

(No Model.)

W. H. SUNDERLAND.
PUMP.

No. 486,136.

Patented Nov. 15, 1892.

Fig. 1.

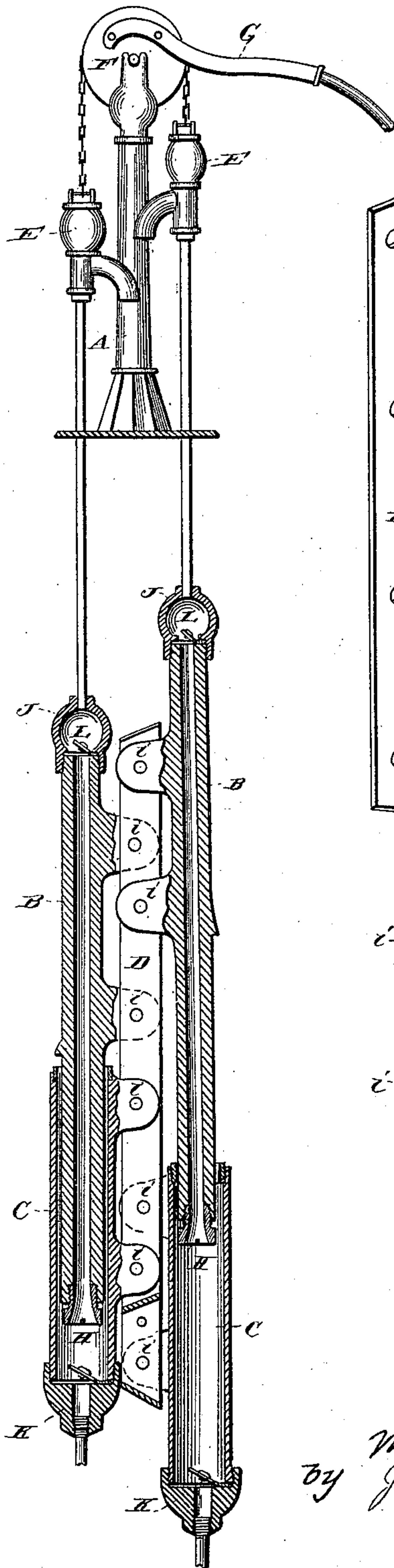


Fig. 2.

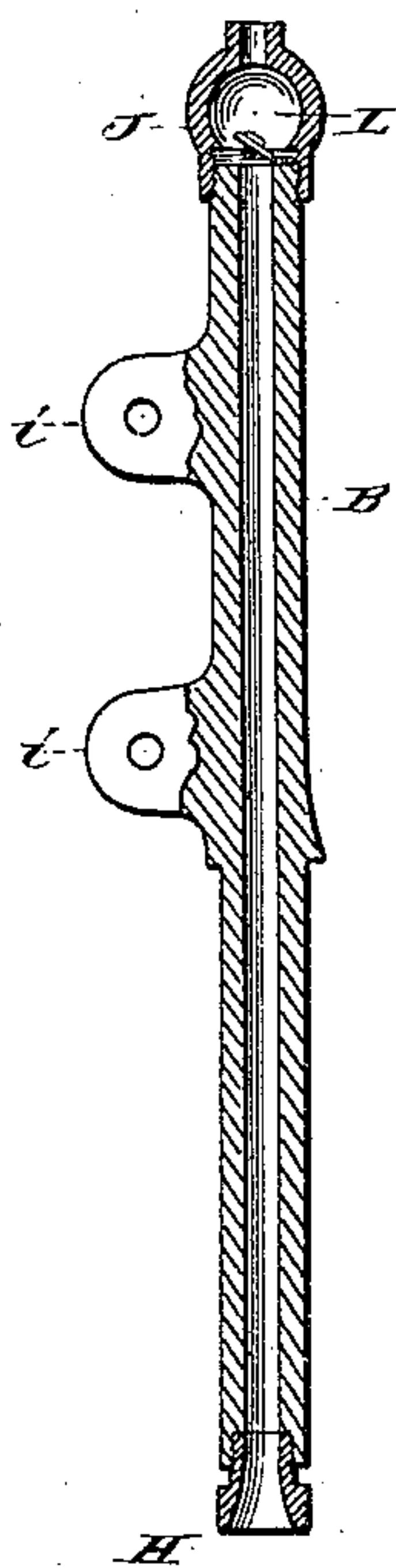


Fig. 4.

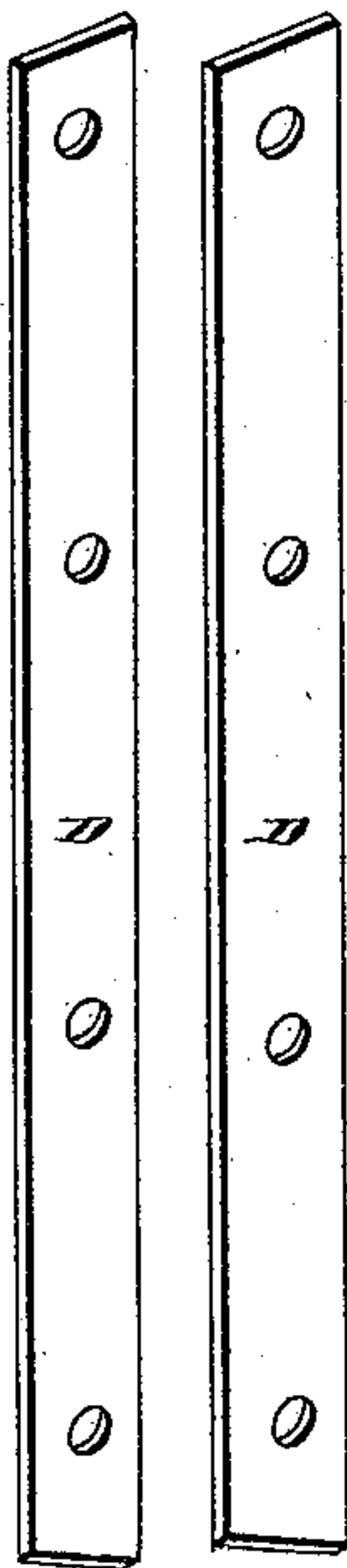
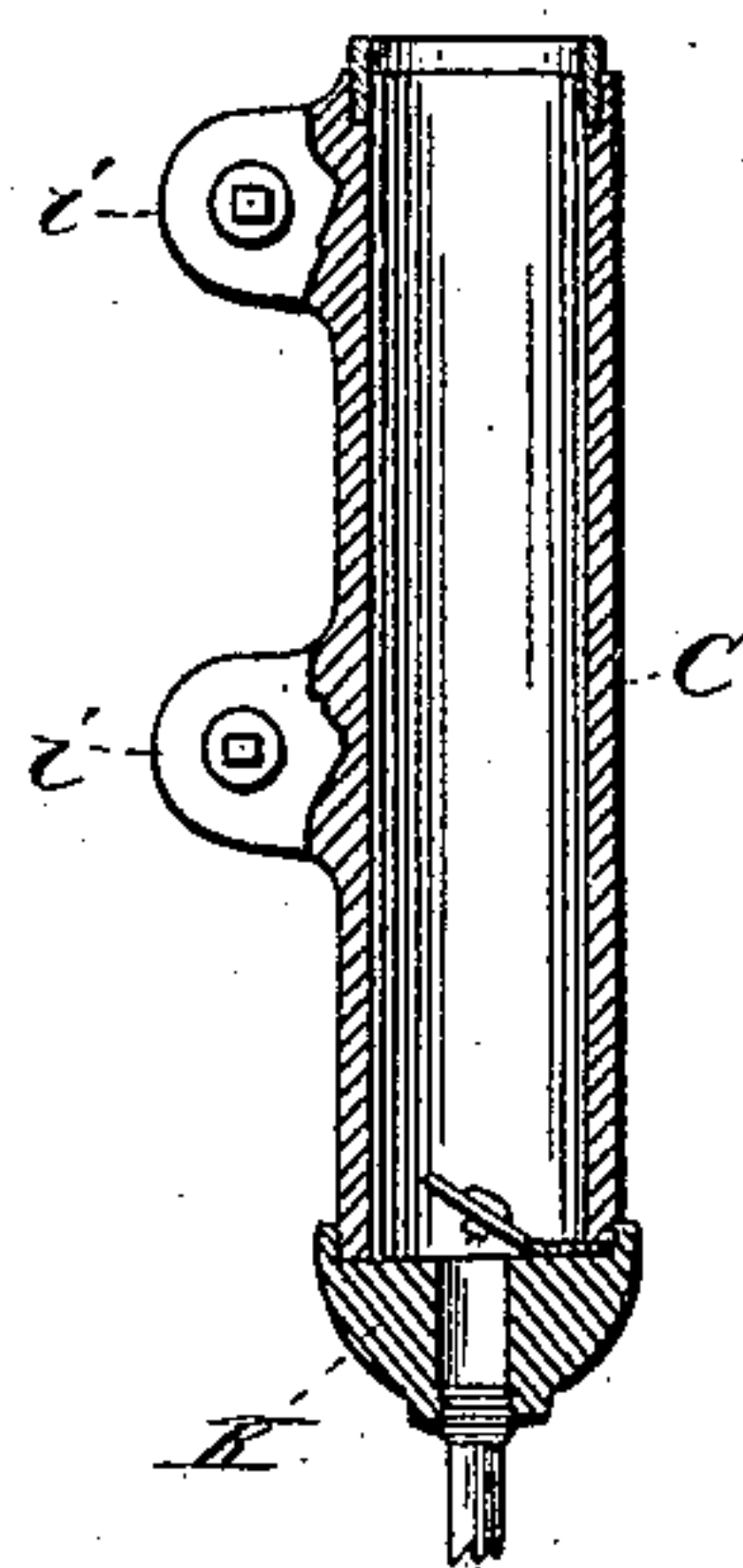


Fig. 3.



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SPECIFICATION forming part of Letters Patent No. 486,136, dated November 15, 1892.

Application filed January 16, 1892. Serial No. 418,344. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. SUNDERLAND, a citizen of the United States, residing at Miller, in the county of Hand and State of South Dakota, have invented a new and useful Pump, of which the following is a specification.

My invention relates to that class of pumps wherein a pair of plungers are reciprocated in opposite directions.

The object of my invention is to produce a device which will be more simple in construction and effective in operation than those heretofore in use.

With this object in view my invention consists in the peculiar features and combinations of parts more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a view in elevation of my complete device, parts of which are shown in dotted lines. Fig. 2 represents a sectional elevation of one of the plungers. Fig. 3 represents a sectional elevation of one of the cylinders; Fig. 4, a perspective view of the plates to which the plungers and cylinders are secured.

The reference-letter A represents a pump-base, journaled in the top of which is a chain-disk F, having its periphery grooved to more securely hold the links of the pump-chain. To the ends of the chain are secured pump-heads E, provided with the usual spout. Secured to the lower ends of the pump-heads E are hollow connecting-pipes extending through the base-plank and secured to hollow or tubular plungers B, which fit snugly and work within vertical cylinders C, the upper ends of the plungers being surmounted by screw-caps J, in the bottom of which are downwardly-seating check-valves. The lower ends of the cylinders C are also provided with downwardly-seating check-valves, which retain the water in the cylinders as they are lifted. The lower ends of the cylinders are provided with flaring suction-glands H. The adjacent faces of the plungers and cylinders are provided with perforated lugs, the lugs on one plunger being secured to the same plate D as the lugs on the opposite cylinder. The same applies to the lugs of the other plunger. It will thus be seen that when the

plunger on the right-hand side is raised the cylinder on the left-hand side of the plate is also raised, as they are both attached to the same plate D, as clearly shown in Fig. 1. This movement forces water up through the plunger on the left-hand side of the plate, and when the movement is repeated water is forced through the connecting-tubes and out through the spout at the pump-head. The same description applies to the cylinder and plunger on the right-hand side of the plate, and a continuous flow of water is thus discharged from the spouts on the pump-heads. It will thus be seen that the plungers and cylinders have a vertical movement, and an alternately-reciprocating movement is thus kept up when the handle is actuated.

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

1. A pump having a pair of cylinders located side by side and provided with alternating reciprocating plungers, the plunger of one cylinder being directly connected to the cylinder of the other plunger, substantially as and for the purpose specified.

2. A pump having a pair of cylinders provided with alternating reciprocating hollow plungers, the plunger of one cylinder being directly connected to the cylinder of the other plunger, substantially as described.

3. A pump provided with a pair of reciprocating plungers having lugs on their adjacent faces and a pair of cylinders also provided with lugs, in combination with a pair of plates, the lugs on one plunger being secured to the same plate as the lugs on the opposite cylinder, whereby the plunger of one pair reciprocates with the cylinder of the opposite pair, substantially as described.

4. A pump having a pair of cylinders provided with reciprocating hollow plungers, the plunger of one cylinder being directly connected to the cylinder of the other plunger, and pump-heads secured to said plungers, substantially as described.

WILLIAM H. SUNDERLAND.

Witnesses:

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