

CARPET, the name given to any kind of textile covering for the ground or the floor, the like of which has also been in use on couches and seats and sometimes even for wall or tent hangings or curtains. In modern times, however, carpet usually means a patterned fabric woven with a raised surface of tufts (either cut or looped), and used as a floor covering. Other floor coverings are and have been made also without such a tufted surface, and of these some are simple shuttle-woven materials plain or enriched with needlework or printed with patterns; others are woven after the manner of tapestry-weaving (see TAPESTRY) or in imitation of it, and a further class of carpets is made of felt (see FELT). This last material is entirely different from that of shuttle or tapestry weaving. Although carpet weaving by hand is, and for centuries has been, an Oriental industry, it has also been, and is still, pursued in many European countries. Carpet-weaving by steam-driven machinery is solely European in origin, and was not brought to the condition of meeting a widespread demand until the 19th century.

In connexion with the word "carpet" (Lat. *carpita*, rug; O. Fr. *carpîte*) notice may be taken of the Gr. *τάπης* and the Lat. *tapetium*, whence also comes the Fr. *tapis* (the *History* present word for "carpet") as well as our own word "tapestry." This latter, though now more particularly descriptive of hangings and curtains woven in a special way, was, in later medieval times, indiscriminately applied to them and to stuffs used as floor and seat coverings. From a very early period classical writers make mention of them. In ancient Egypt, for instance, floor and seat coverings were used in temples for religious ceremonies by the priests of Amen Ra; later on they



FIG. 1.—PART OF A LINEN COVERING OVER-WROUGHT WITH ORNAMENT IN LOOPS OF COLOURED WOOLS.

Egypto-Roman of the 3rd or 4th century A.D.
(Victoria and Albert Museum, South Kensington.)



FIG. 2.—PART OF A LINEN COVERING OVER-WROUGHT WITH ORNAMENT IN LOOPS OF DARK-BROWN WOOL.

Egypto-Roman of the 3rd or 4th century A.D.
(Victoria and Albert Museum, South Kensington.)

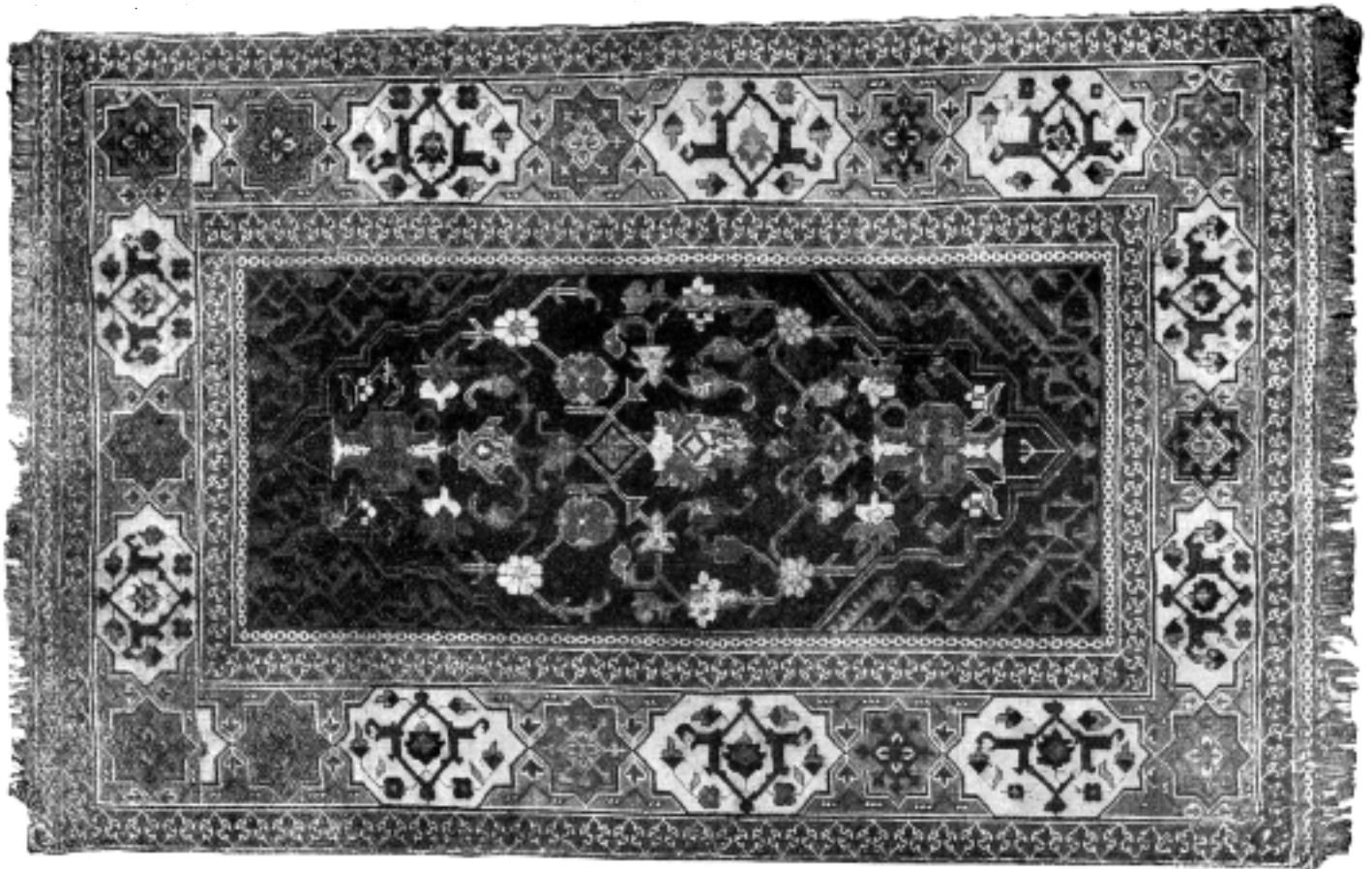


FIG. 3.—CUT PILE TURKEY CARPET, 18TH CENTURY, EXEMPLIFYING SUCH CHARACTERISTIC ANGULAR TREATMENT OF QUASI-BOTANICAL FORMS AS IS USUALLY FOUND IN CARPETS AND RUGS MADE IN ASIA MINOR. FROM DESIGNS OF PERSIAN OR MOSIL ORIGIN. (Victoria and Albert Museum.)

CARPET

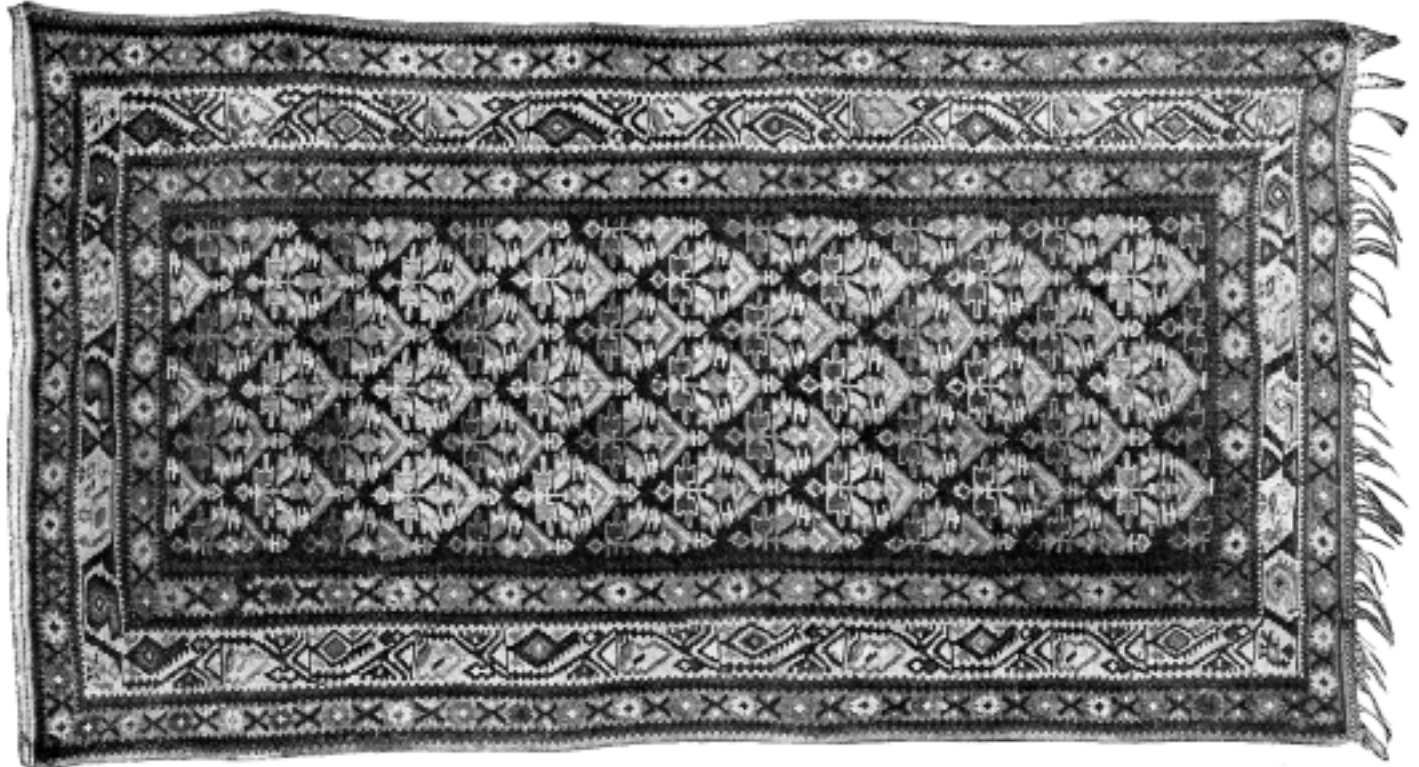


FIG. 4.—RUG MADE IN PERSIA IN THE MANNER OF TAPESTRY WEAVING.



FIG. 5.—CARPET OF STOUT FLAX OR HEMP WOVEN AND THEN COMPLETELY COVERED WITH ORNAMENT WORKED IN CLOSE NEEDLE STITCHES IN COLOURED THREADS.

were used to garnish the palaces of the Pharaohs. If one may judge from rare remains of decorative textiles, in the museum at Cairo especially, dating from at least 1480 B.C., such Egyptian fabrics were of linen inwoven with coloured wools in a tapestry-weaving manner, and were not tufted or piled textures. Taken from the palace at Nineveh is a large marble slab carved in low relief with a geometrical pattern surrounded by a border of lotus flowers and buds, evidently a copy of an Assyrian floor cover or rug about 705 B.C., such as was also woven probably in the tapestry-weaving manner. On the other hand, its design equally well suggests patchwork—a method of needlework in vogue with Egyptians, at least 900 years B.C., for ornamental purposes, as indicated by the elaborately patterned canopy which covered the bier of an Egyptian queen—the mother-in-law of Shishak who took Jerusalem some three or four years after the death of Solomon—and is preserved in the museum at Cairo. In the *Odyssey*, *tapetia* are frequently mentioned, but these again, whether floor coverings or hangings, are more likely to have been flat-textured and not piled fabrics. On the tomb of Cyrus was spread a “covering of Babylonian tapestry, the carpets underneath of the finest wrought purple” (Arrian vi. 29). Athenaeus (bk. v. ch. 27) gives from Callixenus the Rhodian (c. 280 B.C.) an account of a banquet given by Ptolemy Philadelphus at Alexandria, and describes “the purple carpets of finest wool, with the pattern on both sides,” as well as “handsomely embroidered rugs very beautifully elaborated with figures”; these again were probably not piled fabrics but kindred to the hangings in the palace of Ptolemy Philadelphus decorated with portraits, which were likely to have been of tapestry-weaving, and would be nearly the same in appearance on both sides of the fabric. Of corresponding tapestry woven work are Egypto-Roman specimens dating from the 2nd or 3rd century A.D., a considerable collection of which is in the Victoria and Albert Museum at South Kensington. From about the same period date bits of hangings or coverings woven in linen, over-wrought in a method of needlework with ornament of compact loops of worsted (Plate I. figs. 1 and 2). These are the earliest extant specimens of textiles presenting a tufted or piled surface very kindred to that of woven pile carpets of much later date. But the *modus operandi* in producing the earlier only remotely corresponds with that of the later—though making a surface of loops by means of needlework as in the Coptic or Egypto-Roman specimens of Plate I. figs. 1 and 2 seems to be a step in a progress towards the introduction at an apparently later date of tufts into loom weavings such as we find in 16th-century tufted or piled carpets.

The simple traditional Oriental method of making these latter is briefly as follows:—The foundation is a warp of strong cotton or hempen or woollen or silk threads, the number of which is regulated by the breadth of the carpet and the fineness or coarseness to be given to its pile. Short lengths of coloured wool or goats' or camels' hair or silk are knotted on to each of the warp threads so that the two ends of each twist or tuft of coloured yarn, of whatever material it is, project in front. Across the width of the warp and above the range of tufts a weft thread is run in; another line or row of tufts is then knotted, and above this another weft thread is run in across the warps, and so on. These rows of tufts and weft as made are compressed together by means of a blunt fork or rude comb-like instrument, and thus a compact textile with a pile or tufted surface is produced; the projecting tufts are then carefully clipped to an even surface. In the East the rude wooden frames in which the warp-threads are stretched either stand upright upon, or are level with, the ground. They are easily transported and put together, and the weaving in them is done chiefly by wandering groups of weavers. The local surroundings, often those of rocky arid districts, in which Kurdish and other families weave carpets are well illustrated in *Oriental Rugs* by J. H. Mumford. For making pile carpets and rugs two traditional knots are in use; the first is termed the Turkish or Ghiordes knot, from Ghiordes, an old city not far from Brusa. It is in vogue principally throughout Asia

Minor, as far east as Kurdistan and the Caucasus, but it is also used farther south-east in parts of Persia and India. The yard of the pile is knotted in short lengths upon the warp-threads so that the two outstanding ends of each knot alternate with every two threads of the warp. The second traditional knot is the Persian or Sehna knot, which, though better calculated to produce a close, fine, even, velvety surface, has in many parts of Persia been abandoned for the Ghiordes knot, which is a trifle more easily tied. The Persian or Sehna knot is tied so that from every space between the warp-threads one end of the knot protrudes. The number of knots to the inch tied according to either the Turkish or Persian method is determined by the size and closeness of the warp-threads and the size and number of weft-threads thrown across after each row of knots. The patterns of the fabrics made by country weavers are usually taken by them from old rugs. But in towns where weaving is conducted under more organized conditions new patterns are often devised, and are traced sometimes upon great cardboards, on which the stitches, or knots, are indicated by squares each painted in its proper colour. In some of the Persian carpets and rugs made at Sehna, Kirman and Tabriz, the warp is of silk, a material that contributes to fine compact pile textures.

There is much uncertainty as to the period when cut pile carpets were first made in the East. Their texture is certainly akin to that of fustian and velvet; while that of the finer Persian carpets, which were not made much earlier than about the 15th century, is practically not distinguishable from velvet, having long or heavy pile. Fustian, the English name for a cut short pile textile, is derived from Fostat (old Cairo), and such material is likely to have been made there, as soon as anywhere else, by Saracens, especially during the propitious times of the Fatimite Khalifs, who for more than two centuries previously to the 13th century were noted for the encouragement they gave to all sorts of arts and manufactures. It seems that velvet came into use in Europe not much earlier than the 14th century, and various French church inventories of the time contain entries of “*tapis velus* (cut pile carpets) *d'aultre mer, à mettre par terre*” (see *Essai sur l'histoire des tapisseries et tapis*, by W. Chocqueel, Paris, 1863, pp. 22-23). It is an open question if the making of cut pile carpets in Persia or by Saracens elsewhere preceded that of fustians and velvets or whether the developments in making the three proceeded *pari passu*.

The making of carpets with a flat surface, however, is probably far older than that of cut pile carpets, and characteristic of one such old method is that in the making of Soumak carpets (Plate II. fig. 5), the ornament of which done in close needle stitches with coloured threads completely conceals the stout flax or hemp web which is the essential material of these carpets. Soumak is a distortion of Shemaka, a Caucasian town in the far east of Asia Minor. But so-called Soumak carpets are made in other districts, and the particular needlework used in them is practically of the same kind as that on a smaller scale used for the well-known Persian Nakshe or woman's trousering, and again that used on a still smaller scale in the ornamentation of valuable Kashmir shawls. Quilted and chain-stitched cotton prayer and bath rugs from Persia are referred to in the article on EMBROIDERY.

Another method of making carpets with a flat surface is that of tapestry-weaving (see Plate II. fig. 4), which, according to existing and well-authenticated specimens of considerable antiquity (already referred to), appears to be the oldest of any historic process of ornamental weaving (see TAPESTRY).

Very broadly considered, the traditional designs or patterns of Oriental carpets fall into two classes: the one, prevailing to a much larger extent than the other, seems to reflect the austerity of the Sunni or orthodox Mahommedans in making patterns with abstract geometric and angular forms, stiff interlacing devices, cryptic signs and symbols and the like; whilst the other suggests the freer thought of the Shiah or unorthodox sect, in

Date of original pile textures.

Carpets with flat surface.

Motives in traditional designs in Oriental carpets.

designs of ingenious blossom and leafy scrolls, conventional arabesques, botanical and animal forms, and cartouches enclosing Kufic inscriptions (see the splendid example known as the Ardebil carpet, Plate III. fig. 7, and another in Plate IV. fig. 9). Types of the more austere design occur in carpets from Afghanistan, Turkestan, Bokhara and Asia Minor, N.W. India and even Morocco, the other types of freer design being almost special to Persian rugs and carpets.

Next in historic importance to Persia, Turkestan and Asia Minor is India, where the making of cut pile carpets—known as Kalin and Kalicha—was presumably introduced by the Mahommedans during the latter part of the 14th century. But the industry did not apparently attain importance until after the founding of the Mogul dynasty by Baber early in the 16th century. The designs mainly derived from those of Persian carpets of that period do not as a rule rise to the excellence of their prototypes. Historical centres of Indian carpet making are in Kashmir, the Punjab and Sind, and at Agra, Mirzapur, Jubbulpore, Warangal in the Deccan, Malabar and Masulipatam. Velvets are richly embroidered in gold and silver thread at Benares and Murshidabad and used as ceremonial carpets, and silk pile carpets are made at Tanjore and Salem. For the most part the best of the Indian woollen pile carpets have been produced by workers of repute engaged by princes, great nobles and wealthy persons to carry on the craft in their dwellings and palaces. These groups of highly skilled workers as part of the household staff were paid fixed salaries, but they were also allowed to execute private orders. During the 19th century the carpet industry was developed in government gaols. Produced in great quantities the prison-made carpets as a rule are less well turned out, and the competition set up between them and the rugs and carpets of private factories has had a somewhat detrimental effect upon the industry generally. Older in origin than the cut pile carpets are those of thinner and flat surface texture, which from almost immemorial times have been woven in cotton with blue and white or blue and red stripes in the simplest way. These are called *daris* and *satranjis*, and are made chiefly in Benares and northern India. They are also made in the south and by such aborigines retaining primitive habits as the Todas of the Nilgiri Hills, a fact which points to the age of this particular method of making ground or floor coverings.

A condition that has always controlled the designs of Oriental carpets is their rectangular shape, more often oblong than square. As a rule, there is a well-schemed border, enclosing the main portion or field over which the details of the pattern are symmetrically distributed. Simpler patterns in the field of a carpet or rug consist of repetitions of the same device or of a small number of different devices (see Plate II. fig. 4). Richer patterns display more organic pattern in the construction, of which the leading and continuous features are expressed as diversified bands, scrolls and curved stems; amongst these latter are very varied devices which play either predominant or subordinate parts in the whole effect of the design (Plate III. fig. 7). Angular and simplified treatments of these elaborate designs are rendered in many Asia Minor or Turkey carpets (Plate I. fig. 3); but the typical flowing and more graceful versions are of Persian origin (see Plate III. fig. 7, and Plate IV. fig. 9), usually of the 16th century. Mingled in such intricate stem designs or "arabesques" are details many of which have been derived on the one hand from Sassanian and even from far earlier Mesopotamian emblematical ornament based on cheetahs seizing gazelles, on floral forms, blossoms and buds so well conventionalized in Assyrian decoration, and on the other hand from Tatar and Chinese sources. The style, strong in suggestion of successive historical periods, seems to have been matured in Mosul engraved and damascened metal work of the 12th and 13th centuries before its occurrence in Persian carpet designs, the finest of which were produced about the reign of Shah Abbas. A good deal earlier than this period are carpets designed chiefly according to the simpler taste of the Sunnites, and such as these

appear to be mentioned by Marco Polo (1256-1323) when writing that "in Turcomania they weave the handsomest carpets in the world." He quotes Conia (Konieh in Anatolia), Savast (Sivas in Asia Minor), some 300 m. north-east of Konieh, and Cassaria (Kaisaria or Caesarea in Anatolia) as the chief weaving centres. It is the carpets from such places rather than from Persia that appear to have been the first Oriental ones known in European countries.

Entries of Oriental carpets are frequent in the inventories of European cathedral treasures. In England, for instance, carpets are said to have been first employed by Queen Eleanor of Castile and her suite during the latter part of the 13th century, who had them from Spain, where their manufacture was apparently carried on by Saracens or Moors in the southern part of the country. On the other hand, Pierre Dupont, a master carpet-maker of the Savonnerie (see below), gives his opinion in 1632 that the introduction of carpet-making into France was due to the Saracens after their defeat by Charles Martel in A.D. 726. But more historically precise is the record in the book of crafts (*Livre des métiers*) by Étienne Boileau, provost of the merchants in Paris (1258-1268), of "the tapicers or makers of *tapis sarrasinois*,¹ who say that their craft is for the service only of churches or great men like kings and nobles." In the 13th and 14th centuries Saracen weavers of rich and ornamental stuffs were also employed at Venice, which was a chief centre for importing Oriental goods, including carpets, and distributing them through western Europe. Dr Bode, in his *Vorderasiatische Knüpsteppiche*, instances Oriental carpets with patterns mainly of geometric and angular forms represented in frescoes and other paintings by Domenico di Bartolo (1440), Niccolò di Buonaccorso (1450), Lippo Memmi (1480) and others.

Of greater interest perhaps, and especially as throwing light upon the trade in, if not the making of, carpets in England somewhat in the method of contemporary Turkey carpets, is the specimen represented in Plate III. fig. 6. This may have been made in England, where foreign workmen, especially Flemings, were from early times often encouraged to settle in order to develop industries, amongst which pile carpet-making probably and tapestry-weaving certainly were included. The earliest record of tapestry-weaving works in England is that of William Sheldon's at Barcheston, Warwickshire, in 1509, and, besides wall hangings, carpets of tapestry-weaving were also possibly made there.² The cut pile carpet belonging to Lord Verulam (Plate III. fig. 6) was perhaps made at Norwich. It has a repeating and simply contrived continuous pattern of carnations and intertwining stems with a large lozenge in the centre bearing the royal arms of England with the letters E. R. (Elizabeth Regina) and the date 1570. It also has the arms of the borough of Ipswich and those of the family of Harbottle. The sequence or continuity of its border pattern fails in the corners at one end of the rug or carpet in a way very common to many Asia Minor and Spanish carpets (see Plate I. fig. 3, Plate II. fig. 4, and Plate IV. fig. 10); not, however, to the majority of Persian carpets (see Plate III. fig. 7, and Plate IV. fig. 8). A large cut pile carpet in the Victoria and Albert Museum has a repeating pattern of star devices, rather Moorish in style, with the inscription on one end of the border, "Feare God and Keep His Commandments, made in the yeare 1603," and in the field the shield of arms of Sir Edward Apsley of Thakeham, Sussex, impaling those of his wife, Elizabeth Elmes of Lifford, Northamptonshire. This may have been made in England. A carpet of very similar design, especially in its border, is to be seen in a painting by Marc Gheeraedts of the conference at old Somerset House of English and Spanish plenipotentiaries (1604), now in the National Portrait Gallery, London. A more important and

¹ The *tapissiers sarrasinois* were apparently the makers of piled or velvety carpets, and have always been written about in contradistinction to the *tapissiers de haute lisse* or *tapissiers nostrez*, who it appears did not weave piled or velvety material, but made tapestry-woven hangings and coverings for furniture.

² In Hakluyt's *Voyages* mention is made of directions having been given to Morgan Hubblethorne, a dyer, to proceed (about 1579) to Persia to learn the arts of dyeing and of making carpets.

finer carpet belongs to the Girdlers' Company (Plate IV. fig. 8), and is of Persian design, into which are introduced the arms of the company, shields with eagles, and white panels with English letters, the monogram of Robert Bell the master in 1634, but this was made at Lahore¹ to his order.

Before dealing with later phases of the carpet industry in England, mention may now be made of Spanish carpets, of European as distinct from Saracenic or Persian design; the making of them dates at least from the end of the 15th century or the beginning of the 16th century. It is only within recent years that specimens of them have been obtained for public collections, and at present little is known of the factories in Spain whence they came. A large and most interesting series is shown in the Victoria and Albert Museum, and a portion of one of the earlier of the Spanish cut pile carpets in that museum is given in Plate IV. fig. 10. The inner repeating pattern has suggestions of a lingering Moorish influence, but a superior version of it with better definition is to be seen in extant bits of Spanish shuttle-woven silks of the 16th century. The border of distorted dragon-like creatures is of a Renaissance style, and this style is more pronounced in other Spanish carpets having borders of poorly treated Italian 16th-century pilaster ornament. Beside cut pile, many Spanish carpets of the 17th and 18th centuries have looped and flat surfaces, and bear Spanish names and inscriptions; many too are of needlework in tent or cross stitch.

Another interesting class of very fine pile carpets that has also become known comparatively recently to collectors is the so-called Polish carpets, generally made of silk pile for the ornament, which is distinctively Oriental, and of gold and silver thread textile for the ground, very much after the manner of early 17th-century Brusa fabrics. Many of these carpets are in the Czartoryski collection at Cracow. They are discussed by Dr Bode in his treatise on Oriental carpets already referred to. European coats of arms of the persons for whom they were made are often introduced into them, sometimes different in workmanship from that of the carpets, though there are specimens in which the workmanship is the same throughout. The details of their designs consist for the most part of arabesques and long curved serrated leaves similar to such as are commonly used in Rhodian pottery decoration of the 16th century, though more typical of those so frequent in 17th-century Turkish ornament. Various considerations lead to the conclusion that these so-called Polish carpets were probably made in either Constantinople or Damascus (*tapete Damaschini* frequently occur in Venetian inventories of the 16th century) rather than, as has been thought, by the Persian workmen employed at the Mazarski silk factory which lasted for a short period only during the 18th century at Sleucz in Poland.

The European carpet manufactory, of which a continuous history for some two hundred and fifty years is recorded with exceptional completeness, is that which has been maintained under successive régimes, royal, imperial and republican, in France—at the Hôtel des Gobelins in Paris. Seventy years before its organization under Colbert in 1667 as a state manufactory (*Manufacture Royale des Meubles de la Couronne*), Henry IV. had founded royal art workshops for all sorts of decorative work, at the Louvre; and here in 1604 a workroom was established for making Oriental carpets by the side of that which existed for making *tapis flamands*. In 1610 letters patent were granted to the Sieur Fortier, who has been reputed to be the first inventor in France of the art of making in silk and wool real Turkey and other piled carpets with grounds of gold thread, which must have been sumptuous fabrics probably resembling the so-called Polish carpets of this date. Some ten years later it is recorded that Pierre Dupont and Simon Lourdet started a pile carpet (*tapis veloutés*) manufactory at Chaillot (Paris) in large premises which had been used for the manufacture of soap—whence the name of "Savonnerie." To this converted manufactory were transferred in 1631 the carpet-

makers from the Louvre, and under the direct patronage of the crown it continued its operations for many years at Chaillot. It was not until 1828 that the making of *tapis de la Savonnerie* (pile carpets of a fine velvety character) was transferred to the Hôtel des Gobelins. Here, in contradistinction to the Savonnerie, carpets are made others which, like those of Beauvais (where a manufactory of hangings and carpets was established by Colbert in 1664), are *tapis ras* or non-piled carpets, being of tapestry-weaving, as also are those made by old-established firms at Aubusson and at Felletin, where the manufacture was flourishing, at the former place in 1732 and at the latter in 1737.

Returning now to England, there are evidences towards the end of the 17th century, if not earlier, that Walloon and Flemish makers of Turkey pile carpets had settled and set up works in different parts of the country. A protective charter, for instance, was granted in 1701 by William III. to weavers in Axminster and Wilton. The ultimate celebrity of the pile carpet industry at Wilton was due mainly to the interest taken in it during the earlier part of the 18th century by Henry, earl of Pembroke and Montgomery, who in the course of his travels abroad collected certain French and Walloon carpet-makers to work for him in Wiltshire—over them he put two Frenchmen, Antoine Dufossy and Pierre Jemale. More notable, however, than these is Père Norbert, who naturalized himself as an Englishman, changed his name to Parisot, and started a manufactory of pile carpets and a training school in the craft at Fulham about 1751. In 1753 he wrote and published "An account of the new manufactory of Tapestry after the manner of that at the Gobelins, and of carpets after the manner of that at Chaillot (*i.e.* Savonnerie) now undertaken at Fulham by Mr Peter Parisot." Two refugee French carpet-makers from the Savonnerie had arrived in London in 1750, and started weaving a specimen carpet in Westminster. Parisot, having found them out, induced the duke of Cumberland to furnish funds for their removal to better workrooms at Paddington. The carpet when finished was presented by the duke to the princess dowager of Wales. Parisot quarrelled with his two employees, enticed others to come over, and then removed the carpet works from Paddington to Fulham. A worker, J. Baptiste Grignon, writing to "Mr Parisot in Foulleme Manufactory," mentions the marked preference "shown by the English court for velvet," and how much a "chair-back he had worked in the manner of the Savonnerie had been admired." Correspondence published in the *Nouvelles Archives de l'art français* (1878) largely relates to the efforts of the French government to stop the emigration to England of workers from the Gobelins and the Savonnerie. Parisot's Fulham works were sold up in 1755. He then tried to start a manufactory at Exeter, but apparently without success, as in 1756 his Exeter stock was sold in the Great Piazza auction rooms, Covent Garden. Joseph Baretti (Dr Johnson's friend), writing from Plymouth on the 18th of April 1760, alludes to his having that morning visited the Exeter manufactory of *tapisseries de Gobelins* "founded by a distinguished anti-Jesuit—the renowned Father Nobert." Previously to this a Mr Passavant of Exeter² had received in 1758 a premium from the Society of Arts of London for making a carpet in "imitation of those brought from the East and called Turkey carpets." Similar premiums had been awarded by the society in 1757 to a Mr Moore of Chiswell Street, Moorfields, and to a Mr Whitty of Axminster. In 1759 a society's premium was won by Mr Jeffer of Frome. In the *Transactions of the Society*, vol. i., dated 1783, it is stated that by their rewards, the manufacture of "Turkey carpets is now established in different parts of the kingdom, and brought to a degree of elegance and beauty which the Turkey carpets never attained." Such records as these convey a fair notion of the sporadic attempts which immediately preceded a systematic manufacture of pile carpets in this country. Whilst the Wilton industry survived, that actually

² A wealthy serge-maker of Swiss nationality, who had been settled for some years in Exeter, and bought up the plant of Parisot's Exeter works. (See *Bulletin de la société de l'histoire de l'art français*, p. 97, vol. 1875 to 1878.)

¹ The Royal Factory at Lahore was established by Akbar the Great in the 16th century.

carried on at Axminster died towards the end of the 18th century, and the name of Axminster like that of Savonnerie carpets now perpetuates the memory of a locally deceased manufactory, much as in a parallel way Brussels carpets seem to owe their name to the renown of Brussels as an important centre in the 15th and 16th centuries for tapestry-weaving.

Before the existence of steam-driven carpet-making machinery in England, employers, following the example set by the French, applied the Jacquard apparatus, for regulating and facilitating the weaving of patterns, to the hand manufacture of carpets. This was early in the 19th century; a great acceleration in producing English carpets occurred, severely threatening the industry as pursued (largely for *tapis ras*) at Tournai in Belgium, at Nîmes, Abbeville, Aubusson, Beauvais, Tourcoing and Lannoy in France. The severity of the competition, however, was still more increased when English enterprise, developing the inventions of Erastus B. Bigelow (1814-1879) of America and Mr William Wood of England, took the lead in perfecting Jacquard weaving carpet looms worked by steam, which resulted in the setting up of many power-loom carpet manufactories in the United Kingdom. It was not until 1880 that French pile carpet manufacturers began to adopt similar carpet power-loom, importing them from England.

These machines for weaving pile carpets, either looped (*bouclé*) as in Brussels, or cut (*velouté*) as in Wilton or Axminster carpets, were similar in all respects to such as had been in use by the important English manufacturers—Crossley of Halifax, Templeton of Glasgow, Humphreys of Kidderminster, Southwell of Bridgnorth, and others. A so-called tapestry carpet weaving-loom was invented by Richard Whytock of Edinburgh in 1832, but it was not brought to sufficient completeness for sustained manufacture until 1855. The essential feature of Mr Whytock's process was that the warp-threads were dyed and parti-coloured, in such a way that when woven the several points of colour formed the pattern of the whole fabric. Although the name "tapestry" is used, the texture of these wares has but a remote likeness to that of hand-made tapestry hangings and carpets such as those of the Gobelins and Aubusson manufactories, nor is it the same as the texture of Brussels carpets. Machine-made tapestry carpets are also called "ingrain" carpets, because the wool or worsted is dyed in the grain, *i.e.* before manufacture. Germany in her manufacture of carpets resorts chiefly to the "ingrain" process, but in common with Holland and Belgium she produces pile (looped and cut) carpets from power-loom. In the United States of America there are many similar and very important carpet manufactories; and Austria produces fine cut pile carpets (*veloutés*), the designs of which are largely derived from those of the Aubusson tapestry-woven carpets (*tapis ras*).

Lengths or pieces of felt and other substantial material are frequently made for floor and stair carpeting, and are often printed with patterns. These of course come into quite another class technically. The technological aspects of the several branches of carpet manufacture by machinery are treated in the articles on TEXTILE-PRINTING and WEAVING. Briefly, the products of carpet manufacture practically fall into three main divisions: (1) Pile carpets (*tapis moquettes*) which are either looped (*bouclé*) or cut (*velouté*); (2) flat surface carpets (*tapis ras*) as in hand tapestry-woven material; and (3) printed stuffs used for carpeting.

Whilst the production of carpets by steam power predominates in Europe and the United States of America, and at one time appeared to be giving the *coup de grâce* to the craft of making carpets by hand, there has been in recent times a revival in this latter, and many carpets of characteristic modern design, several of them made in England, are due to the influence of the late William Morris, who devoted much of his varied energies to tapestry weaving and pile carpet weaving by hand, both of which crafts are being fostered as cottage industries in parts of Ireland, as well as in England. At the same time leading English carpet manufactories continue to produce hand-made carpets as

occasion requires. In France a much more systematic existence of tapestry weaving and pile carpet making by hand has been maintained and is of course attributable to the perennial activity of the state tapestry works in Paris (at the Gobelins workshops) and in Beauvais, and of corresponding works managed by private enterprise at Aubusson and elsewhere.

Designing patterns for English carpet manufacture is now more organized than it was, and greater thought and invention are given to devising ornament suitable to the purpose of floor coverings. Before 1850 and for a few years later, rather rude realistic representations of animals and botanical forms (decadent versions of Savonnerie designs) were often wrought in rugs and carpets, and survivals of these are still to be met with, but the lessons that have been subsequently derived from intelligent study of Oriental designs have resulted in the definite designing of conventional forms for surface patterns. The early movement in this direction owes much to the teaching of Owen Jones, and in its later and rather freer phases the Morris influence has been powerful. Schools of art at Glasgow, at Manchester, Birmingham and elsewhere in the United Kingdom have trained and continue to train designers, whose work has contributed to the formation of an English style with a new note, which, as a French writer puts it, has created a sensation in France, in Germany, in fact in all Europe and America.

France retains that facility of execution and liveliness in invention which have been nurtured for over three hundred years by systematic governmental solicitude for education in decorative design and enterprise in perfecting manufacture. Her Aubusson and Savonnerie carpets have maintained a style of design in form and colour entirely different from any that clearly throws back to Oriental principles, and many of the designs for the finer and larger of these carpets are schemed with large central oval panels, garlands of flowers and fantastic frames very much on the plan of what is frequently to be seen in the decoration of ceilings. At the same time the style called *l'art nouveau* has become developed. It largely grows from very fanciful dispositions of free-growing natural forms, as well as curiously curved and tenuous forms, many of which are bone-like and fibre-like in character, flat in treatment and rather thin and washy in colour, and its influence has slightly percolated into designs for pile carpets. This style, sometimes intermixed with the more robust, less fantastic and rather fuller-coloured English style, has found followers in England, America and Germany, but the bulk of the designs now used in power carpet looms seems to be mainly of Oriental descent.

The more important art museums in Europe contain collections of Oriental carpets, and the history of many is fairly well established. The subject has become one of serious study, the results of which have been published and elucidated by means of well-executed coloured reproductions of carpets and rugs preserved in both public and private collections.

BIBLIOGRAPHY.—(1) *An Account of the New Manufactory of Tapestry after the manner of that at the Gobelins; and of Carpets after the manner of that at Chaillot, &c., now undertaken at Fulham, by Mr Peter Parisot* (London, Dodsley, 1753, 8vo). This is probably the only account of carpet-making in England during the 18th century; it is of peculiar interest in that respect, and as containing a statement that "the Manufacture of Chaillot is altogether of wool, and worked in the manner of Velvet. All sorts of Figures of Men and Animals may be imitated in this work; but Fruits and Flowers answer better; and the properest employment for this Art is to make Carpets and all sorts of Skreens." (2) *Essai sur l'histoire et la situation actuelle de l'industrie des tapisseries et tapis*, by W. Chocqueel (Paris, 1863). (3) Vol. xi. of *Reports on the Paris Universal Exhibition of 1867*, containing "Report on Carpets, Tapestry and other stuffs for Furniture," by Matthew Digby Wyatt, F.S.A. (1868). In reviewing the modern products shown at the exhibition, Sir Digby Wyatt discusses at some length the aesthetics of carpet design. (4) *British Manufacturing Industries*, edited by G. Phillips Bevan, "Carpets," by Christopher Fresser (London, 1876). (5) *Allorientalische Teppichmüster nach Bildern und Originalen des xv.-xvii. Jahrhunderts*, by Julius Lessing (Berlin, 1877). Numerous references are made in this illustrated work to the carpet designs that occur in paintings by Italian and Flemish masters. (6) *Eastern Carpets*, by Vincent J. Robinson, with water-colour drawings by E. Julia Robinson (London, 1882, large 4to). In this publication,

Modern machinery.

Modern hand-made carpets.



FIG. 6.—CUT PILE WORSTED CARPET, BEARING ROYAL ARMS OF ENGLAND WITH E. R. (ELIZABETH REGINA); DATE 1570.

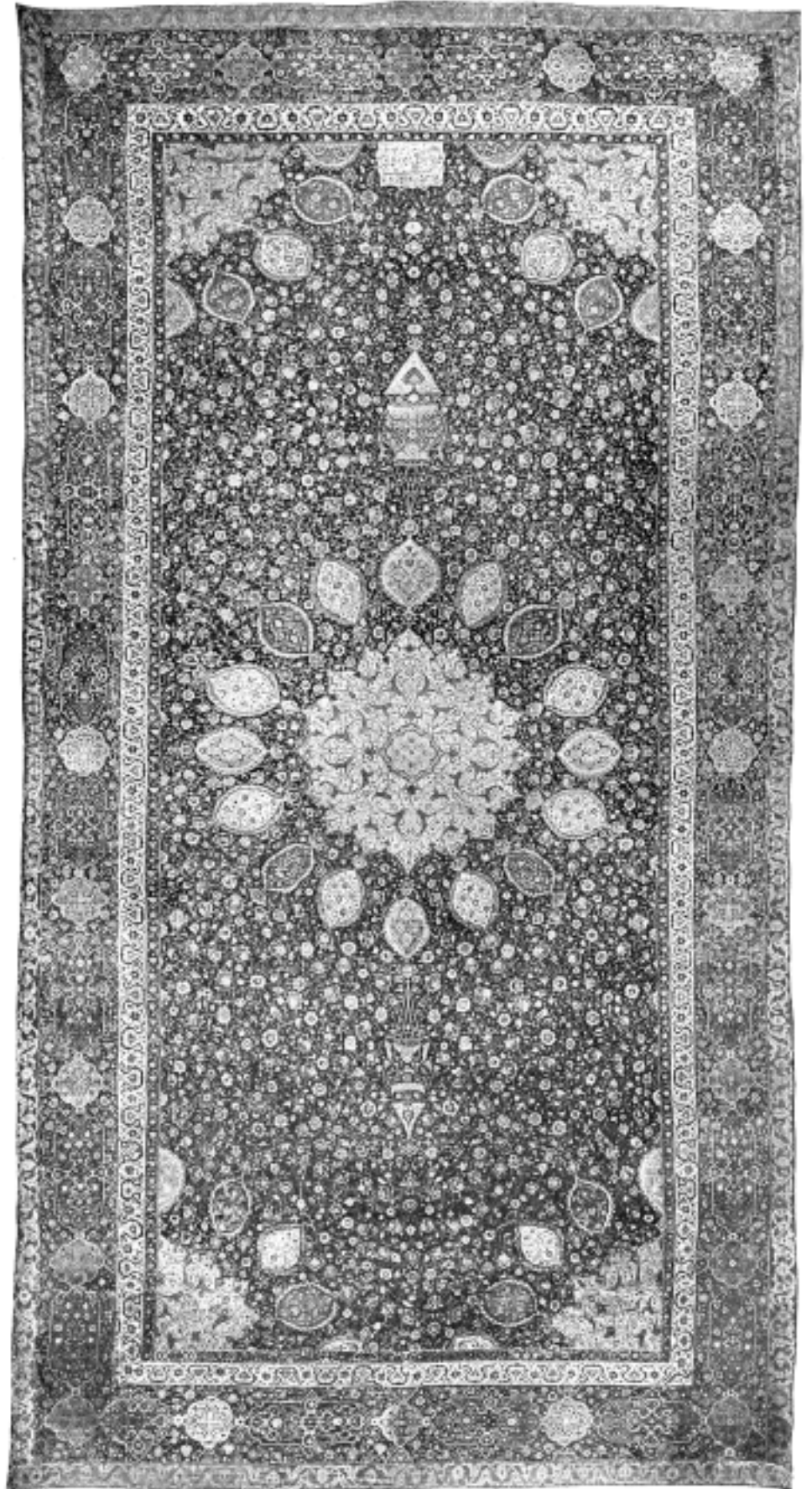


FIG. 7.—VERY FINE CUT PILE PERSIAN CARPET KNOWN AS THE HOLY CARPET OF THE MOSQUE AT ARDEBIL.

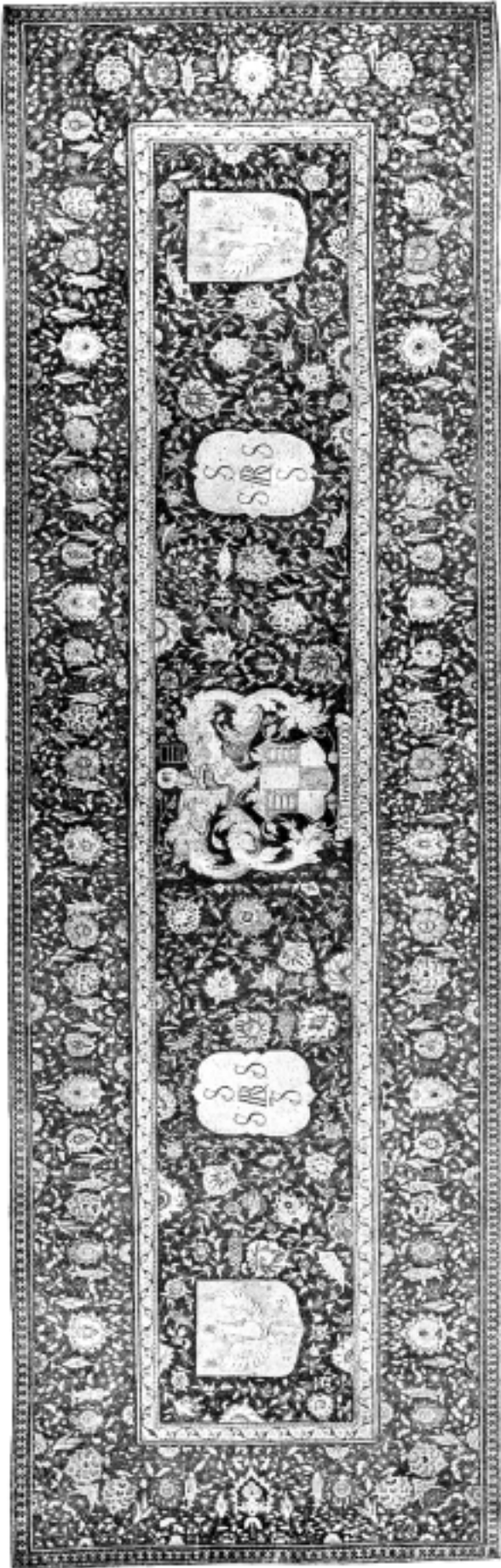


FIG. 9.—CORNER OF A CUT PILE CARPET OF PERSIAN MANUFACTURE, 16TH CENTURY.



FIG. 10.—CUT PILE CARPET OF SPANISH MANUFACTURE, EARLY 16TH CENTURY.

FIG. 8.—FINE CUT PILE LAHORE CARPET (c. 1664) BELONGING TO THE GIRDERS' COMPANY AND PRESERVED IN THEIR HALL IN LONDON, OF PERSIAN DESIGN.

CARPET

which precedes by nine or ten years the more learned works by Riegl and Bode, there are two examples, one ascribed to the manufactory at Alcaraz in La Mancha, and one to the supposed manufactory of the 17th century at Warsaw. By the light of later and more complete investigations Mr Robinson's ascriptions are scarcely borne out. (7) *Oriental Carpets*, by Herbert Coxon (London, 1884, 8vo). (8) *Altorientalische Teppiche*, by Alois Riegl (Leipzig, 1891); a useful book of reference (containing thirty-six illustrations) of manufacturing, archaeological and artistic interest. (9) *Jahrbuch der kunsthistorischen Sammlungen des Allerhöchsten Kaiserhauses*, vol. xiii. (Wien, 1892). Containing an important and finely illustrated article, "Ältere orientalische Teppiche aus dem Besitze des Allerhöchsten Kaiserhauses," by Alois Riegl, in the course of which comparisons are made between the designs in Persian MS. illustrations, in engraved metal work and those of carpets. (10) *Oriental Carpets*, published by the Austrian Commercial Museum (English edition by C. Purdon Clarke) (Vienna, 1892-1896). This contains a series of monographs by I. M. Stockel, Smyrna; Dr William Bode, Berlin; Vincent Robinson, London; M. Gerspach, Paris; T. A. Churchill, Tehran; Sir George Birdwood, London; C. Purdon Clarke, London; and Alois Riegl, Vienna, and a preface by A. von Scala, Vienna. (11) *Ancient Oriental Carpets*, a supplement to the above, four parts containing twenty-five plates with text (Leipzig, 1906, large folio). (12) *Vorderasiatische Knüpsteppiche aus älterer Zeit*, by Wilhelm Bode (Leipzig, 1901). This learned treatise gives *inter alia* suggestive notes upon the production of the so-called Polish carpets and of Spanish carpets. (13) *Ein orientalisches Teppich vom Jahre 1202 und die ältesten orientalischen Teppiche*, by Alois Riegl (Berlin, 1895). A coloured illustration is given of a pile curtain with a triple niche design and an Armenian inscription that it was made by "Gorzi the Artist" to the glory of the church of St Hripsime—an Armenian martyr. The date 651 appears in the inscription, but Riegl adduces valid reasons for reading it as the equivalent of A.D. 1202. Another pile carpet of conventional garden design, probably not of earlier manufacture than 14th century, is also illustrated and carefully discussed, especially in connexion with the appearance in it of well-authenticated Sassanid devices—streams with fishes and birds, &c. (14) *Report on Carpets at the Paris Exhibition of 1900*, by Ferdinand Leborgne (1901, 8vo). (15) *Oriental Rugs*, by John Kimberly Mumford (London, 1901), contains twenty-four colour-plate and autotype reproductions of rugs and eight photo-engravings of phases of the rug industry—amongst which latter are: "A Nomad Studio," "Kurdish Girls at the Loom," "Boy Weavers of Tabriz," and a "Rug Market in Iran." (16) *Rugs, Oriental and Occidental*, by Rosa Belle Holt (Chicago, 1901), well illustrated, with colour-plate reproductions of various types of rugs, including less known Chinese and Navajo specimens. (17) *The Art Workers' Quarterly*, vol. iii. No. 11, July 1904; article on the pile carpet belonging to the Worshipful Company of Girdlers of the City of London, by A. F. Kendrick, with a colour-plate of this remarkable carpet, made to the order of the master of the company in 1634 at Lahore. (18) *Journal of Indian Art and Industry: Indian Carpets and Rugs* (parts 87 to 94) (London, 1905 and 1906). Upwards of ninety-nine illustrations of many varieties of Indian and Persian carpets are given in this publication, a large number showing debased versions of fine designs, e.g. some from the Punjab, Warangal, Mirzapur and Elura; those from Yarkand exhibit Tatar and Chinese influences. (19) *A History of Oriental Carpets before 1800*, by F. R. Martin, published by the State Printing Office in Vienna (Bernard Quaritch, London, 1906). This contains a series of excellent reproductions in colours of Oriental carpets, many of which, being presents to kings of Sweden by the shah of Persia in the 17th century, are to be seen in the castles of Stockholm and Copenhagen—others are in the Imperial Museum at Constantinople or belong to private owners. (A. S. C.)