No. 894,286. PATENTED JULY 28, 1908.

F. C. REINEKING.

AIR INTAKE REGULATOR FOR CARBURETERS.

APPLICATION FILED APR. 10, 1908.

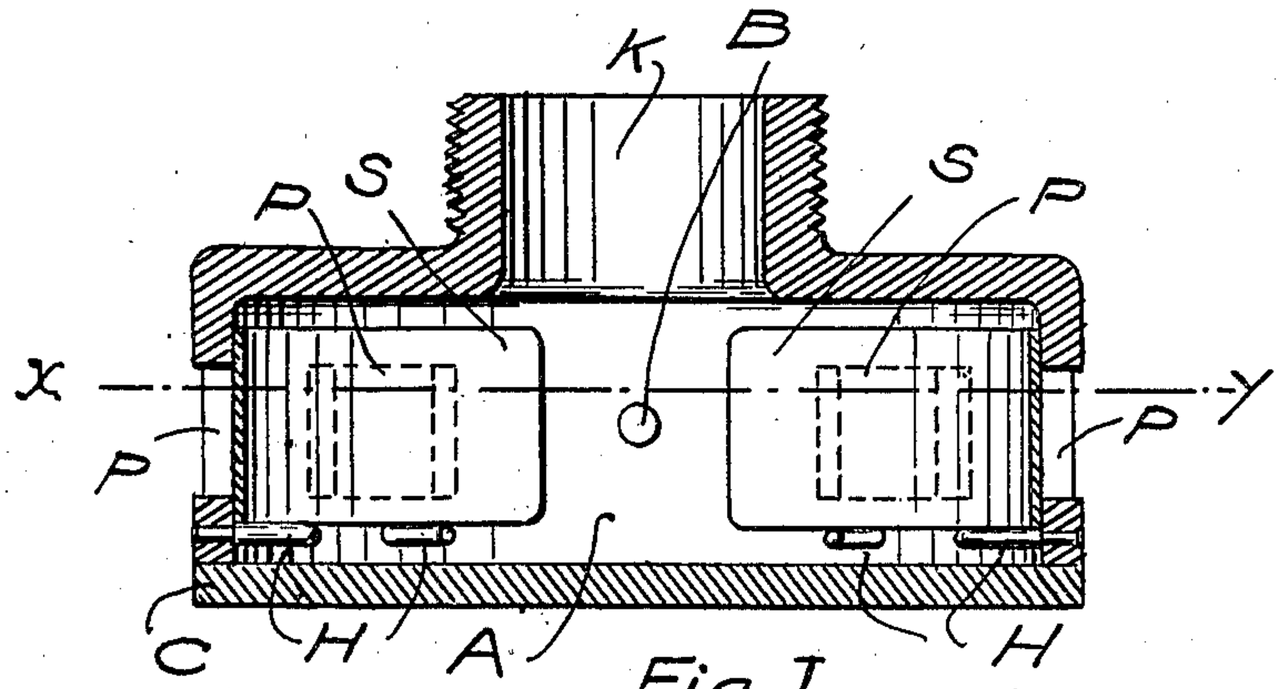

Fig. I.

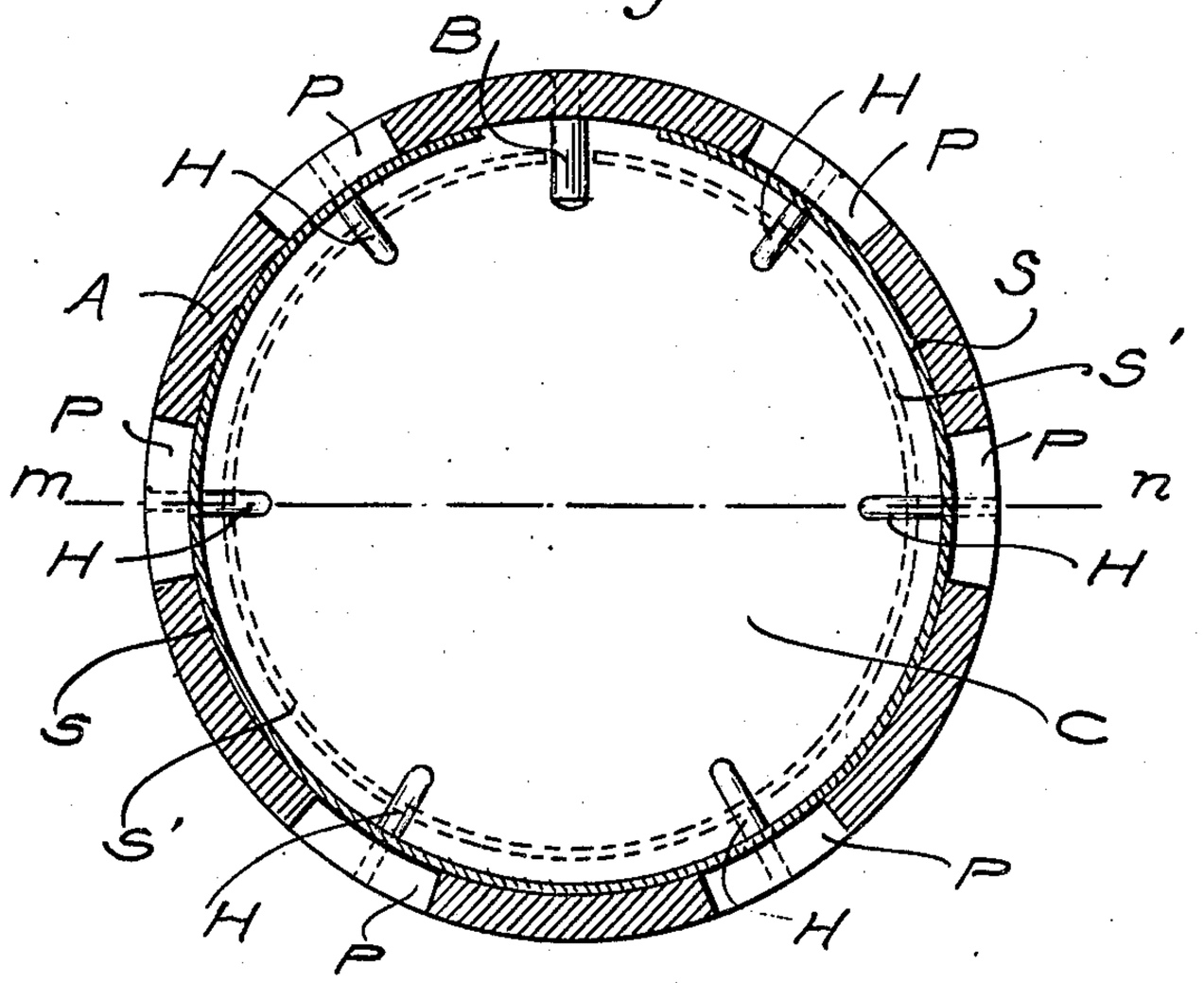

Fig. II.

WITNESSES:

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AIR-INTAKE REGULATOR FOR CARBURETERS.

No. 894,286. Specification of Letters Patent. Patented July 28, 1908.

Application filed April 10, 1908. Serial No. 426,180.

To all whom it may concern:

Be it known that I, FREDERICK C. REINEKING, a citizen of the United States, residing at 208 East Sixty-third street, in the city and county of New York and State of New York, have invented a new and useful Improvement in Air-Intake Regulators for Carbureters, of which the following is a specification.

My invention relates to an improvement in air intake regulators for carbureters; and the object of my invention is to provide means for securing great flexibility in the control of hydrocarbon motors. I attain this object by the mechanism illustrated in the accompanying drawings, in which

Figure 1 is a section in elevation of my device, and Fig. 2 is a section in plan of my device.

Similar letters refer to similar parts throughout the several views.

Figure 1 is a section in elevation taken in the plane *m n*, (Fig. 2). A is the air intake regulator chamber with passage K leading to the carbureter. B is a pin whose function is to keep the spring S from revolving about inside the chamber A. C is an annular bottom rigidly fastened to the lower edge of the sides of the chamber A. H are pins rigidly fixed to sides of the chamber A as shown and projecting inwardly from the sides of the chamber A as shown. P are air ports in the sides of the chamber A. S is a flat spring running around the inside of the chamber A and resting on the pins H. This spring is in the form of a circle except for the opening between the ends of the spring shown in the middle of Fig. 1.

Fig. 2 is a section in plan taken in the plane *x y* (Fig. 1). A is the air intake regulator chamber. B is the pin rigidly fixed to the side of A. C is the bottom of the chamber A. H are the pins rigidly fixed to the sides of the chamber A. P are the air ports in the sides of the chamber A. S is the spring resting on the pins H. S′ is another position of the spring S. The pin B is not an essential portion of my device as its only function is to steady the spring S, and to prevent the open space between the ends of the spring S from working around opposite one of the air ports P. A cast-lug or any other device which would perform the same function as the pin B would answer equally well. The pins H are not an essential portion of my device, as their only function is to keep the bottom of the spring S clear from C the bottom of the chamber and thereby reduce the frictional resistance to the movement of the spring S away from and toward the ports P. My device would function without the presence of the pins H by letting the spring S rest directly on the bottom C, but the presence of the pins H will perhaps add to the smoothness and uniformity of the operation of my device. The spring S, instead of having a space between its ends as shown in Figs. 1 and 2, may be made with overlapping ends, in which case the pin B would be dispensed with.

The operation of the device is as follows: When the engine is at rest, the spring, by reason of its elasticity, is in the position shown by S, Fig. 2, and all the air ports are closed by said spring. As soon as the engine starts however, a partial vacuum is created inside the chamber A. The atmospheric pressure outside the chamber A thereupon becomes operative upon the spring S through the ports P, and the result is that the spring S is pushed back from the ports P and assumes the position S′. The faster the engine runs, the greater becomes the vacuum inside the chamber A, and the more the spring S is pushed back from the ports P, and the more air is admitted to the engine. In like manner, the slower the engine runs, the less becomes the vacuum inside the chamber A, and the less the spring S is pushed back from the ports P, and the less air is admitted to the engine.

I claim as my invention

In air intake regulators for carbureters, in combination a cylindrical air intake chamber, air ports in the sides of said chamber, one continuous spring inside of said chamber closing said air ports, said spring at all points being free to move back away from said air ports.

FREDERICK C. REINEKING.

Witnesses:

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