

(No Model.)

G. J. KELLER.
METALLIC LIFT PUMP.

No. 418,191.

Patented Dec. 31, 1889.

Fig. 1.

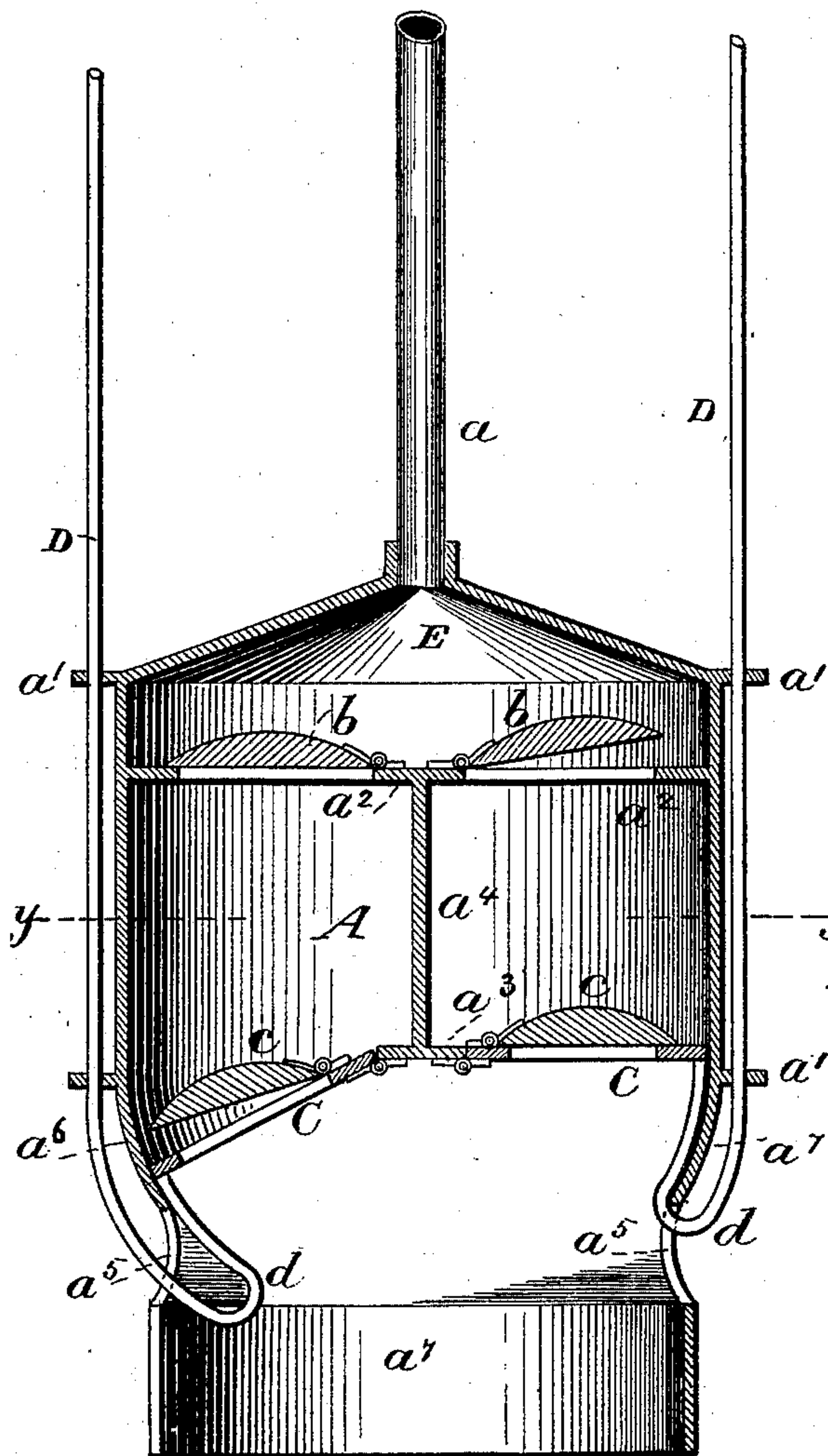
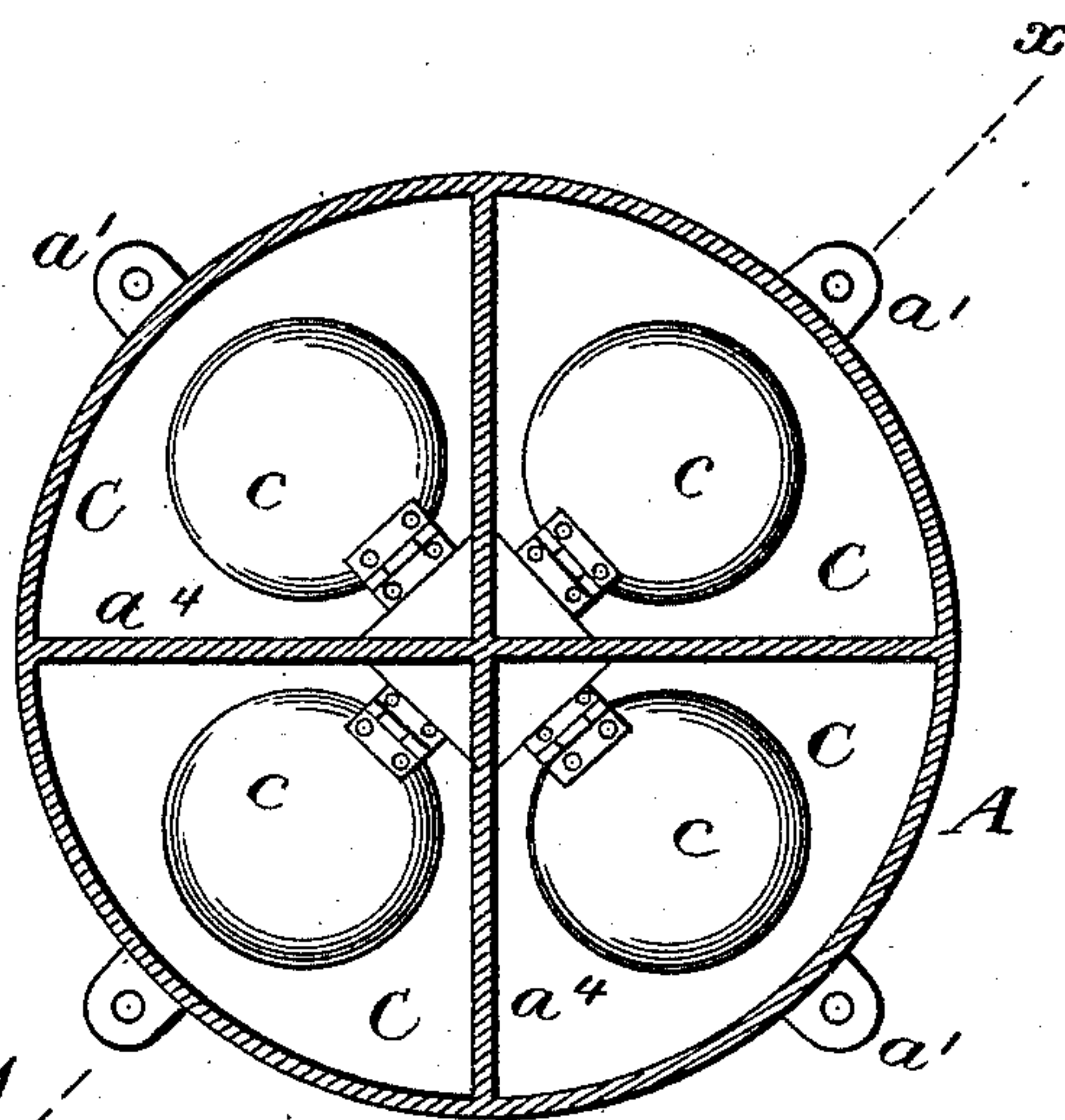


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

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METALLIC LIFT-PUMP.

SPECIFICATION forming part of Letters Patent No. 418,191, dated December 31, 1889.

Application filed September 6, 1889. Serial No. 323,119. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. KELLER, a citizen of the United States, residing at Osceola, in the county of Polk and State of Nebraska, have invented certain new and useful Improvements in Metallic Lift-Pumps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The invention relates to metallic lift-pumps; and it consists in the construction, arrangement, and combination of parts hereinafter described.

Figure 1 of the drawings is a vertical section on the dotted line xx of Fig. 2, and Fig. 2 is a horizontal section on the dotted line yy of Fig. 1.

In the drawings, A represents a top-covered and bottom-open cylinder with the up-pipe a , through which the water passes to the outlet or discharge spout, the apertured flanges $a' a'$ on the outside, the horizontal partitions $a^2 a^3$, and the vertical diametrical partitions $a^4 a^4$. In each quadrantal compartment and on the horizontal partitions a^2 is arranged an upper hinged valve b , and on the partitions a^3 are hinged the pistons C, carrying valves c , all of said valves opening upwardly.

D are the piston-stems formed of metallic rods end-bent to form the hooks d , which

work in vertical slots a^5 of the cylinder and support the hinged valves C. The latter fall by their own gravity, and are raised by the hooks d , the operation of said valves being the same as in any ordinary lift-pump, except that the valves c turn in the arc of a circle, and the cylinder A is curved at a^6 to correspond. All the compartments open into the superposed chamber E, whence the water is forced up the discharge-pipe a , while the stems D may be connected with operative mechanism, so as to actuate the pistons and make them work together or successively. The lower part a^7 of the cylinder rests on the bottom of the well, and the water enters there through the slots a^5 or through side perforations.

What I desire to protect by Letters Patent is—

The combination, with a top-covered cylinder A, having an upper chamber E, with the up-pipe a , of the horizontal partitions $a^2 a^3$, the vertical partitions $a^4 a^4$, the slots a^5 , the curve a^6 , the valves b on the partitions a^2 , the hinged pistons C, carrying the up-valves c , and the rods D, having the hooks d at the lower end, whereby two or more pumps may be operated separately or together in the same well, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE J. KELLER.

Witnesses:

OSCAR N. KELLER,
M. E. BITTNER.