

1. Introduction

This paper reports the outline of the mold (and related tools) stored in the Osaka Celluloid Hall.

2. As shown in Table 1 (P4), there were 22 molds that were reviewed. An overview is given in Table 2.

Table 2: Type and number

Product name	Number	Examples
Mold for compression	9	Fig. 1
Cavity insert	1	Fig. 2
Pattern	8	Fig. 3
ZAS cast parts (negative)	2	Fig. 2
ZAS cast parts (positive)	2	Fig. 4
Total	22	

Fig. 1 Mold for compression



Fig. 2 ZAS insert



Fig. 3 Pattern



Fig. 4 ZAS cast parts (positive)



Fig. 5 Bracelet mold end



3. Each type of mold

(1) Mold for compression molding (e.g. Fig. 1)

A large number of this type molds are stored in Celluloid Houses Yokohama. They are mainly for accessories. The overwhelming majority are hand-carved on gunmetal. The ones in Osaka were brooch 6, catcher, bracelet, and 1 each of the ornamental square plates.

Characteristic

-1. Large "rose" brooch

Table 1, No.14, the loose brooch mold shown in Fig. 1 has a 7cm degree of finish. Maybe the biggest example as a brooch.

-2. Size adjustment of bracelet

Table 1, No17, the end of the bracelet mold is crushed by 43mm with lead-alloy (see Fig. 5). It seems that the dimensions were adjusted. This amendment, including other articles, is unusual.

(2) Cavity insert

There was a cavity insert (Fig. 2). It is a ZAS cast product and is compatible with molds that are pot transfer molding or injection-molded (=for cellulose acetate or synthetic plastics).

It was attached as a cavity part to a mold base made of steel. In this case, a fixing screw (M6 female screw) is cut on the back side (Fig. 6).

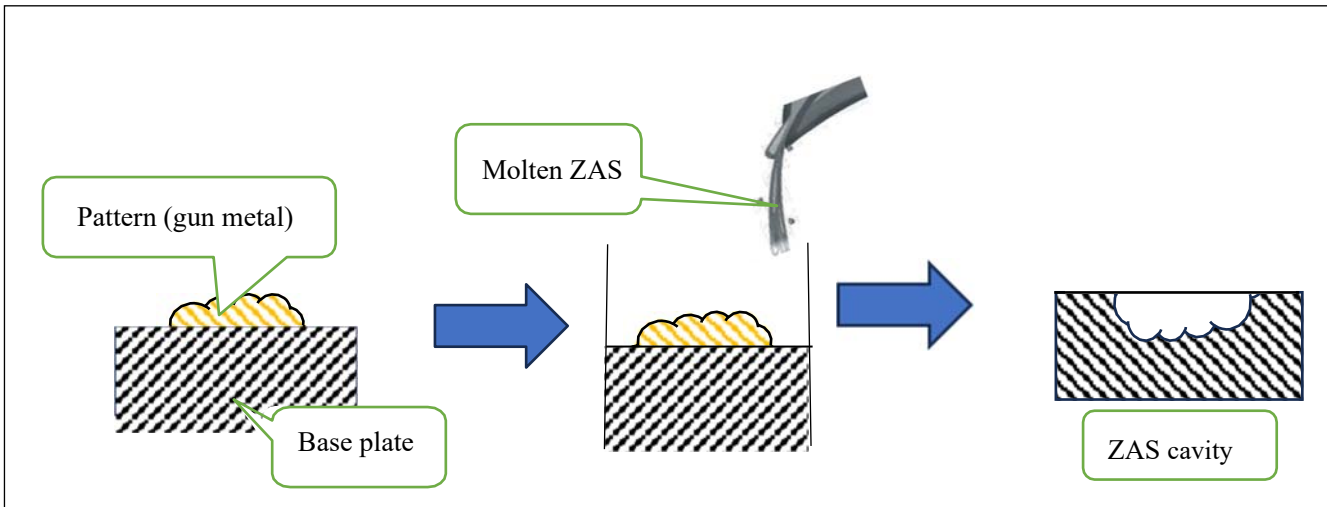
Fig. 6 Female thread for insertion piece mounting



(3) Pattern

There were eight patterns of various aspects (example Figure 3). The pattern is a model (= positive) that has the same shape as the mold, when a large number of cavities are made by casting. Low melting point zinc-alloy (ZAS) is used as the cavity material. For patterns, gunmetal is used which has a higher casting temp. than ZAS and is easy to be processed (engraved). Fig. 7 shows the process of forming a ZAS set piece from a gun metal master.

Fig. 7 Process for ZAS cavity insert



Normally, the cavity insert is made as shown in Fig. 8, and pattern is screwed to the base plate and subjected to ZAS casting. In this case, the back of the master is provided with a female screw for mounting. The screw sizes were M5 and M6. Some were integral with the base plate (Table 1, No.7, Fig. 9).

Fig. 8 View of the screw set



Fig. 9 Pattern integrated with the base plate



Fig. 10 Examples of ZAS cast parts



(4) Negative ZAS parts

Two of ZAS negatives parts shown in Fig. 9 (Table 1, 1 and 2) were included. It seems to be processed to a cavity insert.

(5) Positive ZAS parts

There were positive ZAS parts (Table 1, 3, 4, and Fig. 4). This application is not known. If it is assumed that ZAS was used to confirm the cavity configuration at a stage where the celluloid could not be used for some reason.

4. At the end

This collection contains a variety of molds and jigs, as well as items that cannot be stored (or found) in Celluloid House Yokohama. In particular, ZAS casted parts are used to identify the mold fabrication process and the mold construction. It is an important proof when considering the actual mold fabrication/molding sequence. In this sense, it is valuable, and I hope that it will be kept in the collection and continued to be exhibited and investigated.

Table 1: List of molds stored in Osaka

No.	Type	Product name	Negaposi	Material	Dimensions	Note 1	Note 2
1	Cast product	Female image	Negative	ZAS	40.3φX69.2H	Pre-processing cavity insert	
2	Cast product	Female image	Negative	ZAS	40.5X66H		
3	Cast product	Female image	Positive	ZAS	32.3X43.2X35	Transfer of No.6	With flash
4	Cast product	Female image	Positive	ZAS	29.4φX23.1h	Transfer failure	
5	Cavity insert	Female image	Negative	ZAS	23.1φX25.8h	With set screw tapping (M6)	
6	Mold for compression	Female image	Negative	Gun metal	31.1X42.4X14.5	Carved into an ellipse on the back	
7	Pattern	Rose	Positive	Gun metal	50.9φ×40.8h	Integrated structure	
8	Mold for compression	Rose	Negative	Gun metal	50.2X57.5X28.4	Stamped "25"	
9	Pattern	Hexagonal print	Positive	Gun metal	40.2φX37.5h	Scratch mark on the side	
10	Pattern	Girl	Positive	Gun metal	31.1X42.4X14.5	Carved on the back	Screw assembly (M6)
11	Mold for compression	Round flower bundle	Negative	Gun metal	52.2X52.4X12.5	Stamped of "17"	
12	Mold for compression	Darya	Negative	Gun metal	60.4X50.6X10.3	Scratches on the back	
13	Mold for compression	Chrysanthemum	Negative	Gun metal	60.1X50.6X10.3		
14	Mold for compression	Rose	Negative	Gun metal	77.7X79X13.8	Largest as a brooch (approx. 7cm)	
15	Mold for compression	Rose square plate	Negative	Gun metal	129.7X73.3X16.8		
16	Mold for compression	Headband	Negative	Gun metal	222X34.8X13.3		
17	Mold for compression	Bracelet	Negative	Gun metal	281X28.2X14.3	End 43 mm mashing	
18	Pattern	Dogs.	Positive	Gun metal	37X41X10.2	Hind foot failure	M6 eyelet
19	Pattern	Rose	Positive	Gun metal	46.3X40.2X10	M5 eyelet	
20	Pattern	Lily	Positive	Gun metal	44.7X41X10.4	M5 eyelet	
21	Pattern	Sunflower	Positive	Gun metal	46X41X10.4	M5 eyelet	
22	Pattern	Cowboy	Positive	Gun metal	42.3X49.3X9.1	M6 eyelet	

(Refer to attached photo)

(Attached photograph-I)

No. 1 ZAS negative parts Female image



No. 2 ZAS negative parts Female image



No. 3 ZAS positive parts Female image



No. 4 ZAS positive parts Female image (positive).



No. 5 ZAS negative parts Female image



No. 6 Mold for compression Female image



(Attached photograph-II)

No. 7 Pattern of gun metal Rose



No. 8 Mold for compression Rose



No. 9 Pattern of gun metal Hexagonal print



No. 10 Pattern of gun metal Girls



No. 11 Mold for compression Round flower bundle



No. 12 Mold for compression Darrier



(Attached photograph-III)

No. 13 Mold for compression Chrysanthemum



No. 14 Mold for compression Rose



No. 15 Mold for compression Rose square plates



No. 16 Mold for compression Headband



No. 17 Mold for compression Bracelet



No. 18 Pattern of gun metal Dog



(Attached photograph-IV)

No. 19 Pattern of gun metal Rose	No. 20 Pattern of gun metal Lily
 A detailed gun metal pattern of a rose, showing multiple layers of petals and a central bud, rendered in a dark, metallic finish.	 A detailed gun metal pattern of a lily flower, featuring several large, pointed petals radiating from a central point, with a dark, metallic finish.
No. 21 Pattern of gun metal Sunflower	No. 22 Pattern of gun metal Cowboy
 A detailed gun metal pattern of a sunflower, showing a large, dark, metallic flower head with a grid-like center and numerous pointed petals, surrounded by leaves.	 A detailed gun metal pattern of a cowboy riding a horse, shown in profile, wearing a hat and boots, with the horse in a trotting or galloping pose.