

## WR PATENT NEWS # 2007-16

US2469583 SUVERKROP 1949  
US2594823 SUVERKROP 1952  
US2965973 SUVERKROP 1960  
US2985964 SUVERKROP 1961  
US3056211 SUVERKROP 1962  
US773547 COLEMAN 1904  
US833699 STARRETT 1906  
US1502804 WINDHAM 1923  
US1590410 BERNARD 1926  
US2381698 SIRECI 1945  
US3405450 PEACOCK 1968

*This week I will show you patents concerning **FIX THE STRING** (adjustable plumb bobs)*

*Let's start with the famous LEW SUVERKROP and his first patent US2469583 SUVERKROP 1949 **ADJUSTABLE PLUMB BOB**.*

*Very interesting is his short **HISTORY** about the actual plumb bobs and their disadvantages:*

### I

My invention relates particularly to the geometrical instrument known as the plumb bob, used to establish a location vertically above or below a point. The improvements apply especially to the types used by builders, surveyors, etc. in the more exacting work requiring fine adjustment of the string length so as to place the plumb bob point closely above a reference point. For such work, the ordinary plumb bob, having no provision for holding or adjusting the string, has serious disadvantages. To adjust the length of the string, it must be knotted or otherwise manipulated, or a separate attachment must be employed for the purpose. If the adjustment is made with sufficient precision, it is usually a time-consuming job. The lack of a place provided for carrying the string when the plumb bob is not in use is an additional disadvantage. The string is usually wound about the neck of the bob or looped in figure-eight fashion over its body; but this is untidy, the string frequently becomes tangled, and time is consumed in winding or withdrawing the string.

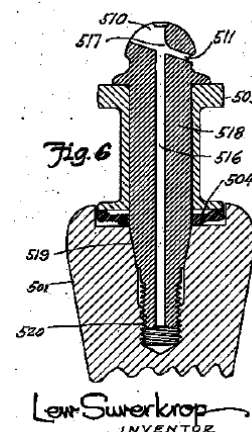
Plumb bobs have been constructed heretofore with reels, usually with the common advantage over the ordinary type of bob in that they provide a place for the string so it will not become tangled when the bob is not in use. Those bobs are of two types. The reels are either internal or external. In general, the internal reel type permits fine adjustment of the string length; but has the disadvantages of somewhat complicated and delicate mechanism, and is slow in operation—especially in winding up the string. In the external type, the string may be quickly wound up; but such bobs have the disadvantage of not permitting quick, fine adjustment of the string length. Moreover, this type of plumb bob requires a string hook and this is usually made integral with a larger part of the bob all of which must be replaced in event of damage to the hook. In addition, the hook is difficult to manipulate.

*Here are his objects:*

One object of this invention is to provide a plumb bob with a reel on which the string may be more quickly wound than in the internal reel type, and from which the string may be more quickly withdrawn than is the usual external reel type. A further object is to provide a plumb bob with a reel which may be directly rotated by the hand for the purpose of adjusting string length. A further object is to provide a plumb bob with a head affording a string hook which will facilitate the introduction of the string into position for suspension of the plumb bob. A further object:

*The further objects you can read in the original patent.*

*The reel is shown in the detail:*



PATENT NEWS especially for PLUMB BOB COLLECTORS

Much more interesting than the reel is the top and the invention to fix the line:

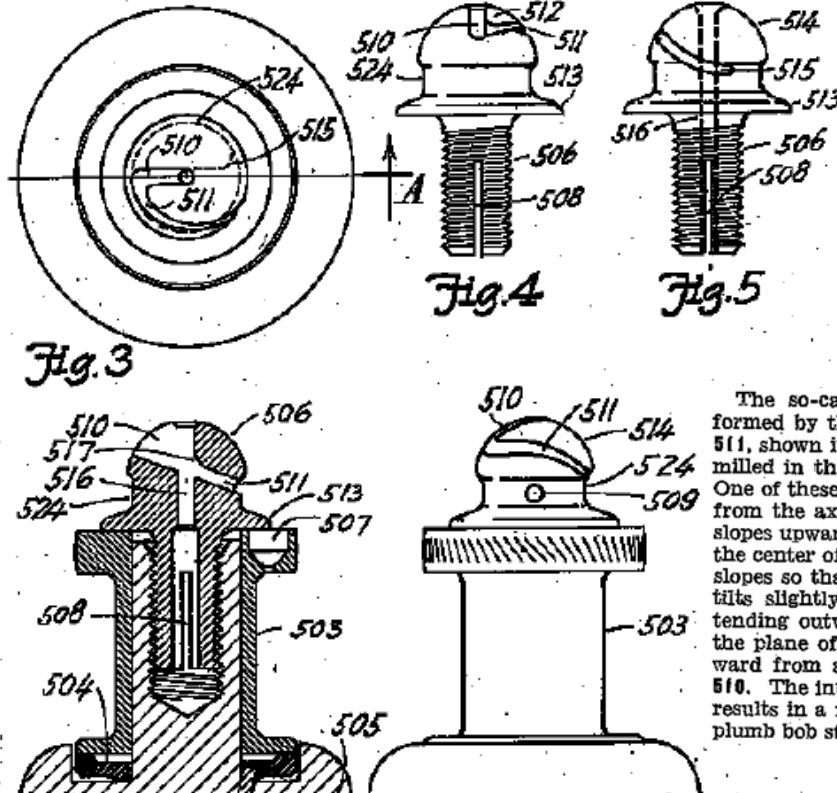
May 10, 1949.

L. SUVERKROP

2,469,583

ADJUSTABLE PLUMB BOB

Filed July 30, 1945



The so-called hook part of the head 506 is formed by the intersection of two slots, 510 and 511, shown in the various illustrations, which are milled in the metal of which the head is made. One of these, 510, is vertical and extends outward from the axis of the head. The other slot, 511, slopes upward slightly as it extends outward from the center of the head. The plane of the slot 511 slopes so that it intersects slot 510 in a line that tilts slightly upward from a perpendicular extending outward from the axis of the head, and the plane of the slot 511 also slopes slightly upward from a perpendicular to the plane of slot 510. The intersection of such planes 510 and 511 results in a rather sharp edge which will cut the plumb bob string unless rounded as at 512 in Fig. 6.



Unfortunately I don't have this plumb bob in my collection.  
Perhaps you can send me a close up photo of the top.

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Thirteen years later Lew Suverkrop wrote in his patent US3056211 1962 ADJUSTABLE PLUMB BOBS:

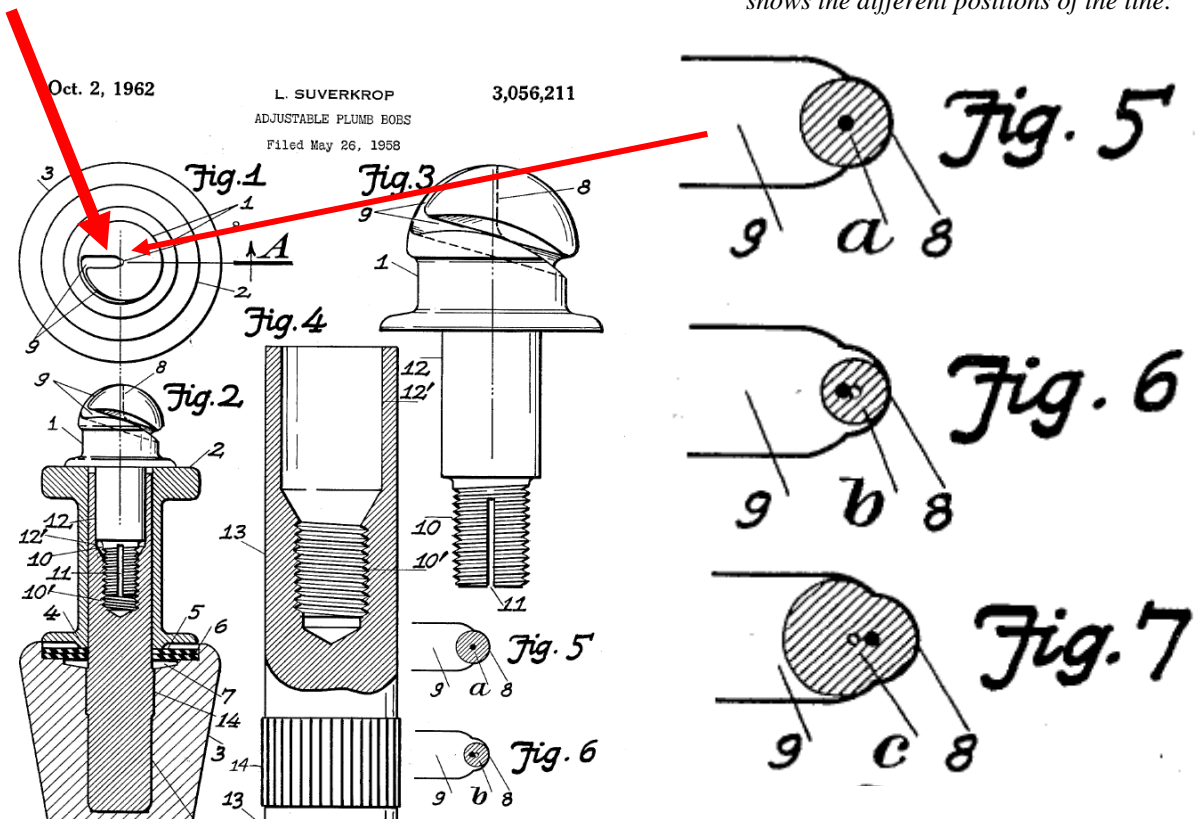
3,056,211  
ADJUSTABLE PLUMB BOBS  
Lew Suverkrop, Box 436, Bakersfield, Calif.  
Filed May 26, 1958, Ser. No. 737,961  
6 Claims. (Cl. 33-216)

This invention is an improvement in the adjustable plumb bob covered by my Patent 2,469,583, dated May 10, 1949, whose objectives were mainly quickness and convenience in use. Apart from objectives listed in that patent, the type of plumb bob thereof has a theoretical advantage of superior accuracy of a plumb line indicated by it, when compared with ordinary plumb bobs in which the cord issues from an encircling cord hole. The reason for this is that, to make practicable the stringing of such an ordinary bob, the cord hole must be of diameter appreciably larger than that of the thickest cord which may ever be required in work with the bob. Therefore, even the thickest usable cord may bear against one side of the cord hole; and then we have the curious condition of a "plumb" bob that does not hang plumb. And with the more commonly used, smaller diameter cord this eccentricity is increased. Precise measurements made by me (on a large number of such ordinary bobs made by numerous manufacturers including myself) show eccentricity, largely of this kind, occasionally exceeding 1/32(=0.031) inch. The importance of this

SUVERKROP tells us a lot about the time and production of plumb bobs:

A number of considerations (and particularly those having to do with balance of the finished bob) impose restrictions on the over-all size of the reel with which the bob may be equipped. At the same time, a considerable cord capacity is desirable, especially in trades that use this type of bob most. With over-all size limited, the only way to increase capacity would be to reduce the minor diameter of the reel. But this is confronted by diameter requirements of the stem upon which the reel rotates, including that of strength to resist bending during service use. Traditionally—probably more than for any other reason—bodies of plumb bobs of these types are always made of brass. This tradition alone is so strong a factor as to require manufacturers to follow that practice. Intricacy of the bob-top (in which the semi-cylindrical seat and intersecting slots are fashioned) is such that this part can be economically manufactured only from some easily-worked material such as brass; and the choice of brass here is further supported by considerations of appearance. Therefore, considerations of accuracy such as have been discussed above, or any other reason requiring that the stem be made integral with either the body or the bob-top as shown in the previous patent, lead unavoidably to the stem being of brass. And the limited strength of this material requires a larger diameter, if the bob is to withstand field use and abuse, than would a material of greater unit strength. Proceeding from these facts effort was made to devise a steel stem and a method of fixing it permanently in the brass body that would meet requirements of manufacturing economy as well as accuracy.

The DETAILS OF THE guide for the line (9) shows the different positions of the line:



The improvements are modifications on the top (see details) and a rod from steel instead of brass:

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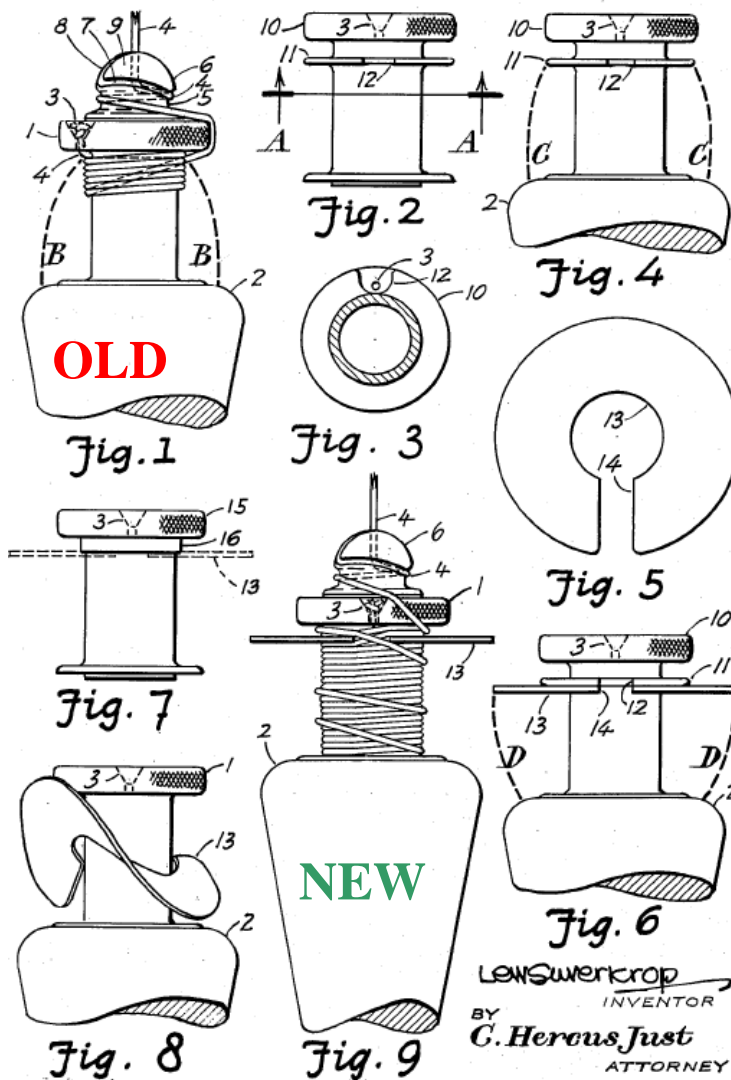
Another patent is US2965973 SUVERKROP 1960 REEL FOR PLUMB BOB:

This specification covers a development which improves those geometric instruments known as plumb bobs, and particularly the kind such as that of Suverkrop's Patent No. 2,469,583 of May 10, 1949, having a reel for storage of the plumb bob cord. Its object is to provide a simple and economically manufactured means which is conveniently and quickly used for increasing the cord carrying capacity of such reels without either disturbing the balance of such bobs or interfering with their adjustment functioning. These and other objects will be apparent from the specification and accompanying drawing in which:

Dec. 27, 1960

L. SUVERKROP  
REEL FOR PLUMB BOB  
Filed Nov. 21, 1957

2,965,973



assembling

L. Suverkrop  
INVENTOR  
BY C. Hercus Just  
ATTORNEY

**PATENT NEWS especially for PLUMB BOB COLLECTORS**

A further patent US2594823 SUVERKROP 1952 has nothing to do with "adjustable plumb bob", but it helps to store the line (+ second tip in the body....): The patent (Fig 3) tells how it works.



April 29, 1952

L. SUVERKROP  
PLUMB BOB

2,594,823

Filed Oct. 21, 1948

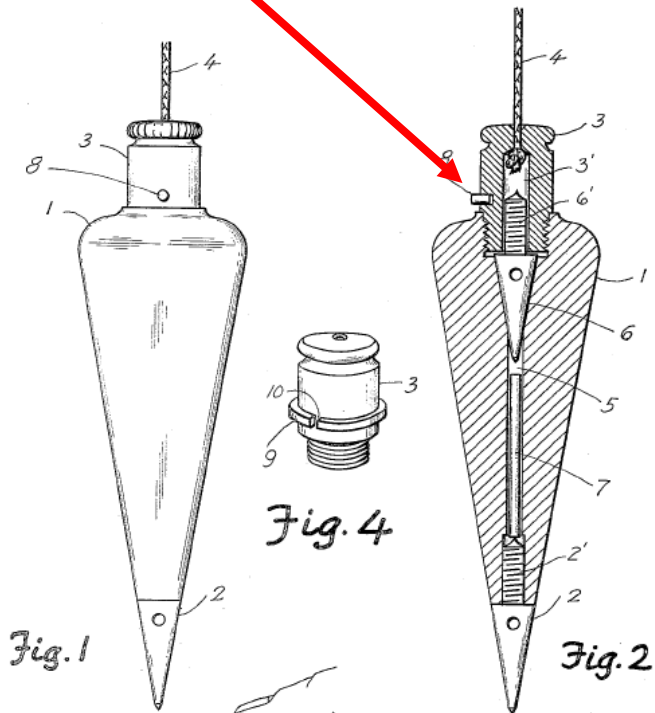


Fig. 1

Fig. 2

Fig. 4

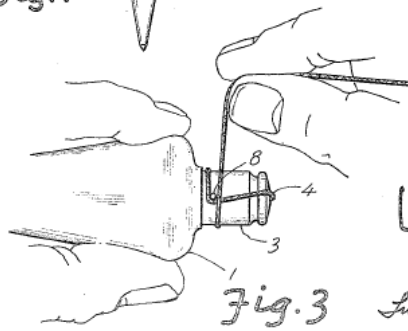


Fig. 3

Lew Suverkrop  
INVENTOR.

BY Lindsey, Prutzman and Just

To complete the SUVERKROP patents here is something to CENTER THE LINE.

May 30, 1961

L. SUVERKROP  
PLUMB BOBS

2,985,964

Filed June 10, 1958

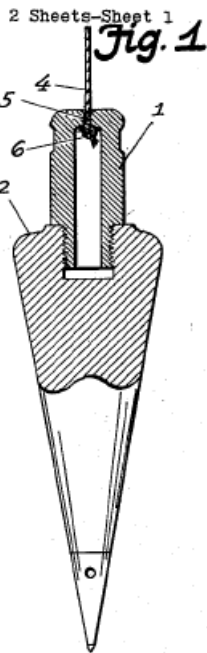
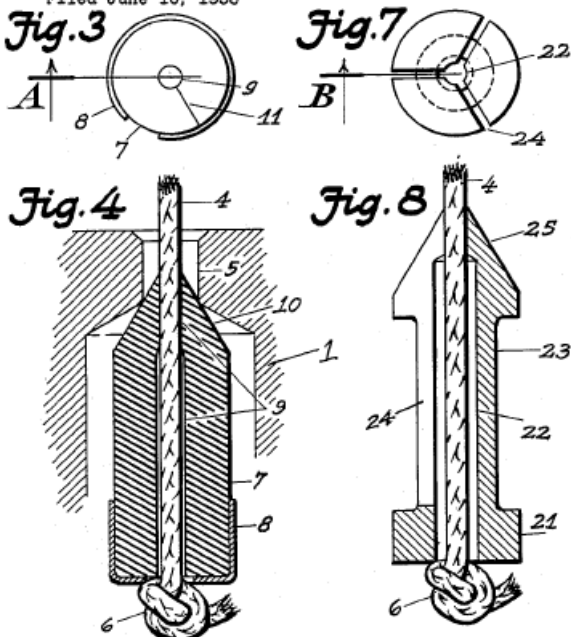


Fig. 1

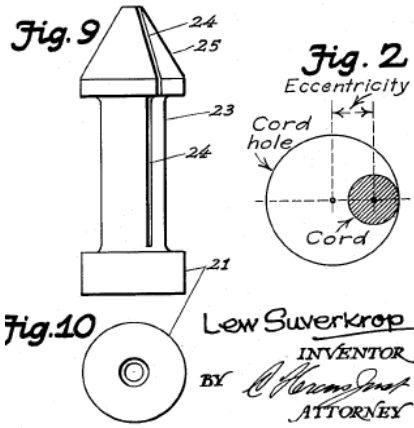


Fig. 9

Fig. 10

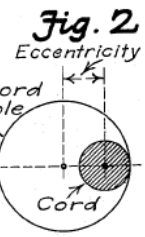


Fig. 2

Lew Suverkrop  
INVENTOR  
BY Lindsey, Prutzman and Just  
ATTORNEY

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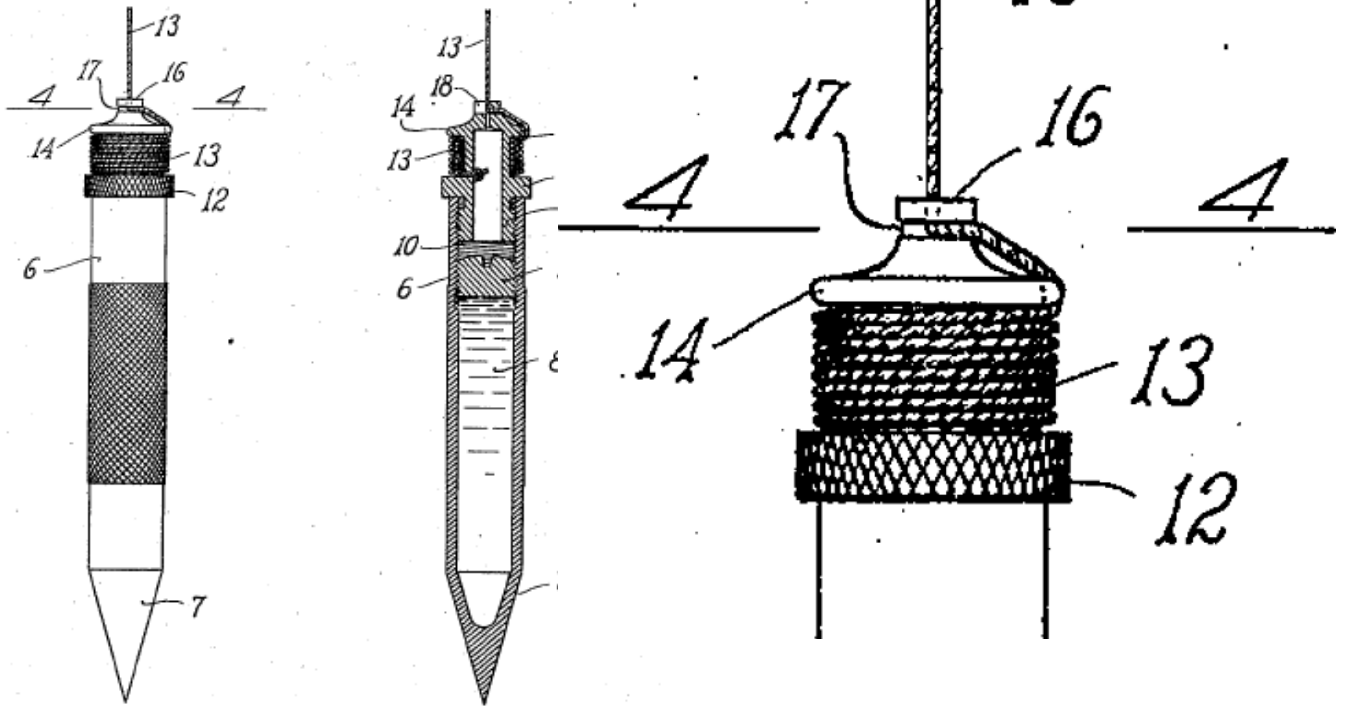
Let's leave SUVERKROP and come to US833699 STARRETT.1906. You know the plumb bobs from STARRETT (#87 as mercury filled). One special part of this patent is the invention for fixing the line: The drawings are not very clear, but THIS INVENTION WORKS VERY WELL!

No. 833,699.

PATENTED OCT. 16, 1906.

L. S. STARRETT.  
PLUMB BOB.

APPLICATION FILED FEB. 7, 1906.



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Other examples of an ADJUSTABLE PLUMB BOB are US1590410 BERNARD 1926 and US1502804 WINDHAM 1924

I never saw these plumb bobs. Do you have one in your collection??

They invented simple ways to get the line into the wanted length.

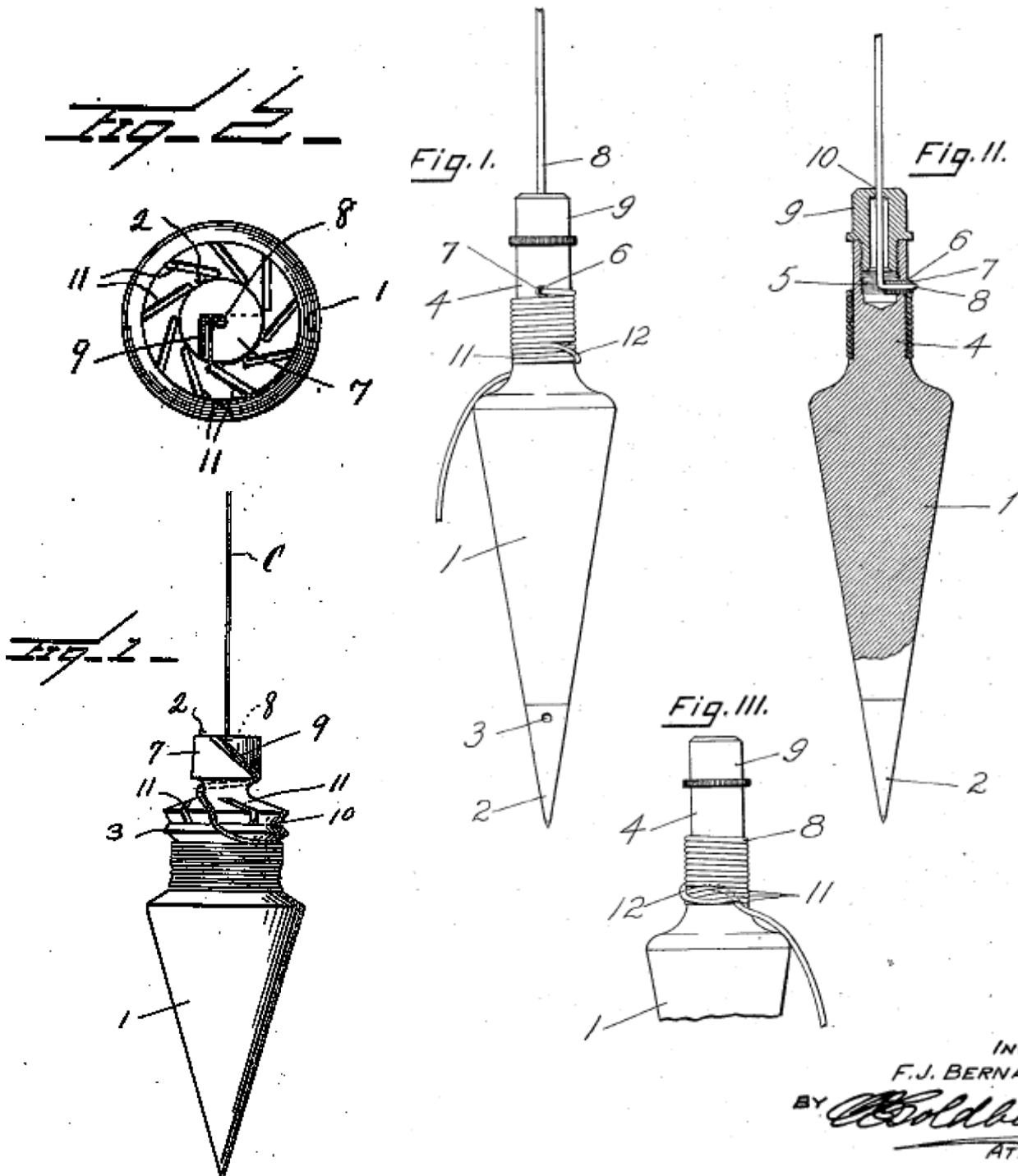
June 29, 1926.

F. J. BERNARD

PLUMB BOB

Filed April 2, 1925

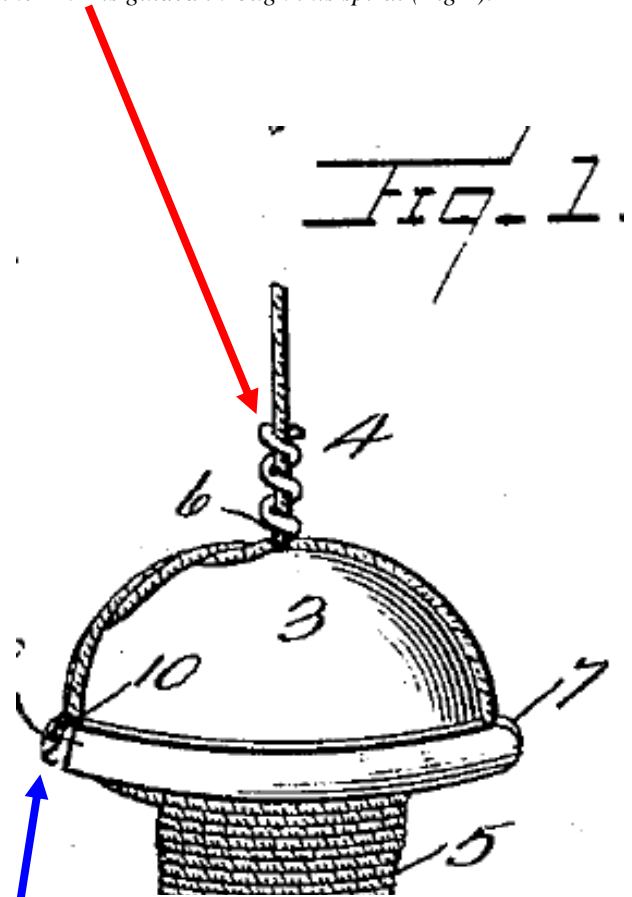
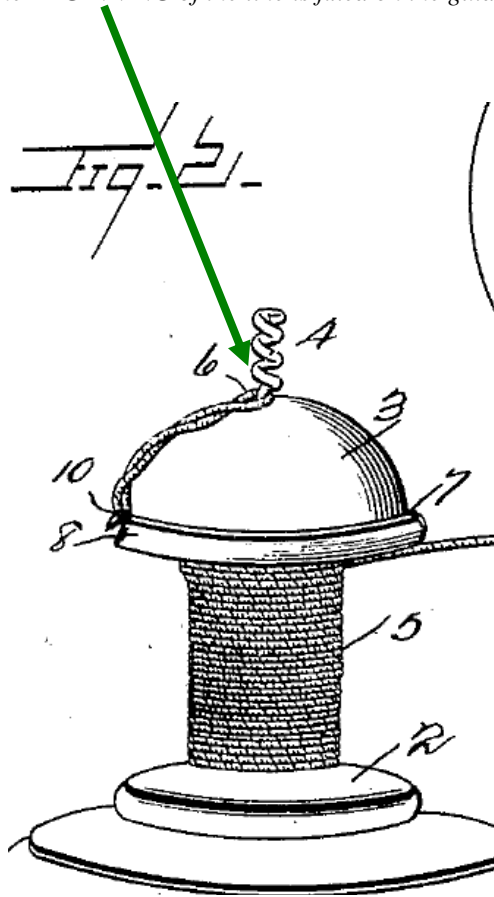
1,590,410



INVENTOR  
F. J. BERNARD.  
BY *Goldberg*  
ATTORNEY.

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I never saw as plumb bob US773547 COLEMAN 1904. The COLEMAN has an interesting GUIDE 4 (spiral). The BEGINNING of the line is fixed on the guide (Fig 2) and the END is guided through this spiral (Fig 1):

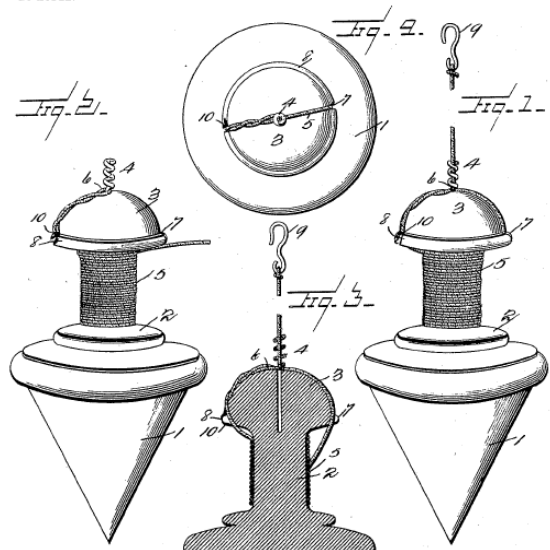


He claimed and explained how it works:

3. In a device of the character described a plumb-bob comprising a body having a spool portion and a head, the said head having slots at its junction with the spool portion, a guide comprising a piece of metal bent to form a spiral, said guide being secured to the head, a flexible connection having one end secured to the guide and extending over the head into one of the slots and being wound on the spool, the opposite end of said flexible connection being passed through the guide, the said flexible connection being seated in the opposite slot.

GEORGE ANSON COLEMAN.

No. 773,547. G. A. COLEMAN. PATENTED NOV. 1, 1904.  
ADJUSTABLE PLUMB BOB AND LINE REEL.  
APPLICATION FILED MAY 20, 1903.





PATENT NEWS especially for PLUMB BOB COLLECTORS

US405450 PAECOCK 1968 has a cap for winding the plumb line:

1

3,405,450  
**PLUMB BOB**  
Reginald T. Peacock, 5561 Lower Wyandotte Road,  
Oroville, Calif. 95965  
Filed July 18, 1966, Ser. No. 565,949  
3 Claims. (Cl. 33-217)

5

**ABSTRACT OF THE DISCLOSURE**

A plumb bob comprising a spool within a cap for winding the plumb line thereon. The plumb body is secured to the cap by a ring positioned under the spool. Bias means are provided between the upper surface of the spool and the cap to maintain a desired resistance to unwinding of the spool.

10

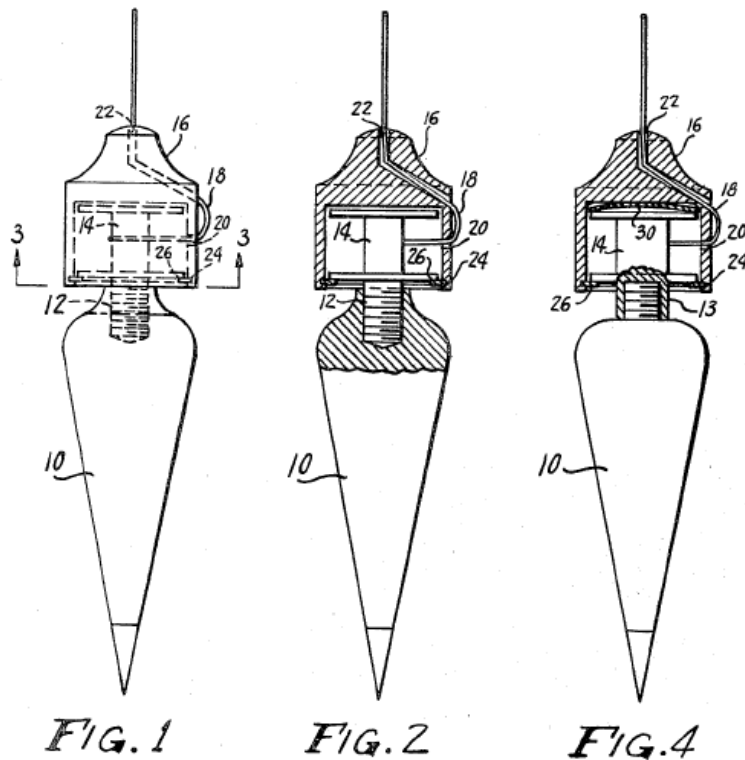
Oct. 15, 1968

R. T. PEACOCK

3,405,450

PLUMB BOB

Filed July 18, 1966



**PATENT NEWS especially for PLUMB BOB COLLECTORS**

*At least I have US2381698 SIRECI 1945. I could not find a plumb bob that matches exactly with this patent.*

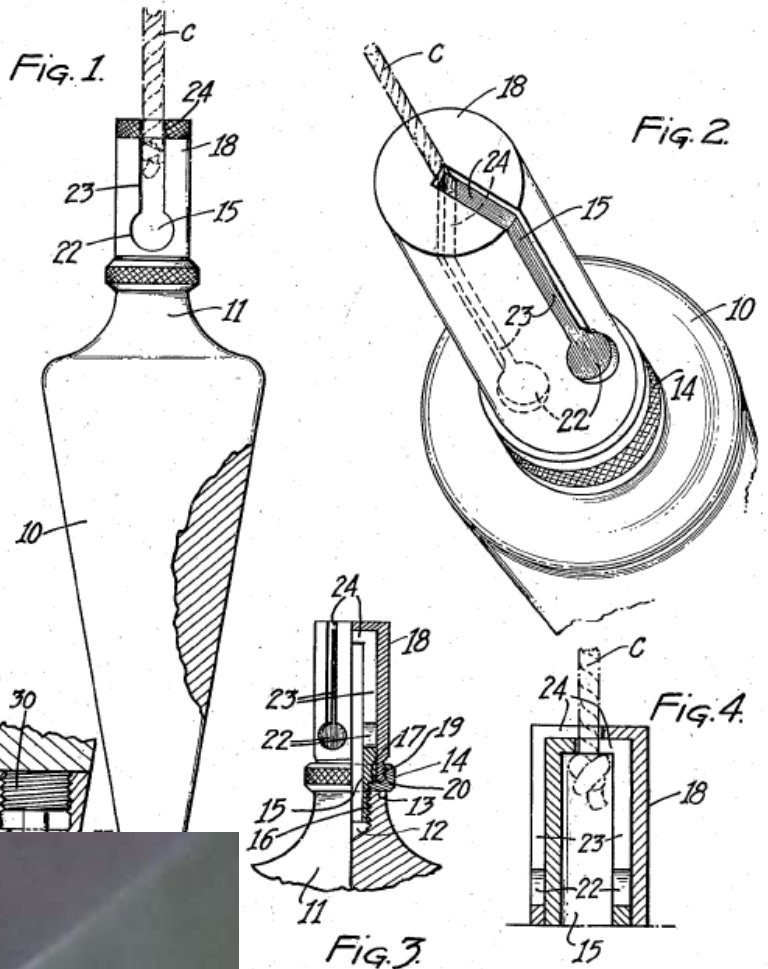
*I have in my collection a BERGMAN TOOL CO, BUFFALO NY (thanks Riccardo) that works identically, but as adjustable plumb bob, not only to fix the line on the top..*

Aug. 7, 1945.

G. SIRECI  
PLUMB BOB

2,381,698

Filed Sept. 1, 1944



INVENTOR:  
GESUALDO SIRECI  
BY *John J. Lynch*  
ATTY.

