

No. 833,699.

PATENTED OCT. 16, 1906.

L. S. STARRETT.

PLUMB BOB.

APPLICATION FILED FEB. 7, 1906.

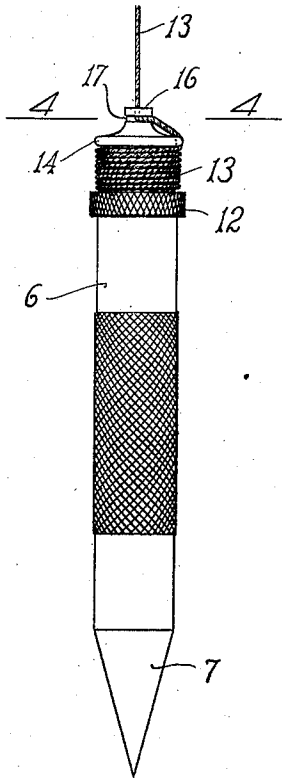


FIG. 1.

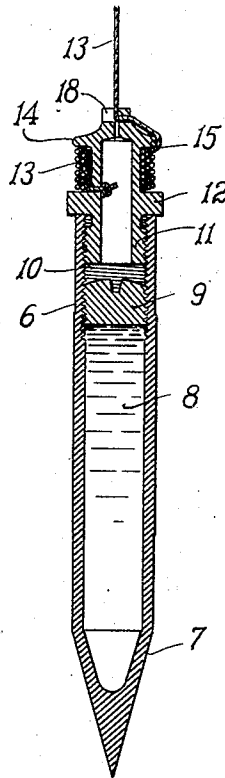


FIG. 2.

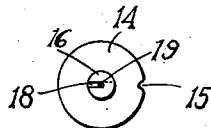


FIG. 3.

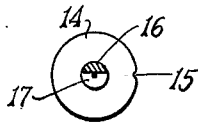


FIG. 4.

WITNESSES

H. L. Ladd
A. T. Palmer

INVENTOR

Laroy S. Starrett
by *B. H. Jewett*
Attorney

UNITED STATES PATENT OFFICE.

LARROY S. STARRETT, OF ATHOL, MASSACHUSETTS.

PLUMB-BOB.

No. 833,699.

Specification of Letters Patent.

Patented Oct. 16, 1906.

Application filed February 7, 1906. Serial No. 299,965.

To all whom it may concern:

Be it known that I, LARROY S. STARRETT, of Athol, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Plumb-Bobs, of which the following is a specification.

This invention supplies to mechanics, surveyors, and others a plumb-bob of improved construction and materials and one provided with novel suspending means whereby the device may be axially suspended by any desired length of the upper end of the line without uncoiling the remainder of it and whereby said line end may be frictionally fastened when not in use.

In the drawings, Figure 1 is an elevation of my improved plumb-bob as in use; Fig. 2, a vertical section thereof; Fig. 3, a top view of the cap, and Fig. 4 a horizontal section of it on line 4 4 of Fig. 1.

The body 6 of this device is a slender cylinder of steel formed with a hardened conical tip 7, the axis of which coincides with that of the body 6. In its best form, as shown in Fig. 2, these parts are accurately bored axially to form a receptacle for mercury 8, which, being nearly twice as heavy as the steel displaced, adds materially to the weight without increasing the bulk of the device. Moreover, the excess of weight is located near the lower end, which is advantageous.

The mercury is retained in place by means of a screw-plug 9 engaging internal screw-threads 10, formed in the cavity-walls and treated with a suitable cement before screwing the plug down to the mercury to prevent its leakage or movement. Above plug 9 is a hollow cap 11, having a threaded engagement with the same internal screw-threads 10 and formed with a collar 12, which bears against the end of body 6 when fully screwed in. Collar 12 and body 6 are peripherally knurled or roughened to facilitate insertion and removal of the screw-cap. Above collar 12 the diameter of cap 11 is reduced to form a spool on which to coil the suspending cord or line 13, the inner end of which passes through the spool-wall and is knotted within the cap. (See Fig. 2.)

Cap 11 embodies a special feature of my invention. It has a terminal flange 14 with an edgewise notch 15 and is formed with a reduced projecting tip 16, slotted horizontally, as at 17, Figs. 1 and 4, and vertically,

as at 18, Figs. 2 and 3. Slot 17 extends inwardly, so as to intersect an axial perforation 19 through tip 16, and slot 18 extends downwardly through the portion of said tip lying to the left of such perforation—that is, on the side most remote from notch 15. Slot 17 is broad enough for the cord 13 to readily enter it laterally, while slot 18 is narrower, so that the cord enters with some friction, and it is frictionally held in the perforation 19. The angle where these slots intersect will be somewhat dulled, and the upper end of perforation 19 will be countersunk to lessen wear on the cord. It will be seen that with this construction the suspending-cord may be largely coiled on the spool of cap 11 and the outer end portion deflected at notch 15 and drawn laterally into slots 17 and 18 and perforation 19, where friction readily holds it, more or less of the free end being used to suspend the device axially, as desired. When not in use, its terminal portion is similarly held to prevent unwinding.

The entire device may be made solid, as appears externally in Fig. 1.

I claim as my invention—

1. In plumb-bobs, a slender cylindrical body formed at its lower end with a conical tip and at its opposite end provided with a cap of spool-like formation to receive the coiled suspending-cord and an edgewise notch to permit deflection of the free end of the cord, such cap having an axially-perforated terminal tip formed with horizontal and vertical slots intersecting each other and said perforation and adapted to frictionally engage the uncoiled cord for the purpose set forth.

2. The improved plumb-bob described, comprising the hollow cylindrical body and conical lower end portion, adapted to receive a filling of mercury and a plug serving to confine the same, in combination with a cap portion engaging said body, recessed and notched peripherally to receive the suspending-cord and having a slotted tip portion axially perforated for frictional engagement with the uncoiled portion of the cord.

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

LARROY S. STARRETT.

Witnesses:

WILLARD G. NIMS,
FRANK E. WING.