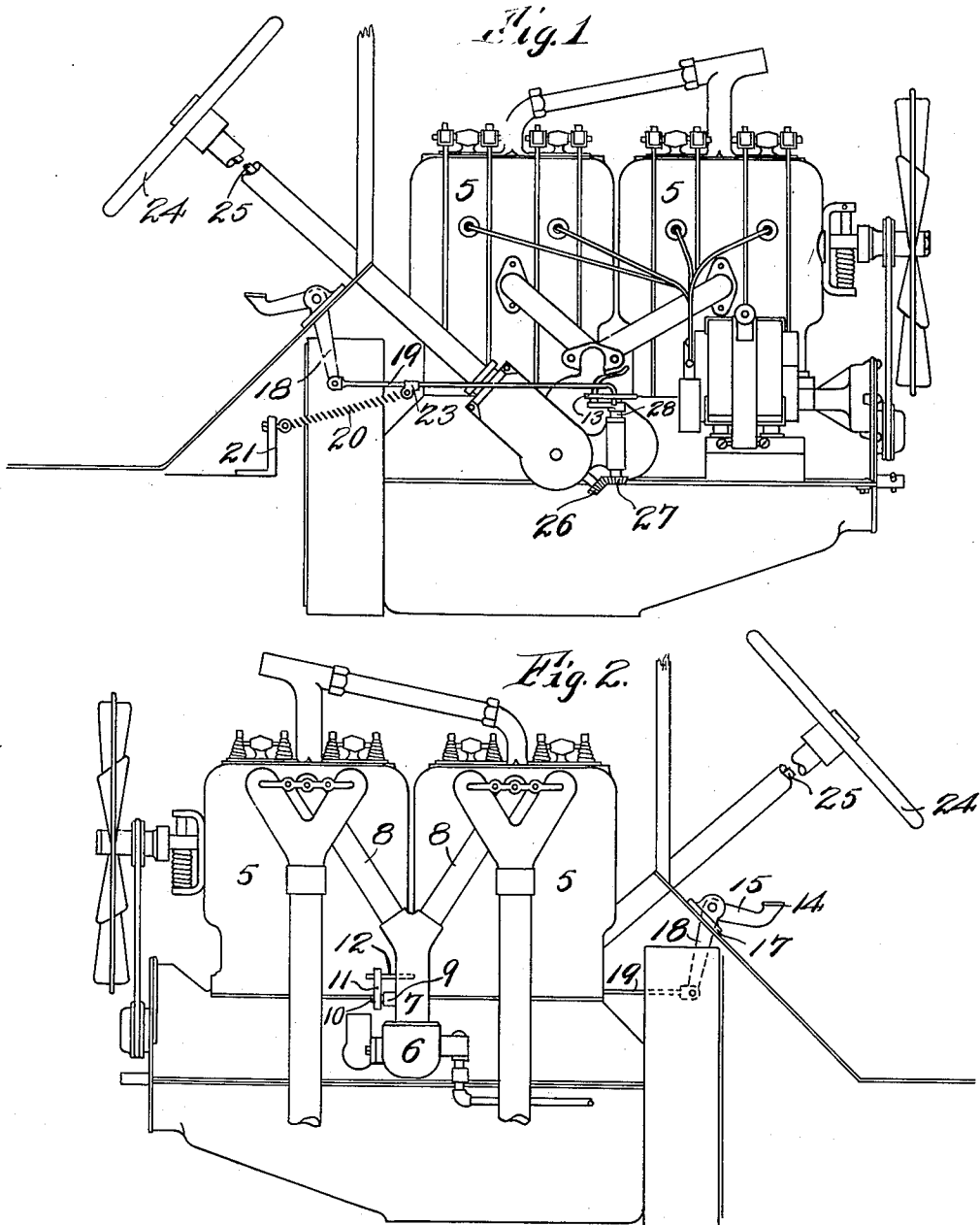


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CONTROLLING MEANS FOR EXPLOSIVE ENGINES.
APPLICATION FILED APR. 19, 1910.

1,017,359.

Patented Feb. 13, 1912.

2 SHEETS—SHEET 1.



Inventor.

LOUIS C. WOLFE

Witnesses

Walter Kelly

Emory A. Croff

By

N. E. Lee

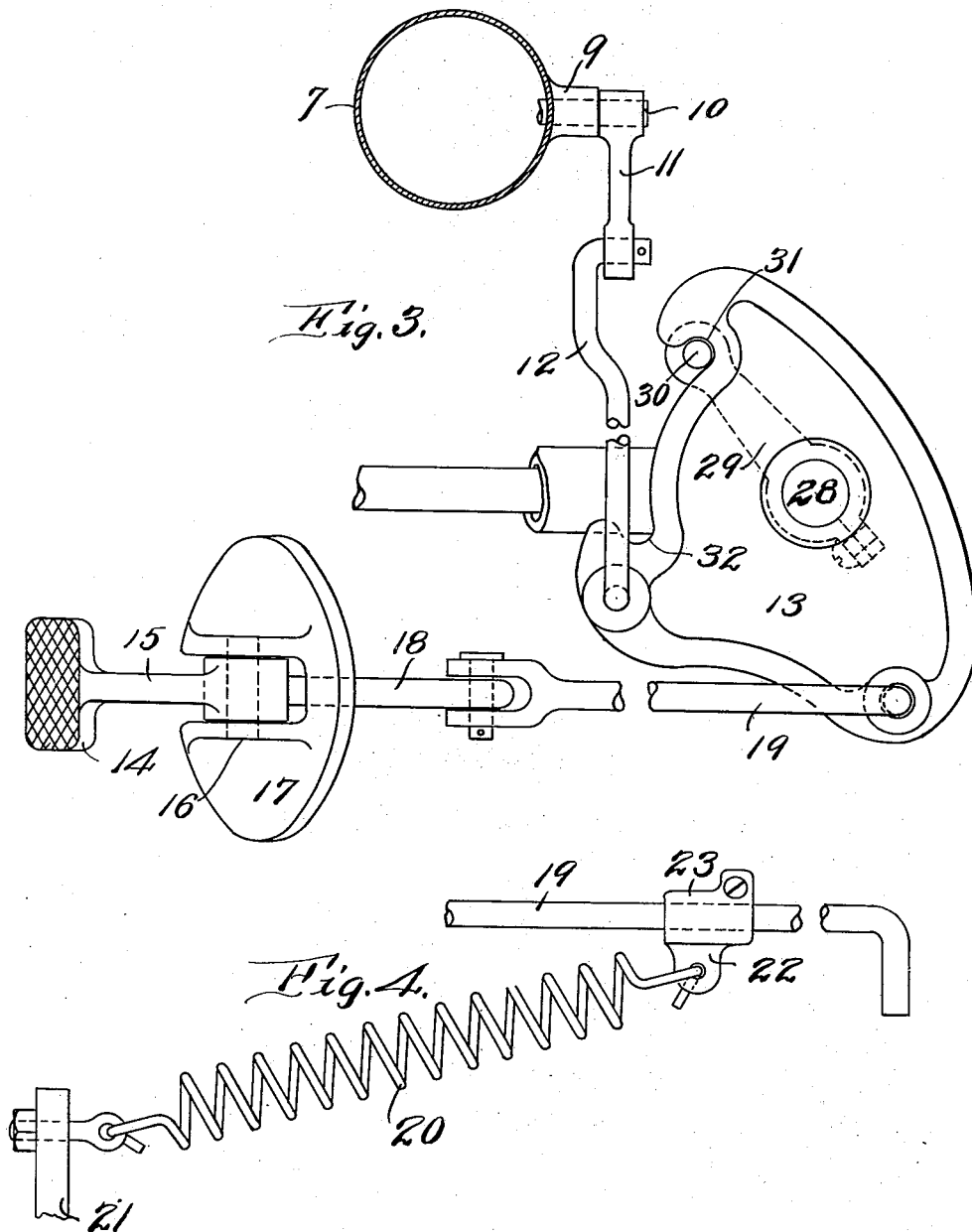
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UNITED STATES PATENT OFFICE.

LOUIS C. WOLFE, OF ALTOONA, PENNSYLVANIA.

CONTROLLING MEANS FOR EXPLOSIVE-ENGINES.

1,017,359.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed April 19, 1910. Serial No. 556,400.

To all whom it may concern:

Be it known that I, LOUIS C. WOLFE, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Controlling Means for Explosive-Engines, of which the following is a specification.

The present invention relates more particularly to internal combustion engines for automobiles or self-propelled vehicles and more specifically to means for controlling the speed of the engine through the manipulation of the throttle valve or other controlling element.

The primary object of the invention is to provide novel means of a simple character, whereby such valve can be manipulated by the foot without in any way interfering with the usual hand operating device, so that the speed of the engine can be easily controlled when the hands of the operator are occupied with other duties.

A further and important object is to provide a structure that can be employed in connection with any well known type of motor and may be either in the form of an attachment, with which such motor can be equipped or can constitute a unitary portion of the mechanism.

An embodiment of the invention that has proven entirely satisfactory, is disclosed in the accompanying drawings, wherein:—

Figure 1 is a view in elevation of one side of a well known type of motor, showing the improvements applied thereto. Fig. 2 is a view in elevation of the opposite side of the motor. Fig. 3 is a plan view on an enlarged scale of the controlling mechanism. Fig. 4 is a detail view showing the spring returning device.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment disclosed, the engine comprises a pair of cylinders 5, with which is associated a carbureter 6. An intake pipe 7, leading from the carbureter, has branches 8 that conduct the charges to the cylinders in a manner well understood, and arranged in this intake, is a throttle valve of the usual type, having a projecting stem 9 provided with a crank shaft 10. A link 12, extending transversely of the engine, is

connected to the crank arm 11, and is pivoted to a motion transmitting device, in the form of an oscillatory plate 13 located on the opposite side of the engine to the carbureter, and loosely journaled on the vertical stub shaft 28 or equivalent member.

A treadle plate 14 is formed upon one arm 15 of a bell crank, pivoted, as shown at 16 to a base plate 17, and the other arm 18 of this bell crank, is connected by a link or rod 19 with the motion transmitting device 13. The treadle is mounted on the machine in convenient relation to the operator and it will be obvious therefore that if the treadle is depressed, the plate 13 will be swung, thereby moving the link 12, the crank arm 11 and the throttle valve will be opened. In order that the valve may be returned to closed position when pressure upon the treadle is released, a spring 20 is employed, one end being connected to a bracket 21 suitably secured to the machine, the other end being engaged with an eye 22 clipped as shown at 23 upon the rod or link 19. This spring will be extended when the treadle is depressed, and will react when said treadle is released.

In order to manually operate the device, the usual hand operating mechanism is mounted on the steering wheel 24 of the machine, and is connected to a rod or shaft 25 that carries at its lower end a beveled gear 26, this gear being in mesh with another gear 27 carried by the lower end of the aforesaid-stub shaft 28, and the upper end of said shaft has a crank arm 29, the axis of which is coincident with the axis of movement of the plate 13. This crank arm is provided at its free end with an upstanding projection or pin 30, and said pin operates between and is arranged to engage with a pair of oppositely disposed abutment shoulders 31 and 32, formed on the plate 13.

Under normal conditions, or when the throttle valve is closed and the various parts are inactive, the shoulder 32 is against the projection 30. Therefore to open the valve by the treadle, it will be evident that if said treadle is depressed and the plate 13 swung, the shoulder 32 will move away from the projection, and consequently the operation of the throttle valve by the treadle will not in any way affect the hand operating device. The shoulder 32 is against the pro-

jection 30. Upon the operation of the hand device, the crank arm and projection will be swung, and said projection, operating against the shoulder 32, will cause a movement of the motion transmitting device 13.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In an explosive engine, the combination with supply controlling mechanism, of a movable motion transmitting device connected thereto and having spaced abutments, and an actuating member that is movable between and engages the abutments.

2. In an explosive engine, the combination with supply controlling mechanism, of an oscillatory motion transmitting device having spaced oppositely disposed shoulders, and means for operating the device, includ-

ing a swinging crank arm having a projection that operates between the shoulders.

3. In an explosive engine, the combination with supply controlling mechanism, of a movable motion transmitting device connected thereto and having spaced abutment shoulders, an actuating member that is movable between and engages the shoulders, and another actuating member that is connected directly to the device.

4. In an explosive engine, the combination with an engine having an intake and a throttle valve controlling the intake, of an oscillatory motion transmitting device, a link connection between the device and the throttle valve, a treadle, a link connection between the treadle and motion transmitting device, said device having oppositely disposed shoulders, and an actuating member including a crank arm having a projection that operates between and engages said shoulders.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

LOUIS C. WOLFE.

Witnesses:

N. E. GEE,

ADAM LEAKE.