H. E. COFFIN.

COMBINED SEDIMENT CUP, STRAINER, AND DRAIN PLUG.

APPLICATION FILED NOV. 6, 1908.

920,271. Patented May 4, 1909.

Fig 1.

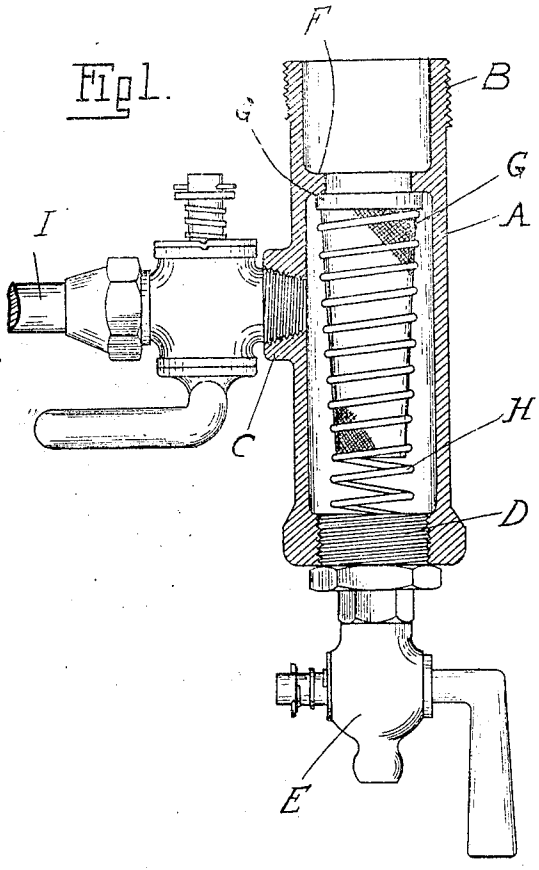
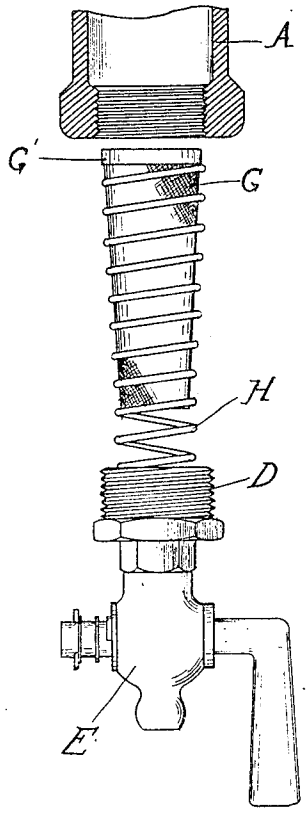


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HOWARD E. COFFIN, OF DETROIT, MICHIGAN, ASSIGNOR TO THE CHALMERS-DETROIT MOTOR COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

COMBINED SEDIMENT-CUP, STRAINER, AND DRAIN-PLUG.

No. 920,271. Specification of Letters Patent. Patented May 4, 1909.

Application filed November 6, 1908. Serial No. 461,421.

To all whom it may concern:

Be it known that I, HOWARD E. COFFIN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in a Combined Sediment-Cup, Strainer, and Drain-Plug, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to fluid circulating systems, and is more particularly designed for use in lubricators.

The invention consists in the construction by which the strainer may be quickly and easily detached for cleaning, and, further, in the peculiar construction, arrangement and combination of parts as hereinafter set forth.

In the drawings—Figure 1 is a sectional elevation of my improved structure; Fig. 2 is a similar view showing the manner of detaching the strainer.

A is the casing which is provided at its upper end with a threaded nipple B and at its side with the threaded nipple C for respectively connecting with the outlet and inlet conduits of the circulating system.

D is a drain plug having a threaded engagement with the lower end of the casing A and preferably provided with the petcock E.

F is an annular flange or shoulder formed within the casing A between the nipples B and C. G is a screen, preferably of conical form, which at its upper end is seated against the shoulder F and extends downward within the casing A, spaced from the walls thereof.

To hold the screen to its seat, and at the same time to permit of quickly removing it when necessary for cleaning, I provide a resilient holder for the screen, which is attached to the plug D. This holder is preferably a spiral spring H which at its lower end is seated in the plug D and at its upper end bears against a flange G' upon the screen G. The diameter of the nipple of the plug D is greater than the maximum diameter of the screen and spring, and is also larger than the annular bearing F within the casing. Thus the screen may be readily inserted or withdrawn from the casing whenever the plug is attached or detached and is normally held against its seat by the resilient holder H.

In operation the fluid entering from the conduit I through the nipple C will first pass into the chamber in the lower portion of the casing A and will then filter through the screen and pass upward to the outlet nipple B. Any sediment which cannot pass through the screen will fall down and collect in the lower portion of the casing A. This sediment may be removed by opening the cock E and whenever necessary the screen may be removed for cleansing by merely unscrewing the plug.

What I claim as my invention is:

1. The combination with a casing, of a conduit connected with said casing at one side thereof, a removable drain plug engaging an aperture in the lower end of said casing, a screen insertible through said aperture, a bearing on the upper end of said screen, a seat for said screen between said conduit and the upper end of said casing, and a spiral spring surrounding said screen and engaging the bearing; the lower end of said spring being supported by the removable plug.

2. The combination with a casing having an abutment intermediate its ends, of a removable drain plug engaging an aperture in the casing, a screen insertible through said aperture, a bearing on one end thereof, a spiral spring encircling said screen and engaging said bearing for yieldingly holding the screen against the abutment, and a removable drain plug for the aperture in the casing against which the other end of said spring abuts.

3. The combination with a casing having an abutment intermediate its ends formed by an inwardly-projecting annular flange, of a conduit connected with said casing at one side thereof, a removable drain plug engaging an aperture in the casing, a screen insertible through said aperture, a bearing on one end of the screen, a spiral spring encircling said screen and engaging said bearing, the other end of said spring being supported by the drain plug whereby the screen is yieldingly held against said abutment.

In testimony whereof I affix my signature in presence of two witnesses.

HOWARD E. COFFIN.

Witnesses:

W. J. BELKNAP,

JAMES P. BARRY.