A. FOURNAISE.

COMBINATION LOCK FOR ENGINE STARTING DEVICES.

APPLICATION FILED FEB. 20, 1912.

1,054,190. Patented Feb. 25, 1913

FIG. 1

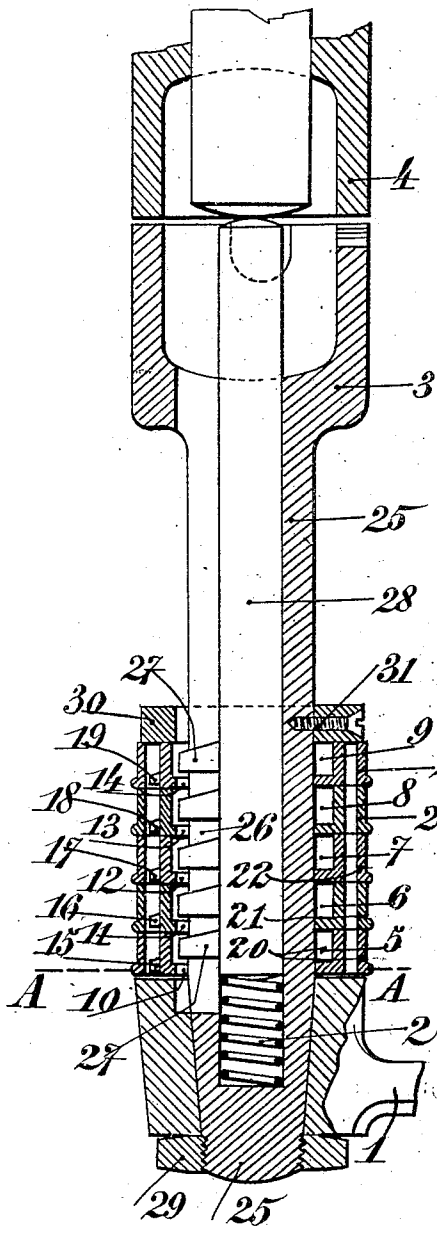


FIG. 2

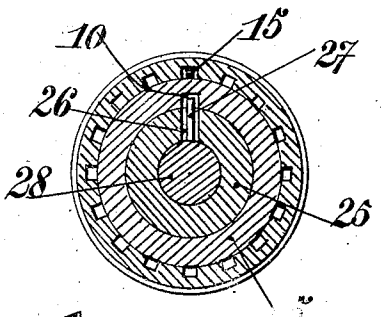
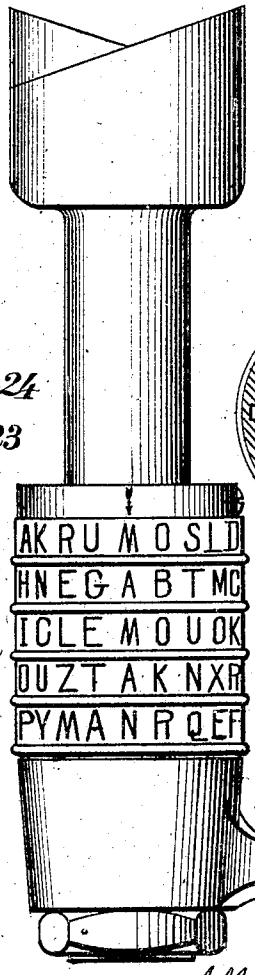


FIG. 3



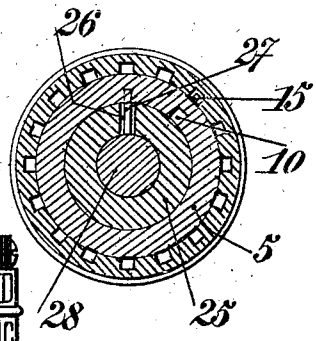


FIG. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ALBERT FOURNAISE, OF LYON, FRANCE.

COMBINATION-LOCK FOR ENGINE-STARTING DEVICES.

1,054,190. Specification of Letters Patent. Patented Feb. 25, 1913.

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To all whom it may concern:

Be it known that I, ALBERT FOURNAISE, a citizen of the French Republic, residing at Lyon, in the French Republic, have invented a certain new and useful Improvement in Combination-Locks for Engine-Starting Devices, of which the following is a specification.

The object of the present invention is a simple and practical device particularly applicable to the starting handles of motor road vehicles for preventing fraudulent starting of the vehicle, since it is necessary to know a particular combination of ciphers or characters in order to bring the usual starting crank handle in position for rotating the engine shaft, and the secret combinations which are very numerous, can be varied as desired by the owner of the car or other authorized person.

In the annexed drawing which illustrates an embodiment of the invention, Figure 1 is a longitudinal section, Fig. 2 is a cross section on the line A A of Fig. 1, and Fig. 3 is a cross section showing the parts of the mechanism in position for preventing starting, while in Figs. 1 and 2 all the parts are in the necessary position for starting, so that the crank 1 can be forced inward compressing the spring 2 whereby the clutch 3 of the crank can be brought into engagement with the clutch 4, the rotary movement of which revolves the engine shaft.

The mechanism comprises a number of disks 5, 6, 7, 8 and 9, each provided with a notch 10, 11, 12, 13, 14, and with a spur 15, 16, 17, 18 and 19 respectively. The said spur is adapted to engage in one of a series of corresponding notches in outer rings 20, 21, 22, 23, 24, to connect the disk to the respective ring. Each of the rings has on its periphery letters, figures or other characters by the interrelation of which different secret combinations can be produced.

The disks 5–9 are rotatably mounted on a tubular shank or member 25 provided with a longitudinal groove 26 which always affords passage to the teeth 27 of a rod or member 28 which may be termed a comb. The said groove 26 permits a longitudinal movement of the shank 25 relatively to the comb, said shank being secured to the handle 1 in operative connection with the clutch 3. When the notches of the disks 5–9 coincide with the teeth 27 of the comb 28, they afford passage to said teeth and the disks can then be forced inward when axial pressure is exerted on the handle 1, the spring 2 being compressed against one end of the rod 28 of the comb, the other end of which always abuts against a stationary part. If, however, the positions of the outer rings and disks are varied, for example, to give them the positions shown in Fig. 3, the notches 10 to 14 no longer coincide with the teeth 27 of the comb, and between said fixed teeth are solid parts of the disks which prevent any axial movement of the handle and consequently any attempt to start the engine. A nut 29 fixes the crank on the shank 25, but this and other details of construction can be varied as required as for instance the number of disks and rings.

It will be understood that the mechanism described effectually prevents fraudulent starting of the engine while allowing a person acquainted with the combination to quickly start it by shifting the letters or characters of the combination opposite marks made on the crank and on the shank 25.

To vary the combination it is sufficient to turn the outer rings with regard to the disks which they surround whereby the notch into which the spur penetrates is changed.

As will be seen by reference to Figs. 2 and 3, each outer ring has a number of notches corresponding to a letter or character. Rotation of the rings relatively to the disks can be effected without trouble after rectilinear displacement of the rings which can be easily effected by unscrewing the nut 29 so that the handle can be removed. A suitable stop such as a collar 30 held in position by a screw 31 prevents rectilinear displacement of the rings in the other direction.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. In a device of the character described, the combination with an engine starting member of a series of rotatable notched disks in operative connection therewith and a stationary member having teeth adapted to prevent axial movement of said disks until the notches therein are brought into coincidence with the teeth of said stationary member.

2. In a device of the character described, the combination with an engine starting member of a series of rotatable notched disks

in operative connection therewith, a stationary member having teeth adapted to prevent axial movement of said disks until the notches therein are brought into coincidence with the teeth of said stationary member, a rotatable character bearing ring surrounding each disk, and means for positively connecting the rings and disks.

3. In a device of the character described, the combination with an engine starting handle, a grooved shank connected thereto, a plurality of notched disks rotatably mounted on said shank, and a fixed member within same having teeth extending through said groove and adapted to engage said disks to prevent axial movement thereof and of the handle until the notches in said disks coincide with said teeth.

In witness whereof I have signed this specification in the presence of two witnesses.

ALBERT FOURNAISE.

Witnesses:
GASTON JEANNIANO,
MARIUS MERONAZ.