T. Welham.

Siphon Water Wheel.

No. 45102. Patented Nov. 15. 1864.

Fig: 1.

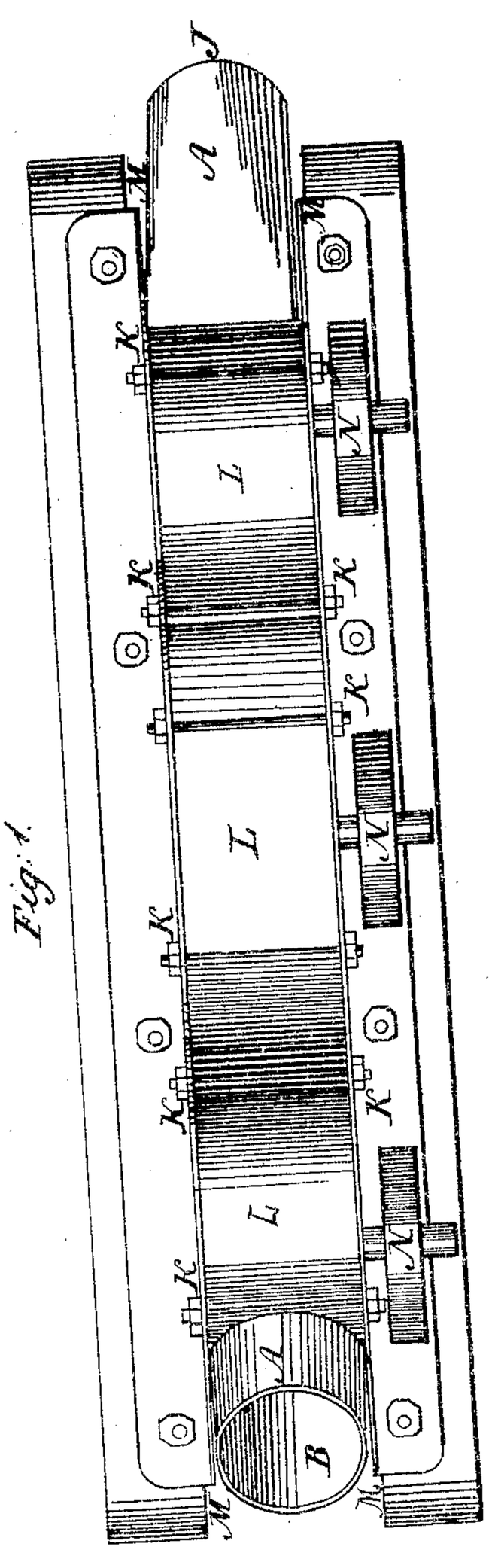
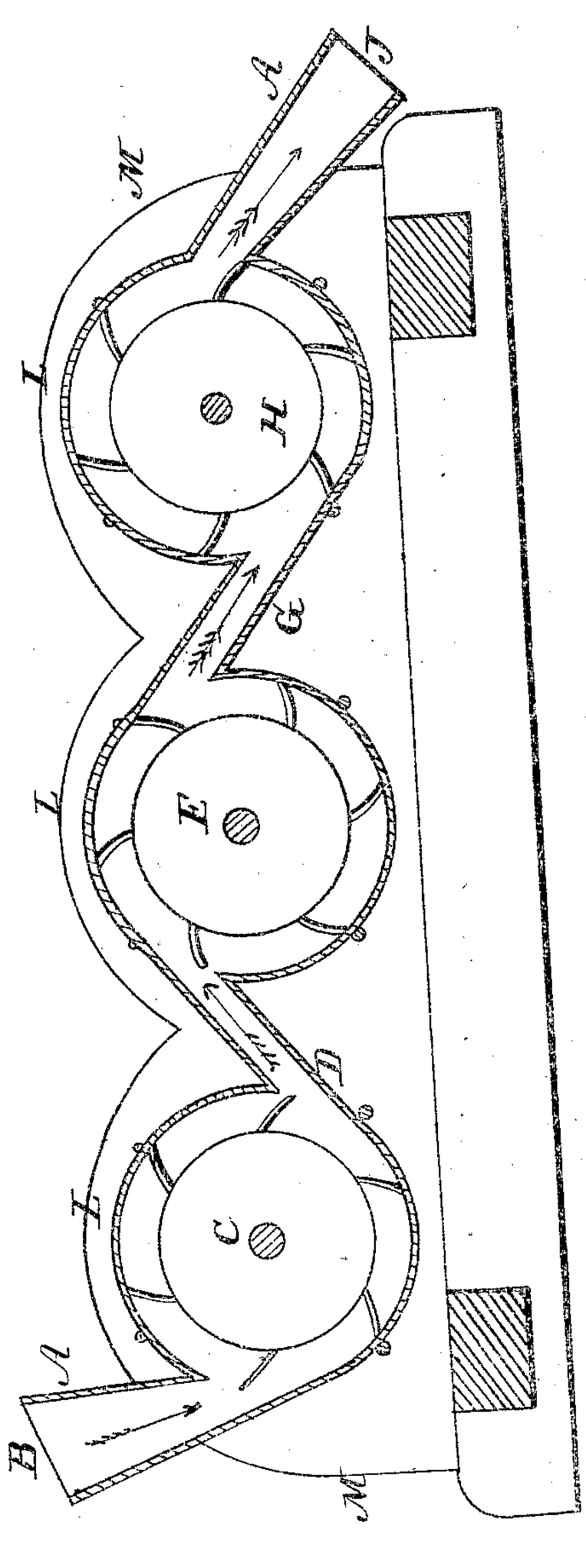


Fig: 2.



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UNITED STATES PATENT OFFICE.

THOMAS WELHAM, OF BROWNVILLE, NEBRASKA TERRITORY.

IMPROVED SIPHON WATER-WHEEL.

Specification forming part of Letters Patent No. **45,102**, dated November 15, 1864.

To all whom it may concern:

Be it known that I, THOMAS WELHAM, of Brownville, Nemaha county, Nebraska Territory, have invented a new and useful Hydro-siphoid Engine; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in a series of two or more water-wheels, operating in an air-tight chamber, as a siphon, with the feed-spout above the first wheel, conducting the water in an air-tight channel or siphon from one wheel to another until it is discharged at the lower end of the spout or long leg of the siphon.

Figure 1 represents a top view of the engine; Fig. 2, a side sectional elevation.

A represents the siphon, with its feed-pipe or short leg B at top, conducting the water upon the buckets of the first wheel, C. The water acts upon and drives the wheel C as an undershot wheel. The water (as indicated by the course of the arrows) thence passes upward, by the pressure of the head of the water and the power of the lower buckets of the wheel C, through the channel D of the siphon upon the upper buckets of the second wheel, E, driving the wheel E in an opposite direction to the first wheel, C, and operating it as an overshot wheel, where the water enters the channel G of the siphon in an incline downward with all its speed upon the third wheel, H, acting upon the buckets on the lower side of the wheel H as an undershot wheel, and driving the wheel in an opposite direction to that of the second wheel, E, and discharging through the channel or tube J as the long leg of the siphon A—the wheels thus operating as right and left hand screws. The sides M of the siphon A are made close and air-tight, and are fastened permanently by screw-bolts K, connecting and bracing the sides of the channel forming the siphon A. Between the channels are air-tight cylinders L, which form part of the siphon A, and in which the wheels revolve and operate. N are band or driving wheels attached to the outer ends of the axles of the wheels, to drive any kind of machinery.

The object and advantage of my invention are to have the water confined in a channel or siphon containing any number of water-wheels at any suitable distances apart, so as to obtain all the use and pressure of the water and power of the wheels possible for manufacturing purposes, for all high heads and falls of water, especially such as can be had from hydrant-pipes conducted from reservoirs of water in city water-works, so that my invention can be attached to a hydrant-pipe and operated in any machine-shops of a city. This machine always sets above the tail-water, and can be worked above the head-water, not exceeding thirty feet in height, and by this means of the siphon can be operated in the same apartment with the machinery driven by it.

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

Keeping the water inclosed in a siphon after it leaves the first wheel, and conducted through the siphon inclosing any number of wheels, at any required distances apart, by which the water is used over a series of wheels from the same head, as herein described, and for the purposes set forth.

THOS. WELHAM.

Witnesses:

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