

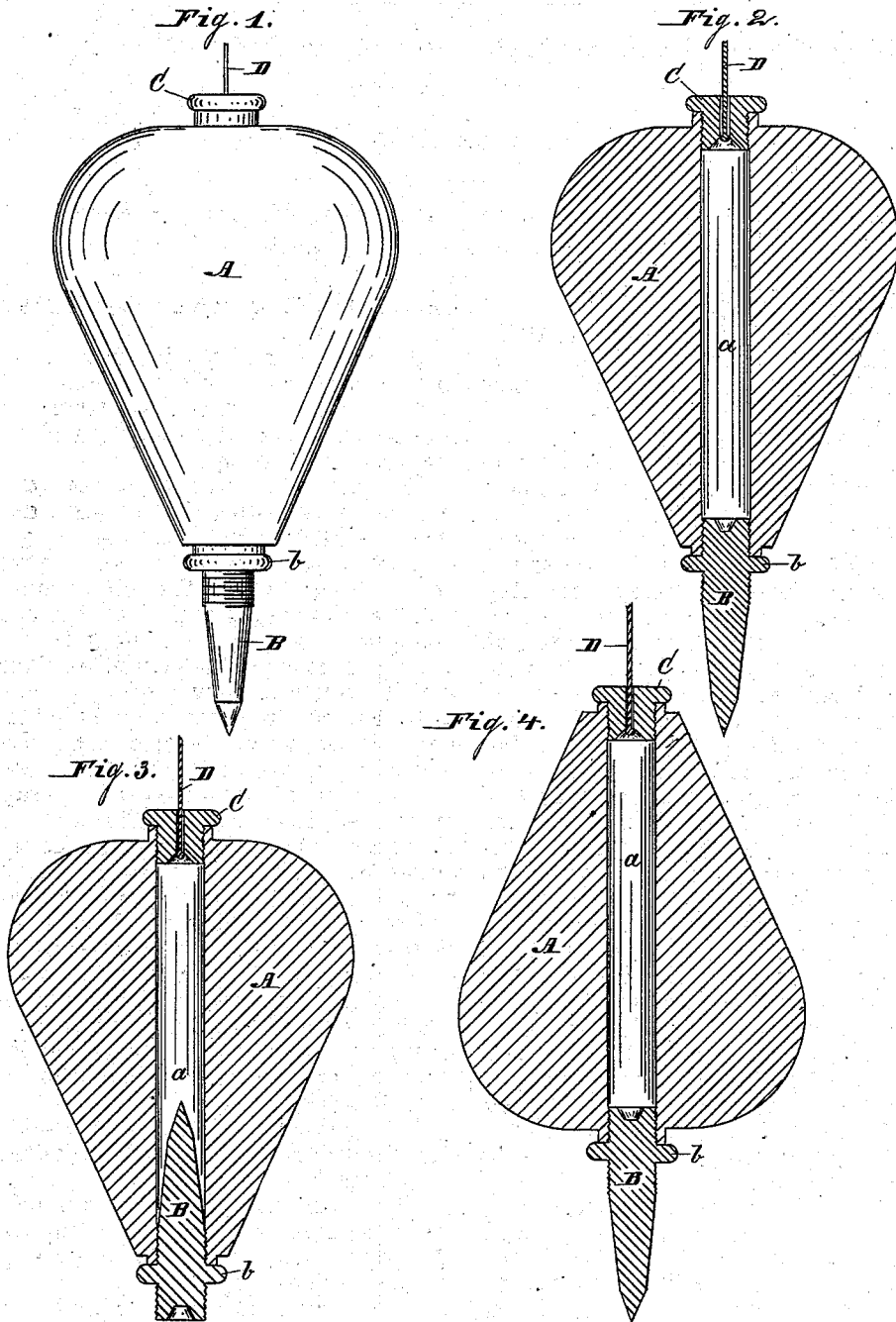
(No Model.)

W. C. VAJEN.

PLUMB BOB.

No. 267,655.

Patented Nov. 14, 1882.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

WILLIS C. VAJEN, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO VAJEN & NEW,  
OF SAME PLACE.

## PLUMB-BOB.

SPECIFICATION forming part of Letters Patent No. 267,655, dated November 14, 1882.

Application filed November 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIS C. VAJEN, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Plumb-Bobs, of which the following is a specification.

As is known by persons who use plumb-bobs, they will settle or become still much sooner and maintain their position much better when the point is attached to the heavy end. In most cases this advantage does not compensate for the disadvantage of being obliged to stoop to see the point of the bob; but where the point itself is used to make the mark, and does not necessarily have to be seen, the greater steadiness of the bob when the large end is down, and the point thus brought nearer the center of gravity, is of much importance. Millwrights have frequently to run a line of holes from the top to the bottom of the building through several floors. In such cases they attach the bob to the line, let it become still when within a few inches of the floor through which the hole is to be bored, and then let it drop, when the point of the bob makes the required mark in which to insert the point of the bit or auger. In the old or common forms of plumb-bobs, unless the greatest care is taken in dropping the bob, the point is apt to waver or vary from the true line, and the result is thus rendered unsatisfactory. In my improved bob the common form is retained for ordinary use, while by simply transposing the point and cap the new form is produced for the use above described.

My said invention therefore consists in a plumb-bob the point whereof can be attached to either end at pleasure. By extending the hole through or a considerable distance into the body, as shown, the point can also be reversed, and thus shielded when not in use.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a plumb-bob embodying my improvements; Fig. 2, a vertical section thereof; Fig. 3, a section similar to Fig. 2, except that the point of the bob is inside the hole in the body thereof and is protected thereby; and Fig. 4, a view like Fig. 2, except that the ends of the bob are transposed or reversed.

In said drawings, the portions marked A represent the body of the plumb-bob; B, the point

thereof; C, the cap thereto, and D the plumb-line.

The body A is of similar form to ordinary bobs, except that a hole, *a*, extends either entirely through it or a considerable distance into each end, the outer ends of which are preferably screw-threaded.

The point B has a collar, *b*, near its square end, and is screw-threaded on each side of said collar a sufficient distance to securely hold it in place in the body of the bob. When it is desired to use the bob the pointed end of this point is turned outwardly, and the square or blunt end is screwed into the hole *a*. When the bob is not in use the pointed end is screwed into the hole *a*, as shown in Fig. 3, which protects the point from becoming dulled in handling. When, as in the cases described, it is desired to have the heavy end of the bob down the positions of this point and the cap C are transposed, as is shown in Fig. 4.

The cap C has a hole through the center to admit the plumb-line, as shown, and should have its screw-threaded portion of the same size as that upon the point B, so as to be interchangeable with said point when it is desired to transpose the ends of the bob.

In using the plumb-bob in places where there is a current of air it will also often be found advantageous to hang the large end down, as the point cannot be so easily blown about when in this position.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the plumb-bob body, the removable point and the removable cap, said point and said cap being interchangeable, substantially as specified.

2. The combination, with a plumb-bob body, A, having hole *a* therein, of the removable and reversible point B and the removable cap C, either of which is adapted to be attached to either end of the body A, all substantially as shown and described, and for the purposes specified.

In witness whereof I have hereunto set my hand and seal at Indianapolis, Indiana, this 7th day of November, A. D. 1881.

WILLIS C. VAJEN. [L. s.]

In presence of—  
C. BRADFORD,  
CHAS. L. THURBER.