

## **Illumination tools in the 19th century Artistic archaeological study in the light of selected models preserved in Abdeen Palace**

**Museum in Cairo**

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### **Summary:**

The study of Islamic arts is one of the important matters, as it reflects the extent of progress and development of Islamic people, and what they were of civilization, and the enjoyment of progress and prosperity. Illumination tools are among the most important tools that have accompanied man throughout the ages, and the era of the Muhammad Ali Dynasty witnessed many types and forms of Illumination tools, as we received many of these pieces preserved in palaces and museums, which reflect a wonderful artistic taste, it is known that the Dynasty of Muhammad Ali has been greatly affected by artistic trends that prevailed in Europe, Especially Khedive Ismail, as he was known to be the carrier of the European Renaissance to Egypt, due to his intense influence on European culture and architecture, especially the French, These European influences were represented in the use of the Baroque and Rococo styles in forming and decorating the Illumination tools of the group under study, and the research deals with a set of lighting tools that are dated back to the (13th AH / 19th century). Saved Hall Silver Abdeen Palace including (Lamps - candles), archaeological study of art. An analytical study of Illumination tools will be done in terms of functions and shapes and a study of the raw materials from which this group was made and the methods of formation and methods of decoration and also the various decorative elements that were found on this group, whether plant or engineering or living or fictional objects in addition to artistic effects

### **Key words:**

Lamps - candles - silver - gold - decorations - Baroque and Rococo - effects

### **Analytical study: -**

#### **First artifacts in terms of shapes and functions: -**

**1- The lanes: in terms of shape:** It is a container consisting of a round, oval or almond shaped bowl, the top of which is a lid, which has a nozzle in which the oil is poured, and it has a hole from the extended side from which the wick comes out, and it has a handle from the opposite side, and the word is embarrassed by opening the M. It means that the filament and the fat are placed in it, but the wick is the filament. According to the records of the Abdeen Palace Museum, it shows the furniture seen in terms of the use of gold and silver in its manufacture .

**The lanes: in terms of function:** they are distinguished by the ease of carrying them from one place to another according to need, and the simple cost of lighting them, and it is noted that the body takes the spherical shape in order to accommodate the largest amount of oil and the presence of a hole on the body to fill the lamp with oil, and the manufacturer made a cover for it to prevent the fall Oil, and a hand for the lamp in a decorative way for easy carrying, and also the manufacturer's keenness to use a fuse of a fibrous material that is characterized by the ability to absorb oil .

**2- Candles:** in terms of form: these candles were associated with daily social life, whether in lighting them for mosques or palaces, as they were presented as a kind of vows to be placed on both sides of the mihrab, or on the sides of the building in the palaces, and they were placed on their tables, and were in the homes, they are allocated wall cabinets that are kept in them during the day, until they are taken out at the end of the day, and they are lit by wax. The candles in the era of the Muhammad Ali family were distinguished by their influence on the style of the Baroque and Rococo style. We have received from this period many forms of candles of different shapes and sizes. Among the most important forms of candles that appeared in the nineteenth century preserved in the Silver Hall in the Abdeen Palace Museum, including one candlestick with one candle, with floral and engineering motifs in the style of brook and rococo, and another candlestick with three arms.

**The candle: in terms of function:** The candle is considered one of the most important mobile lighting tools, easy to use, and is transported to any place as needed, and the lighting power can be controlled through the number of arms above which the candle house is installed, and he made the body of the menorah have elongation, in order to suit his job, which is moving through the fist of the hand, and we find a kind of candle with legs to hold it in place.

### Secondly raw materials:

**Gold:** One of its most important properties is its yellow color and luster, and it is not affected by the air or materials and chemical acids. Pure gold is not sufficiently hard so it is mixed with copper or silver to increase its hardness. Egypt is the area between the Nile Valley and the Red Sea south of the Qena Qasir Road to Egypt's border with Sudan, and the gold mines in the Nuba country in southern Egypt from Aswan to Wadi Halfa. Translator of references to the attention of Mohammed Ali search for gold sources, gold has been used in the coating Lamps made of silver in the era of the family of Muhammad Ali.

**Silver:** It is characterized by its ability to withdraw and trail, it is a good conductor of heat and is characterized by not being affected by air or water, and does not oxidize if it is heated in the air. The Jews monopolized most of the silver trade in Egypt during the era of the Muhammad Ali family, and the Jews drafting in Cairo concentrated on the goldsmithing line in a neighborhood between the two pictures. Silver metal was used in making lighting tools during the era of the Muhammad Ali family, whether it came from pure silver or came from silver Gold-plated.

### Three, modulation methods:

1- **knocking:** This method is used for antiques made of silver or gold and others, and the process of making the masterpiece begins after selecting the appropriate metal plate for the design to be implemented, and cut it with scissors according to the shape of the masterpiece to be made,

followed by a Fermentation process, then let it cool down slowly, then the methods process of the tool comes with a hammer until the shape of the masterpiece becomes smooth and free from protrusions. Masterpiece to serve as decorations are different on the shelf surface.

**2- Casting in a mold:** This method is done by pouring the metal in the case of liquidity into a template that has been prepared, and the motifs and the required artistic shapes are engraved on it, it may be of wood or metal, and these motifs are engraved with gummy pits to extract prominent motifs, or carved with prominent relief to be extracted, decorations are recessed, and is used in making ornaments that are added to the lanterns and candles, and for casting the mold, the mold is broken after the metal freezes, or by separating the two parts of the mold from each other, as two molds were used to make some pieces and after completing the formation of the component parts of the tool, the manufacturer begins assembling and connecting.

#### **Four, decorative methods:**

**1- Drilling method:** Modern mechanical machines appeared, which helped facilitate the process of engraving the motifs from what was common in the traditional method. Two methods have emerged for the first drilling method. Gummy pits: In this way, the manufacturer digs the surface of the decorations themselves, leaving the areas around them by drawing the decorations that need to be executed with the pen first, then the manufacturer digs those decorations with metal pens that have a steel edge, by hammering them with a hammer.

**2- Slitting method:** The slitting motifs are cut on a sharp instrument, and no embodiment appears, but the motifs are flat, and this method is suitable for all metals that accept the creation of motifs in them by a pointed machine, such as gold and silver. Early, and continued in the era of the Muhammad Ali Dynasty.

**3- Discharge method:** This method was known almost since the 11th century AD and was widely used in decoration of metal lighting tools. This method was known to the Turks as cutting or punching, and is done by drawing the decorations on the surface of the masterpiece, and then pierces and empties the floor around it with a sharp machine. It is being knocked on, or by casting into the mold, and after making cut-out motifs the edges of the motifs are cleaned and softened by means of a coolant, and the emptying method was used widely in decorating Ottoman lighting tools, and it continued in the era of the Muhammad Ali family.

**4- The method of decoration in casting in the mold:** It is used for metals that are easy to melt and be formed in a mold, the template is engraved from the inside with engraved ornamentation engravings to extract prominent motifs, or carved with relief engraving to extract recessed motifs. Decorative ornaments are executed from branches, leaves, animal heads and dome legs that decorate the lighting tools of the collection under study in this way.

**5- The method of gold plating and camouflage:** It is one of the methods that were widely used in metalworking in Islamic times in general and in the era of the Anatolian Seljuqs and the Ottoman era in particular. The gold plating method is used for two purposes: the first is aesthetic and the second is functional to protect the internal structure of the metal, which is one of the methods commonly used in the Muhammad Ali family era in decoration of lighting fixtures.

**Fifth: Decorative elements:**

**Botanical motifs:** It is considered one of the most important types of motifs, and the branches permeate a group of leaves. The plant is polymorphic, like the acanthus leaves, and the use of roses and flowers, like the municipal rose, was used on the many lighting tools alongside branches and plant leaves.

**Geometric shapes:** They mainly depend on the lines of their straight, broken types, as well as square, diamonds, circles, stellar plates, etc., and Muslims distinguished themselves in engineering decoration, and was used in the era of the family of Muhammad Ali on lighting tools, including shapes with a simple spatial characteristic such as: the circle, rhombus, and cylindrical shape, among which are geometrical compositions such as small plates: they were used in lighting tools as an integral part of the instrument body as they were used upside down to be a base for the candlestick or to fix the part of the wick to the lamp. Cup decoration: It has an aesthetic purpose and also a functional purpose where the candle is fixed inside for unnecessary lighting.

**Decorations of living creatures:** reached the apex of the Baroque and Rococo styles, and these influences were transmitted to Egypt during the period of the Muhammad Ali family, and were reflected on the applied arts, especially the lighting tools of the group under study, which were decorated with many animal figures, which are characterized by extreme realism, like snake and dragon.

**Sixth, the artistic styles influenced by the lighting tools during the era of the Muhammad Ali family in Egypt:**

**Baroque style:** the word Baroque is derived from the Portuguese word Barroco, and its meaning is irregular raw pearls, which is the art of decorative excess, and was distinguished by the preference of curved lines and spiral, and the decoration of animal or fables statues in a realistic way, and this style moved from Europe and Turkey to Egypt especially in the beginning of the nineteenth century.

**Rococo style:** Derived from the English word Rock, which means stone, or from the word Rocaille, which means irregular shell, and Rococo art is considered an advanced stage of Baroque art, except that it is distinguished from it in its direction towards grace and tenderness, and is characterized by abundance of decoration, and is characterized by the use of Expensive metallic materials in the manufacture of antiques such as gold and silver, his tendency towards spiral lines and exaggeration in the use of motifs, the use of acanthus leaves, plant motifs are being carried

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