

DEVELOPMENT OF FORM MAKING OF DOOR KNOCKERS IN ITALY IN THE XV-XVII CENTURIES

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Abstract: Decorative art items – door knockers – combine practical and esthetic features. At the same time they are a part of everyday and art culture, and can tell much about the ideology, lifestyle of the society, and the level of the artistic crafts development at the time when they were created. The goal of this research is to study the role and purpose of door knockers in the Italian culture of the XV-XVII centuries, to research door knockers that continue decorating doors of various Italian cities and towns, to study in details Italian door knockers of the golden age of the bronze-casting art through the samples from the Hermitage in Saint-Petersburg.

For this research it was necessary to solve the following tasks: to put the generalized illustrative material in the historical succession, to consider form making of door knockers in accordance with the architectural styles, and symbolic meaning, to define characteristic features of the artistic expression, to reveal regularities in form making and decorating of door knockers, as well as to study and describe samples from the Hermitage in Saint-Petersburg as the best examples of Italian door knockers of the XV-XVII centuries.

The following methods were used during the research:

- References and analytical: reproduction of the general picture of the development of various forms of door knockers, searching for and systematization of the actual material, archive documents, and studying and generalizing scientific publishing and researches, art albums, and exhibitions catalogues,
- Subject and analytical – natural research of door knockers that continue decorating doors of various Italian towns and cities: searching, photo fixation, sketches, classification of items according to the technological solution, principles of the decorative composition and painterly finishing, studying and sketching the best examples of Italian door knockers from the Hermitage in Saint-Petersburg.

As a result of the performed work, great illustrative materials were collected. They allow to observe the history of form making of door knockers, define their possible symbolic meaning, and consider various methods of working with metal when producing door knockers. The research considered door portals of various architectural styles. Their stylish commonness with the form of door knockers was analyzed. The forms of door knockers of the XV-XVII centuries of various bronze-casting schools from the Hermitage collection were analyzed.

Keywords: Door knockers, Italian applied and decorative arts of the XV-XVII centuries.

INTRODUCTION

Door knockers served for informing masters of the house and were an intermediary link between the door handle and bells that gradually replaced the function of door knockers. The first door knockers had simple forms. With the flow of time they turned into works of the applied art. A lot of door knockers continue serving people. Some of them have been lost. The best samples are found in museums around the world.

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The first researcher of door knockers was the Flemish artist Jan van Grevenbroek. In 1779 in the "Collection of Venetian Door Knockers" he published 45 gravures of Venetian door knockers created by him. The album shows images of door knockers that belonged to illustrious names of Gradenigo and Grimani, as well as door knockers that ornamented doors of monasteries.

One of the largest collections of Italian door knockers is found in Venice in the Correr Museum. It is already in the middle of the XVII century when 45 knockers from the above collection were reproduced by order of Venetian Pietro Gradenigo and the Dutch artist and designer Johannes Gravenbruch who lived in Venice. They were published under the name "Raccolta di Battitori a Venezia". The collection of items that includes door knockers is found in the National Museum in Florence, Museo Civico in Brescia and Museo Civico in Padua (Trofimova 2010).

In the XIX century unique collections of door knockers are formed in the State Hermitage and State Museum of Art Industry in Berlin. In the XIX century Russian collectors D.P. Tatishchev, baron von Schtiglits and M.P. Botkin started displaying interest in Italian Renaissance objects that form the door furniture as works of art and acquiring door knockers. Later their collections were transferred to the State Hermitage.

Graf Friedrich Pourtales made a collection of door knockers during his diplomatic mission in Italy. It makes up the basis of the collection of small bronze of the Renaissance epoch in the State Museum of Art Industry in Berlin.

In 1911 the expert and amateur of the Renaissance applied art Academician of the Historical Art of the Saint Petersburg Academy of Arts M.P. Botkin issued the catalogue of his unique collection with the images and description of door knockers. "The collection has 35 door knockers, almost all of them are made in Italy in the XVI-XVII centuries. Many of them were made masterfully. It is possible to recognize the style of Sansovino, Giovanni da Bologna. The figure of a crowned woman, sitting on a lion, and winged female figures with Acanthaceae leaves instead of legs on each side are wonderfully made. Its authorship was attributed to Sansovino. Neptune from the Pesaro Palace is a wonderful knocker from the Schpizer's collection, as well as a knocker with a whole garland of dancing Cupids". (Collection of M.B. Botkin)

The richest collection of M.P. Botkin allowed the State Hermitage to become the owner of one of the best collections of knockers in the world. It is proved by a catalogue of the Hermitage exhibition of the decorative art. (Androsov and Feinson 1977)

Lapkovskaya E.A. (Lapkovskaya 1971; Lapkovskaya 1941) and Lopatina O.V. (Lopatina and Sviderskaya 2009) researched the development of decorative art objects through the example of door knockers from the Hermitage collection. The illustrative materials according to the ornaments and samples of door knockers were

represented in such albums as Bernhard G. *Recueil de Serrurerie d'Art*, Editions H.Vial. 2009, Raguenet A. *Motifs ornamentaux. Elements D'architecture*. Editions H.Vial. 2009, Wheeler W. *Ironwork, L'Aventurine*, 2004 (Bernhard 2009; Raguenet 2009; Wheeler 2004).

Catalogues of museums, exhibitions, and private collections are devoted to researching separate unique samples. However, there are no researches where all material on the development of form making of Italian door knockers in the XVI-XVIII centuries would be collected, explained, generalized and systemized. The form making of Italian door knockers, their stylistic and typological features on the basis of artistic creation combining objects that continue decorating doors and objects that are stored in museums have not been researched before purposefully and comprehensively. Addressing the theme selected for researching had an episodic nature.

The research aims at considering the integral picture of the development of door knockers as a part the unified evolutionary process of decorative art. The research must define the impact of the architectural style on the selection of metal and methods of its processing, dependence of form making and decorating door knockers from technical methods of metal processing. The goal of this research is to study the role and purpose of door knockers in the culture of the XV-XVII centuries, to reveal stylistic, compositional, functional, and technological peculiarities of their creation. It is necessary to pay special attention to the analysis of the best samples of Italian door knockers of the golden age of the bronze-casting art through the samples from the Hermitage Museum in Saint-Petersburg.

The set goal determines the following tasks:

1. To generalize the illustrative material and put it in the historical succession,
2. To consider the form making of door knockers in accordance with the architectural styles, symbolic meaning, to define characteristic features of the artistic expression, and to reveal regularities in the form making and decorating of door knockers,
3. To study and describe samples from the Hermitage in Saint-Petersburg as the best examples of Italian door knockers of the XV-XVII centuries.

As a result of the performed work, the goal has been achieved. On the basis of the collected materials and archive documents objects were systemized and classified according to the technological decision, principles of the decorative composition and artistic finishing, and architectural styles. It allowed to reveal stylistic development of various forms of Italian door knockers. One of the areas of studying the decoration of door knockers was an attempt to define their possible symbolic meaning. Vast illustrative material allowed to follow the history of the form making of door knockers from simple items to the best samples of the decorative and applied art from the Hermitage.

METHODS

The following methods were used during the research:

- References and analytical: reproduction of the general picture of the development of various forms of door knockers, searching for and systematization of the actual material, archive documents, and studying and generalizing scientific publishing and researches, art albums, and exhibitions catalogues,
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RESULTS

Methods of Working with Metal and Obtaining its Beautiful Color

The research makes an attempt to follow the methods of working with metal and obtaining its beautiful color when producing door knockers.

Bronze is the best material for art casting. In the XV century they people started making door knockers from bronze. Positive features of bronze as an alloy include flexibility that allows to develop wonderful finesse of forms, and sturdiness that allows to use only the required points of support. Besides, bronze is ideally gilded and obtains excellent patina.

1. *Casting method*: A number of various specialists successively participate in the bronze production. Each of them improves his part of the work. Firstly, every object is clay modeled. Sculptors are often involved in this process. After modeling and forming related to it, the next stage of the bronze production follows. This is casting. It is usually performed by bronze duplicating of separate parts of the modeled original and assembling them in the complete unit.
2. *Method of casting “with the wax loss”*: When producing door knockers, the sculptor uses this method to bespread the model slice with wax. The casted metal melts this wax slice with its heat and falls on the surface instead of it. Thus, it perfectly reproduces the model form. It is possible to repeat producing the item according to this sample only if the sculptor again bespreads the gypsum base surface with wax and thus entirely reconstructs the model. The items made according to the “lost wax” technique are unique and extremely valuable.

3. *Pressing method*: Sometimes casting is replaced by the method when a picture is pressed and partially beaten on the yet soft metal. This technique is used on small parts of bronze where the design is duplicated by stamping on plated or ornamental parts. It is easier than casting, but it can be used only for items with a low relief. The cast bronze is given to the chaser. The quality of the object mainly depends on the work of this specialist.
4. *Embossing and scribing*: The task of embossing and scribing is to smooth deficiencies that are inevitable when casting, as well as natural aggregation marks. It is necessary to distinguish the ornament, expressiveness of the figure, and turn a mechanical cast part of bronze into a work of art.
5. *Gilding*: After the cast and embossed bronze is taken from the chaser's workbench, it looks like simple cuprum. Then the gilder works with it. He finally forms it up by varnishing it with a special substance that is the production secret.
6. *Creating the patina effect*: The atmosphere and time have a great influence on the color of the ancient bronze. They give the item a specific color that cannot be achieved artificially. This form of item is called patina. In order to add a beautiful color to bronze, it was bespread with artificial patina produced according to an individual receipt. "Some specialists blacken it with oil, some use vinegar to give it a green shade, and some paint it black. It depends on the master"(Vasari 1956/2011).

Defining Possible Symbolic Meaning of Door Knockers

One of the areas of researching the decoration of door knockers was an attempt to define possible symbolic meaning.

1. Separate motifs of the embellishments are stylized figures or symbols of objects: a zigzag may depict a snake, and a cross can mean a bird. Gradually these figures became more abstract and only the most characteristic lines of real objects were maintained and turned into symbols.
2. The most wide-spread form of door knockers is a door knocker in the form of a ring. The ring is a symbolic safeguard of the house (the function derived from the general symbolism of the ring). The ring is a symbol of integrity, unity and marriage bonds.
3. The ring can symbolize the flow of the earthly life time. The ring movement or spiral movement is an image of eternity.
4. Door knockers in the form of a ring were often used for churches and named as "shelter knockers". In the Middle Ages it was thought that it was enough for the person who was pulling through chasing and striving to reach a church to grasp such door knocker for him to get the right of shelter

provided by the church that made him untouched (*Dictionnaire Raisonné de L'architecture Française du XIe au XVIe Siècle*). The construction of some such knockers is rather notable. The door knocker from the Cathedral Church of Christ, Blessed Mary the Virgin and St. Cuthbert of Durham (Great Britain) has holes instead of eyes. The light from the church penetrated them and pointed church members to the direction of moving in the darkness.

5. Door knockers were often made as figures of lions having a ring in the mouth. In the ancient times in the Mediterranean world lions were reputed as guardians of water resources. That is why the ring can be a vivid symbol of waters circulation in the Universe. The water circulation for our ancestors was defined by the mechanism of functioning of the whole world.
6. "My house is my castle", Sir Edward Coke wrote at the beginning of the XVII century. This phrase is the basics of our thinking and life style. For the purpose of giving the protection function to the door, people started depicting a lion's mask on it.
7. The winged lion is a symbol of Venice. That is why figures of lions are often found on Venetian knockers.
8. Gradually door knockers acquired the figure of lyre. The lyre is a symbol of rhythmic sound of space, harmony, beauty and perfection, poetic inspiration, marriage devotion and love.
9. Later door knockers became a sort of a visit card of the house owners. In addition to decorating the door itself, they could contain the information about its master, his hobbies, material position, tastes, and depict the family crest of the owners. "Heraldic gradually becomes the imaginative language everybody can speak and understand the meaning of its signs. The figures of crests appeared on household articles: furniture, carpets, goblets, books covers and of course on screens at the house entrance, shutters and door handles, and simplified the search for the required house just according to the family crest or sign"(Arseniev 2001).
10. Knockers are an integral part of the door, and the door always fulfilled an important function in the person's house. It allowed to feel safe and be reliably protected. "In the Ancient Rome the god of doors was Janus – a lord of all time beginnings and starts. All entrances and exits were under his protection whether they were doors of a private house, a gods temple or gates of the city walls. Janus had two faces turned in the opposite directions (one was turned to the past, and the second one - to the future). In his hand Janus had a key he used to lock and unlock heavens gates. Figure 300 (CCC) was depicted on fingers of his right hand, and 65 (LXV) was found on the left hand. In total it means the number of days in a year. It is also possible to find these signs on front doors" (Benois 2006).

11. The threshold was thought to be the most important element. It symbolized the transfer from the light to the darkness, from the carnal to the sacral area. “The expression “to close a door” means “to bate breath”, and the transfer via the door symbolizes the initiation to the arcane knowledge” (Arseniev 2001). The oldest doors contain plates put on spuds and joined with the horizontal central parts. In the XIII century such composition of doors is complicated by struts that form a triangular system and increase the resistivity of doors to deformation (Err and Dumont 2009).

Door Portals of Various Architectural Styles and their Style Commonness with the Form of Door Knockers

The research considers door portals of various architectural styles and analyzes their style commonness with the form of door knockers handles. The results of the research were brought in the table.

The door portal in the gothic style is characterized by the vaulted contour, deep arch usually topped with attic. As a rule, there is a relief in the vaulted arch above the rectangular of the gothic entrance. Gothic sculptures are characterized by the beauty and delicacy. Figures of hellish monsters are placed outside of churches, and a great variety of plants are found on capitals. Contours of details in the gothic style comply with material requirements – not to lap over the simplest forms. All motifs were borrowed from the local flora. The sculptor reproduces only those plants he can see. The accuracy of the reproduction is so high that not only the main features of some types of plants are taken into account but also their secondary features and local species. When selecting models, the artist is inspired by the character of the architecture itself. The flora ornament becomes more and more sophisticated and light as the architecture acquires more lightness and sophistication. The hammered metal with its tense lines, expressive contours complied with the requirements of the gothic style best of all. Iron railings, doors fittings and handles become more sophisticated on pictures and thinner as produced. In the XIV century prolonged iron hammers appeared. They consisted of the movable hammer strengthened by joints on the rectangular iron plate. It was usually richly decorated with gothic cut ornament. The form making in the gothic style is geometrical.

Masters of the Italian Renaissance art acted both as artists, sculptors, and architects. They refused architectural forms of Gothics and thought them to be barbarian. They strived to focus their creative work on using the architectural language of the Ancient Rome. A. Palladio devotes his book “Four Books about Architecture” to the results of researching and scaling monuments of the antiquity in Rome and other cities of Italy (Palladio 1938).

During the Renaissance there was a corporate organization of craftsmen with the charter that protected people from foreign competition and was a guarantee

of the professionally performed work. Architects, sculptors, artists and jewelers offered their services.

In Padua and on its suburbs there were numerous workshops. Along with Florence, the school of casters from Padua founded by Donatello approximately in 1500 gave birth to a number of first-class masters, for example, Bellano and Riccio. The school of masters specializing in bronze in Venice was the largest branch of the school from Padua. Its brightest representatives included Jacopo Sansavino and Alessandro Vittoria. In addition to the monumental works, almost all of the above masters created small bronze items. Wonderful door knockers occupy a specially outstanding place among them.

The production of knockers turned into an artistic industry. Leading sculptors and architects of the Renaissance participated in it. For example, Giovanni da Bologna, Pietro Tacca in Florence, Andrea Riccio in Padua, Jacopo Sansovino, Ticiano Aspetti, Alessandro Vittoria, Tavagnia, Nicholos Roccaliata in Venice, and brothers Levi in Verona. They changed the concept of this device and turned it from a non-obligatory object of everyday life to a highly artistic work. The ornament of the Renaissance epoch is picturesque, realistic, and is influenced by the art. Grottesque is the most characteristic type. The intrusion of the erotic beginning is observed in the ornament. The main motif is the vine that is characteristic of the Middle Ages, acanthus leaf and curl, and a sea shell.

Unlike the Gothic, the Renaissance railing is made of the round rod by using a more complicated technology of production (the method of broaching is used, it allows spirals of one curl to cross spirals of another one). "A characteristic figure in the "eight" form appears. It consists of crossing sticks. Plane elements are entwined in the ornament. Sometimes they include so called "whiskers" separated and thickened at the edges and having curls" (Panchenko 2005).

In the XVI century a lot of sculpturally decorated portals are created. This is the best time of producing door knockers. The demand for ready products that occurred abruptly causes the growth of production. In France corporations on metal processing are founded. The item creation is preceded by the design creation. This is a sketch that will be used for the production. The production of door knockers was massively developed in the XVI century.

In the XVII century masters of three workshop organizations participated in the production of bronze items. The sculptor made a model, the chasing caster cast and chased in the generalized mode, and the gilder chaser finished casting and gilded the ready-made item by using the mercurial method. Works of the artistic craft entered the person's life and were an admissible way to really touch the art. The decorative design of door knockers like any other craft became an objectification of creative ideas, and gradually turned objects of everyday life into works of art.




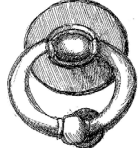

Forms of volumes and facades of rococo are based on combining the heritage of classicism and baroque. Rococo borrows an accurate order organization of

facades from rococo, and the tendency to curvilinear forms from baroque. The sculpture décor is put on blind planes of walls. It is possible to meet the techniques of decorating frisos with molded garlands, installed vases, portrait sculptures, and sculpture groups on parapets.

The motif of shell becomes a favorite element of this style ornament. It is possible to see a shell in every ornamental composition, as well as various types of curls that remind contours of the wave running to the coast. These motifs were named rocaille, i.e. shells and stones of the improperly-shaped form (McGrew 1949).

Door knockers have been produced later on, too, and up to now, according to the old forms that were already known and appreciated. However, door knockers nowadays fulfill only the decorative function.

TABLE 1: SCHEMATIC REPRESENTATION OF DEVELOPING FORM MAKING OF DOOR KNOCKERS ACCORDING TO THE RESULTS OF SELECTING THE MOST PECULIAR SAMPLES

1	The first door knockers were rather simple. They were made of the hammered iron and originated from a simple door handle. Door knockers of the beginning of the XV century were basically characterized by the fact that the item function was not hidden and its purpose was vivid and easily seen.	
2	The form of the handle as a smooth movable ring affixed with a joint sleeve to the round plate was the most wide-spread.	
3	The bottom part of the ring was thickened to strengthen the knock.	
4	A smooth metallic plate was placed where the ring knocked. Thus, the moment of transferring from the door handle to the door knocker is defined by thickening of the ring bottom (Rodionovski and Trofimova 2013)	
5	Door knockers of the beginning of the XV centuries were created in one copy and are unique, because masters were looking for the most convenient constructive and decorative solution.	

- 6 Searching for the most convenient form. Door knockers of the drop shape.



- 7 Door knockers acquire the shape of a lyre. This is the beginning of decorating door knockers.



- 8 Door knocker in the form of a lyre. The beginning of the sculptural image.



- 9 Increasing the immovable part of the door knocker.



- 10 Decorating the immovable part of the door knocker.



- 11 Sculptural image on the immovable part of the door knocker. Door knockers often contained figures of lions with a ring in the mouth. This is the most favorite image that was often copied.



- 12 Awesome mascarons scared misery from the owners' house.



- 13 The motif of a shell becomes a favorite element of the rococo style. The habitual lion of the door knocker of the XVII century is decorated with an ornamental curl that reminds contours of the wave running to the coast.



- 14 The gravity of the item parts, simplicity and accuracy of the composition. Door knockers - the end of the XVII century (items in the classical style appear), the depiction of Sphynx that according to the Ancient Greek mythology is a winged creature with the lion's body and the woman's head. He set unsolvable tasks.



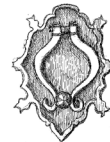
- 15 A cartouch (a decoration in the form of a junction box or lap contoured with curls) could be used for decorating the door and as an additional décor for the door knocker. A lot of historical examples related to using cartouches can be found in the book "Doors and Portals in the Italian Architecture" (Palladio 1938). This is an example of a simple rectangular cartouch.



- 16 Vertically spread gothic door knocker. The emblem of the Cardinal from the Della Rovere family on the door knocker with the figure of St. George fighting the dragon, XV century. Italy. Hermitage



- 17 In the XV century masters started using ornaments in the form of cartouches that imitate leather curls.



- 18 The cartouch is richly decorated and plays the main decorative function. Beginning was in the XVI century.



- 19 The cartouch remains a richly decorated ornamental motif. However, a figure composition appears on the movable part of the knocker, XVI century.



- 20 The décor of the movable part is characterized by the opulence of the plastic figure. The immovable part is secondary. XVI century. Complicated volume composition.



- 21 The whole decorative part that was earlier focused on the immovable part turned into a developed movable part. Beginning of the XVII century (Renaissance).



The research considers the period of the second part of the XVI – beginning of the XVII centuries in more details. This is the time of the uppermost prosperity of the applied bronze plastic arts. The form making of this period is considered through the examples of the exhibits from the Hermitage in Saint-Petersburg.

Analysis of Forms of Door Knockers of the XVI -XVII Centuries Made by Various Bronze-casting Schools from the Hermitage Collection

The collections of the West European applied art of the State Hermitage have been formed gradually during more than two centuries. At the present time this is the greatest collection of the applied art in our country with one of the most considerable collection of door knockers in the world.

1. **Workshop of Carlo Fanzago, 1591-1678:** The Italian sculptor Carlo Fanzago worked in Naples. His design was used to produce lamps and other décor items for churches and palazzos of grand people. The door knocker of the drop shape from the Hermitage collection shows two symmetrically volume fishes that carry a mask (Figure 1). This simplest form of the door knocker started the development in terms of decorativeness, filling its movable part with details. The balance in the composition of the door knocker is based on the principle of the masses steadiness.

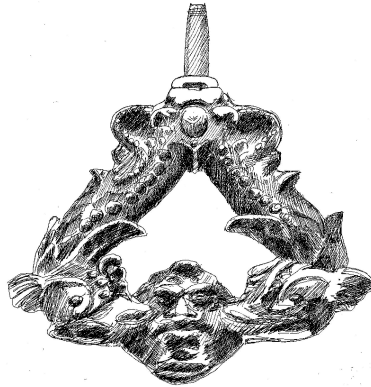


Figure 1: Door Knocker. Workshop of Fanzago. Italy. The Second Part of the XVI Century. Artificial Dark-brown Patina.

2. **Workshop of the Levis Brothers:** On the top of the massive knocker figured as a lyre in the center of the composition, there is a grotesque head with long hair, beard, and mustaches. In the head's mount there is a ribbon where a small cartouch hangs with an emblem plate. In its turn the cartouch has a big comic mask decorated with a fruit garland. The figure of the knocker in the form of a lyre is made by two dolphins, but the rendition of their surface is plainer as compared to earlier works (Figure 2). On this knocker

reverse there is an insightful signature that says that this hammer is a work of the apprentice of the Levis brothers' workshop in Verona.

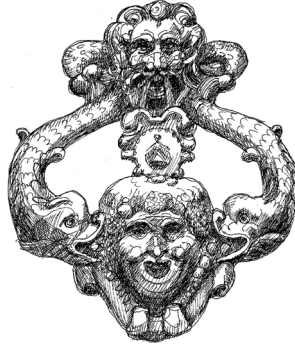


Figure 2: Door Knocker. Workshop of the Levis Brothers. Italy, Verona. XVI Century. Artificial Dark-Brown Patina

3. **Bronze-casting School of Andrea Riccio (Briosco.1470-1532):** The theme borrowed from the antique times is reflected on the door knocker made by Andrea Riccio who lived and worked in Padua. The form of the knocker imitates the cartouch. The female wolf feeds Romulus and Remus and carefully hugs one of the babies as if protecting it (Figure 3). The bottom part of the knocker is decorated with a tragic mask in the center. It wears a chaplet and a fruit garland under the chin. Vegetation sprigs are found along the bottom part.

The form of the knocker is complicated. However, the item is plain as a whole. The form of the knocker does not look like a lyre. It does not have a drop elliptical form. This is a new form that along with the drop form will be used in the door knockers after Riccio.



Figure 3: Knocker with Female Wolf Feeding Romulus and Remus Made by Riccio (Andea Briosco 1470-1532r.) Italy. XVI Century. Artificial Black Patina.

4. **Bronze-casting School of Jacopo Tatti (Sansovino 1486-1570):** In Venice in the XVI century sculptor and architect Jacopo Tatti founded a bronze-casting school. On the door knocker made in the workshop of Sansovino the movable part is made by triton's and nereid's torsos curved and turned in different sides. Under the figures there is a mask with the hanging ends of the headwear. This is the first time when the decorative elements added the sculpture volume and lyre form to the knocker.

The theme of the female figure is continued by depicting nereids. Nereids are shown either moving, or a less plastic female half-figure in the still pose is located in the center of the composition with the fish tails or garlands that make up the form of the lyre.

Figures of nereids on the door hammers are especially characteristic of Venice. In the Hermitage there is a door knocker of the old traditional form of the church knocker that consists of the lion mask with the ring adjusted to it. Like in old knockers, in this knocker the richly decorated immovable part is distinguished most of all. Instead of the lion mask this part is decorated with a dragon. Here the ring is turned into a pendant in the form of a lyre with a sort of the nereid and triton swinging in it. The doubled tail of the nereid crinkles and makes up a form of lyre. The raised right arm of the nereid touches the tail, and the lowered left hand lies on the fish's body. The head is raised up and turned slightly left. The figures are located on the sides of the herma with the female torso and grotesque head with the beard and moustaches. Triton and nereid as if seized their hands, and embrace their fish tails that are abruptly raised up and make up the form of a lyre with another hand with weed on the ends. The fish tails are interweaved with snakes and dragons' heads. Their powerful torsos turned to different sides are shown in a strong movement, the heads turned to the opposite sides are lowered (Figure 4). Under the triton and nereid there is a comic mask with the hanging ends of the headwear. This knocker is interesting by the fact that it is an illustrative sample for the further evolution of the Renaissance style and is subordinated to its absolutely special laws. Thus, for example, comparing how the comic mask of the knocker is included with the triton and nereid, and how Andrea Ricci, Carlo Fanzago and masters of the Levis school placed their tragic mask in the bottom of the knocker, we ascertain that the comic mask is not assembled but exists individually.

The door knockers that were popular with contemporaries were casted in many copies by masters themselves and their apprentices. The knocker with triton and nereid was one of the most favorite in the XVI century. That is why it was copied many times.

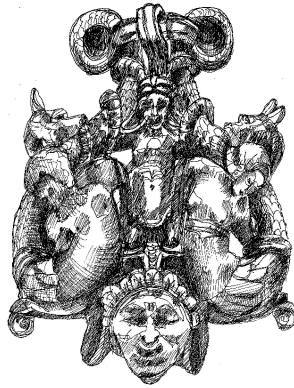


Figure 4: Door Knocker. Triton, Nereid, Herma, Mascaron, Tati Circle, Jacopo (Sansovino), Italy. XVI Century. Artificial Black Patina

The most numerous groups of door knockers of the XVI century that are peculiar of the Venetian school of Sansovino are combined by sea attributes included in the décor. Stylized fishes and other sea creatures move downwards on both sides of the lyre and frame the figure centered separately. A wonderful door knocker is attributed to one of the Sansovino's apprentices. It is based on the lyre with a female figure in the center. This figure embraces heads of two lions hanging on the lyre ends. One of the front paws of every lion is lowered to a sort of the shell filled with water. The woman wears thin transparent clothes, and her shoulder is naked. The figure and gestures of the woman are quiet and majestic. In spite of the small size, the knocker is extremely monumental (Figure 5).



Figure 5: Door Knocker from the Armoury of the Tsarskoe Selo, from the Collection of Tatishchev D.P. Italy, end of the XVI – beginning of the XVII Century. Artificial Dark-brown Patina.

5. **Alessandro Vittoria:** The door knocker with the figure of the lord of seas Neptune was made by the Jacopo Sansovino's apprentice and follower Alessandro Vittoria. In the center of the composition there is Neptune standing full length with the trident in his right hand, and his left hand lowered. He is located between two hanging hippocamps that make up the lyre. The hippocamps are depicted with the front legs lowered in the shell filled with water (Figure 6).

The top of the knocker is decorated with the coat of arms. In the whole composition the balance is based on specific contrasts of moving. Neptune with the hippocamps or lions is one of the most favorite and wide-spread motifs of decorating Italian door knockers of the XVI century. This knocker is attributed to Alessandro Vittoria (1525-1608). It is done on the basis of the similarity of the main figure with Neptune from the Victoria and Albert Museum in London and the marble statue of St. Jerome in the Basilica di Santa Maria Gloriosa dei Frari in Venice (The British Museum).

The works of Alessandro Vittoria have some peculiar features. The figures differ by their extensiveness and gracefulness strengthened by a small head. He interprets affection somehow superficially. All his works are characterized by a higher level of picturesqueness than works of Sansovino. The figure of Neptune and his encirclement is one of the most frequent motifs related to the sea. Herewith, it may express a definite symbolic meaning. The person of the XVI century interested in the antiqueness and pagan mysteries liked being involved in the world of antique gods who were related to the ancient cosmologic system. The door knocker with sea attributes was simultaneously a symbol of the wave depicted by him, as well as the fire he was born from. The door itself was perceived as the firmament – land. “Thus, the person happened to be involved in the world

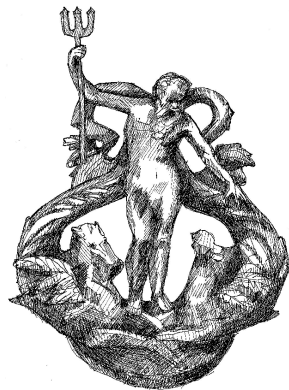


Figure 6: Door Knocker with the Neptune Figure. Workshop of Alessandro Vittoria. Italy. The Second Part of the XVI century. Artificial Black Patina.

of elements, and three basic elements of the world formation made up additional protection on the way to the inhabitation” (Benois 2006).

6. **Pietro Tacca (1577-1640):** The door knocker of the XVI century from the Hermitage collection with the picture that is thought to be an apotheosis of Venice is of a great artistic value. The door knocker “Venice Coronation” attracts attention above all by a rare composition and sophistication of the idea. In the center of the movable part of the knocker there is a figure of a lion with a crowned woman on his back, and two half-naked female torsos on his sides (Figure 7).



Figure 7: Door Knocker. Venice Coronation. Italy. XVI Century. Pietro Tacca. Bronze. Casting. State Hermitage

The knocker has the figure of a lyre formed by wide volutes and two curved fantastic winged figures without a hand with magnificent curly knotted hair. The underpinning of figures turns into vegetation sprigs. On the top between the volutes there is an arm of coats with an unknown emblem. In the center of the knocker composition there is a crowned female figure sitting on the lion and wearing a long dress. In the bottom the knocker is decorated with a big mascaron. The crown in the form of the ampyx with lilies from the Medici emblem points at the fact that the door knocker belonged to the Medici’s house. This work is attributed to the Florentine master Pietro Tacca (1577-1640). In the Museum of Artistic Industry in Berlin there is a door knocker that is similar to “Venice Coronation” according to the composition. Italy, the XVI century.

7. **Bronze-casting School of Nicolos Roccaliata:** Two wonderful knockers that are close to each other according to their style and composition are referred to the end of the XVI – beginning of the XVII century. They might be attributed to a great Venetian master Nicolos Roccaliata. Both knockers have a form of the lyre. In the center of one of them there is a sitting Cupid

whose entire figure is displayed in the complex movement. In the center of another knocker there is a herma putto with the arms folded across its chest. The edges of the lyre make up two specific, picturesquely interpreted dolphins (Figure 8, 9).

In the bottom part of the composition between the dolphins' heads there is a female mask with long hair knotted near the chin.

The knockers ends are very much pompous. Dolphins' tails with the ends in the form of trefoils get easily up and form two big loops. In the second knocker between these loops there is an arm of coats. At the end of the XVI century Roccaliata defined the style of late bronzes. The use of plump Cupids with half-open mouths and curly hair divided by two parts is typical. He was a sort of the last representative of the Cinquecento traditions.

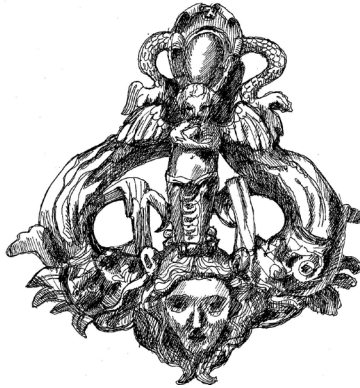


Figure 8: Door Knocker with Putto Herm in the Center. Nicola Roccaliata (Workshop), Italy. End of the XVI - beginning of the XVII Centuries. Bronze, Casting



Figure 9: Door Knocker of Nicola Roccaliata (workshop), Italy. End of the XVI – beginning of the XVII Centuries. Artificial Dark-brown Patina.

DISCUSSION

The development of architectural styles caused the evolution of forms of the applied bronze plastic arts that stipulates the stylish commonness of works. Classifying into styles and periods is rather conditional, and it is necessary to take into account that there is a sort of transitional period when styles changed. It means that for some time old canons go on being used with the new ones. Nevertheless, it is possible to follow the development of forms and constructions of door knockers that comply with the tasks of every historical period. Door knockers were developed in terms of the silhouette complication and turning it into a sculpture image that hides its functionality. The moment of transferring from the door handle to a door knocker is defined by thickening of the bottom part of the ring and metallic plate on the door to enhance the knock.

During the XV century one of the basic characteristics of door knockers was in the fact that the item function was not anyhow hidden, and its purpose was understandable and vivid.

Since the middle of the XV century more convenient construction and form of knockers were looked for.

Since the end of the XV century in Italy the most wide-spread form of the knocker was the form that looks like a lyre with a composition or a figure placed vertically in the center. All decorative part that had been earlier focused on the immovable part was transferred to the developed movable part.

In the XVI century the form of the door knocker turns into a comprehensive multi-figure composition. At that time forms for casting knockers details appear, too. Items are produced on a massive scale. Architectural and artistic metal was a decorative emphasis, representational but secondary component when perceiving the architecture ensemble as a whole. In the XVI century Italy started the process of increasing the artistic value of the architectural metal and its self-sustainability.

In the XVI-XVII century bunches and garlands hanging in ribbons or as a festoon dominate in the knockers ornament. It is possible to often see images of shells, curls that remind freakish contours of the wave running to the coast on door knockers of the beginning of the XVIII century.

Special features of the XVII-XVIII centuries include the evenness of the item parts, simplicity and precision of the composition. Elements of the antique ornament are introduced in the décor. The best samples of the items of the decorative arts were researched through the example of door knockers from the Hermitage collection. This article offers a part of images that are found in the Hermitage Museum in Saint-Petersburg where there is a unique collection of door knockers.

At the present time the practical use of door knockers is lost and they serve exceptionally to decorate doors. The systematization of door knockers offered in

this research may serve when designing and reconstructing buildings of various historical periods.

In the research we have gathered a lot of illustrative materials – pictures and images of door knockers. When analyzing and systemizing the items, we did not manage to accurately define the work author even when the item contained the name, because this name might belong both to the bronzer and the shop owner. Bronze is often found without any notes. Besides, there is no opportunity to define the authorship on the basis of the composition. Successful bronze compositions were copied and distributed. “In case of the generally accepted succession of the craft among the family members and durability of firms at old times, models were maintained for many years and outlived their first customers. As a result, unfortunately we have to acknowledge that much bronze whose origin has not been determined documentarily was made in the XIX century in workshops that maintained succession and name from the previous times” (Weiner 1923).

CONCLUSIONS

In the art culture of every epoch the meaning of architecture, art, and sculpture is obvious. However, we often underestimate the role of the applied art. Small applied bronze plastic arts are a bright phenomenon that comprises a great diversity of forms that solve tasks of every historical period.

As a result of the performed work, great illustrative materials have been collected. They allow to observe the history of the form making of door knockers, to define their possible symbolic meaning, and to consider various methods of working with metal when producing door knockers. The research considered door portals of various architectural styles. Their stylish commonness with the form of door knockers was analyzed. The forms of door knockers of the XV-XVII centuries of various bronze-casting schools from the Hermitage collection were analyzed.

This research is the first part and will be continued. It is offered to collect illustrative materials and reveal the interrelation of the applied arts to the architecture of other countries having objects of the bronze plastic arts that are scarcely studied. The combination of the data will allow to analyze stylistic, typological, functional, and technological researches of the applied art objects – door knockers.

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