

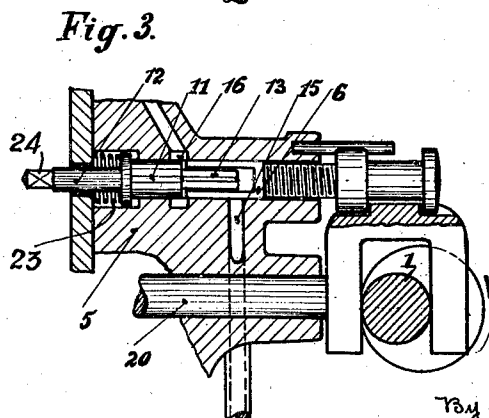
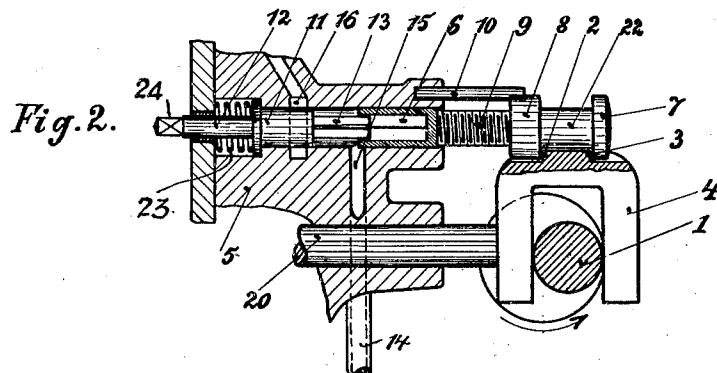
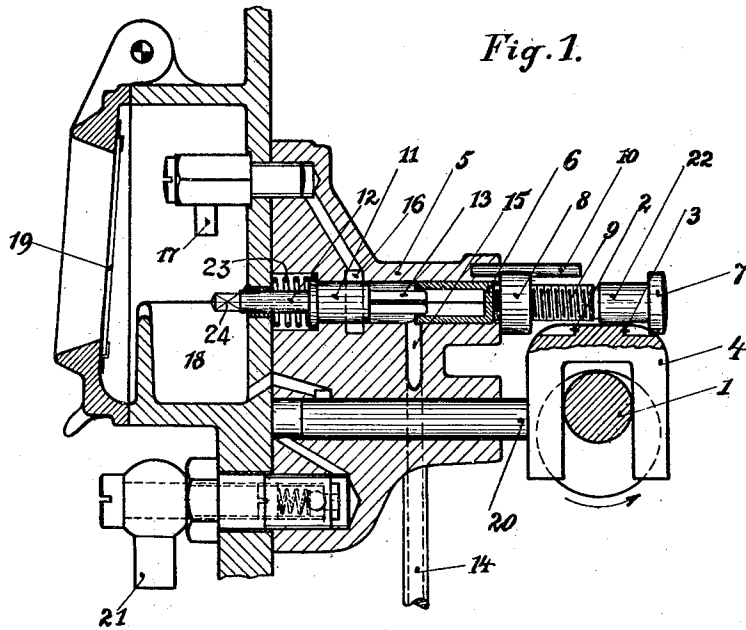
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A. GRÜTZNER

DEVICE FOR ADJUSTING THE STROKE OF FEED PUMPS FOR LUBRICATOR PUMPS

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Inventor
Arthur Grützner
By *Severely*
for Attorney

UNITED STATES PATENT OFFICE.

ARTHUR GRÜTZNER, OF MEISSEN-ON-THE-ELBE, GERMANY.

DEVICE FOR ADJUSTING THE STROKE OF FEED PUMPS FOR LUBRICATOR PUMPS.

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The present invention has for its object a device for adjusting the stroke of feed-pumps. The novelty of said device consists in that the delivery-valve arranged in the axis of the cylinder of the feed-pump projects by a prolonged part to the exterior or into the oil chamber and by a second edged prolonged part into the feed-piston in such a manner that the latter can be rotated by a rotary-movement of the delivery-valve from its outwardly prolonged part and a stop-nut ensured against rotary movement can be adjusted or controlled for the bow of the driving eccentric.

The drawing forming part of the description shows an example of construction. Fig. 1 is a longitudinal section of the pump-body, the driving-device and the oil-gauge. Fig. 2 shows the position of the feed-piston during the sucking period.

As clearly seen from Figs. 1 and 2, 1 is the shaft with the driving-eccentric, 2 and 3 are the stop-surfaces arranged on the fork 4 moved to and fro by the driving-eccentric. 5 is the body of the pump-casing proper. 6 is the feed piston, the rod of which consists of a threaded portion 9 and a smooth portion 22 terminating in a collar 7. On the threaded portion 9 a nut 8 is screwed, said nut being prevented against rotary movement on the thread 9 by a pin 10 in such a manner that on rotating the feed-piston 6 and its prolonged part 22 the nut 8 is displaced on the thread 9. 11 is a piston-valve being under spring action and controlling the pressure-passage 16, said valve being provided with an inwardly projecting prolonged part 13. Said prolonged part is for instance of square section and engages by its free extremity into the feed-piston 6 so that said piston is also simultaneously rotated on rotating the piston valve. The piston valve is yieldingly maintained in position relative to the feed piston 6 by the action of a spring 23. The piston valve 11 and the feed piston 6 may be simultaneously rotated by means of a key placed on the extremity 24 of the prolonged part 12 of the piston valve or otherwise. In this manner the nut 8 is adjusted or displaced on the thread 9 of the prolonged part 22. 14 is a sucking-pipe in connection with the chamber of the pump by an opening 15. 17, Fig. 1, is a dropping device. 18 an oil collecting container and 19 a glass-pane allowing to control the dropping of the oil into the oil-collecting container 18. 20 is a pump feeding or supplying in a manner known per se the oil from the container 18 into the connecting tube 21. The operation of the pump for feeding oil is as follows:

Fig. 2 represents the pump in its sucking-position and the oil runs from the passage 15 into the pump-chamber. On rotating the shaft 1 in the direction of the arrow, the passage 15 is closed and the oil enclosed is brought under force or pressure which compels the piston-valve 11, being under spring-action, to move in an outward direction (to the lefthand side) until the force-passage 16 is opened, as seen in Figure 3. Now, the oil flows through the passage 16 into the dropping device 17 and enters in the collecting-container 18 by its free-fall.

The control or adjustment of the quantity of oil to be fed is effected by rotating the feed-piston 6 through turning the exterior prolonged part 12 of the piston-valve 11 being under spring-action, whereby the nut 8 is displaced on the thread 9, in other words screwed along on the prolonged part 22 without any rotation of the nut 8. Therefore for the purpose of regulating or controlling the quantity of oil to be fed, the nut 8 is adjusted at will by turning the prolonged part 8.

In Fig. 1 the nut 8 is represented as being in a position, in which is so much loss of time between the collar 7 and the nut 8 on the one hand and between the stop-surfaces 2 and 3 of the fork 4 on the other hand that the piston 6 does not move at all. Therefore, the oil-passage is fully closed.

The advantage of the feed-pump forming the object of the present invention is seen in that the piston-valve 11 being under spring-action is constructed, so as to speak, as an adjusting device and a distributing-valve and that the work or action of the movement for the oil distribution can be controlled from outside and, in the most simple manner, by rotating or turning to and fro the prolonged part 12.

What I claim is:

1. In a device for adjusting the stroke of feed-pumps for lubricator-pumps, in combination with a feed-pump cylinder and a driving-eccentric, a force-valve, means for rotating said force-valve, a feed-piston, means for rotating the said feed-piston, a stop-nut screwed on the feed-piston, means

for ensuring said stop-nut against rotary-movement and means for adjusting the stop-nut in relation to the driving-eccentric.

2. In a device for adjusting the stroke of
5 feed-pumps for lubricator-pumps, in combination with a feed-pump cylinder and a driving-eccentric, a force-valve arranged in the axis of the feed-pump cylinder, means for rotating said force-valve, a feed-piston,
10 being engaged by the force-valve mentioned, means for rotating the feed-piston, a stop-nut to be screwed from outside on the feed-piston and ensured against rotary movement and means for adjusting said stop-nut in
15 relation to the bow surrounding the driving-eccentric.

3. In a device for adjusting the stroke of

feed-pumps for lubricator pumps, in combination with a feed-pump cylinder and a driving-eccentric, a force-valve arranged in
20 the axis of the feed-pump, a prolonged part arranged on said force-valve and projecting into the outer oil collecting container, a second edged prolonged part arranged on
25 the other side of the force-valve and engaging the feed-piston, means for rotating the latter, a stop-nut screwed from outside on the feed-piston and ensured against rotary movement, said stop-nut adjusting the
30 bow surrounding the driving eccentric.

In testimony, that I claim the foregoing as my invention I have signed my name this 3rd day of April, 1925.

ARTHUR GRÜTZNER