Feb. 20, 1923. 1,446,056.

J. I. MISENER.

SEDIMENT CUP.

FILED NOV. 22, 1920.

Fig. 1.

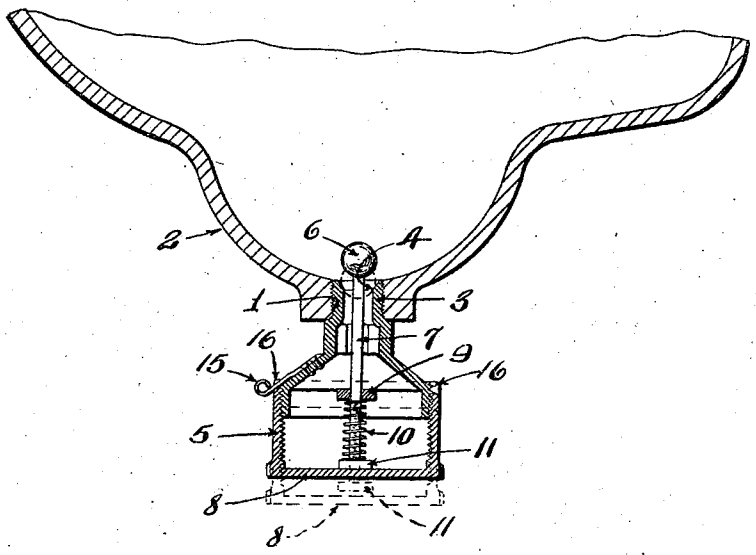
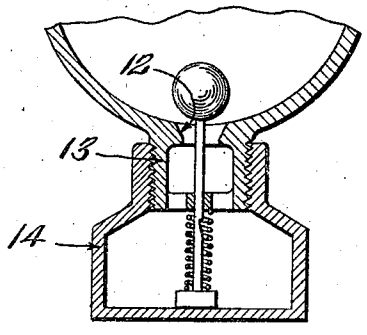


Fig. 2.



INVENTOR

John I. Misener

Patented Feb. 20, 1923. 1,446,056

UNITED STATES PATENT OFFICE.

JOHN I. MISENER, OF SYRACUSE, NEW YORK.

SEDIMENT CUP.

Application filed November 22, 1920. Serial No. 425,671.

To all whom it may concern:

Be it known that I, JOHN I. MISENER, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Sediment Cup, of which the following is a specification.

My invention has for its object a means for removing the sediment such as carbon, dirt, water, kerosene etc., from lubricating oils and is particularly adapted for use in connection with the lubricant drain port of internal combustion engines and the like, and consists of a sediment cup which is very simple in construction and highly efficient and durable in use.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a sectional view of my sediment cup, a portion of an engine base being also shown.

Figure 2 is a view similar to Fig. 1 showing a modified construction of my invention.

Lubricating oils, as used in internal combustion engine bases and similar places when they are subjected to excessive heat become thinned with water, from condensation and with kerosene from the fuel used in the engine, they also become fouled with carbon, dirt and metal worn from the bearings etc. and filled with dirt and other foreign matter, all of this foreign matter being heavier than the oil and settles to the lowest point of the engine base, or lubricant container.

My object is to provide a simple and cheap means of removing this sediment with a minimum amount of labor and waste, and my invention comprises generally, a sediment cup comprising a part provided at one end with a threaded nipple for attaching said part to the drain port of a lubricant container, a passage through said port, the upper end of said passage being provided with a valve seat, a sediment container threading upon the other end of said part, a valve head coacting with said valve seat, a spring for holding said head on its seat, a valve stem projecting from said valve head and coacting with the bottom of the sediment container for raising said valve head from its seat after the sediment container has been connected to the drain port, and allowing said valve to seat again before the sediment container or cup has been removed.

In Fig. 1, of the drawings, I have shown my sediment cup taking the place of the drain plug in the drain port 1 of an engine base 2. 3 is the nipple threading into the part 1 and provided with a valve seat 4, said seat 4 being flush with the lowest oil level of the engine base or lubricant container.

5 is the sediment container and as here shown consists of cup-shaped member threading upon the lower end of the nipple 3. 6 is the valve head and 7 is the valve stem integral therewith, said valve stem extending through the hollow nipple 3 and coacting with the bottom 8 of the cup 5 for raising the valve head 6 from its seat 4.

9 is a web extending across the nipple part 3, said web 9 forming a guide for the valve stem 7. 10 is a spring on the valve stem between the web 9 and the knurled head 11 on the lower end of the valve stem, said spring returns the valve head to its seat when the cup 5 is adjusted downwardly, as shown in dotted lines, Fig. 1.

As shown in Fig. 2, the valve seat 12 may be made integral with the drain port 13 and the sediment cup 14 threaded upon said port 13.

15 is a spring catch coacting with a notch 16 in the upper edge of the cup 5 for locking the cup 5 to the nipple 3.

In operation, the cap 5 is screwed up until the valve is lifted from its seat as shown in Fig. 1. The sediment cup is preferably removed when the motor is at rest and the sediment has had time to settle into the cup 5.

By this construction of sediment cup the sediment may be taken off without wasting the lubricant and without spilling any of the sediment as the valve closes before the cup 5 is removed and opens after said cup is replaced, and the cup 5, owing to the telescoping arrangement of the cup 5 over the part 3, is of sufficient capacity to hold the entire amount of sediment etc. below the valve 6 after said valve has seated.

By my two piece cup construction a sediment trap can be produced to fit the different size drain ports by simply providing the part 3 with the proper size nipple, thereby producing a sediment cup to fit any drain port at a very small cost.

What I claim is:

1. In combination with an oil drain port, a two-part sediment cup, one of said parts being provided at its upper end with an externally threaded hollow nipple, said nipple being provided with a valve seat at its extreme end, the other part comprising a removable container for the sediment, said last mentioned part telescoping over the lower end of the first mentioned part, a ball valve coacting with said valve seat, and supported by the first mentioned part, and means for closing said valve before the last mentioned part has been removed and opening said valve after said part has been replaced.

2. In combination with an oil drain port, a two-part sediment cup, one of said parts being provided at its upper end with an externally threaded hollow nipple, said nipple being provided with a valve seat at its extreme end, the other part comprising a removable container for the sediment, said last mentioned part telescoping over the lower end of the first mentioned part, a ball valve supported by the first mentioned part and coacting with said valve seat, a spring for holding said valve on its seat, a valve stem projecting downwardly from said ball valve, and coacting with the bottom of the last mentioned part to close said valve before the last mentioned part has been removed and to open said valve after said last mentioned part has been replaced.

In testimony whereof, I have hereunto signed my name, at Syracuse, in the county of Onondaga, and State of New York, this 13th day of November, 1920.

JOHN I. MISENER.