

(No Model.)

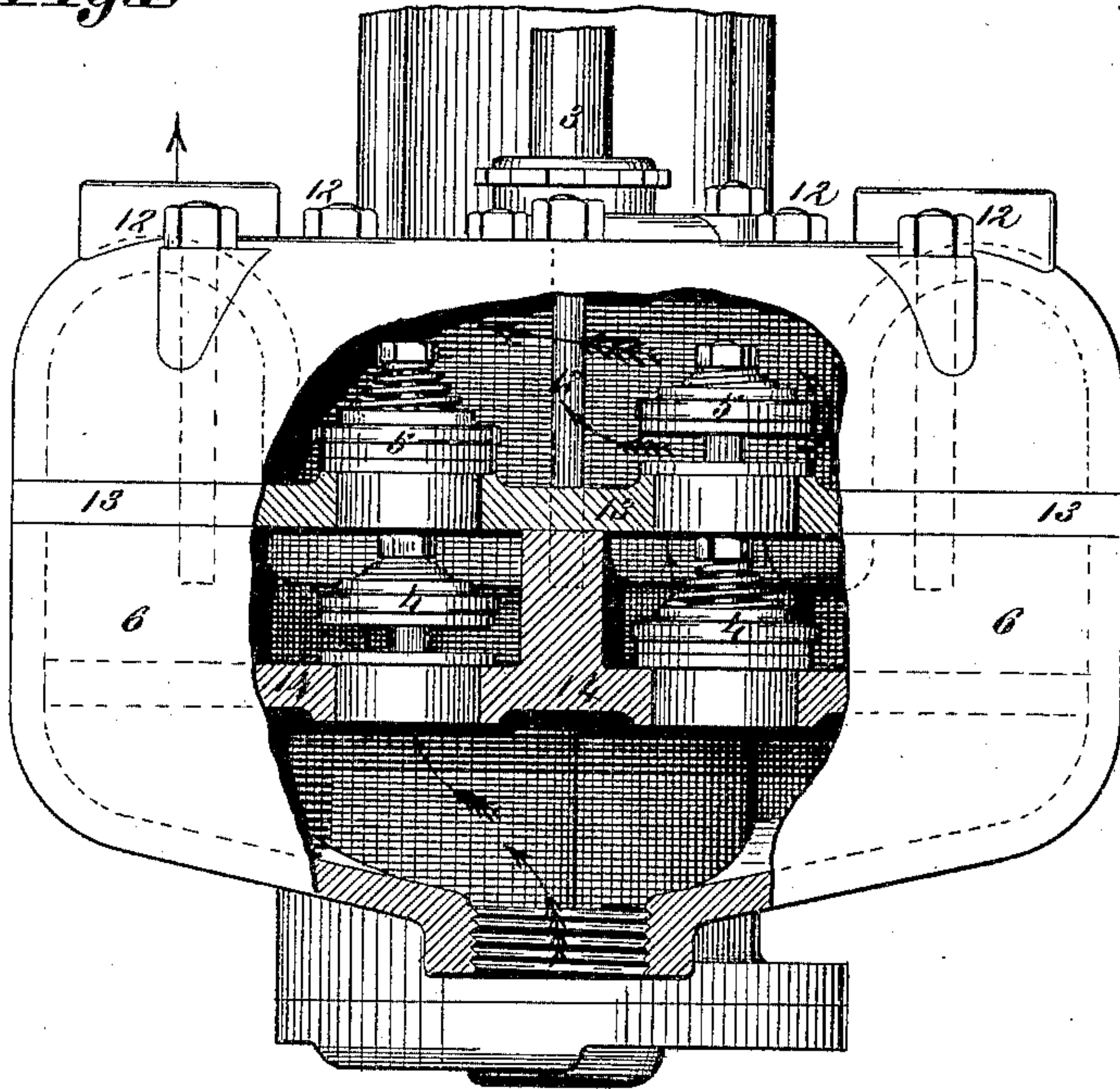
2 Sheets—Sheet 1.

F. LANSBERG.  
PUMP.

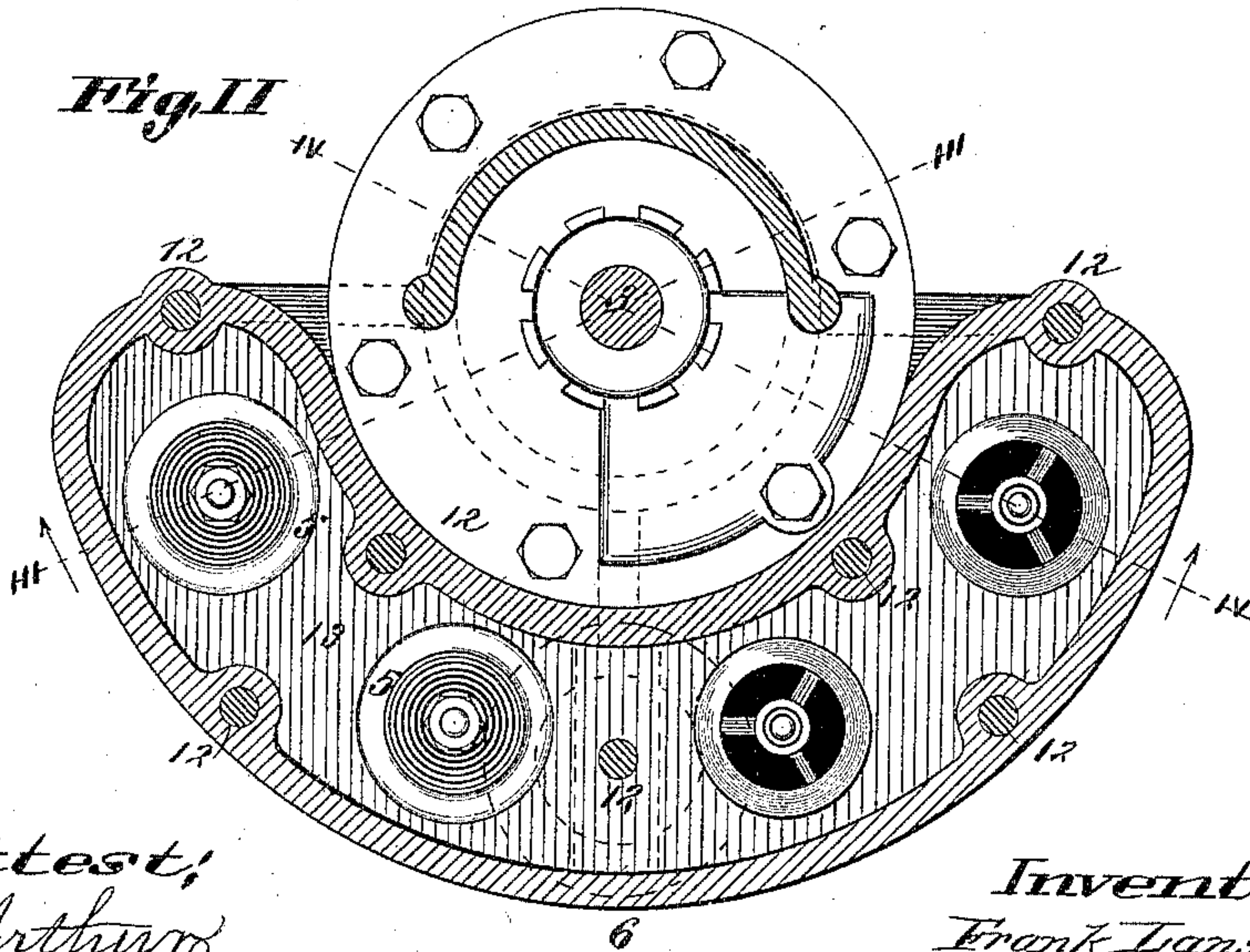
No. 436,714.

Patented Sept. 16, 1890.

*Fig. I*



*Fig. II*



*Attest:*  
*E. Arthur*  
*S. H. Knight*

*Inventor:*  
*Frank Lansberg*  
*By Knight & Bro*  
*attys*

(No Model.)

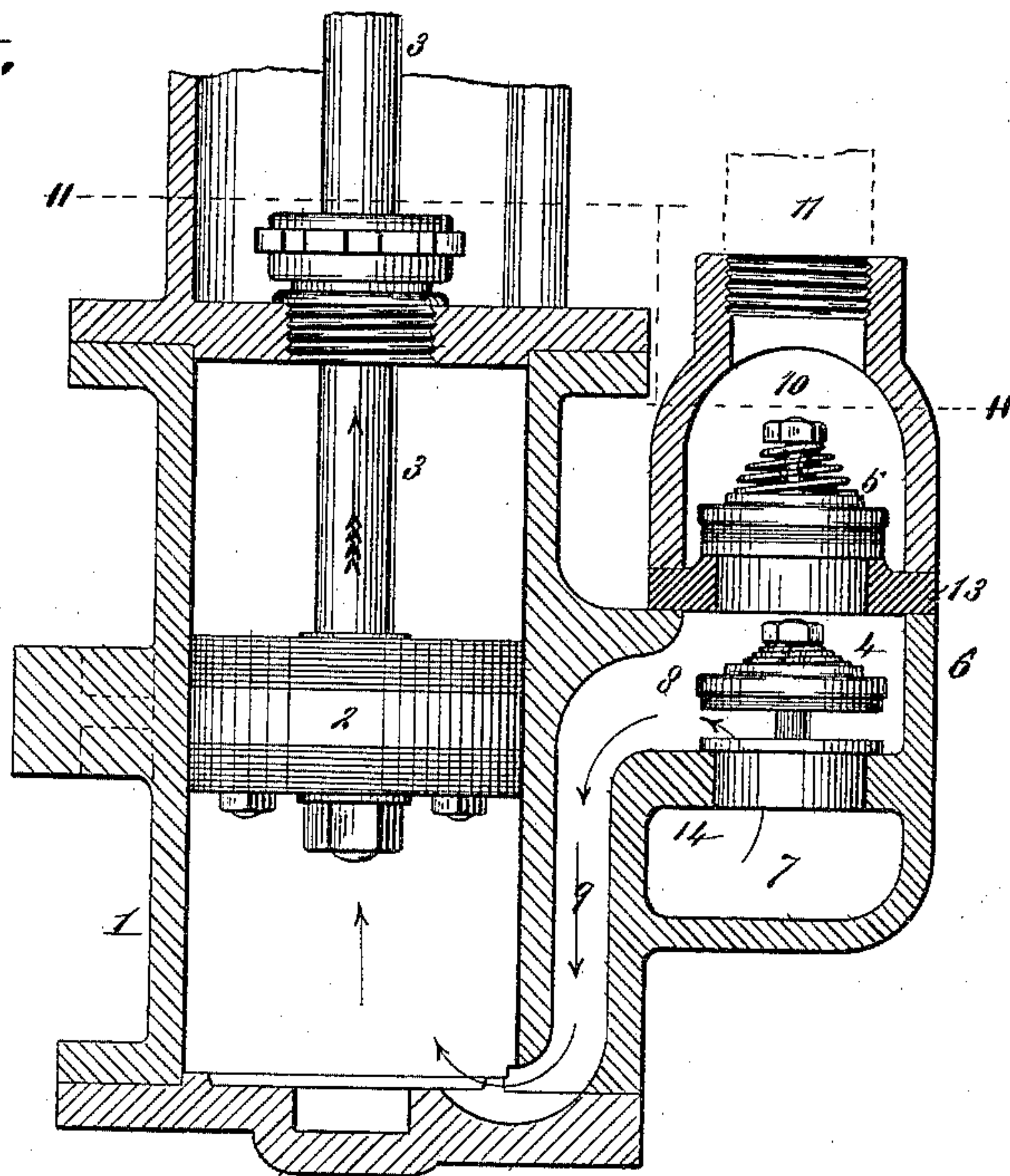
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F. LANSBERG.  
PUMP.

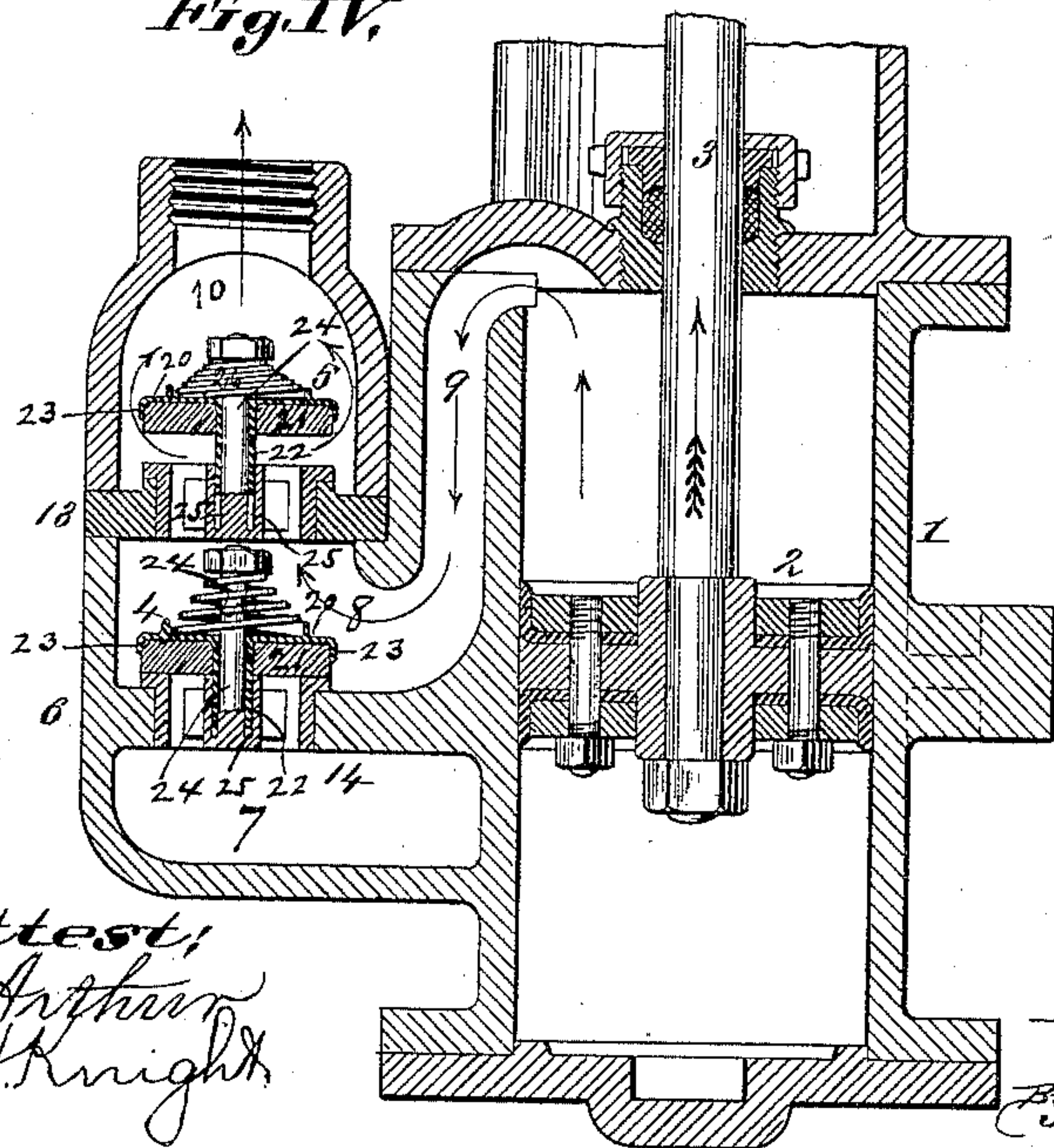
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*Fig. III.*



*Fig. IV.*



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# UNITED STATES PATENT OFFICE.

FRANK LANSBERG, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE LANSBERG  
BRAKE COMPANY, OF EAST ST. LOUIS, ILLINOIS.

## PUMP.

SPECIFICATION forming part of Letters Patent No. 436,714, dated September 16, 1890.

Application filed January 14, 1890. Serial No. 336,936. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK LANSBERG, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in steam-pumps; and it consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure I is an elevation, part in section, illustrative of my invention. Fig. II is a transverse section taken on line II II, Fig. III. Fig. III is a vertical section taken on line III III, Fig. II, and looking in the direction of the arrow. Fig. IV is a vertical section taken on line IV IV, Fig. II, looking in the direction of the arrow.

Referring to the drawings, 1 represents the cylinder of the pump, 2 the piston, and 3 the piston-rod.

4 represents the inlet-valves, and 5 the outlet-valves, of the pump, arranged in a housing 6 to one side of the cylinder 1. I have shown four of the outlet-valves arranged in a horizontal series, and also four of the inlet-valves arranged in a horizontal series and located, preferably, directly beneath the outlet-valves.

7 represents a port of the pump through which the water passes to the inlet-valves 4, and after entering the chamber 8 the water passes through a port 9 into the cylinder beneath the piston at one side of the housing, (see Fig. III,) and at the other side of the housing (see Fig. IV) the water passes through the port 9 to the cylinder above the piston, the pump being thus double acting. The water escapes through the valves 5 into a chamber 10 above the valves and passes off through a pipe 11.

The valves 4 and 5 consist of metal caps 20 and rubber or other suitable disks 21. The caps have annular flanges 23, that hold the disks, and they also have central sleeves 22, that fit over central stems 24, extending upward from the main casting of the housing. 25 represents annular grooves around the stems in which the stems 24 fit and work as the valves open and close. 26 represents springs placed between the caps 20 and heads 27 on the upper ends of the stems 24. By thus constructing the valves the parts 21 are protected from wear in the movement of the valves.

The housing 6 is made in two parts divided horizontally and held together by tie-rods 12. Between these sections of the housing is located a plate 13, in which are formed the openings and seats of the valves 5. Now it will be seen that by removing the upper portion of the housing 6 access can be had to the valve 5, and by simply lifting off or removing the plate 13 access can be had to all of the valves 4 which are formed in the bridge 14 of the housing.

I thus construct a very simple and durable pump, and perfect facilities are afforded for applying, removing, or repairing the valves, and as the valves are all arranged in a housing located at one side of the cylinder they can be reached simultaneously.

I claim as my invention—

In a pump, the valves composed of caps 20, having sleeves 22, fitted in grooves 25, and flanges 23, disks 21, and stems 24, substantially as set forth.

FRANK LANSBERG.

In presence of—

E. S. KNIGHT,

BENJN. A. KNIGHT.