H. O. & W. L. EKERN.

PORTABLE GARAGE GREASE GUN.

APPLICATION FILED DEC. 10, 1914.

1,170,432. Patented Feb. 1, 1916.

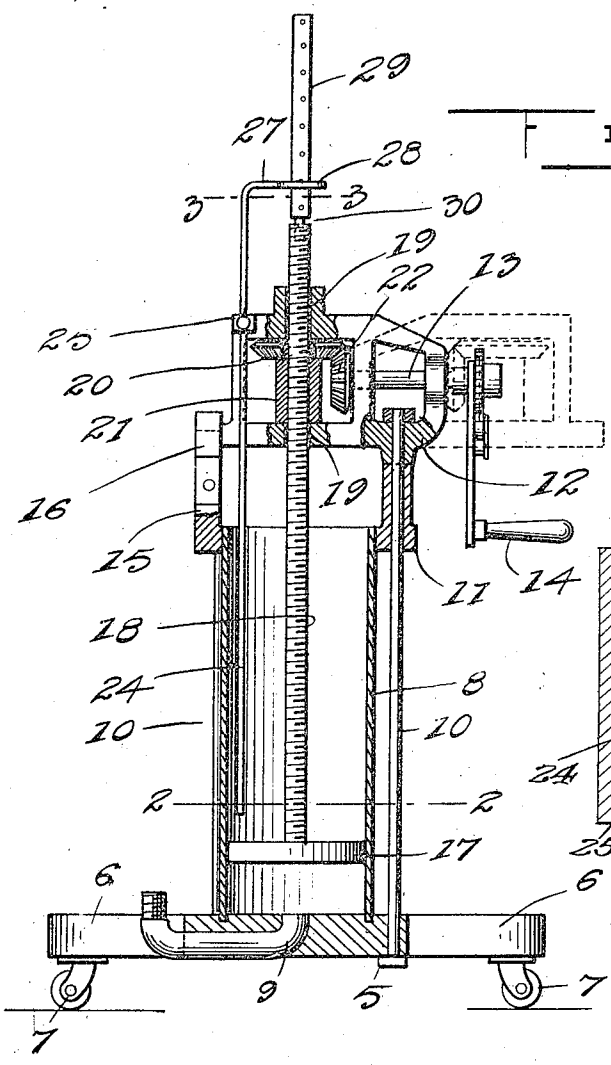


Fig. 1.

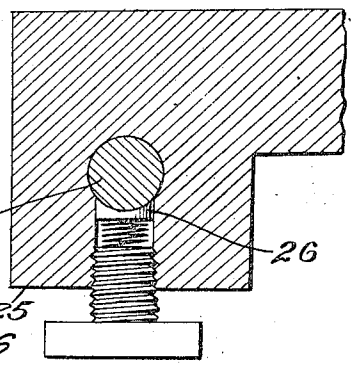


Fig. 4.

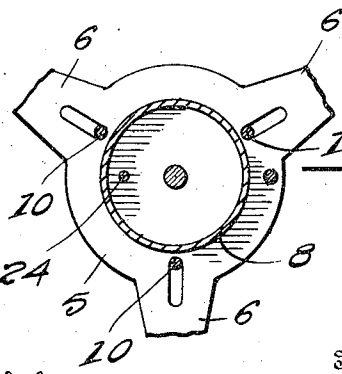


Fig. 2.

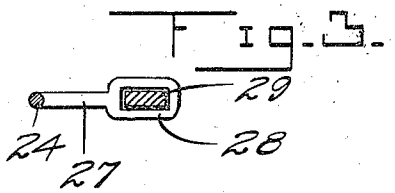


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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PORTABLE GARAGE GREASE-GUN.

1,170,432. Specification of Letters Patent. Patented Feb. 1, 1916.

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To all whom it may concern:

Be it known that we, HELMER O. EKERN and WILLIAM L. EKERN, citizens of the United States, residing at Flandreau, in the county of Moody and State of South Dakota, have invented certain new and useful Improvements in Portable Garage Grease-Guns; and we de hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has for its object to provide a gun of improved and simplified construction specially designed for forcibly ejecting heavy oils and greases such as used for lubricating the transmissions and differential of motor vehicles.

Another object is the provision of a simple and efficient indicating device for indicating the quantity of oil or grease ejected from the gun.

With the above and other objects in view, the invention consists in the novel construction, arrangement and formation of parts as will be hereinafter specifically described, claimed and illustrated in the accompanying drawing, in which:

Figure 1 represents a vertical central sectional view through a grease gun constructed in accordance with this invention. Fig. 2 represents a horizontal sectional view on the line 2—2 of Fig. 1. Fig. 3 represents a horizontal sectional view on the line 3—3 of Fig. 1, looking upwardly. Fig. 4 represents a fragmental detail sectional view through a portion of the grease gun illustrating the spring retaining means for the slide rod.

Referring to the drawing in detail, wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 5 indicates a base provided with a plurality of radially directed legs 6 carrying casters 7 at their outer extremities, whereby the grease gun may be conveniently moved from place to place. The central portion of the base 5 is formed with an annular depression or seat in which is engaged the casing or cylinder 8 of the gun communicating with a passage 9 formed in the base 5 for conducting the material ejected from the gun. The casing 8 is secured in position upon the base 5 by a plurality of bolts or connecting rods 10 positioned at their upper extremities through an annular flange 11 of the casing 8. One of the rods 10 provides a pivotal bearing for a frame structure 12 in which is rotatably mounted a horizontally disposed shaft 13 carrying an operating crank 14 at its outer end. The lower bar of the frame 12 is adapted to rest upon a post 15 carried by the casing 8 and on which is pivotally secured a U-shaped strap 16 adapted to be swung to the position shown in full lines in Fig. 1 to secure the frame 12 in operative position upon the upper end of the casing or cylinder 8. A piston 17 is slidable vertically within the casing 8 and carries a screwthreaded piston rod 18 slidable longitudinally through and rotatable in apertures 19 formed in the upper and lower horizontal bars of the frame 12. A bevel gear wheel 20 is rotatably mounted upon the piston rod 18 and is formed integral with a collar or flange 21 having internal screwthreads fitting the threads of the piston rod 18. The bevel gear wheel 20 is in permanent mesh with a bevel gear wheel 22 carried by the horizontally disposed shaft 13. The bevel gear 20 and its collar or flange 21 are mounted between the upper and lower horizontal bars of the frame 12 and are thus prevented from moving vertically relative to the casing 8 during the operation of the gun. A rod 24 is slidably mounted through an apertured ear 25 formed integral with the frame 12 and is disposed parallel with the piston rod 18. The rod 24 is retained in adjusted position by a spring actuated plunger 26 positioned in a recess formed in the ear 25 and is formed with an angularly directed upper extremity 27 preferably enlarged and formed with a rectangular opening 28 in which is slidably and non-rotatably positioned an indicating block 29 rotatably mounted at 30 in the upper extremity of the threaded piston rod 18. The opposite faces of the block 29 are preferably formed with suitable markings, whereby the movement of the piston rod 18 relative to the angularly directed end 27 of the rod 24 may be quickly ascertained and thus the quantity of material ejected from the gun during its operation may be determined. It is clearly evident that any portion of the contents of the casing 8 may be ejected and in any desired quantity, which may be accurately determined by releasing and moving the rod 24 downwardly until it is stopped by engagement with the top face of the piston 17

and in this position the upper angularly directed end 27 is opposite the zero mark on the scale or block 29. The rod 24 is reliably secured against accidental removal by the frictional engagement of the spring actuated plunger therewith and the movement of the piston 17, piston rod 18 and scale 29 relative to the rod 24 is indicated.

What we claim is:

1. In combination, a grease gun including a casing, a piston slidable longitudinally therein, a screw-feed piston rod carried by said piston, a longitudinally slidable rod disposed parallel with said piston rod, means for securing the second-mentioned rod in adjusted position, and means secured to and extending axially from the upper end of said piston rod adapted to cooperate with the second-mentioned rod to indicate the movement of said piston relative to said second-mentioned rod.

2. In combination, a cylindrical casing, a rod movable longitudinally within said casing and disposed parallel with the longitudinal axis thereof, a piston slidably mounted in said casing constituting a stop for the lower extremity of said rod, a screw-threaded piston rod connected with said piston, means for rotating said rod to feed the latter into said cylindrical casing, and means for retaining the first-mentioned rod in adjusted position with relation to said cylindrical casing, said first-mentioned rod having an angularly directed upper end formed with a rectangular aperture, and a graduated block rotatably secured to and extending axially from the upper extremity of the piston rod and non-rotatably received within the angularly directed extremity of the first-mentioned rod and adapted to cooperate with the first mentioned rod to indicate the movement of the piston relative to said rod.

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:
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