



## BRIEF HISTORY OF GOLD AND SILVERSMITHING.

## HOLLOW WARES.—PART I.



Y OBJECT in this sketch is to give a very brief history of gold and silversmithing, from ancient times to our day. The almost unlimited scope of the subject, however, makes it desirable that I should confine myself, so far as possible to a special branch of it. I will therefore chiefly deal with hollow-wares, and, as I pass along, it is my intention to place before the reader illustrations of some of the best specimens of cups and vases, belonging to the principal periods of the art. Gold is generally believed to have been the first metal used by the artificer on account of its being the only one easily found in a pure state. The old tale

about its discovery and the results of it runs thus: One day, as the prehistoric man was treading along a vale, he came across a glittering little lump lying on the ground among pebbles and apparently brought there by waters which had retired since. Irresistibly attracted, he picked it up and hung it on his body as an ornament. After a time curiosity prompted him to strike the nugget with his percutor (stone hammer without a handle), and he notice with surprise, that each blow leaves a mark on the lump instead of breaking it. Then he observes that repeated hammering stretches it and increases its surface, which is entirely different from what takes place when he treats wood and stone in the same manner. Hence flashes on his mind the notion of malleability. Suddenly, he remarks that the matter ceases to extend under his hammering, and has become extremely hard. But through directing his blows, intentionally or not, in a circular way from the outline to the center of the piece (this one resting on a soft ground) he has shaped it into a kind of vessel; and, full of pride, he makes up his mind, at once, to use it for his food. One day this gold tureen, being left too long on the fire, becomes red hot. When the heat has gone, the owner of the vase feels, in handling it, that the matter has become soft. He beats it again and sees it stretch as before, which brings to his mind the principal notions that man had to acquire before he could be a goldsmith.

Now we must suppose that, on one occasion, two or more gold tureens, being left carelessly side by side on a well fed fire, happened to run into one another, and form a shapeless heap, and then we understand how our barbarian came to have the notion of melting.

The prehistoric goldsmith managed to do all his work with a stone anvil, a stone hammer, and a hatchet of the same substance which he used, either as a chisel to divide the metal, or as a puncher to adorn it with those striæ or arrangements thereof that we notice on all barbarian relics.

Many centuries, no doubt, elapsed before men discovered the various ores that being worked by them, yielded those metals, out of which no end of masterpieces have been made, although very few, alas! were preserved.

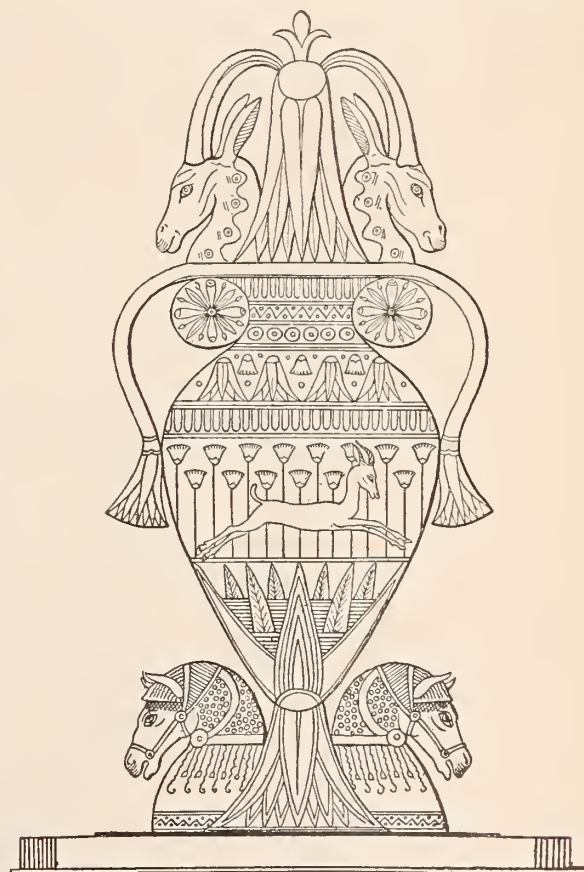
## EGYPT.

All authorities on artistic matters have repeatedly declared that everything beautiful, lofty and superior in art was invented by the Greeks. Yet, if we examine the ancient works which archeologists

have unearthed during the last twenty years, we see that great nations flourishing many years before historical Greece was in existence, produced interesting specimens in all branches of art. Ideas and customs, widely different from ours, caused those works to be fashioned in a way which may appear to us somewhat strange; but the remarkable workmanship and finish, in many of them, lead to the belief that their authors had a keen sense of artistic beauty, and possessed, besides all the notions, nearly all the practical means wanted to obtain a perfect rendering. Up to modern times, Indian, Chinese and Japanese styles have so slightly influenced European ones that I think it unnecessary to describe them in the present essay. Egypt, on the contrary, from the fact that Greece seems to have learnt a great deal from her, ought to receive our attention for a while. The vases and cups in gold and silver, which belonged to the Boulag Museum (recently transferred to Gizeh) and those on view at the Louvre, exhibit very graceful outlines, and are beautifully embossed and engraved. A great many that are figured on the various Egyptian monuments, even of very ancient periods, are still more elegant in shape and elaborate in design. Besides, we possess several proofs of the fact that every one of the processes which Greek goldsmiths of the best period used, and which make their handiwork more acceptable, no doubt, to our taste, was known in Egypt many centuries before Athens came to life. Even soldering was familiar to the workers of the precious metal who flourished at (Egyptian) Thebes, 1,700 years B. C. A scarabæus which has been found in the tomb of queen Aah-Hotep, and now belongs to the Gizeh Museum, is adorned with gold legs fixed to the body by soldering in massive gold, the corselet and wings being covered with a pale blue vitreous substance. A ring, with the name of Touthmes III. which is at

the Louvre, shows in some of its parts traces of the same process. Near this jewel there are several breast ornaments in *cloisonné* (one of them being a relic from Ramesses II. period) in which the partitions joined with gold solder.

As regards the blowpipe, we see in Champollion's *Monuments de l'Egypte et de la Nubie*, three illustrations, reproduced from very ancient paintings, showing



VASE OF GOLD AND ENAMEL. XX DYNASTY.

conclusively that the same apparatus, which our modern goldsmiths have been using until quite recently, was known to the Egyptians seventeen centuries B. C. The blowpipe, as exhibited on one of these paintings, is simply a reed, but on the others it is represented

as a tube, provided at a short distance from the narrowing end with a swelling part to receive moisture which might interfere with the blowing.

The quantity of valuable wares possessed by the Pharaohs of the flourishing periods must have been enormous, if we consider that all the gold and silver exacted from defeated enemies, was melted and fashioned into all kinds of cups, vessels and jewels. A great many vases were made for religious purposes, and the king's palace was amply provided with handsome plate. Even in private houses could be seen numerous sets in the precious metals. Not only did Egyptians of the high caste possess elegant dishes, trays, ewers, cups, goblets and baskets covered with ornaments and figures beautifully finished off; but on special occasions, their tables were adorned with large flower vases in gold or silver. Among the most remarkable pieces may be mentioned a cup showing papyrus buds with their stalk turned into handles and a full blown papyrus shaping the foot, carried by two Asiatic slaves gorgeously clad, whose attitudes are well designed to give grace and harmony to the ensemble. Our fig. 1. shows a very curious vase, supposed to have been in enameled gold and made at the time of the XXth Dynasty, (the thirteenth century B. C.) It is a kind of elongated *hydrie* whose cover consists of a lotus flanked with two gazelle's heads. On the body of the vase, we see several bands or zones, of various width, exhibiting different ornaments. We notice on one of them a startled antelope rapidly crossing a sort of marsh. Two busts of richly caparisoned horses lean against the foot of the vase. Many other specimens of gold and silverwares

might be described most peculiarly adorned, some of them with handles in the shape of leopards, others elaborately decorated with scenes illustrating Egyptian victories; but this would carry us too far.

If we study the documents and records concerning ancient Egypt and carefully examine the relics of Egyptian grandeur which have been preserved, we must soon be convinced that the artisans, who worked in that country about four thousand years ago, were really proficient in their art. In our line alone, Egyptian designers seem to have invented a wonderful

variety of shapes for vases, cups and vessels of all kind. The conventional ornaments they devised, geometrical and others, are extremely numerous; and those introducing an imitation of native flowers, fruits and plants often give a beautiful effect and are always striking even if severe.

ASSYRIANS—HEBREWS.

Ancient historians speak very highly of the gold and silver plate possessed by the Assyrians kings; but as none of these pieces have been preserved, we cannot form an exact idea of their artistic beauty. The same can be said of the Hebrews. We have been taught to wonder at Solomon's enormous wealth and at the grandeur of his temple; but we cannot clearly picture to ourselves the outlines and decorations of the magnificent works in gold and silver, which are mentioned in the Bible. Besides we have every reason to believe that they were not made by Hebrew artisans. At all events their style must have been but slightly different from the Egyptian or Assyrian.

GRECO-ROMAN PERIOD.

Dr. Schliemann's discoveries at Mycenæ in 1874, together with his statements as regards the jewels, vases, arms, masks etc., unearthed by him, have given rise to a great deal of discussion among men conversant with archeological matters. If we are to admit that the gold cups and vases, thus brought to light, really belonged to Agamemnon, we must acknowledge that the gold and silversmith's art was far inferior in those heroic times to what Homer's poems would lead us to believe. Yet these rough specimens are not wholly unworthy of attention. They show us that most artists of prehistoric Greece

endeavored with their clumsy style, to study nature as they saw it. Besides conventional ornaments in the shape of rosacæ, spirals, circular embossments, etc., we remark on some of these pieces, copies of aquatic plants and coarse imitations of molluscs and zoophytes, among which poulps, medusæ, asterias and nautili are predominant.

Even if we consider the rough ancient relics discovered at Mycenæ, as well as those of Hissarlik and Spaba, as works far anterior in date to the Trojan war, it would not help us in the belief that the



FIG. 2.

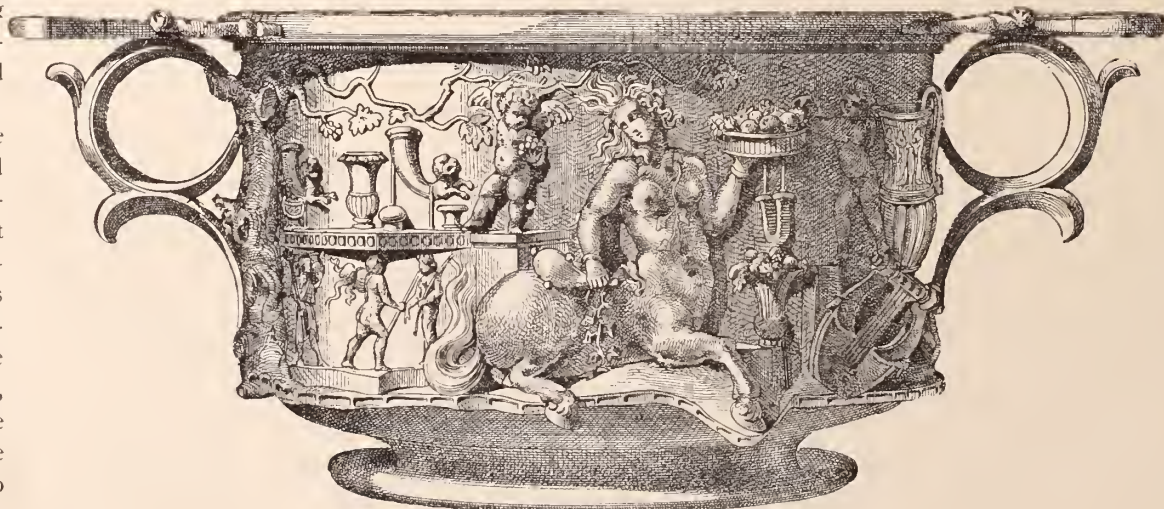


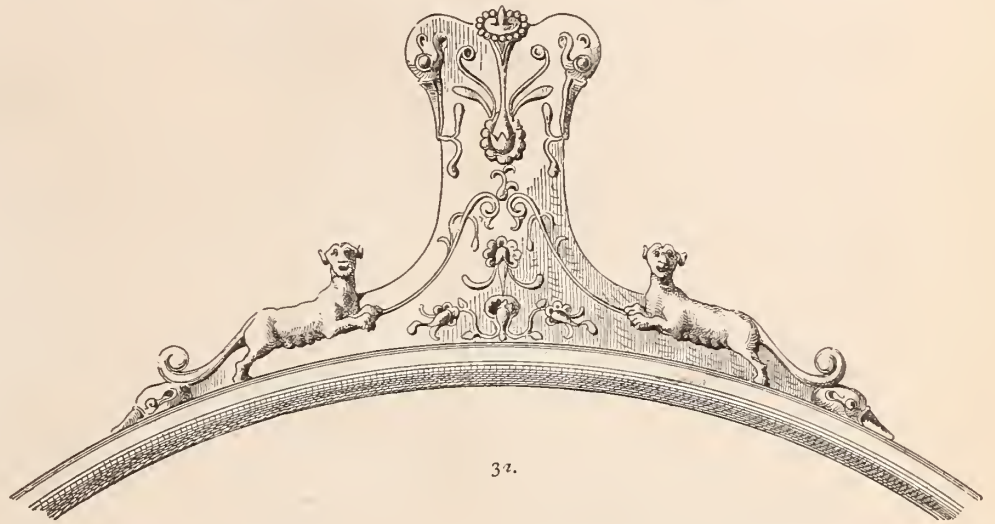
FIG. 3.

gallant Achilles did really possess the marvellous shield described by Homer. It is almost impossible to admit that the author of the Iliad, who is said to have lived during the ninth century B. C. could have known all the particulars concerning that shield, since the son of Peleus had died at the siege of Troy, many centuries before. We may rather suppose that the poet's description is suggested by works made in his own time. There are in his description details which he could not invent, although his powerful imagination greatly embellishes what he describes. Evidently Homer saw some remarkable shields, which may have been brought to Greece by Phoenician merchants. The poet often mentions Cyprus and Sidon in connection with works of art. We see in the Iliad that Agamemnon's breast armour, as well as his car were presents from the king of Cyprus. In another passage we are told that the silver cratera or bowl offered by Achilles, as a prize for the games given on the occasion of Patrocles' death, was the work of a Sidonian artist.

The following details are still more interesting for us. Homer says that the shield was divided into concentric zones, each one exhibiting a different scene worked in bas-relief, every division being colored differently. This was obtained by use of various metals: gold, silver, brass, iron and tin, besides several alloys.

In the ninth century B. C. the melting apparatus was very simple. Two middle sized goat skins were placed on the ground and connected with the furnace with reed pipes. A man standing with one foot on each goat skin, weighed alternately on them, pulling up the empty one by the help of strings, fixed to it. Although we may suppose that the earthen crucible had already replaced the stone one, we have no information about it. On the other hand, we learn from a passage in the Iliad that silversmiths were provided with the following tools, all in brass: an anvil, hammers and pincers. Speaking of the latter, the poet says they were made with art, viz. well suited to their purpose. Now, it is perfectly evident that, even

Previous to the seventh century, B. C. that is before the time when Glaucos of Chio taught the Greeks the process of soldering, the different parts of all articles in metal were joined by rivets. In some cases two sheets of metal were fastened together by folding down



the edges and interlocking them and then hammering them down one underneath the other.

For a considerable period, numerous Asiatic and Egyptian works in silver were frequently imported into Greece by Phoenician merchants. Greek artisans endeavored to reproduce them, and became by degrees more and more skilful in their craft. They soon however, grew tired of following the same tracks, for an artistic temperament of a decided character developed in them, under the influence of laws and customs entirely different from those of the people who had hitherto been their teachers.

In the fifth century B. C., the Hellenic art attained its very height with Phidias, and during that period, masterpieces were made out of all substances, Greek artists being then in full possession of all the processes, indispensable to produce perfect works. This is not the place to describe anew, the Chryselephantine statue of Minerva, which the famous sculptor made to adorn the Parthenon, at Athens.

I will also refrain from reproducing the descriptions of canthari, paterae, pocula, rhyton, cratera, patellae, calices etc., which fill up so many pages in Pausanias, Athenaeus and Pliny. Unfortunately, none of the pieces have been preserved and I must say that the numerous words of praise, bestowed on them by these eminent writers, do not at all picture them before our eyes. I think it more to the point briefly to examine a few of the best cups and vases unearthed at Bernay, France, in 1830, and at Hildesheim, Germany, in 1868. All prominent writers on the origin of artistic relics of the past, agree in considering these pieces as Roman works of the Greek school; and from some inscriptions and weight marks (which for aught they know may have been engraved on one or two of them three hundred years after their real date,) declare that these pieces were all made between the first and third century of our era. It suffices for us to find in some of them an exact representation of what the best Greek works must have been.

Our fig. 2. reproduces one of the two silver oenochoes, on view at the National Library, Paris. This well-shaped vase is 30 centimeters high. It exhibits on one side a scene showing Achilles weeping over the slain Patrocles, and on the other side "the ransoming of Hector's body." On the neck of the vase we see Diomedes holding the Palladium; and in front there is the following inscription "Mercurio Augusto 9. Domitius Tutus." The handles of the oenochoes, ending with Medusan heads are in massive silver, decorated with chased ornaments. The oval and pearls



FIG. 4.

when handled by a very skilful artist, tools in brass could not turn out a delicate and perfect relief work in silver, and still less in gold, unless we take it for granted that either of these metals was employed in a pure state, which would have made it unfit, on account of its softness, for use in the making of a weapon. This alone is sufficient to convince us that a Greek silversmith of the ninth century and *fortiori* one of the thirteenth B. C., never made artistic work like that described by Homer.

round the top and the dents at the base of the neck, are also so to speak glypted out of the metal. Traces of the gilding are visible on the draperies and on some other parts.



FIG. 5.

Fig. 3 reproduces a drinking cantharus belonging to the same place, whose emblema it is useless to describe. The work, in various reliefs, is beautifully done. Fig. 3*a* shows all the details of the handles.

Figs. 4, 5, 6 and 7 are illustrations of pieces in silver repoussé found at Hildesheim, and now on view at the Berlin Museum. I thought it best to reproduce in fig. 4 only a fragment of the great patera, with the figure of Minerva in the center, so as to direct the reader's special attention to the *palmettes* and foliage, in slight relief, decorating the wide rim. The workmanship of this piece is entirely exquisite. The goddess, seated on a rock, holds in her right hand a stick shaped at the top like a hook. The face and neck, as well as the background, preserve the color of silver, whereas the robe and the various ornaments have evidently been gilt. The thinness of the plate used to work out the emblema, is especially conspicuous in the folds of the robe, which give the exact effect of rumpled cloth. The handles are of a chaste and graceful style. This is a real Greek masterpiece, as is from a certain point of view the large cratera reproduced in fig. 5, although its character is entirely different. We see at the base two griffins breasting each other. From their outstretched wings start very fine curling ornaments, which, together with a rising foliage, cover the piece in a sparing and delicate manner. Here and there we notice some little imps darting with tridents at various fishes. No work, even of the best Renaissance period, can convey a more pleasing impression. Yet it must have been a vessel of frequent use. Its shape, as well as the plainness of its handles, put in the right place to answer the purpose of frequent use, combine to give us the idea of absolute fitness.

The drinking cantharus reproduced in fig. 6 exhibits most elegant outlines. This applies not only to the body of the piece and to the

handles, but also to the stand, the curves and proportions of which are absolutely perfect.

In fig. 7 we have a very curious patera. In order that the central figure should appear as it really is, it was necessary to place the piece in a bent position. This portrait of infant Hercules, choking a snake with each hand, is in very high relief. It is almost an alto-relievo.

According to all records, cups and vases in gold seem to have been very rare in ancient Greece and Italy. There is a beautiful gold patera on view at the National Library, Paris, which was found at Rennes, Brittany, in 1777. The emblema, full of life, represents the famous drinking match between Hercules and Bacchus. It consists of eight human figures and a panther, and is surrounded by a frieze showing, in low relief, the triumph of the god of wine over his competitor, which includes twenty-nine figures and five animals—goats, elephants and panthers. The exterior rim is adorned with alternate garlands of acanthus and laurels, placed equi-distant from each other, and in which are set eighteen Roman gold medals (*aurei*) ranging from Hadrian to Geta.

The emblemata, viz., the figures and ornaments adorning gold and silver vessels, were obtained in repoussé work on very thin plates of metal. It was done in this way: the plate, being laid upon a yielding substratum (a kind of soft cement made of pitch and brick dust), was beaten with blunt punches of various forms into a connected series of hollows, roughly forming on the other side the intended design. Then the metal was taken up, turned over, and with the use of a *ciselet* and a small hammer, the artist shaped the rude relief into a neat and a well-finished decoration. The places where the metal had been overthinned by stretching were patched at the back with grains of a solder, which Pliny describes as being made of two parts of black and one of white lead (tin evidently). The plates so adorned were fixed on a plain massive vessel, through the rims being caught underneath the mouldings or secured by claws.



FIG. 6.

Gilding was done by the quicksilver process (this was still in general use until a few years ago). A leaf-gold being applied on the surface which had been rubbed with quicksilver, the piece was

exposed to heat and the fluid mercury evaporated.

Handles or appendages obtained by casting, were chased and then fixed on the vessel with tin solder.

Pliny tells us that the vogue for emblemata in repoussé was almost extinct in his time, on account of that kind of decoration being found too fragile. He says: "We now prefer chiselled work (anaglypta), in which the silver is cut away around the outlines of the design.

is especially in the jewelry line or in bronze works that they exhibited a thorough originality.

As a conclusion to the first part of this brief history, we must acknowledge that the Greeks invented an æsthetic that, up to this day, has been considered by European people as *the one*, and which no artist can help following to a very great extent if he means to produce a faultless work. The chief rules of it, as they appear to me, are clearness of design, harmony, fitness and chaste elegance.



FIG. 7.

Greeks seem to have known niello work and damaskeen as early as the days of Homer. They evidently saw some Asiatic works adorned in that way. The poet of the Iliad describes Agamemnon's breast plates as inlaid with ten outlines of dark azure, twelve of gold and twenty of tin. Egyptians were believed to have practiced the art of *niellatura* for a considerable time. In a rather obscure passage, Pliny says: "Egypt stains silver so as to see her adored Anubis upon the plate, and paints the metal instead of chasing it." The pigment is supposed to have been made by adding one-third by weight of the finest copper, and as much of sulphur, to some silver in filings. This mixture was roasted in a covered pot until the cover opened of itself.

A very low cup of the Hildesheim collection is surrounded by a garland of olive leaves, on which traces of green enamel are visible. The stalks were in brown enamel. This cup rests on three claws boldly chased. Although all the specimens I have described are supposed to be the work of artisans who lived at the time of the Cæsars, we may say that Roman art never existed, since all the pieces made by the Romans were copies of Greek productions. From the Etruscans, who were a very powerful nation when Rome was still in its infancy, many beautiful relics are preserved. But it

Nature was, in Greece, the great source of inspiration, yet all artists understood that they ought not servilely to copy it, but simply to take hints from the best models living and growing around them, and use these hints according to art's superior laws.