No. 858,850. PATENTED JULY 2, 1907.

A. BENTZ.

PLUNGER FOR PUMPS.

APPLICATION FILED JAN. 9, 1906.

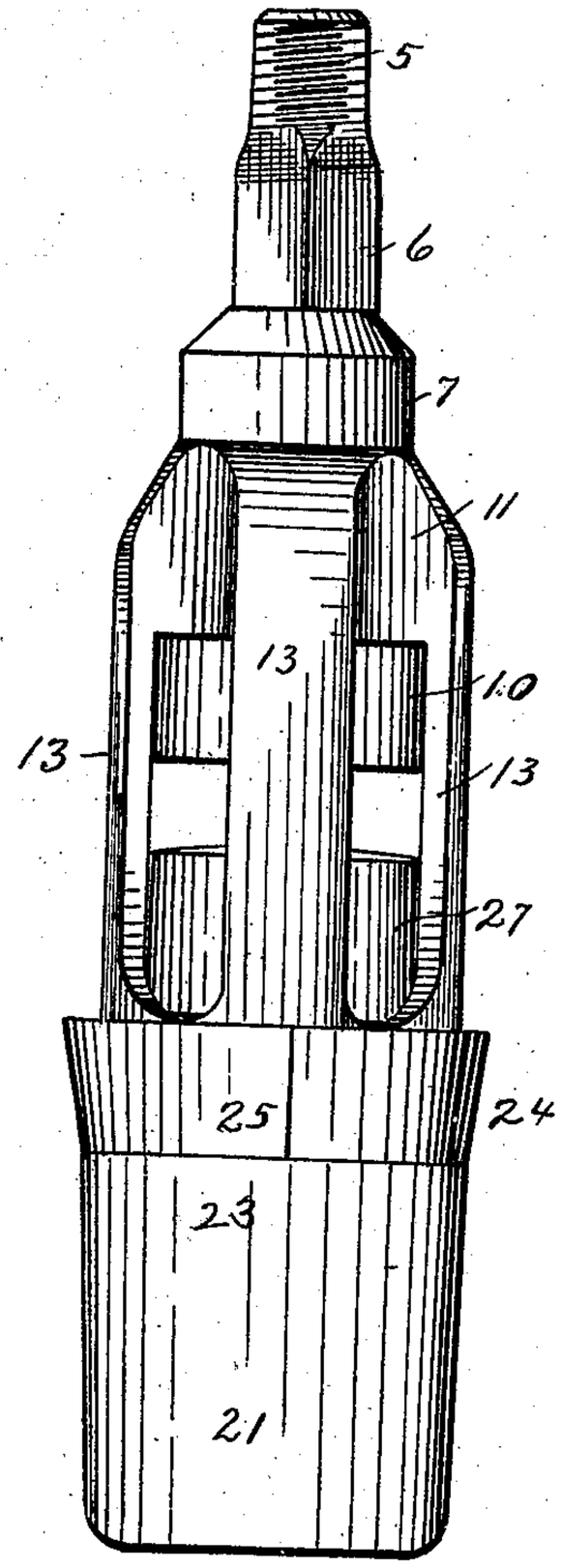

Fig. 1.

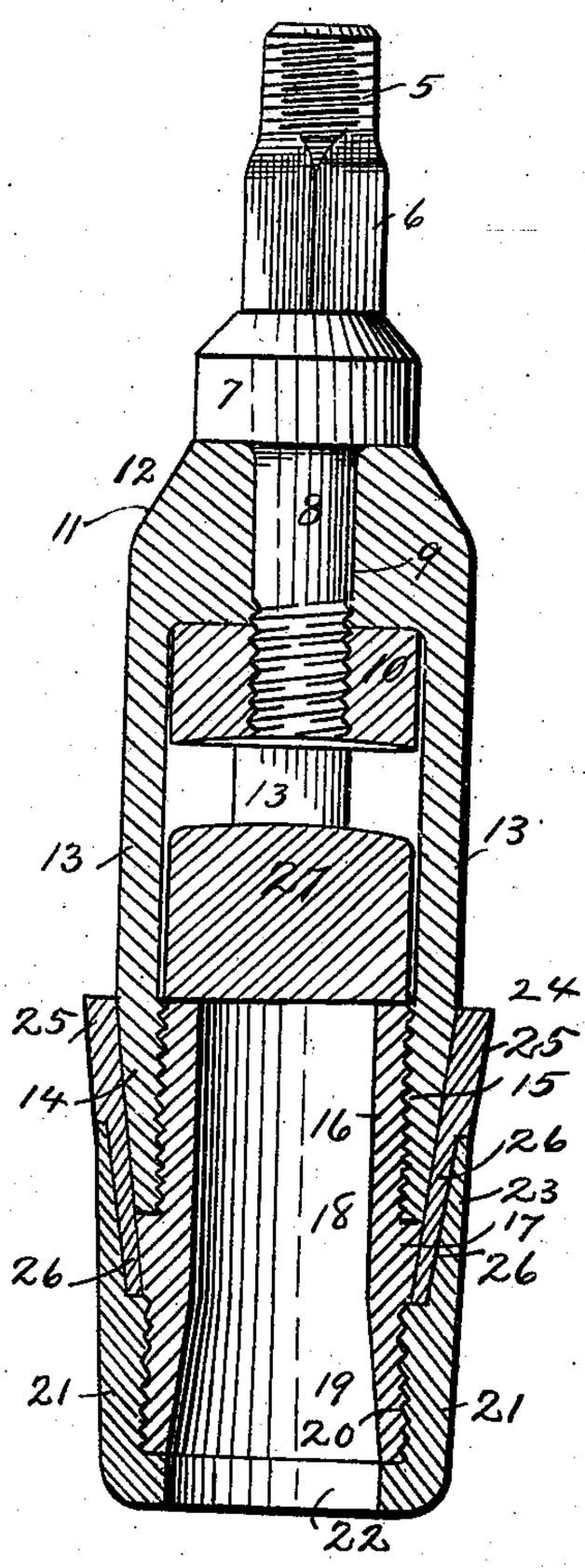

Fig. 2.

WITNESSES

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PLUNGER FOR PUMPS.

No. 858,850. Specification of Letters Patent. Patented July 2, 1907.

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To all whom it may concern:

Be it known that I, ADAM BENTZ, a citizen of the United States, residing at Pomeroy, in the county of Meigs and State of Ohio, have invented certain new and useful Improvements in Plungers for Pumps, of which the following is a specification.

My invention relates to an improved plunger for pumps.

The object of the invention is the provision of an improved device of this character having a leather suction disk clamped thereon in such manner as to be held firmly in position against any strain to which the plunger is likely to be subjected.

Further objects and advantages of the invention will be set forth in the detailed description which now follows.

In the accompanying drawing: Figure 1 is a side elevation of a plunger, constructed in accordance with the invention. Fig. 2 is a vertical section of said plunger casing with the plunger stem in elevation.

Like numerals designate corresponding parts in both of the figures of the drawing.

Referring to the drawing, the numeral 5 designates the plunger stem. This stem comprises an angular portion 6, a shoulder 7, and a downwardly extending stem 8. This stem 8 projects through an opening 9 formed through the top of the plunger casing and is threaded at its lower end for the reception of a nut 10 which serves to hold the plunger casing 11 upon the stem 8. This plunger casing comprises a solid head 12, depending arms or ribs 13, and a tapered annular flange 14, the inner face of which is threaded as at 15. Threaded into this tapered flange is a coupling 16 having a shoulder 17 formed upon the exterior wall thereof, against which the lower end of flange 14 abuts when the parts are screwed into position. The coupling 16 has a bore 18 formed therethrough, and is tapered as at 19. The lower exterior face of coupling 16 is threaded as at 20, for the reception of a cap 21, saiid cap having an opening 22 formed through the lower face thereof, which registers with the bore 18 of coupling 16 when the parts are assembled.

The cap 21 has an upwardly extending annular flange 23, the inner face of which is outwardly tapered. The outer face of shoulder 17 is also tapered, as is shown in Fig. 2. A leather suction disk 24 having a thickened upper portion 25 and a downwardly extending tapered portion 26, is clamped firmly between the tapered inner face of flange 23 of cap 21, and the tapered outer face of flange 14 of plunger casing 11, when the parts are screwed together, as illustrated in Fig. 2.

A clapper valve 27 lies between the ribs 13 and is limited in its movement by the lower face of nut 10 and the upper face of coupling 17. Upon the downward movement of the plunger casing it will be readily understood that the water will enter through bore 18, lifting clapper valve 27, and will flow out between the ribs 13 into the pump barrel. Upon the upward movement of the plunger, the clapper valve will seat itself upon the top of the coupling 16 to prevent the egress of water through said coupling. The water will consequently be lifted through the pump valve to its point of discharge.

From the foregoing description it will be seen that simple and efficient means are herein provided for accomplishing the object of the invention, but while the elements shown and described are well adapted to serve the purposes for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth but includes within its purview such changes as may be made within the scope of the appended claims.

Having thus described my invention what I claim, is:

1. In a device of the character described, the combination with a plunger casing having an annular flange at the lower end thereof, the interior of said flange being threaded and the exterior of said flange tapered downwardly, of a coupling threaded into said flange, a cap piece threaded upon said coupling and having an outwardly tapering, upwardly extending flange, and a leather suction disk having a downwardly extending, inwardly tapering portion which is clamped between the flange of the cap piece and the clapper box, and having an enlarged or thickened upper portion which lies entirely above the flange of the cap piece.

2. In a device of the character described, the combination with a plunger casing having its lower portion inclined, of a coupling carried thereby, a nut provided upon said coupling and surrounding said inclined lower portion in spaced concentric relation, said nut having its inner face inclined to correspond to the inclined face of said lower portion and a suction ring in the space between said nut and said casing and projecting therebeyond.

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

ADAM BENTZ.

Witnesses:
JOHN C. SOMMER,
ANDREW SMITH.