

(No Model.)

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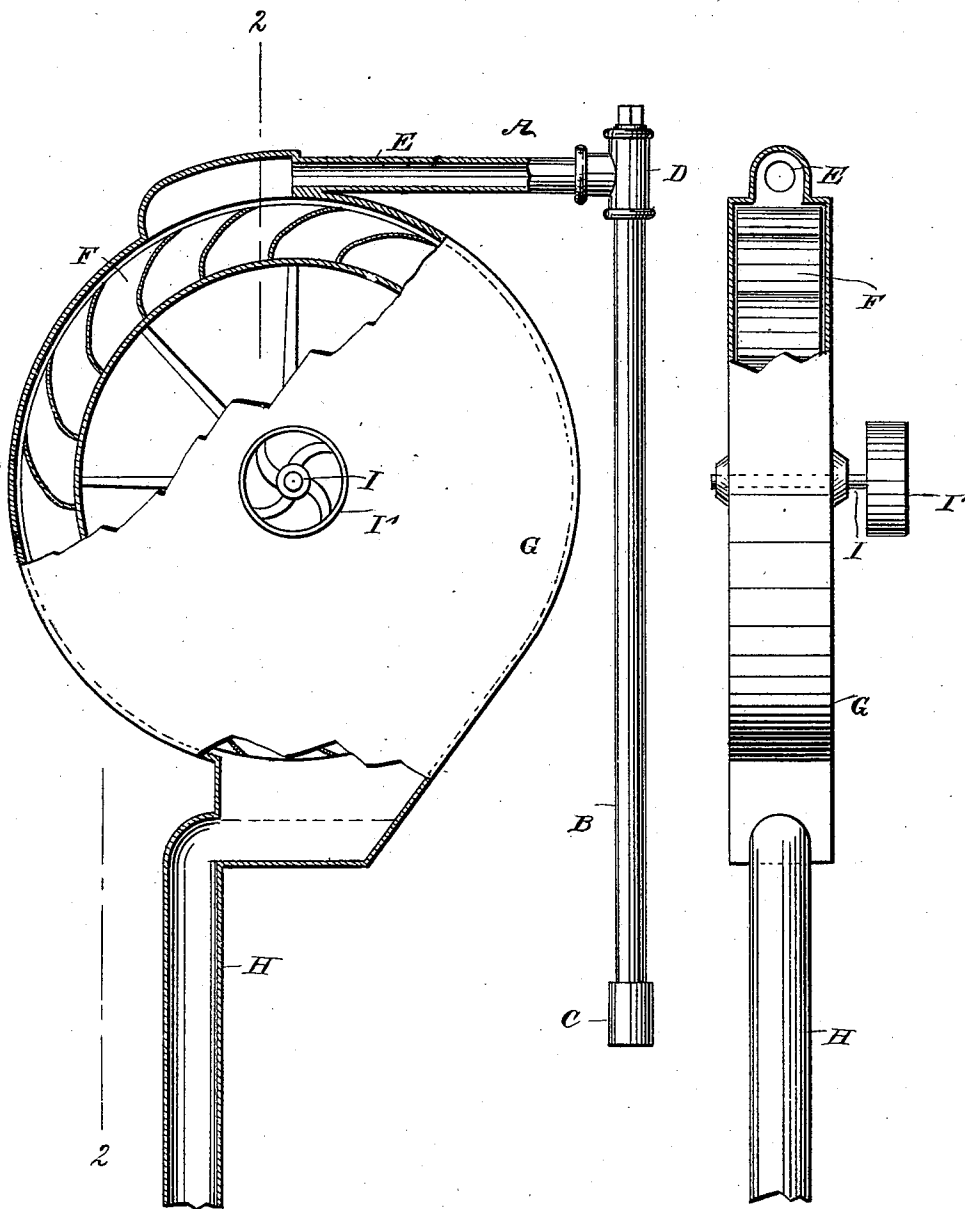
F. W. REINHARDT.
SIPHON MOTOR.

No. 510,709.

Patented Dec. 12, 1893.

Fig: 1.

Fig: 2.



WITNESSES:

Chas. Nida.
C. Spitzgirtel

INVENTOR

F. W. Reinhardt
BY *Munn & Co.*

ATTORNEYS.

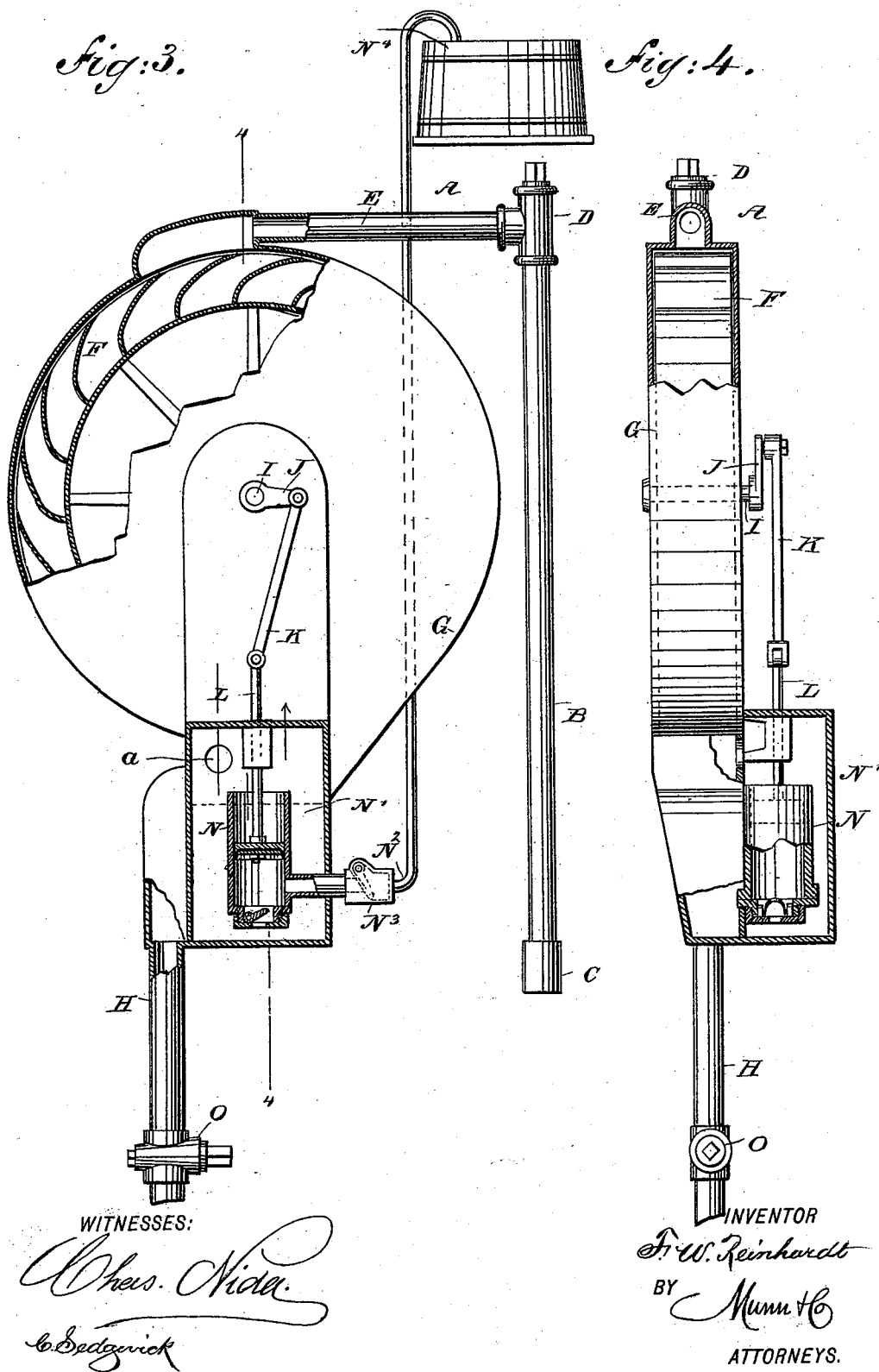
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No. 510,709.

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THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERIC WILLIAM REINHARDT, OF MEMPHIS, TENNESSEE.

SIPHON-MOTOR.

SPECIFICATION forming part of Letters Patent No. 510,709, dated December 12, 1893.

Application filed February 25, 1893. Serial No. 463,681. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC WILLIAM REINHARDT, of Memphis, in the county of Shelby and State of Tennessee, have invented a new and Improved Siphon-Motor, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved siphon motor, which is simple and durable in construction, very effective in operation and designed for driving small machinery such as pumps, &c.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with parts in section. Fig. 2 is an end elevation of the same, with parts in section, on the line 2—2 in Fig. 1. Fig. 3 is a side elevation of the improvement with parts in section, showing the same arranged for use as a siphon pump; and Fig. 4 is an end elevation of the same, with parts in section on the line 4—4 in Fig. 3.

The improved siphon motor is provided with a siphon A, having the usual inlet leg B, formed on its lower end with the usual inlet C, and at its upper end with a filling nozzle D, for filling the siphon with the necessary amount of water to start the motor, as hereinafter more fully described.

The upper or middle portion E, of the siphon A discharges into a water wheel F, of any approved construction and arranged in a suitable closed casing G, forming part of the outlet leg H, of the siphon. The shaft I, of the water wheel F is connected at its outer end with the machinery to be driven. For this purpose I may provide the end of the shaft *i* with a pulley I' adapted to be connected by belt with the machinery to be driven, as illustrated in Figs. 1 and 2, or I may provide one outer end of the shaft I with a crank arm J, connected by a pitman K, with the plunger L, of a pump N, as shown

in Figs. 3 and 4. This pump N, is located within an auxiliary casing N', forming part of the casing G, and into which passes part of the water discharged from the wheel F, through a port *a* in the side of the casing G. The auxiliary casing N' is thus always filled with water which surrounds the pump and passes into the bottom of the cylinder of the pump on the up-stroke of the pump plunger which discharges the water on the downstroke through the outlet or discharge pipe N² containing a check valve N³, and leading to a suitable tank N⁴ which may be located above the top of the siphon A. In the extreme lower end of the leg H is arranged a stop cock O, for stopping the flow of the liquid through the siphon A.

When the device is in operation, the valve O is open, so that the liquid passing through the siphon A in the usual manner, actuates the water wheel F, and the rotary motion of the latter is transmitted by its shaft I to the device to be driven. As illustrated in the drawings, the driven device is the pump N which utilizes part of the water passing through the wheel F without breaking the siphon.

In order to stop the motor, the operator closes the valve O, so that the siphon A remains charged and whenever it is desired to again start the motor, the operator then opens the valve O to again start the liquid through the siphon A in the usual manner.

It is understood that the inlet C is always immersed in the water which forms the motive power, and the outlet or lower end of the other leg H of the siphon A is a suitable distance below the inlet C.

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

1. The combination with a siphon having a casing arranged in its outlet leg between the ends thereof and forming a part of the same, and a water wheel mounted in the casing and onto which the water is discharged, of an auxiliary casing below and in communication with the main casing, and a pump arranged in the said auxiliary casing and operated from the water wheel, substantially as described.

2. The combination with a siphon having a casing in its outlet leg between the ends thereof and a water wheel mounted in the casing, of an auxiliary casing below and communicating with the main casing, a pump in the auxiliary casing, an outlet pipe leading from the pump out through the said auxiliary casing and provided with a check valve, and mech-

anism between the pump and water wheel for operating the former from the latter, substantially as herein shown and described.

FREDERIC WILLIAM REINHARDT.

Witnesses:

RHEA P. CARY,
H. N. ALLEN.