

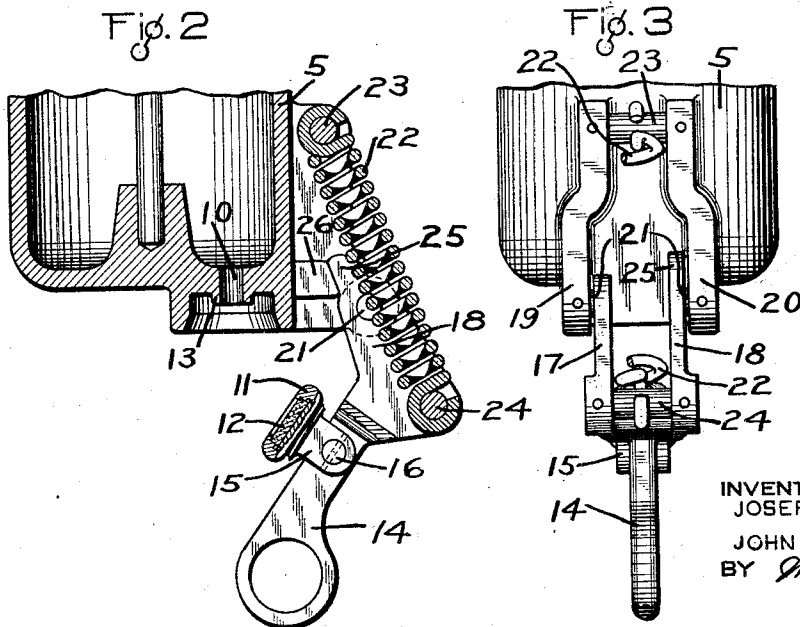
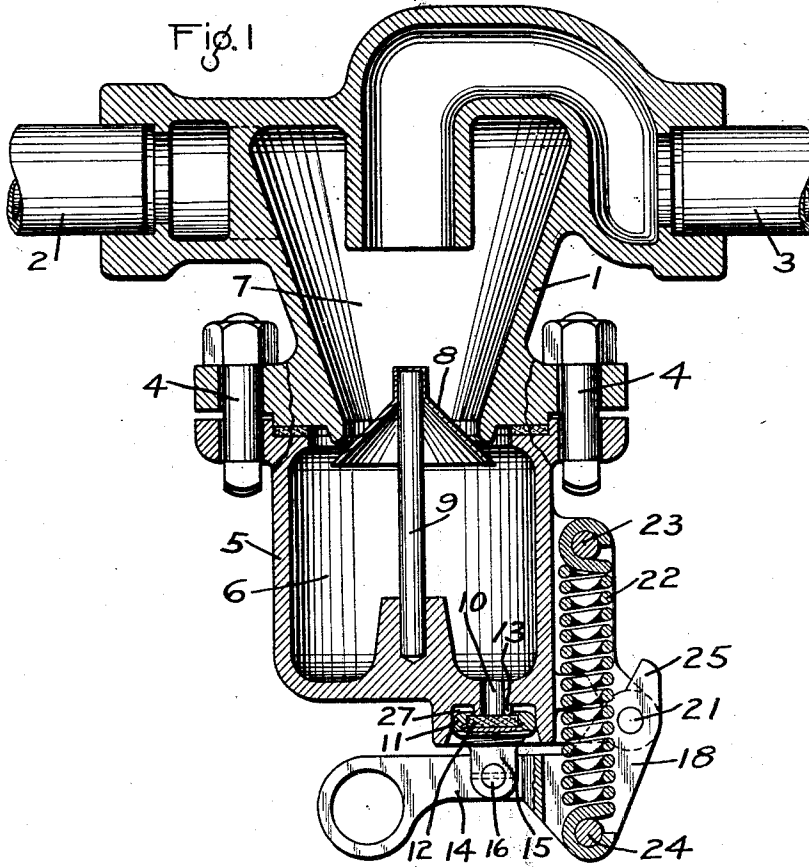
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J. C. McCUNE ET AL

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DIRT COLLECTOR

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# UNITED STATES PATENT OFFICE

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## DIRT COLLECTOR

Application filed March 15, 1930. Serial No. 436,152.

This invention relates to dirt collectors for fluid pressure systems such as a fluid pressure brake system, and the principal object of the invention is to provide improved means for draining water and the like from the dirt collecting chamber of a dirt collector.

In the accompanying drawings; Fig. 1 is a sectional view of a dirt collector, showing our improved drain device applied thereto; Fig. 2 a fragmentary sectional view, showing the drain valve in its open position; and Fig. 3 a side view of the portion shown in Fig. 2.

The dirt collector shown in the drawings is of the centrifugal type comprising a casing section 1, which is connected to a fluid under pressure conducting pipe such as the brake pipe of a fluid pressure brake system, the sections 2 and 3 of the pipe being connected to the casing 1.

Secured to the casing section 1 by bolts 4 is a casing section 5 having a dirt collecting chamber 6, connection between the chamber 6 and chamber 7 of the casing section 1 being controlled by a valve member 8, which is mounted on a stem 9, secured to the casing 5.

According to our invention, a drain opening 10 is provided through the bottom wall of the casing 5, and said opening is controlled by a valve member 11 carrying a resilient valve seat 12 adapted to engage a seat rib 13, surrounding the opening 10. The valve member 11 is carried by an arm 14, said member having lugs 15 which straddle the arm 14, and are connected to the arm by a pin 16. Integral with the arm 14 are spaced portions 17 and 18 which are mounted between lugs 19 and 20 carried by the casing section 5, the portions 17 and 18 being mounted on pivot pins 21 secured in the lugs 19 and 20.

A coil spring 22 is hooked at one end over a pin 23 secured to the lugs 19 and 20, and the other end of the spring is hooked over a pin 24 secured in the portions 19 and 20.

The portion 18 is provided at its outer end with a finger 25 adapted to engage a stop lug 26 carried by the casing section 5, when the arm 14 is thrown to open the valve 11.

The spring 22 is so positioned, that when the valve member 11 is in seated position, as shown in Fig. 1, the longitudinal axis of the

spring will lie between the pins 21 and the valve member 11, so that the tension of the spring acts to hold the valve tightly seated against any fluid pressure existing in the chamber 6.

If it is desired to drain the chamber 6 of water or the like, the arm 14 is rotated about the pins 21, until the finger 25 engages the stop lug 26, as shown in Fig. 2. In this position, the longitudinal axis of the spring is disposed outside of the pins 21, so that the tension of the spring 22 acts to hold the arm 14 in the open position.

The valve member 11 is guided to its seat by engaging in an annular recess 27 provided in the casing 5 concentric with the seat rib 13.

While one illustrative embodiment of our invention has been described in detail, it is not our intention to limit its scope to this embodiment or otherwise than by the terms of the appended claims.

Having now described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. The combination with a dirt collector having a dirt collecting chamber provided with a drain outlet, of a valve for controlling said outlet, an arm for operating said valve, a pin on which said arm is pivoted, a tension spring acting on said arm and having its longitudinal axis at one side of the pin when the arm is positioned to seat the valve, and having the longitudinal axis at the opposite side of the pin when the arm is positioned with the valve unseated, so that the spring acts both to maintain the valve seated and unseated.

2. The combination with a dirt collector having a dirt collecting chamber provided with a drain outlet, of a valve for controlling said outlet, an arm for operating said valve, a pin on which said arm is pivoted, a tension spring acting on said arm to hold said valve seated, and acting when the arm is operated to open the valve to hold said arm and valve in the open position.

In testimony whereof we have hereunto set our hands this 12th day of March, 1930.

JOSEPH C. McCUNE.  
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