W. W. DAVIS & W. JAESCHKE.

FILLING NOZZLE.

APPLICATION FILED MAR. 9, 1914.

1,150,420. Patented Aug. 17, 1915.

Fig. 1.

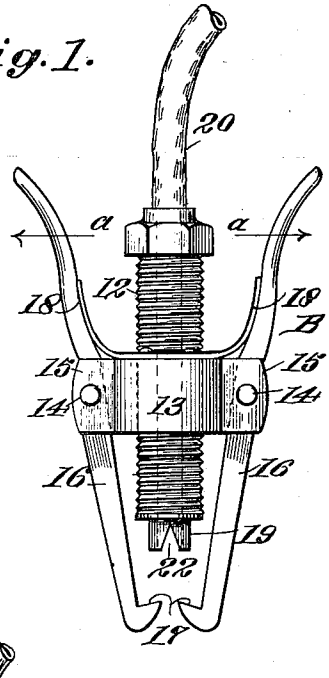
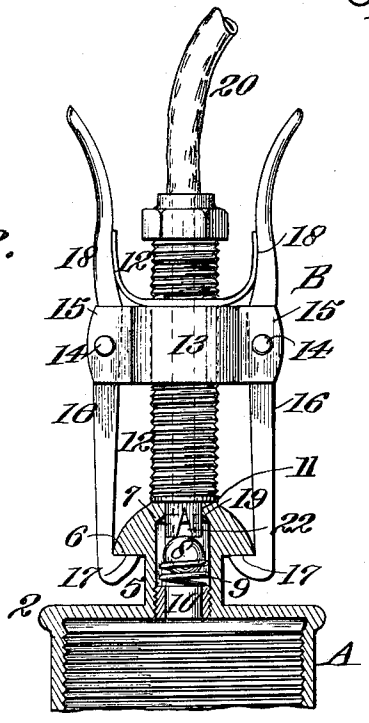


Fig. 2.



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WILLIAM W. DAVIS AND WILLIAM JAESCHKE, OF SAN FRANCISCO, CALIFORNIA.

FILLING-NOZZLE.

1,150,420. Specification of Letters Patent. **Patented Aug. 17, 1915.**

Application filed March 9, 1914. Serial No. 823,364.

To all whom it may concern:

Be it known that we, WILLIAM W. DAVIS and WILLIAM JAESCHKE, citizens of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Filling-Nozzles, of which the following is a specification.

This invention relates to an improved form of filling nozzle for grease cups.

It is one of the objects of the invention to provide a simple, substantial, easily operated filling nozzle for grease cups and the like, through which grease may be forced into the cup without removing the cap, and which is so constructed that it may be quickly adjusted for attachment to cups of various sizes.

Further objects will hereinafter appear.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawing in which—

Figure 1 is a side elevation of the filling attachment. Fig. 2 is a detail view partly in section showing the attachment of the filling device.

Referring to the drawings, A indicates a standard form of grease cup, and 2 the cap on same, which is adapted to be screwed on in the usual manner.

Formed integrally with the cap, or otherwise secured to same is a tubular extension 5 on the upper end of which is formed an annular shoulder extension 6, and formed interior of the tubular extension is a valve seat 7, with which a ball-valve 8 is adapted to engage; valve 8 being normally held in engagement with seat 7 through the medium of a spring 9 and an adjustable nut 10.

Operable in connection with the supplementary opening, indicated at 11, which is normally closed by the ball-check 8, is the filling attachment which is generally indicated at B. This consists of an externally threaded tube 12 upon which is adjustably mounted a collar 13. Pivotally mounted as at 14 in lugs 15, formed on the sides of the collar 13 is a pair of lever arms 16 on the lower ends of which are formed inwardly projecting lugs 17. Interposed between the upper ends of the arms 16 is a suitable form of spring 18, which normally exerts a pressure in the direction of arrows *a* for the purpose of forcing the hooked ends of the arms inwardly. The lower end of the externally threaded tube 12 is provided with a projection 19, the outside diameter of which is just sufficiently large to enter opening 11 formed in the upper end of the tubular extension 5. Suitably secured to the upper end of tube 12 is a flexible tube 20 which may be connected with a grease gun or any other suitable similar device not here shown.

The operation will be as follows: The grease cup generally indicated at A is secured to a bearing by means of the lower threaded extensions 21 in the usual manner. Screw cap 2 is then turned into the uppermost position. The filling attachment generally indicated at B is then grasped by the upper ends of arms 16, and sufficient pressure is exerted on these to spread the lower hooked ends of same. The filling attachment is then placed on top of the grease cup in such a position that the contracted projection 19 will enter the filling opening 11. The upper ends of the arms 16 are then released, permitting the hooked ends of 17 to engage with the lower side of the annular shoulder 6. The filling attachment is thus secured in position on the grease cup and cannot be removed until the upper ends of arms 16 are forced inwardly to release the device. A leather washer may be inserted between the filling opening and the end of tube 12, and this may be tightened into position to prevent any leakage by turning collar B in the right direction. The application of the filling attachment in this manner forces the ball-check away from its seat, and an opening is thus formed through which grease may be entered through the flexible tube 20, tube 12 and extension 19. Pressure is then applied to the grease gun or other device to which the flexible tube 20 is connected. The grease will then be forced down through said tube, tube 12, and will discharge through extension 19 into the grease cup. The pressure applied to the grease cup will not only fill the cup in its extended position, but will also force the grease down to the bearings proper and the channels or ducts connecting the grease cup with same. The lower end of extension 19 is preferably slotted as indicated at 22 to permit as free a discharge of the grease as possible. The cup with connected bearings having once been filled, it is only necessary to apply pressure to the upper ends of arms

16. This will swing the hooked ends 17 out of engagement with the annular shoulder 6 and permit the filling attachment to be moved. Ball-check 8 will then immediately move up into engagement with seat 7 through the medium of spring 9 and form a complete closure which prevents admission of dust or leakage at this point. The grease cup is otherwise operated in the usual manner; that is, cover 2 may be turned down from time to time to force the grease down to the bearing in the usual manner.

The materials and finish of the several parts of the apparatus are such as the experience and judgment of the manufacturer may dictate.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:

In a filling nozzle, an exteriorly threaded tube, a collar threadedly engaged over said tube and having lugs extending outwardly from diametrically opposite points, a pair of arms pivoted to said lugs at points intermediate the ends of the arms, said arms having their lower ends inturned, and a substantially U-shaped spring having its base secured to the upper face of the collar and having its free ends bearing against the respective arms to cause the lower ends of the arms to move inwardly.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

WILLIAM W. DAVIS.
WILLIAM JAESCHKE.

Witnesses:
JOHN H. HERRING,
W. W. HEALEY.