GLASS IN PERSIA IN THE SAFAVID PERIOD AND LATER

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The Islamic glass of the Near East was highly prized in medieval Europe, although for reasons of geography as well as of technical superiority, it was mainly the gilt and enamelled glasses of 13th-14th century Syria which enjoyed unsurpassed prestige in the West — one has only to call to mind such glasses as "The Luck of Edenhall", the "Goblet of Charlemagne" at Chartres, or the "Goblet of the Eight Priests" at Douai, all of them carefully preserved since the Middle Ages, whether in specially made leather cases, or in precious metal mounts[1]. It was probably Timur's devastation of Syria about 1400, including the glass-making cities of Aleppo and Damascus, that gave this industry its *coup de grâce,* there although it appears to have hung on for a while in Mamluk Egypt. Timur is said to have carried off Syrian glass-makers into captivity in Samarkand, but there is little enough evidence of what they may have made there[2]. By the end of the 15th century Syria and Egypt were importing glass, even lamps for religious buildings, from Venice. By the 16th century the balance had tipped decisively in favor of Venice, and against the Near East[3].

Little is know about the glass-making centres of medieval Persia[4], and less about those of the 15th and 16th centuries. The disruptions of the Mongol period, and the disorders and Turkish invasions of the early Safavid period, under Shah Ismail (ruled 1499-1524) and Shah Tahmasp (ruled 1538-76), were hardly conducive to the re-establishment of an industry like glass-making, which required considerable fixed capital assets in the way of buildings, and assured access to fuel and certain raw materials. The first shafts of light begin to fall almost simultaneously with the accession to the throne of the great Shah Abbas I in 1587.

Thomaso Garzoni, in his *La Piazza Universale di Tutte le Professioni del Mondo* (Venice, 1585) writes in his chapter on *«Merchants, Bankers (and) Usurers...»: «Venetian cloths, Flemish kerseys, tin, bronze, glass, paper, chests, mirrors and numberless other Venetian wares have an excellent sale in the various parts of the Levant...»*[5]; and specifically of Persia Berchet notes from the records of the consul Alessandro Malipiero in 1596 that glass, mirrors and beads were articles of export from Venice[6]. In 1603 gifts from the Venetian Signoria to the Shah included *«Two bottles of cut silver with the glass»* (i.e. glass bottles with a sheathing of silver cut *à jour)*[7]; and ten years later the Shah himself was obtaining from Venice through his agents there among other commodities: *«worked glasses, beautiful and well made, and for the most part gilt ... large crystal mirrors, which are unblemished and unbroken; mirrors of middling and small size, diamonded; ringstones of all sorts, with figures engraved on them; crystal eye-glasses made with the diamond...»*[8]

Adam Olearius[9], who was in Ispahan in 1637, records how the Embassy of which he formed part, was received by the Shah's Chief Minister in *«...a very beautiful room which from the moment of entry wonderfully charmed the sight; for in the middle of the vestibule one saw a great fountain throwing up numerous beautiful jets of water. The room was all lined above with numerous portraits or pictures of women, clothed in a variety of ways, and all in the European style*[10]*; and below them was nothing but mirrors, to the number of more than two hundred, large as well as small; so that when one was in the middle of the room, one saw oneself reflected on all sides. They told us that in the Shah's Palace, and in the apartments of his women, there is also a mirror-room, but incomparably larger and more beautiful than this one...»*[11]

Olearius is also our witness to the acceptability in Persia of the European *«case-bottle»*, rectangular on plan, for the reception of strong waters. When in Scamachie (probably the modern Shemakha in Russian Azerbaijan) in January, 1637, the Embassy presented to the

Khan, among other things, *«a case filled with two dozen bottles of all sorts of strong liquors...»*[12] A case-bottle presumably of this type may be seen in a 17th century wall-painting of a house in New Julfa[13] near Isfahan, and similar bottles appear in paintings well into the 19th century[14]. He is also one of the first to mention the glass *kalian* - or hookah-base. Speaking of tobacco, he writes[15] : *«To take it with a degree of pleasure, the Persians make use of a glass flask, or of a jug, or of a coconut... which they fill with water half-way or a little more, and sometimes mix perfumes in it. Into this water they insert a little plain tube, having at one extremity a disc, on which they place the tobacco with a little charcoal, and with another pipe an ell long, which they hold in their mouth, they draw the smoke of the tobacco through the water».* We will return to this later.

Du Mans, in his *L'estat de la Perse en 1660,* quotes a memorandum of thirty years later on the objects of trade suitable for Persia: *«The principle are: cloth, perpetuanas, serge, tin, lead, and quick-silver; one could add also damasks, «tabisoudes»* (a kind of moiré silk):

Fig. 1

mirror glasses, glass of all sorts of colours, cut; beads, worked or unworked crystals...»[16] The French traveller Chardin, who was in Persia for much of the period 1664 to 1670 and again between 1671 and 1681, confirms this in saying:"... *their glass mirrors are brought from Venice, as also their window-panes and their beautiful bottles for taking tobacco...»* (i.e. *kalians)*[17]; and almost certainly Venetian, or at least *façon de Venise,* glasses may be seen in Persian miniatures by, or in the style of, Rizá-i-Abbasi (figs. 1, 2). They are also unmistakably represented in one of the paintings in the Cathedral of New Julfa (fig. 3).

It is probably the last-named item of Chardin's list — the *kalian* — that was the single most consistently demanded glass article of export from the West. Engelberg Kaempfer, who was in Persia in 1684, describes and illustrates the *kalian* (fig. 4). Having referred to the poisonous character of the tobacco-leaf, but conceded that the smoke produced by their combustion *«fills the brain with cheerfulness»,* he proceeds' *«That this may be performed the more successfully, the Persians draw the smoke through an apparatus, more than half-filled with water; this absorbing the sulphur, which is foul and bad for the brain, allows the smoke to pass through cleansed of every malign pungency, cooled and pure. This apparatus, which they call* قليان *, Khalliaan or Khaliuun, is a flask a foot-and-a-half high, made of glass, and furnished with a longish neck; the orifice of which is closed by a small brass disc, hammered out to a diameter of a palm and a half, which admits in the middle two conjoint brass tubes — one whose lower end enters the flask, and is covered by the water, while the upper end, shaped like a funnel or the mouth of a trumpet, houses the receptacle for the tobacco and the coals placed on it; the second is shorter, its lower end not reaching the water, and its upper end curved to take a long reed, by which the smoke is sucked up...»* The whole is made air-tight, so that *«by sucking, the smoke can only be forced from the funnel, passing into the water with a pleasant gurgle* ("jucundo strepitu"), *thus first filling the empty space in the flask, and thence through the reed reaching the mouth and the very lungs of him who sucks...»*[18]

The *kalian* represented by Kaempfer in his illustration shows a flask with a stem composed of two depressed quatrefoil knops of a type favoured in the Dutch glasshouses of the late

Fig. 2

Fig. 3

17th century, and may well have come by way of the Dutch East India Company, on one of whose ships Kaempfer continued his voyage to India and beyond. In the 18th century, however, the supply seems to have come from Venice. In 1714 *«eight carafes with flowers alla Turchesca, in crystal»* were among the glasswares sent from Venice to Constantinople[19] The family which supplied them (Bigaglia) is found late in the same century making *«Pipe con frutti entro»* ("Pipes with fruits in them") alongside *«Pipe Persiane senza frutti colorite»* ("coloured Persian pipes without fruit"), the first sort costing 20, the second 15 Venetian lire[20]. A bottle with fruits modelled in the round enclosed within it is still in the Salviati-Camerino Collection in Venice[21]. Flowers and fruits of this kind had to be made "at the lamp" before they could be enclosed within these vessels, and it was no doubt to this type of work that a report of the Venetian Board of Trade referred in 1728, when listing *«exports from Venice of beads, manufactures produced by means of the blow-pipe» («manifatture spettanti all'arte di Supialume»), looking-glasses...»* [2] Later in the century, at much the date of Pietro Bigaglia's "Persian pipes", the English traveller Thomas Martyn, in his *A Tour through Italy* (London, 1791), records: *«One of the principal manufactories at Venice is that of glass on the island of Murano. They blow large mirrors, and make abundance of trinkets (margaritine), and flowers to decorate lustres, and for nosegays to adorn the churches. They export little now but to the Levant.»*[23] The lamp-worked flowers seem to fit well into this framework of reference.

The *kalian*-bases with enclosed flowers (fig. 5) was copied in Persia in the early years of the 19th century. E.S. Waring in *A Tour of Sheeraz* (London, 1807) records: *«They have here a glass-house and a foundery, both worth seeing. The bottoms which they blow, of glass, for the Kuleeans, have a curious appearance to a stranger; they are ornamented in the inside with representations of trees, flowers, etc. and some-*

Fig. 4

Fig. 3

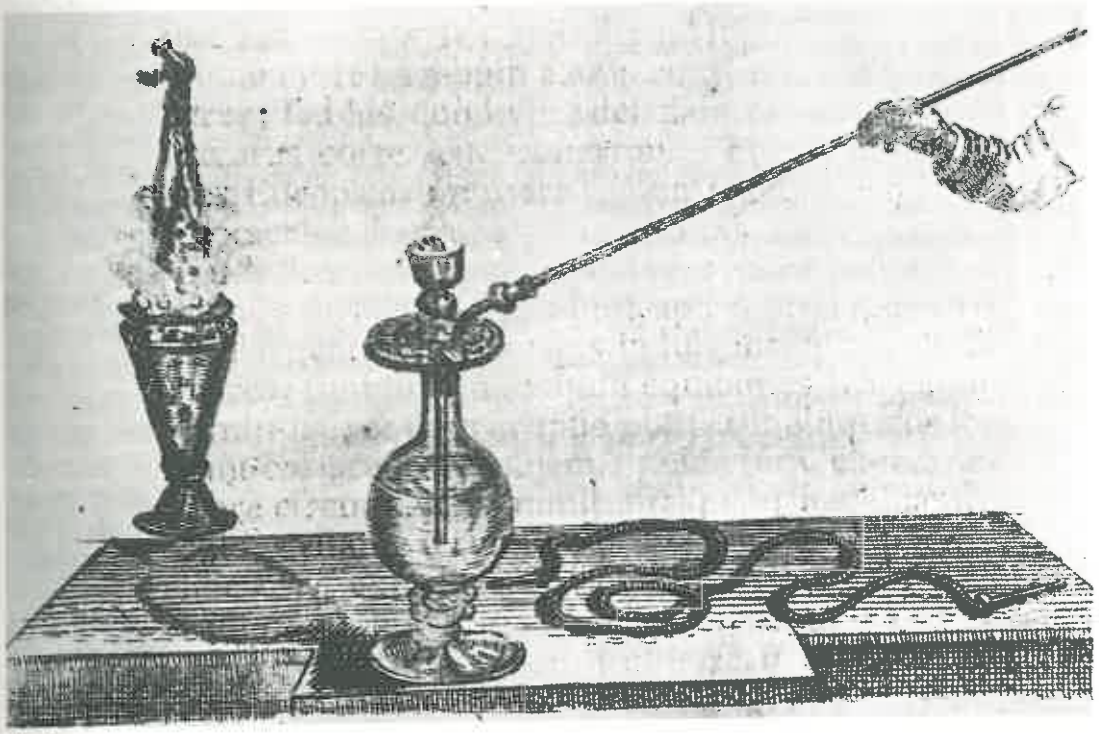

Fig. 4

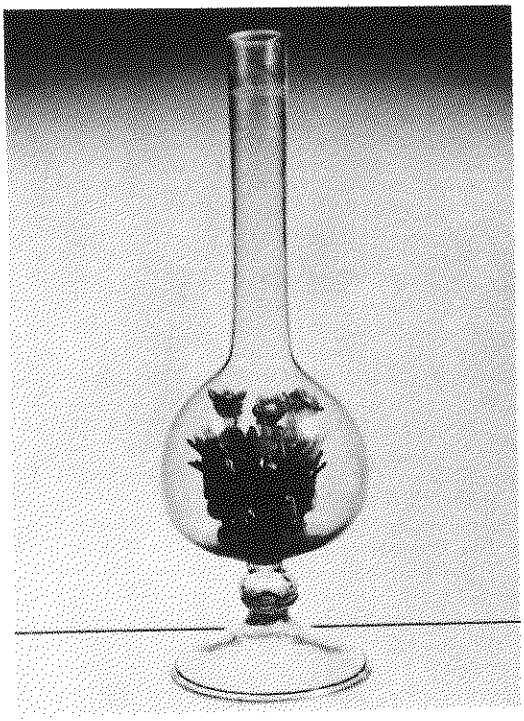

Fig. 5

times with small medallions. When the glass is just blown, they fix them in the bottom with small pincers; and so neatly are the pieces joined together, as to entirely escape observation.»

That the bottle-shaped *kalian* remained in favour well into the 19th century is demonstrated by a picture of Fath Ali Shah (1798-1834) by the artist Ahmad, now in the British Embassy in Teheran (fig. 6). The mounts are heavily bejewelled, like the smoker himself, but the container is visibly glass, whether also decorated by jewels, or perhaps merely enamelled and gilt, a type of decoration favoured by the Bohemian glasshouses in their supply of *kalian*-bases and other glasswares to the Near Eastern market (fig. 7). There were Bohemian warehouses at Izmir (Smyrna) and Beyrut[24], and Joseph de Tournefort, who travelled in the Levant in 1700-1702, recorded of Smyrna: *«The Caravans of Persia are continually arriving at Smyrna from All-Saints (November) to May and June...»* Elsewhere he records of the Armenians: *«They are the greatest Traders upon Earth... The Armenians brought back also the Cloths of England and Holland, Brocades, Venice Glass... and every thing they thought fit for their own Country, or the Indies...»*[25] The channel of entry of glasswares into Persia therefore requires no elucidation; and what was true of Venetian glass in the early years of the 18th century was no doubt true of Bohemian glass towards the end of it. A number of glasses which may reasonably be identified as of Bohemian origin have come to light in Persia over the years.[26]

So much in a preliminary way for the imports of European glass into Persia in the 17th and 18th centuries. The subject should not be too abruptly divided, and the matter of imports will recur intermittently.

Tavernier seems to be the first authority to refer to the making of glass in Persia. He writes: *«There are in Shiraz three or four glasshouses where quantities of bottles, large and small, are made which serve for the transport of the rose-waters and other scents which are made in this town. They also make a number of different sorts of container («vases») for picked fruits, which are transported to foreign countries...*[27] Curiously enough, this passage makes no reference to the use of glass bottles for the transport of wine, the commodity of Shiraz which was most famous in European, if not in Persian, eyes. Herbert, writing in 1627, had declared: *«...indeed no part of the world has of wine more or better than Sheraz»*, and describing Gombroon (Bandar Abbas), referred to *«...plenty of Shyraz wines brought in long-necked glasses and jarrs that contain some gallons, the best wine indeed in all Persia...»*[28] These details are important and specific. Chardin in his turn wrote: *«The bottles in which they transport this wine are of two sizes: the small bottles contain four-and-a-half pints, Paris measure; the large bottles have the capacity of five small ones, being made of thick glass, and wickered on the outside, to make them less subject to breakage. These bottles are stoppered with cotton having melted wax on top, so that they cannot admit air. They are put into cases, ten small bottles in each, with straw, and they are transported in this way thoughout the Kingdom, and to the Indies... They also make in Shiraz, for export to the Indies, rose-water, oil, and all sorts of pickled fruits... put in bottles each of which will take two pounds' weight...»*[29] Jean Struys, who was in Shiraz in March, 1672, repeats this account in essence, stating that there were three glasshouses there which made nothing but containers for wine, rose-water,

Fig. 6

and pickled fruits.[30]

It is Kaempfer once again, however, who really rounds out the picture for us, and provides an illustration for good measure (fig. 8). Writing of the Shiraz wines and their transport, he says: «.. *Of the glass vessels, some are larger, big-bellied* ("ampullacea") *and jacketed with rushwork* ("circumucto scirpo tunicata"), *which they call «Karaba»;* (see letter c) *others smaller and not furnished with rushwork;* (see letter d). *The former take eight* man kohoneh *of wine, less often nine; the latter one-and-a-half. The glasses indeed are manufactured in this city itself: the flints are furnished by the land itself, the neighbouring city of Neris provides the plant for the alkali, called* Kilià, *while the valleys round about provide the wood. A single* Karabà *costs at the glasshouse two* mamudi, *seldom dearer. The chests for transport, which the Persians; call* Sanduk, *and foreigners* Kassa, *are densely woven of thin rods* («ex tenubis asserculis obtuse sunt compactae"), *and are too weak to stand a journey without being carefully strengthened by being tied round with cords; having first been stuffed with straw, by means of which they may be kept apart and protected against pressure* (see letter f). *Individual chests take about ten of the smaller flasks, rarely more; and at least two of the* Karabas, *with which one of the smaller flasks is very frequently inserted. Not infrequently smaller glass vessels filled with rosewater are inserted into the empty spaces* (see letter e). *Two chests make the load of one mule...»*[31]

From this account and the accompanying illustration we may obtain some picture of the glasses made in the Shiraz glasshouses. Two things may be asserted of them: they all seem to have a swelling in the neck a short way below the rim; and some at least of them were blown in a ribbed mould. The wine-bottle does not have a particularly long neck. To this we shall return.

The utilitarian containers referred to in this passage from Kaempfer were clearly glasses

without much artistic pretension, and Chardin is the source from which we obtain some light on this question. *«These are the arts and crafts which the Persians practice well enough; those in which they are unsuccessful are the following:*

Glass-making. There are glasshouses all over Persia; but the glass is for the most part flawed, full of «seed» and bubbles, and greyish in colour; which proceeds, no doubt, from the fact that their fire lasts only three or four days, and that their deremnè, *as they call it, which is a sort of heath, which they use to make it, does not give such a strong heat as ours. The glass of Shiraz is the finest in the country; that of Ispahan, on the contrary, the worst because it is only glass re-melted. They make it commonly in the Spring. They have no knowledge of silvering glass, as I have observed; as a result, their glass mirrors are imported from Venice, as also their sash-glasses and their beautiful flasks for the taking of tobacco. For the rest, the art of making glass was introduced into Persia less than eighty years ago. An Italian, poor and avaricious, taught it at Shiraz for fifty crowns. Had I not been well informed about the matter, I should have believed that they owed to the Portuguese their knowledge of an art so noble and so useful...»*

This was written in the book which retails Chardin's first experience of Persia, in 1666-70. His account is borne out by Du Mans, writing of a few years earlier: *«The glass-workers, notwithstanding the shortage of wood, are always at work, although not continuously, for they light their furnace when the* Pilevers, *or gatherers of broken glasses and bottles, have brought them a sufficient quantity; for to found glass — that is to say, fresh glass — here in Ispahan, would not pay them, new glass being made at Shiraz of stones and soda; for there wood is cheaper. Here then they only re-melt that glass, and that with deremnè* (Artemisia santonica), *which is like the heather of our country. They put the glass directly into the furnace, and not into a glass-pot; this fire, which is only half shielded and mixed with flying cinders, causes the glass to become* (instead of colourless and clear, as it was) *half-black, full of flaws and blebs. Also they make here nothing but bottles, for of that beautiful glass which charms the sight with the lovely hue of a September dew, there is no usage here; nor do these wretches here deserve it. This calling of glass-maker does not presuppose gentle birth, as in France, those here being, like the rest, of the dregs of the population.»*[33]

This hostile account may perhaps be adjusted by another, more or less contemporary. De Thévenot writes of Shiraz: *«There is much glass made there, and several Glass-Shops are in the Town, though they work not constantly in their Glass-Houses, but let the Fire go out after they have employed a certain quantity of materials. They make their Glass of a White Stone, almost as hard as Marble, which they get in a Hill four days Journey from Schiraz, and it is very clear: especially they make great Bottles as clear and delicate as in any other place in the world; but it is wonderfully strange how they can blow the great Bottles, they call* Caraba, *which are as thick as ones Finger, and hold near thirty Quarts of Wine; these bottles are covered with the Straw of Canes.»* In the same passage he says of the great jars in which the wine is stored: *«But when they broach a Jarr, it must be presently drawn off, and Bottled up in* Carabas... *in each Case or Chest they put ten great Bottles, with a good deal of straw; and two of these Chests make a Mules load...»*[34]

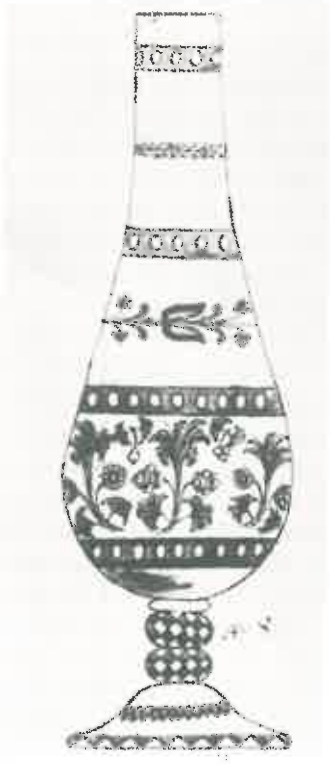

Fig. 7

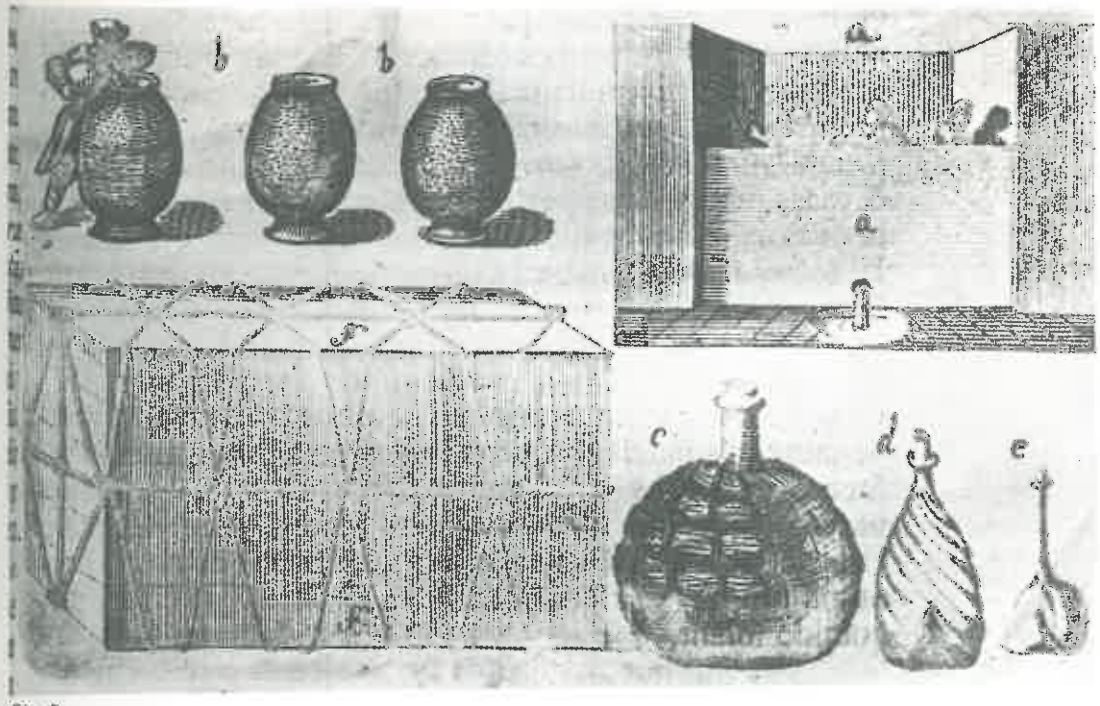

Fig. 8

It seems likely that thenceforward glass never ceased to be made at Shiraz. The observation of Savary Des Bruslons (1730) that *«there is no glass-making at all in the East, apart from Persia»* may be called to mind[34]; and later in the century W. Francklin in *Observations made on a Tour from Bengal to Persia in the Years 1786 to 1787* (London, 1790), notes: *«They have at Shirauz a glass manufactory, where they cast very good glass, of which great quantities are exported to different parts of Persia;...»* (p. 147). E.S.Waring's observation quoted above makes it evident that quite skilled work was being done in the early years of the 19th century, and L. Langlès, editor of Chardin's *Voyages,* refers in a note on his account of Shiraz to the fact that much had changed since Chardin's time, but that *«il y a une verrerie et une fonderie dignes d'être vues...»* (1811)[35] – a choice of words, however, which suggests that he was perhaps in fact copying Waring. J. Ussher in *A Journey from London to Persepolis* (London, 1865) writes in the context of Shiraz wines: *«It is kept in large jars, and sold in glass bottles of various sizes, holding from a quart to two or three gallons. The manufacture of these bottles gives employment to a large number of people»;* and as late as 1911 H.R. D'allemagne could write: *«A Chiraz, on fabrique des bouteilles soufflées qui on cette particularité d'être Plates et de ne tenir debout qu'en étant adossées».*[36] It may reasonably be supposed that within this time-span, from the 17th century to the early part of the 20th, glass-making was continuous at Shiraz.

It is by no means easy to reconcile the details of these different accounts. Herbert's *«jarrs that contain some gallons»* presumably correspond with the *Karaba* (22 1/2 pints, Paris measure, according to Chardin, 30 quarts according to Thevenot – this perhaps a simple mistake for 30 pints?), and his *«long-necked glasses»* are presumably the equivalent of Chardin's *«small bottles».* Kaempfer makes the *Karaba* hold approximately 6 small bottles, Chardin five; but both agree that 1 *kassa* holds 10 small bottles. This detail perhaps helps to explain one apparent anomaly in Thevenot's account. He writes *«in each Case or Chest they put ten great Bottles».* His *«great bottle»* therefore must be distinct from the *karaba* (as a careful reading of the passage independently suggests), and this perhaps explains why he says *«they make great Bottles as clear and delicate*

as in any other place in the world», whereas the *karaba* is described as being *«as thick as one's finger»*, a thickness unlikely to produce an effect which could be described as *«clear and delicate»*. Indeed, Chardin refers to his *«large bottles»* (i.e. the wicker-clad *karaba)* as being made of *«gros verre»*, which to a contemporary Frenchman would almost certainly have implied a thick green bottle-glass. Thévenot and Du Mans agree in stating that at least some of the Shiraz glass was *«colourless and clear»*. If Herbert's passage will bear the construction suggested, it seems likely that his *«long-necked glasses»* are the *«small bottles»* of Chardin, made in a glass approximating to the Venetian *cristallo:* from which it follows that the smaller wine-bottle illustrated by Kaempfer may not be typical; and one is even tempted to wonder whether his letters d and e should not be interchanged. There is some circumstantial evidence to back up this general hypothesis. Fig. 9, a probably mid-18th century oil-painting, shows a (?) betrothal-scene, in which the girl sits holding a bottle in her right hand and a (palpably European) wine-glass in her left. Exactly the same type of bottle is represented in one of the wood-cuts illustrating Herbett's work (fig. 10) more than a century earlier (1627). As late as 1911 an authority refers to *gulaptans* as *«sortes de carafes de forme surbaissée munies d'un goulot orné d'une large collerette, et dont la panse est toute côtelée...»*[37] which seems a reasonable description of the typical Persian bottle as it has survived in numerous examples to the present day (fig. 13).

Chardin, in his description of a meal given by an Armenian merchant in Ispahan, writes: *«The buffet was at the bottom of the room, on a floor-covering of gilt leather, and consisted of three or four dozen glass bottles as fine and clear as crystal. These bottles, which hold about three pints «chopines» each, have a slightly sagging spherical body, and a neck eight or nine inches long; some are plain, others gadrooned* (? ribbed), *others again decorated in diamond-point; there are a hundred shapes and fashions. These were filled with various sorts of wine, and each had in place of a cork a nosegay... Amongst this crowd of bottles of every sort, one saw vases of flowers, interspersed with cups of rock-crystal, silver, silver-gilt, glass, porcelain;...»*[38] This account is very closely echoed in his description of the *calaat (khil'at* or garderobe) of the Palace at Isfahan (Ali Kapi). Of this he writes: *«The walls all round have a revetment of slabs of jasper, to a height of eight feet; and above, right to the apex of the vault, one sees on every side nothing but niches in a thousand different shapes, filled with vases of every sort and of every materail imaginable... There is nothing more light-hearted or gay than this infinity of vases, cups, bottles of every sort of shape, fashion and material, such as crystal, carnelian, agate, onyx... procelain... etc... The offices of store-rooms which lie to the side of this magnificent room, are filled with cases of wine, four feet high and two feet wide. The wine there is for the most part either in great bottles of fifteen to sixteen pints, or in bottles of two to three pints, with long necks, as you see them at the apex of the vault on the draft* (fig. 11). *These bottles are of Venetian crystal, of divers fashions, in diamond-point, with gadroons* (? ribs), *or with mesh-patterns. Since the good Asiatic wines have a very lively colour, they like to see them in the bottle...»*[39]

These two passages occur some distance apart in the book, and perhaps lend support to each other, the description of the bottles certainly appearing to complement each other. Nevertheless, although in the second passage Chardin seems to imply that they are of Venetian glass, the general tenor of the account, with its reference to bottles of two sizes for wine (albeit apparently not agreeing with the capacities given in the passages cited earlier) suggests that there is a break in the sense, and that the Venetian bottles were simply amongst those used for serving the wines. The expression *«à pointe de diamant»*, taken alongside *«à godrons» and «à raiseau»*, suggests that conceivably a lozenge-shaped mould-blown pattern may be designated rather than decoration by the diamond-point.

The second feature of Chardin's description of the Palace is the reference to glass bottles used as decoration in niches. These niches still survive in the Ali Kapi Palace in Isfahan[40], and in other buildings in or near that city (fig. 12)[41]. Clearly not all these niches would have been occupied by glass vessels, since some of the silhouettes suggest forms too slender to have been rendered in anything other than metalwork. That this style of decoration continued well on into the 19th century is indicated by the following description of a bath-house in

Fig. 9

Fig. 9

Teheran in the reign of Shah Nasir al-din (1848-96): *«All around the hall were niches, offering ample space for thirty persons to sit in at once. A thick pole, its ends stuck to the wall, cut the front of each niche where it began to shape itself into an arch. The poles which were carved flat on the top, made resting-places for hundreds of glass vases filled with coloured water - red, green, blue, yellow and mauve.»*[42]

What, of all this glass, survives? The answer probably has to be "very little". The *karabas* by their very function were destined to go on their travels, often to India and beyond. Just as the thick English wine-bottle is a type-fossil on almost any excavation in England, so it may be anticipated that fragments of *karabas* will turn up on 17th-18th century Persian city-sites that are systematically excavated: of the thousands which travelled to India, some will presumably come to light there. The smaller, and thinner, wine-bottle probably survives in two forms — the smaller transport bottle described by Kaempfer (fig. 8, letter d), and the long-necked serving-bottle referred to by Chardin and others (fig. 9-10). One example of the former type may perhaps be identified in a bottle in the Metropolitan Museum, New York[43]. Instances of the latter form are legion, but the question of their date is very difficult to determine. Being of thin glass, they were probably easily broken, and Persian banquets were far from being staid affairs, as we learn from the experience of the Sieur A.D.D.V. at the Shah's Court: *«... They brought me the spinet, which being very much out of tune, produced a music that was intolerable, but it was enough for me that the King approved it. While I was playing, Monsieur Sein, who was cutting a thousand different capers near us, made a false step, and broke a bottle which he was holding, the wine and the fragments of which fell on the spinet, striking it dumb...»*[44]. The bottles represented on 17th century Persian miniatures seem on the whole, when they are identifiable as of glass, to have the bases finished with a more or less high "kick", rather than with the base-ring which distinguishes most of the surviving coloured glasses, made by pushing in the bottom of the paraison and providing a foot in the form of a double thickness of glass. A probable survivor of the former type is a bottle in the Metropolitan Museum, New York[45]; examples of the latter type abound (fig. 14 c,d). A. Nesbitt in

Fig. 10

his *Descriptive Catalogue of the Glass Vessels in the South Kensington Museum* states: *«several specimens* (as Nos. 2423 to 2341-'76) *of vessels have been lately added to this collection which are stated on good authority to be exactly similar to those made daily in Persia; some of these* (e.g. 2431-'76) *corresponds in form to a bottle shown in Chardin's engraving of the interior of the Shah's drinking-hall at Ispahan, while in texture and quality of material they differ little from Venetian glass of the 16th or 17th centuries...»*[46] This glass is the one here illustrated as fig. 13, c. It seems extremely likely that almost all the surviving bottles of this form, especially those in coloured glass, date from the 19th centuty and quite possibly from the second half of it, although it should be borne in mind that the bottle shown in the 18th century painting of fig. 9 is apparently made in this way, but of colourless material. The bottle illustrated in fig. 13d, was probably blown in the same three-part mould, decorated with a row of cypress-trees between borders of gadrooning, as the swan-necked vessel in fig. 13a,[47]. Vessels of both these types sometimes have the exceptionally broad foot-fold, and the double-knopped stem, which are found on the

Fig. 11

kalian-bases enclosing lamp-worked flowers (fig. 5). These we have already seen to be reasonably dated to the early 19th century, and attributed to Shiraz, and so may the corresponding bottle and swan-necked "rose-water sprinkler". The same three-mould design of cypresses appears on numerous coloured ewers and other forms, and these too probably date from well on in the 19th century, a dating perhaps confirmed by the fact that none of these types appears to occur in the oil-paintings of the Qajar period.

One form of long-necked bottle has not yet been touched on. This is made of dark-green glass, has a flattened, slightly sagging body, and a tapering neck round which is coiled a thickish trail (fig. 14 a,c). One example of this type (with the wine still in it) was shown at the 1931 Exhibition of Persian Art. According to tradition it had been presented to Queen Anne in 1708 by a visiting Persian Embassy, and was said to have remained thereafter from 1758 until modern times in the cellars of the Duke of Rutland[48]. An example in theVictoria and Albert Museum when presented in 1907, was quite frankly considered to be of 19th century date (fig. 14a)., and H.R. d'Allemagne stated that at the time of his visit to Persia glass-manufacture still continued at Qum, producing these flattened bottles with spiral threading round the neck[49]. The example shown in fig. 14c, has on it in gilt lettres the legend "Elixir of Life", and if this can be taken at its face-value, suggests that the bottle reached Europe in the 18th, or the early years of the 19th, century. The type may well have had a long life.

The time is not yet ripe for a final judgment on the nature of the glasses manufactured in Persia from the late 16th to the 19th century, and the present essay is no more than an attempt to lay a foundation on which further work in this field may rest. It is greatly to be hoped that systematic excavation in Iran will one day provide the basis for a firm chronology.

NOTES

1. C.J. Lamm, *Mittelalterliche Gläser... aus dem Nahen Osten,* Berlin I (1930), II (1929), pp. 241 ff. Apart from the pieces mentioned, fragments of similar glasses are not infrequently found in excavations in northern Europe (e.g., London, Lübeck, Lund, etc.)
2. *Ibid.,* pp. 256 and 494, extract 64.
3. This theme has already been handled, in so far as Syria, Egypt and Turkey are concerned, by the present writer ("The Import of Venetian Glass into the Near-East: 15th-16th Century", in *Annales du 3e. Congrès des «Journées Internationales du Verre»,* Liège (n.d., 1965), pp. 158-168; and "The Import of Western Glass into Turkey: 16th-18th centuries", *The Connoisseur* (May, 1966), pp. 18-26). Much evidence on the period somewhat prior to that which concerns us here is given by L.Zecchin, "I primi Cristalli Muranesi giunti in Oriente", *Vetro e silicati,* ,XII, No. 71 (1968), pp. 17-20.
4. C.J. Lamm, "Glass and Hardstone Vessels", in (ed.) A.U. Pope, *A Survey of Persian Art,* London and New York (1939), III, pp. 2600-1;
5. *«i pani Venetiani, i Carisei di Fiadra, i stagni, i rami, i vetri, la carta le casse i specchi, & infinite altre merci di Venetia han buonissimo recapito nelle parti di Levante...»* (1589 ed., p. 54). Richard Hakluyt, writing some five years earlier (1580), had given the following list of articles acceptable in the Oriental trade: *«Glasses of English making. Venice glasses. Looking glasses for women, great and faire... Spectacles of the common sort. Others of Christall trimmed with silver, and otherwise. Hower glasses.. Glazen eye to ride with against dust...»* (R. Hakluyt, *The Principle Navigations, Voyages, Traffiques and Discoveries of the English Nation...,* London (1599, re-edited with additions, 1809), p. 496.

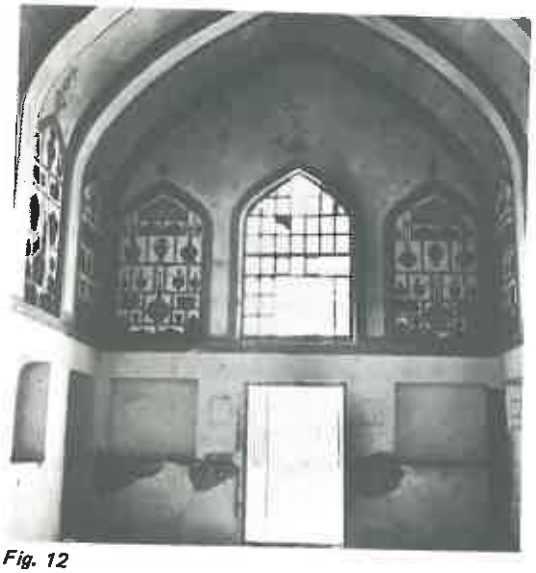

Fig. 12

6. G. Berchet , *La Repubblica di Venezia e la Persia,* Turin (1865), p. 64. R. Du Mans, in his *L'Etat de la Perse en 1660,* records that the trade in Persian silks, then in the hands of the Armenians, went by way of Turkey (presumably via Tabriz, where they maintained agents and stores) to Smyrna and Aleppo, and then by sea to Venice and Leghorn (cit. John Carswell, *The New Julfa,* Oxford (1968), p. 76). On the subject of beads, which will not be further dealt with in this article, see Charleston, "Imports of Western Glass into Turkey...", p. 23.
7. Berchet, *op. cit.,* p. 46 ("due fiaschi d'argento intagliati, col vetro"). The turn of phrase is paralleled by the English expression *«Leather bottle of glass»* (i.e. glass protected by a leather cover) in a 17th century inventory.
8. Berchet, *op. cit.,* p. 65 *(«Vetri lavorati, belli, ben fatti et indorati la maggior parte... Specchi di cristallo grandi, che siano netti e senza casse. Specchi mezzani et piccoli, a punta di diamante. Pietre d'anelli d'ogni sorta, con figure intagliate sopra. Occhiali di cristallo fatti a diamante» «A punta di diamante»* may mean *«with diamond-point engraving»,* and mirrors so decorated do exist. The expression "diamonded" is used in English 17th-18th century parlance to refer to the bevelling of a mirror (see Geoffrey Wills, *English Looking-Glasses,* London (1965), pp. 60, ff.)
9. Adam Olearius, *Voyages... faits en Moscovie, Tartarie, et Perse...* (tr. de Wiequefort), Amsterdam (1721), cols. 740-2. An English edition appeared in London in 1669, but the present English translation is by the writer from the Wicquefort's French version.
10. Pictures of this kind are still to be seen in some of the Armenian houses of New Julfa (see Carswell, op. cit., Pls. 72-3, 79-80).
11. It is a curious fact that, although using imported European mirrors, the Persians seem to have anticipated the rage which later seized Europe, for making complete rooms lined with mirrors. The earliest European *cabinet de glaces* appears to have been that of Cathérine de Médicis (1599), in which there were 119 Venetian mirros (Serge Roche, *Miroirs: Galeries et Cabinets de Glaces,* Paris (1956), p. 42). Chardin (see below) confirms that the Persians got their mirrors from Venice (Lamm, op. cit., pp. 500-501, extracts 104 and 106).
12. *op. cit.,* col. 572.
13. *op. cit.,* Pl. VIII
14 One in the Victoria and Albert Museum, two in the collection of H.I.M. The Empress of Iran, formerly in the J. Amery Collection.
15 *op. cit.,* col. 831. Thomas Herbet, however, who was in Persia in 1627, writes: *«Arac or Aque-vitae they also drink, and Tobacco suckt through water (that it inebriate not) by long canes issuing form a round vessel» (Some Years Travels into Africa, Asia the Great...,* London (3rd ed., n.d.), p. 328.
16 *cit.* Lamm, *op. cit.,* I, p. 500, No. 101.
17 *ibid.,* p. 500, No. 104.
18 Engelbert Kaempfer, *Amoenitatum Exoticarum Politico-Physico-Medicarum Fasciculi V,* Lemgoviae (1712), pp. 640-1: *«Quod ut praestet feliciùs, Persae fumun trahunt per machinam, aquâ ultra dimidium plenam, quae foetidum & cerebro inimicum sulphur imbibens, fumum transmittit ab omni malignitatis acrimonia defaecatum, frigefactum & sincerum. Machina illa, quam قلیان Khaliaan vel Khaliuun vocant, ampulla est sesqui-pedalis altitudinis, vitrea, oblongo donata collo; cujus orificium claudit orbiculus aeneus, in sesquipalmarem diametrum expansus, duos in medio permittens tubulos invicem adsolidatos, aeneos; Unum, cujus inferior pars in ampullam demissa, aquae immergitur; superior recipit nicotianae cum impositis carbonibus retinaculum, infundibulo seu buccinae orificio simile: Alterum breviorem, cujus demissa extremitas aquam non attingit: superior incurvata arundinem excipit longam, qua fumus attrahitur... Ita evenit, ut ad suctum non possit nisi ex infundibulo fumus succedere; qui jucundo strepitu aquam penetrans, primò inanè vitri spatium occupat, inde per arundinem ad os sugentis atque ipsos pulmones pertingit;...»* Kaempfer adds that the habit of drawing tobacco-smoke through water had spread to India, where, however, gourds were used in the absence of glasses. This deficiency was later well cared for by the East India Company.

Fig. 13 a)

Fig. 14 a) b) c

Fig. 13 a) b) c) d)

Fig. 14 a) b) c)

Fig. 15 a) b) c)

19. See Charleston, "Import of Western Glass...", pp. 24 and 26, n. 31.
20. B. Cecchetti, V. Zanetti and E. Sanfermo, *Monografia della Vetraria veneziana e muranese,* Venice (1874), p. 238, schedule of goods made by Pietro Bigaglia in 1795/6.
21. G. Mariacher, *Italian Blown Glass,* London (1961), Pl. 83.
22. Lamp-work was a special branch of Venetian glass-working, as it is today – see A; Gasparetto, *Il Vetro di Murano...,* Venice (1958), pp. 184, 187-9. Rods and canes of coloured glass were melted and manipulated by means of oil-laps, the flame being brought to a high temperature by means of bellows operating air-jets and worked with the foot.
23. *op. cit.,* p. 463.
24. Charleston, "Import of Western Glass...", pp. 24 and 26, n. 34.
25. M. Tournefort, *A Voyage into the Levant...,* London (1718), pp. 293, 376.
26. e. g. Charleston, "Import of Western Glass...", figs. 12-13.
27. Lamm, *op. cit.,* p. 500, No. 102.
28. Herbert, *op. cit.,* pp. 119 and 42
29. J. Chardin, *Voyages en Perse* (ed. L. Langles, Paris, 1811), VIII, p. 439.
30. *Les Voyages de Jean Struys, en Moscovie, en Tartarie, en Perse...,* Amsterdam (1681), p. 321. Tavernier gives a very similar account (but does not mention the transport of wine), adding that *«There are in Schiras three or four Glass-houses...» (op. cit.,* p. 248).
31. Kæmpfer, *op. cit.,* Fasciculus II, Relation VIII. *«Oenopoeia Sjirasensis, IV. Vini transvectio et qualitates», p. 379:»... Vasa vitrea, alia sunt majora, ampullacea & circumducto scirpo tunicata, quae vocant* Karabà; *(vid. lit. c) alia minora nulloque scirpo munita: (vid. lit. d) Illa vini capiunt* man kohoneh *octo, rarius novem; haec unum cum dimidio. Vitra verò in hac ipsà urbe elaborantur: silices ipsa tellus, herbam alcalicam,* Kilià *dictam, ubs (sic) vicina Neris, ligna valles circumsitae conferunt. Venit* Karabà *una apud vitriarios duobus mamudi, rarò cariùs. Cistae vectiles, quas Persae* Senkùk, *exteri* Kassa *vocant, ex tenuibus asserculis obtusè sunt compactae, & imbecilliores, quà ut sufferre iter possent, nisi restibus circumligatis cautè firmarentur; farctae priùs stramine, quo distineantur adversus impressionem. (vid. lit. f) Capiunt cistae singulae lagenas minores circiter decem, rarò plures;* Karabàs *verò saltem duas, quibus frequentissimè lagena minor interponitur. Non rarò lacunis inseruntur vitra minora (vid. lit. e) plena aquae rosaceae. Cistae binae unum constituunt chus muli, quod Persae* Karwaar, *exteri* Kárroga *vocant, ita jungendae, ut utrinque ex tergo singulae dependeant.»*
32. Chadin, *op. cit.,* IV, pp. 147-8.
33. *cit.* Lamm, *op. cit.,* p. 500, No. 103 (translated here from the French).
34. *The Travels of M. de Thévenot into the Levant,* London (1687), p. 125. It is perhaps worth adding here that Savary des Bruslons, in his *Dictionnaire universel de Commerce, Supplément,* Paris (1730), states *«Il n'y a point de Verrerie dans tout l'Orient, à la réserve de la Perse...»*
35. *Op. cit.,* VIII, p. 425.
36. H.R. d'Allemagne, *Trois Mois de Voyages...,* II, Paris (1911), p. 136.
37. *Ibid.,* p. 136.
38. Chardin, *op. cit., VIII, p. 180.*
39. *Ibid., VIII,* p. 376.
40. André Godard, *L'Art de l'Iran,* Paris (1962), Pl. 149; W. Blunt and W. Swaan, *Isfahan, Pearl of Persia,* London (1966), p. 72. A number of other palaces of the time of Shah Abbas (e.g. at Ardabil) were decorated with these cut-outs (Godard, *op. cit.,* p. 356).
41. Carswell, *op. cit.,* pp. 65-7, Pl. 76, b.
42. cit. Lamm, *op. cit.,* p. 501, No. 107.

43. A.U. Pope, *Survey...*, VI, Pl. 1454, C (Ht 15 1/4 in., of golden colour, spirally ribbed).
44. Le Sieur A.D.D.V., *Les Beautez de la Perse*, Paris (1673), p. 38. The Shah was Abbas II, and the events described must have occurred before his death in 1666. The "Sieur A.D.D.V." was a man named André Daulier Déslandes.
45. A.U. Pope, *Survey...*, VI. Pl. 1453, G (Ht. 16 1/4 in., greenish glass with traces of gilding).
46. A. Nesbitt, *op., cit.*, London (1878), pp. lxix-lxx.
47. The exact function of this shape is uncertain. Usually referrred to as a rose-water sprinkler, it has also been averred to be a urinal. With its invariably twisted neck and the characteristic form of its orifice, it looks as if it is a descendant, via Venice, of the Germanic "Kuttrolf". A lacquered mirror-case dated 1790 sold at the Hôtel Drouot in 1974, however, shows an outdoors night-scene with candles, a bottle of wine, and two of the swan-necked flasks, apparently filled with liquid. In this situation they must be containers for either perfume or a beverage (Sale 10 April, 1974, Lot 141, *ill.)*
48. A. U. Pope, *Survey...*, VI, Pl.
49. *op. cit.*, p. 136, Qum had been noted in the 17th century as a potting-centre.

LIST OF FIGURES

1. Miniature of a girl making up in a mirror. At her feet is a flagon, almost certainly of Venetian or *façon de Venise* glass, half-filled with wine. By Riza-i-Abbasi. Dated 1618. Detroit Institute of Arts (44.274). Gift of Mrs. Edsel B. Ford.
2. Miniature of a reclining youth in European costume, feeding a dog from a bowl, a Chinese (?) jug of blue-and-white porcelain in his right hand, a half-filled wine-glass, almost certainly of Venetian or *façon de Venise* glass, at his feet. By Rizà-i-Abbasi. Dated 1633. Detroit Institute of Arts (58.334) gift or Robert H. Tannahill in memory of Dr. William R. Valentiner.
3. Wall-painting *(The Marriage at Cana)* on the south wall of All Saviour's Cathedral, New Julfa, showing jugs of *maiolica* (?), and wine-glasses almost certainly of Venetian or *facon de Venise* glass. Perhaps after 1655. (Photo. J. Carswell)
4. Wood-cut showing a *kalian*, from E. Kaempfer, *Amoenitatum Exoticarum...* (1712), p. 642.
5. Kalian-base with inserted bouquet of coloured flowers. Shiraz; early 19th century. Ht. 15 in. Victoria and Albert Museum. Crown Copyright.
6. Portrait of Fath 'Ali Shah (1798-1834) by the artist Ahmad. Dated 1822. British Embassy Teheran. Crown Copyright. Reproduced with the permission of the controller of her Majesty's Stationary Office.
7. Drawing, probably for a *kalian*-base in engraved glass, from a pattern-book of the Harrachov glassworks. Bohemian; about 1785. Museum of Glass, Jablonec Nad Nisou, Czechoslovakia.
8. Wood-cut showing the making and packing of wine in Shiraz, from E. Kaempfer, *Amoenitatum Exoticarum...* (1712), p. 377. Fig. c shows a wicker-coated *karabà*, fig. d a wine-bottle, fig. e a rose-water bottle, and fig. f a case for transporting bottles.
9. Oil-painting of a (?) betrothal-scene. Middle of 18th century. Collection of the Hon, Mrs. Rodd. Crown Copyright.
10. "An old Inhabitant of Persia", wood-cut from Herbert's *Some Years Travels...* This illustration is probably directly copied from a 17th century Persian miniature.
11. Wood-cut showing the interior of the Ali Kapi palace at Ispahan, from J. Chardin's *Voyages en Perse.* British Museum. Crown copyright.
12. House "A" at New Julfa, showing cut-out decoration for the insertion of bottles, ewers, etc. 17th century (1876 is the date of repainting (Photo. J. Carswell)
13. (a) "Sprinkler", yellowish-colourless glass Ht, 17 in.: (b) "Sprinkler", blue glass. Ht. 14 in.: (c) Bottle, blue glass. Ht. 10 5/8 in.: (d) Bottle, yellowish-colourless glass. Ht. 16 1/2 in. All with rib-moulded neck. (a) and (d) Shiraz; early 19th century. (b) and (c) probably second half of 19th century. Victoria and Albert Museum. Crown Copyright.
14. (a) Bottle of dark-green glass. Ht. 11 in. (b) Ewer of yellowish-colourless glass with enclosed flowers. Ht. 9 in. (c) Bottle of dark-green glass, inscribed in gold: "Elixir of Life". Ht. 12 in. (a) 18th or 19th century. (b) Shiraz; early 19th century. (c) 18th-early 19th century. Victoria and Albert Museum. Crown Copyright.
15. (a) Spittoon, purple glass. Diam. 7 in. (b) Two-spouted ewer of brown glass. Ht. 5 5/8 in. (c) (?) spittoon, green glass blown in a two-part mould, overpainted in gold. All probably 19th century.