EARLY MATCHES AND MATCH MAKING

The first friction match was made by John Walker, in Stockton-on-Tees, England in 1826. By 1840, friction matches were in use in many parts of the Western world. The 180 year history of the match includes matches that had heads made of chlorate of potash and sulphide of antimony which ignited when dipped into small bottles of sulphuric acid, called "instantaneous light-boxes." Another type was the sulphur match, a small wood splint that was dipped into melted sulphur and carried in tinder boxes. It was not struck and was primarily used to light candles after it was ignited from the burning tinder. The match that we recognize today is the friction match that Walker invented and actually bursts into flame when rubbed against a roughened surface.

The evolution of the friction match later included the addition of phosphorus to facilitate igniting the match. The use of phosphorus in the manufacturing of matches was an unfortunate period in the history of the 19th century as they were manufactured in poorly equipped "factories," mostly by young girls. The working environment often caused a condition called "phossy jaw," or necrosis of the jaw bone. The dangers from the use of phosphorus in match making lasted close to eighty years with the loss of hundreds of lives and the disfigurement of hundreds of others. The poor working conditions, long hours, low pay and the health risks finally caused the British government, in 1861, to form a commission to study children's employment. Part of that commission's report found that children were sent to the factory instead of school as the wages were desperately needed by the family, the working conditions lacked ventilation, the factory smell was suffocating and the sanitary conditions horrid.

In 1886, the first strike by an all women's union, "the match girl's strike" attempted to change the work conditions but failed. Much in the industry remained the same throughout the world until 1911 when the Diamond Match Company, in the United States, offered its patent for making non-toxic matches to the public. In 1915, the Diamond Match Company was awarded the Louis Livingston Seaman Medal for the elimination of an occupational disease and the diseases caused by phosphorus in the manufacture of matches finally came to a close.

MATCH SAFES

Since those early matches were easily combustible when carried loosely in the pocket or purse, special containers were designed to hold the matches.

The first containers Walker used to hold the matches he made and sold in his chemist's shop were round canister-shaped tin boxes that cost two pence each and held 100 matches. There was no roughened surface on the boxes to ignite the matches but rather a piece of sandpaper was inserted for that purpose.

Walker never patented his invention and others took his ideas and spread them around the

Western world. The containers that held these later matches were called vesta cases in England and match safes in the United States.

In the United States, one of the most prolific manufacturers of match safes to hold friction matches was the Gorham Manufacturing Company (the name used from 1865-1961, the period when most match safes were made in the United States) in Providence, Rhode Island. They made more than 1,180 different varieties of match safes; i.e., either the material, motif, decoration was unique.

The Gorham Archive at the John Hay Library at Brown University contains many records of the Gorham Company. George Sparacio and I have sorted through those records, compiled a data base of our findings and have found a number of interesting facts about Gorham's manufacturing codes and techniques, including the fact that there are prefixes used by Gorham from which it is possible to designate the match safe material (this code appears to be true for all of the metal products made by Gorham). There is also one suffix "M" that designates location of the manufacture.

Production number prefixes for Gorham safes:

- B: Circa 1898, and after, used to indicate that item was made in "smalls" room, made in sterling silver
- W: Made of iron
- P: Made of platinum (in some cases XP is used. The example shown is platinum and iron, there are records of all platinum safes but no known examples)
- X: Made of gold, any grade or color
- C: Made in Japanese style called mokume gane (resembling "wood grain");
- Y: Made of copper
- 0 (zero): This is a zero and it means made of plated silver
 - BY: Made of bronze; "Q" was also use for large and small bronzes, but no actual match safes with "Q" have been found, nor have any archival records

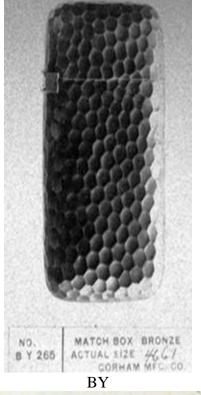
Whole Made of sterling silver if made after 1868 (when Gorham adopted the Sterling Number: Standard).

- T: Unknown at this time
- When the letter "M" follows a production number, e.g., 1529 M, it means the match safe was made in New York City at the Gorham manufactory at Union Square. (Do not to confuse "M" with the date mark for 1880 or the "M" on flatware for "massive"; 15 Troy ounces per dozen. Carpenter, p.233)

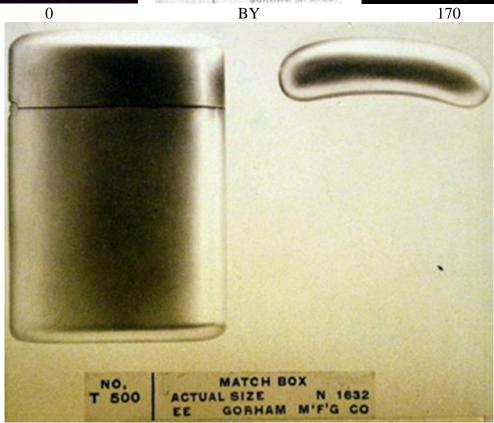
Examples below:











(Except for examples BY and T all the match safes are from a private collection.)

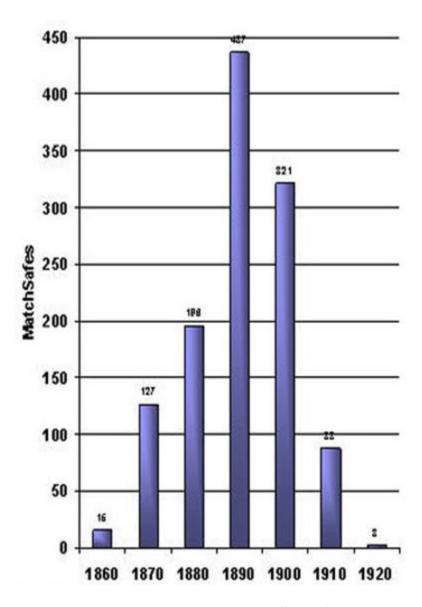
As is common in these types of investigations some exceptions to the above have surfaced:

- There are nine (9) known exceptions to the "X" prefix for 14K gold they are 1379,146(one safe),175 (one safe) (both production numbers 146 and 175 are used by a number of safes with different motifs and designs), 250,265,280,8983,9967 and B 3803/1.
- Four exceptions to the "X" prefix for 18K gold are 3621, 3622, 3636, and V/Y.
- One exception to the silver plate prefix"0" is 987.
- There is one exception to the iron "W", it has no production number.
- There is one exception to the copper "Y" it is A/P.
- There is one exception to the steel "W" it is A/A/O.

The first recorded match safe in the Archive was made in 1861 and the last one in 1923. The average weight of a match safe is one (1) ounce seven (7) pennyweights and the average size is $1\frac{1}{2}$ " x $2\frac{1}{2}$ " x 3/8".

Below is a chart that shows the total variety of match safes made by Gorham in each decade. Each column represents the total number of match safes that are unique either for their motif, material or decoration.

TOTAL MATCH SAFES IN EACH DECADES



TOTAL NUMBER OF MATCH SAFES: 1187

SAFES WITH NO PRODUCTION NUMBERS:

Interestingly, in the years 1870-1875, there are no Gorham records of match safes with different production numbers. Whether this had anything to do with the financial panic of 1871 is not known at this time.

UNANSWERED QUESTION

As careful as Gorham was about keeping records we found 65 safes with no production identification. These safes were made in no particular years and were made without production numbers from the 1870's to 1900. We can speculate about workmen's oversights, experimental or sample safes made for internal use, but at this point no one knows why these safes are without identification numbers.

SAFES MADE OF PARTICULAR MATERIALS & MOTIFS:

As you might suspect various materials and motifs cluster around certain periods of time. For example, the iron safes were made from 1898 until 1900. The majority of gold safes were made from 1900 -1910; copper safes from 1882-1884. Special safes (those made for an individual or a unique occasion) appear to cluster around 1900 -1901 and platinum safes were made from 1909-1910. Silver safes, both plated and sterling were made from 1861 until they stopped making them in 1923. Gorham made a total of 957 sterling match safes, with either unique motifs, decorations or finishes that are identified as such in the Gorham Archive. (Just to be certain that there is no misunderstanding, Gorham made tens of thousands of safes, we are referring only to unique productions).

A selection of motifs and the period in which they were made:

ANIMALS	1867-1899
FLAGS	1898
GOLF	1898
COINS	1895-1898
HAMMERED	1882, 1883
MYTHS	1889, 1902
NIELLO	1885
NUDES	1894-1897
SEA	1876-1885
CREATURES	10/0-1003
SMOKING	1897

All of these motifs appeared on silver safes, but not necessarily on safes made from other materials.

Gorham made eight, eighteen carat gold Martele match safes, but none in silver, neither sterling nor .950, nor .9584 (Pristo, L., **Martele: Gorham's Nouveau Art Silver**, p.148).

In the Archive are records of silver and other material(s) match safes:

175	silver with enamel decoration
3	silver with niello decoration
14	silver, enamel and 14K
1	silver, 14K and platinum
1	silver, 14K and iron
8	silver, 10K and 18K
1	silver, 14K and 18K
6	silver and steel
13	silver and 14k
1	silver and gun metal
3	silver and copper

- 1 silver and aluminum
- 1 silver and mother of pearl
- mokume gane (silver based and other metals, see note #1)
- 2 silver with inserted stones
- 1 silver plate and bronze
 - silver hidden photograph (sometimes referred to as a "mistress" match safe since it
- 1 usually contained a picture of a lovely woman that was assumed to be a lover rather than a wife.

Many silver match safes originally had some oxidized decoration when they were made, regrettably most, if not all of that decoration has been lost to wear or over-polishing.



Silver figural safe*



Enamel & Silver safe*



Silver & applied metal safe*



Silver & Niello safe**



Hidden photograph safe*



Silver (gilded) w.stones*



Mokume gane silver & other metals**



Copper w. applied silver*





Silver and inlaid 14K gold **

*Private collection

** Gorham Archives

Note #1: In the Gorham Archive is a book, circa 1885, (the authorship of which is attributed by Samuel Hough, current Gorham archivist, to Charles Grosjean, a former superintendent of silverware and designer at Tiffany,), that carefully details how mokume gane (spelled "mokumea" in the archival book) is made. Carpenter offers a guess in his book on Gorham (p.85), but this is the actual technique.

The metals are 4 in number:

- Copper fine (electro-type of Lake Superior)
- Gold fine
- Silver fine
- Alloys composed of 10% gold & 10% silver (or use Shakudo (copper with 5% gold))

They are prepared as follows:

Roll in sheets to gauge 12 and cut in squares of 4½ inches. Then scrape the surface carefully of each piece (on both sides) and arrange them together for soldering in the following order: Copper, #0 solder (very thin, say G.30 or 34), gold, solder, alloy, solder, silver. Great care must be taken to insure a perfect soldering, an excess of solder will

cause a complete failure, it being apt to run out and leave spaces wholly unsoldered. The mass is then hammered and rolled to about 1/8 of an inch in thickness, cut into 3 pieces, soldered together and hammered or rolled a second time, cut again into 3 pieces & soldered together & rolled or hammered a 3rd time. After this process of multiplying the layers, being now 36 in number, it is drilled and cut as required."

The above information is just a small portion of the data we acquired from the Gorham Archive at the John Hay Library at Brown University. We hope in the near future to publish a data base and book that will enable collectors, researchers and dealers to fully document all Gorham match safes.

Should any reader have a Gorham match safe that they feel is unusual or any additional information or comments please send an image and or a message to me at nshapir1@nycap.rr.com.

Selected References:

Alsford, Denis, A **HISTORY OF THE MATCH**, (Unpublished manuscript, circa 1990)

Carpenter, Charles H. Jr. **GORHAM SILVER**. (San Francisco, CA.:Alan Wofsy Fine Arts, 1997)

Gorham Archive in the John Hay Library, Brown University, Providence, R.I. Pristo, L.J. MARTELE, GORHAM'S NOUVEAU ART SILVER (Phoenix, 2002)

Venable, Charles L. **SILVER IN AMERICA** (New York, Harry Abrams, 1994)

I have also had personal correspondence and conversations with Samuel Hough and Larry Pristo, who have provided valuable insights into this research as has my research partner, George Sparacio. The funding for this research has been provided by the International Match Safe Association.