

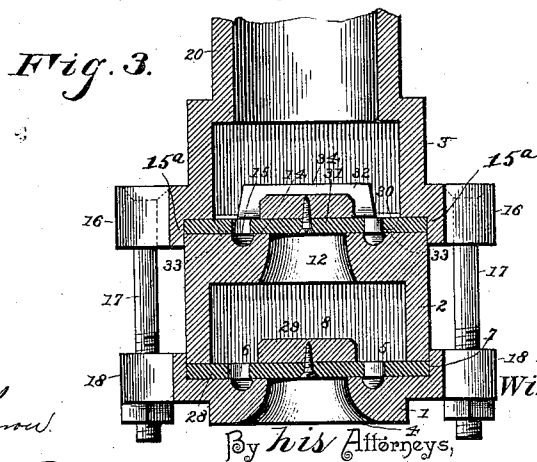
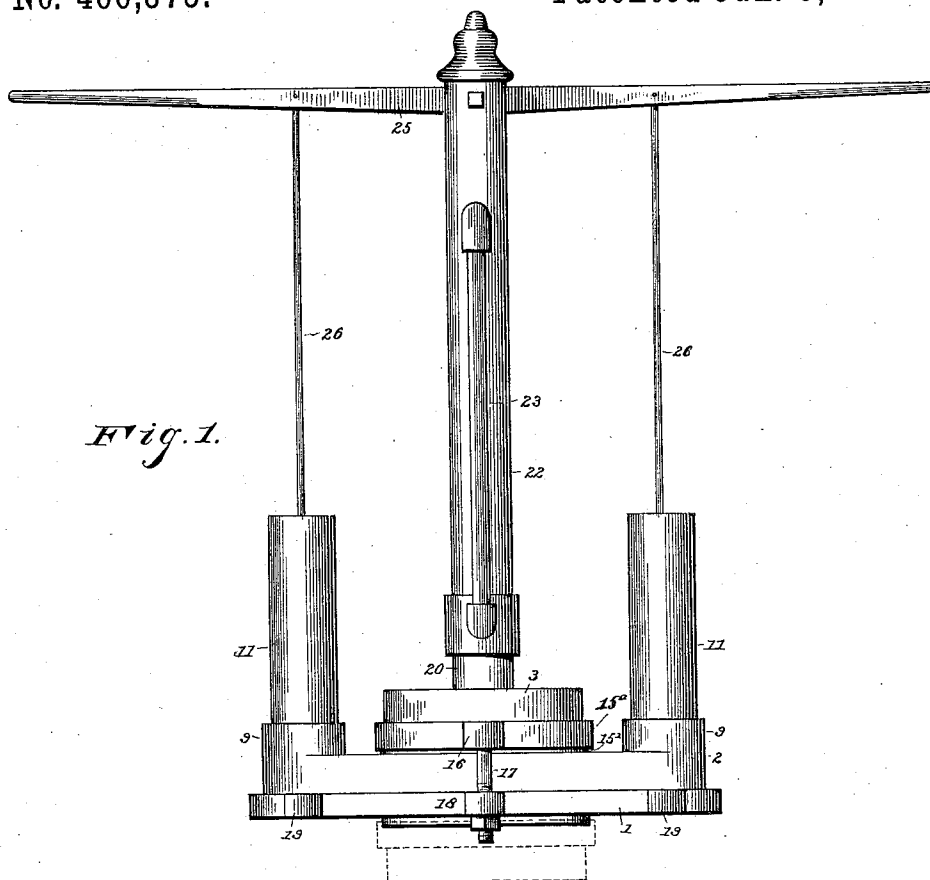
(No Model.)

2 Sheets—Sheet 1.

W. S. SHAHAN.
PUMP.

No. 466,375.

Patented Jan. 5, 1892.



Witnesses,

J. M. Throu
Wm. Baggers

Inventor,

Winfield S. Shahan,

By his Attorneys,

C. A. Snow & Co.

(No Model.)

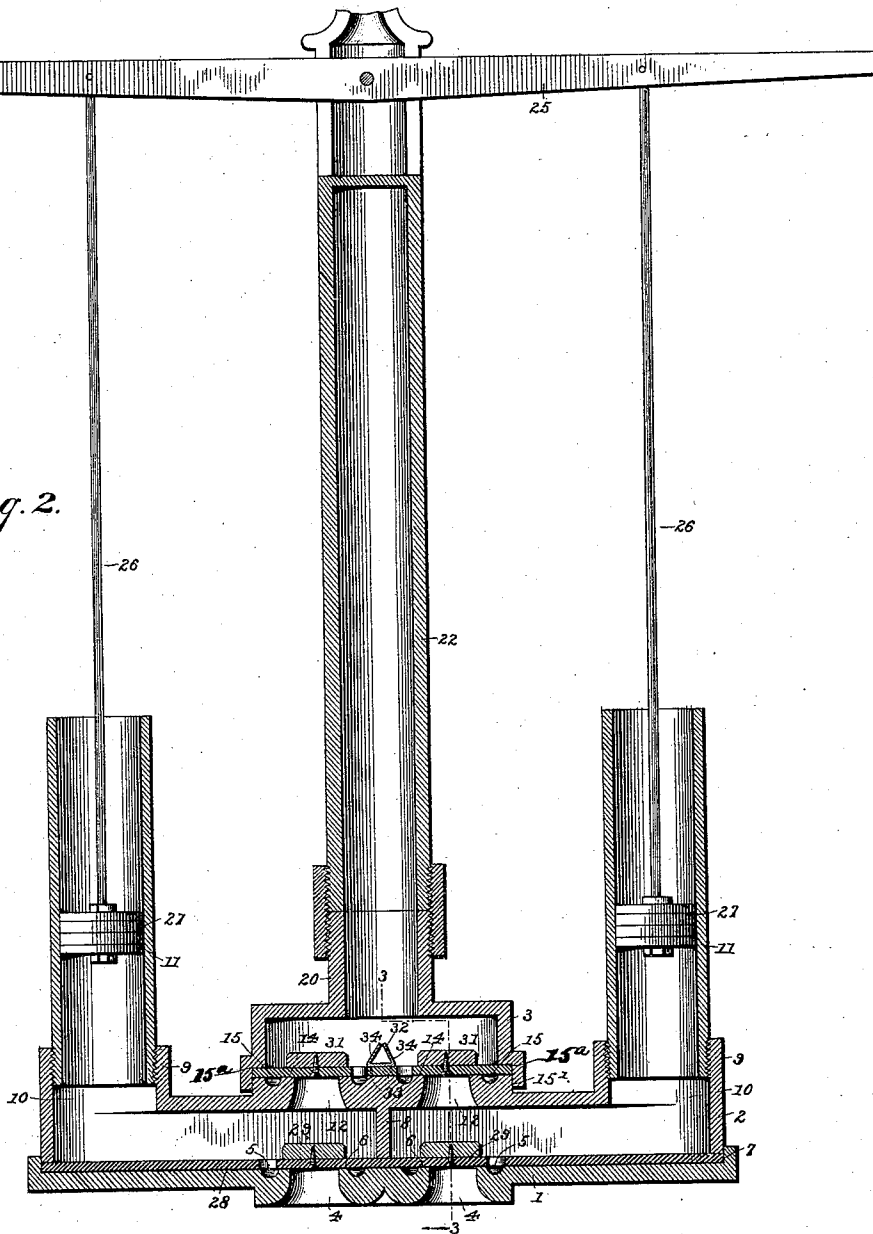
2 Sheets—Sheet 2.

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Fig. 2.



Witnesses;

J. M. Withrow
Wm. Baggers

Inventor,
Winfield S. Shahan

By *his* Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WINFIELD S. SHAHAN, OF MOLINE, ILLINOIS.

PUMP.

SPECIFICATION forming part of Letters Patent No. 466,375, dated January 5, 1892.

Application filed March 14, 1891. Serial No. 385,077. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD S. SHAHAN, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented a new and useful Pump, of which the following is a specification.

This invention relates to pumps, and is designed as an improvement of Letters Patent No. 391,563, granted to me October 23, 1888, the same having for its object to provide a force-pump which shall be simple in construction, durable, and easily manipulated.

The invention consists of the improvement in the construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a side elevation of a pump constructed in accordance with my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a transverse sectional view taken on the line 3 3 in Fig. 2.

Like numerals of reference indicate like parts in all the figures.

The body of my improved pump is preferably of cast-iron, and it consists of three principal parts—namely, the base 1, the casing 2, and the top piece 3. The base is oblong, as shown, and is provided with two openings 4, which are surrounded on their upper sides by annular grooves 5, thus forming the valve-seats 6. The said base is also provided with a circumferential flange 7, within which the casing is fitted. Said casing consists of an oblong casting which is provided with the central transverse partition 8. The upper side of the said casting is provided with upwardly-extending flanges or collars 9, surrounding the openings 10 and serving for the attachment of the pump-cylinders 11. The openings 10 are located at or near the ends of the casing, which latter is provided near its central portion with openings 12, surrounded by annular grooves 15, forming the valve-seats 14. The openings 12 are arranged on opposite sides of the central partition-wall 8.

The top piece 3 consists of an oblong casting having a downwardly-extending shouldered flange 15^a, adapted to be fitted over the flange 15', surrounding the two valve-seats 14,

and provided with laterally-extending perforated lugs 16, adapted to be connected by means of bolts 17 with similar lugs 18, extending laterally from the base. The latter is also provided near its ends with similar perforated lugs 19 to enable it to be bolted to a suitable support. The top piece or casing 3 has an opening surrounded by a flange or collar 20, which may be connected with the exit-pipe. A casting similar to the top piece 3 may be mounted upon the under side of the base, as shown in dotted lines in Fig. 1, such casting being secured by means of the bolts 17 for the attachment of an induction-pipe. The exit-pipe, which is connected with the flange or collar 20 of the top piece 3, consists of a metallic casting formed with the air-chamber and standard 22 and with the pipe 23, which latter may be provided with a suitable nozzle or serve for the attachment of a hose or similar water-conductor. The said standard also serves for the attachment of the lever 25, which on opposite sides of its fulcrum is connected with the plunger-rods 26 of the plungers 27, working in the cylinders 11.

Between the base 1 and the casing 2 is interposed a disk 28, of leather or other suitable material, and having the valves 29, which normally rest upon the seats 6. The central wall 8 of the casing 2 serves to bear upon and depress the disk 28 between the said valves, which are thereby held to their seats. A similar disk 30, having valves 31, is interposed between the casing 2 and the top piece 3. The said valve-disk is provided with a central brace 32, of sheet metal, provided with prongs 33, by means of which it is attached to the said disk, and having upturned flanges 34. This brace serves to stiffen the valve-disk and to assist in holding the valves to their respective seats.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed.

My improved pump is exceedingly simple in construction and is composed of but few parts, which may be readily put together or taken apart for repairs.

The pump may be used as a submerged pump when so desired, or it may be provided with an induction-pipe extending into the

well. It is an exceedingly powerful force-pump, and will for this reason be found useful for washing windows, carriages, and the like, as well as for extinguishing fire. This improvement is designed to supplant the heavy and cumbrous construction of my former patent and the arrangement and construction of the valves. Being constructed of fewer parts and the manner of assembling the same in the present specification allows the pump to be made of stronger and more durable material, whereas wood was the only material that would be suitably used in the patented pump. Furthermore, the standards and cross-braces are dispensed with, and the air-chamber of the present pump serves the double function of the air-chamber and standard. Other differences of construction are also apparent as improvements over my patent, numbered 391,563.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a pump, the combination of the base having valved inlet-openings and a continuous encircling flange, the casing having the central partition resting upon the base between the inlet-openings, the valved outlet-openings arranged near the center and the opposite threaded flanges or collars 9 and seated and inclosed within said base-flange, the pump-cylinders secured in said flanges or collars 9, the top piece capping said casing and provided with a central top opening and a flange encircling said centrally-arranged outlet-openings in the casing and clamped to the base, a continuous interposed valve-disk located over said outlet-openings and clamped

thereon by said top piece, a metallic brace secured upon the top of said continuous valve-disk between the valves and having securing-prongs and flat upturned converging stop faces or flanges, and the combined air-chamber and standard connected with the top opening in said top piece and having the outlet-pipe, substantially as set forth.

2. The combination of the base having the valved inlet-openings and a continuous and encircling flange, the casing having the valved outlet-openings arranged near the center, the upwardly-extending flange encircling both outlets and the central partition and seated upon said base within the encircling flange therearound, the pump-cylinders connected with the ends of the casings, the top piece arranged above the valved outlet-openings of the casing and having the upwardly-extending central neck and the depending shouldered flange taking over said casing-flange and serving to retain the valve-disk upon the latter and clamped upon said casing and to said base, the combined air-chamber and standard coupled to said upwardly-extending neck and projecting from said top piece and having the outlet-pipe, and the operating-lever pivoted to said standard and connected with the pump-plunger, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WINFIELD S. SHAIAN.

Witnesses:

ADOLPH ALTIG,
JOHN NORTON.