April 27, 1926. 1,582,758

H. A. JONES

CRANK CASE DRAINING DEVICE

Filed June 4, 1925

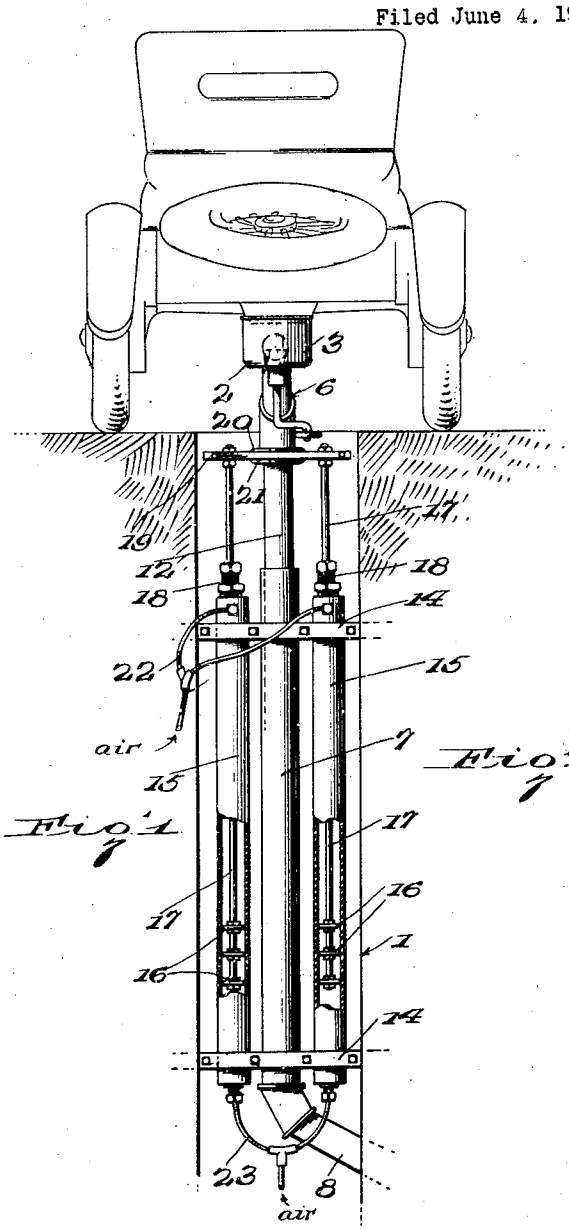


Fig. 1

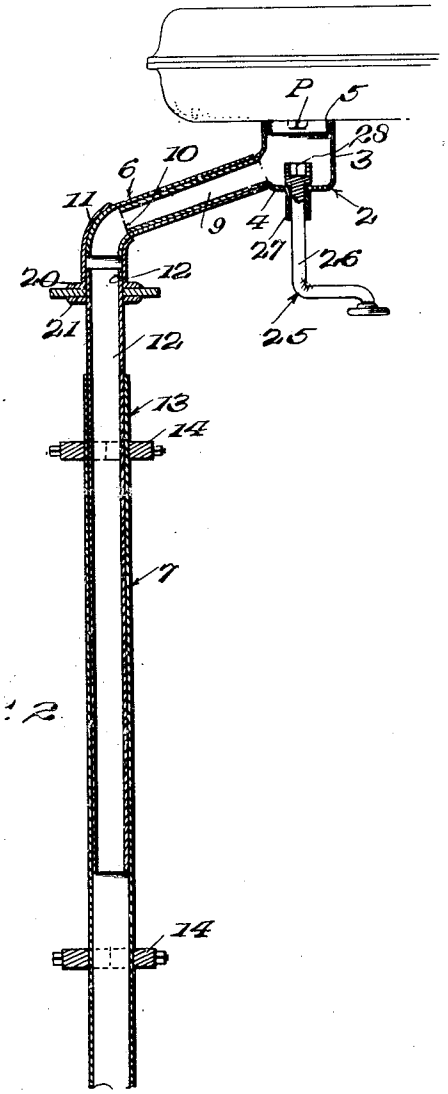


Fig. 2

WITNESSES

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Patented Apr. 27, 1926. 1,582,758

UNITED STATES PATENT OFFICE.

HENRY AUSTIN JONES, OF PHOENIX, ARIZONA.

CRANK-CASE-DRAINING DEVICE.

Application filed June 4, 1925. Serial No. 35,026.

To all whom it may concern:

Be it known that I, HENRY AUSTIN JONES, a citizen of the United States, and resident of Phoenix, in the county of Maricopa and State of Arizona, have invented certain new and useful Improvements in Crank-Case-Draining Devices, of which the following is a specification.

This invention relates to a device for draining the crank cases or oil pans of automobiles or the like and aims to provide a device of this character which may be readily and easily operated to disconnect the oil plug and receive and carry off the old used oil and also to replace the oil plug without spilling or spattering the oil.

A further object is to provide a device of this character which is normally out of the way but which may be elevated by compressed air into operative position, the device also being readily adjustable to deal effectively with various types of cars.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming a part of this specification, and in which:

Figure 1 is a view partly in section and partly in elevation showing the device in use, and

Figure 2 is a fragmentary view in central vertical section.

Referring to the drawings it will be seen that the present invention is when not in use entirely disposed within a pit 1 provided therefor, the pit being suitably walled and constructed.

The device constituting the present invention includes a receiver 2 shaped and formed to engage and coact with the crank cases or oil pans of automobiles, the receiver having a body portion 3 of cylindrical form, a bottom 4 and an open top. Around the upper edge of the body portion a gasket 5 is provided to insure an oil tight joint between the receiver and the oil pan.

Means is provided for carrying off the oil from the receiver and comprises an extensible offtake pipe designated generally at 6 extending laterally and downwardly from the receiver and a vertically disposed extensible discharge pipe 7 leading from the offtake pipe to a pipe 8 the, latter connecting to a sewer or suitable point of disposal for the oil.

The offtake pipe 6 comprises relatively rotatable and telescopic sections 9 and 10, the section 9 being welded or otherwise suitably secured to the receiver, the section 10 receiving the section 9 being threaded in or otherwise suitably connected to an elbow 11. The elbow 11 is suitably fixed to the upper end of the inner section 12 of the discharge pipe. The inner section 12 is slidably and rotatably fitted in an outer section 13, the latter being fastened adjacent its ends to frames 14 secured to the walls of the pit.

For raising and lowering the receiver 3 a pair of cylinders 15 are provided and are carried on the frames 14. Pistons 16 are fitted in the cylinders and have piston rods 17 connected thereto and extending up through stuffing boxes 18 to a cross head 19 to which they are fastened. The cross head 19 has a central opening through which the section 12 of the discharge pipe extends. The section 12 is constrained to partake of the vertical movement of the cross head although free to rotate relative thereto by virtue of the provision of a flange 20 on the elbow 11 and collar 21 on the section 12.

Valve controlled air lines 22 and 23 lead from a suitable source of supply of compressed air to the opposite ends of the cylinders 15 whereby the receiver 3 may be raised to coact with the oil pan or crank case of an automobile or lowered down into the pit.

In order to facilitate removal of the plug P of the oil pan a wrench designated generally at 25 is provided and has its shank 26 rotatably fitted in a suitably packed bearing 27 provided on the bottom of the receiver. Within the receiver the wrench has a socket 28 to receive and engage the plug P.

With this arrangement the oil may be quickly and easily drained from the car and carried off to any suitable point of disposal without spilling or spattering.

The wrench 25 has its shank turned down in a lathe and is so fitted in its bearing and of such length that it may be adjusted to engage the oil plug P before the receiver is brought into engagement with the crank case, thereby facilitating the engagement of the wrench and plug.

I claim:

1. In a device for draining crank cases or the like, a receiver, means for raising and lowering the receiver into engagement with

the crank case, means for carrying off the oil from the receiver, and means mounted on the receiver and operable to remove and replace the drain plug.

2. In a device for draining crank cases or the like, a receiver, means for raising and lowering the receiver into engagement with the crank case, means for carrying off the oil from the receiver, and means mounted on the receiver and operable to remove and replace the drain plug and comprising a wrench operable from without the receiver and having a socket located within the receiver and adapted to engage and receive the drain plug.

3. A device for draining crank cases or the like comprising a receiver, an offtake pipe leading laterally and downwardly from the receiver, a vertical discharge pipe connected to the offtake pipe and comprising sections interfitted for relative sliding and rotary movements, means for fixedly supporting one of said sections and means for raising and lowering the other section.

4. A device for draining crank cases or the like comprising a receiver, an offtake pipe leading laterally and downwardly from the receiver, a vertical discharge pipe connected to the offtake pipe and comprising sections interfitted for relative sliding and rotary movements, means for fixedly supporting one of said sections and means for raising and lowering the other section and comprising cylinders, pistons fitted in the cylinders and connected to the movable section and valve controlled air lines leading to the opposite ends of the cylinders.

5. A device for draining crank cases or the like comprising a receiver, an offtake pipe leading laterally and downwardly from the receiver and comprising a pair of rigid sections slidably interfitted, a vertical discharge pipe connected to the offtake pipe and comprising sections interfitted for relative sliding and rotary movements, means for fixedly supporting one of said sections and means for raising and lowering the other section.

6. A device for draining crank cases or the like comprising a receiver, an offtake pipe leading laterally and downwardly from the receiver, a vertical discharge pipe connected to the offtake pipe and comprising sections interfitted for relative sliding and rotary movements, means for fixedly supporting one of said sections and means for raising and lowering the other section and comprising cylinders, pistons fitted in the cylinders, piston rods connected to the pistons, a cross head connected to the piston rods and means on the movable section and cooperable with the cross head to constrain the movable section to partake of the vertical movement of the crosshead while leaving the movable section free to rotate relative to the crosshead, and valve controlled air lines leading to the opposite ends of the cylinders.

HENRY AUSTIN JONES.