

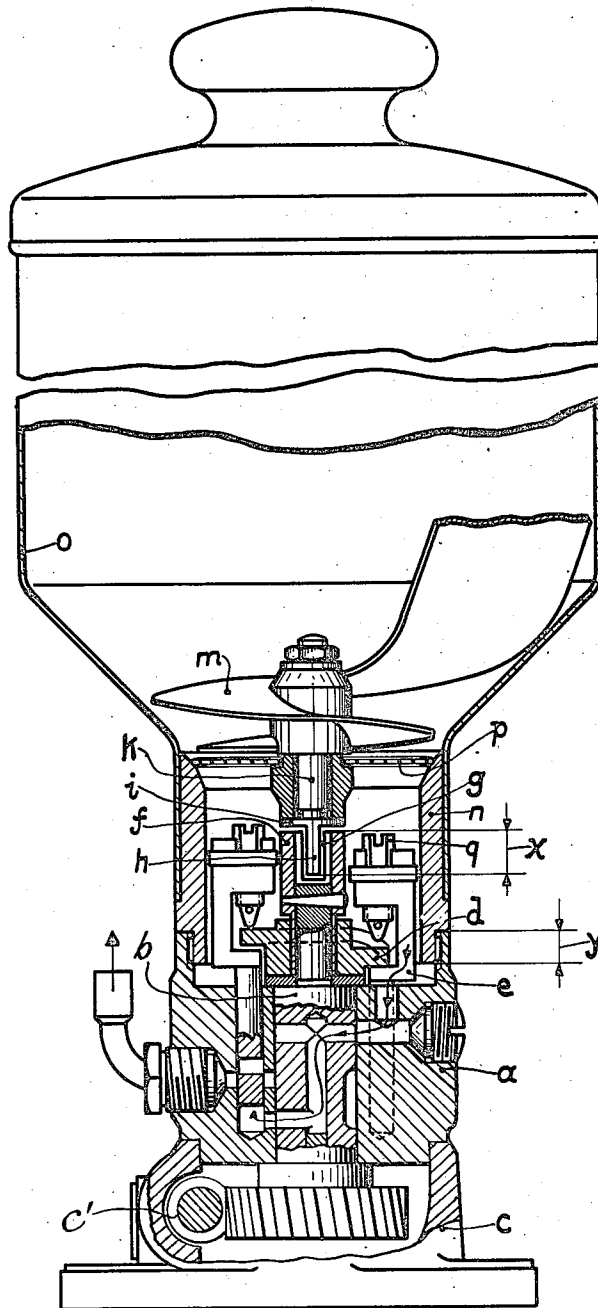
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LUBRICATING PUMP

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UNITED STATES PATENT OFFICE

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LUBRICATING PUMP

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The present invention relates to lubricating pumps and more particularly to pumps having detachably mounted thereon a lubricant container in which a stirring apparatus driven from the pump is rotated, which stirring apparatus carries the grease stored in the container to the pump.

According to the invention, a base member, a body containing the pump and controlling members and a grease storing chamber are arranged co-axially one upon the other.

In order to be able to detach the container, whether it be completely or partially filled, for inspection or regulation of the pump, without being obliged to dismantle the stirring apparatus as in the known types of pump, the shaft of the stirring apparatus is connected to the pump shaft by means of relatively axially displaceable coupling elements such as socket or clutch couplings.

In the accompanying drawing one form of construction according to the invention is shown by way of example in partial longitudinal section.

A cylindrical pump body *a* together with a rotatable pump shaft *b* is mounted on a base member *c* and is secured thereto by a screw connection. The pump shaft operates in addition to its normal function as a controlling or distributing shaft and receives its drive through a shaft *c'* mounted in the base part *c*, through a screw or worm wheel drive as shown. The underside of the base member forms a supporting and securing surface. On the upper end of the pump shaft is a cam disc *d* which causes a pump piston or plunger *e* disposed about the pump shaft to move up and down in known manner. A half coupling *f*, having a slot *g* formed therein is provided at the end of the shaft *b* for engagement by a half coupling *h* secured to a stirrer *m*. The shaft *k* is mounted in bearings in a neck-piece *n* screwed on to the pump body and on which is mounted a sheet metal container *o*. A strainer *p* is fitted on the neck-piece below the stirring apparatus.

In order to inspect the pump or to adjust the quantity delivered by the piston *e*, by means of an adjusting screw *q* the container together with the neck piece must be removed.

This can be effected without necessitating the dismounting of the stirring apparatus by means of the clutch coupling existing between the pump shaft *b* and shaft *k* of the stirring apparatus.

The length of contact of the clutch coupling *x* is greater than the distance *y* with which the thread on the neck piece engages with opposite thread on the pump body so that the screwing of the container on to the pump body can only be effected after the clutch coupling is in engagement.

We claim:

1. A lubricating pump comprising a base, a pump chamber mounted on said base, a pump shaft arranged within said chamber, a lubricant container detachably mounted on the pump chamber, a stirrer supported within said container, and releasable clutch means connecting said stirrer to said pump shaft and arranged to disconnect said stirrer from said shaft when said container is detached from said chamber.

2. A lubricating pump comprising a pump chamber, a pump shaft and plunger arranged within said chamber, a lubricant container detachably mounted on the pump chamber, a stirrer arranged within said container, and relatively axially displaceable coupling elements connected to the pump shaft and the stirrer for obtaining rotation of the stirrer on rotation of the pump shaft, said coupling element being arranged to disconnect said stirrer from said shaft when said container is detached from said chamber.

3. A lubricating pump comprising a pump chamber, a pump shaft and plunger arranged concentrically within said chamber, a lubricant container mounted concentrically on the pump chamber and secured thereto by means of a screw thread connection, a stirrer arranged concentrically within said container and relatively axially displaceable coupling elements connected to the pump shaft and the stirrer for obtaining rotation of the stirrer on rotation of the pump shaft, the axial length of the interengaging portions of said coupling elements being greater than the axial length of the screw thread connection between the pump chamber and container.

4. A lubricating pump comprising a base,
a pump chamber mounted on said base, a
pump shaft arranged within said chamber, a
pump plunger and means for adjusting the
throw of said plunger enclosed within said
5 chamber, a lubricant container detachably
mounted on the pump chamber in alignment
with said pump shaft and arranged to cover
said adjusting means, a stirrer supported
within said container, and a releasable clutch
10 means connecting said stirrer to said pump
shaft and arranged to disconnect said stir-
rer when the container is removed to obtain
access to said adjusting means.

15 In testimony whereof we have hereunto
affixed our signatures.

KARL LORENZ.
GOTTLOB SCHIESSWOHL.

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