

(No Model.)

A. HALLOWELL.
OIL CAN.

No. 512,438.

Patented Jan. 9, 1894.

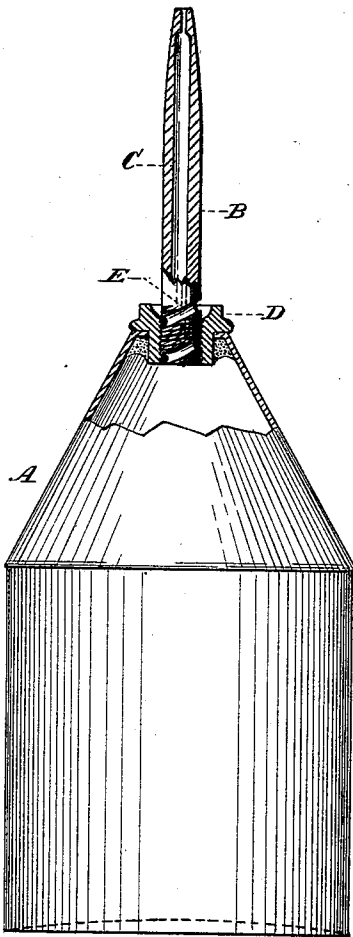


Fig. 1.

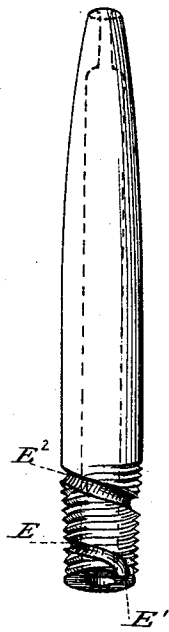


Fig. 2.

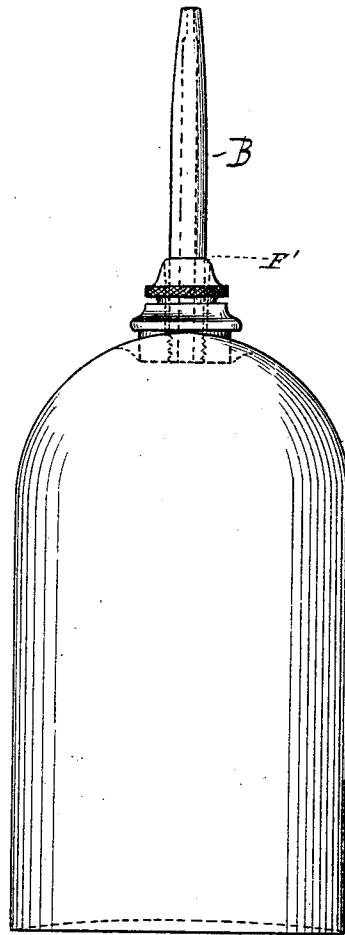


Fig. 3.

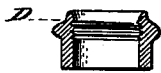


Fig. 4.

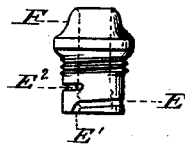


Fig. 5.

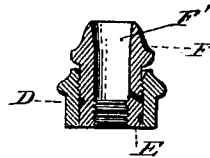


Fig. 6.

Witnesses:
E. L. Carlson,
Lillian H. Trow

Inventor:
Albert Halliwell
By J. H. Rupp
Att'y

UNITED STATES PATENT OFFICE.

ALBERT HALLOWELL, OF LOWELL, MASSACHUSETTS.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 512,438, dated January 9, 1894.

Application filed April 8, 1893. Serial No. 469,541. (No model.)

To all whom it may concern:

Be it known that I, ALBERT HALLOWELL, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Oil-Cans; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Oil cans for lubricating machinery are usually filled to near the top of the can with oil, and leave a small space for air. After a few drops have been discharged from the can a vacuum is formed and no more oil would flow, unless an air vent was arranged between the outer air and the interior of the can, so that sufficient air will be supplied to the interior of the can to prevent a vacuum, and further to cause a discharge of the oil from the discharge nozzle. The discharge of the oil from the can depends upon the size of the air vent—or, in other words, the flow of the oil is governed by the air vent.

One object of my invention is to provide an air vent for oil cans, simple in construction and of great utility. This and other objects are accomplished by the apparatus hereinafter described and claimed.

In the accompanying drawings which illustrate my invention, Figure 1 represents a side elevation with the upper part partly in section. Fig. 2 is a perspective view of the discharge nozzle, showing the air vent cut in the screw threads at the bottom of the discharge nozzle. Fig. 3 is a side elevation of a modified form of connection between the discharge nozzle and the can. Figs. 4, 5, and 6 are detailed constructions hereinafter described.

In the figures like letters of reference refer to like parts throughout the several views.

A represents an oil can having a mouth which is formed in the cap D which is soldered to the upper open end of the can. This mouth is internally screw threaded, and into it the lower end of the discharge nozzle B, having a central orifice C, is screwed. The air vent E is cut contrary to the direction of the threads, and one end, E', opens to the interior of the can, and E² opens to the atmosphere.

When the can is tipped the oil will flow from the central orifice C, and will also enter into

the spiral grooved air vent E, but owing to its construction will not reach the end E² until after a discharge of oil has passed from the orifice C, and as the oil will flow only from the lower of two points the air will pass into the vent E, and force the oil back from the spiral groove E into the can, and in this manner keep the can supplied with air so as to cause a discharge of oil from the nozzle B.

A modified construction is shown in Figs. 3, 4, 5, and 6. The sleeve D is soldered to the can and provided with screw thread at its upper end to receive the cap F, which forms the mouth of the can and which is screw threaded at its inner lower end, which receives the screw thread of the nozzle B. The lower exterior of the cap F is plain, and has a spiral groove E, with one end, E', opening into the interior of the can, and the other end E² opening to the atmosphere through the air space F', between the cap F and the nozzle B, as shown in Figs. 3, 4, 5, and 6.

The oil can, constructed as just described, will operate in exactly the same way as that shown in Figs. 1 and 2.

The spiral arrangement of the air vent E causes a delay of the oil passing through it, until a discharge takes place from the end of the nozzle B, after which the air will enter the air vent E and pass into the interior of the can, and thereby prevent a vacuum, thus causing a discharge of oil when required.

In Fig. 1, I have shown the spiral grooved air vent as cut in the direction contrary to that of the screw threads, but it may be in the same direction if desired; by cutting it in the contrary direction, however, the stripping of the threads is prevented, and I therefore consider it preferable to cut the vent as shown.

The lower end of the discharge nozzle B is slightly tapered, so that when screwed into the cap D a tight joint is made with said cap.

It is obvious that the spiral air vent, which is cut in the lower end of the discharge nozzle (see Fig. 1) may be cut in the threads of the cap instead of in the nozzle, in which case the operation would be the same.

I do not limit myself to the exact arrangements and constructions shown, as the same may be varied without departing from the spirit of my invention.

Having thus ascertained the nature and set

forth the construction of my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination, an oil can, a discharge
5 nozzle secured to the mouth thereof, and a spiral groove forming an air vent and located between the nozzle and the mouth of the can, substantially as set forth.

2. In combination, an oil can having a mouth
10 internally threaded, a discharge nozzle externally threaded at its lower end and adapted to be secured in said mouth, and a spiral groove forming an air vent and located between the said nozzle and mouth of the can, substan-
15 tially as set forth.

3. In combination, an oil can, a discharge nozzle with a tapering end secured to the mouth thereof, and a groove forming an air vent located in the tapering end of said nozzle, substantially as set forth.
20

4. In combination, an oil can, a discharge nozzle secured to the mouth thereof, and a

spiral groove surrounding said nozzle and concentric therewith and forming an air vent, substantially as set forth. 25

5. In combination, an oil can, a discharge nozzle secured to the mouth thereof, and a spiral groove cut in the lower end of said nozzle and forming an air vent between the nozzle and the mouth of the can, substantially as
30 set forth.

6. In combination, an oil can, a discharge nozzle secured to the mouth thereof, and a groove forming an air vent and located between the nozzle and the mouth of the can, 35 substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 7th day of April, 1893.

ALBERT HALLOWELL.

Witnesses:

E. L. HANLON,
L. H. TROW.