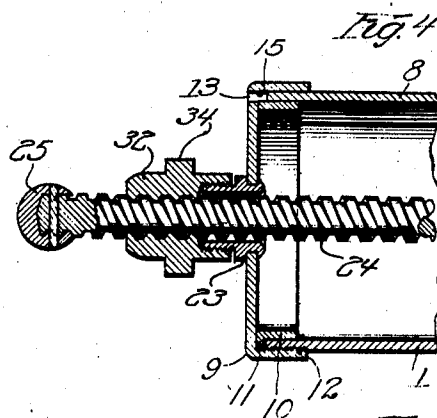
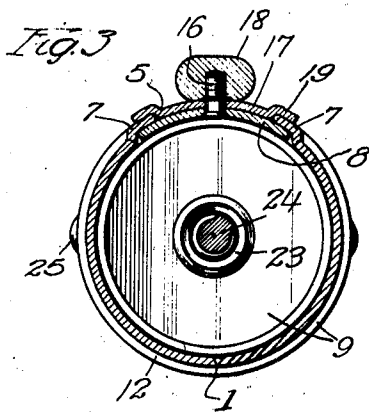
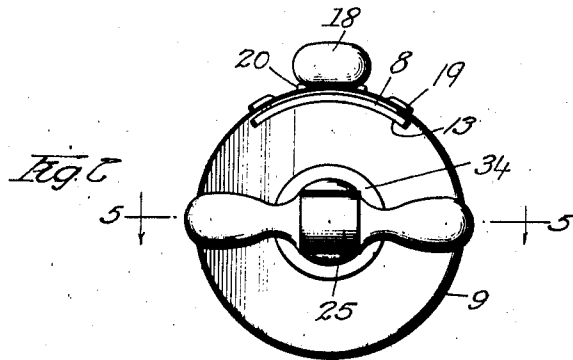
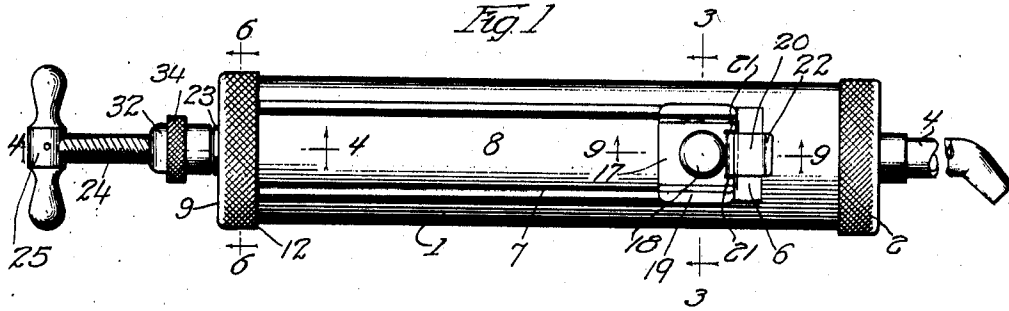


E. EDELMANN.
GREASE AND OIL GUN.
APPLICATION FILED JULY 2, 1919.

1,379,004.

Patented May 24, 1921.

2 SHEETS—SHEET 1.

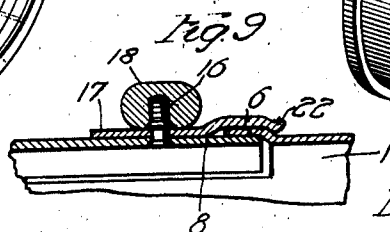
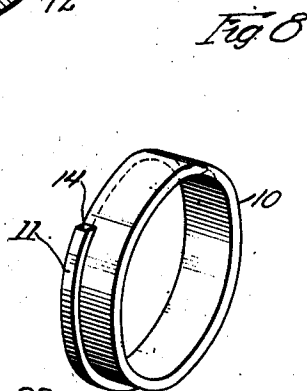
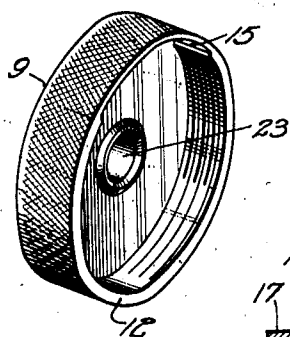
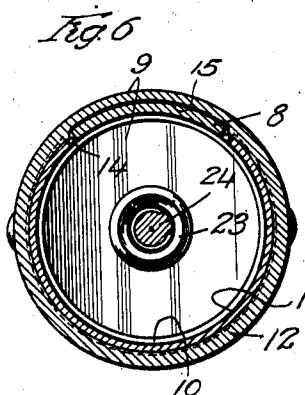
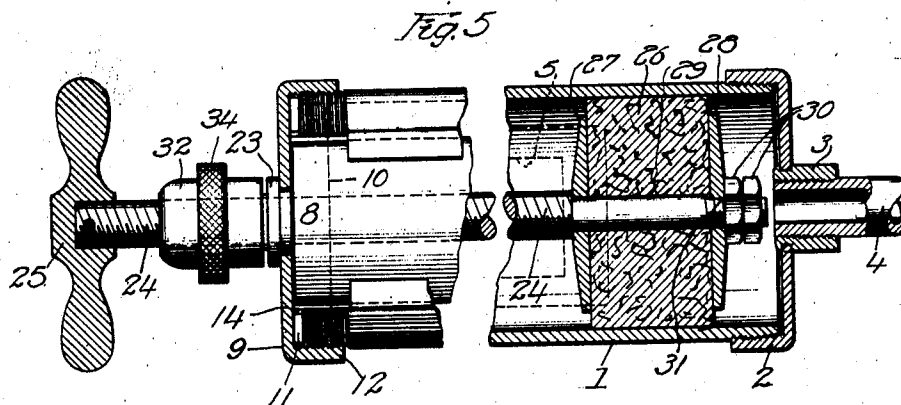


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UNITED STATES PATENT OFFICE.

ERICH EDELMANN, OF CHICAGO, ILLINOIS.

GREASE AND OIL GUN.

1,379,004.

Specification of Letters Patent.

Patented May 24, 1921.

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To all whom it may concern:

Be it known that I, ERICH EDELMANN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grease and Oil Guns, of which the following is a specification.

My invention has reference to devices commonly called grease guns, which are usually employed for forcing grease into a location which is not conveniently accessible with the ordinary means of supplying grease. My invention, however, is not limited to the use of grease therewith but is adapted to be used for supplying any material in a fluid, semi-fluid, paste or other condition which enables it to be forced from the gun.

In grease guns such as have been commonly used heretofore, no convenient means has been provided for filling the gun with grease or other material preparatory to use. These guns usually consist of a barrel with a spout at one end and a plunger operable in the barrel for pressing the contents out through the spout, and as heretofore constructed it has been necessary to unscrew one or more end caps to fill the gun. This was usually accomplished with considerable inconvenience as a rather long threaded connection is ordinarily provided, and the threaded connection is often times hard to start. It was especially difficult if it was necessary to fit the plunger back in the barrel, and in any case, it was hard to get grease down into the barrel from the end opening and thoroughly fill the gun. With my invention it is unnecessary to remove any end-caps or withdraw the plunger from the barrel, and the gun is easily filled as the barrel is provided with a long opening through which grease or other material may be placed in front of the plunger, which opening is provided with a closure which is easily secured in position to afford a tightly closed chamber in which pressure is applied to the grease or other material therein.

The principal objects of my invention are to provide a gun for grease, oil, or other material, having an opening with a conveniently operable closing means enabling the gun to be easily and quickly filled without the necessity of removing an end of the barrel or cylinder of the gun; to provide a device of this character having an opening in the side wall of the barrel and a closing member therefor which remains connected

with the barrel during operation of opening and closing the barrel opening; to provide a gun with a longitudinal opening in the side wall of the barrel controlled by a panel slidably connected with the barrel; to provide the panel or closing member with an improved, conveniently operable catch for holding the panel or closing means in the closed position; to provide a panel or closing means which serves to lock parts of the gun in the assembled position and which is connected with the gun so as to prevent separation or removal of the panel without disassembling the gun; and in general, to provide an improved grease gun structure having a conveniently operable panel affording access to the interior of the gun for filling same.

On the drawings, Figure 1 is a side view of a gun construction in accordance with my invention, showing the panel which affords access to the interior of the barrel; Fig. 2 is an enlarged view of the gun looking at the left hand end of Fig. 1; Fig. 3 is an enlarged transverse sectional view on the line 3—3 of Fig. 1; Fig. 4 is an enlarged longitudinal section of the rear end of the gun on the line 4—4 of Fig. 1; Fig. 5 is a view with parts in section on the line 5—5 of Fig. 2 and intermediate portions broken away to permit a large view to be shown; Fig. 6 is an enlarged sectional view on the line 6—6 of Fig. 1; Fig. 7 is a perspective view of the rear end cap; Fig. 8 is a perspective view of the rear end ring; Fig. 9, an enlarged fragmentary sectional view of the latch on the line 9—9 of Fig. 1.

Referring to the drawings, the reference numeral 1 indicates the barrel of the gun which is in the form of a cylindrical tube and has a head 2 threaded onto and closing one end thereof. This head is centrally apertured and has an internally threaded bushing or sleeve 3 secured in the aperture and a nozzle or spout 4 threaded into the bushing or sleeve 3 to afford an outlet from the gun for the grease or other material to be ejected therefrom. This spout may be bent laterally, as shown, if desired for lateral discharge. The barrel 1 has an opening 5 in the side, extending longitudinally thereof from the rear end and terminating a short distance rearwardly of the front end of the barrel, and has a flange 6 at the front end and flanges 7 extending along the sides of the opening, said flanges being pressed

outwardly from the wall of the barrel to receive a panel 8 thereunder for closing the opening 5. Flanges 6 and 7 are raised sufficiently so that the inner surface of the panel 8, which has the same curvature as the interior surface of the barrel, is flush with the latter surface, and flanges 7 serve as guides, permitting the panel to slide longitudinally of the barrel.

10 The rear end of the barrel is externally threaded and has a cap 9 screwed thereon to close the rear end of the barrel, a ring 10 being inserted in the rear end of the barrel to prevent collapse of the latter, and having a flange 11 which is clamped against the end of the barrel by the cap 9, and the ring 10 thereby locked in place. The rear end of the panel 8 when in the closed position extends under the annular flange 12 of the rear end cap 9, and the latter has an arcuate slot 13 in its rear wall which is adapted to register with the end of the panel 8 when the cap 9 is turned tight on to the end of the barrel 1, so as to permit the panel to be projected through the rear wall of the cap when it is operated to uncover the opening 5. The flange 11 of the ring 10 is cut away, as at 14 in Fig. 8, a distance slightly greater than the width of the panel 8, and the ring is clamped in the end of the barrel so that the cut-away portion of the flange 11 registers with the opening 5 in the barrel and the slot 13 of the end cap 9, to permit passage of the panel, and the inner surface of the flange 12 of the cap 9 is also correspondingly cut away at 15 for the same purpose.

An outwardly projecting stud 16 is secured to the panel 8 adjacent the forward end, and has a plate 17 inserted thereon and clamped on the panel by a knob 18 which is threaded onto the stud 16. This plate 17 has a raised flange 19 at each side overlying the flanges 7 of the barrel, so that the latter are slidably engaged between the panel 8 and flanges 19 when the knob 18 is screwed down against the plate and the panel 8 thereby held up against flanges 7. The rear end of the panel 8 is held up against the flanges 7 by engagement over the ring 10. A tongue 20 projects forwardly from the plate 17, the latter being slotted at each side thereof at 21 to afford the required resiliency, and this tongue 20 is raised slightly, as shown in Fig. 9, and has the forward end countersunk downwardly at 22 to provide a clasp which engages the flange 6 of the barrel and holds the panel 8 in the closed position.

The rear end cap 9 is centrally apertured and has a bushing or sleeve 23 secured in the aperture and a threaded plunger stem 24 is fitted to slide in the sleeve or bushing 23. The outer end of this plunger stem has a handle 25 fixed thereon and a plunger 26 is secured on the inner end of the stem 24

within the barrel 1. This plunger may be of cork or any other suitable material closely fitting and slidable longitudinally of the barrel, and is clamped between washers 27 and 28 on the reduced end 29 of the stem 24 by a pair of nuts 30 which are threaded on the forward end of the reduced portion 29. The forward end of the reduced stem 29 is preferably flattened or notched longitudinally at 31 and the washer 28 fitted to the flattened or grooved side of the stem to prevent turning of the washer on the stem and avoid loosening of the nuts 30 thereby.

The outer end of the sleeve or bushing 23 is externally threaded, and there is a nut 32 internally threaded to engage the threaded stem 24, and having the inner end counter-bored and internally threaded to screw on to the bushing or sleeve 23, as shown in Fig. 4. This nut 32 has a knurled annular flange 34 to afford a finger grip to facilitate engagement with and disengagement from the bushing or sleeve 23.

In assembling the panel 8 in the barrel, the ring 10 is inserted in the rear end thereof with the portion thereof from which the flange 11 is omitted registering with the opening 5 of the barrel, and the end cap 9 is then screwed on to the end of the barrel tight against the ring 10, to clamp the latter firmly in place, and when so engaged the slot 13 and cut-away portion 15 of the end cap likewise register with the opening 5 of the barrel. The panel 8 from which the plate 17 and knob 18 is removed is then inserted from the inside of the barrel up into position in the opening 5, the rear end thereof being slipped into the arcuate opening provided therefor between the ring 10 and the cut-away part 15 of the cap 9. By thus inserting the rear end of the panel 8 in place, the panel may be lifted up against the flanges 6 and 7 after which the plate 17 is inserted on the stud 16 and the knob 18 screwed on to the stud, thus holding the panel 8 securely in place. Access may then be had to the interior of the barrel by pulling rearwardly on the knob 18 which disengages the clasp 20 from the flange 6, and when the panel is pushed forward to the closed position, the counter-sunk end 22 of the clasp readily rides over and re-engages the flange 6 to hold the panel closed.

It will be observed that the rear end of the panel 8 when placed in position engages in the cut-away portion 15 of the rear end cap 9 and thereby locks the rear end cap from turning movement on the end of the barrel 1. This is particularly advantageous in this type of pump as the nut 32 is adapted to be screwed on and off the sleeve 23 of the rear end cap, and such operations might effect a turning of the cap 9 on the barrel.

The pump is adapted to be operated by 130

direct reciprocation of the plunger 24 by disengaging the nut 32 from its threaded connection with the bushing 23, or when the nut is engaged with the bushing, may be
 5 operated by rotating the stem 24 which by reason of its threaded connection with the nut 32 applies a powerful pressure upon the contents of the gun to expel same therefrom.

Obviously, to fill the gun it is only necessary to withdraw the plunger 26 to the rear end and slide the panel 8 rearwardly so that access may be had to the interior of the barrel in front of the plunger, and after filling, the panel is projected forwardly until
 10 the clasp 20 engages the flange 6.

This structure not only has the advantage that the panel remains connected with the barrel when withdrawn from the opening 5 and avoids possibility of misplacing the
 20 panel, but also, as the panel engages under the flanges 6 and 7, pressure applied to the contents of the barrel tends to more securely seal the joint between the panel and its retaining flanges, so as to prevent leakage or
 25 escape of the contents of the barrel.

While I have shown and described my invention in a preferred form, I am aware that various changes and modifications may be made without departing from the principles of my invention, the scope of which
 30 is to be determined from the appended claims.

I claim as my invention:

1. In a device of the class described, the
 35 combination of a barrel having a longitudinal opening in the wall thereof and an outlet at one end, a plunger adapted to reciprocate in the barrel so as to force the contents through the outlet, a cap on the end of the
 40 barrel having an aperture in alinement with the longitudinal opening, a panel slidably mounted in the longitudinal opening and operable through the aperture of the cap, and means engaging the inner face of the
 45 panel at the inner side of the end cap for holding the panel in alinement with said aperture.

2. In a device of the class described, the combination of a barrel having a longitudinal
 50 opening in the wall thereof and an outlet at one end, a cap for closing the opposite end of the barrel and having an aperture therethrough registering with said longitudinal opening of the barrel, a plunger

in the barrel having a stem projecting
 55 through the cap for operating the plunger to expel the contents of the barrel through said outlet, a panel slidably mounted in said longitudinal opening of the barrel and operable through the aforesaid opening in the
 60 end cap, and a ring clamped in the end of the barrel by means of the end cap so as to engage the inner surface of the panel and hold the latter in alinement with the aperture of the cap. 65

3. In a device of the class described, the combination of a barrel having a longitudinal opening in the wall thereof and an outlet
 70 at one end, a cap on the other end of the barrel, a plunger in the barrel having a stem projecting through the cap for operating the plunger to expel the contents of the barrel through said outlet, and a panel slidably mounted in said longitudinal opening
 75 of the barrel and interengaged with the end cap so as to lock the latter on the barrel.

4. In a device of the class described, the combination of a barrel having a longitudinal opening in the wall thereof and an outlet
 80 at one end, a cap for closing the opposite end of the barrel and having an annular flange provided with a threaded connection with the barrel, a slideway in the end cap in alinement with the longitudinal opening in
 85 the barrel, a panel slidably mounted in the longitudinal opening in the barrel and engaging the slideway of the end cap to lock the latter against turning movement on the end of the barrel, and a plunger in the barrel
 90 having a stem projecting through the cap for operating the plunger to expel the contents of the barrel through the aforesaid outlet.

5. In a device of the class described, the combination of a barrel having a longitudinal
 95 opening in the wall thereof, and an outlet at one end, a cap for closing the opposite end of the barrel and having an opening therethrough registering with said longitudinal opening of the barrel, a plunger in
 100 the barrel having a stem projecting through the cap for operating the plunger to expel the contents of the barrel through said outlet, and a panel slidably mounted in said longitudinal opening of the barrel and operable
 105 through the aforesaid opening in the end cap.

ERICH EDELMANN.