

Chinese lacquerware

The perfect combination of luxury and cost

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Abstract: Chinese lacquerware has a long history. As early as in the Hemudu culture of the Neolithic Age, it had already appeared. At that time, the production of lacquerware was simple, mainly daily necessities, and the lacquer colors were mostly red and black. During the Xia, Shang and Zhou dynasties, the lacquerware craftsmanship improved somewhat, and processes such as pasting gold foil and inlaying turquoise appeared. In the Warring States period, lacquerware entered all fields of life, and new processes such as laminated body appeared. In the Qin and Han dynasties, it reached its peak, and there were special departments for making lacquerware to serve the nobility. From the Eastern Han Dynasty to the Song Dynasty, the development of lacquerware was once slow, but the gold and silver flat relief in the Tang Dynasty and the carved lacquer craftsmanship in the Song Dynasty had high achievements. During the Yuan, Ming and Qing dynasties, the manufacture of lacquerware flourished again, with diverse craftsmanship techniques. The characteristics of Chinese lacquerware are rich and diverse. It is shaped with wood or other materials and is made through lacquering. It has practical functions and appreciation value. Its decorative techniques are numerous, including painting, tracing gold, inlaying, etc., with rich colors and unrestrained lines. Lacquerware has a wide range of types, including living utensils, religious ritual utensils, etc. Its products also have the characteristics of being lightweight and firm, durable, and having stable shapes.

Keywords: lacquerware, laminated body, gold and silver flat relief, lacquering

Lacquerware production is a craft that reflects the traditional Chinese thought of the unity of nature and humanity. It is also a process of transforming natural objects into luxurious and beautiful utensils through the reconstruction of processing techniques. The processing of lacquerware is different from the processing of other materials in that the production and processing of lacquer products have the characteristics of many process links, complex craftsmanship, and long time-consuming. Moreover, due to the natural characteristics of lacquer, from lacquer collection and lacquer making to lacquering, it can only be carried out under specific temperature and humidity conditions according to different seasons and climates to obtain the best lacquerware products. For example, for the simplest lacquering, dozens to hundreds of layers of lacquer need to be applied repeatedly on the carcass. For each layer, it can only be applied after the lacquer layer is air-dried under specific temperature and humidity. The required time and labor cost are extremely high.

In addition to the high cost of making and processing lacquerware itself, some techniques in lacquerware, such as qiangjin (incised gold) and piled lacquer, seem simple but require superb skills and artistic background, as well as patience and time to achieve. In addition, precious materials such as gold and silver foil, gold and silver flat removal, inlaid pearl shells, gems, and ivory can all be applied in lacquerware products, which greatly increases the difficulty of making lacquerware products. A gorgeously decorated lacquerware product may involve multiple professional skills and the processing and combination of multiple materials from

making the base to the final completion. Lacquerware and precious metals such as gold and silver, gems, etc., not only are their production materials very expensive, but also require experienced craftsmen to spend a lot of time carefully making to finally complete. It can be said that lacquerware is a very inclusive material that can integrate various decorative materials. However, for this reason, producers need to be proficient in the production and processing techniques of many different materials as well as have quite skillful and superb production skills. Only by combining the two can a perfect lacquerware product be presented. For example, for the famous Tianshui carved lacquerware, some representative works may take months or years to complete. The production involves multiple trades such as carpentry, lacquerwork, stone carving, and inlaying, as well as hundreds of processes such as applying lacquer, tracing gold, and pasting silver.

Even with the most simplified approach, lacquerware decorated only by lacquering has a rather long actual production process and cycle. And this kind of lacquerware that combines luxury and high production costs does not have a magnificent appearance like gold, silver, and jade wares when completed. Instead, it appears elegant and low-key, truly reflecting the ideological realm of Taoism that "great ingenuity appears clumsy."

1. High-start lacquer craftsmanship

The history of Chinese lacquerware is long and has a rich and colorful development process. The history of Chinese lacquerware not only shows the exquisite skills of ancient craftsmen but also reflects the development of social culture and aesthetics in various periods. The Chinese character for "lacquer" vividly shows the process of tapping lacquer: there is a "wood" on the top, a "water" on the bottom, and a left and right stroke in the middle, representing the bamboo slices inserted into the trunk when tapping lacquer. The lacquer liquid of the lacquer tree is like water by the bamboo slices, and a bucket is placed below to collect the lacquer juice.



Lacquer-painted chest from Marquis Yi of Zeng's tomb, Warring States period

In the Neolithic Age, primitive people were surprised to find that the natural juice extracted from lacquer trees could be used for strengthening and repairing production tools due to its adhesiveness. Subsequently, people discovered that applying lacquer on the surface of wooden objects could give wood products a long-lasting protective film. According to Chinese archaeological findings, as early as on the surface of Neolithic pottery jars, there was already the practice of applying lacquer. Wooden objects with lacquer decorations were also unearthed in the Yin Ruins in Anyang, Henan Province, showing the long history of lacquerware in China. Before making lacquerware, one generally needs to prepare the object to be initially coated with lacquer to determine the initial shape of the lacquerware, which is called the base. In the early stage, the most common ones were wooden bases and a small number of bamboo bases. Later, with the improvement of craftsmanship, there were also gold and silver bases and porcelain bases. Different materials can be selected as the inner base according to the shape and purpose of the utensil.

In addition, there is also a kind of laminated fabric core. For the laminated fabric core, wood or clay is first used to make a vessel shape as an inner mold. Then, multiple layers of linen or silk are attached to the inner mold. Lacquer is applied layer by layer. After it dries and solidifies, the inner mold is removed, leaving the laminated fabric core. This is called the "bodiless method". This method can greatly reduce the weight of lacquerware and can be used to make large statues. Many Buddha statues adopt the method of laminated fabric core. It not only makes use of the stable texture characteristics of lacquerware and its ease of carving and coloring to create vivid Buddha statues, but also makes use of the anticorrosive and easy-to-preserve characteristics of lacquer products to ensure the integrity and stability of Buddha statues. The seated statue of Monk Jianzhen made in the Tang Dynasty (618-907 AD) in China adopts the method of laminated lacquer statue. The painted Buddha statue is 84 centimeters high. The eminent monk is wearing a kasaya, with his eyes closed, a smile on his lips, and his hands folded on his knees, showing the dharma appearance of the eminent monk at the time of his passing away. It is as real and vivid as a real person and has been enshrined until now. Because the Buddha statues made by the lacquer method are relatively lightweight and easy to move, it has become a very common method for making Buddhist statues.

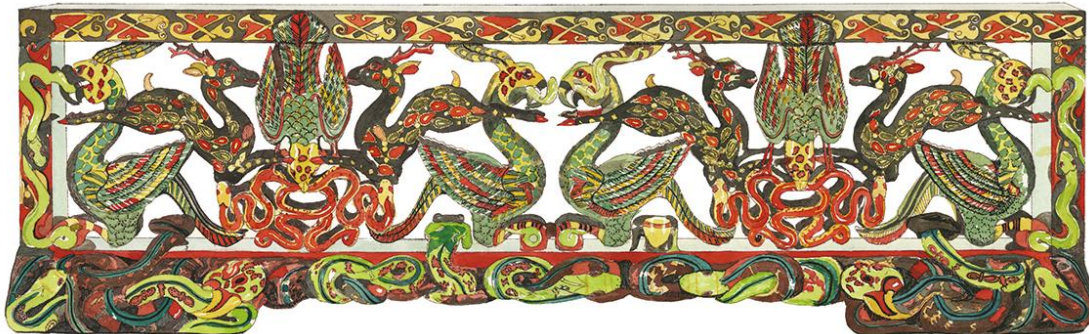


Gilded lacquer statue of Bodhisattva



Lacquer box with piled lacquer soul pattern, Western Han Dynasty during the reign of Emperor Wen

In ancient lacquerware, the "lacquer" is natural raw lacquer, which is raw lacquer collected from lacquer trees. "White as snow, red as blood, black as iron" refers to the process in which the natural lacquer changes from a liquid state to an oxidized and dried state, and its color changes from light to dark, finally forming a solid lacquer film. The lacquer liquid secreted by lacquer trees is a thick, grayish-white juice. When these collected juices are oxidized after coming into contact with air, they will turn chestnut-shell color. After being dried in the sun, they will become a shiny brown lacquer film. When brushed on objects, it is the original lacquerware. However, people are not satisfied with the natural black lacquer color, so they will add pigments to the lacquer. Black is the most common. In ancient times, there was such a saying: "All lacquers that do not mention colors are black." There are two methods for the ancients to make lacquer black. First, add soot to the lacquer. Although the color is black, there are residues. Second, add iron rust water to the lacquer. The urushiol and iron oxide have a color reaction. After mixing evenly, brush it on objects. It is jet-black like ink. The black lacquer obtained by this method is also called black lacquer or dark lacquer. However, there are other colors for ancient lacquer. Pigments added to lacquer are an indispensable main component for preparing colored lacquer. Since ancient times, several pigments that can be added to lacquer include silver vermilion, ochre, iron oxide red, indigo, and pine soot.



Lacquer screen painted with beasts and birds, Warring States period

The high production cost of lacquerware is caused by many factors. First of all, lacquer trees grow in special environments and cannot be widely planted everywhere like other tree species. Therefore, they are mostly produced in central China. The difficulty in planting directly leads to limited harvest. The quantity is small and the output is low. Moreover, it is not easy to pick. In ancient times, there was a saying that "it takes a thousand cuts within a hundred miles to obtain one catty of lacquer." Raw lacquer is toxic and can easily cause allergies in lacquer collectors, making the collection even more difficult.

Secondly, in terms of process cost: On one hand, the production process of lacquerware is complex. Each piece of lacquerware may take several weeks or even months to complete. This also means that the manpower, time and cost required for making lacquerware are relatively high. Regardless of the size of a piece of lacquerware, it needs to be coated more than a hundred times or even two hundred times. The layers are stacked on top of each other, and each layer merges, infiltrates, interlocks and blends with each other. After each coating, it needs to be dried in a shady room for more than three days. Exposure to sunlight or heat will definitely cause it to crack and it can only be air-dried. Calculated in this way, the production cycle of a single piece of lacquerware is at least one year or more. On the other hand, the technical requirements for making lacquerware are relatively high, and unique lacquerware production skills need to be mastered. These techniques often require long-term learning and training, and the inheritance channels are limited. Due to the scarcity of technology, craftsmen can usually raise prices to reflect their professional skills and labor costs. Finally, the production of lacquerware may also involve materials such as gold, silver, gemstones, mother-of-pearl, etc. The cost of these materials themselves will also affect the cost of making lacquerware.



Lacquer-backed mirror inlaid with mother-of-pearl figures, flowers and birds, Tang Dynasty

Lacquerware is an important category of practical utensils and handicrafts in ancient China. Archaeologists, through excavating and researching ancient ruins and tombs, not only discovered the existence of lacquerware but also inferred that humans began to use lacquer as the raw material for handicrafts very early. Although primitive people may have been aware of some basic uses of lacquer, their understanding of the chemical properties and production techniques of lacquer may be relatively limited. As time passed, the use and production techniques of lacquer gradually developed, forming a more complex and refined lacquerware culture. After the Xia Dynasty (approximately 2070 BC - approximately 1600 BC), the varieties of lacquerware increased. In the Shang Dynasty (approximately 1600 BC - 1046 BC), the production of lacquerware began to be particular, using thick wooden tires, and gold foil inlay appeared, which was the beginning of the gold foil inlay technique in the history of lacquer craftsmanship. During the Western Zhou Dynasty (1046 BC - 771 BC), lacquer craftsmanship further developed. Painting and inlay became the main decorative techniques, reflecting hierarchy and order. A lacquer dou (a kind of container) from the Western Zhou Dynasty is not only composed of contrasting patterns of black and red lacquer, but also has a circle of mussel shell ornaments inlaid regularly on the belly of the dou. The colors are in sharp contrast, and the flowing colors of the mussel shells also appear very magnificent against the background of black and red lacquer. A major development and change of lacquerware in the Shang and Zhou Dynasties (1046 BC - 256 BC) is that it moved from ritual vessels to daily necessities. The practice of applying lacquer layers on the surface of utensils was widely used in many daily utensils. At this time, the patterns on the surface of lacquerware products were simple and the style was bold.



Square dou with phoenix pattern. Dou is a utensil for holding food.



Dou inlaid with mussel shells, early Western Zhou Dynasty

During the Spring and Autumn and Warring States periods (770 BC - 221 BC), lacquer trees were widely planted and the application of lacquer became more and more extensive. At this time, lacquerware production became a specialized industry, and the fineness of lacquer craftsmanship was improved. In addition to the early wooden carcass, new carcass forms such as bamboo-woven carcass also appeared. During the Warring States period (475 BC - 221 BC), the lacquerware industry was included as an important source of economic income by the state, so it was very prosperous and the production scale of lacquerware was large. In addition to daily utensils, some large and exquisite lacquer artworks began to be made, and the pattern decoration on the surface of lacquerware became more detailed and complex. The early lacquerware shapes still came from bronzes. For example, a square-shaped lacquerware with phoenix bird patterns in the Warring States period had a square body and a high foot style, which was very similar to the bronze dou of the same period. Because lacquer trees were produced in the Chu region (in the middle of the China), lacquerware from Chu was particularly representative, with very high production skills and aesthetic levels. A painted and lacquered tiger-seated double-bird drum unearthed from the Chu tomb at Wangshan in Jiangling in the north in 1965 is 87.8 centimeters long, 104.2 centimeters high, and 15.9 centimeters wide. It is made of wood with round carving. The drum base is two tigers lying on their backs facing each other. The two tigers are based on black lacquer and decorated with red lacquer cloud patterns. The tiger's shape has its head held high and its tail raised, with an imposing manner. There is a phoenix standing on the back of each tiger, looking up to the sky with its sharp beak slightly open, as if it is stretching its neck and chirping. The two phoenixes are based on black lacquer. The red lacquer lines outline the feather contour lines, and then different color blocks are filled in within the contour lines. The metal rings at the connected parts of the bird tails, together with the metal rings behind the heads of the two phoenixes, form a triangle for pulling and fixing the drum surface in the center. This lacquer drum in the shape of animals uses three craftsmanship methods of lacquer, carving, and painting to create a very practical and beautiful musical instrument.



Lacquer drum with two phoenixes

Another painted lacquer decorated wooden carved sika deer was unearthed from the Tomb of Marquis Yi of Zeng. It is a round carved wooden work from the early Warring States period. The deer is in a crouching position lying on the ground. The body is carved from a whole piece of wood. The head can rotate freely. The real antlers on the head are also decorated with black lacquer. The whole body of the deer is based on black lacquer. Yellow lacquer is used to depict melon seed-shaped dotted patterns on the deer's body. The eye sockets, lips, and nostrils of the deer are painted with bright red thick lacquer. There is a small square opening at the tail of the deer. It is speculated that it may be used to insert the upper component. Obviously, the deer body is the base of a certain utensil. It is beautified by painting and lacquer painting. At the same time, the lacquer layer is also used to protect the wooden carving. Another painted mandarin duck dou (a kind of food container) from the Warring States period is also made of wood. It is composed of a deep plate with a cover, a thin handle, and a flared base joined by tenons. The cover and the plate are fastened with a female-male opening. The inside is oval. When the outside cover and the plate are fastened, it presents the image of a mandarin duck bird lying quietly with its head turned back and resting on its wings. The mandarin duck's wings are closed, its claws are curled, and the end of its tail is slightly upturned. The round bird image, head, body, wings, feet, and tail are all treated with bas-relief.

The carving is fine and the image is vivid. The handle and the base are made of whole wood. There is a convex ridge in the middle of the handle. The flared base is relatively high and hollow. The surface of the utensil is based on black lacquer. On it, red, gold, yellow and other colors are used to paint feather patterns. On both sides of the tail are two symmetrical phoenixes looking back. On the handle and base of the dou are painted curling cloud patterns and interlocking cloud patterns. The entire painted mandarin duck dou is 25.5 centimeters high and the diameter of the plate is 18.2 centimeters. It is not a large lacquer ware. But because of this, both the painting and carving are very fine. Although the patterns are simple, they are very smooth and vivid. It is a practical utensil and also a display handicraft.



Painted sika deer



Painted mandarin duck dou

In the Qin Dynasty (221 BC - 207 BC), lacquer was widely used as an important economic resource. The flesh color on the faces of the Terracotta Army was also decorated with a base of lacquer. The lacquer craftsmanship of the Qin Dynasty inherited the legacy of the Warring States period but became more standardized. The "marking of craftsmen's names on products" system emerged, which meant that the makers of artifacts had to engrave their names on the artifacts to facilitate the inspection of product quality by managers and ensure traceability of quality responsibilities, thus improving product quality. The Qin Dynasty advocated black, so the most representative lacquerware was black-based with red patterns. Common patterns were various variants of divine bird patterns.



Meng with deformed bird pattern, Qin Dynasty



Ear cup with bird pattern, Qin Dynasty

The lacquerware craft in the Han Dynasty (202 BC - 220 AD) further developed on the basis of inheriting traditions. After continuous development in previous dynasties, the lacquerware production process was relatively mature. Therefore, it presented characteristics of large production scale, complete varieties, and exquisite craftsmanship. Moreover, the production areas of lacquerware were also more extensive. The Han Dynasty was the heyday of lacquerware. The varieties of lacquerware further increased, and a variety of new craft techniques were created, such as multicolored, needle engraving, copper buckles, gold foil pasting, tortoiseshell pieces pasting, inlaying, and piled lacquer. The lacquerware craft of the

Han Dynasty reached its peak and penetrated every corner of life. A large number of sets of daily-use lacquerware appeared.



Painted lacquer pot with cloud pattern, Western Han Dynasty

The lacquerware unearthed from Mawangdui was unearthed in Changsha City, Hunan Province in 1972. It is lacquerware from the Western Han Dynasty (202 BC - 8 BC). The Mawangdui Han Tombs are the tombs of Li Cang, the prime minister of Changsha State in the Western Han Dynasty and the marquis of Dai. More than 700 exquisite lacquerwares were unearthed. These lacquerwares are famous for their exquisite craftsmanship and preservation state. The craftsmanship is complicated. It can be said to represent the superb skills of lacquerware production in the Han Dynasty and show the glorious achievements of the lacquerware industry in the Han Dynasty. The types of lacquerwares are rich, including tripods, boxes, pots, fang, zhi, ear cups, plates, cosmetic boxes, etc. The number of ear cups accounts for more than half. The carcass of lacquerware is mainly made of wood, a small amount of bamboo, and some are made of laminated carcass. The decorative patterns are mainly geometric patterns, and also include dragon and phoenix patterns and grass patterns. The carcass of the lacquerware unearthed from Mawangdui is exquisitely made and the lacquer layer is uniform, showing superb skills. In addition to the curved and continuous cloud-like decorative patterns, the most representative lacquer plate also depicts the images of four cats. The three-character inscription "Please enjoy your meal" is written in the food plate, and the five-character inscription "Nine liters, the family of the marquis of Dai" is written at the bottom of the plate. It not only indicates its use and origin but also vividly depicts the

image of cats. In addition, some lacquerwares also have branded stamps, such as "Made in Chengshi grass" and "Made in Chengshi full". These stamps may be marks of the place of origin or production workshop of the made lacquerware.

On some lacquer wares, the needle engraving technique is used. That is, patterns are carved on the undried lacquer film with awls or needles. This technique had emerged in the Warring States Period and was further developed in the Han Dynasty. Due to the preservation conditions of the Mawangdui Han Tomb reaching constant temperature, constant humidity, oxygen deficiency, and sterile conditions, many lacquer wares have been extremely well protected. Although these lacquer wares have gone through more than two thousand years, they can still remain shiny after being unearthed, just like their appearance when they were first completed. Among the lacquer wares unearthed from the Mawangdui Han Tomb, there is a cloud-pattern lacquer tripod. When it was taken out during archaeological excavation and the tripod cover was opened, it was found that there was soup and lotus root slices inside the tripod. These lotus root slices were still clearly distinguishable after being soaked for more than 2,100 years, but they dissolved soon after being exposed to air.



Lacquer tripod with cloud pattern, Western Han Dynasty

The prosperity of economy and culture and the strength of national power in the Tang Dynasty (618 - 907) also directly promoted the development of lacquerware craftsmanship. Lacquerware products made great progress in both technology and plastic arts. In particular,

the prevalence of gold and silver "pingtuo", the development of mother-of-pearl inlay, and carved lacquerware with red lacquer also began to appear. In addition to more exquisite decoration, another major feature of Tang Dynasty lacquerware is its wide application, which has developed further compared with previous dynasties.

In terms of technology, the gold and silver pingtuo process was widely used at this time. This is a technological technique that combines lacquer painting and metal inlay. As early as the Shang Dynasty, people had already tried to decorate lacquerware with gold and silver foil appliques. After continuous application and experimentation for a long time, mature gold and silver pingtuo skills were formed in the Tang Dynasty. Gold and silver pingtuo is a technological technique that combines lacquer painting and metal inlay and is a famous decorative technique for utensils in ancient China.



Secret color porcelain flat inlaid lacquer bowl, Tang Dynasty

Artisans made gold and silver into foil sheets. They pasted honeysuckle flower sheets with various processed patterns on the surface of lacquerware, then applied two or three layers of lacquer. After the lacquer dried, they carried out fine polishing to reveal the honeysuckle flower sheets under the lacquer layer, forming the "gold and silver pingtuo" technique. The gold and silver patterns formed by this decorative method can be on the same plane as the lacquer bottom or can be higher than the lacquer bottom to form a three-dimensional pattern effect. In the underground palace of Famen Temple in the Tang Dynasty, artifacts decorated with pingtuo technology have been unearthed. Moreover, due to the development of porcelain, in the Tang Dynasty, there also appeared a decorative form of secret color porcelain gold and silver pingtuo lacquer, which combined the decoration of lacquer with more artifacts of

different materials. In addition to being combined with porcelain artifacts, it is also combined with artifacts of other metal materials. For example, using the excellent adhesive property of lacquer as a decorative material on the back of bronze mirrors, and inlaying mother-of-pearl and gold and silver decorations on the lacquer layer. In addition, lacquer craftsmanship is also widely used in the production of musical instruments. Now, many institutions including the Palace Museum in China cherish Tang Dynasty guqins. Most of these guqins are made of wood with an external lacquer layer, and mother-of-pearl and gold and silver decorations are added to the lacquer layer. They have been preserved to this day because of the stable characteristics and excellent anti-corrosion properties of lacquer materials.



Jiuxiao Huanpei Qin, Tang Dynasty

The Song Dynasty (960 - 1279) and Yuan Dynasty (1271 - 1368) periods saw lacquerware

mainly in single colors, but many highly decorated lacquerwares were also unearthed. In particular, the carved lacquer craftsmanship of the Yuan Dynasty had a profound influence on the Ming and Qing dynasties that followed. The characteristic of the lacquer layer of objects in the Yuan Dynasty is that the piled lacquer is relatively thick, and then the decorative patterns are carved with a knife. After the Yuan Dynasty, the production scale of lacquerware continued to expand. During the Ming and Qing dynasties, both the production scale and processing techniques of lacquerware production had further development. Various places emerged with their own unique lacquerware processing techniques, such as carved lacquer in Beijing, inlaid mother-of-pearl in Yangzhou, bodiless lacquerware in Fujian, etc., each with its own characteristics.



Shen's bodiless lacquer peach plate, Qing Dynasty

The Yuan Dynasty is an important period for the development of Chinese lacquerware craftsmanship. In particular, the carved lacquer craftsmanship achieved brilliant achievements.

During this period, a group of famous lacquerware makers with outstanding skills emerged, such as Zhang Cheng. Zhang Cheng is a carved lacquerware craftsman in the late Yuan Dynasty. He is from Xitang, Jiaxing, Zhejiang. He is not only good at carved lacquer craftsmanship, but also has achieved achievements that others cannot reach in techniques such as red carved lacquer and inlaid gold and silver. Especially, he is most famous for making red carved lacquerware. His works have thick lacquer coatings and smooth knife techniques. The patterns on the finished utensils do not show knife marks. He often engraves the inscription "Made by Zhang Cheng" in the hidden parts of the utensil.

2. Superb lacquer processing technology.

The craft of carved lacquer emerged as early as the Tang Dynasty and matured in the Yuan Dynasty. Particularly represented by Zhang Cheng's carved lacquerware, it had reached a very high technological level. In the Ming and Qing dynasties, carved lacquer was used as a special supply of royal lacquerware, and was specially produced and processed by the royal family. As a result, the carved lacquerware of this period had very high quantity, quality and technological value. At this time, the types of carcasses for carved lacquerware were more diverse. In addition to the traditional wooden carcass and bamboo carcass, there were also many materials such as porcelain carcass, metal carcass and grey carcass. When making it, first apply lacquer on the carcass. After applying one layer, let it dry and then apply another layer. During the drying period of the lacquer layer, pay attention to the humidity and temperature of the air. For objects to be carved with lacquer, generally the lacquer layer is relatively thick, with at least dozens of layers and as many as three to five hundred layers. After the lacquer layer is painted, first design the image on the surface of the lacquer layer, and then use a knife to carve to form relief-like patterns. Finally, polish the patterns. Carved lacquer can be divided into many varieties according to the different colors of carved lacquer. Using natural lacquer, vermilion lacquer is the most common. There are also techniques for carving with other colored lacquers, such as picking yellow, picking green, and picking rhinoceros horn.



Porcelain-bodied carved red flower water dropper



Gilt copper high-foot bowl with baby play pattern

Carved red lacquer, also known as piled vermilion or carved red lacquerware. It is one of the most important traditional Chinese lacquerware techniques. Its history can be traced back to the Tang Dynasty. In "Xiushi Lu - Kunji - Carving and Engraving Tenth - Carved Red Lacquer," written by Huang Cheng of the Ming Dynasty, it is written: "Carved red lacquer is carved red lacquerware.... The products of the Song and Yuan dynasties have clear hidden edges, smooth and rounded reliefs, and are exquisitely delicate." It often uses wood ash or metal as the base. Layers of red lacquer are applied on the base. When it is semi-dry, a draft is drawn, and then patterns are carved. The decorative themes of carved red lacquer include landscapes, figures, flowers, birds and beasts, auspicious patterns, etc., which are rich in strong traditional cultural characteristics. In addition to being used as process ornaments, carved red lacquerware is also often used in daily necessities, stationery supplies, furniture and religious ceremonial utensils. Carved yellow lacquer is carved yellow lacquerware. Carved green lacquer is carved green lacquerware. For carved polychrome lacquerware, when applying lacquer, multiple different colors of lacquer layers can be applied on different layers. When carving, carving can be done on different lacquer layers, finally forming a colorful lacquerware appearance. Among these, carved rhinoceros horn pattern lacquerware is the most representative.



Lacquer plate with painting of Post-Red Cliff Ode, Southern Song Dynasty

Tixi is also a technique in traditional Chinese lacquerware craftsmanship. Its method is basically the same as that of Tihong. The difference is that Tixi is made of alternating layers of red, black, or vermillion, black, and red lacquer. Therefore, the cross-section of the lacquer layer formed by the knife edge after carving presents a two-color line image of alternating black and red, very much like the cross-section of a rhinoceros horn, and hence gets its name. Lacquerware carved using the Tixi technique can present a black and red alternating effect in its patterns, which is very elegant. Therefore, its carvings are mostly concentrated on simple and atmospheric patterns such as cloud patterns and flower patterns, highlighting the classical and elegant style of utensils.



Lacquer vase with carved red flower pattern, Yuan Dynasty

One notable characteristic of the carved lacquerware technique is the distinct layering of the lacquer. Each layer of lacquer can be carved into different patterns or textures, creating rich visual effects. After the carving is completed, different colors can be applied to the lacquer surfaces of different layers to enhance the contrast and visual impact of the patterns. The carved lacquerware technique is known for its fine carving, rich layering, and vivid color contrast. It not only requires craftsmen to possess superb skills but also demands patience and a meticulous work attitude. In order to increase the color variation of lacquerware patterns and highlight the pattern image, there are two types of lacquerware derived from several previous processing techniques. One, which increases the planar pattern effect, is called carved and inlaid lacquerware. The other, a technique that increases the three-dimensional pattern effect, is called piled lacquerware.



Lacquer box with carved rhinoceros pattern

The name of carved and inlaid lacquerware was first seen in "Gongbu Changku Xuzhi" by He Shijin in the late Ming Dynasty (1368 - 1644). The carving and inlaying technique was popular in the Ming and Qing Dynasties (1644 - 1911) and became a common name in the antique industry in the 20th century. The method is to carve intaglio patterns on the surface of lacquerware, then fill them with colored lacquer and smooth them. Draw intaglio lines on the patterns and fill gold in the lines. There are different production methods of carved and inlaid lacquerware. Some are real carving and inlaying, that is, carving intaglio patterns and then filling in colored lacquer and then gilding; some use painting instead of carving and inlaying, and then gilding after painting; some are partly carved and inlaid and partly painted. The two methods are applied simultaneously and finally gilding. The technique of piled lacquer appeared as early as the Han Dynasty (202 BC - 220 AD). Its characteristic is to use lacquer putty and lacquer to pile up patterns and create a three-dimensional decorative effect. It is a very ancient lacquerware decorative technique. The piled lacquer process usually involves applying a layer of lacquer first and then sticking a layer of charcoal powder to thicken layer by layer, or piling up lacquer layer by layer. In the process of piled lacquer, sometimes it needs to be polished and sometimes it needs to be colored to form a three-dimensional pattern. After piling up is completed, the surface is polished to make it smooth. Also creating a protruding pattern effect on the surface of utensils, carved lacquer is carving and piled lacquer

is molding. It makes lacquer painting break through the limitation of plane, increase the factor of sculpture and also enhance the visual effect.



Polishing lacquerware



Painting lacquer on lacquerware



Carving patterns on the surface of lacquerware with draft prepared

In addition to carved lacquerware, there is also a practice of directly painting decorative patterns on the surface of lacquerware, called painted lacquer. According to different techniques, it can be divided into two techniques: painted lacquer and painted oil. Painted lacquer is to use various colored lacquers to depict patterns on a plain lacquer ground. Painted oil, also known as painted brocade, uses tung oil instead of lacquer and mixes various bright colors to draw patterns. Painted lacquerware has a long history and can be traced back to the pre-Qin period. At that time, all lacquerware was painted with colored lacquer. Since the appearance of oil colors on lacquerware in the Han Dynasty, the use of oil colors has been increasing day by day, making the colors of lacquerware more gorgeous and rich. In the Ming and Qing dynasties, the use of oil colors on lacquerware was quite common. Painted lacquerware pays great attention to the quality of the lacquer base. In order to prevent the lacquer base from cracking and ensure the long-term preservation of lacquerware, cut summer cloth according to the size of the carcass and paste it on the wooden carcass with wheat lacquer. Then a coating needs to be applied to the lacquerware. In jargon, it is called "lacquer base". After brushing with putty made of raw lacquer and various seasonings, lacquer materials are applied to the carcass, and then polished and air-dried to form plain lacquerware. Finally, craftsmen use various colored lacquers to depict patterns on the plain lacquer ground. Painted oil uses tung oil instead of lacquer and mixes various bright colors to draw patterns.

The patterns and designs of painted lacquer are all drawn by craftsmen. Therefore, it is closest to the effect of painting. Although the patterns are in a flat form, various images can be depicted very delicately and realistically. Moreover, the use of oil colors can also make various pattern designs colorful and prominent. It can be used together with other decorative techniques such as carved lacquer, or all painted lacquer can be used to make colorful patterns.



Lacquer box painted with double butterflies, Qing Dynasty

In the processing technology of lacquerware, there is also a special method called tracing in gold. The characteristic of tracing in gold lies in decorating lacquerware with gold color. It is usually combined with black or red primer. The patterns of gold-traced lacquerware are completely covered with gold, so the finished product is resplendent and extremely magnificent. The practice of gold-traced lacquerware had already appeared as early as the Warring States Period. In the Sui and Tang Dynasties, it was also introduced to Japan and had a profound influence on the development of Japanese lacquerware. "Xiushi Lu" written by Huang Cheng of the Ming Dynasty describes the technique of gold-traced lacquerware: "Tracing in gold, also known as mud gold painted lacquer, is pure gold flower patterns. Red ground and black texture are both suitable. Its patterns include landscapes, feathers, flowers

and fruits, figures and stories, etc.; and fine hooking is yang, sparse drawing is yin, either in black or with colored gold images." The production process of gold-traced lacquer is also to first apply lacquer on the polished plain body. Either red lacquer or black lacquer can be used. This layer of lacquer is called topcoat lacquer. After the lacquer layer reaches the desired thickness, it is dried and polished to make the surface polished and bright. Then, use transparent lacquer to mix colored lacquer. Thinly trace patterns on the surface of lacquerware, and then put it in a greenhouse. When the lacquer is about to dry, use a silk cotton ball to apply the finest gold powder or silver powder on the patterns to make the entire pattern appear golden or silver. On this basis, there is also a gold-traced method in which a material called gold glue lacquer is used to first draw patterns on the finished lacquer ground, and while the gold glue lacquer is not completely dry, gold foil or gold powder is stuck on. This method can make the golden patterns present a three-dimensional effect and can also be combined with colored painting. That is, on the basis of gold tracing, patterns are painted with various colors. In addition, according to needs, mica mother-of-pearl, gold sand, rolled gold, mud gold, fine gold, etc. can also be decorated on gold-traced lacquerware at the same time to increase its artistic value and ornamental value. The gold-traced technique can obtain all-gold and silver decorative effects, so it is also used in architectural decoration and becomes a unique architectural colored painting. Especially yellow is the exclusive color for the royal family. Therefore, gold-decorated colored paintings have also become a high-level and high-specification practice and are exclusively used by the royal family.



Color painting and gilding



Color paintings in Dehui Hall

Lacquerware is a very important craft technology in the history of Chinese arts and crafts. There are also a considerable number of exquisitely made lacquerware relics. At the same time, the changes in the production and manufacturing technology of lacquerware also occupy an important position in the history of Chinese science and technology. It not only reflects the progress of ancient Chinese chemical technology and material science but also shows the exquisite achievements of the combination of handicraft technology and scientific processing technology. The production of lacquerware involves the collection, processing, and application of raw lacquer. As a natural resin coating, the use and processing of raw lacquer not only involve lacquerware as a material but also involve the combined application of various materials such as wood, bamboo, metal, mother-of-pearl, and gemstones. The selection and treatment of these materials show the ancient understanding and application of different material properties. The production process of lacquerware includes various techniques such as lacquering, painting, inlaying, and carving. The innovation and development of these technologies reflect the high level of handicraft technology and are also the result of the in-depth development of human material science. Lacquerware had extensive uses in ancient society. Moreover, it was not only cherished domestically but also spread to other regions through trade routes such as the Silk Road and had a profound impact on East Asian and Southeast Asian countries.



Lacquer plate with carved yellow dragon and phoenix pattern, Ming Dynasty

Reference:

- [1] Yu Yuan and Jin Kaicheng. "An Introduction to Chinese Culture: Ancient Lacquerware". Jilin Publishing Group Co., Ltd. Published in April 2010.
- [2] Zhou Mingming and Song Fanghua. "Historical Origin of Lacquerware Decorative Techniques". "Friends of Science (First Half of the Month)", Issue 06, 2014.
- [3] Zhu Hengfu and Luo Dan. "Lacquerware Art of the State of Chu". "Journal of Hanjiang Normal University", Issue 05, 2019.
- [4] Hong Shi. "Research on Early Lacquerware in China". Social Sciences Academic Press. Published in April 2022.
- [5] Wang Ye. "An Overview of Ancient Chinese Lacquerware". China Commerce Press. Published in 2015.
- [6] Qiao Shiguang. "Lacquer Art". China Academy of Art Press. Published in 2000.

[7] Pan Tianbo. "The Great Lacquer Dynasty". Jiangsu Phoenix Fine Arts Publishing House. Published in 2018.

[8] Wang Qijun and Xie Yan. "History of Chinese Arts and Crafts". China Machine Press. Published in 2008.

[9] Pan Tianbo. "Lacquer Color: Chinese Lacquerware and the Silk Road". Huangshan Book Society. Published in 2024.

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