May 4, 1926. 1,583,723

W. H. KIMBALL

GREASE GUN LOADER

Filed Sept. 10, 1925

Fig. 1.

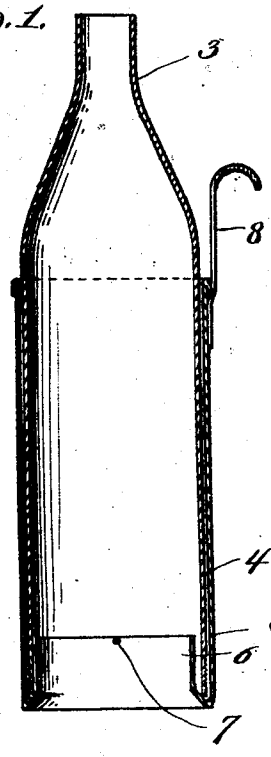



Fig. 5.

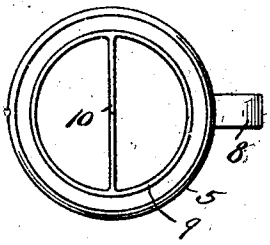



Fig. 6.

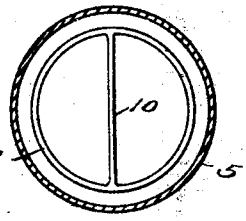



Fig. 4.

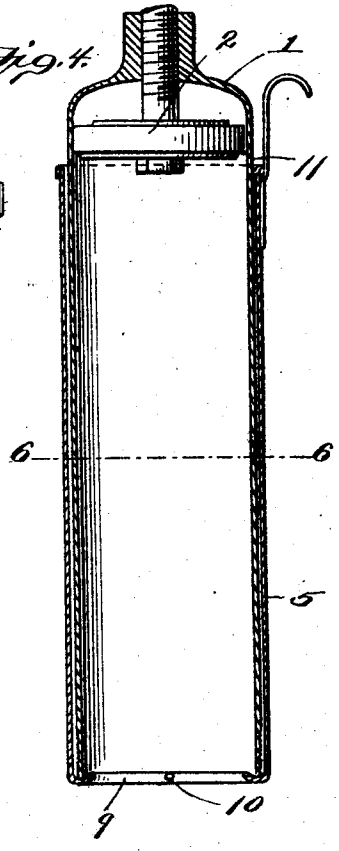



Fig. 2.

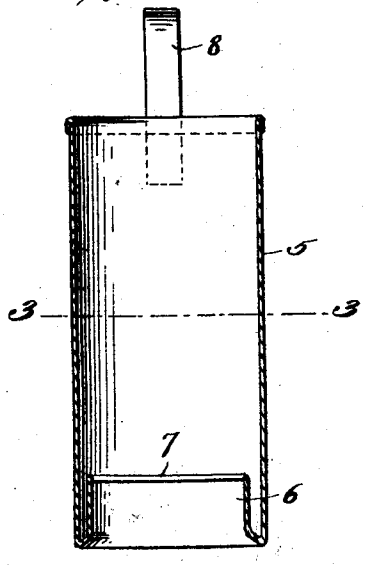
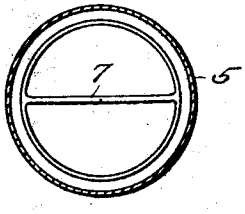



Fig. 3.




Inventor

Walter H. Kimball

By James L. Norris

Attorney

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# UNITED STATES PATENT OFFICE.

WALTER H. KIMBALL, OF FLINT, MICHIGAN.

## GREASE-GUN LOADER.

Application filed September 10, 1925. Serial No. 55,561.

*To all whom it may concern:*

Be it known that I, WALTER H. KIMBALL, a citizen of the United States, residing at Flint, in the county of Genesee and State of Michigan, have invented new and useful Improvements in Grease-Gun Loaders, of which the following is a specification.

This invention relates to loaders for grease guns and proposes the construction of a device of the class designated, insertable with the grease gun into a pail of grease for progressively molding within the grease gun a column of grease of less diameter than the internal diameter of the gun barrel, and severing it from the main body of grease in the pail when the gun has been loaded.

Another object of the invention is to provide a loader particularly adapted to the filling of those guns having the plunger withdrawable from the upper end in order to give access to the gun barrel, and wherein an empty space is automatically left in the upper end of the gun barrel to leave room for the plunger when the latter is reinserted.

Other objects of the invention will appear as the following description of illustrative embodiments thereof proceeds.

In the drawings:—

Figure 1 is a longitudinal section through one form of grease gun loader, the grease gun being in place.

Figure 2 is a longitudinal section of the loader shown in Figure 1 taken in a plane at right angles to that of Figure 1.

Figure 3 is a section taken along the line 3—3 of Figure 2.

Figure 4 is a longitudinal section through a slightly modified form of grease gun loader.

Figure 5 is a plan view of the same.

Figure 6 is a section taken along the line 6—6 of Figure 4.

The loading of grease guns is ordinarily difficult from the fact that the consistency of the grease renders it frictionally adhesive to the interior surface of the gun barrel so that, when it is attempted to fill the gun by forcing the gun barrel down into a body of grease, the grease enters for only a short distance within the gun, further injection of grease being prevented by the adhesive force of that portion of the grease already within the gun which overbalances the pressure of the grease outside of the gun at the mouth of the gun barrel, so that the grease within the pail displaces itself as the gun is thrust into it instead of rising into the gun barrel. The present invention concerns itself with cutting a column of grease of smaller diameter than the interior diameter of the gun barrel and permitting the introduction of the same into the gun barrel in such a way that the sides of the column of grease remain out of contact with the inner wall of the gun barrel, thus avoiding the objectionable frictional adherence above referred to and permitting the grease to rise within the gun barrel until the latter is filled.

In referring to the several figures for a detailed description of the device of my invention, it may be stated that grease guns are generally of two types, one in which the plunger remains in the gun barrel during the act of loading, and is retracted to the upper end thereof as shown in Figure 4, in which the gun barrel and plunger are represented respectively by the reference characters 1 and 2. In this type of grease gun the lower or nozzle end is unscrewed and removed when it is desired to re-fill the same.

In the other type of grease gun the nozzle ordinarily is not removable from the barrel, the plunger being entirely removed from the upper end of the barrel in order to fill the barrel. This form of grease gun is illustrated in Figure 1, 3 being the nozzle and 4 the gun barrel.

In the latter type of grease gun it is customary to fill the barrel not quite full, thereby leaving a vacant space in the upper end of the barrel into which the plunger may be reintroduced. Otherwise it is difficult to re-insert the plunger and the gun will be messed with grease in the attempt.

Referring now to that form of grease gun loader illustrated in Figures 1 and 2, it consists of a cylindrical tube 5 of larger internal diameter than the external diameter of the barrel of the grease gun so as to loosely receive said barrel and having at its lower end a re-entrant tubular flange 6 of smaller internal and external diameter than the internal diameter of the grease gun barrel, forming a zone of relatively narrower width extending a short distance into the barrel of the grease gun when the latter is in operative position within the loader. The outer peripheral portion of said flange flares

downwardly and outwardly, forming with the tube 5 a peripheral grease-cutting edge. A stiff wire 7 extends diametrically across the inner end of the flange 6 and is secured at its opposite ends to said flange. The tube 5 is provided at its upper end with a suitable handle 8 by means of which the grease gun loader may conveniently be handled and withdrawn from the can of grease when desired, and which, when the loader is not in use may overhang the wall of a grease pail. The length of the flange 6 is such that the force of adhesion of the grease thereto will not equal the pressure of the body of grease in the pail at the mouth of the loader.

In operation, the plunger having been taken out of the grease gun, the latter is placed in inverted position within the loader and forced with the loader down into a body of grease. The grease is directed by the flaring outer end of the flange 6 into the opening within said flange and is introduced into the gun barrel in the form of a molded column having a diameter equal to the internal diameter of the flange 6, which, as has been stated, is less than the internal diameter of the gun barrel 4. Consequently the grease will not adhere to the wall of the gun barrel, the pressure outside of the grease gun being superior to the resistance of the grease within the gun so that the grease rises into the barrel until the gun barrel is filled. The gun barrel is then rotated and the wire 7 will cut off the column of grease within the gun barrel at a distance from the inverted upper end thereof substantially equal to the length of the flange 6. The gun barrel is then withdrawn from the upper end of the loader. The gun barrel will be filled only up to the level at which the column of grease is cut off by the wire 7, the vacant space between said level and the open end of the barrel affording room for the re-insertion of the plunger into the gun barrel.

In that form of the invention shown in Figure 4 there is no necessity to leave room within the gun barrel for the plunger, since the latter is never absent from the grease chamber. Consequently the flange 9 is made extremely short, and the cutting off wire 10 is placed substantially at the mouth of the loader. This form of loader is used in precisely the same manner as that one shown in Figures 1 and 2, except that the grease is introduced into the lower, instead of the upper end of the gun barrel, the column of grease within the gun remaining substantially out of contact with the wall of the gun barrel until the latter has been completely filled. The barrel of the grease gun may be provided with a small aperture 11, just in advance of the plunger when the latter is in its most retracted position, to permit escape of the air when the latter is displaced by the entering grease. Since said aperture will be occluded upon the initial forward movement of the plunger, it will not adversely affect the operation of the gun.

While I have in the present description emphasized a practical and efficient form of my invention yet it is to be understood that the construction may be varied to suit the exigencies of use, being limited only by the express terms of the appended claim.

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

A loader for grease guns comprising a tube of larger diameter than that of the grease gun, having a re-entrant tubular flange at its lower end of smaller diameter than the internal diameter of the barrel of the grease gun, and adapted to extend a short distance within the grease gun barrel when the latter is positioned within the loader, the outer end of said flange being flared outwardly to form with the wall of said tube a grease cutting edge and cutting means arranged transversely of said tubular flange at the inner end thereof.

In testimony whereof I have hereunto set my hand.

WALTER H. KIMBALL.