



Jugs found in Provincetown harbor
Bottle stoppers are vintage mechanical Italian handcarved wooden Anri



Part of a collection of intact bottles found in Provincetown harbor



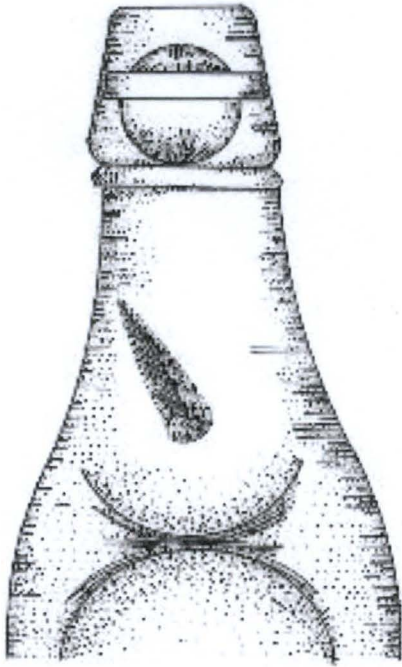
Part of a collection of intact glass bottles and lids found in Provincetown harbor



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Codd's Ball Stopper - by far the most successful of an assortment of internal ball type stoppers for soda bottles patented during the second half of the 19th century.



Codd's Ball Stopper

The Codd ball stopper was by far the most successful of an assortment of internal ball type stoppers for soda bottles patented during the second half of the 19th century. It was first patented in England in 1870 with the patents for the most commonly seen form issued in 1872 and 1873; it was patented first in 1873 in the United States (Munsey 1970; Goodacre 1995). Most of its success was, however, in England or its Commonwealth nations like Canada, India, and Australia. This closure & bottle style was infrequently used by American soda/beer bottlers, primarily due to stiff competition from the Hutchinson closure/bottle, and may never have actually been produced in this country, though a few other non-Codd ball types were made here (Riley 1958; Graci 2003). Reportedly, part of the reason for its lack of success in the U.S. was because American kids had a tendency to break the bottles to get at the internal marble for their youthful games, though this must have occurred in other countries also (Lief 1965).



For an image of a much less successful competitor that also utilized a ball for the closure mechanism, click on [Roorbach bottle](#) which shows a Hutchinson type bottle that used the Roorbach ball stopper.

The bottles were produced by a method that required the use of an applied finish until well into the 20th century which is long after virtually all other bottle types were being mouth-blown with tooled finishes. According to one author the mouth-blown bottles were produced as follows: *After being mold blown the bottles were sheared at the neck and allowed to cool. Then a glass marble, made from glass of a hardness twice that of the bottle was dropped into it. The bottle was then re-heated and the neck welded on (finish applied), so containing the marble* (Goodacre 1995). Eventually fully automatic bottle machines were adapted to produce Codd bottles (example pictured to the right).

This type of internal ball closure was self-sealing via a rubber gasket mounted inside the bore of the bottle against which the marble was pushed firmly by the carbonated contents. The contents were accessed by pushing down on the marble to release the pressure after which the marble

dropped to the lower part of the neck. Click [Codd opener](#) for a picture of a tool used to push down the marble and open Codd bottles. The illustration to the left shows the upper portion of a Codd bottle with the marble in the sealing position inside the bore. The photo to the right shows a late 20th century, [machine-made Codd bottle](#) from India with the gasket in place in the middle of the finish and the marble in the unsealed "resting" position low down in the neck. During the mid-20th century most of the English machinery to produce Codd bottles was shipped to India where the bottle may still be produced (Goodacre 1995). This side view of a Codd bottle also shows why these bottles were and still are sometimes called an "elephant" or "pig" bottle (Elliott & Gould 1988). Some resemblance I guess?

Dating notes: As noted, the Codd closure was always a minor element in the American soda bottle/closure market. Hutchinson closures followed by the crown closure (both covered below) were far and away the most popular sealing methods for soda and mineral water in the U.S. One researcher has, however, tallied 25 or so different Codd bottles that are identifiable as used by American companies spanning the country (Graci 2003). In Hawaii, the state where soda companies used the Codd closure the most, there were at least 14 different Codd or Codd type bottles used by 4 different companies between 1884 and 1898 (Elliott & Gould 1988). It is not known how many American soda companies used unembossed Codd bottles with proprietary labels attached, though it likely a very low percentage compared to the Hutchinson and crown closure bottles.

The general date range for the mainland American use of the Codd closure is probably similar to the date range in Hawaii, though it is known that some Codd bottles were used into the early 1900s by some companies in the West. For example, one Western embossed Codd bottle (*Biggam Bros.* /

Yakima, WA) is known to date between from 1911 and 1913. These bottles were marked as having been manufactured by *Nuttall & Co.* - a glass works in St. Helens, Lancashire, England which was merged out of existence in 1913 (Fowler 1986; Whitten 2005). A good cut-off date for Codd closures in the U.S. is the mid 1910s (Newman 1970). Worldwide, Codd bottles were used for an immense range of time from invention in the early 1870s to the late 20th century, as indicated by the pictured bottle above which is machine-made and has as base sticker noting it was *Made in India*. It was purchased new from an import store around 1990!



Ballast Bottle Blob top - very heavy
Ships stored them below decks on their sides
so corks wouldn't dry out and lose carbonation



Joseph Campbell Company - Campbell soup founder
(across the center)
Camden, NJ



Creamer Bottle is embossed: Contents Half Pint
Gale Force Farm
Providencetown, MASS - (typo) - could be valuable



On the neck it says: REGISTERED
The embossing reads: Ye CAPTAINS BEVERAGES
PROVINCETOWN, MASS
(in the middle of the embossing)
E.D. CROWELL
MANUFACTURER



Stone Gin
Used to store wine, water and gin



Detail from previous photo of a Stone Gin - used to store wine, water and gin



Stone Gin
Stored wine, water and gin

DR. VAN LUCAS BOON
DEET LOOTSJIE
AMSTERDAM

$\frac{3}{4}$ LITRE

Detail of Stone Gin from Amsterdam

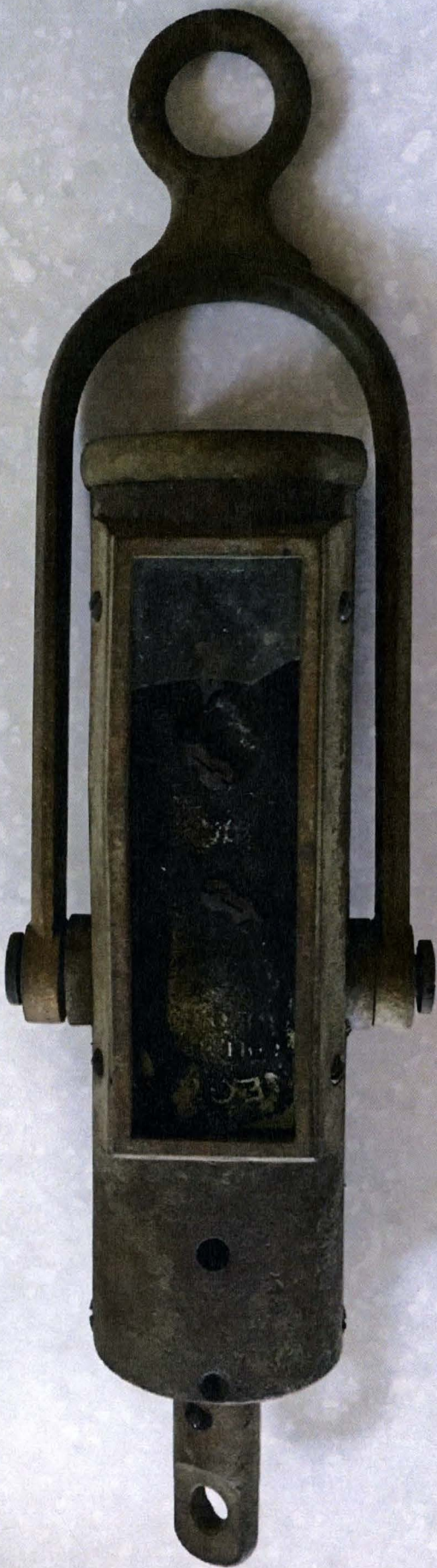


Ballast Bottle Blob top - heavy - stored below decks on its side so corks wouldn't dry out
Left - Belfast Right - Dublin



DECK PRISM

A deck prism is a prism inserted into the deck of a ship to provide light below



Taffrail Log

It is an object dragged from the stern of a vessel to calculate the vessel's speed through the water



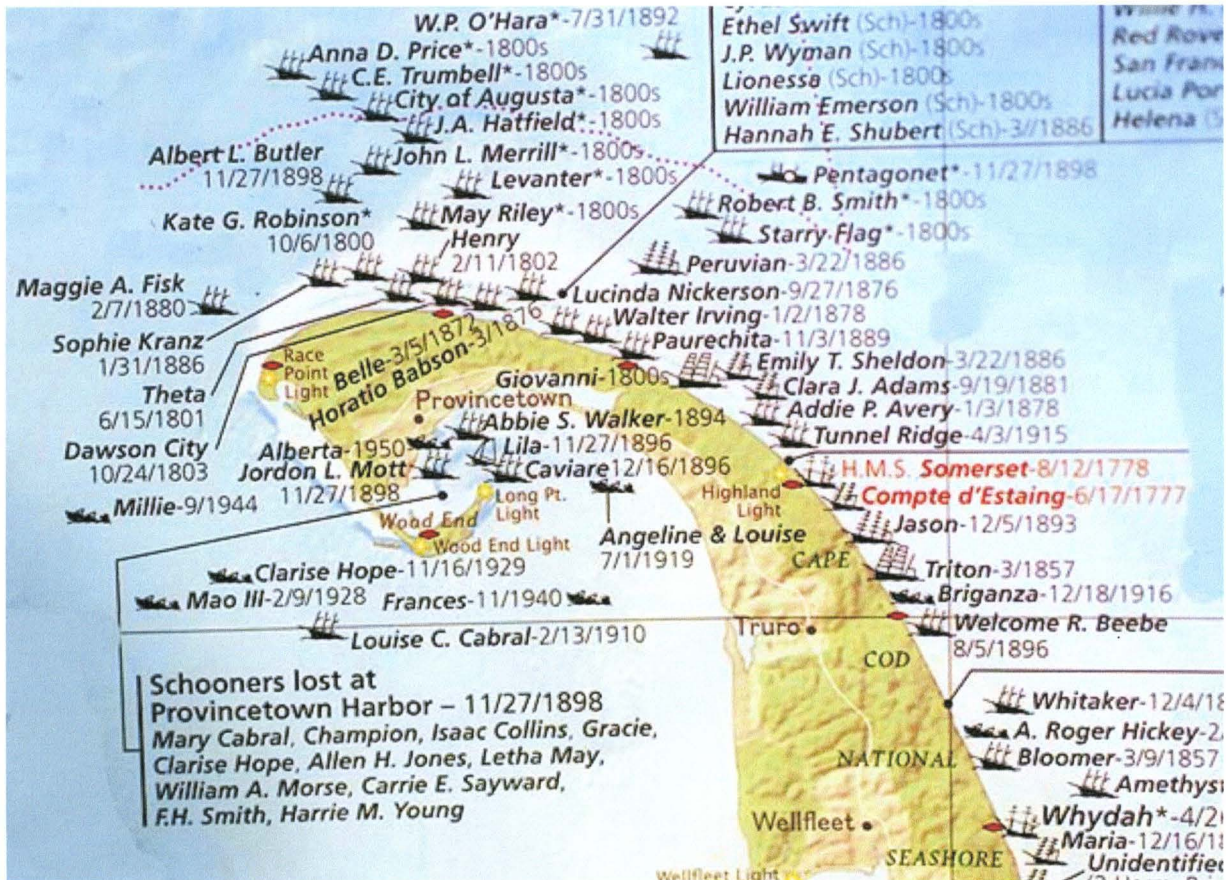
A 50 year old oyster (according to the number of rings) from Provincetown harbor, pictured next to a quarter



Open view of a 50 year old oyster from Provincetown harbor



Outer shell of 50 year old oyster from Provincetown harbor



A map of Cape Cod denoting ships and the dates that they were lost at sea including several inside Provincetown harbor