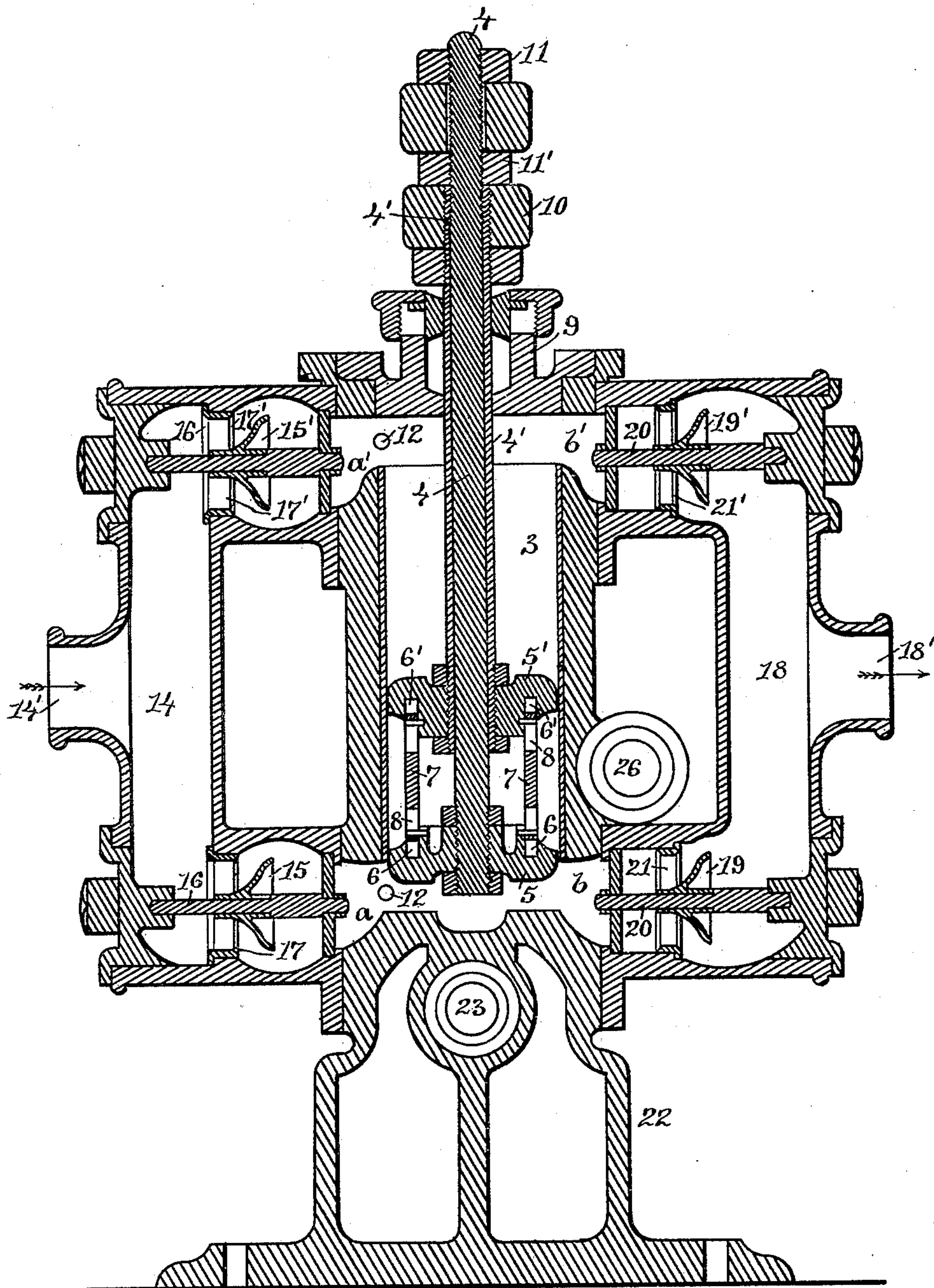


(No Model.)

C. CUSHING.
PUMP.

No. 462,471.

Patented Nov. 3, 1891.



WITNESSES:

Chas. H. Luthers
W. F. Bligh

INVENTOR:

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UNITED STATES PATENT OFFICE.

CHRISTOPHER CUSHING, OF PROVIDENCE, RHODE ISLAND.

PUMP.

SPECIFICATION forming part of Letters Patent No. 462,471, dated November 3, 1891.

Application filed January 12, 1891. Serial No. 377,575. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER CUSHING, of the city of Providence, county of Providence, and State of Rhode Island, have invented certain new and useful Improvements in Pumps; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

This invention has reference to improvements in plunger heads and rods for pumps.

The object of this invention is to produce a plunger head and rod for pumps which may be operated from the outside of the pump to force the packing against the interior surface of the plunger-cylinder.

To this end my invention consists in the use of a plunger-rod having a jacket, one portion of the plunger-head being secured to the rod and the other to the jacket, together with other novel features of construction and combination of peculiar parts, which will be more fully described hereinafter, and pointed out in the claim.

The drawing illustrates my improved plunger and rod in connection with a double-acting pump, which is shown in vertical section.

Similar numbers of reference indicate corresponding parts throughout.

In the drawing, 3 indicates the plunger-cylinder of the pump, in which moves the plunger-rod 4, having the jacket 4'. The plunger-rod 4 is secured to the lower disk 5 of the plunger, while the jacket 4' is secured to the upper disk 5'. These plunger-disks are provided with annular slots 6 and 6', into which

the upper and lower edges of the ring 7 are partially entered, and are held by pins passing through the slots 8 in the packing-supporting ring 7. The plunger-rod 4 and jacket 4' pass through an ordinary stuffing-box 9 and through a perforation in the yoke 10, and are supplied with screw-threads which, on the rod 4, engage with the threads on the nut 11 and lock-nut 11', while those on the jacket 4' engage in threads cut in the yoke 10.

The construction of the plunger permits of the adjustment of the packing entirely from the outside of the pump. Should the packing, which is held against the inner surface of the cylinder 3 by the ring 7, become loosened, the nut 11, bearing on the top surface of the yoke-piece 10 and working on the thread cut on the plunger-rod 4, may be turned to draw the disk 5 upward toward the disk 5', the ring 7 sliding into the annular slots 6 and 6', cut into the disks, thereby compressing the width of the packing and forcing it against the inner surface of the cylinder 3.

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

In a plunger-head for a pump, the combination, with the disk 5, carried on the rod 4 and having the annular slot 6, and the disk 5', carried on the jacket 4' and having the annular slot 6', of the ring 7, having the slots 8 arranged to slide into the annular slots 6 and 6', as described.

CHRISTOPHER CUSHING.

Witnesses:

HENRY J. MILLER,
J. A. MILLER, Jr.