H. A. SCHMIDTKE.

PLUMB BOB.

APPLICATION FILED DEC. 8, 1908.

916,608. Patented Mar. 30, 1909.

Fig. 1.

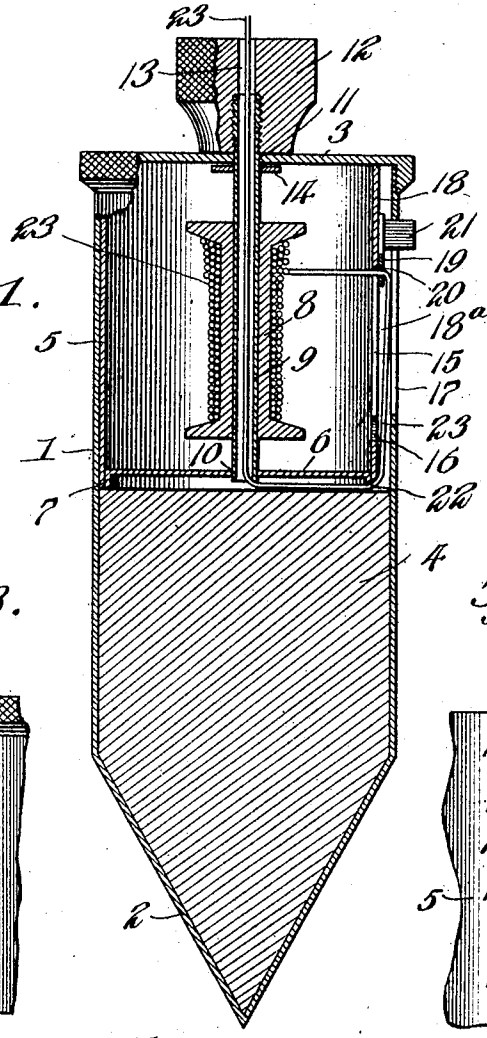


Fig. 3.

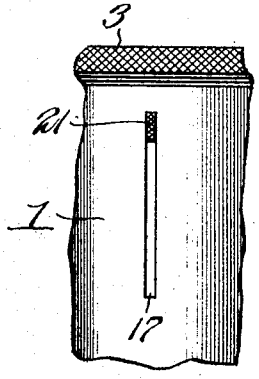


Fig. 4.

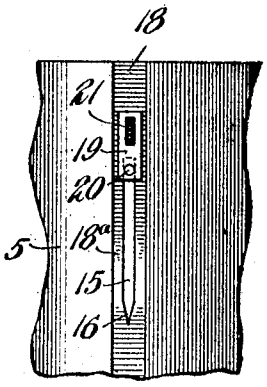
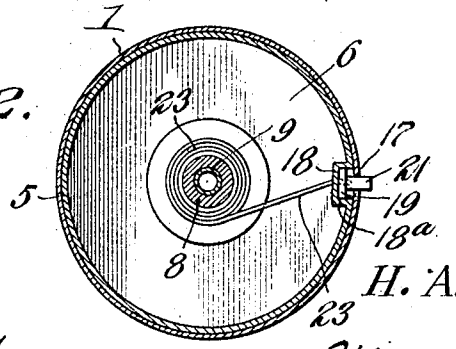


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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PLUMB-BOB.

No. 916,608. Specification of Letters Patent. Patented March 30, 1909.

Application filed December 8, 1908. Serial No. 466,523.

To all whom it may concern:

Be it known that I, HERMAN A. SCHMIDTKE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Plumb-Bobs, of which the following is a specification.

This invention relates to plumb bobs, and the particular object of the invention is to provide a plumb bob having a reel contained therein and on which the plumb line may be wound and from which any length or portion of the line may be unwound as occasion requires, thus preventing the line from becoming snarled or tangled and enabling it to be wound up and inclosed so as to be out of the way when the bob is not in use.

A further object of the invention is to provide a novel construction of chambered bob and mode of mounting the reel, as well as novel means for winding the line, permitting unwinding of the length of line desired, and locking the line from movement, whereby a simple and efficient plumb bob of this character is produced.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a vertical longitudinal section of the bob. Fig. 2 is a horizontal transverse section thereof. Fig. 3 is a fragmentary side elevation of the bob. Fig. 4 is a similar view of the reel casing.

Referring now more particularly to the drawing, my improved plumb bob comprises an external cylindrical shell or casing 1 having a closed conical lower end 2 and closed at its upper end by a threaded cap or head 3. The lower half of the body of this shell and the conical end 2 inclose a solid filler 4 of lead or other suitable material acting as a plumb weight. The upper portion of the shell forms a chamber receiving a reel casing 5, which reel casing is closed at its upper end by the cap or head 3 and is clamped between the same and the filler 4. The lower end of the casing 5 is closed by an elevated head 6 having a depending flange 7 bearing with the lower edge of the casing against the filler. Arranged within the said casing 5 is a reel comprising a flanged spool 8 rigidly mounted on a hollow shaft 9, which shaft is journaled at its lower end in a bearing opening 10 in the head 6 and at its upper end in a bearing opening 11 in the head. The said upper end of the shaft extends above head 3 and is engaged by a milled nut 12 having a line passage 13, and on the shaft below said head is a stop collar or washer 14. The nut and washer coact with the head to prevent endwise movement of the reel, which may be removed with the head for convenience in substituting a new line for an old one, etc.

Formed in one side of the casing 5 is a vertical slot 15 having a tapering or contracted lower end 16, and formed within the adjacent side of the shell is a vertical slot 17 registering with said slot 15. The slot 15 is formed within the inner wall of an offset portion 18 (Fig. 2) of the casing, which offset portion provides a guide channel 18ª for a sliding shifter plate 19. This shifter plate is formed at its lower end with an opening 20 and provided at its upper end with a serrated finger piece 21 which projects externally through and slides in the slot 17. The lower edge of the casing and the flange 7 are cut away to form a guide notch or passage 22 between the lower end of the channel and the space below the head 6.

The line 23 is secured and wound at one end around the spool 8, thence passes out through the slot 15 and opening 20 in the shifter into the channel 18ª, thence down through the channel and recess 22 into the space between the filler 4 and head 6, and finally upward through the hollow shaft 9 and out through the passage 13 in nut 12, where its free end is exposed. The cord may be locked from movement when wound or unwound to any extent by sliding the shifter downward to force the adjacent portion of the cord into the contracted lower end 16 of slot 15. To wind up the cord, it is simply necessary to release it from the notch 16 and turn the reel clockwise by means of the nut 12. To unwind the wound cord the shifter is adjusted to release the same from notch 16, and then the free end of the cord is grasped and the line pulled out, whereby any desired number of feet of line may be withdrawn for use in suspending the bob. It will, of course, be understood that as the line is wound or unwound the shifter 19 reciprocates, thus causing the line to wind or unwind equally on or from the reel.

From the foregoing description, taken in

connection with the drawing, the construction and mode of use of my improved plumb bob will be clearly understood, and it will be seen that the invention provides a bob wherein the line may be inclosed when not in use and from which any portion of it may be withdrawn for use without liability of tangling the line, and, further, that the construction disclosed provides for the manipulation of the line in an easy and convenient manner and its secure retention in adjusted position. By simply detaching the cap 3 it is obvious that the reel and line may be removed and a new line readily substituted for an old one whenever occasion requires.

Having thus fully described the invention, what is claimed as new is:—

1. A plumb bob provided with a chamber, guiding means therein including a reciprocating shifter, a reel having a hollow shaft projecting exteriorly at one end and provided with an operating device, and a line connected at one end with the reel and extending therefrom to the exterior through said shaft, said line engaging said guiding means and being held thereby in the form of a loop between the reel and shaft, said loop being movable with the shifter.

2. A plumb bob having a chamber, a reel therein comprising a spool having a hollow shaft projecting exteriorly at one end, a line connected with the reel and extending exteriorly through said hollow shaft, and guiding means for the line between the spool and inner end of the shaft.

3. A plumb bob provided with a chamber having a guide slot provided with a contracted portion, a reel in said chamber comprising a spool having a hollow shaft projecting exteriorly at its upper end, a line extending from the spool through said slot and adapted to be locked in the contracted portion thereof, said line extending from the slot to the exterior, through the hollow shaft, guiding means for holding that portion of the line between the slot and shaft in the form of a loop, and a reciprocating shifter having a guide opening for passage of the looped portion of the line, said shifter being movable in line with said slot.

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

HERMAN A. SCHMIDTKE.

Witnesses:

R. L. SHEPHERD,

W. H. GRIMMELMAN.