H. SEYTER.

Air-Pump for Carbureters.

No. 162,255. Patented April 20, 1875.

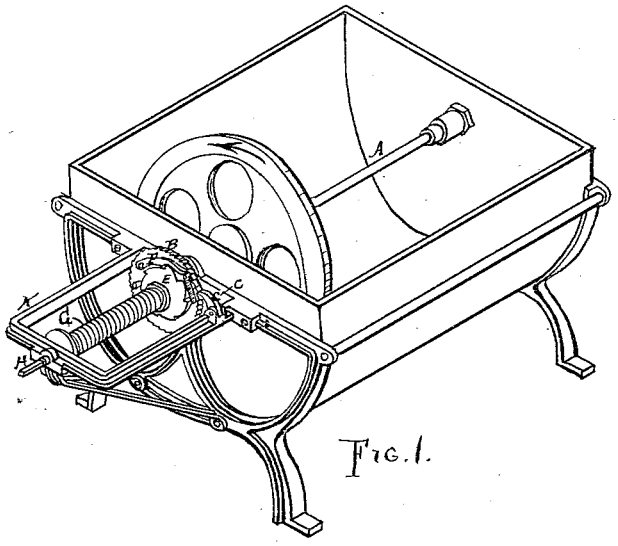

FIG. 1.

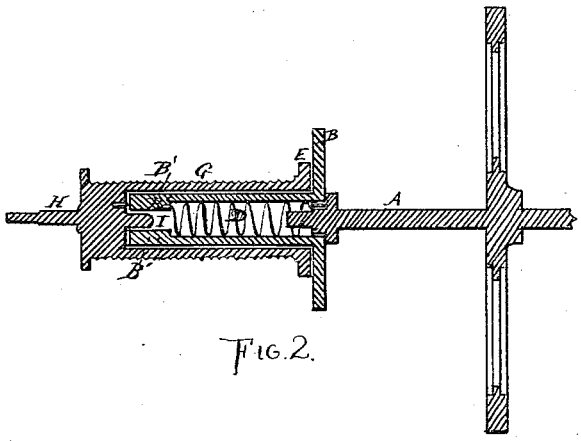

FIG. 2.

John R. Young
Jas. E. Hutchinson } Witnesses.

Inventor.
Herman Seyter, by
Prindle and Co. his Attys

UNITED STATES PATENT OFFICE.

HERMAN SEYTER, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN AIR-PUMPS FOR CARBURETERS.

Specification forming part of Letters Patent No. **162,255**, dated April 20, 1875; application filed February 6, 1875.

To all whom it may concern:

Be it known that I, HERMAN SEYTER, of Cambridge, Massachusetts, have invented an Improvement in Air-Pumps for Carbureters, of which the following is a specification:

This invention relates to the maintaining power of the carbureter-pump, which keeps the pump in action while the weight is wound.

It consists in the combination, with the shaft of a revolving air-pump, exterior to the case thereof, of a drum which rides upon the end of the shaft, and is furnished with a ratchet and pawl allowing motion only in one direction, a coiled spring fastened at one end to the drum and at the other to the shaft, an exterior drum furnished with an opposite pawl and ratchet allowing independent motion in one direction, but combining the motion of the two drums in the opposite or driven direction.

In general principle the above-described contrivance resembles in some degree the maintaining power of a watch of the old-fashioned fusee sort, but the adaptation of the principle to the carbureter-pump has required very careful thought and study, and a complete reorganization of the details of the contrivance.

In the drawings, Figure 1 is a perspective. Fig. 2 is a longitudinal central section of the winding drum and the connecting mechanism. In Fig. 1 a portion of the case and interior of the pump proper is shown. A is the shaft of the pump. It is desired to revolve this in the direction shown by the arrow marked on the wheel in Fig. 1. A drum, B′, carrying on its end a ratchet, B, rides on the end of the shaft, as shown in Fig. 2. A pawl, C, attached at one end to the frame of the pump, engages with this ratchet and allows the drum to revolve only in the said proper direction. This drum, B′, is hollow, and contains a coiled spring, D, fast at one end to shaft A, and at the other to the drum. Upon this drum slips the winding-drum G, which has a ratchet, E, on its inner end, with opposite teeth to those on the first-named ratchet, which engages with pawl F on the face of the first ratchet-wheel, combining the winding-drum G with the spring-drum B′ in the driving direction. A projection, I, in the interior of the winding-drum enters a cylindrical axial cavity in the spring-drum and centers the two. The outer end of the winding-drum is formed into an arbor and crank square, H, which rides in a box in frame K. The driving-cord is wrapped on the exterior of drum G, so as to revolve it in the direction of the arrow, Fig. 1. The driven motion of drum G is transmitted through ratchet and pawl E F to drum B′ and ratchet B, and from that through spring D to the end of shaft A. From this it follows that spring D is always wound, and when winding the cord and drum G it will maintain the motion of the shaft A.

I claim as my invention, and desire to secure by Letters Patent—

The combination of the concentric drums G B′ with the pawl and ratchet E F, the concentric spring D, ratchet and pawl B C, all applied to and combined with the end of shaft A, outside the case of a rotary air-pump, substantially as and for the purpose described.

HERMAN SEYTER.

Witnesses:

A. S. HARRIS,

THOS. WM. CLARKE.