

Contemporary medals and Japanese crafts

Tetsuji Seta



Fig 1. Rotate the template and make a mould with clay moulding sand

I would like to present about Japanese crafts and contemporary medals. Both have many things in common, such as their small size and the style of viewing them in the one's palm. Although Japan is an industrialized country and produces products using machines, there are still some traditional crafts produced by hand. Today's craft

artists continue to inherit traditional production methods while evolving them into new ways of expression.

I will introduce those who create contemporary medals from among contemporary craft artists.

1. Iron kettle production process (traditional method)

The origin of Japanese iron kettles dates back to the 12th century. Initially, it was developed as a tea kettle used for tea ceremonies. In the 19th century, iron kettles appeared, which were miniaturized tea kettles that could be used in everyday life. Today, along with industrialized and mass-produced iron kettles, handmade iron kettles made by craftsmen are also popular. I will introduce the process of making iron kettles by craft artist Nobuho Miya. He is a member of the Metal Casting Artists and Craftsperson Association of Japan, to which I also belong. I received the cooperation of Mr. Keiwa Kobayashi in creating these materials.



Fig 2. 'Grain pattern' using a spatula by hand



Fig 3. Heat treatment (distortion removal)

1. Rotate the template and make a mould with clay moulding sand.
2. Make a clay mould from the spout prototype. Unglazed the 'pour spout' mould.
3. 'Grain pattern' using a spatula by hand.
4. Fire the surface of the mould to an unglazed state (over 800 °C)
5. Coating 'charcoal powder' to the 'mould'
6. Place the 'core' into the mould
7. 'Cast iron' is an alloy of iron, carbon, silicon, etc., and the temperature during casting can reach 1,350–1,400 °C. Pour the molten iron into the mould. Add one's weight to the mould to prevent it from expanding under pressure.
8. After the temperature has cooled, break the mould and remove the iron kettle.
9. The 'foundry clay' is further crushed and used as material for the next mould. Through repeated use, the particles of 'foundry clay' become uniform, making it a smooth material with increased fire resistance.
10. Heat treatment (distortion removal). After finishing, the whole thing is heated to red heat to create 'distortion'. The structure becomes homogeneous and the surface is covered with a strong oxide film, making it a durable and long-lasting product that is resistant to rust.
11. Baking of Urushi lacquer. It has been practiced since ancient times in Japan. Anti-rust treatment.

2. Today's craft artists who create contemporary medals

2.1. Tokyo University of the Arts, Department of Crafts



Fig 4. The ground of the casting foundry workshop is covered with foundry soil
Tokyo University of the Arts

The Crafts Department, which began as a specialized arts and crafts department at the Tokyo School of Fine Arts in 1889, includes basic and specialized courses in metal carving, metal hammering, metal casting, Urushi-Art (Japanese lacquer), ceramics, and textile arts. There are three specialized courses in metalwork.

The metal casting foundry workshop has a large room filled with foundry sand necessary for traditional production. They also have equipment for plaster casting, precision casting, etc.

The ground of the workshop is covered with foundry soil. The author completed graduate school in 1988.

– Yasunori Tanioka

He is a professor in the Metal Casting Department. His interest has been primarily in contemporary expression. In his recent work, he uses lace collected from old clothes. The lace is soaked in wax and made into a wax mould.

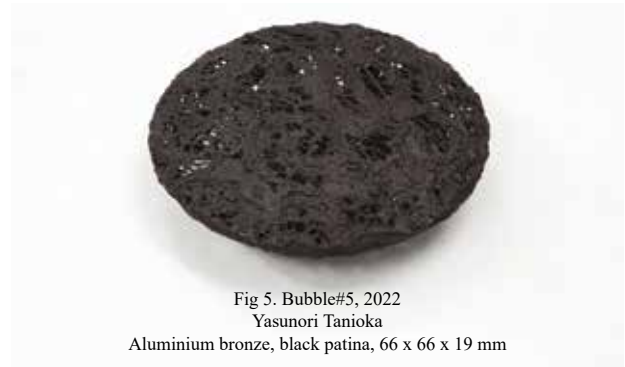


Fig 5. Bubble#5, 2022
Yasunori Tanioka
Aluminium bronze, black patina, 66 x 66 x 19 mm

– Liujing Yang

She was awarded in the British Art Medal Society's Student Medal Project in 2019 while enrolled in the metal casting class as an international student. In this medal, two medals are combined to form one. Centrifugal casting was used to create it.

2.2. Nagoya University of the Arts

The author has been teaching at Nagoya University of the Arts since 1993. Nagoya University of the Arts have gradually acquired precision casting equipment and are currently researching techniques such as using plants as part of the wax model and using resin output from a 3D printer as a casting model.

– Plant direct casting

Plants can be burned in a kiln and used like wax models. Fine details that cannot be reproduced by hand modelling can be replaced with metal. Plants have a structure that absorbs water from its roots and distributes it throughout the plant. If you attach sprue wax along the structure, you can distribute the metal throughout with less sprue.

– 3D printer

Castable resin can be output with a 3D printer. The printed



Fig 6. *Evolution*, 2019
BAMS project 2019
Liuqing Yang
Bronze, 70 x 70 x 5 mm



Fig 7. Wax models incorporating
plant parts
Left plant: *Chamaecyparis obtuse*
Right plant: *Rhaphiolepis indica*



model is filled with plaster and burned in a kiln, just like a wax model.

– Mitsuho Shibata

She graduated from Nagoya University of the Arts 2011. She creates medals using a technique of hand-shaping soft wax and casting. The soft wax can be shaped like clay. She has exhibited at FIDEM exhibitions since 2014 in Sofia.

2.3. *Nobana Art Work in Ginza*

There are many people in Japan who enjoy making crafts. Exhibitions of craft groups are held every year at the museum.

Nobana Art Work in Ginza is an art gallery located in Ginza, Tokyo. Craft lovers gather there, transcending the boundaries between professionals and amateurs. Nobana Art Work has been holding medal exhibitions every year since 2020.



Fig 8. いりまちのおほやがはらのいはゐづら ひかばぬるぬる わになたえ
そね (*Portulaca oleracea* / September 24 2015), 2015
Tetsuji Seta
Silver 950, 107 × 107 × 27 mm



Fig 10. 2010 2012 2014 2016 2018 2021 2023, 2023
Tetsuji Seta
Silver 950, 98 × 98 × 70 mm
Casted from 3D printer output resin, wax, acorn cap



Fig 9. 3D printer output resin
Wax, acorn cap

– Yoko Sato

She is an owner of the gallery Nobana Art Work in Ginza and a metal craft artist. She creates medals using traditional metalworking techniques.

– Mizuko Yamada

She completed Tokyo University of the Arts Metal Hammering course. She creates shapes by hammering aluminium plates.

– Masaaki Toyoda

He completed Tokyo University of the Arts Urushi-Art course. He uses the dry lacquer technique to create shapes.



Fig 11. My heart, 2023
Mitsuho Shibata
Aluminium, lost wax casting, 90 x 96 x 32 mm



Fig 12. Triangle, 2021
Yoko Sato
Gold, Silver, Shakudo, 10 x 68 x 68 mm



Fig 13. Wings, 2023
Mizuko Yamada
Aluminium, 150 x 130 x 75 mm



Fig 15. Save our planet, 2021
Keiko Kubota-Miura
Copper, gold leaf, patina, 150 x 130 x 70 mm



Fig 14. Memory of flowers 2023, 2023
Masaaki Toyoda
Lacquer, linen cloth, washi paper, whetstone powder, ground powder, tin powder, silver powder, 110 x 110 x 25 mm

– Keiko Kubota-Miura

She completed Tokyo University of the Arts Metal carving course. Now, she lives in NY. Her medals are made by hammering a copper plate.

Conclusion

All of the medals introduced in this article are individually handmade.

Japanese crafts developed independently during the isolation period (1639–1854), when they were cut off from the West. A variety of products were made in each region, from luxury goods sought by samurai and wealthy merchants to daily necessities used in the daily lives of common people. However, today crafts are in a difficult situation due to the pressure from cheap, mass-produced products. But the delicate expressions created by hand have been elevated to artistic expressions, and continue to be passed down and developed by craft organizations, educational institutions, galleries, etc. Medal is said to be art in the hand. This sense of size is also common to Japanese crafts. For Japanese craft artists, medal art is an art that is both new and familiar.

Special thanks:

The Metal Casting Artists and Craftsperson Association of Japan
Tokyo University of the Arts
Nagoya University of the Arts
Nobana Art Work in Ginza