

(No Model.)

A. JACOBS.
MOTOR ENGINE.

No. 351,639.

Patented Oct. 26, 1886.

Fig. 1.

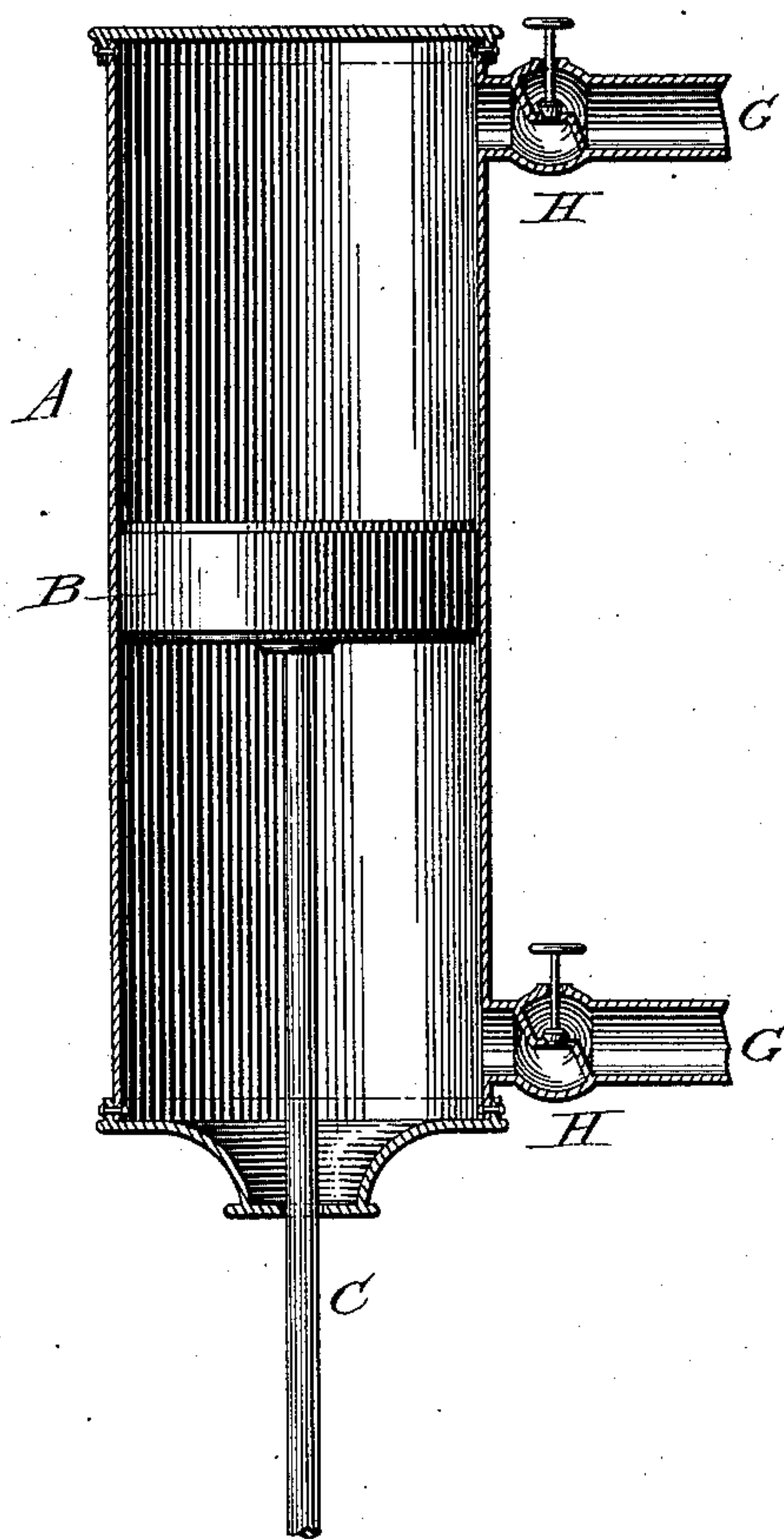
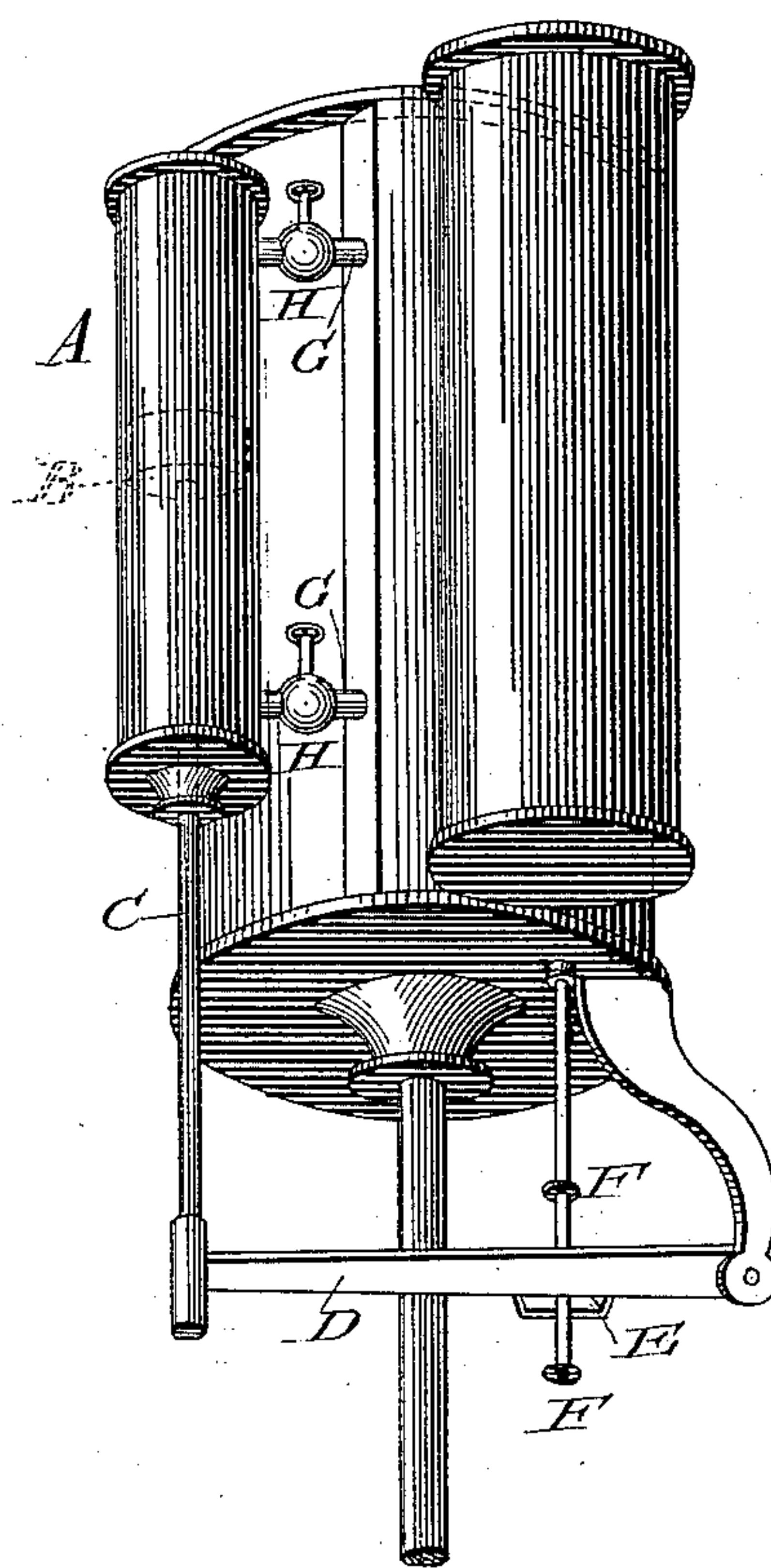


Fig. 2.



Witnesses:

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ALBERT JACOBS, OF CHICAGO, ILLINOIS.

MOTOR-ENGINE.

SPECIFICATION forming part of Letters Patent No. 351,639, dated October 26, 1886.

Application filed July 19, 1886. Serial No. 208,455. (No model.)

To all whom it may concern:

Be it known that I, ALBERT JACOBS, a citizen of the United States, residing at Chicago, Cook county, State of Illinois, have invented
5 a new and useful Valve-Motion, of which the following is a specification.

My invention relates to motor-engines of the cylinder and piston type only, whether
10 driven by steam, water, or other motive power, that may be put to such work as prevents the piston reaching the ends of its cylinder, that is applicable to all purposes, the nature of which causes a variable length of piston-stroke, thus disabling it from moving
15 its own valve.

The object of my invention is to provide a means by which a sure and effective motion is given to the valve. I attain this object by the mechanism illustrated in the following
20 drawings.

Figure 1 is a vertical section of the entire invention. Fig. 2 is a view of the same with a cylinder whose piston is controlled by piston and auxiliary valves, to which this invention is best adapted.
25

A is the cylinder; B, the piston; C, the piston-rod; D, the lever; E, auxiliary-valve stem; F F, blocks; G G, passages; H H, cocks or valves.

30 Let it be supposed that steam is entering the main cylinder, Fig. 2, by the upper supply-port and passing through the upper passage, G, into cylinder A, both pistons being driven to the bottom of their cylinders, the
35 main engine being engaged, say, in such work as striking iron, the main piston will not reach

to the very bottom of its cylinder, because of the iron upon which the hammer strikes. This prevents the main piston throwing its own valve; but the piston B, having a full stroke, moves the lever D, which, by contact with the lower block F, moves the valve that admits steam to the lower end of main cylinder, lower passage, G, and cylinder A, causing
45 both pistons to rise to the top of their cylinders. The lever D being again moved by striking the upper block F, the valve is again moved and steam admitted to the top of both cylinders, both pistons descending as already shown. Where the main cylinder receives no
50 steam at the upper end, but depends on the weight of the hammer for the descent of its piston, steam is admitted just the same to the small cylinder, the upper port being merely closed where it opens into the main cylinder.
55 By the proper adjustment of valves H H both pistons will speed the same.

I claim no particular supply-valve, the well-known piston and auxiliary valves being, in my judgment, the best, nor any kind of valve-
60 gearing; but

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

The cylinder A, piston B, piston-rod C, the two valves H H, of ordinary construction, and
65 the two passages G G, all combined and operating as set forth.

ALBERT JACOBS.

Witnesses:

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