

The Genuine Persian Rug

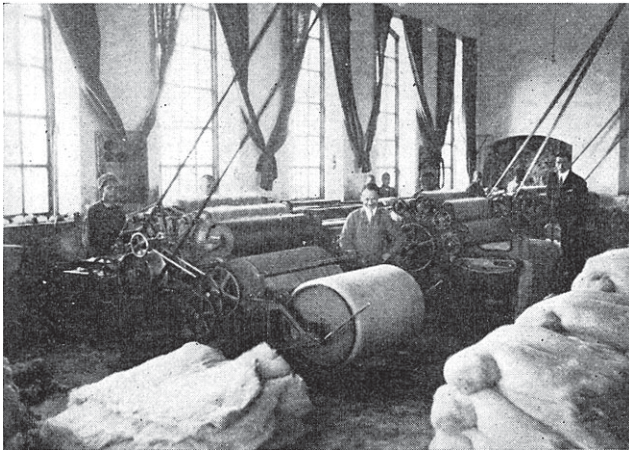
By L. BAUMANN

(Continued from Oct. issue, p. 570)

The Manufacture of the Rugs

Preparation of the Cotton-Warp or Basis for the Rugs

The cotton yarns for warp and filling of the rugs are still made in two ways—either by hand spinning with simple spindle, or mechanically on ordinary cotton machinery. The importance of hand spinning is gradually decreasing, however. Besides the hand spun yarns, machine yarns from Persian mills as well as English and Indian yarns are used mainly, hand spun yarns ranging from 8 to 12 in number. Persian mill yarns are used in 12. Finer warps are made from English yarns in numbers from 16 to 20. The hand spun yarns are twisted 6 to 12 ply and the machine yarns 10 to 16 ply according to fineness. The filling is mostly twisted 6 to 12 ply from finer yarns. The twisting is still largely done by hand, the yarns being stretched out on a rope walk, fastened on one end while the other end is spread over a piece of board, which is turned by a weight.



Small Wool Carding and Spinning Plant in Tabriz

Spinning of Wool and Cotton

The spinning of the wool is still done 90% by hand. Carding today is often done on machines and the wool then spun by hand on spindle or spinning wheel. Soured immediately after the shearing, the wool is sorted before spinning to eliminate impurities and black or brown hairs. The dusting and opening of the wool—and cotton as well—is still performed largely by a vibrating cord-instrument. On a strong, flexible

stick a string of guts is fastened on both ends similar to a bow. The cord is brought to vibration and held into the wool or cotton material to be opened. Thus an intensive cleaning and opening of the fibers is achieved in a very tender way. Quantitatively this method is of course not very efficient. It is used mainly in the rural districts, while the mills in the Northern towns apply more modern methods of cleaning and opening.

The spinning of wool and cotton is still done largely on the simple spindle. Especially in the nomad districts one can observe women on horseback quickly and cleverly turning their spindle. The wheel is mainly used in the villages while the nomads still content themselves with the spindle.

These hand spun yarns are smooth but often very irregular, ranging from 1 to 3 in metric number. They are, however, preferred by many house weavers and by some of the larger workshops of European firms.

Mechanically spun yarns, mostly made in primitive shops with one or two sets of cards, range from 3 to 5 in metric number. Number 3 as well as coarser numbers are often used single, while number 5 is mostly twisted in the above-mentioned way, giving 2 to 3½ turns per inch, depending upon the fineness of the yarn. All pile yarn must be loose and soft in twist. For fine rugs yarns of numbers 6 to 8 are used, twisted 3 to 4 ply. The mechanically spun yarns are washed, dried in the open air and packed in hanks.

Spinning of Silk. The spinning of silk is done in a similar way exclusively by hand, as far as the silk cannot be reeled. Very fine threads are spun and twisted or plied several times. Often the reeled silk when multiplied serves this purpose.

The Dyeing of the Wool Yarns

The dyeing of the yarns is mostly done in very simple dyehouses or in the household, in small lots, mostly over an open fire. Vegetable dyestuffs are used almost exclusively. As Aniline is prohibited in Persia, Aniline dyed rugs are subjected to a high export duty as a penalty, often they are not released for export at all.

The various shades are obtained by varying the concentration of the dye baths. The main vegetable dyes are indigo, logwood, sandal-wood, fustic, Brazil-wood, madder, etc. The current colors are: Indigo blue; in

darker shades always faster and more durable than in lighter, slate-blue and grayish blue shades. Green is very rare in old rugs, as this color was reserved for the turbans of the pilgrims going to Mecca and for the descendants of the prophet—the “Sehids.” In old rugs very seldom a beautiful, soft bluish green can be found, dyed in a mixture of indigo and saffron. The best and fastest red is furnished by the madder-root. This shrub grows all over Asia and is used for dyeing since antiquity. The kermes-insect, too, which occurs in the spacious oak woods in the North of Persia, supplies a very useful red color. Both red dyes give a warm, deep, rich, and gorgeous red, which stays fast and beautiful for centuries; the color improves even with age. A red of different shade is obtained from the cocheneal-insect, which color mixed with fustic, results in the fast, brilliant scarlet. The various shades—especially the red and blue colors—mostly depend upon the quality of the wool material and its affinity for dyes. A yellow color is obtained from saffron or other crocus plants as well as from pomegranate, curcuma and rhamus, a tree with a brownish red wood. Yellow is appreciated only in soft, mild shades, especially a yellowish cream is preferred.

Shading and irregularities in the coloring of rugs by no means should be considered as faulty, being caused by the troublesome work of collecting dye-plants and the primitive way of dyeing in small batches, the dyes on such rugs mostly being the fastest. The softer, deeper, and richer the colors, the more harmonious they appear in their composition, the older and more valuable is the rug itself. The charm of the colors of the oriental rugs, besides their design, is their main appealing factor.

The Weaving of the Rugs

The loom consists of a hardwood frame with two horizontal beams, which mostly are adjustable in vertical direction to give the cotton-, wool- or silk-warp the required tension. To avoid irregular tension in the warp the diameter of the beams is mostly quite large. The warp is either wound on the upper beam or stretched out endless over both beams like a hank of yarn on a reel. On this latter type the finished piece of rug is moved around, while with the other type it is wound onto the lower beam. The warp runs vertically from the upper beam down. The weavers sit in front of the warp and tie the pile threads into it. Balls of yarn in different colors are hanging above the upper beam, from which the weavers with one hand tear short pieces of about two inches and tie the knots, while the other hand holds the warp threads apart.

As a rule several weavers are working on one rug, one of them announcing the color schedule, which all of them knit at the same time, for instance, he commands in a singing voice one—blue, two—red, four—yellow, etc. The foreman is mostly an elderly person, while the knitters are sometimes children from six years up. Visiting weaving mills in Persia, I have met children which tie from 10,000 to 12,000 knots in a working day of from 10 to 12 hours, an 8-year-old child even tied 16,000 knots a day. In Northern Persia mostly men are working on the loom, with exception of the home industry, where women are working too, while in the South women are weaving.

The pieces of thread knotted in for the pile are from $\frac{3}{4}$ to $1\frac{1}{2}$ inches long. In Persia three types of knots are used: First the Senné- or Persian knot (Fig. 1)—second the Smyrna- or Chiordes-knot, sometimes called the Turkish knot (Fig. 2)—and third the so-called single thread Persian knot (Fig. 3). In the Eastern countries the thread is cut or torn off after the tying of the knot, while in Persia the thread is torn off in short pieces before the knot is tied. The third kind of knot is mainly used by nomads in the South of Persia. In India this knot is sometimes used on pairs of warp-threads instead of the single thread shown in the illustration.



Fig. 1



Fig. 2



Fig. 3

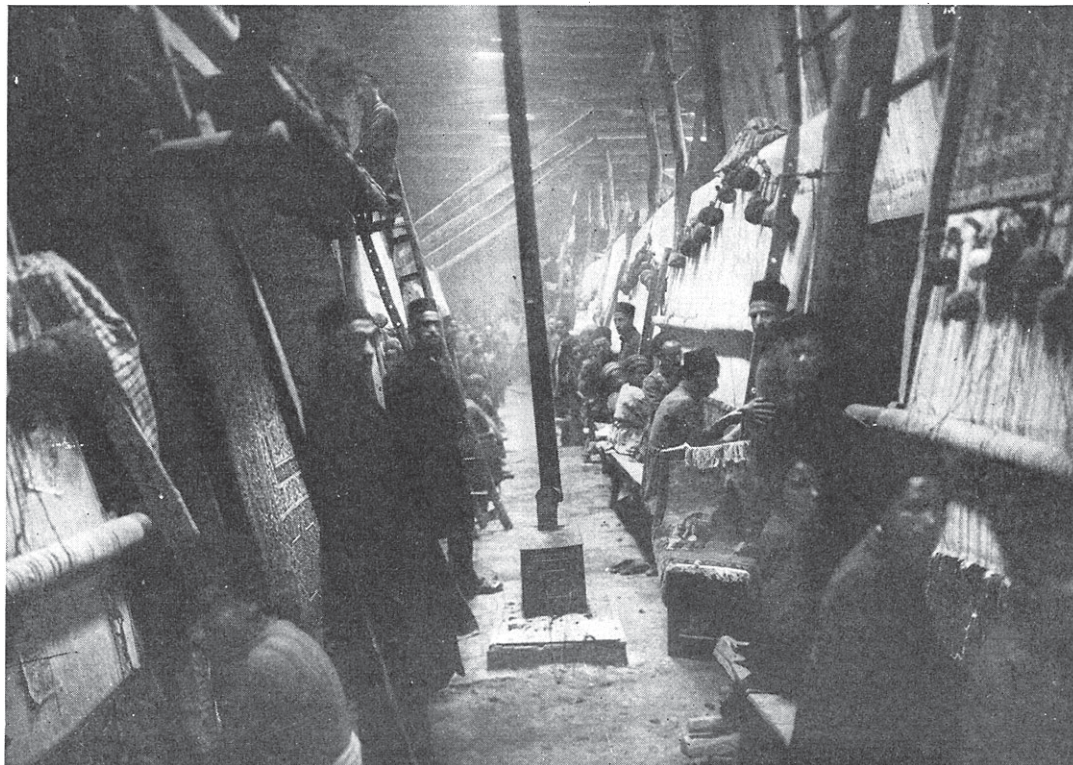
After a row of knots is tied over the width of the warp or in case of loosely woven rugs after two rows, the pile threads are beaten with a comb, made from brass, steel or wood—called “Darag”—and then two filling threads are brought in. The filling of cotton, silk or wool gives the rug its firmness in fastening the pile threads, being invisible from the surface of the rug. By the beating of every row of knots a loosening is avoided and the filling thread forced under the knots, thus permitting the next row of knots to be tied closely. The first filling thread is generally brought in tightly and is beaten tightly, the second filling shot in loosely, thus two layers of warp threads are obtained, which eases the tying of the knots, as the warp threads can easier be reached separately. This method further improves the density of the pile and avoids bagging. The filling requires utmost care of the operator, as uneven filling results in a distortion of the pattern of the rug. At the beginning and at the end of each rug a number of fillings are brought in in cloth

binding. The selvage is often formed by tying the filling with the outer warp threads. On fine rugs the ends of the warp threads are knotted together in groups and cut off evenly to form the fringes.

Before a rug can be made, its pattern has to be drawn. The size of this drawing is in a certain pro-

The Washing of the Rugs

The shorn rugs are removed from the loom and subjected to washing, consisting of a chemical treatment or a scouring in plain water. This gives the rug its beautiful, silky sheen, which is so highly appreciated especially by the American consumer. Where river



Large Rug-Weaving Plant for Fine Tabriz Rugs (160,000-200,000 knots per sq. meter)

portion to the size of the rug, every point in the drawing indicating a certain number of knots. It is drawn in the same colors as the rug and placed behind the warp, every detail in the pattern being marked on the warp by correspondingly colored threads. The designers enjoy great esteem and in ancient times, they were considered as artists blessed by God. Nowadays they mainly copy works of the glorious epoch.

The Shearing of the Rugs

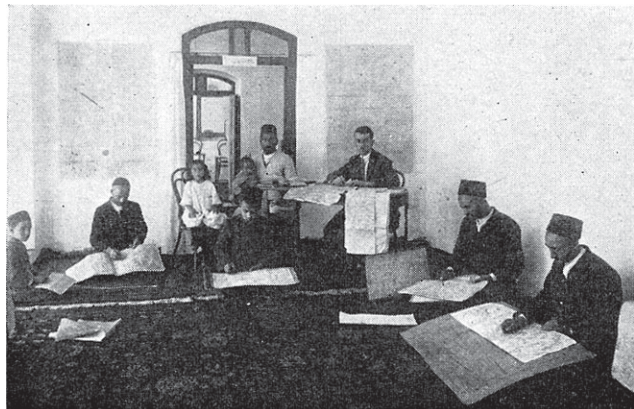
After the rug has been woven it is shorn to obtain a uniform pile. The Persian rugs with exception of the rugs from Kurdistan-Mosul are shorn short. Sporadically in Persia the borders of the pattern are cut shorter to give the larger figure more prominence which at the same time enhances the effect of the colors. The shearing is performed by a highly skilled operator with a hatchet-like knife mostly right on the loom or on a special shearing frame.

water is available, the rugs are hung into it for several days and thus obtain a very fine luster. The dyes used on the yarn have to be resistant to this process. The synthetic dyes generally fail on the oriental rug as they impart a factory-made appearance. The aniline dyes deprive the wool—even the best and most beautiful carpet wool—of its original mild luster, so that such rugs look mostly harsh and dull. These rugs lack the harmony of colors and the warmth of the shades.

To overcome this disadvantage and to improve the glaring colors of the aniline dyes, chemical or chlorine washing is applied. This process reduces the glaring effect of the colors, but at the same time attacks the wool fiber impairing the durability of the rug. The chlorine washing process is highly delusive.

The scouring with plain water removes all impurities and short fibers from the fast dyed rug and brings up the colors thus improving the appearance and quality of the rug. Where no river water is available the

rugs are placed on a declined, smooth floor, mostly made from concrete and flooded with water. In special rug scouring plants the water is constantly poured over the rug from a main line along the wall with numerous openings, while men are scrubbing the rug with a piece of wood shaped like a broom and kneading it with their bare feet until the water runs off clear. Then the rug is dried in the sun hanging over a wooden beam. The air drying improves the quality and the sheen of the rug.



Design Drawing Room of a Rug Weaving Plant in Tabriz

The Pattern of the Rugs

Ornaments, Colors and Typical Motifs

The colors are of considerable importance for the ornamentation varying however in various regions.

Blue symbolizes the air in Persia, bad luck in India, power, force and might for the Mongolic nomads, the truth for the ancient Egyptians, luck and talisman for the Persians in the North and the Turkmenians.

Red symbolizes the fire for the Persians, truth and virtue in India, the joy for the Moslems, the faith for the ancient Egyptians, and the truth for the Chinese.

Yellow is the sun for the Persians, joy, power, splendor for the Chinese; it symbolizes worry and fear for the Egyptians, and bad luck for the ancient Egyptians.

Orange represents piety and devotion for the Moslems.

Green is the sacred color in all Islamic countries; it symbolizes the perception of the Supreme Being for the Persians; in India it is the color of joy and vivacity. We find this color very seldom in rugs from Islamic countries as it is reserved for the turbans of the pilgrims and not to be stepped upon with the feet. In ancient Egypt it means hope.

Pink symbolizes in Persia God's wisdom and power.

Violet is the water for the Persians.

Black is the symbol of grief for the Persians, the dark for the Turkmenians, the vice for the Chinese, in ancient Egypt the error, and in India vice and depravity.

White is the purity in Persia, the innocence for the ancient Egyptians, and the sorrow for the Chinese.

Just as all these colors so the motifs and characteristic decorations partly of ancient origin represent a certain symbol and are not chosen freely, especially on old rugs. The traditional motifs and ornaments of certain tribes and people however are taken over by other tribes and people through wars and migration of the tribes. These color symbols must be known to understand old pieces of this art.

The unlimited diversification and the abundance of ornaments in the Oriental rugs may be classified into geometric and vegetable ornaments. The geometric ornamentation is used by nomad tribes on a primitive level of art untouched by foreign influences, often in crude patterns. The settled Persians apply the vegetable ornamentation with its interlacing of tendrils in artistic but clear design, mostly grouped around a large medallion, often embellished by arabesques, serrated leaves, flowers, lilies, lotus-flowers, vines, etc. The border often is formed by small waved tendrils and very small flowers and blooms, artistically tied in, and sometimes giving a deceptively natural impression.

The Herati pattern is very old and much in favor, consisting of a rosette between two arabesque-leaves, sometimes called fish-pattern. It is the typical pattern on the ground of the Feraghan rugs. The pattern typical for the Kirman rugs is the tree of life with its entangled tendrils and branches with gaily colored birds such as pheasants, pigeons, peacocks, and parrots. On Persian hunt-rugs hunters on black horses are pictured chasing wild animals, such as leopards, panthers or small bears. The background is filled with pretty flowers and rosettes and splendid leaf- and tendril-work, this splendor of flowers and birds being typical for all Persian rugs.

The Persian rugs mostly consist of a large, abundantly ornamented center-piece with matching corner-pieces and wide border. The ground surrounding the center-piece, which is often a horn-of-plenty, filled with flowers, is either of one color—red, blue, golden, cream, or recently sometimes green—or filled with tendrils and flowers in variegated splendor. The Kirman, Kashan, Tabriz, Heris, and Joraghan rugs mostly show this design with a medallion in the center, while the Herat, Serabent, Dshaudshagan, Feraghan, Mushkabad, Mahal and Saruks are generally without medallion, the ground being filled with tendrils. The



Tabriz-Heris Rug Design for Pillows
(120,000 knots per sq. meter)



Kirman and Tabriz Rug Design
(140,000 knots per sq. meter)

Isfahan, Hamadan and Kurdistan rugs are mostly of a similar design.

The imitation of impure animals is prohibited for the Moslem; this is not taken very seriously, however, as the Christian people did not pay attention to it. Especially in the rugs of the Kashkai such animals as, e.g., wild boars or dogs can be found.

In Persia the lion is the symbol of power, strength and reign of the light; an eagle flying up means good luck, while an eagle flying downwards means bad luck; the light-footed antelope and gazelle are the symbol of the moon and the peace of the night. The phoenix is the symbol of life; wolves and dogs mean glory and honor. Cloud bands (Tschis) symbolize air or the sky or the four elements; the lotus-flower symbolizes the summer, the narcissus the winter, the peach-blossom the spring and the chrysanthemum the fall.

At the time when the Persian rug art was growing

and flourishing the various provinces and regions had their own highly typical designs. The tribes clung to them quite conservatively as long as they had no contact with Occidental culture. In those times the origin of a rug could be recognized with certainty, while nowadays all tribes are using patterns of others. As far as larger workshops are concerned, the designs are not typical any more, but the rustic home industry and the nomads are partly still faithful to their inherited designs, ornaments and colors. The time of mass-production has passed and it is to be hoped forever. Since the Fall of 1929 the Persian industry almost as a whole is reviving the old designs of the Shah Aba period. The cheaper rugs for ordinary use will be produced mechanically in the Occident, while the production of works of art and splendor will remain in the Orient.

(To be continued)