

INTRODUCTION

The ruins of the town of Dvin, one of the largest cities of Medieval Armenia, are found in the district of Artashat in the Armenian SSR.

Systematic archeological excavations on the territory of Dvin were begun in 1937 and are as yet proceeding on (under the direction of prof. K. G. Kafadarian).

The excavations have shown that the central hill, the core of the city and later on its citadel, was inhabited since the III millennium B. C. The first townlike settlement appeared in the IV century A. D. From the V century until the end of the XIII Dvin was the centre of the economic and cultural life of the country and one of the largest centres of international trade in Hither Asia.

Archeological investigations of many years have made it possible to determine the borders of the city and to disclose its different life periods as well as the broad international relations and the many-sided and highly developed industrial life of that town.

Dvin had its citadel and was surrounded by several rows of fortress walls and an intricate water-supplying system. Palaces and churches were built, together with the edification of the town's commercial and industrial districts. The inhabitants of the town were engaged in most diverse trades. Among them were many skillful blacksmiths; they also mastered the art of casting and the chasing of metals. They were versed in the different branches of the textile industry and were acquainted to the subtleties of the jeweller's art. Ceramics also attained a high degree of development in Dvin.

Dvin was also renowned for its highly developed glassware industry. The excavations

have given a big and rare collection of glass-made objects dating back to the IX—XIII centuries, which have a considerable historical value as to their multiplicity and the diversity of their forms, in many ways extending our notions about the glass-making industry in the Transcaucasus and the Near East during the IX—XIII centuries. It accounts rightfully for one of the largest among medieval collections of glassware found at the excavations carried out in the towns of the Near East and the Transcaucasus. The collection includes a great assortment of articles of different shapes, qualities, colours, ornaments and manufacturing techniques. It comprises various glass-made vessels made for domestic or technical purposes—cups, glasses, bowls, vases, bottles, ewers, lamps, candle-sticks, chemical ware and window glasses. Coloured glass was also used for preparing feminine ornaments: bracelets, beads and rings. To our days have reached the remnants of verlegated mosaics which decorated particularly the cathedral church of the city.

The glass of Dvinian vessels is predominantly of high quality, transparent and well-baked. The chemical stability of that glass is very great and only an insignificant part of the vessels have, with time, been covered with patina and undergone crystallization and iridescence.

For the investigation of the chemical composition of Dvinian glass 78 samples have been analysed, among which three bracelets, four mosaic blocks and the remainder—vessels.

The glasses investigated spectrally have been qualitatively divided into six main groups which do not differ whatsoever by local pecu-

larities and have a wide range of Hitherto-Aslan analogues.

One of the basic compositional variants of glass ingredients—Na, K, Ca, Mg, S, Al—traditionally persists during the IX—X and the XII—XIII centuries, rendering the largest rate of local as well as imported articles.

The investigated material has allowed to establish the following ratios according to the colour of the glasses: green—39%, colourless—36%, yellow—13%, blue—6%, black—4%, manganic-red—2%.

Obviously the source of raw materials during all the periods of glass-making in Dvin was common, and judging from the scale of the production also cheap.

It is possible to classify all the different kinds of glass-made objects into groups having at their bases, on one hand, their designation, and on the other, the technique of their manufacture. As to designation, it is possible to divide them into vessels made for domestic use and for technical employment.

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In Dvin the most ancient group of diversely ornamented vessels is represented by half-spherical cups and small bottles. The cups and some of the bottles are decorated with polished facets—round, oval or hexagonal. The fragments of these cups were found in the lower layers of the citadel as well as in the central quarter of the town and date back to the VI—VII centuries, although faceted cups are also met with in complexes dating to a later period—the VIII—IX centuries.

The investigation of the material shows that the glass-makers of Dvin manufactured semi-round cups in the VIII century. Their manufacture was continued during the IX century, although that epoch is remarkable by a substantial improvement of the trade and a large increase of form assortment and methods of decoration.

Among the material brought to light at the excavations of the central quarter of the town there are specimens of glass-made vessels (found in the IX century layers), prepared by the mold-blowing method, which are reminiscent of vessels of an earlier date, having po-

lished facets, but upon which are neatly reflected the modes and traditions of the IX century. These articles became already characteristic for the succeeding period of development of glass-making.

The next group of vessels includes a few drinking glasses, cups, bottles and jugs made of an identical thick material, with a yellow tinge, nowadays covered with olive-green patina (fig. 53, 4, 5, 75, 76, 100, 101). As to the quality of the glass these objects, various in their shapes, differ from the semi-round cups by their more angular and massive forms; the glass is coarse-grained, semi-transparent, though not very thick (2 mm.). From thick, colourless glass, which was covered subsequently with olive-green patina, Dvinitians also made drinking glasses, pitchers, bottles of different sizes, vases and cups. They used different methods for decorating them as, for instance, polishing, retting and moulding. One of the oldest methods for decorating glass-ware—was the plotting of double-sided patterns or ornaments by means of special tongs, punches or, as it is admitted to call them, „waffle-irons“—which were also applied.

Obviously it is possible to relate the group of vessels made of semi-transparent glass covered with brown patina to the production of the local glass-making workshops. It was introduced in the course of development of the trade as well as by the growing requirements of the market.

In the following, third group, we have included the glassware carved with ornaments presenting a higher artistic value. Here the glass is of a better quality and the technique of carving has been improved. Apparently these specimens relate to the costly glass-made articles which were not produced on a mass scale.

In the glassware collection of Dvin may be noticed a pear-shaped ewer (fig. 98) with a high support and a massive handle, decorated with an applied pattern and made of thick, high quality glass. The body of the vessel is covered with beautiful deep carvings of triangular section.

This vessel draws our attention not only by its highly artistic and technical qualities,

but also by its unusual shape. The body, the spout, the handle with the ornament applied on it and the support remind us of a metallic rather than a glass-made vessel.

Our collection comprises a shallow, large-mouthed cup with an ornament engraved in relief (fig. 9).

To that same group of articles may be related a cup made of colourless glass, the walls and the handle of which have an original shape (fig. 8). It was blown into shape together with its handles and the intricate designs found on its walls and its handles' bucklers. The ornament was additionally elaborated by way of carving and polishing.

The investigation of the above-mentioned cups and ewer has led our attention to their forms which are more appropriate to metal than to earthenware or glass. While examining earthenware or glass-made objects researchers have often underlined the fact that on preparing glassware the masters of old have borrowed the shapes of objects made of other materials (ceramic, metal), not always taking into account their specific qualities and their characteristic properties. In the middle of the I millennium vessels made of precious metals and rock-crystal were widespread all through the Near East. Particularly famed was Sassanian silver remarkable for the diversity of its forms and ornaments. Together with the widespread distribution of these valuable objects, substitutes of costly materials made their appearance. Besides the golden and silver ware, bronze and ceramic vessels of the same shape were manufactured. A substitute is found for rock-crystal, too. Glass-makers learned to obtain a substance similar to rock-crystal by its limpidity, and which could be fused and poured in mould as metal, and also ornamented by means of carving, like stone. Thus glassware was made which resembled metal or crystal-made vessels, but less costly and no less ornamental.

If until the VI—VII centuries glass-makers everywhere held, as a rule, to the classic proportions of Roman glass-making, the configurations of which were established after the invention of the glass-blowing tube, now heavier vessels with sharp contours, flat bottoms, elaborate massive handles and details character-

istic of metallic receptacles make their appearance. The style and the decorating methods are sometimes similar to the style and decorations of metallic objects. Polishing, facetting and chiselling were applied in preparation of glassware. In that respect the glassware of Dvin cannot be said to be original, for it reflects the general Hither-Asian style of glassmaking in the IX century.

There is also another specific group of articles towards which should draw, according to the chief typological method of analysis, our attention: the duplicates produced by local masters of imported specimens. Among them may be classified some of the glasses and a cup bearing a Kufic inscription (fig. 7).

The excavations carried out in 1964—65 in the central district of the town, have provided material attesting that in the IX century vessels made of fine transparent glass were prepared in Dvin. That material may be ranged in the third group of glass-made articles found in the central quarter of the town. The overwhelming part of that material is constituted by fragments of vessels discovered in burrows not far from the residency of the Catholicos and the Cathedral Church. The reconstruction of these objects shows that most of them are small, large-mouthed cups (3—5 cm in height, 6—13 cm upper diameter), mostly with polished, some of them with corrugated surfaces. Some of the cups have two or three small loop-handles. The upper board of the cups is wrought by different methods, with thickened or, as usually called, "heated" rims and straight or slightly outwardly-bent walls. As a rule the cups have no support; only a few cups have a small depression in the centre or a thin annular support (fig. VI-11, XI_{1,4,6}).

That same group includes twelve funnel-shaped noggins, found in Dvin, the brims strongly folded outwards (fig. XI₂).

The residency of the Catholicos and the Cathedral Church in Dvin were illuminated by lustres, to the group of which obviously belonged the above-mentioned glass-ware. They are made of fine, transparent glass with a light greenish-blue shade.

The next, fourth group of vessels constitutes tulip-shaped goblets with semiround

bottoms and without supports (fig. 10, Nos. 60—68). More than 20 specimens of these goblets are known to us, among which seven are made of transparent colourless glass, with polished walls; seven others have walls ornamented with slanting corrugations of different intensity. Two cups made of dark yellow glass are conspicuous for the artful designs of their corrugated walls. Three goblets are ornamented with designs formed by little squares; two of them are made of blackish-yellow glass, the other is colourless. Some of the goblets found in the central district of Dvin are decorated with thin overlaid threads.

To the articles produced in Dvin may be added another group of glassware. It consists of deep cups with vertical walls, in the centre of which is placed a tube for fixing a candle. The glass of these cups is ordinary, of lower quality, and with time has been covered with a thick patina (fig. V₁₂).

In the Middle Ages these candle-sticks made of glass, clay or metal were very widely distributed. They were found also in Samarra and in the Iranian towns (Rey, Nishapur).

Unlike the previously mentioned objects, chandeliers are met in Dvin in the central quarter as well as in the citadel; they were widely distributed during the VIII—XIII centuries.

The investigation of glass-made articles found in the central quarters of the town suggests that, though no traces of glass-making workshops have been found until now in Dvin or its surroundings, the town had, nevertheless, its workshops where different kinds of glassware were manufactured. Glass-making in Dvin was a widely practiced handicraft with a high quality of production corresponding to the technical and esthetical requirements of that period.

The characteristic features of the household vessels of Dvin in the IX century are the weighty angular forms appropriate to metal and ceramics rather than to glass. From one and the same kind of glass were prepared cups, glasses, flasks, jugs, candle-sticks and many other articles. The technique of decoration of the vessels was diverse. Polishing, fretwork, engraving, facetting, chiselling and stamping

were also considerably developed. The vessels were prepared not only by way of casting into plain shapes, but also by means of blowing into figured shapes. That method, which became widely practiced, was an innovation called forth by the requirements of an increasing production and as a result of the great demand for goods, since it partly substituted the costly and labour-consuming method of carving in glass. The glass-makers of Dvin learned to prepare a finer and more transparent glass, from which they manufactured lamps and lustre-bowls. Vessels made of thin glass gradually became modern. In the IX century we notice the rudiments of several new symptoms that reached full development in the following centuries.

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The X—XII centuries should be considered as the period of greatest development of glass-making in Dvin. For a long time glass-made vessels accounted mainly as articles of luxury, and because of their high cost they were available only to the wealthy class of the town. Beautiful glass-made vessels decorated the houses of the nobility and the most refined articles were kept in the depositories of the church. However, in the course of time, the demand for glass-made vessels increases and it became necessary to intensify the development of glassmaking. Ever since the IX century glass-makers gradually substituted the method of blowing into shapes and designs to the methods of carving and polishing, which made glassware expensive. That process was particularly intensified in the following period, being directly related with the development of the trade and the final shaping of the feudal town.

In the towns handicraftsmen become professional artisans tending to satisfy the needs of the wide sections of the population, while production overstepped the limits of the local market and turned into an item of commerce. And if in the IX century the individual character of ordered articles prevails, the X century witnesses their large-scale production, intended for an extensive market. That modification process of the character of trade can be observed within all of its branches.

In metallurgy, waxen moulds, which are used for casting a single unique object are replaced by assemblage frames affording to put out a cheaper, large-scale production.

The ceramic ware of the IX and of the beginning of the X centuries were produced as artistic articles through the application of costly materials and huge labour consumed on the individual preparation of the object. Beginning from the second half of the X century a tendency of reducing the costs of various ceramic goods is neatly observed; the earthenware crockery loses its artistic individuality, ornamentation is simplified, paintings are achieved through the application of local inexpensive dyestuffs, the stencil and the punch are involved in the everyday practice of the potter.

From that tendency of "mass production" glass-making does not lag behind. The archaeological material of Dvin pertaining to the X—XI centuries shows that the production of glassware had increased, acquiring the character of light industry with the roundish and smooth forms of its articles. Free blowing becomes the fundamental method for manufacturing glassware. Instead of various ornaments the patterns obtained by the method of mould-blowing are widely applied.

New shapes began to appear in everyday practice, gradually driving away the heavy glassware, to which arises the need of obtaining a new quality of glass that should be easy to melt, transparent and inexpensive. The glass-makers of Dvin succeeded in resolving that difficult problem and, indeed, the glass of the XI—XII centuries differs by its new chemical qualities. Among the specimens belonging to that period one may much more rarely come across patina-covered or iridescent glasses.

The few specimens of blown glass that were manufactured in the IX century were not characteristic of that period. They have been preserved since an earlier period, at the time of the invention of the glass blowing tube and the elaboration of the basic principles for the production of glass. The oriental mode of heavy vessels resembling metalware temporarily ousted the light, glassmade

vessels. Now they returned to it again. By restoring the previous shapes, at the same time perfected them. Vessels and cups were made larger in size; their forms were complicated by the introduction of supports and legs. Flasks were made slender with elongated necks and diversified crowns, handles and elaborated brims. The "mouldblowing" method became more suitable for the preparation of new vessels. If at the beginning of the application of that method the ornaments repeated the carved designs, in the course of time the character of the decoration changed and instead of imitating carved ornaments, the corrugation method was introduced. It was used for decorating cups, glasses, goblets and flask necks.

Another method for preparing decorative vessels consisted in blowing them into special ornamental shapes.

One of the most widespread methods for decorating the glass-made vessels of Dvin was the overlaying of designs consisting of glass filaments, points, drops and appliques upon the vessel while hot.

Overlaid designs used to decorate the cups, glasses, goblets and flasks. By the skill and artistic taste of the master glass-makers that method offered great possibilities for the effectual ornamentation of vessels.

That style of decoration was particularly in splendour at the end of the XII and during the XIII centuries. Of no less importance for the outward appearance of glass-made vessels was the designing and elaboration of their crowns and bottoms. The brims of such vessels were elaborated by different methods, the most widespread and simple of which was the so-called "heated" brim. The second method consisted in the turning back of the brim, while the third and least practiced consisted in elaborating the crown by means of a welded, sometimes coloured thread.

The bottom of glass-made vessels was shaped in different manners: it was, in most cases, flat or rounded, pressed in, which was done for giving firmness and durability to the vessel. In other cases annular or cup-shaped supports and legs, made of a separate piece of glass or by stretching out the bottom of the

vessel, were fastened to the latter. In Dvin the most widely distributed was the annular support moulded out of separate glass strips of different width and thickness, sometimes decorated with incisions or inlays.

Some of the vessels, mainly flasks, ewers and cups were provided, if necessary, with handles (fig. XX).

Within the collection of the glass-made articles of Dvin prevails the simple, artless vessel, which was the cheapest and therefore the most widely distributed.

The collection comprises a large assortment of household vessels. That material is met within all the layers of Dvin, though it is particularly abundant in the XII—XIII century dwellings of the citadel.

Glass-made vessels were also used by "alchemists". Alchemy was one of the most extensive branches of science in medieval Armenia. Through their recipes and practical advices alchemists helped to improve the technology of the various handicrafts. The manuscripts have kept detailed descriptions of several objects which were indispensable for working and among them glass-made vessels hold a quite important place.

The glassware collection of Dvin includes also vessels, the usages or the designation of which is precisely related with alchemy. These are small vessels, so-called "alembics" of two types, made of fine and transparent glass (fig. 125, 126, 127, 128).

Armenian alchemic manuscripts have been preserved only since the XVII—XVIII centuries, with indications that they have been rewritten from the manuscripts of the XIII century. However, the archeological material found at Dvin testifies that alembics existed in Armenia at an earlier period, ever since the X—XI centuries.

The next vessel which we have referred to the category of chemical laboratory ware is a bottle (fig. 124) made of transparent greenish glass.

To the group of laboratory vessels of the alchemist may also be ascribed glass-made specimens of spheroid-conical vessels, well-known by their ceramic analogues (fig. 105, 106).

In the different parts of the town's citadel were found small, flat fragments of vessels

with their brims turned inward. The measurement of the segmented arcs showed that five of the disks had a diameter of 18, 20, 21, 22 and 27 cm., respectively. Four of them are made of transparent, colourless glass, the last one has a manganic-red colour. These disks are thickened at the centre (from 3—5 mm) and thin at their borders (1 mm). Obviously, here we are concerned with window pucker-glasses.

Two fragments of flat and thick glass were found at the excavations of the cathedral church; the first, of triangular form, is made of manganic-red glass, the second has light-green shade. Apart from that, in Ani and in Dvin have been found alabaster frames with figured cells for the glass.

Mosaic patterns made of small glass cubes, substituted for natural stones and in some cases supplementing the colours' range during the Middle Ages, made their appearance in Armenia only in the VII century.

In Dvin glass was also used for making adornments, namely, bracelets and beads. Bracelets characterized by the multiplicity of their shapes, the vividness and the diversity of their decoration are most often met with. They are mostly polished, twisted, trimmed with variously coloured plaits, thickened with mosaic figures or painted, circular, triangular, oval or semicircular in section. Green, blue or black, seldom turquoise are the characteristic colours of the bracelets of Dvin. Besides the bracelets, pendants and rings are also met with, differing from each other only by their sizes. Bracelets are mostly found in the layers pertinent to the X—XIII centuries.

At the excavations of Dvin a considerable quantity of beads made of glass or glass paste, with a smooth, mosaic inlaid surface, has also been found.

The glass-made articles of Dvin pertaining to the X—XIII centuries are characterized by the fine, medium quality of the glass which is transparent, colourless or displaying different shades of green or yellow. These two colours, stipulated by the initial raw material of the glass, may be considered as basic ones for the glass-making workshops of Dvin. The careful, detailed investigation of the specimens of glass-made articles, the technological particularities

of the details and of the style, leads to the conclusion that several glass-processing workshops existed in Dvin.

The comparison of the different groups of articles affords the possibility of determining the distinctive traits of the handicraft and to describe the local peculiarities of the different workshops. For instance, from the bulk of the glassware may be isolated a group of differently shaped vessels-flasks (fig. 88, 89), cups (fig. 23) and drinking glasses with welded blue threads laid on the crown. These vessels were found in the different parts of the town. Besides the characteristic blue threads laid on them, they are all made not only of the same colour, but of the same quality glass, with a dull-milky iridescence and small cracks. It is known that the firmness and the durability of glass depend on its chemical composition and mode of baking. Undoubtedly, all these vessels have been manufactured under the same conditions, i. e. in the same workshops. To the articles made by the same master or in the same workshop obviously pertain the ewers (fig. 103, 104), glasses (fig. 59), goblet (fig. 71) made of colourless glass and decorated with manganic-red or turquoise coloured threads and drops. In another separate group must be also classified the black and dark-green cups with overlaid, scalloped stripes (fig. 31, 32). Still another group includes narrow cylindrical drinking glasses made of the same, high-quality glass (fig. 45, 46, 47, 54, 55, 56, 57). Such groups of glass-made articles with individual singularities of manufacture may be numbered in a few. Each of them had its own distinctive mode as to decoration, details and baking of glass. Blue-green tinged glass was typical for one workshop, yellow for another. Some of them liked to decorate their vessels with blue threads of glass, others with colourless threads, and still others with threads of manganic-red colour.

As a rule the glass-makers of Dvin did not print their trademarks on the articles they produced and their belonging to a definite workshop was determined by their distinctive, favourite forms, details and modes of decoration.

However there is no rule without exception. In our collection there are four fragments

of glass-made objects having the shape of small medallions. They are made of colourless glass. One of them is round (fig. 122), the other three are like oval plates (fig. 123). All of them were details of handles. The round one was fastened to the upper part of a vessel's big handle, while the oval ones-to the lower part of a vessel, at the junction point of the handle with the body. They are imprinted with Arabic inscriptions made while the glass was not yet cooled. On two of the oval medallions we read: „Made by Ali-Ibn-Abdallah“. That inscription was, no doubt, stamped by the master glassmaker.

Neither the Arabic inscription, nor the name of the glass-maker should confound the investigators of such a multinational town as Dvin. In that town, where Greeks, Arabs and other Arabic-speaking people who lived side by side with the Armenians and where, according to the testimony of the contemporaries, no one was stirred by the fact that the Christian church and the Moslem mosque stood side by side, the name of the master glass-maker Ali, son of Abdallah, written in Arabic, should'n't astonish us.

In that connection we should refer to another round medallion that also bears a stamped inscription which, however, is not legible, despite the seeming clearness of the imprint. It is altogether possible that in this case we are concerned with an imitation of an Arabic inscription. Such imitations were widely practiced at that time.

In 1967, fragments of a cup, made of transparent green glass and ornamented with brown enamel, were found in one of the premises of the town's citadel. On the upper board of the cup, the lower half of which has not been preserved, is set a frieze in Arabic letters, which are not legible in spite of the decoration. Below the frieze the cup is ornamented with a geometrical design. Not far from the spot where the above-mentioned fragment was found another fragment of a small cup, made of a similar, transparent green glass and also bearing the remnants of an inscription in brown enamel, was also located (fig. 69).

There is also a fragment of a vessel made of transparent green glass decorated with clr-

cles having a yellow core in the middle. By the manner of execution all of these fragments belong to the main group of glassware manufactured in Dvin. The similarity of the writing style and the colours of the enamel suggest that these vessels were decorated in the same workshop. The resemblance in the manner of execution with that of the Dvin made cups makes it possible to assume that that workshop may have been in Dvin.

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However, it would be quite erroneous to think that in such a big commercial town as Dvin the inhabitants only made use of local glassware. They led an extensive trade, themselves travelled to distant lands, received merchants from different countries, so that the market of Dvin witnessed a wide exchange of commodities between them.

There can be no doubt that the wealthy layer of the citizens, the ecclesiastical and the urban nobility, bought and made use of glass-made articles manufactured by the famed workshops of Iran, Iraq, Syria, Byzantium and Georgia.

The investigation of the specimens of imported vessels pertaining to the collection of Dvin gives us the same picture of trade relations as those established by the written sources and the numismatical data.

During the VIII—IX centuries Dvin held lively commercial relations with the Arab Khalifat, chiefly with the countries ruled by the Abbasides and primarily with Iraq and Iran.

In our collection there are specimens of glassware prepared in the latter countries, such as a cup with a relief carving (fig. 9), another one with segmented walls (fig. 8), a pear-shaped vessel with deep carvings (fig. 104) and some drinking glasses decorated with various ornaments.

During the X—XI centuries the trade relations of Armenia bore a new orientation for a number of political and economic reasons. The relations with the West, Byzantium and the Eastern shores of the Mediterranean were intensified. That fact is also reflected by the specimens of glassware.

First-class and unique specimens of Byzantine glass, presenting an exceptional interest for the investigation not only of the trade relations of Dvin in the XI century, but also for that of Byzantine glassmaking (fig. 83, 114), were found in Dvin.

Particular attention must be devoted to a vessel pertaining to that group and made of fine, blue-coloured glass decorated with gold and diversely coloured enamel (fig. 83).

It is one of the few objects upon which are brilliantly reflected the technique style of the Byzantine metropolitan masters of the XI century. That significance is also determined by the topic of the imprint. On one of the medallions is made the image of a sitting man, playing on the violin set against the chin of the musician. That picture is one of the most ancient representations of fiddles shown in horizontal position, that manner of holding the instrument being characteristic for western musicians, whereas in the East the bow instruments were held in the upright position when played on.

First-rate specimens of an earlier Byzantine glassware, as, for example, a mosaic cup which can also be dated back to the IX—X centuries, was also found. That cup was found together with Byzantine coins dating back to the X—XI centuries and a vessel made of fine blue-coloured glass ornamented with white enameled holes (fig. 114).

However, the citizens of Dvin obtained ornamented glass- not only from the workshop of Byzantium, but also from those of other neighboring countries.

According to the style of the decoration and the composition of the design, insofar as it may be possible to judge from the preserved relics, the fragments of a cup (fig. 53, 1, 2, 3, 6) and possibly, the toilet box with a massive lid made of colourless opaque glass (fig. 120) should be ascribed to Irakian production. Later on, in the XII—XIII centuries, Aleppo and Damascus began to be renowned for their decorated glass-made vessels. In their workshops were prepared more ornamental and richly decorated vessels requiring a great quantity of gold and bearing, as a rule, Kufic inscriptions. Fragments of vessels manufactured

by these reputed workshops were also found at the excavations of Dvin (fig. 52, 53, 57). Some fragments, that made part of the bottoms bear designs made of various coloured enamel and are covered on their upper part with a layer of colourless glass (fig. 34). They have close analogues amid the material found at the excavations of the Georgian town of Orbeti, where a glass-making workshop was opened (excavations were led by N. N. Ougrelidze. This material is not yet published).

The glass-made articles discovered at the excavations of Dvin clearly display the cha-

racter of the handicraft and trade of the medieval town. The over-all development of the productive forces, combined with extensive trade, stipulated the rapid development of the local glassmaking handicraft which made use of the old traditions and achievements of the countries with which Armenia had ties. Glass-made articles were firmly involved in the mode of life of the citizens. That brought to light the fact that the attributes of these articles, being given definite local particularities, were general for many countries of the Medieval East.