

WR PLUMB BOB NEWS

Information for plumb bob collectors

2008-08
June 30, 2008



Editor: Wolfgang Ruecker

THE PLUMB BOB and ITS RELATIVES

At the heart of collecting “plumb bobs” is the recognition that the vast majority of the examples in our collections are weights attached to strings. The specific function they serve is in allowing men to build things vertical or a specific number of degrees away from vertical. Throughout history plumb and to this day plumb bobs are used by masons, carpenters, bridge builders, structural steel workers, architects, scientists, to name a few trades, the plumb bob serves the primary function of allowing us to build in the best way to allow our structures to endure, that is to say, defy the pulling down effect of gravity. However, when you study the construction and use of certain plumb bobs and explore the concept of suspending weights to achieve different results, there are subtle variations that allow them to be adapted in many applications.

I know some collectors who wish to maintain that these adaptations of use make them not plumb bobs at all. But I think of plumb bobs in the broadest sense. After all, *“if it walks like a duck and quacks like a duck,” I tend to think it is in fact, a duck.*

Thus, the premise of this newsletter is to lay out the family tree of the common plumb bob, so to speak, to introduce you, to some of the odd ball cousins of this adaptable tool.

In other publications I have explored the many variations of the plumb bob uses as a tool of construction. These variables include shape, weight, size, material and in some cases, the ability to alter the center of gravity. These are the granddaddies at the center of my conceptual family tree.



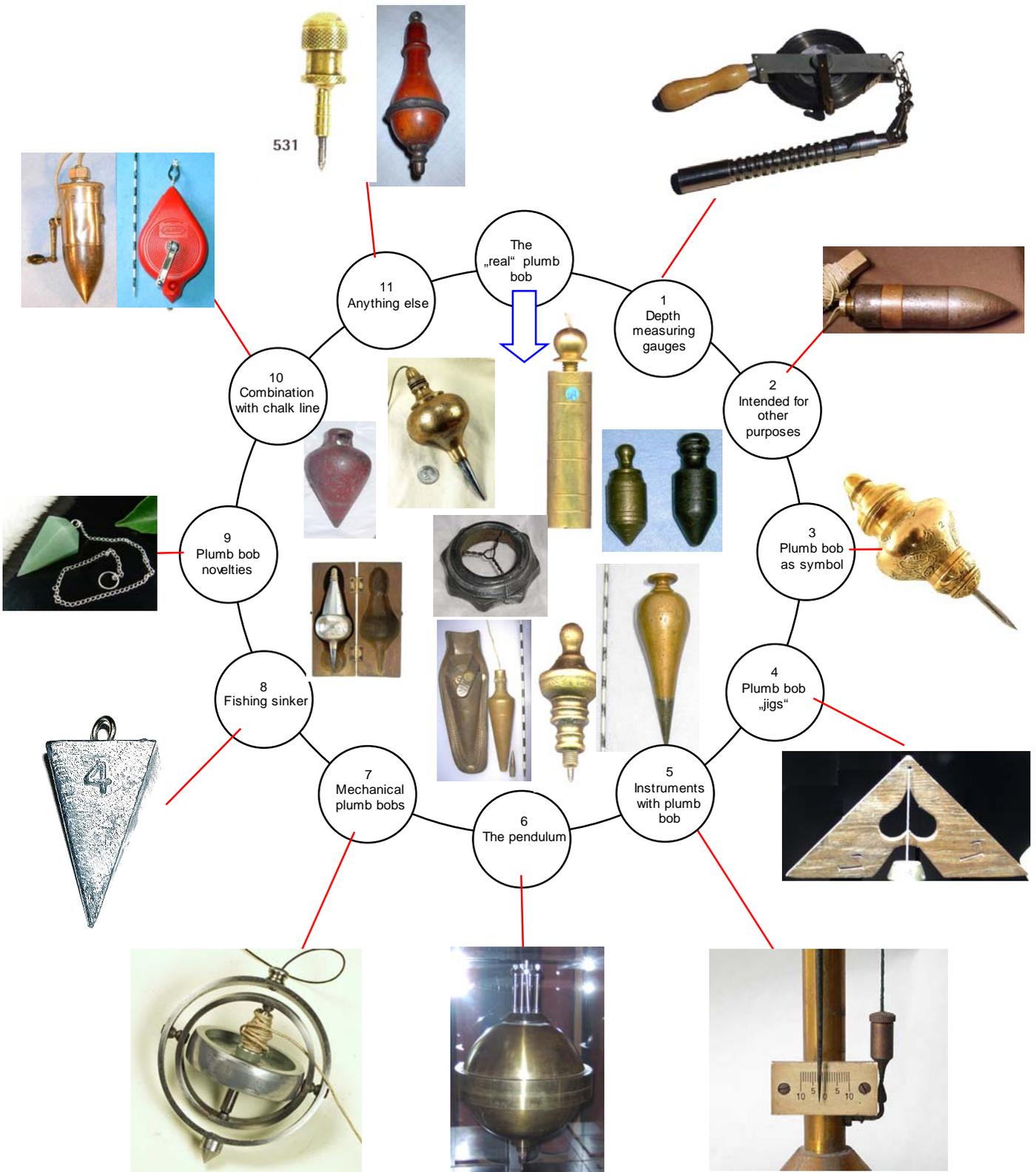
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1. Plumb Bobs used as depth measuring gauges:

A newsletter has already been published that describes in detail the depth gauge used to measure the quantity of liquid in a tank. ([more see WR PLUMB BOB NEWS 2008-05](#)) Although in the English language the name of the tool, "depth gauge," would not give you an indication that this tool is a plumb bob, in most European languages the word for "depth gauge" or "sounding weight" and "plumb bob" are one in the same word.

Another variation on this theme is the "sounding gauge" used aboard ships to measure the depth of water. These weights, deployed on ropes marked in increments of water depth, "fathoms." Their bottoms are frequently flat or even concave at their bottoms, to which tallow is applied, that would serve the additional purpose of bringing a sample of the ocean floor to the surface for examination.

Obviously, this tool is only as good as a sailor's ability to throw this line out quickly and repeatedly, to discern that the depth of water is becoming shallower, not already too shallow, or "aground" as you would say in nautical terms. Identical devices would be used to measure the depth of water in a springs and wells.



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2. Working plumb bobs made from weights originally intended for other purposes.

Some strange totally unrelated items commonly appear as working plumb bobs. One of my favorites is munitions of many types including bullets and mortar shells. Once you overcome the potential problem of disarming the explosive part of the object, the weight and symmetry of a shell lends to convenient adaptability as a working tool. This is a more frequent phenomenon than you might expect. Like "beating swords into plow shares," this becomes a tool at little or no expense, the risk of handling explosives aside.

Fellow collectors have reported a level of frequency of plumb bobs fashioned out of the tips on welding tools, drapery pulls, pointed and symmetrical drawer pulls, and even the weights used for flushing mechanisms of old fashioned toilets. If you get beyond the late 20th century mentality of buying specific tools at your local "hardware emporium," there were times when men were more commonly inclined to adapt tools from commonly found items.



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3. Plumb bobs as symbols.

One of the unique features of plumb bobs is that extraordinary numbers are made in such a way that they were not intended to be working tools. Variations abound that include rare materials such as ebony, ivory, silver and gold. Some are highly and delicately decorative, being etched, knurled and cast with decorative motifs.

The reasons for the construction of these artistic pieces are many. I believe that some may have been made as “shop projects,” a way for an artisan to display the merits of their abilities. Some others may have been used as “signage”, a way to bring attention to an establishment dealing with metal work, perhaps. Others may be more literally symbolic as in the case of the “Masons” where the use may be included in the rituals of the order, and is a symbol of a man’s uprightness.

There is also a curious phrase that I associate with the English people, that is a tool described as a “gentleman’s tool.” I theorize that the origin of this phrase is from that period of time when it became possible to become upwardly mobile in the class system, a time in which basic tradesmen might have abandoned the every day use of their tools, but in reverence to their origins, replace them with symbolic representations of the tools of their trade.



From Riccardo Chetoni collection



From Nelson Denny collection



Antique market Bièvres

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4. Plumb bob “jigs”

Plumb bobs are frequently employed with other constructions to enhance their usefulness. “Plumb boards” simplify the function of determining verticality in a portable device that required no set-up time. “A frames” are also portable devices that convert the common aspect of the plumb bob of determining verticality, to an instrument that also determines true horizontal, that which is at right angle to the vertical. “A frames” equipped with quadrants marked in degrees of a circle were the first and most basic inclinometers. These are simply made “jigs” that when used with the simple plumb bob and plumb line, served men well for hundreds if not thousands of years. It was not until the spirit vial found in the contemporary level was economically produced, that these more primitive tools disappeared.

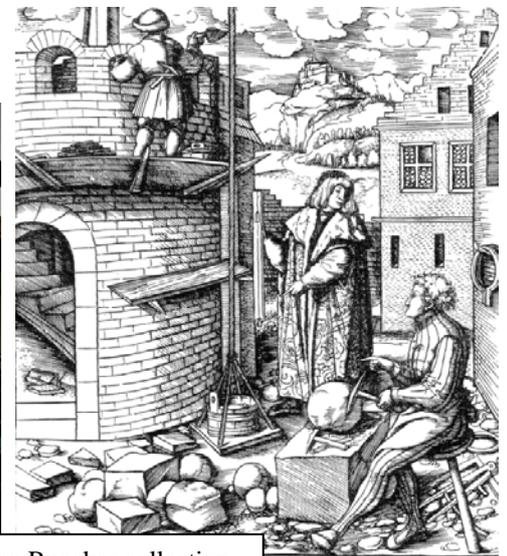
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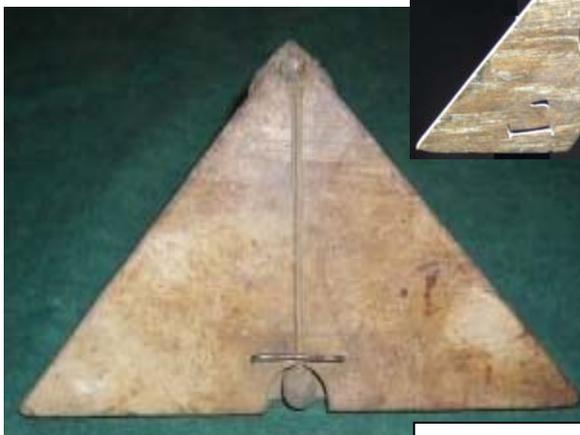
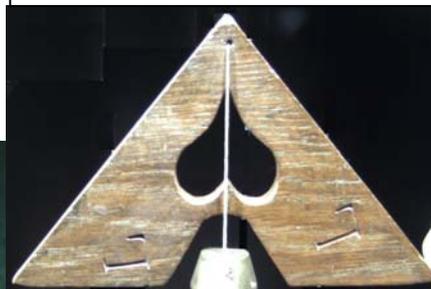
Museum Gerhard Schmitz coll.



From Wolfgang Ruecker collection



Museum Troyes France



From Wolfgang Ruecker collection

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5. Other instruments that employ plumb bobs to make them work.

Scientific instruments and scales used to measure weight frequently employ plumb bobs.

From Germany in 1856 was the Faustmann mirror hypsometer. From the USA is the Fuller patent of 1887 for an inclinometer, one of many angle measuring tools that employed plumb bobs with increasing accuracy. Some of the earliest astronomical devices employed plumb bobs to chart and measure the visible stars and planets. Quack cures for our ailments employ plumb bob like devices of precious stones hung from chains to measure water and wave action.



Faustmann mirror hypsometer WR coll.



Fuller inclinometer Rick Floyd coll.



Plumb bobs from decimal scales from W R coll.

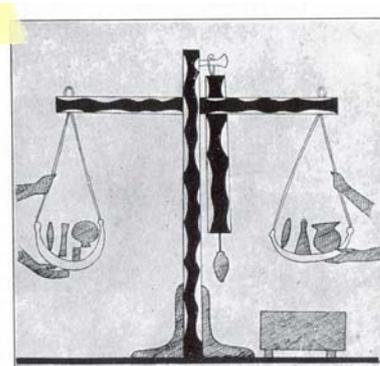
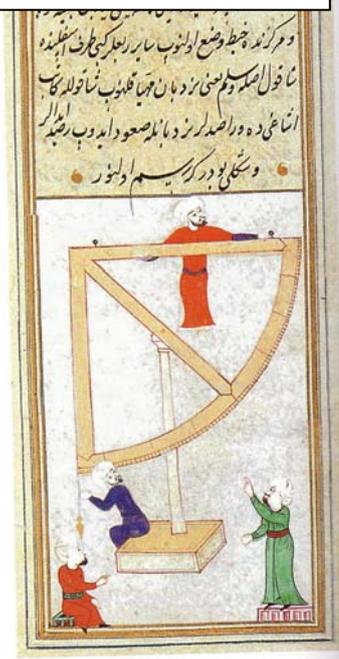


Abb. 49. Anderer Bau einer ägyptischen Wage.
Am Wagebalken ein nach unten gerichteter Seilbalken mit Lot, das gegen eine jedenfalls am Standfuß angebrachte Marke einspielen muß.



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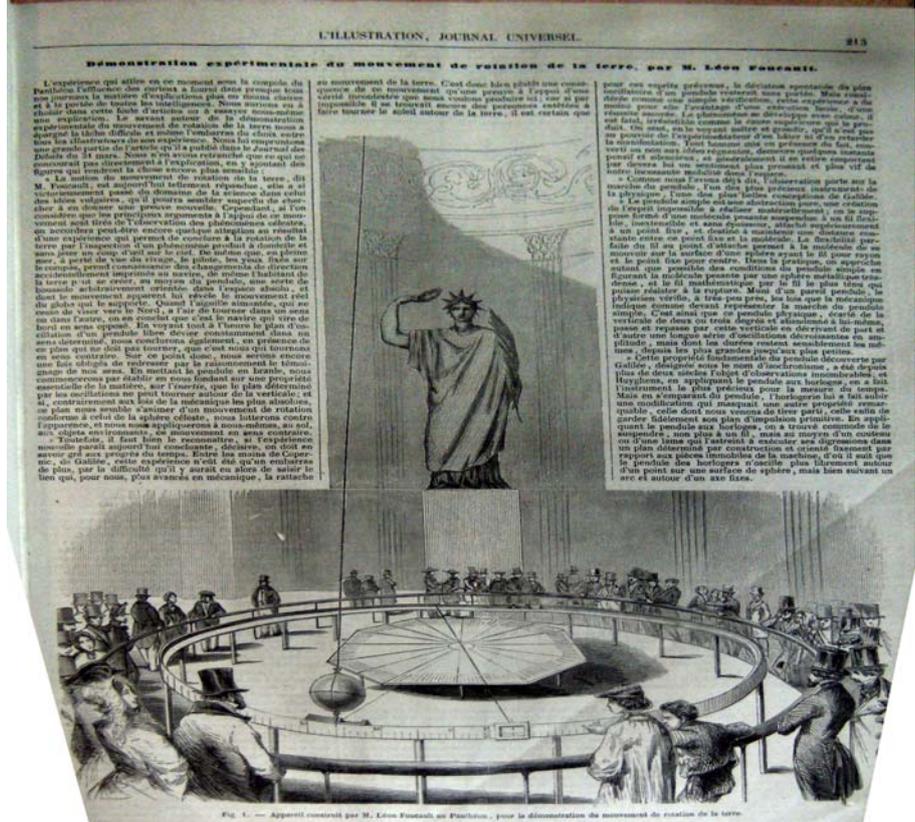
2008-08 June 30, 2008

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6. The pendulum

The pendulum is really a special breed of plumb bob for rather than employing a weight and string at rest, it is the constant movement of the weight inscribing a definite pattern on the floor beneath the bob, that forms the basis of its function. The famous experiment conducted by Foucault in Paris France in 1851 was the first scientific proof that the earth turns on its axis.

(see WR Plumb Bob News 2008-07)



Newspaper 1851 about the experiment. In the background the design model of the Statue of Liberty.



Different Foucault pendulums Paris

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7. Mechanical plumb bobs

Innumerable trials have been made to mechanize plumb bobs. Without actually counting, I would guess that a full 50% of hundreds of US Patents are devoted to incorporating spools, springs and gears into the bodies of plumb bobs to allow the plumb line to retract. Sadly, the only commercially successful attempt was the Traut Patent, manufactured by Stanley for close to 80 years. There is something intrinsically appealing about the examples that remain; so much creative human spirit applied to solve the problem of the tangled mess of string of a plumb bob in a tool box. (See several issues of the WR Patent News 2007)



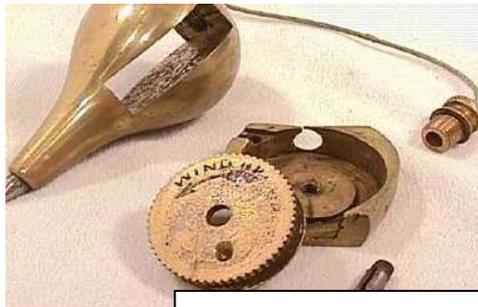
3 sizes of Traut patent 1874 (Stanley)



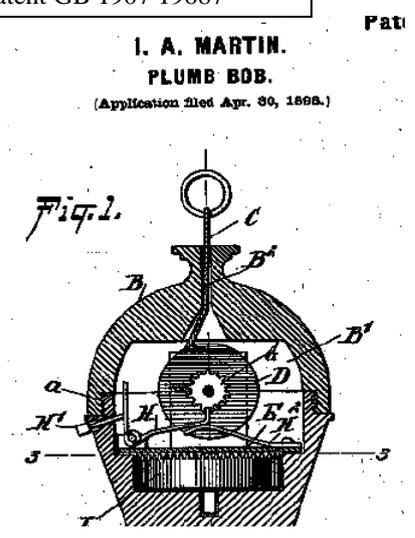
Knaus patent 1962 US3027977



Carter patent GB 1808 00163
Nelson Denny collection



Wiesener patent GB 1907 19687



Rose Patent; Primitivo Gonzales coll.

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8. Fishing sinker

Fishermen use a small piece of lead as a weight at the end of their line. In some languages this piece is also called "plumb bob." On Ebay we frequently find "plumb bob moulds". These moulds are for making fishing sinkers. Not to confuse you by talking about this, this type of bob has nothing to do with real plumb bobs, never used to catch a fish! Some shapes however, mimic the shapes of plumb bobs.



Fishing sinker mould



Chinese catalogue of fishing sinkers

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10. Plumb bob novelties.

Representations of plumb bobs frequently appear as parts of lapel pins, watch fobs, key chains, necktie pins, ashtrays, advertising posters, conversation tools, and even a golden plumb bob from Mercedes for the visitors to an automobile exhibition. And let us not forget the scantily clad, "Plumb Bob Barbara" and "Plumb Bob Robert." These plumb bobs are actually patented (US5720112 ADAMS 1998 Asymmetrical plumb bob) and believe or not, they work very well!

(More see WR PATENT NEWS 2007- 26).



Adams patent 1998 US5720112



Just The Right Shoe



Tie holder WR coll.



Mercedes gold plated 1980



Ash tray from a German brick factory



Rückseite

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10 Plumb bobs and chalk lines

Some workers, i.e. carpenters need for their work plumb bobs and chalk lines. To fulfil this demand some inventors have devoted their creative talents to combine the function of plumb bob with a chalk line dispensing tool commonly called a chalk box. The earliest effort at devising this combination tool was a plumb bob that could also be used as a plumb line (inside filled with powder). Later the shape derived from a chalk box which with an added tip it could be used as a plumb bob.

(More see [WR PATENT NEWS 2007 21 + 22.](#))



DOWNIE patent 1885 US316530
chalk liner and plumb bob



German KUKA plumb bob and
chalk line



Cavileer (Ridgely) patent 1909 US909846
plumb bob + chalk line holder



Ash tray from a German brick factory



"modern" chalk lines



Chinese chalk line WR collection



Evans chalk line and plumb bob

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11. Anything else

In this group you find a lot of funny things that were offered on ebay as (patented) plumb bobs. ☺ ☺

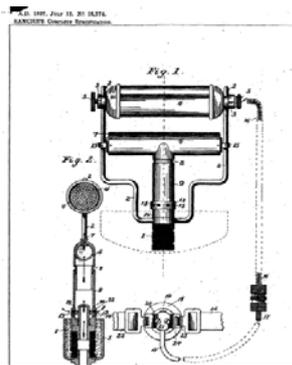
The seller does suggest the buyers that this item is a very worthy plumb bob.

Here are some samples from different WR PATENT NEWS 2007

- “Coffee filter glass p b” US2370674 LUCIA 1945
- ”Valve means” GB520068 ANDREASEN 1940
- “Land anchor for posts” US610184 HILL 1898
- “Handle or pull for water closets” US334412 BATE 1886
- “Medical plumb bob” US588483 DR SANCHE 1897
- “Ammunition / bullets” US469631 DRIGGS 1892
- & c.

Also the weights of scales and clocks are often sold and used as plumb bobs. From China came brass inkstands for travelling.....

Recently I found a patented distance measurement for ball games, looking like a plumb bob.



Dr Sanche 1897 pat Oxydonor “VICTORY” Protection against climatic diseases

?????? offered as patented pb



Weight for a lamp



clock weight



offered as patented glass pb



Land anchor for posts



Pin ball machine part



Chinese “plumb bobs” = inkstand



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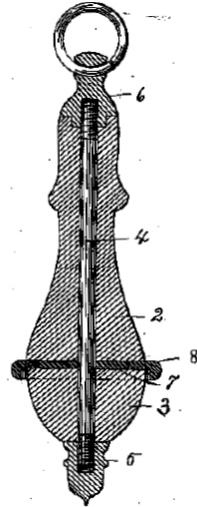


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“Valve means” 1940 GB520068



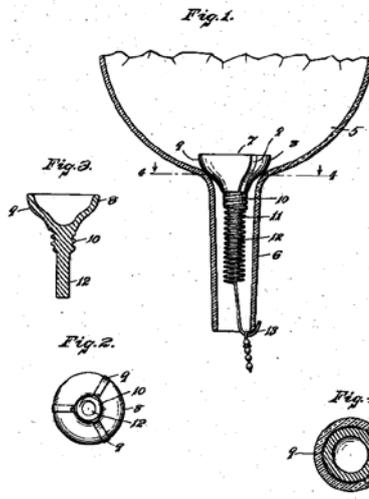
Patented handle for pull or water closets



March 6, 1945.

L. V. LUCIA
FILTERING DEVICE
Filed Oct. 3, 1941

2,370,674



INVENTOR

Louis V. Lucia

Part of a coffee filter, offered as “patented glass plumb bob”



GB191030048 MERCER 1911 MEASURING DEV FOR BOWL GAMES