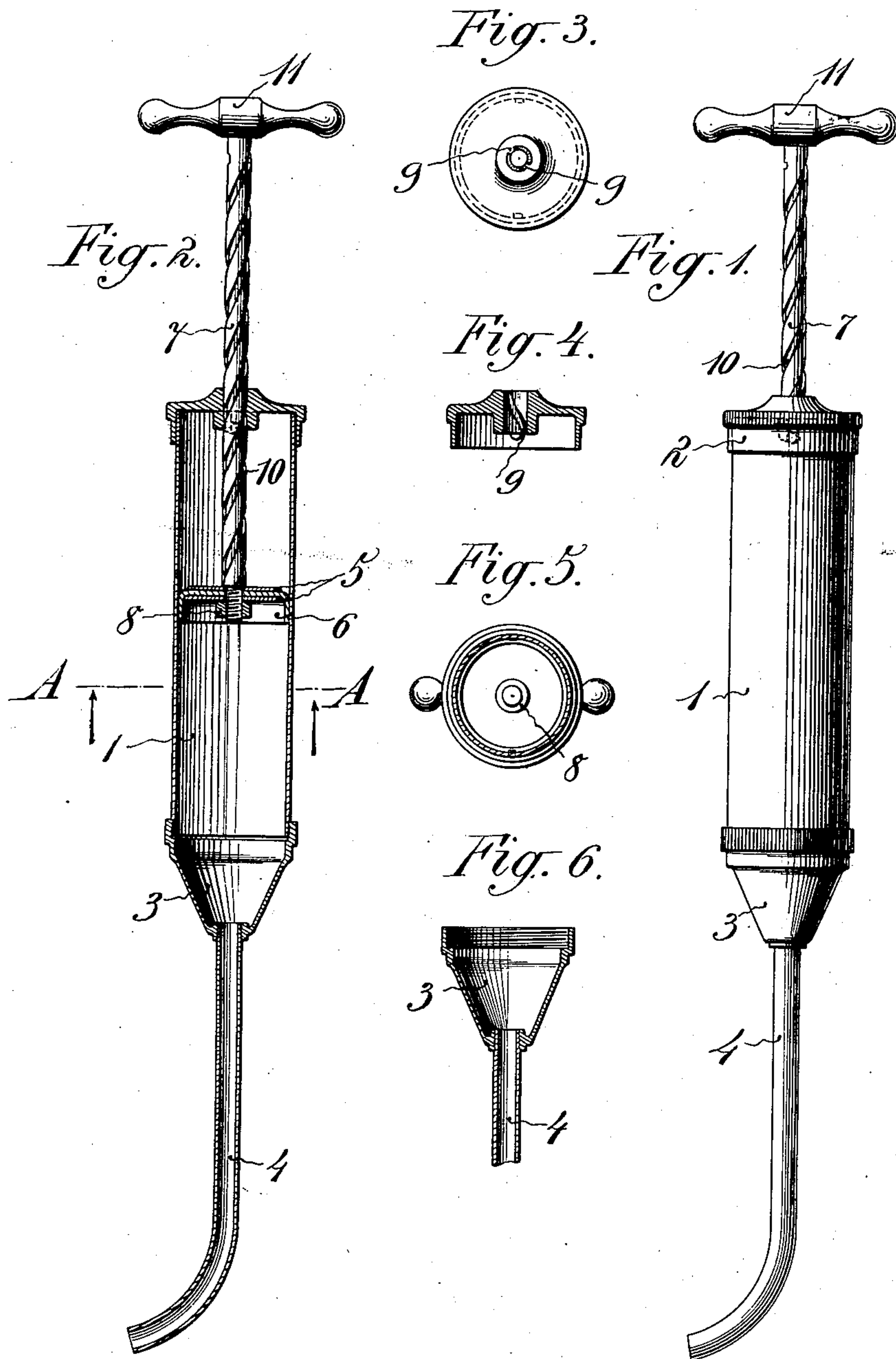


W. P. MILLER.
GREASE GUN.
APPLICATION FILED JAN. 31, 1908.

983,636.

Patented Feb. 7, 1911.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM P. MILLER, OF NEW YORK, N. Y.

GREASE-GUN.

983,636.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed January 31, 1908. Serial No. 413,567.

To all whom it may concern:

Be it known that I, WILLIAM P. MILLER, a citizen of the United States, and resident of the borough of Brooklyn, in the city and State of New York, have invented a new and useful Improvement in Grease-Guns, of which the following is a specification.

One object of my invention is to provide a gun from which the grease may be ejected in predetermined quantities and at a predetermined speed, thus avoiding the jerking action of the plunger so common in the ordinary grease guns, which results in inaccuracy and wastefulness, and also avoiding the slow action of a screw and nut device.

Another object of my invention is to provide means for very rapidly filling the barrel of the gun with even the heaviest kind of grease.

A further object is to provide a gun in which grease may be carried at all times without danger of its being forced out by the jolting of the vehicle or the contact of the gun with other objects.

A still further object is to provide certain improvements in the form, construction and arrangement of the various parts of the gun for carrying out the above mentioned objects.

A practical embodiment of my invention is represented in the accompanying drawings in which—

Figure 1 is a side elevation of the gun, Fig. 2 is a vertical central section of the same, Fig. 3 is a plan view of the cap, Fig. 4 is a vertical section through the same, Fig. 5 is a horizontal section taken in the plane of the line A—A of Fig. 2, looking in the direction of the arrows, and Fig. 6 is a detail vertical central section of the nozzle.

The barrel of the gun is denoted by 1 and it is provided at its inner end with a cap 2 and at its outer end with a removable nozzle composed of the parts 3 and 4. In the present instance I have shown the cap 2 removably secured to the barrel by the well known bayonet lock. I have also shown the part 4 of the nozzle exteriorly screw-threaded at one end for engaging with the part 3, and part 3 interiorly screw-threaded for a distance for engagement with the barrel 1. Both the cap 2 and the part 3 of the nozzle, I have shown provided with milled surfaces for facilitating the turning of the parts.

The plunger head is constructed in any well known or approved form and comprises, in the present instance, stiff disks 5 and an interposed cup washer 6. These parts are secured to the shank 7 of the plunger in the present instance, by the nut 8 engaging with a screw-thread on the shank 7. The plunger is fitted to reciprocate in the barrel and have a substantially air-tight engagement with the inner wall thereof.

The cap 2 is provided with a central opening on the inner wall of which are one or more spiral lugs 9, in the present instance two, arranged diametrically opposite each other. The shank 7 of the plunger passes through the opening in the cap 2, and it is provided with one or more spiral grooves 10 for engaging the lugs 9. These spiral lugs 9 insure an extended engagement of the shank with the cap 2. The outer end of the shank 7, I provide with a handle 11 rigidly fixed thereto, for manually operating the plunger.

When it is desired to make use of the gun, the operation is as follows. The part 3 of the nozzle is unscrewed from the barrel 1, the gun is held with the handle 11 projecting downwardly and the plunger is permitted to slide down to its extreme inward position. The barrel is then easily and rapidly filled with grease from the open outer end and the nozzle is replaced. The gun is now ready for use. By turning the handle 11 in the proper direction, the plunger head is caused to advance as a result of the co-action of the spiral lugs 9 and the spiral groove 10. Thus a positive discharging action is obtained as the plunger cannot be suddenly forced ahead but only advanced by the turning of the handle. And yet the turning of the handle imparts a very forcible, rapid and uniform forward movement to the plunger head suitable for discharging very heavy grease. This gun can be very quickly filled for the reason that the pitch of the spiral groove is such that the plunger head will return by gravity to the limit of its inward movement when the gun is held with the handle projecting downwardly, thus obviating the tedious and slow process of unscrewing the plunger as in guns having screw-threaded plungers, heretofore in use; and this pitch of the spiral groove also permits the rapid discharge of the grease by a few turns of the handle, when desired. Moreover, the lubricant can

be positively ejected without danger of waste and in just the quantity desired.

It is to be understood that I do not limit myself strictly to the construction herein
5 described and shown as various changes might be resorted to without departing from the spirit and scope of my invention.

What I claim is:

10 A grease gun comprising a barrel, a plunger having its shank provided with a spiral groove, and means on said barrel engaging said groove for reciprocating the plunger

as the shank is rotated, the said groove being of such pitch that longitudinal pressure on the plunger will cause the same to move 15 longitudinally of the barrel.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this thirtieth day of January 1908.

WILLIAM P. MILLER.

Witnesses:

F. GEORGE BARRY,
HENRY THIEME.