March 29, 1932. R. L. BACHER 1,851,342

GREASE GUN

Filed June 10, 1931

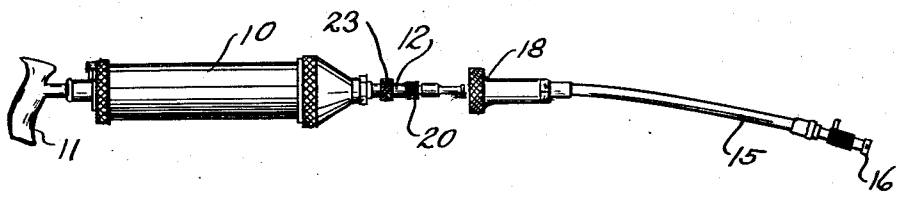

FIG. 1

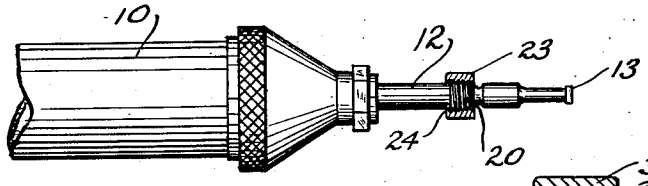

FIG. 2.

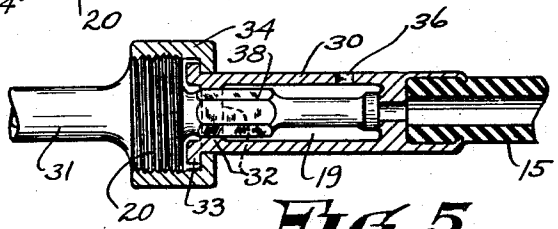

FIG. 5

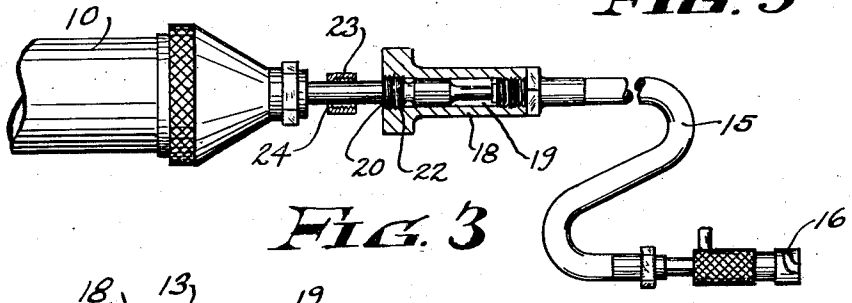

FIG. 3

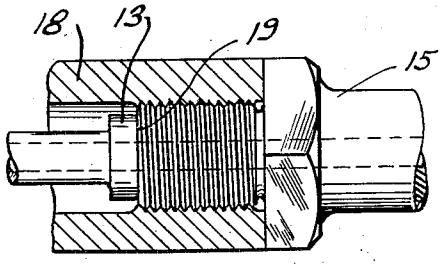

FIG. 4

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UNITED STATES PATENT OFFICE

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GREASE GUN

Application filed June 10, 1931. Serial No. 543,282.

This invention relates to dispensing apparatus and particularly to grease guns that are adapted for use in dispensing lubricant through fittings, which are attached to the bearings and other parts to be lubricated. At the present time, the most prominent kinds of fittings are known in the trade as the "Zerk" and "Alemite" fittings. The Zerk type necessitates the use of manual pressure to hold the coupler in contact with the fitting during the dispensing operation. Accordingly where a hand gun is used, the fitting is rigidly attached to the discharge spout, and where a flexible hose is used, the end that carries the coupling must be held rigidly against the fitting. The Alemite type on the other hand has a positive locking connection between the coupling and fitting and thus obviates the necessity for the use of manual pressure to hold the coupling in place. As it is necessary however, for garages and service stations to provide equipment to service either type of fitting, the practice has been to make the Zerk coupler detachable and replaceable by the Alemite coupler. This procedure however, has been found to be objectionable for the Zerk coupler is relatively small, and therefore is apt to be lost or mislaid when it is detached from the hose.

An object of the present invention therefore is to provide a grease gun which enables the operator to engage either the Zerk or Alemite fittings without removing the Zerk coupler from the gun. An additional object is to make a gun, which may be handled in the same manner as that heretofore used for the same purpose.

Referring now to the drawings, Fig. 1 is a side elevation of a grease gun embodying my invention and showing the "Alemite" adapter removed from the gun; Fig. 2 is an elevation partly in section on an enlarged scale of the gun shown in Fig. 1; Fig. 3 is a section through part of the gun and illustrates the "Alemite" adapter attached to the gun, Fig. 4 is a section on an enlarged scale adjacent the connection between the gun and the adapter, and Fig. 5 is a longitudinal section through a device embodying a modification of my invention.

I have shown my invention in connection with a hand-operated grease gun wherein 10 indicates the barrel of the gun, 11 the operating handle, and 12 the discharge conduit that leads from the barrel. Such last named conduit is shaped adjacent the discharge end thereof, as at 13, to coact with a "Zerk" type fitting, and inasmuch as the entire discharge conduit is rigid with the barrel, it is apparent that the manual pressure which must be exerted to maintain the coupling in contact with the fitting can readily be applied.

To adapt the gun for use with the "Alemite" fitting, I provide a short length of hose 15, which carries the "Alemite" coupler 16. The opposite or intake end of the hose is then provided with an enlarged tubular casing 18, that extends over the "Zerk" coupler and part of the discharge spout. Such casing is provided with a seat 19 that is adapted to engage the end of the discharge spout, and to provide a grease tight joint therewith.

To connect the sleeve to the gun, I have shown the discharge conduit 12, as having a threaded portion 20 thereon, which is adapted to be engaged by a corresponding internally threaded portion 22 on the sleeve. Normally, such threaded portion is protected by a nut 23, which has a flange 24 that is spun on the end of the nut adjacent the barrel and which retains the nut on the spout when it is disengaged from the thread. Whenever it is desired therefore, to use the gun for lubricating through "Alemite" fittings, the nut is backed off the thread and the Alemite adapter is placed over the conduit and screwed tightly thereon. Thereupon grease is dispensed through the hose without leakage, and without necessitating removal of the Zerk coupler.

Where a hose is used in place of the hand operated gun, the end of the hose is formed to coact with a Zerk fitting. In either case, the hose carrying the Alemite coupler is fitted over the Zerk coupler, so that lubricant may be dispensed without necessitating the removal of the Zerk coupler.

In Fig. 5, I have shown a modification of my invention, wherein a union joint is made between the casing 30 and the discharge spout 31. Provision is then made for enabling the casing to be slid longitudinally of the spout but to be prevented from rotating with reference thereto, preferably by means of a hexagonal portion 38, which extends lengthwise of the spout and a coacting complementary shaped portion 32 on the inner part of the casing.

The end of the casing is then provided with a shoulder 33, which is engaged by a nut 34, and which acts when threaded onto the spout 31, to make a lubricant tight joint between the casing and the spout.

An advantage of the modified form is that there is no danger of the joint between the casing and spout being loosened if the gun should be turned inadvertently by the operator while the pressure is on. A further advantage of the modified form is the fact that an opening 36 in the wall of the casing enables the pressure to be reduced in the discharge conduit, to permit removal of the coupler merely by loosening the nut 34. The release of pressure can likewise be accomplished by breaking the joint between the casing 18 and the threaded portion 20, but the use of the lateral opening 36 prevents the accumulation of lubricant adjacent the threaded portion, where it is apt to smear the hands and clothing each time the replacement is made.

I claim:

1. In combination in a lubricant dispenser, a discharge spout formed to coact with one type of fitting, said spout having a threaded portion spaced from the end thereof, and having a noncircular periphery disposed between the threaded portion and the end of the spout, a casing slidably mounted along the nonthreaded portion and being adapted to provide a lubricant tight seal with the spout, said casing having a non-circular portion on the interior thereof for coacting with the noncircular part of the spout to prevent rotation of the casing with reference to the spout, a nut on the casing and adapted to coact with the threaded portion to lock the casing to the spout, and means carried by the casing for coacting with a different type of fitting.

2. A lubricant dispensing device for use in connection with a grease gun having a discharge conduit formed at the end thereof to coact with one type of fitting, and having a threaded portion remote from the end of the conduit; comprising a flexible conduit having means thereon adapted to receive the end of the discharge conduit and to engage the threaded portion thereon, and to provide a lubricant tight joint therewith, said flexible conduit being provided with a coupling to coact with a different type of fitting.

3. A lubricant dispensing device for use in connection with a grease gun having a discharge spout rigid therewith, said spout having the end thereof formed to coact with one type of fitting; comprising a flexible conduit and means extending along the exterior and across the discharge end of the spout and making a fluid tight joint between the conduit and spout, said conduit having a coupling at the free end thereof adapted to coact with a different type of fitting.

4. A lubricant dispensing device for use in connection with a grease gun having a discharge member, adapted to coact with one type of fitting; comprising an auxiliary conduit, said conduit being adapted to coact with a different type of fitting, means for enabling the conduit to be extended over the end of the member, means for preventing rotation of the conduit with reference to the member, and other means for locking the conduit to the member, and to provide a lubricant tight joint therewith.

5. A lubricant dispensing device for use in connection with a grease gun having a discharge spout and having the end thereof formed to coact with one type of fitting; comprising a conduit adapted to be splined on the spout and to make a lubricant tight joint therewith, means for locking the conduit to the spout, said conduit being adapted to coact with a different type of fitting and having a pressure release opening extending therethrough between the point of locking connection and the point of lubricant tight seal therewith.

6. A lubricant dispensing device for use in connection with a grease gun having a discharge spout formed to coact with one type of fitting, comprising an anxiliary flexible conduit adapted to coact with a different type of fitting, said conduit being formed to receive the spout, and to provide a lubricant tight joint therewith, and means for interlocking the spout and conduit, said means being adapted when released, to relieve the pressure at said joint whereby the coupling may be removed from the fitting while under pressure.

7. A lubricant dispensing device for use in connection with a grease gun having a rigid discharge conduit formed at one end thereof to coact with one type of fitting, comprising a flexible conduit having a coupling at the free end thereof formed to coact with a different type of fitting, and means for making a lubricant tight joint between the conduits, said means including a threaded member slidably mounted on one of the conduits and a coacting threaded portion on the other conduit.

8. A lubricant dispensing device for use in connection with a grease gun having a rigid discharge conduit formed at one end thereof to coact with one type of fitting, comprising a flexible conduit having a coupling at the free

end thereof formed to coact with a different type of fitting and means for making a lubricant tight joint between the conduits, said means including a valve seat carried by the flexible conduit and engaging the end of the discharge conduit, and interengaging members on the conduits for locking them together in lubricant conducting relationship.

In testimony whereof, I hereunto affix my signature.

ROLLIN L. BACHER.