March 6, 1934. C. J. BRISTOL 1,949,777

COMBINED HYDRAULIC LIFT AND OIL RECEPTACLE

Filed Dec. 15, 1930

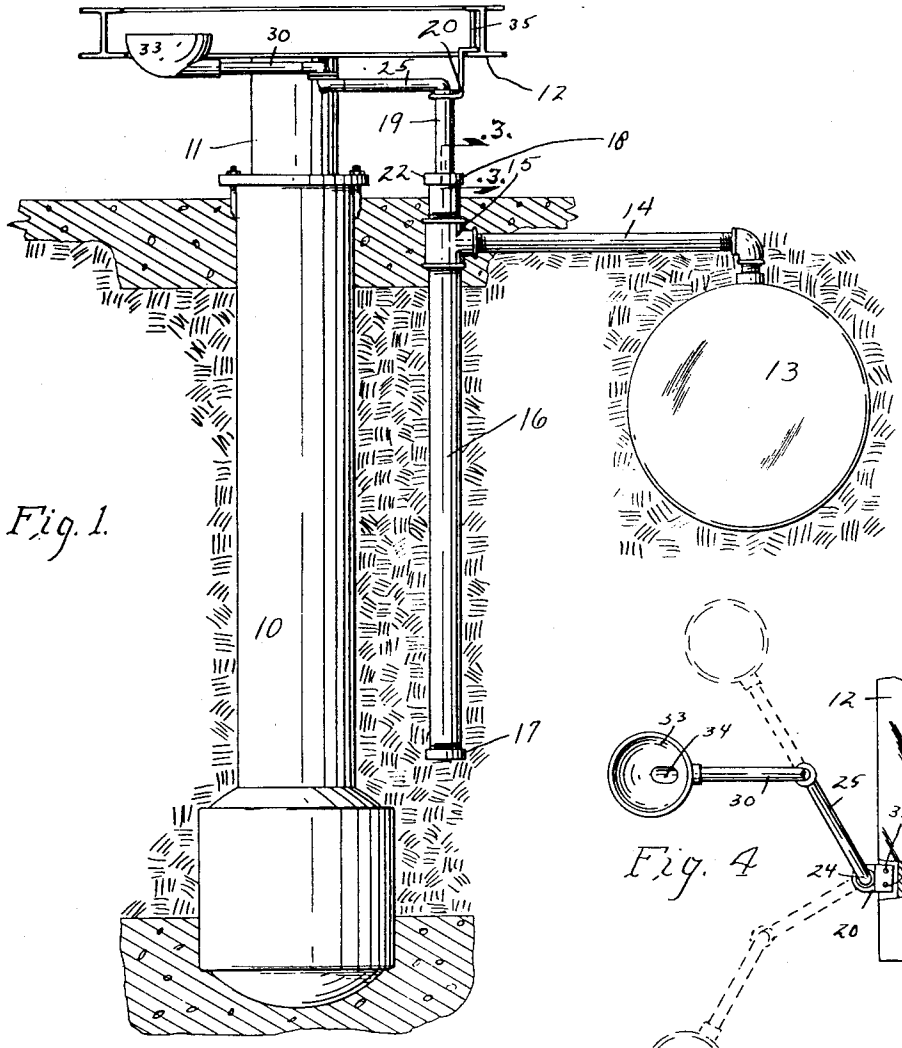


Fig. 1.

Fig. 4

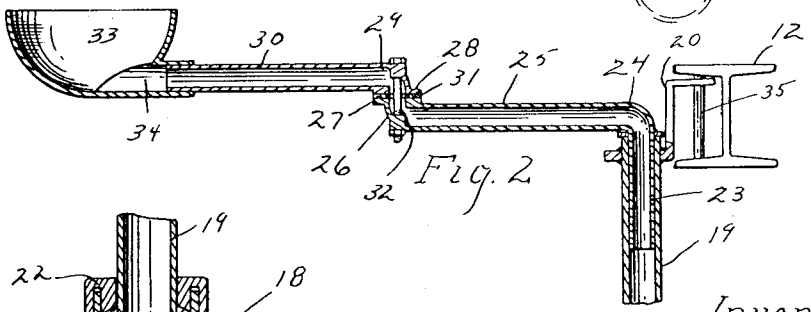


Fig. 2

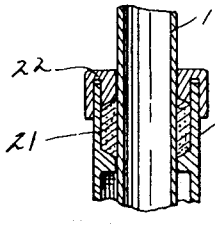


Fig. 3.

Inventor
Cyrus J. Bristol
by Owig & Hague Attys

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COMBINED HYDRAULIC LIFT AND OIL RECEPTACLE

Cyrus J. Bristol, Des Moines, Iowa, assignor to Globe Machinery & Supply Company, Des Moines, Iowa, a corporation of Iowa

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2 Claims. (Cl. 184—1.5)

The object of my invention is to provide a simple, durable and inexpensive oil receptacle which may be attached to a hydraulic lift of that type designed to lift automobiles, and when so attached provides means whereby oil from the car may be drained into a suitable tank placed under the ground surface and having means included therein whereby the oil drained from the engine may be conveyed to the tank regardless of the elevation of the lift.

A further object is to provide in connection with a device of the class described, an improved conductor whereby an oil receptacle may be pivotally mounted on the lift in such a manner that it may be easily and quickly used in various operative positions, and whereby oil will be conducted to the tank regardless of the position of the receptacle.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawing, in which:

Figure 1 is an end elevation of a hydraulic lift of that type adapted to lift automobiles, showing the manner in which my improved oil receptacle is attached thereto.

Figure 2 is a detail sectional view, taken longitudinally of the pivoted arm for supporting the oil receptacle.

Figure 3 is a detail sectional view taken on the line 3—3 of Figure 1; and

Figure 4 is a plan view of the oil receptacle and the pivoted arm for supporting the same.

Referring to the drawing, I have used the reference numeral 10 to indicate the lift cylinder which is supported in an upright manner in the ground in the usual manner, having a lift rod 11, the upper end of which is provided with a head or frame 12 designed to engage the under surface of the automobile axle, means being provided whereby the lift rod 11 may be moved to various elevated positions with the car supported on the frame 12.

My improved device comprises a tank 13 which is preferably mounted in the ground, having an inlet pipe 14 making connections with a T 15 supported on the upper end of the vertically arranged pipe 16, said pipe 16 being of a length greater than the up-travel of the lift rod 11.

A cap 17 is provided for closing the lower end of the pipe.

A nipple 18 is mounted in the upper end of the T 15 and designed to slidably receive a pipe 19, the upper end of which is fixed to the frame 12 of the automobile lift by means of a suitable bracket 20, slidably mounted on guides 35. The pipe 16 is mounted parallel with the cylinder 10 and in fixed relation thereto, so that the pipe 19 is free to move longitudinally of the pipe 16 as the lift rod 11 is elevated and lowered. The upper end of the nipple 18 is provided with a packing 21 and a packing gland 22. The packing 21 provides means for wiping the outer surface of the pipe 19 of oil as the said pipe is elevated.

Pivotally mounted in the upper end of the pipe 19 is a pipe 23 having its upper end terminating in an elbow 24 and a horizontally extending portion 25, the outer end of the member 25 terminating in an elbow 26 having an upwardly projecting end. The end of the elbow 26 terminates in an annular flattened portion 27 designed to support a similar member 28 carried by the outer end of the elbow 29, said elbow terminating in a horizontal pipe 30. A washer 31 is placed between the faces 27 and 28, said faces being pivotally supported together by means of a bolt 32 passing through the elbows 26 and 29. The free end of the pipe 30 is provided with an oil receptacle 33, preferably of semi-spherical shape having an opening 34 for receiving the outer end of the pipe 30, in the manner clearly illustrated in Figure 2.

By referring to Figure 1 it will be seen that the bracket 20 is connected to the guides 35 of the frame member 12 in such a manner that the pipes 25 and 30, together with the lower portion of the recepticle 33, are supported in the space between and below the upper surface of the frame member 12, the pipe 23 being pivotally mounted in the upper end of the pipe 29, while the pipe 30 is pivoted to the pipe 25 in such a manner that the receptacle 33 may be moved either longitudinally or laterally of the frame, or both longitudinally and laterally, whereby the receptacle 33 may be quickly and easily located beneath the drain cock of the crank case of an automobile engine when supported on the frame 12, permitting the oil to be drained into the receptacle 33, which will then flow through the pipe 30 into the pipe 25 and thence into the vertically arranged pipe 19, into the pipe 16. The oil will be delivered from the pipe 16 through the pipe 14 into the tank 13 by gravity.

On account of the pipe 19 being slidably mounted in the packing 21 it will be seen that oil may be automatically drained into the tank 13 from the receptacle 33, regardless of the elevation of the frame 12, as the said pipe 19 will

move upwardly and downwardly in unison with the upward and downward movement of the lift 11.

When the frame 12 is at its elevated position, as illustrated in Figure 1, the bracket 20 rests on the lower flange of said frame with the upper edge of the members 25, 30 and 33 below the upper surface of said frame, to permit clearance of the downwardly projecting members of an automobile as it is moved to position on said frame, and to permit free swinging movement of the member 33 beneath the crank case of the automobile.

When the frame 12 is at its lower position of movement, the pipe 25 usually rests on top of the ground surface with the bracket 20 at the upper end of the guides 35, and with the top edge of the member 33 substantially even with the top surface of the frame 12, thus permitting the top surface of the frame 12 to rest nearer the ground surface than would be possible if the bracket 20 were fixed to the frame member, and thus giving greater clearance between the top of the frame and the lower edges of the automobile axles, as the automobile is advanced to position above the frame members.

This provides an oil receptacle adapted to convey drained oil from the crank case of an engine to a suitable tank under the ground surface, regardless of the elevation of the lift frame, and in connection therewith provides means whereby the oil receptacle may be easily and quickly moved to any desired position to accommodate cars of different makes and sizes, and whereby the oil receptacle may be moved to various positions where it will be out of the way of the operator in case of making repairs. In Figure 4 several positions of the receptacle are illustrated by dotted lines.

I claim as my invention:

1. In a device of the class described, the combination of a lift beam, a vertical guide carried by said beam, a bracket slidably mounted on said guide, a vertical pipe supported in said bracket, a second pipe rotatively mounted in the upper end of the first pipe, and provided with a horizontal portion, and an oil receptacle carried by the free end of the horizontal portion.

2. In a device of the class described, the combination of a lift beam, a vertical guide carried by said beam, a bracket slidably mounted on said guide, a vertical pipe supported in said bracket, a second pipe rotatively mounted in the upper end of the first pipe and provided with a horizontal portion, a third pipe pivoted to the free end of the second pipe to swing in a horizontal plane, and an oil receptacle carried by the free end of the last horizontal pipe.

CYRUS J. BRISTOL.