May 3, 1938. E. KLAIBER 2,116,353

DOUBLE MAGNETO

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Fig. 1

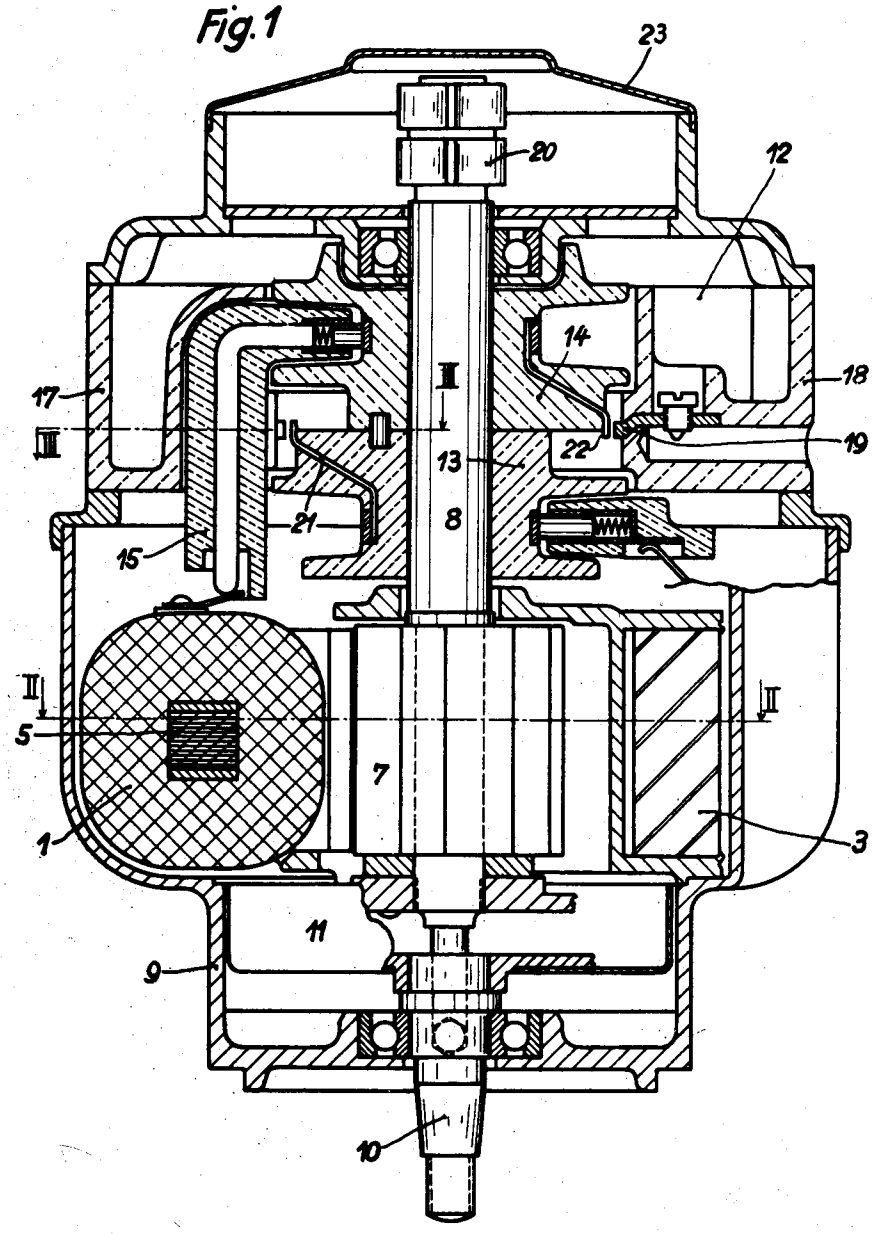

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Fig. 2

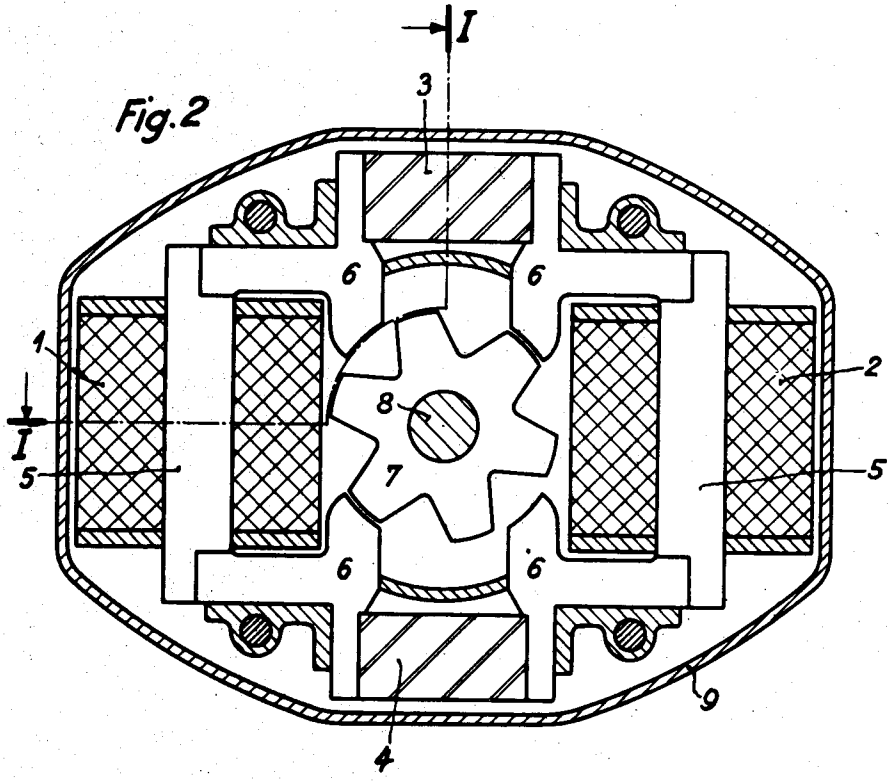
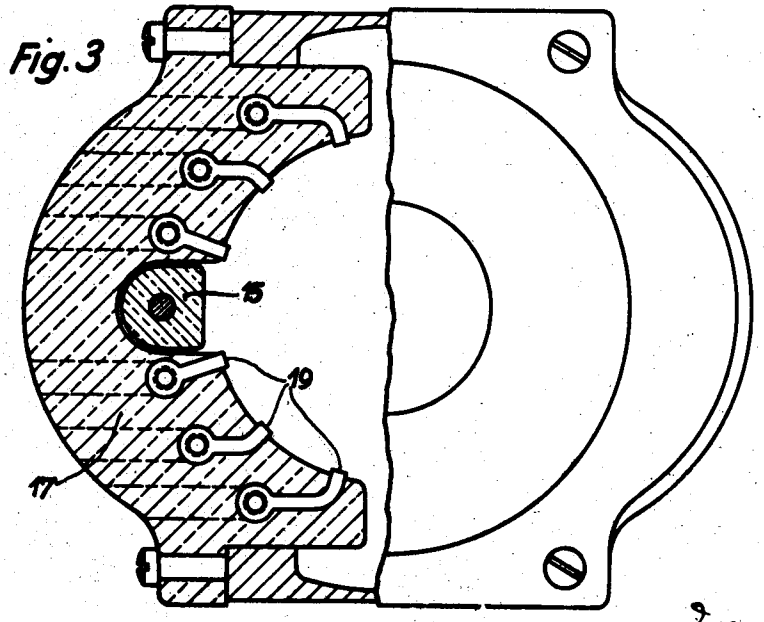


Fig. 3



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UNITED STATES PATENT OFFICE

2,116,353

DOUBLE MAGNETO

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Application July 31, 1935, Serial No. 34,078
In Germany August 28, 1934

7 Claims. (Cl. 171—209)

The invention relates to double magnetos, more especially those having a rotary inductor or conducting piece for the lines of force, and a stationary system surrounding the inductor and consisting of two armatures with pole-shoes and two magnets seated between these armatures. It is an object of the invention to provide a novel double magneto simple and economical in construction and preferably suitable for engines with a great number of cylinders. For this purpose, according to the invention a distributor device for both armatures for direct drive without gearing is arranged on the magneto shaft.

An example of construction of the invention is shown in the drawings, in which:—

Figure 1 shows a double magneto in section on line I—I of Fig. 2.

Figure 2 a cross section through the magneto on the line II—II of Fig. 1.

Figure 3 a sectional view of a part of the magneto on the line III—III of Fig. 1.

The magneto shown in the drawings is intended for a twelve-cylinder engine. It consists of two stationary armatures 1 and 2 and two magnets 3 and 4, which are arranged in the same plane between the ends of the armature cores. The armatures have at the ends of their cores 5 pole-shoes 6, which extend into the interior of the space formed by the armatures and magnets and are situated in such a way that their ends lie in a circle. Between these pole-shoes a six-armed conducting piece or inductor 7 for the lines of force rotates, and is mounted on the magneto shaft 8, which is mounted in the casing 9. In order to obtain a compact and light construction of the current-generating system, for example for aircraft, the magnets consist of a steel of high coercive force, such, for instance, as aluminium-nickel steel, which necessitates short magnets.

Between the driving shaft 10 and the magneto shaft 8 which carries the inductor, an automatic adjuster 11 is introduced as a so-called drive adjuster or centrifugal timing device, which as the speed increases advances the ignition time. On the other side of the inductor remote from the driving shaft a current-distributing device 12 is provided. This consists of two rotating distributor pieces 13 and 14, which are arranged axially side by side. Each distributor piece is connected by a well-insulated current-carrying piece 15 to the high tension winding of the armature cores. Around the distributor pieces two half-ring shaped distributor discs 17 and 18 are arranged, which are provided with electrodes 19 for the connection of ignition cables and past which the electrodes 21, 22 of the distributor pieces travel. These electrodes are so arranged in the distributor pieces that their ends lie in one plane. On the end of the magneto shaft projecting beyond the distributor pieces a cam 20 for an interrupter device is provided, which is of the usual construction and is not more fully shown. The interrupter device is covered by a cover 23.

By altering the form of the inductor for the lines of force, the double magneto can also be made applicable to engines having more cylinders.

I declare that what I claim is:

1. A double magneto for feeding separate ignition circuits comprising two stationary armatures, stationary magnets arranged in the same plane between the ends of the armature cores, a rotary magneto shaft, an inductor mounted on said shaft, and a distributor device for both armatures for direct drive without gearing arranged on said rotary shaft.

2. A double magneto for feeding separate ignition circuits, comprising two stationary armatures, stationary magnets, a rotary shaft, an inductor for the flux mounted on said shaft, and a distributor device for both armatures for direct drive without gearing, mounted on said rotary shaft.

3. A double magneto for feeding separate ignition circuits comprising two armatures, magnets, a rotary shaft, a driving shaft, a centrifugal timing device between said driving shaft and said rotary shaft, a distributor device for both armatures mounted on said rotary shaft and an interrupter device on said rotary shaft, on the side of the distributor remote from the armature.

4. A double magneto for feeding separate ignition circuits, comprising a rotating inductor for the lines of force, a stationary system surrounding said inductor consisting of two armatures carrying the magneto winding and two magnets arranged between said armatures, and a distributor device for both armatures for direct drive without gearing, arranged on the shaft of said inductor.

5. A double magneto for feeding separate ignition circuits comprising two armatures, magnets, a rotary magneto shaft and two distributors for direct drive without gearing mounted, side by side, on said shaft, one for each armature.

6. A double magneto for feeding separate ignition circuits comprising two armatures, magnets, a rotary magneto shaft and two distributors, arranged side by side on said shaft, one for each armature.

7. A double magneto for feeding separate ignition circuits comprising two armatures, magnets, a rotary magneto shaft and two distributors arranged side by side on said shaft, one for each armature, the electrode ends of the distributors lying substantially in one plane.

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