

H. NEUMEYER.
Hand Fire-Engines.

No. 158,729.

Patented Jan. 12, 1875.

Fig: 1.

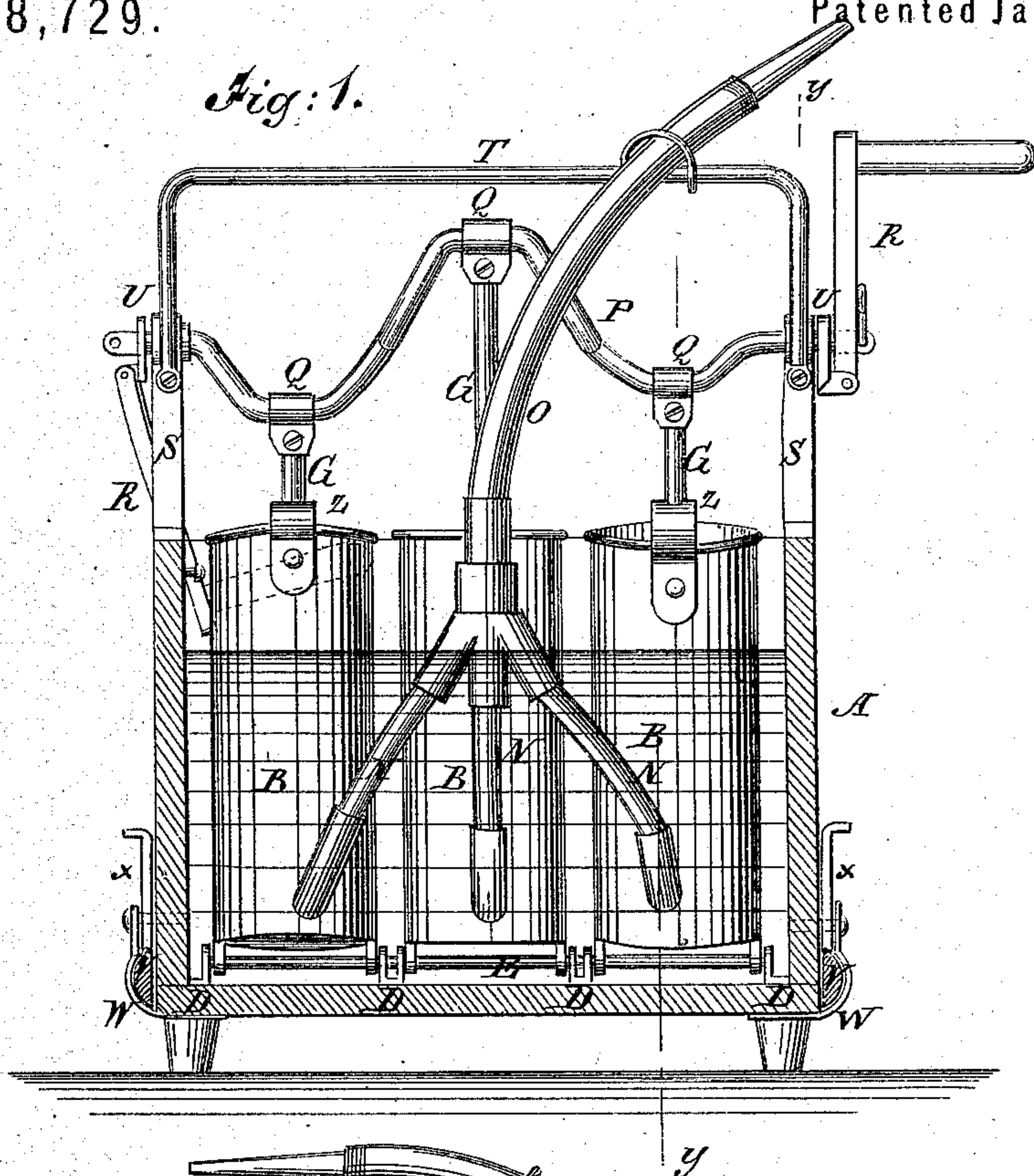
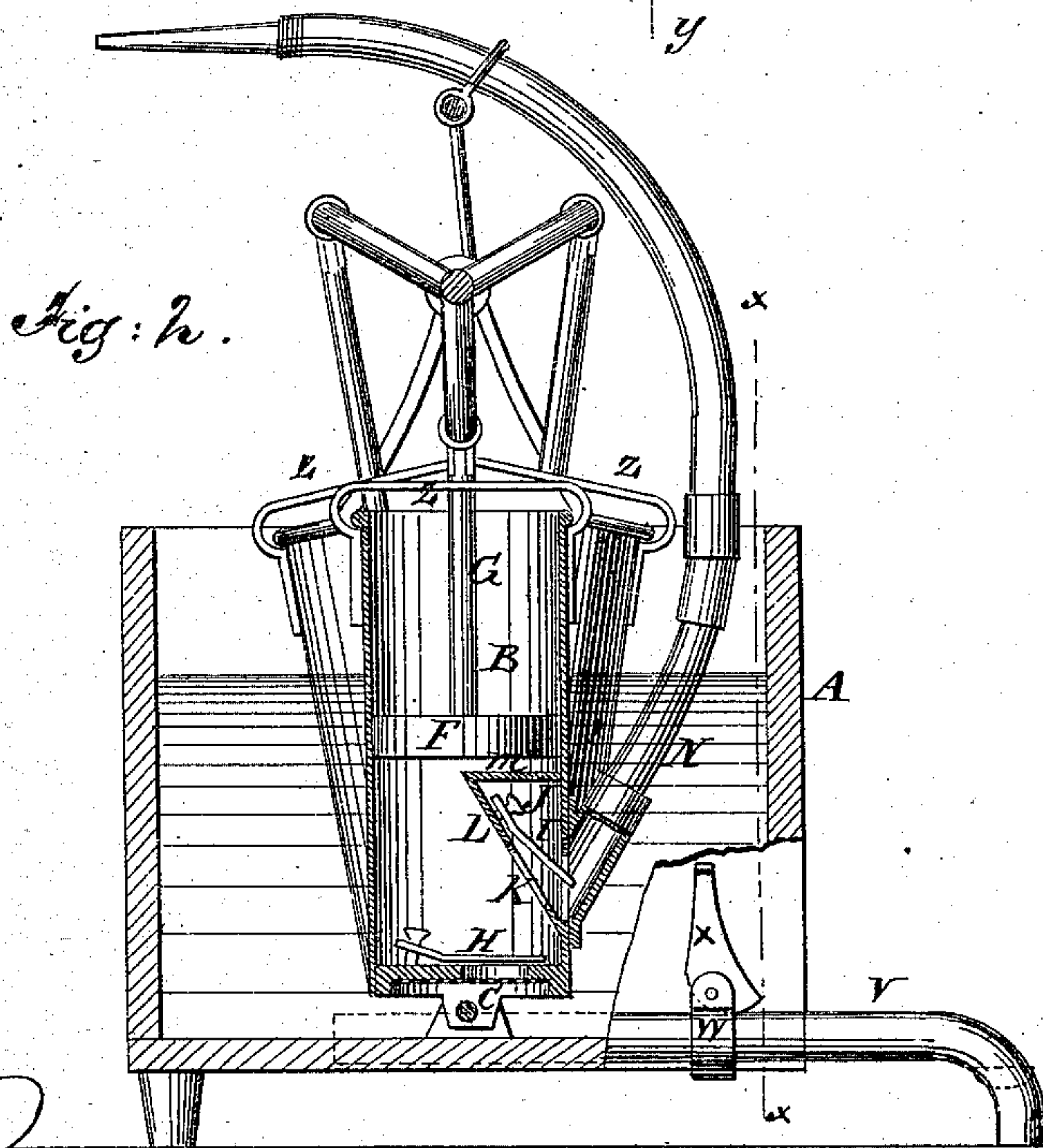


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY NEUMEYER, OF MILLERSTOWN, PENNSYLVANIA.

IMPROVEMENT IN HAND FIRE-ENGINES.

Specification forming part of Letters Patent No. 158,729, dated January 12, 1875; application filed June 27, 1874.

To all whom it may concern:

Be it known that I, HENRY NEUMEYER, of Millerstown, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Improvement in Hand Fire-Engines, of which the following is a specification:

The object of this invention is to furnish a cheap, durable, and effective hand fire-engine; and it consists of a tank and three, more or less, single-acting force-pumps combined so as to throw a single and continuous stream of water from a hose-pipe. The invention further consists in other details of construction and arrangement which will be hereinafter more fully described.

In the accompanying drawing, Figure 1 is a vertical section looking to the left from the line *xx* of Fig. 2. Fig. 2 is a vertical section of Fig. 1 on the line *yy*.

Similar letters of reference indicate corresponding parts.

A is the tank, of suitable size, made of wood or metal, and water-tight, but open at the top. B represents the cylinders, three, more or less, which are attached by hinges to the bottom of the tank by means of ears C, extending from the bottom of the cylinders, the short stand D, attached to the bottom of the tank, and the rod E, substantially as seen in Fig. 1. F are the pistons; G, the piston-rods. H are the foot-valves, which close the inlet-opening in the bottom of the cylinder. I are stop-valves, which hold the water in the hose. These valves work in the chambers J, and close the openings K through the inclined plates L. These valves close by their own gravity, and the chambers J are formed by the inclined valve-plate and the horizontal plates *m*, above which the pistons work. N is a pipe connected with each of the chambers J. These pipes connect with the main hose O, as seen in Fig. 1. P is the driving-shaft, having a crank for the piston-rod of each cylinder. They are connected, as seen at Q. On one or both of the ends of this shaft is a crank, R. This shaft is supported by stands S attached to the top of the tank, and these stands are connected together by the stay-rod T. The crank or cranks R are so constructed that, while connected with the shaft,

they may be slipped from the ends thereof and turned round into the tank, so as to be out of the way when they are not in use. For this purpose I hinge them to the revolving elbows U, and make mortises through them to secure the end of the shaft. The cranks are held on the ends, as seen in Fig. 1, by pins; but when not in use they are slipped off and turned inward, as seen at the left of the figure. V V are sliding metallic bars on the ends of the tank confined to the tank by clips W, and held in position by means of the cam-levers *xx*. These bars are connected by a foot-piece, V', and when drawn out, as seen in Fig. 2, one operator stands with his right foot and the other with his left on the connecting-bar, which holds the engine steady while the cranks are turned. When not in use the foot-piece is shoved back under the engine out of the way. Y is the nozzle of the hose-pipe.

When the crank-shaft is revolved the cylinders vibrate on the rod E, and accommodate themselves to the motion of the cranks being vibrated by the piston-rods, which pass through yokes Z on the top of the cylinders.

With this machine a continuous stream of water is thrown with a force proportioned to the power applied.

This machine may be applied to other purposes if desired, as, for instance, watering gardens and grounds, and for all similar purposes.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An engine for extinguishing fires and for other purposes, composed of the tank A, vibrating cylinder-pumps B, crank-shaft P, pipes N, hose O, and driving-cranks R, combined and arranged substantially as described.

2. The foot-piece, composed of the slides V V, connecting-bar V', and cam-levers *xx*, in combination with a fire-engine, substantially as and for the purposes described.

3. The chambers J, in combination with the cylinders B, as and for the purposes described.

HENRY NEUMEYER.

Witnesses:

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