# Japanese Silver Match Safes

By Neil Shapiro

*Fig. 1*

**Japanese art is filled with unique creations, beliefs, creatures, techniques, and perspectives. Some of them, particularly the myths and supernatural creatures, may have come to Japan from other cultures and been uniquely transmuted into Japanese concepts. But some artistic and technical skills belong to only the Japanese. One of these is the metal working techniques created by Japanese craftsmen during the two hundred years before the opening of the country by Commodore Perry in 1853.**

**The 200-year-old metal working techniques and alloys developed by the Japanese found an appreciative audience when the country began to show its traditional wares and skills at international expositions. The Western world was astounded by Japanese products and eagerly purchased and collected them. Some Western craftsmen tried to replicate Japanese metal working artistry; but most did not have the unique set of skills, experience, or the knowledge to be consistently successful.**

**How the Japanese used these special skills to make silver, mixed metal, and inlaid match safes, a non-traditional, utilitarian object, is the subject of this article.**

## Background

Eleven years after the 1868 Meiji Restoration in Japan, the government banned the wearing of swords *(haitorei)*. Metal working craftsmen who made ornamental fittings for swords then lost their traditional livelihood. But about that time, the Meiji government developed an economic plan that encouraged the exportation of traditional Japanese crafts to the West via international expositions and exhortative slogans, such as, "Japanese spirit, Western things," and "encourage manufacture and promote industry."

This governmental initiative resulted in opportunities for the ornamental metal workers to earn an income. In effect, this meant that the particular skills for making sword ornaments could now be used in new ways. One of those ways was the making of match safes or vesta cases as they were called in Europe. Match safes are small cases, usually measuring 2 1/2 x 1 1/2 x 3/8 inches, when rectangular. Figural match safes vary in size from 1 to 4 inches in height and from 1 to 2 inches in width. The thickness of both kinds is almost always 3/8 inches. They were designed to hold

"strike anywhere matches." Traditionally, the average Japanese smoker used flint and tinder to create a flame to ignite their smoking paraphernalia. With the encouragement of the Meiji government, the skills of some traditional metal workers were redirected toward crafting beautifully ornamented match safes for the Western markets.

Prior to the restoration of the Meiji government, the Japanese aristocracy, through the sixteenth - nineteenth centuries, experienced a gradual decline with a concomitant rise of the common class. Art in everyday life began to flourish and the joys of practical life, which had been minimal for the commoners, proliferated. Commoners for the first time had access to embroidery, painting, enamels, and metal-worked objects, particularly those metal objects fashioned from the newly discovered silver and gold fields. An age of color and brightness blossomed and by 1876, the traditional hand-crafting metal workers were incorporating these colorful metal working techniques into objects for sale and display at international expositions, including objects never before made for the Japanese public, like match safes. Their basic metal working techniques were casting, hammering, inlay, and chasing.

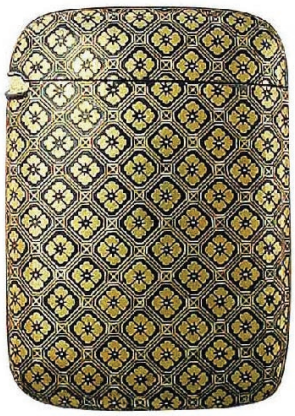

*Fig. 2*

*Fig. 3*

*Fig. 4*

## Some Metals and Techniques Used by the Japanese to Make Match Safes

The metals most commonly used by Japanese craftsman were gold, silver, copper, tin, and iron. Each metal has distinctive characteristics of texture and color and when the craftsmen mixed some of these metals together to form alloys, they created alloys that were uniquely Japanese. A Japanese metalsmith's work was grounded in a reverence for the natural cycles of nature, its ever changing beauty, and a type of elegant simplicity. Many of the alloys and patinas that the Japanese metalsmiths devised, after hundreds of years of experimentation and tradition, are to be found on Meiji era match safes.

*Fig. 5*

## Alloys

The two most important alloys for match safe collectors are *shakudo* and *shibuichi*. *Shakudo* is an alloy of copper and pure gold that has a purplish-black glossy surface, which may be iridescent. *Shibuichi* is an alloy of 75% copper and 25% silver that turns grey or dusky silver when patinated. These alloys are often combined with silver inlays or other silver ornamentation as illustrated in Figure 1.

## Zogan

Match safes are made with a variety of metal working techniques but the most exciting for collectors is *zogan* (inlay). Inlaid match safes have relatively soft metals such as gold and silver embedded into a harder ground made of materials like copper, iron, brass, *shakudo,* or *shibuichi*. There are a number of techniques including: line inlay, flat inlay, high relief inlay, polished out inlay, and thread inlay. In textile imprint inlay *(nunome-zogan),* thin sheets of gold, silver, or lead are hammered into a fine mesh-like grid engraved onto the surface of the metal ground as shown on the match safe in Figure 2. Some experts refer to this type of technique as Japanese damascene.

## Damascene

Japanese damascene is another metal working technique. Its design motifs are different from Spanish damascene although some of the techniques share a common origin and name. A contemporary description of how the damascene artisan works is provided by author Frederic De Garis

in his book *Their Japan:*[1]

A design, first drawn on a piece of tissue paper, is placed over the metal surface and traced with a fine chisel into the metal – then removed. The outlines thus cut are undercut four times crosswise and four times diagonally (hatched) to produce something like a silken texture. Into these minute grooves, gold and silver threads almost as fine as cobwebs are hammered, and a deer-horn hammer is used to smooth the surface and tamp down rough thread edges. The article is then placed in a cabinet and made to corrode by the use of nitrate acid, which later is removed with hot soda water. When dry, it is washed twice in weak soda water and baked over a fire. Eight or nine times a day for a period of five days in summer and seven in winter, the article is washed and baked until all the rust in the steel has been conducted out. The clean surface is then dipped into thick red-clay mud and baked again over a hot fire – this process being repeated from 50 to 100 times.

The next step is to coat the surface with powdered charcoal and oil, bake, and repeat 10 to 20 times, adding more charcoal and oil each time. A piece of cryptomeria wood is used to clean off the black powder, and a small steel rod to run the surface to a polish. The last step is to add any necessary carvings. Often these are monograms or handwritten names of purchasers, if desired. To retain the original polish, the article should be rubbed once a month with a soft cloth dipped in olive oil.

The secret of the finest damascene work is, regardless of the design, having the bottom of the inlay wider than the surface; this creates a resistance to shock and elasticity (Figure 3).

## Mokume Gane

There are many Japanese metal working terms that are specific to their uniquely Japanese techniques. One that is highly valued by match safe collectors, as it appears in no other countries' match safe output, is *mokume gane*.[2]

*Fig. 6 Standard cloisonné work. All photography by George Gruel (oddstick@mac.com).*

*Mokume gane* is a technique in which multiple layers of different metals are soldered together face to face and flattened by hammering to form a billet. Slices are then taken across the end grain and beaten flat to produce a polychrome marbleized ground. The term translates to "wood grain" and that is exactly what *mokume gane* looks like (Figure 4). The greater the number of colors in the finish, the more the match safe is valued.

## Katabori

*Katabori* is a type of Japanese engraving or chiseling which imitates a painter's brush stroke in that it has an unevenness of width and depth (Figure 5). *Kebori* is another type of engraving where the engraved lines are usually thinner and of uniform depth and width.

Traditionally, the *katabori* artist performs each stroke in a single motion of the burin (the engraving tool). There is no re-cutting, extending the line or deepening the line; the first cut produces the gradual or abrupt swelling of the line.

## Silver and Enamel

The Japanese have twenty different kinds of enamel work. Some of their techniques are unique to the Japanese and some varieties originally came from other cultures.

Encrusted enamel work has a high relief with the irregular surfaces covered with enamel (see Figures 6-8).

## Patination

Japanese silver and non-silver match safes were frequently patinated for aesthetic and practical reasons. Patination is the last stage in metal work production. It is a crucial process

for the final appearance of a match safe. Patination is essentially a matter of oxidizing the metal surface. Once the desired effect has been achieved, the match safe is covered with wax or lacquer to prevent further oxidation and to stabilize the final color (Figure 9).

There are many patination techniques and some have been passed down as family or guild secrets. One technique, for an iron bodied match safe, involves the intentional corrosion of the cast iron surface by the application of an oxidizing compound. This is then followed by heating, cleaning, polishing, and sealing the iron with a wax or lacquer.

*Fig. 7 An example of wireless cloisonné.*

When match safes are made of non-ferrous metals, e.g. silver, the completed work may be soaked in a solution of verdigris (various acids) mixed with copper sulfate and heated. Once the desired color has been obtained, the match safe is removed from the patinating solution, rinsed, dried, and then protected by a covering of treated insect wax.

Noted English designer Christopher Dresser, in his discussion of Japanese metalwork which he regarded as the most perfect ever produced, cited the extraordinary color harmonies that were said to have been unequaled in the West.[3]

The colors produced by the Japanese metal workers not only demonstrated their acute aesthetic sensibilities but also showcased their extraordinary metallurgical knowledge. These skills are evident in their match safe output.

*All the match safes are from private collections in Japan, the United States, and England.*

*Notes*

1. Frederic De Garis, *Their Japan* (Bentendori, Yokahama: Yoshikawa Publishing, 1936), 95.

2. Some manufacturers of match safes, e.g. Gorham Mfg. Company and Tiffany & Co. in the USA, made *mokume gane* type match safes but did not use the Japanese techniques nor did they manage to achieve as many color variations in their final product.

3. Christopher Dresser, *Japan: Its Architecture, Art, and Art Manufactures* (London, 1882).

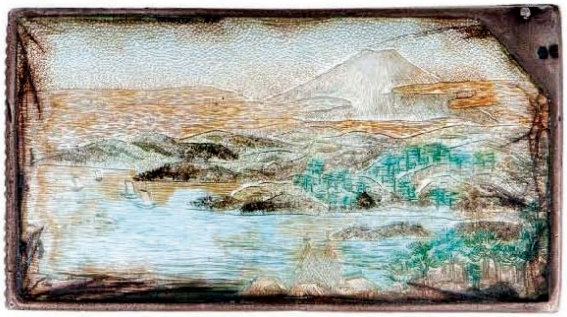

*Fig. 8*

*Fig. 8a*

*Fig. 9*

**Neil Shapiro** has written two books and many articles about match safes. Recently, he finished a book about Japanese match safes. He is a member of the International Match Safe Association and can be reached at nshapir1@nycap.rr.com.