

P. D. SCHENCK.
VALVE MECHANISM.
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1,018,447.

Patented Feb. 27, 1912.

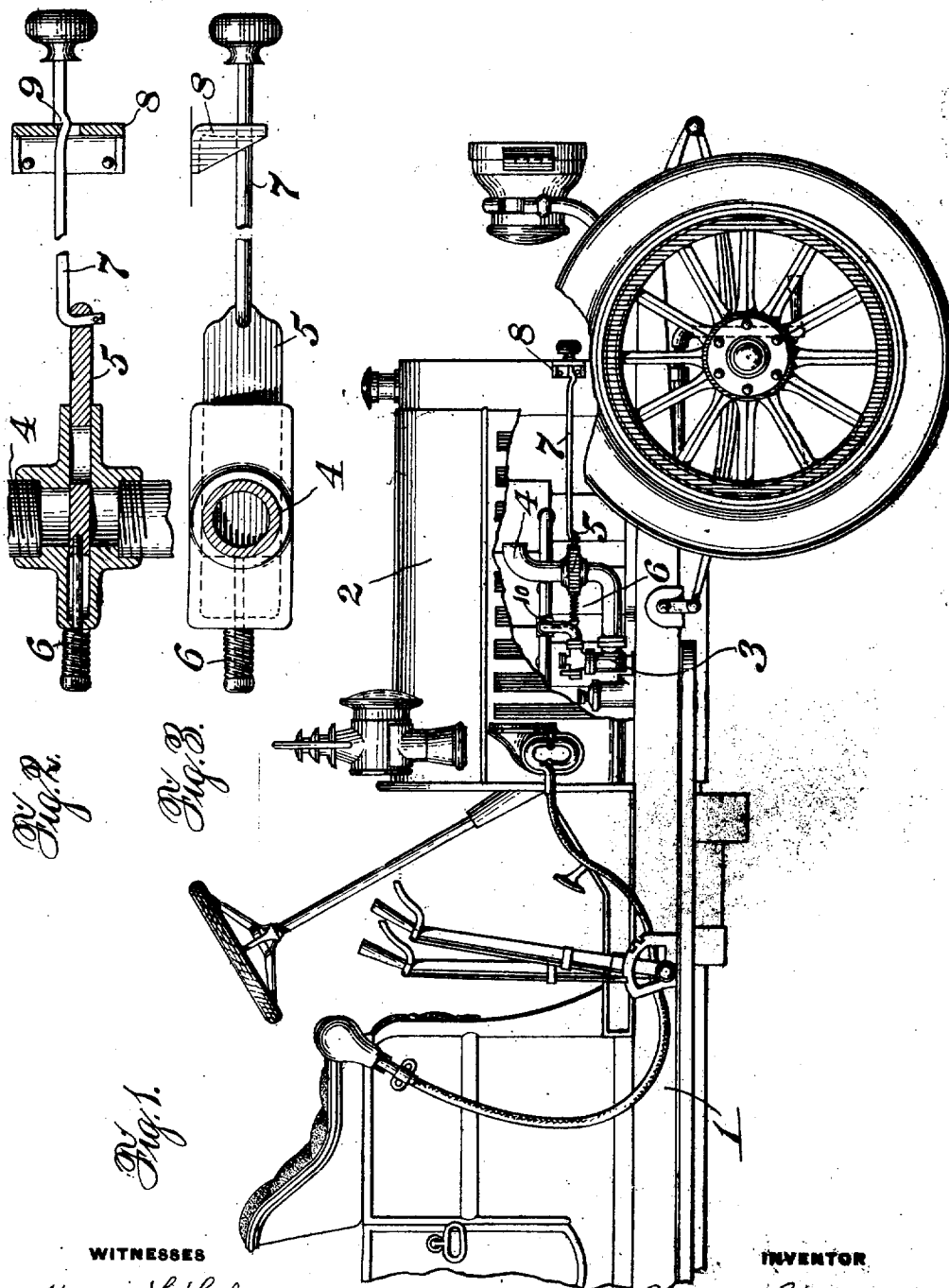


Fig. 2.

Fig. 3.

Fig. 1.

WITNESSES

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VALVE MECHANISM.

1,018,447.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PEIRCE D. SCHENCK, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Valve Mechanisms, of which the following is a specification.

My invention relates to valve mechanisms and particularly to the application of controlling means for the air inlet as used on the carburetor of a motor car, and the invention has for its objects; the provision of valve controlling means whereby the motor may be more readily started, especially in cold weather; to provide a control for the air inlet which may be easily operated from the exterior of the motor casing; to provide a convenient means for temporarily holding the air inlet closed; and to provide a means for holding the air inlet closed which will be automatically opened by the vibration due to the starting of the car. One embodiment of my invention is shown in the accompanying drawings in which—

Figure 1 is a side elevation of the front part of the motor car, the motor casing being broken away to disclose the controlling means for the air inlet valve to which my invention particularly relates,

Figure 2 is a detail section showing the valve for the air inlet and the means for controlling the valve, and

Figure 3 is a plan view of the device as shown in Figure 2.

It has been found that it is also difficult to start a motor car, especially on cold days, because of the admission of an excess of cold air to the carburetor which excess of cold air retards the operation of the carburetor and the ready starting of the motor. My invention is designed to overcome this difficulty by the provision of means for temporarily closing the air inlet valve at the time the motor is started, there being sufficient air in the pipe 4 and the carburetor to provide the air requisite for the first few explosions before the valve is opened. Furthermore, as this closure is desirable only at the time of starting, my invention is designed to provide automatically for the releasing of the means for holding the valve closed when the vehicle is started. In the embodiment of the invention as herein shown and described, this is accomplished by making the valve spring closed, and pro-

viding a catch which is in position to be jarred open by the vibration of the car.

Referring now to the drawings, 1 is the body of the car which may be of any approved form, 2 is the casing which as shown in Figure 1 is broken away to clearly disclose the interior part, 3 is the carburetor, 4 is the air inlet pipe for the supply of air to the carburetor, 5 is the controlling valve therefor held normally in open position, by means of the spring 6, 7 is the operating rod for the valve which rod loosely engages the valve 5, and 8 is a bracket through which the rod 7 passes and which is adapted to cooperate with the projection 9 on the rod for holding valve 5 shut (see Figure 2). The pipe 10 serves to conduct the mixture of gas and air from the carburetor to the motor. It will be noted from Figures 2 and 3 that the valve 6 is of the gate pattern and is adapted to be fully opened or entirely closed, the spring 6 normally tending to hold the valve in full open position. The rod 7 extends to the exterior of the casing for convenience of operation, and is as shown provided with a knob. This rod 7 is loosely connected to the end of the valve 6 so that such rod is capable of a slight vertical motion by which motion the catch 9 is released from the bracket 8, when desired. As it is desirable to retain the valve in closed position, shown in Fig. 2, only when the car is starting, the catch 9 is provided on the upper side of the rod 7 so that the jarring of the vehicle in motion will disengage such catch if the rod is inadvertently left in the position of Figure 2 after the motor has started. The closing of the air inlet when the motor is started serves to accelerate the action of the carburetor and motor by excluding the cold air and at the same time increasing the proportion of combustible in the explosive mixture. It will be seen from the foregoing that the controlling valve is easily operated and that if desired no attention need be paid to this valve after it is placed in the position shown in Figure 2, as the catch will be automatically released by the vibration of the motor or the vehicle after the parts are in operation.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is the following:

1. The combination with a carburetor, of a valve for controlling the air inlet, yield-

ing means for holding the valve open, means for closing the valve and retaining means cooperating with such last means for holding the valve shut against the tendency of the yielding means to open such valve, and adapted to be disengaged by the vibration incident to the operation of the motor with which the carbureter is used so that the valve may open.

- 10 2. The combination with a carbureter, of an air inlet for the carbureter, a valve for controlling the air inlet; yielding means for holding the valve open, means for closing the valve provided with an engaging projection on its upper side, and an engaging member for cooperating with the projection when the valve is closed, the contact between the projection and engaging member being such that the parts will be automatically

disengaged by the vibration incident to the operation of the motor with which the carbureter is used to permit the yielding means to open the valve.

3. The combination with a carbureter, of an air inlet for the carbureter, a valve therefor, yielding means for holding the valve open, and a rod for closing the valve provided with a catch adapted to be disengaged by the vibration incident to the operation of the motor with which the carbureter is used for temporarily holding the valve closed.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

PEIRCE D. SCHENCK.

Witnesses:

E. P. LOFTON,
R. A. HERBRUCK.