

L. P. Garner
Steam Pump.

Nº 93,690.

Patented Aug. 17, 1869.

Fig. 1.

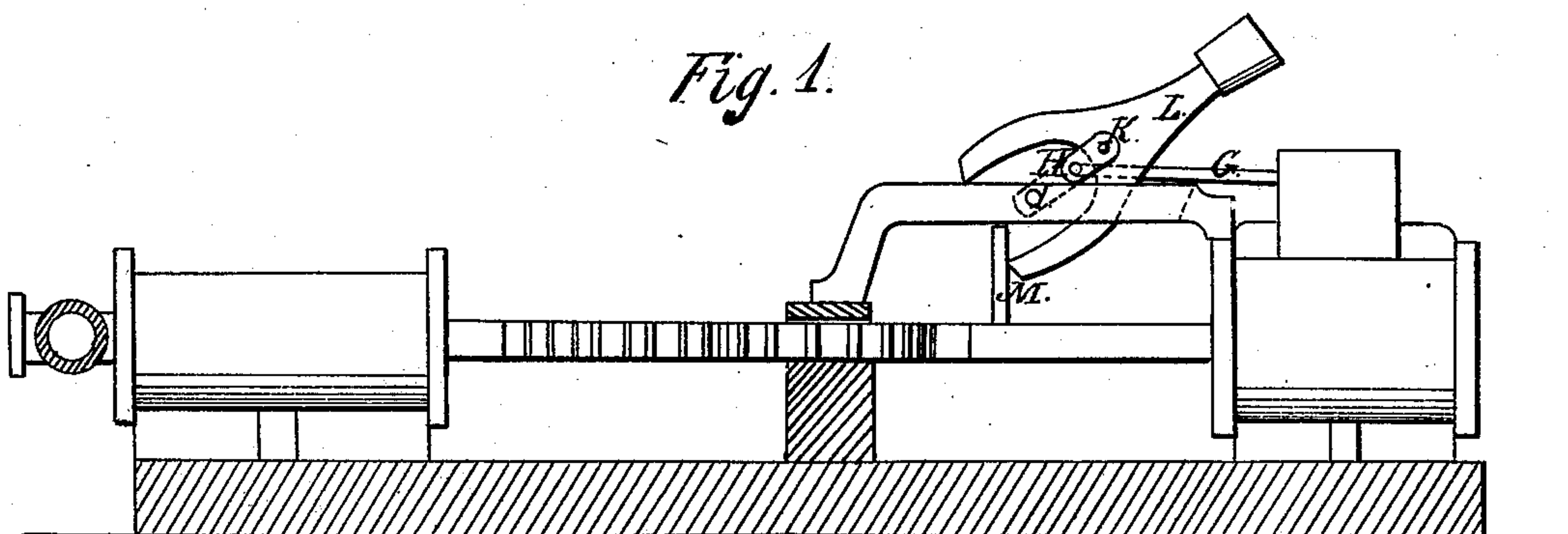
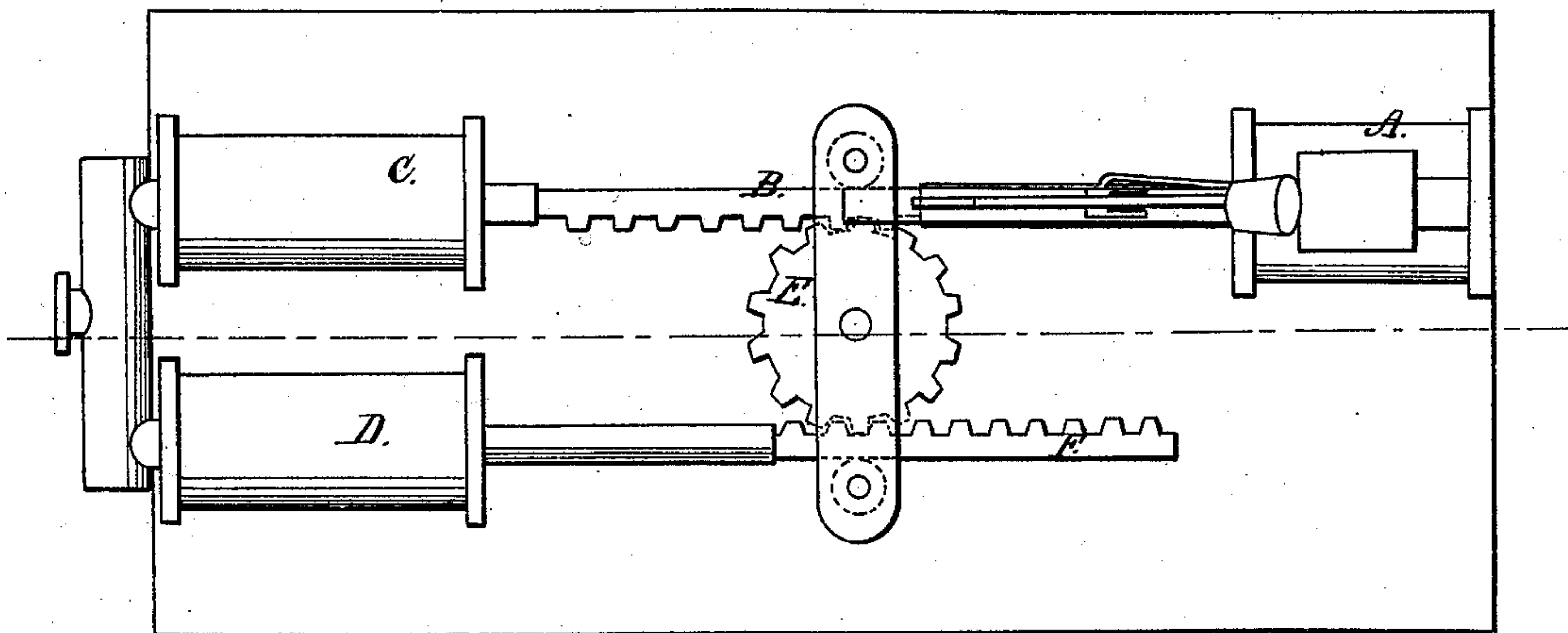


Fig. 2.



Witnesses,

Chas. Nida
Stinchman

Inventor:

L. P. Garner.

per Munn & Co.
attys.

United States Patent Office.

L. P. GARNER, OF ASHLAND, PENNSYLVANIA.

Letters Patent No. 93,696, dated August 17, 1869.

IMPROVEMENT IN STEAM-PUMP.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, L. P. GARNER, of Ashland, in the county of Schuylkill, and State of Pennsylvania, have invented a new and useful Improvement in Steam-Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in that class of steam-pumps wherein two pump-pistons are actuated by one engine, the piston-rod of the engine forming one of the pump-rods, and actuating the other through the medium of a cog-wheel gearing into teeth on the piston-rod of the engine, and also into corresponding teeth on the other pump-rod.

The invention consists in an improved arrangement of the working-parts.

Figure 1 represents a horizontal vertical section on the line *x x* of fig. 1, and

Figure 2 represents a plan view of the same.

Similar letters of reference indicate corresponding parts.

A represents the steam-engine, the rod B of which forms the rod of the plunger of the pump C.

The said rod is provided with gear-teeth on one side, and actuates thereby the cog-wheel E, which gears into teeth on the piston-rod of the pump D, and communicates motion thereto, the simultaneous motion being in opposite directions, and constituting a double-acting pump.

G represents the valve-rod of an ordinary slide-valve.

It is connected to a link, H, which is pivoted at I

to a fixed support, and at K to the forked and weighted lever L.

M represents a tappet rising up from the piston-rod B, between the forks of the lever.

The said tappet is so arranged, with reference to the lever, that when near the end of the stroke, it will strike one of the forks, and raise the lever to or slightly beyond the perpendicular, allowing the weight to carry it over, and move the valve, to reverse the motion of the piston.

By another arrangement, instead of connecting the valve-rod to the link H, it may be provided with arms or lugs, against which the forks of the lever will strike and move the valve.

This arrangement provides a very simple and cheap construction, that will not be liable to get out of repair, and which may be adapted for any situation required, especially in mining-uses.

An especial advantage is that the pumps may be placed at any desired distance down a shaft by lengthening the connecting-rod, and the steam-cylinder placed anywhere up the slope, out of the way of water when the mines are flooded.

Having thus described my invention,

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

The engine A, pumps C and D, connecting-rods B F, wheels E, weighted forked lever L, link H, and tappet and valve-rod G, all arranged substantially as specified.

L. P. GARNER.

Witnesses:

MOSES WOLFGANG,
JACOB STEINHILBER.