(No Model.)

H. P. KAUFFER.

WATER ENGINE.

No. 258,233. Patented May 23, 1882.

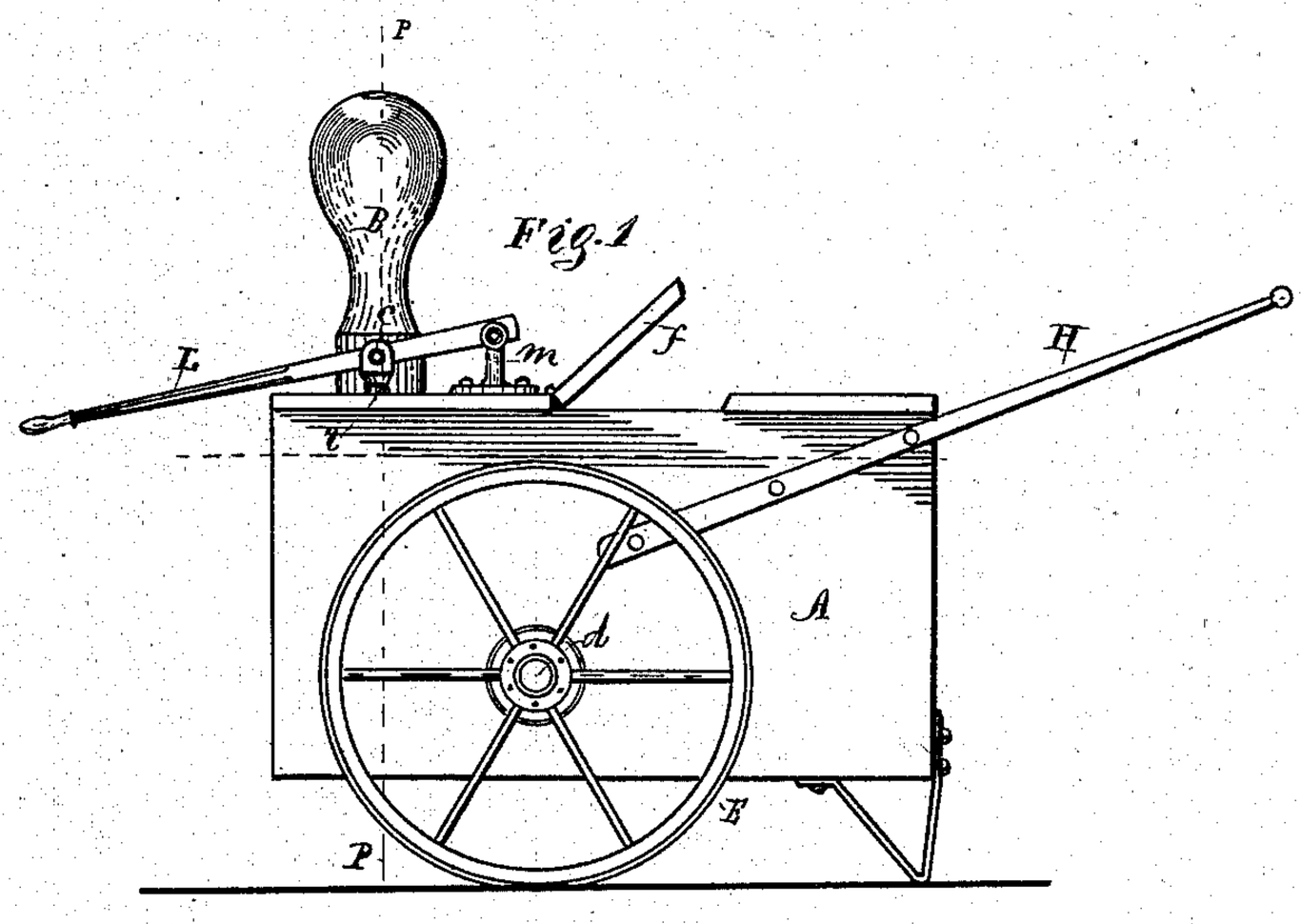

Fig. 1

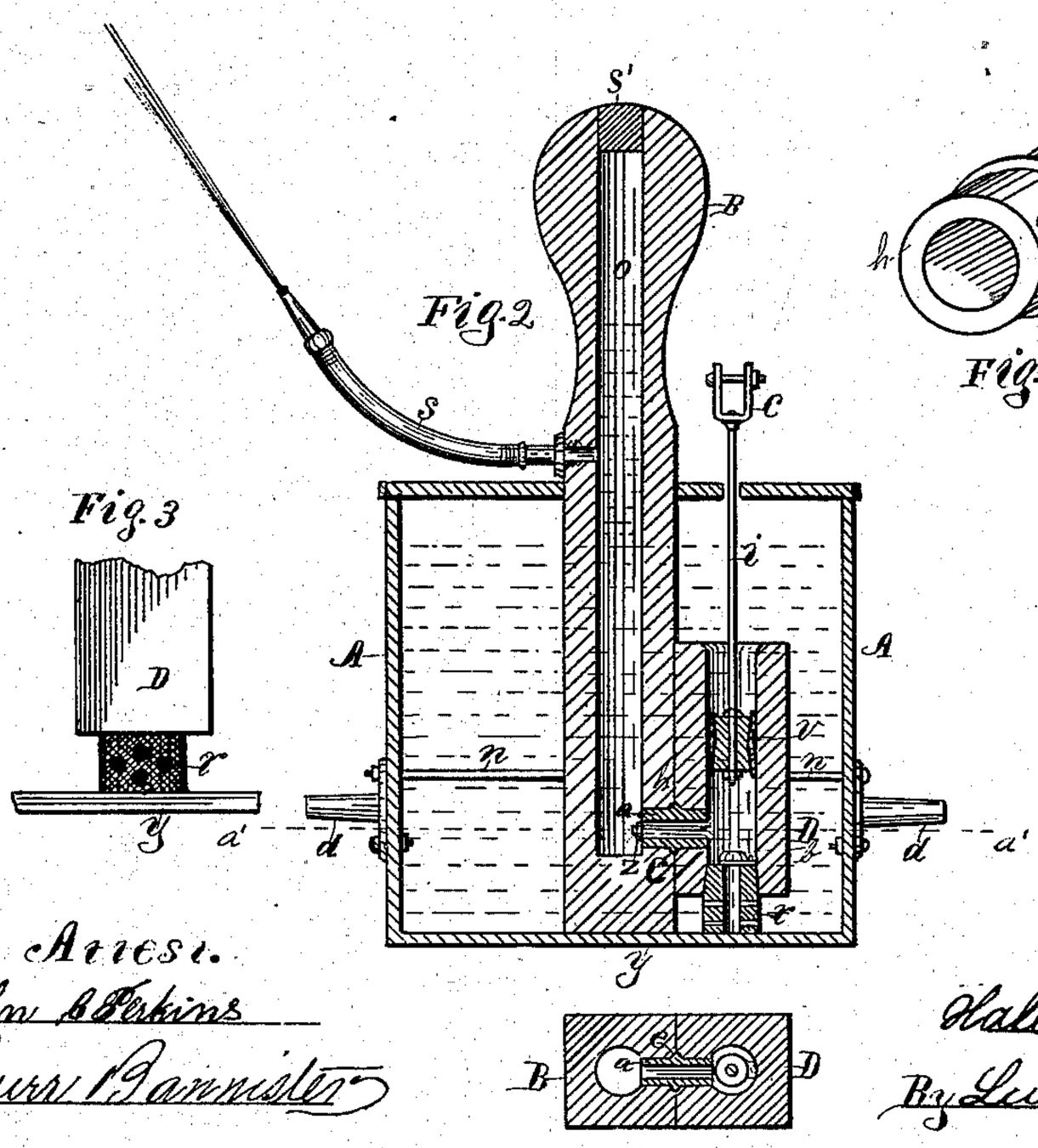

Fig. 2

Fig. 3

Fig. 4

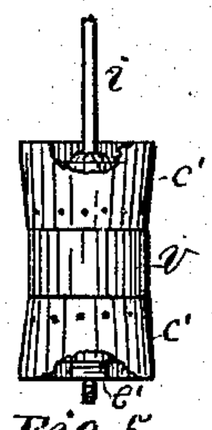

Fig. 5

Fig. 6

Witnesses:
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UNITED STATES PATENT OFFICE.

HALE P. KAUFFER, OF KALAMAZOO, MICHIGAN.

WATER-ENGINE.

SPECIFICATION forming part of Letters Patent No. 258,233, dated May 23, 1882.

Application filed December 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, HALE P. KAUFFER, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Water-Engine, of which the following is a specification.

My invention relates to portable devices for throwing water, consisting of a water-tank and a force-pump, constructed and adapted to be used in watering gardens, showering lawns, washing windows, and extinguishing minor conflagrations.

It has for its object certain improvements, in combination with well-known features, whereby greater simplicity, utility, and cheapness are effected.

A construction embodying my improvements consists in a rectangular water-tank, in which are vertically located two hollow wooden pump-logs and mechanism for perfecting a force-pump, said tank being provided with transporting-wheels and a handle for propelling the device.

The novel features of construction are set forth in the detailed description.

In the drawings forming a part of this specification, Figure 1 is a side view of the device; Fig. 2, a cross-section on dotted line P P, Fig. 1, looking from a point at the left hand of the figure, showing the internal construction. Fig. 3 is a view of the lower end of plunger-log; Fig. 4, a view of the spout connecting the two pump-logs. Fig. 5 is a view of the plunger; and Fig. 6, a cross-section of the pump-logs on dotted line *a' a'*, Fig. 2, looking from the top.

A is the water-tank; E, one of the wheels, (there being one on the other side,) and H the handle. *f* is a door to the tank for supplying it with water. B D are the pump-logs, forming the pump proper. The plunger-log B is made in the same manner, except the vertical hole extends entirely through, the lower end being stopped by a hollow plug of wood, *r*, which serves to support the plunger-log, and also form the lower valve-seat, the valve *b* being shown in Fig. 2. In the lower end of plug *r* are horizontal perforations to admit the water, and around them is wrapped a wire-cloth or filtering device. The logs B and D stand side by side in close contiguity to each other, and connection is made with the hollow center of each by means of the hollow wooden spout *a*, detachably located, as shown in Fig. 2. This spout has a rib, *e*, countersunk half and half in each log, which prevents its displacement lengthwise. The ends of this spout *a* are of equal size, and end *h* in the air-chamber log is provided with the upper check-valve, *z*. In putting the parts of the pump together the air-chamber log is secured in place, and the end *h* of spout *a*, with valve *z*, is inserted in the side. The plunger-log is then located in place, receiving the other end of spout *a* in the orifice designed for it. By separating the logs the spout is disconnected from the sides. Thus valve *z* can be more conveniently examined and replaced by a new one than in prior devices having a connecting-spout which is provided with a valve-seat. By locating the valve in a vertical position at the end of the spout it is found that the pressure of the water in log B below the air-chamber on said valve, in closing it, is nearer commensurate with the pressure caused by the plunger *i* in opening said valve than it would be were the valve located at the other end of spout *a*, in the center of the same, or were the end to which valve *z* is connected formed oblique, and also if the valve were located horizontally in log B.

i is the plunger-rod, passing through a vertical perforation in the wooden block *v*, where it is held by the detachable nut *e'*, Fig. 5. Around each end of this plunger *v*, I secure strips of leather *c' c'*, (by simply tacking them around the wooden body,) which extend a little beyond the ends and serve for alternate packing to the plunger as it moves up and down.

L is a handle operating the plunger, connecting with it at *c* and pivoted to stud *m*.

d d in Fig. 2 are the axles supporting the transporting-wheels, which are bolted to the sides of the tank A. In connection with this common arrangement, in place of two of the bolts I use rod *n*, extending entirely through the tank, which not only serves to assist in

securing the axles, but braces the sides of the tank. The operation is similar to all force-pumps of this class.

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

1. The combination, with the plunger-log and the air-chamber log, of the spout having the central rib and ends of equal size, and the valve secured to the end of said spout, all substantially as described, for the objects set forth.

2. In a water-engine consisting of a force-pump and a portable tank, the tank having the rod located through it, serving the double purpose set forth, all substantially as described and shown.

HALE P. KAUFFER.

Witnesses:
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