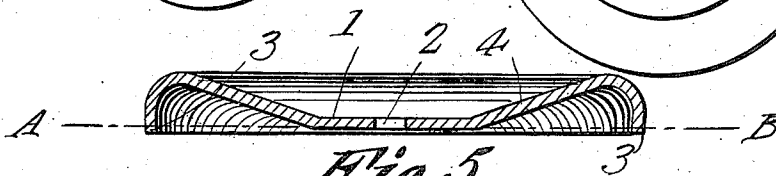
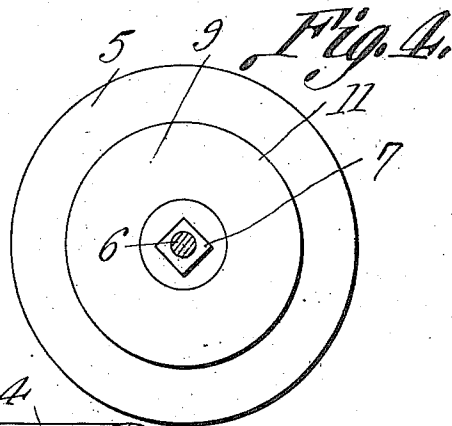
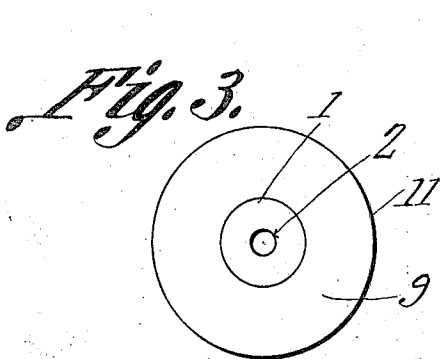
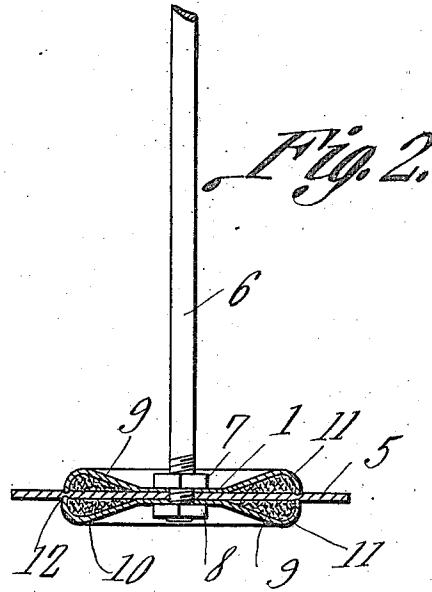
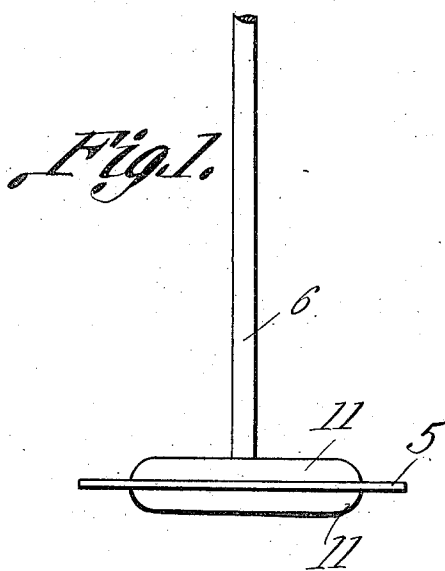


G. W. BAIRD.
 SELF LUBRICATING PUMP PLUNGER.
 APPLICATION FILED SEPT. 14, 1910.

987,788.

Patented Mar. 28, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. BAIRD, OF WARREN, PENNSYLVANIA.

SELF-LUBRICATING PUMP-PLUNGER.

987,788.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed September 14, 1910. Serial No. 582,044.

To all whom it may concern:

Be it known that I, GEORGE W. BAIRD, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented a new and useful Self-Lubricating Pump-Plunger, of which the following is a specification.

The device forming the subject matter of this application, is a piston adapted to be used in hand sprayers and in air pumps generally, the construction being such that the piston will contain a lubricant, the lubricant, being fed to the flexible portion of the piston, will prevent the same from becoming dry and brittle.

It is the object of this invention to provide a structure of the class above set forth which will contain a lubricant, and to this end, disks of novel and improved form are provided, which disks, being secured to opposite faces of the head of the piston, uniting to form a chamber, are adapted to contain a lubricant.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 shows the invention in elevation; Fig. 2 is a transverse section, the plunger rod being shown in elevation; Fig. 3 is a top plan of one of the disks; Fig. 4 is a top plan of the structure shown in Fig. 2, the plunger rod being shown in section; and Fig. 5 is an enlarged transverse section of one of the disks.

Referring to the drawings, and noting particularly Fig. 5, it will be seen that each disk consists of a flat central portion 1 in which there is a hole 2. The periphery of the disk is extended across the plane A—B in which the flattened central portion 1 is located, this construction being indicated by the numeral 3. This disk, is spaced as denoted by the numeral 4, from the plane A—B of its central portion, intermediate its peripheral portion 3 and its flat central portion 1.

The invention contemplates the use of two disks, each of which is constructed as above described. These disks are placed edge to

edge, a head 5, ordinarily fashioned from leather, being placed between them. Through the openings 2 in the disks, and through the head 5, a plunger rod 6 is extended. This plunger rod 6 carries a nut 7, adapted to engage the uppermost disk. Upon the lower end of the plunger rod 6, a nut 8 is threaded, the nuts 7 and 8 constituting an adjustable means for pressing the disks against the head 5. Beyond the flat central portions 1, the disks flare, as denoted by the numeral 9, to define a chamber, into which a lubricant of any desired sort may be placed. The peripheries of the disks are carried toward each other as denoted by the numeral 11, to bring their edges 12 into contact with the head 5. It will be seen that the lubricant 10 which is inclosed between the disks will permeate the head 5, keeping the same sufficiently pliable so that it will not crack or deteriorate under use. The flat central portions 1 of the disks are adapted to abut against the nut 7, and to receive the nut 8, without distorting the shape of the disks. The peripheries of the disks, being held against the head 5, serve to prevent the lubricant from leaking rapidly beyond the peripheries of the disks. Moreover, the flat central portions 1, abutting against the head 5, serve to prevent the peripheries of the disks from being forced entirely through the head 5 under the coöperation of the nut 7 and the nut 8. However, by reason of the fact that the peripheries of the disks are extended beyond and across the plane A—B of their central portions 1, the peripheries of the disks may be compressed upon the head 5 to an extent sufficient to prevent an undue leakage of the lubricant.

It is to be noted that the disks are duplicates of each other, the disks being fashioned from sheets of material of the same thickness throughout their extent, the construction being such that the disks may be stamped out, at trifling expense. Attention is directed to the fact that the disks, adjacent their peripheries, noting Fig. 1, present rounded edges, over which the head 5 may fold, without endangering a cutting of the head, through contact with either of the disks. The flat, central portions 1 form depressions in which the nuts 7 and 8 are housed completely, within the contour of the disks, and thus the stroke of the pump may be lengthened, the length of the stroke being limited by contact with the disks only, and

not by contact with the nuts 7 and 8. Moreover, owing to this construction, the possibility of loosening the nuts 7 and 8 is decreased.

5 Having thus described the invention what is claimed is:

10 A device of the class described comprising a head, and disks applied to opposite faces of the head, the disks being fashioned from a plate of material of the same thickness throughout its extent, the disks comprising flat central portions bearing directly upon the head, and diverging portions defining a lubricating chamber in the device, the periph-
15 eries of the diverging portions being curved to present a rounded edge, over which the head may fold, the edges of the

diverging portions being extended toward each other, beyond the planes of the flat central portions; a rod extended through the disks and the head; and securing devices upon the rod, bearing against the flat central portions, and housed completely in the depressions formed by said flat central portions; the disks being duplicates of each other. 20 25

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

GEORGE W. BAIRD.

Witnesses:

GUY C. SWANSON,
F. C. LANDBLADE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
