the piston in the cylinder can be changed to vary the degree of compression of the charge.

The invention consists in the particular construction and arrangement of parts as hereinafter fully described and pointed out in the claim.

Figure 1 is a sectional plan view of the improvement; and Fig. 2 is an enlarged cross section of the crank on the line 2—2 of Fig. 1.

The oppositely-disposed alined cylinders A, A′ are connected with each other by a casing B, into which open the inner open ends of the cylinders A and A′. In the cylinders A, A′ reciprocate the pistons C, C′ connected by pitmen D, D′ with a wrist pin E held on crank arms F, adjustably secured to the opposite flattened ends G′ of the sections of the main shaft G, as plainly indicated in Fig. 1. Each crank arm F is provided with an elongated opening F′, the side walls of which slidingly engage the flattened sides of the end G′ of the corresponding shaft section, and in said end G′ screws a screw H mounted to turn at its outer round portion H′ in a bushing I, secured in one end of the crank arm F. The round portion H′ terminates in a polygonal offset H² adapted to be engaged by a wrench or other tool, to permit of turning the screw rod H, so as to move the crank arm F laterally, thus shifting the wrist pin E nearer to or farther from the center of the shaft G, thereby decreasing or increasing the stroke of the pistons C, C′, and thus governing the degree of compression of the explosive charges in the working ends of the cylinders A, A′. From the foregoing it will be seen that by making the crank arms F transversely adjustable on the engine shaft G, the explosive charges in the cylinders A, A′ can be compressed to a more or less degree, as desired. Nuts G² screw on the terminals of the ends G′, to hold the crank arms F against longitudinal movement on the reduced ends G′ of the shaft sections.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

In an internal combustion engine, a crank shaft consisting of alined sections whose adjacent ends are spaced apart from each other and flattened, a crank arm on each of said ends, each of said arms having at one end an elongated opening for receiving the flattened end of the section and at the other end a circular opening, said openings being transverse to the arm, said arm having also a longitudinal opening communicating with the elongated opening, a bushing threaded thereinto, and a screw journaled in the bushing and threaded through the flattened end of the section and engaging the opposite side of the elongated opening, the outer end of the screw being squared for the purpose set forth, and a wrist pin having its ends received in the circular openings of the respective arms.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CONRAD JOSEPH GOTTI.

Witnesses:

CHARLES JUPE,

LOUIS CHATLAS.