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PUMP STRUCTURE

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*Only for examination. Original drawing will follow later.*

Fig. 1

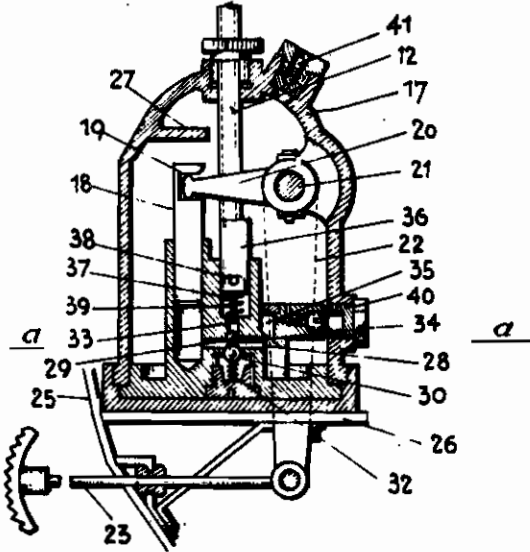


Fig. 2

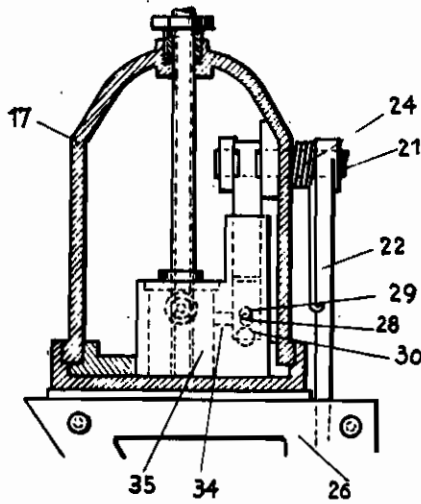
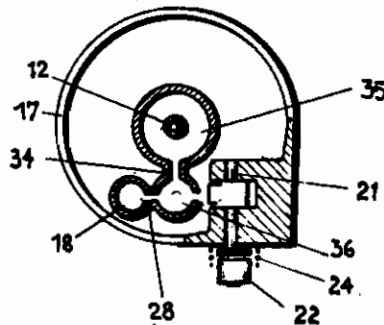


Fig. 3  
Section a-a



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# ALIEN PROPERTY CUSTODIAN

## PUMP STRUCTURE

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Application filed November 25, 1941

This invention relates to a pump structure built into a vessel containing a pressure medium to be driven into telescopic lifting jacks for motor vehicles, and the present application is a divisional application from my co-pending application Ser. No. 373,239½, filed January 6, 1941.

The invention is illustrated by way of example in the accompanying drawing, in which

Figure 1 is a sectional view of the reservoir containing the pressure medium and of the pump; Fig. 2, a side view of Fig. 1; and

Fig. 3, a section on the line A—A, of Fig. 1.

The structure comprises a reservoir 17 with in-bullt pump, which is arranged on a bracket 26 secured to a dashboard 25. At the free end of the pump piston 18 a notch 19 receives a lever arm 20 mounted on a shaft butt 21 supporting a pump lever 22 which is swingable on the outside of the reservoir 17 and, by means of a spring 24, can be actuated by the driver's foot through the medium of a connecting rod 23 projecting through the dashboard 25 into the interior of the vehicle. A stop 27 in the reservoir 17 limits the upward stroke of the piston 18.

The pump cylinder is connected with the inside of the reservoir 17 by a horizontal channel 28 in which two balls 29, 30 act as valve, the lower larger ball 30 abutting against a spring 32 and the upper smaller ball against a vertical bore 33 and a horizontal channel 34 which opens into an antechamber 35. Above the vertical bore 33 a control piston 36 bears against a spring 37 and possesses locking means 38 for holding the piston

in any desired position. A pin 39 of the control piston 36 engages the bore 33 and thereby the smaller ball 29. Safety valves 40, 41 are provided in the wall of the antechamber 35 as well as in the wall of the reservoir 17.

The mode of operation during pumping and use of the jack is as follows:

When the piston 18 draws, the pressure medium passes through the channel 28 and past the valve balls 29, 30 into the pump cylinder, and when pressure is exerted by the piston 18, the control piston 36 will be forced down and with its pin 39 push the valve ball 29 against the larger ball 30. The supply channel 34 for the antechamber 35 is thus freed from the closing action of the ball 29 which now blocks the channel 28 leading to the reservoir 17, so that the pressure medium can flow into the antechamber 35 whence it passes through the conduit 12 into the telescopic jacks.

The jacks can be rendered inoperative by the weight of the vehicle. For this purpose, the pump piston 18 and the control piston 36 are brought into central position by the connecting rod 23 and the piston 36 is fixed in position by the locking means 38, in consequence whereof the ball 29 releases the channels 28 and 34, so that the pressure medium can flow back from the antechamber 35 into the reservoir 17 through the channels 34 and 28. Excess pressure in the antechamber 35 is equalized by the valve 40, or the pressure medium may escape through this valve to the reservoir 17.

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