

PLUMB BOBS OF THE WORLD
20 frequently asked QUESTIONS + *the ANSWERS:*

Dear Fellow Collector, I am often asked about my hobby accumulating information and examples of "PLUMB BOBS", most frequently by people who aren't familiar with these tools. This newsletter gives the answers to the most frequently asked questions.

The answers are given in collaboration of Wolfgang Ruecker WR and Nelson Denny ND.

Thank you for your additional remarks.

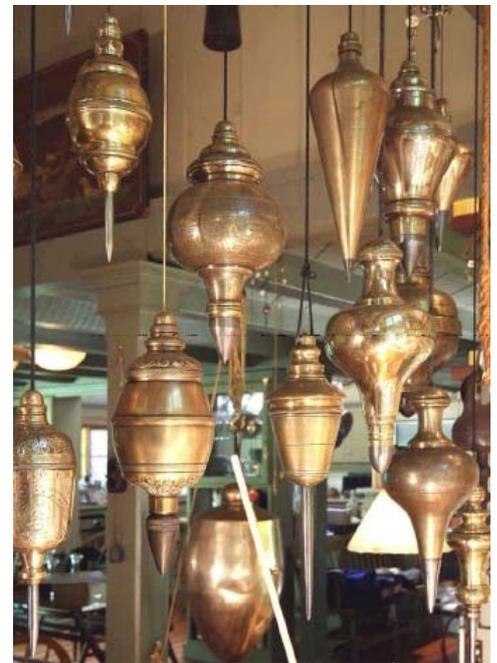
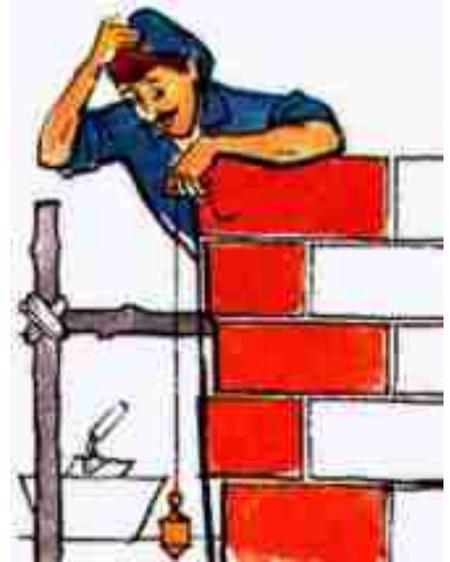
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1. Why we need plumb bobs?

WR: By using a plumb bob, a symmetrical weight suspended on a line, you can find the VERTICAL. It has been known since the beginning of time that structures made to be vertical last longer than those made in a haphazard way. Thus, artisans every place in the world, have used this simple tool to check their work for “plumb.”

ND: Although we generally think of the plumb bob as a working tool there is ample evidence that many plumb bobs have been made that were never intended to be used, strictly speaking, as tools. Examples abound in bobs meticulously crafted from rare and unusual materials such as ivory, bone, gold, silver or exotic woods. Others, crafted in more traditional plumb bob materials like brass and steel, can achieve a level artistry that would suggest that they were intended for a purely decorative or ceremonial purpose or as examples of a metal workers’ ability to craft and refine these materials. These examples frequently include, intricate casting of shapes in relief, etching and inking. It is my estimation that this type of bob is a product of the machine age, and most often associated with American and English artistry, although many countries have examples of bobs made for the sake of art.



2. How long have plumb bobs been in use?

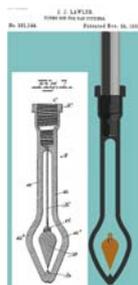
WR: There is ample evidence that all early cultures including Ancient Egypt, Babylon (today, Iraq), China, and the Greeks and Romans employed the plumb bob to make their buildings. They were used in their simplest form, a symmetrical weight suspended from a string, or in a more technically advanced way to determine “horizontality” by the invention of the “A Frame” and “Plumb Level”.



3. What trades use plumb bobs?

WR: *There are more than 20 professions, that even with the advent of laser instruments, continue to find a use for the simple plumb bob:*

1. Masons
2. Carpenters
3. Stair and Cabinet Builders
4. Architects
5. Astronomers
6. Bridge Builders
7. Ship builders
8. Millwrights
9. Well Drillers
10. Tile Setters
11. Wall paper Hangers
12. Mobil Homes for Camping
13. Foresters
14. Gas fitters
15. Surveyors
16. Civil and Structural Engineers
17. Mining Engineers
18. Hydraulic Engineers
19. Oil tank gauging
20. Military Gunners
21. Merchants' Scales
22. Farmers' Scales
23. Manufacturers
of Scientific Instruments
24. Scale builders
25. Freemasons as a Symbol
26. Dowsers
27. etc.



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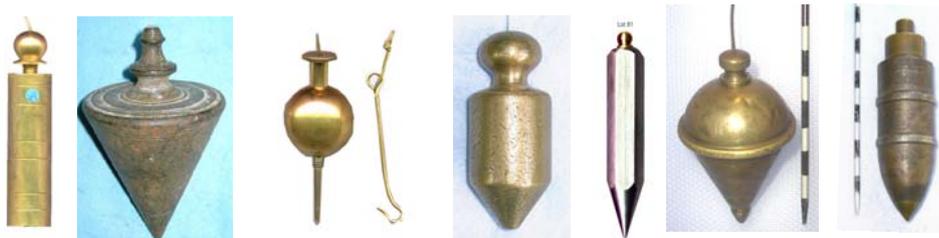
4. What are the basic shapes of plumb bobs?

ND: all plumb bob shapes are symmetrical and I think of them as being divided into three basic types:

“**Naturalistic**” shapes include the “fruits, nuts and vegetables” and bear the names, turnip, carrot, apple, pear, acorn, teardrop and the egg (ovate), the most common names.



“**Geometric**”: Shapes often used and modified are the cylinder, cone, sphere or a combination of shapes such as the pencil point, tapered cylinder, hexagonal cylinder, ice cream cone, bullet.



“**Formal**”: In certain parts of the world, Great Britain and the United States in particular, other “formal” styles were common such as the chalice, doorknocker, barrel. These stylistic developments tend to reflect aesthetic preferences and not strictly practical improvement.



5. Are different shapes of plumb bobs favored in different countries?

WR: Yes, in each country we find different characteristic shapes of plumb bobs. Historically plumb bobs were made for a very local market unlike manufacturing and distribution in the 20th and 21st centuries. The artisans were habituated to one shape in a particular region and accepted this one. With the beginning of a worldwide trade many manufacturers produced their own regionally accepted shapes and also tailored their products to other styles preferred in other countries.

Also the different trades preferred different plumb bob shapes and features. Carpenters used different shapes than millwrights, architects, masons or tile setters. Even the bridge builders and surveyors expected different practical standards in their choice of a plumb bob shape.

(More information see my presentation „PLUMB BOBS OF THE WORLD“
on the web site www.plumbbob.de)

ND: Historically the choice of a specific shape of the of the plumb bob as well as such refinements in A Frames, Plumb Levels, Spacers, Tip Covers, to name a few, had a direct relation to regional differences in trade guild practices and the specific building materials at hand. Tools were made and modified one at a time, more often by the artisan himself, used and cared for in his lifetime then passed on one generation after the next. Personalization in decoration was common, yet shapes tended to be determined by regional custom.

6. What materials are used to make plumb bobs?

ND: Practically speaking, the plumb bob tool when used by all trades benefits from being as heavy as possible, but also as small as possible. Since the user has to wait for the plumb bob to come to rest in order to take a reading, heavier plumb bobs come to rest faster than less weighty alternates. Speed, accuracy and ease of use of any tool is part of the essential nature of a tool.



STONE.....LEAD

Although the earliest plumb bobs were no doubt fashioned from certain types of stone or cast from lead, by far the most common material used to make plumb bobs over the centuries is some alloy of copper and tin, most often called bronze. *(A discussion of the vast array of alloys and their names can be found in the “Plumb Line Continuum,” page 5)*



Since the plumb bob needs to be fashioned into a symmetrical shape and a string has to be attached to the bob’s axis of symmetry, the workability of the base material is significant as is the technology available to shape the material. Thus, as tooling became available to cast iron and machine steel, these materials became an alternative to brass or were used to fashion certain parts of the plumb bob, such as the delicate tip.



Less frequently used, dense but malleable materials are hardwoods, bone, ivory, and mercury encapsulated in a jacket of steel or brass.

7. In the countries worldwide, what are plumb bobs called?



AMERICA, GREAT BRITAIN, CANADA,



AUSTRALIA, NEW ZEALAND ” Plumb Bob” or “Plumb line”



FRANCE, “Fil à plomb”



ITALY,” Filo a piombo”



TURKEY, “Şakül”



SPAIN, “Plomada”



GREECE, “στάθμη“



NETHERLANDS, “schiedloot”



GERMANY, “Senklot”, “Lot“

Where do You come from?

8. Are there many plumb bob collectors in the world?

WR: There are relatively few collectors who specialize in plumb bobs. However, most tool collectors specializing in other things tend to have accumulated some plumb bobs over the course of time. As one of the most universal of all tools, plumb bobs have some relation to almost all trades and their specific kit of tools.

On my subscription list for the WOLF'S PLUMB BOB NEWS are nearly 100 collectors and tool merchants. Interest seems to be highest in the United States, although many other countries are represented. (I hope that I can reach more unknown collectors with the installation of my web site www.plumbbob.de)

In 2006, "The International Association of Plumb Bob Collectors" was formed. The first event was a collectors meeting in Istanbul, Turkey, and in 2008 we met in Paris for presentation of papers and for a tour of local points of interest. For 2010, I am planning a meeting in Cologne, Germany. The long term plan for 2012 is to schedule an event in the United States, in conjunction with one of the known tool collectors associations' meetings.



9. How much plumb bobs do you have or how much plumb bob shapes exist?

WR: In my personal collection I have accumulated over many years about 1000 examples, but some of my colleagues have many more. As I have examined other collections, I have found that it is the exception rather than the rule to find exact matches. My best guess is that the number of different plumb bobs in the world is 10.000+, not counting different weights of the same shape.



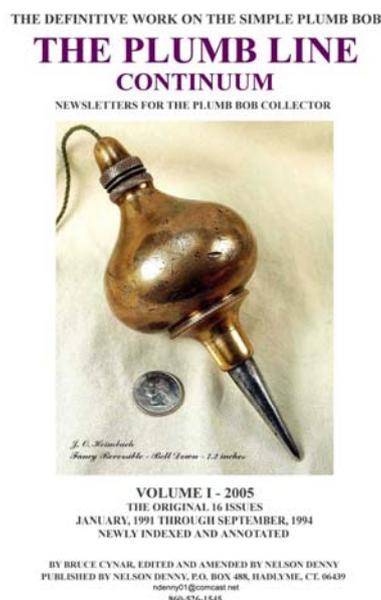
10. How do you get information about Plumb bobs?

ND: Handling plumb bobs, or viewing photographs and drawings, is our primary source of concrete information on the subject. From the 1880's on, and with the beginning of specialized tool makers and distributors, they employed catalogues to market their products. The copies that have survived are important sources of information for "manufactured" plumb bobs. Most are illustrated with fine "technical drawings" and may include information on weight, size, and attributes of a product for specific professional uses. Many years ago fellow collector, Riccardo Chetoni, the grand master of "named plumb bobs," summed it up neatly: "You really can't seriously collect plumb bobs of the late 19th and 20th century without collecting catalogues."

Almost all plumb bobs before the age of commercialism and mail order distribution and many plumb bobs from the 20th Century, were simply made by metal workers, one off or in very limited quantity, for very localized markets. A vast volume of “un-named” plumb bob examples are extremely difficult to categorize. Seldom do you find exact duplication of shape or size.

Dating plumb bobs by shape, style and appearance is a somewhat subjective practice in my opinion. The most accurate identification comes from collectors who have handled hundreds if not thousands of plumb bobs. It is not uncommon to see the phrase, “this plumb bob has the look of age,” to describe the condition or “patina” of a plumb bob. Like most collectibles, older is perceived to be more collectible.

In terms of the written record specializing in the plumb bob, the first source of information was a newsletter written and distributed by Bruce Cynar starting in 1992, and accumulated into about 200 pages of text and illustration. This publication was named “The Plumb Line,” has been recently edited and re-named, “The Plumb Line Continuum.” (see cover right; available on the website www.plumbbob.de) Bruce’s work was most significant in that it identifies the major topics of interest in the world of Plumb bobs. Although his work was American in thrust, articles about metallurgy, and the physical properties of the plumb bob, are applicable to all plumb bobs, worldwide.



Wolfgang’s work, starting in 2007 and continuing on this web site, started with WOLF’S PATENT NEWS in English. In 2008 he reduced the frequency, to a monthly publication and called it WOLF’S PLUMB BOB NEWS refocused on general themes of plumb bobs, 50 issues, 800 pages packed with pictures and commentary. Seeing more plumb bobs of the world is really teaching what there is to know about plumb bobs.

11. Are there any museums or exhibitions with plumb bobs?

WR: Usually museums (even Tool or Technical Museums) don’t have much plumb bobs in their exhibitions. But there is a tool museum in Troyes/France (see picture right) with more than 100 different plumb bobs in their show cases. Every tool collector must have been there for a visit. (MAISON DE L’OUTIL). Another private tool museum (PLANE MUSEUM) belongs to Gerhard Schmitz in Langenfeld near Cologne / Germany. He has now also a lot of plumb bobs (300+) shown in his huge tool collection. For a visit it needs an appointment by phone. Riccardo Chetoni from Pisa has listed a lot of Museums where you can find (few) plumb bobs. Later we will put this list on our website. Some of the plumb bob collectors in Spain, Turkey and Germany had own exhibitions in museums or other institutions.



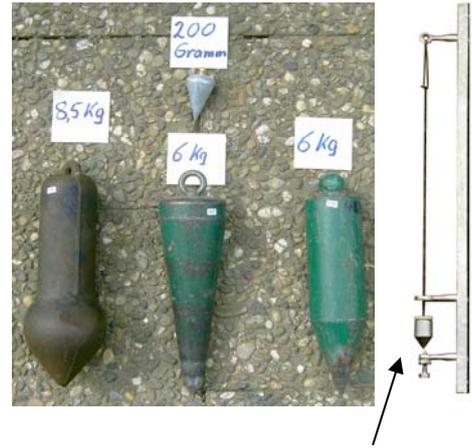
IF YOU HAVE ANY INFORMATION ABOUT PLUMB BOBS IN MUSEUMS etc., please let me know.

12. How heavy is the lightest and heaviest plumb bob?

WR: Extremely small plumb bobs, 1 oz and even smaller, might be used in scientific instruments or occasionally as a plumb bob novelty such as a watch fob, or tie clip.

Dowers frequently use small bobs as pendulums (picture below). On the large end of the range, the builders of big buildings and bridges use much heavier bobs to better

withstand the influence of wind and or to make the bob come to rest more quickly. Three or four pound bobs are quite common. And, there are much heavier plumb bobs used by bridge builders and in mine survey in the 20 to 200 pounds weight range.



13. How do you get plumb bobs?

WR: Simple plumb bobs can be found in local flea markets. More interesting items are frequently found in used Tool or Antique Markets. There are a number of international tool auctions where plumb bobs frequently appear. In England the David Stanley and Tony Murland auction houses are the most well known. They both publish and distribute catalogs by subscription and take absentee bids. In the United States, check out Martin Donnelly's "Live Free or Die Auctions" and "The Fine tool Journal" for the *Brown Auction Services* auction schedule. Sale or trade of plumb bobs between collectors is common practice, too.

ND: The state of the art of tool collecting has changed dramatically with the introduction of the World Wide Web. Tool auctions where attendance was required to bid have been transformed by absentee bids on the internet into "international" auctions. An Ebay search for "plumb bobs" will lead you to a perpetual auction of all types of plumb bobs. The extreme popularity of tool collecting as a hobby in the United States means that the vast majority of significant plumb bobs, are already in the hands of dealers and/or tool collectors. It is the sad fate of the best of collections, that when the collector dies, the collection is sold as individual pieces through one of the auction venues. For the neophyte collector, I would highly recommend finding your way to an Auction in person. For the neophyte Plumb bob collector, you will discover that not a great deal is known about plumb bobs, sometimes a distinct advantage at auctions. I like to bid at auction for the simple reason that if I win, the price is supported by least a few fools who drove me today's price limit.

14. How expensive are plumb bobs?

ND: The price of a plumb bob can vary from a few dollars to a few thousand of dollars. If your collection of bobs focuses on collecting a variety of interesting shapes, your investment is likely to be less than collecting patented or the older of "named" plumb bobs. Similarly, old plumb bobs in their original packaging, old unused bobs, bobs made from rare materials, craftsman made plumb bobs with a high degree of artistry, tend to command higher prices, too. Mining plummet, especially those that survive in their original boxes, are known as the top of the line, coveted by tool collecting generalists, plumb bob collectors and collectors of surveying instruments.



15. What is special about a plumb bob?

ND: As a builder and Architect a plumb bob was at first simply one of the more frequently used tool in my tool kit but a tool I took for granted. The true awakening of my interest came in my discovery of Bruce Cynar's newsletters from the early 1990's titled, "The Plumb Line." (Available now on www.plumbbob.de). Must reading for the new collector, you are introduced to the antiquity of the tool, the worldwide use of the tool, the physics of the behavior of the tool, lists of known plumb bob manufacturers and distributors, and US plumb bob patents, to name a few topics of the essays included. With this background it is possible, with persistence, to collect at any level of investment with any number of specialties. No other tool, I would speculate is used by so many trades and has been shaped and adapted in so many ways. Most collectors also display their collections and nothing displays as artistically as groupings of plumb bobs hanging on their plumb lines.

On the more academic side of collecting some great work in underway on the subject although it remains a relatively new specialty of tool collecting. It is appealing to me that there is more original work to be done in the way of comparative analysis of types and on the backgrounds of known manufacturers and distributors.



16. Are there any patented plumb bobs?

WR: For sure, there are many patented plumb bobs, patents issued in many countries. The men who made improvements to the plumb bob, applied for their patents like for every technical tool. In my archive I have 200+ patents for plumb bobs from all over the world. Especially in capitalistic America, where reservation of an idea for improvement could make for a financial windfall, US patents are numerous. By far improvements to the handling of the plumb line are most common. Other ideas included reversibility of the plumb bob body, protection of the tip with springs or caps, employing mercury to make smaller and heavier bobs. The plumb bob has made adaptations to technical evolution. The story of the plumb bob is a parallel story to trends in technology, improvements in metal working tools, mass production techniques, and the introduction of new materials, such as white metals and plastics. (for more information see *WOLF'S PATENT NEWS 2007* on www.plumbbob.de)



April 3, 1962 L. KNAUS TOOLS 3,027,977

Filed Aug. 7, 1959

2 Sheets-Sheet 1

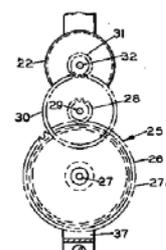


FIG. 5

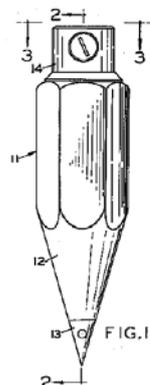


FIG. 1

17. What things are called plumb bob?

WR: The Workers in Germany call a plumb bob a symmetrical weight (perhaps with a tip) that hangs on a line. (supported by a line).

(More see Wolf's Plumb Bob News 2008-08 "The Plumb Bob And Its Relatives"; available on www.plumbbob.de)



18. Are plumb bobs still produced in our days?

WR: Yes in our days are plumb bobs still made by factories. (Not so much as before, because the laser technology and the vial levels relieved the simple plumb bob weight. But it still exists! Most of the cheap plumb bobs now come from Asia in a very simple shape for a low price. But there are still some makers in Europe that produce plumb bobs. i.e. Gampper in Germany.

(more see WOLF'S PLUMB BOB NEWS 2008-01 "Production of plumb bobs")

19. Why do people collect Plumb bobs?

WR: The reasons to collect plumb bobs are various. In our international group we have collectors who collect this tiny little tool for different reasons. Some are generalists, some like the technique, some the shape, some the material like ivory, brass, some will only own old and ancient items. Some for symbol and others collect only marked plumb bobs..... There are some collectors who collect only plumb bobs and other collect other tools and plumb bobs. Fortunately there is no standard.



IF YOU HAVE MORE QUESTIONS, PLEASE LET ME KNOW AND WE CAN CONTINUE WITH THIS FAQS-ISSUE.

Note:

The shipping of WOLF'S PLUMB BOB NEWS as PDF-file is free. Feel free to ask for it. Or, the Newsletters are also available on the website, www.plumbbob.de Bookmark this address on your browser and check in monthly to find the most recent issue, or, to access my library of past issues from 2007, 2008 and 2009. The Newsletters are available in English and German.

*Enjoy it
Wolf Ruecker*

And last but not least #20:

20. Why do you collect also levels, inclinometers and chalk lines?

WR: These instruments in my collection stand for 4 themes:

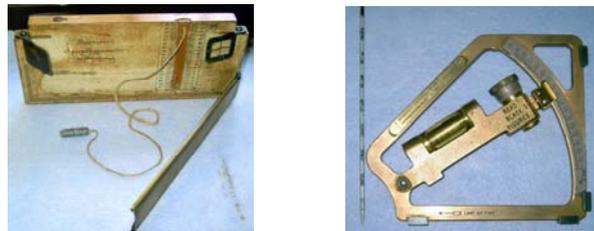
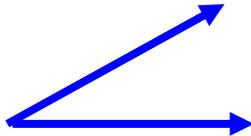
VERTICAL = plumb bobs



HORIZONTAL = levels



ANGLE = Inclinometers



STRAIT LINE = Chalk lines



All these tools belong together.

Thank you for your interest!

Wolf