

Plate XVIII

PLATE XVIII

ORIENTAL RUG

Size 7-10 × 4-1

WARP—11 knots to the inch

WEFT—10 knots to the inch

110 KNOTS TO THE SQUARE INCH

(See Analysis)



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still questionable whether our household cleanliness might not be largely enhanced by desisting from the practice of nailing down carpets on our floors, where they always harbour dust, and in the dining-rooms bread crumbs and minute particles of food which attract rats and mice. The Oriental custom has always been and still is to employ carpets as hangings for shrines and porches, as coverlets for couches, and as rugs lying loose on the floor ; and this sensible system, which has been largely adopted among us since the immense extension of the trade in Oriental rugs, will, in all probability, be still further developed by the technical as well as by the aesthetic teaching of the splendid carpet at South Kensington."

Reference has already been made to degrees of "civilization," and it is well for the national conceit to remember that at the period when Alexander the Great was astonished at the magnificence of the Persian monarch Darius, Britain was barely known, her inhabitants in the first state of savagery ; and that when Maksoud of Kashan was making the superb carpet known as the Ardebil, Erasmus could write of the home life of England, "The floors are commonly of clay, strewn with rushes, so renewed that the substratum may lie undisturbed some twenty years."

That "history repeats itself" is a truism, but genuine examples invariably interest, if only for the reason that in such coincidences there is something of the "uncanny," which appeals to the mystic which is more or less present in every well-constituted brain. Esther Singleton in *The Story of the White House* records the following passage :—

"If we may credit the following account, General Taylor's visitors had reduced the White House to a deplorable plight : 'The Fillmores found the White House in a miserable condition, dirty and bare, with no corner that seemed like a home. The great room over the Blue Room was covered with a straw carpet made filthy by tobacco-chewers. Underneath this was found a good Brussels carpet of the old pattern, a basket of roses upset.'"

Erasmus's indictment of English cleanliness, and lack of appreciation of the higher aspects of home life, is to be found in *Social England*, under date 1509-1558, and the writer, in repeating the oft-quoted extract from Erasmus's letter to a friend, goes on to say that English floors were littered with "a collection of scraps of food and miscellaneous filth not fit to be mentioned."

It is clear that the "handful of British citizens" who sailed in their famous Argo *The Mayflower* from Plymouth on September 6, 1620, carried with them the microbe of "savagery" which in the natural recurrence of Nature germinated under the inspiring

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influence of the miscellaneous backwoodsmen visitors of General Taylor, and led to the state of affairs recorded as existing at America's Presidential official residence in the year of grace 1850. Incidentally, the sight of the extract recorded above in the critique of a London paper, and the possibility of its being used to "point a moral and adorn a tale," induced me to order the original volumes, which contain not only an extremely interesting account of the White House and its constantly changing inmates, but even a close "inventory" of the various phases of furnishing under the varying tastes of Presidents, who, according to their several cultures, renovated, replaced, and added to the furniture, decorations, carpets, curtains, and hangings, which to those sufficiently interested may in their examination throw light upon Poe's "Philosophy of Furniture," quoted at the end of this chapter.

Upon the occasion of my first visit to the United States, I had for a fellow-passenger Mr. French, cousin of President Arthur, who at that time, as a gallant widower, did the honours at White House with a lavish and refined hospitality of which Esther Singleton makes interesting mention. With the free-and-easy courtesy which characterizes the American gentleman, Mr. French no sooner knew that Washington formed one of our points of call than he indited the following letter, which is still in my possession, owing to the fact that upon arrival at the capital we found that President Arthur was away upon official business:—

CUNARD ROYAL MAIL STEAMSHIP "SERVIA,"

October 25, 1884.

MY DEAR MR. PRESIDENT—

The Messrs. Humphries, two English friends of mine—are travelling for some weeks in America, & have expressed a desire to exchange words of courtesy with our Chief Executive—and so I have given them this letter in hopes that you will bestow upon them a few moments of your most valuable time—in the exchange of friendly greetings.

Ever yours respectfully and affectionately,

(Signed) G. B. FRENCH.

The envelope was addressed "To His Excellency The President."

Although prevented from paying our respects to the President, the letter acted as an "Open Sesame" to the officials of White House, and we probably saw more than falls to the lot of most. I am shocked to say that the only reminiscence remaining firmly fixed in my mind is one of those absurd trifles which lurk in the mind, and in so doing seem to oust other and much more important memories and episodes.

The famous East Parlour was naturally a great attraction, but,

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beyond the size of the great chamber and the splendid glass lustres, I have no memory ; the sight of a gigantic negro with bass-broom and bucket, standing disgustedly almost in the centre of the chamber, filled my eye then, as it does now. It is probable that we were admitted at a time when opportunity offered to thoroughly cleanse and sweep the brand-new carpet which had lately added brilliancy to the President's Receptions. The design and colouring of the carpet was of the well-known Aubusson type, and the quality probably a high-grade machine-made Axminster, or "Moquette," as they are called in the States. It is a common experience with all pile carpets that when fresh from the loom, and even some time afterwards, the loose cut wool-fibres clinging to the pile come off under ordinary wear, and especially under the influence of a vigorous brushing, which, with the ignorance generally attaching to the less obvious features of house equipment, is frequently done *against the pile*, which requires some explanation. In every carpet, ancient and modern, Oriental and European, there is a "way of the pile," which is easily tested in the same way as the owner of a really good billiard-table will carefully draw his hand flat over the cloth, and instantly know from the slight resistance offered to the touch that it has to be brushed the way of *least resistance*, or the rich velvety effect of the cloth will be ruined, and the balls will not run true.

Returning to the stalwart coloured gentleman, who had evidently completely lost his temper : the more vigorously he vented his disgust and wrath upon the carpet—and he wielded his broom with no gentle hand—the more the waste pile came off in the form of "fluff," and he must have swept up bucketfuls. The sight was naturally fascinating to me, having some knowledge of the trouble he was suffering from, and as a carpet reminiscence is only equalled by the remembrance of the first real Turkey carpet I purchased as a bachelor, somewhere about 1893, and of which I remember I gently complained owing to the rough appearance it had after only a few weeks' wear. My remonstrance to the salesman of one of the leading West-End carpet houses was met with the pertinent inquiry, "Which way of the pile have you been sweeping it?" The trouble was instantly explained : the Walsingham housemaid had evidently found that there was something to show for her trouble when sweeping *against* the high loose pile, with the result to the owner of the cherished carpet that instead of its rich full surface and the full bloom of the colours which would have resulted from a judicious smoothing of the pile the right way, the carpet presented the appearance of a stubble-field on a winter's day.

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It is simply astounding that a woman, who recognizes to the full the effect of soft and frequent brushing upon the tresses which are one of the chief glories of womanhood, cannot apply the simple lesson to an important article of household adornment and comfort, and as she would not dream of brushing her hair "the wrong way of the pile," will nevertheless be content to see an ignorant housemaid, day after day, ruining a perhaps choice and expensive carpet, and, to use an American expression, "not have the horse-sense" to put the girl right. The plain fact is that with a natural appreciation of the innumerable weaknesses and follies of her own sex, a woman is notoriously a bad judge of a man, which is mostly shown by the deliberate and aggravating way in which she will brush him against the grain, or again, *the wrong way of the pile*, generally choosing the occasion when he most desires to be smoothed, which she could readily do by imagining the luxurious sense of ease and softness which arises when her maid brushes her hair, perhaps when suffering from a "sick-headache."

I am doing a good turn to my own sex in writing in this strain, and I offer no apologies to the fair sex: there is the danger of every woman being infected by the prevalent "suffragette" microbe, and of becoming persuaded that she really knows something about house-keeping—save the mark! The French superiority in matters domestic may be owing to the fact that the French housemaid is a "man," and consequently has the primitive instinct of knowing how to deal with his own sex, which forms the connecting-link with the Oriental, who from the beginning of things knew how to construct a fabric, which his sense of fitness and justice later taught him to appreciate and understand as the prime minister to his comfort and ease.

The Carpet, Oriental and European, Ancient and Modern, of High Grade and Low Grade, Hand-made and Machine-made, is essentially a "MAN AND A GENTLEMAN," and it is an understanding of this fact, imbibed from perhaps thousands of years of ancestors, from childhood to manhood, from age to age, from century to century, which at last resulted in the master-work of Maksoud of Kashan, which, although to be seen day by day with other interesting records of a great past—and *has been* for the past sixteen years—still awaits even the dignity of a definite date, in spite of the fact that many of the officials and dignitaries interested in, and responsible for, its charge would spend years of their lives, and more money than they can afford, to establish a date which, varying in a year, or maybe a month or less, would mean a question of precedence in Social Life.

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Before returning to *The Daily Telegraph* criticism of carpets as writ in August 1893, I venture to quote the few words which appear on the title-page of Sir Herbert Risley's *The People of India* :

*“ In good sooth, my masters, this is no
door. Yet is it a little window, that
looketh upon a great world.”*

Until the Carpet is regarded in this light, there is no chance of this century, or the next, arriving at a point in which comparison can remotely be made with the artistic efforts of past ages, due to Peoples whom the arrogant Christians of the present day are too apt to regard as Pagans, if not “Heathens.” There is no greater truth than “Civilization is but skin-deep”—a potent fact which the people of this country, with its vast and wellnigh unmanageable Oriental possessions, must constantly bear in mind, if they are to keep their hold upon the heterogeneous, many-sided, and subtle intricacies of mind and body resulting from differences of climate, conditions, and surroundings in which their inhabitants have imbibed deeply-rooted rites, customs, and prejudices beyond the grasp of European imagination.

As frequently happens in cases where expression of opinion is not backed up by extensive experience, the inability to go far enough in one direction is made up for by going too far in another. The Orientals certainly make use of their carpets and rugs in a manner quite different from the practice in any European countries ; but climate is very largely responsible for this. In the warmer climates the necessity for the greatest possible ease in the disposition of the body led to the practice of reclining, or sitting with folded legs, upon carpets or cushions ; and by long usage these positions are just as natural to the Oriental as the European habit of sitting bolt upright in chairs.

In Oriental countries carpets, embroideries, and elaborately-figured silk garments practically serve the purpose of pictures. Further and more important, as we are informed by Chardin and Sir John Malcolm, the Oriental eats and sleeps on his carpet, which as a consequence is kept scrupulously clean. The carpet serves as table, chairs, bed, and for the hundred and one more or less superfluous articles of the dressing-room and bedroom ; for the Oriental performs his ablutions away from the house. Wardrobes, cabinets, book-cases, and the other paraphernalia of a well-ordered European house are conspicuous by their absence in the households of the genuine Oriental, who has not yet succumbed to the fascinations of being

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considered "Ingleese"; thus these immovable harbourers of dust, fluff, dead flies, moths, and other accumulations of a well-swept house do not daily threaten his life, and he finds his salvation in the Carpet, which he prizes and takes care of accordingly.

Owing to the excessive heat in Eastern countries, the houses are designed with the object of securing as much fresh air as possible, while excluding the glaring rays of the sun; the rooms are lofty and airy, and pervaded by the dim religious light which serves to tone down the gorgeousness of the brilliant Eastern dyes. Light is the great object of the architect of the ideal English home, and this means giving a crude appearance to imperfectly coloured carpets, and speedily taking the colour out of the priceless Oriental examples, which were never intended to be subject to such heartless treatment.

Polished boards in the strong Western light look "garish," and are extremely difficult to keep immaculate; unpolished boards look "sad," and destroy the richness of a general effect, such as a well-furnished room should have. The opening and shutting of the heavy wooden Western doors disturbs the dust, and possibly microbes, lightly resting upon all smooth articles of furniture, and especially the floor. The Orientals, if they have anything in the shape of a closed doorway, effect their purpose by means of a light curtain, or even a rug, suspended by means of rings.

It is a curious fact that the generally accepted carpet for a room with heavy furniture, such as a library, study, or dining-room, is a Turkey carpet, which is the coarsest and most open-tufted of the Oriental fabrics; there is no carpet more likely to cause "dust, bread crumbs, and minute particles of food" to sink into the deep pile, and rest there in undisturbed accumulation. It is probable that until the seamless woollen "hygienic" garment of the East is made the sole article of clothing, the Turkey carpet will continue to be in favour in directions where on hygienic grounds it would be rigidly excluded.

Considerations of personal taste and predilection, and the fashionable fads of the day, will as heretofore be the ruling factors in such matters. It may, however, be said that some approach to the "happy medium" is possible, which seems to rest in a combination of the Oriental and European methods of dealing with an artistic luxury essential in both quarters.

To prevent the necessity of nailing a carpet to the floor in a position where its removal will be sufficiently difficult to mean that it will remain there for the usual spring-cleaning, and to avoid the risk of the overworked housemaid sweeping the morning's load of dust

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under the loose carpet in a similar position, as also for the reasons already mentioned, the floor should be entirely covered with a velvet carpet of the closest weave procurable. The reason is that dust and small particles of every description will readily sweep off the surface, instead of sinking in or being trodden in. The colour is a matter of personal taste ; but if the carpets are of any consideration, it should be as much chosen with a view to showing off their merits as the wall is carefully coloured or papered to show off the pictures to the greatest advantage.

The soft, firm background of this "all over" pile carpet will serve as a buffer to the heavy foot-gear necessary to the climate ; there being also a certain amount of "give" or flexibility in the pile, the life of the carpets resting thereon will be prolonged, and an additional sense of luxury and ease will extend the life of the owner, by helping to smooth down the wear and tear of the strenuous times.

Valuable Oriental carpets should not be placed in such positions as immediately before the fire, or where heavy articles of furniture, or even chairs, might mark the pile or (worse still) tear the delicate fabric, already weakened by a century or more of sufficiently trying wear and disintegration.

It is the surpassing merit of the Jacquard fabric, and of the method by which it produces design and colouring, that in all respects it can be used with the finest and coarsest Oriental fabrics, whether as a background or in the shape of carpets, runners, and rugs, without any sense of incongruity. Jacquard's invention was primarily in the interests of the silk trade, and he probably had little idea of its extended use in the case of the unlimited fabrics for which it is equally suitable. If, however, Jacquard could have foreseen his invention being applied to the purpose of saving the fine old examples of Oriental art, which he doubtless fully appreciated, he would have welcomed the idea of Jacquard Reproductions bearing the brunt of the household wear and tear, and even of seeing them made use of as receptacles of burning cinders, spilled food and liquids, and the hundred and one things which fall on the floor, instead of flying to the walls or to the ceiling.

There is no intention whatever of suggesting that the Jacquard fabric has the monopoly of the virtues attached to carpeting, and that the fabrics to be briefly mentioned in the next division have not their own particular recommendations. Of necessity later fabrics had to have their special advantages to justify their existence. The Brussels, Wilton, and Saxony varieties of Jacquard manufacture most nearly approach the Oriental ; which is the handsomest and most enduring

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testimony that could be associated with the fine old man, whose rugged honesty of character and enduring worth are typical of the fabric.

The fineness of the texture of a carpet depends upon the number of knots to the square inch, and as a rule these knots are about the same in the warp as in the weft, the design being more conveniently carried out when this is the case ; but it often happens that the work is beaten up by the heavy hammer combs the way of the warp, which necessitates some allowance to preserve a proper proportion in the design, which would otherwise be "spread out" the way of the weft and flattened in the way of the warp.

Chardin in his chapter describing Persian Manufactures, after referring to the beautiful brocades and velvets, embroidered with gold and silver, the former of which always preserves the colour, and the silver only tarnishing after twenty or thirty years' service, which he attributes as much to the dryness and clearness of the air as to the excellence of the workmanship and materials, writes as follows : "The finest of these stuffs are made at Yezd, Kashan, and also at Ispahan. The best carpets are made in the province of Kirman, and particularly of Seistan. These carpets in Europe are generally called *tapis de Turquie*, because they came by way of Turkey, before commerce with Persia was opened up by ocean traffic. The Persian method of gauging the merits of the carpets, in order to fix the price, is to place a measuring-rule upon a portion of the carpet, and count the number of threads to an inch, for the more there are, the greater the value of the carpet. The largest number of threads thus found in an inch is from fourteen to fifteen."

Dr. Riegl, in the Analysis already referred to, seems to have taken a square of 4 inches for his measurements of the number of knots to the inch of the examples so analysed ; others take a square of 9 inches ; but except in the case of the finest carpets, where the experience of the weaver makes his knots uniform throughout, the most trustworthy way is to take various parts of the carpet, and average the results, as it may happen that the knots to the inch by way of the warp vary, the way of the weft being to some extent controlled by the back warp threads ; even here, however, the irregularity of the hand-process is not to be relied upon, as will be seen from some of the long narrow runners or "strips" illustrated in this volume.

Too much stress must not be placed upon this question of the number of knots to the square inch, as it is possible that a carpet of exquisite fineness in this respect may be accompanied by a crudeness of design and colouring which quite robs the former feature of

Plate XIX

PLATE XIX

ORIENTAL RUG

Size 11-1 × 4-2

WARP—8 knots to the inch

WEFT—8 knots to the inch

64 KNOTS TO THE SQUARE INCH

(See Analysis)



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its recommendations, for it cannot be gainsaid that fineness *is* absolutely necessary to secure the fine lines of a free scroll, stem, and figure treatment, without betraying the exigencies of the fabric in having to be made on the square, or built up dot by dot and line by line. The intrinsic merits of a fine Oriental carpet can as little be gauged by measurement as a painting can be estimated by the fineness of the canvas it is painted on, or the quality of the paint, although in this latter respect the quality and mixing of the colours are of the same importance as the dyeing of the shades in a carpet, for the permanence of the true colour scheme in both depends entirely upon the skill and knowledge of the artist in the one case and of the dyer and the weaver in the other.

It is well to mention that a particular value attaches to the fine Persian carpets of the sixteenth century, and especially to those of the period of Shah Abbas, not only because under his rule the carpet in design, colour, and texture arrived at its highest development, but also because of the prestige attached to a great name, and this fact has still to attain its full significance. No more magnificent volume could be conceived than one devoted to *Persian Carpets of the Period of Shah Abbas the Great*, produced regardless of expense both as to printing and essentially as to the finest colour process possible, and I commend the idea to Lord Curzon. The best examples of these carpets are probably hidden away in the treasure-chambers of Eastern potentates, and quite beyond the reach of any ordinary person; but with his many Persian friends, and with the prestige attached to his long and successful Viceroyship, Lord Curzon's name would be an "Open Sesame" to all, and an absolutely unique monument of artistic taste and merit would result.

Something has already been said as to the dyeing of colours, the merits of which Chardin attributes first to the dyes being native to the country and consequently applied perfectly fresh, and with their essential qualities unimpaired; and secondly, to the peculiar virtue of the water, which all good dyers know to be of the first importance, some advocating distilled water. Of course the method of dyeing is more important than anything else, and I personally attribute the rich freshness and gloss of the best Oriental colours to the splendid quality of the wool, full of its natural oil, which permeates every fibre; and to the ancient method of dyeing, which in some colours required a week or ten days' immersion in *cold water*, and others a proportional period in which hot water was used, but without *over-boiling* the wool and destroying its pristine virtues. It must not be supposed that all Oriental dyeing was immaculate, for even in some

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genuine sixteenth-century examples the deep blues and blue greens, and sometimes the deeper shades of red, will wear completely out of the carpet, in fact "perish," leaving the surrounding colours perfectly fresh and with their best qualities improved by age.

As to the shades used, go to nature ; for in a perfect specimen of the best Persian carpets one is conscious of no desirable colour in nature being missing. Only one reservation seems to be necessary in claiming this comprehension of all colours as being within the range of carpet manufacture, and this may be mentioned in Chardin's own words, in which he is speaking of the costumes of the Persians, though his remarks are equally applicable to carpets : "They never wear Black in the East ; it is a sad and ill-omened colour, which they will not endure ; they call it '*the Devil's Colour.*' They wear all colours indiscriminately, and at all ages, and it is an extremely pleasing and edifying sight to see, both on the promenades and in public places, a great crowd of people in their party-coloured raiment, clad in rich stuffs sparkling with gold, and gorgeous by reason of the variety and brilliancy of the colours."

Chardin's references to carpets are mostly to those made with silk, enriched with gold and silver thread, which is wound upon a silk foundation ; as a jeweller by profession, he would be particularly attracted by these splendid examples. It must not, however, be imagined that the mere question of the expensiveness of the materials tends either to greater artistic appearance or to value of the examples so made. For example, the Ardebil Carpet is made of fine wool ; the "Royal Carpet," from the Marquand Collection, which realized the great price of £7200, was made of wool ; in fact, it may be truly said that the finest examples of the carpets most entitled to the name *are* made of wool, for it must be confessed that there is a "velveteen" suggestion in silk carpets which is by no means pleasant, particularly in certain reflections of light ; and the use of gold and silver thread is hardly legitimate in a carpet, which, even by bare feet, is apt to be trodden in ; and, in any case, when time has tarnished the metal the effect is ruinous, as already referred to in the fine Shah Abbas specimen last described. The truth is that, as in "Exhibition" specimens in all directions failure generally results from an attempt to do "better than the best," so in any endeavour to do honour to a king of high degree some virtue is supposed to be attached to the use of the most costly materials, which in most cases results in an offence against Art, and even perhaps the suggestion of Diogenes' cognomen for rich persons devoid of learning, "sheep with golden fleeces."

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As to the possibility of carpets in past ages having been extensively used in triumphal processions and sacrifices to the gods, the practice continued until quite recent times. Erasmus speaks of an occasion in Orleans, in which he says, "Next morning a special service in the cathedral. The streets were carpeted. Bells rang in all the steeples."

Chardin also relates an occasion when the Persian minister Cheic-ali-can entertained his royal master, the road between the royal palace and that of the minister being covered with gold and silver brocade. He adds that this display of luxury is only for such state occasions, and writes : " It is necessary, however, to remark that only one side of the street is so covered, the other being swept, well-watered, and strewn with flowers, the latter especially when they are in full season. The stuffs and the money thrown upon the ground are for the footmen of the King. Sometimes the giver of the entertainment buys the stuffs back again, a practice of Cheic-ali-can's, in order to place the men under greater obligations to him, as he knew they could not sell them for nearly as much as he gave. This custom of spreading carpets upon the road for kings and great princes is one of the most ancient, as it is the most universal, in the East, being enjoined in the *Pourâna*, which are the earliest books of religion and science of the Brahmins."

It appears from this that it has from time immemorial been almost a religious observance to carpet the roads upon ceremonial occasions, which may afford another clue by which the origin of the carpet may be arrived at. Unfortunately, the difficulty has to be faced of the term "carpet" varying in different accounts, which is sure to be the case according to the knowledge of the subject possessed by the writers. Chardin is not always clear ; but in the passage quoted above the word *tapis* is clearly used, and the meaning unmistakable.

Reference has been made to the decadence of the Persian carpet from the period following the death of Shah Abbas ; but it must not be supposed that this means anything more than that until the end of the seventeenth century the impossibility of "living up" to the very high standard established under Shah Abbas caused the inevitable deterioration in design and colouring which only an expert could strictly define. The very splendid supplement to the Vienna Carpet Book, recently issued under the title *Ancient Oriental Carpets*, contains, in the fourth and last part, five perfect colour reproductions of Persian Carpets in the South Kensington Museum, dating from the second half of the sixteenth century to the second half of the seventeenth century. Truth to say, each carpet has its individual and

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characteristic features, and while not comparing with the Ardebil Carpet of the first half of the sixteenth century, or the Shah Abbas carpet of probably the early part of the seventeenth century, the comparison is as fair as to compare the handful of giants who have made the world's history with the average of humanity, whose flesh and blood only lacked the fire of genius, which is precisely the quality which the designs and colourings referred to are deficient in. As regards mere texture, it is not improbable that even at the present day there are weavers who could rival the best work of the ancient masters ; but this part of the creation of a carpet is, in the skilled sense, mechanical, and if unaccompanied by artistic skill in the origination and arrangement of forms, and the appropriate colouring of every detail of the design, the result is much the same as in the case of the picture by a painstaking artist whose work is microscopical in its exactness and finish, but fails to impress by reason of the very evident "art" which it should be the painter's first aim to conceal.

The five Persian carpets above referred to do not contain any features of design and colouring sufficiently distinct from what I have already described to make further detail necessary : so, to lead from Persia to India, and to account for some of the common characteristics to be found in the carpets of both countries, I will again quote from Chardin's editor, M. Langlès, before referring to the very remarkable carpet owned by the Girdlers' Company, which was made by the weavers of the Lahore factory, probably descended from, or in any case influenced by, the Persian carpet-weavers brought to India by the great Akbar, the descendant of Tamerlane, who reigned from 1556 to 1605, and was therefore for twenty years contemporary with Shah Abbas.

M. Langlès opens his "Notice Chronologique de la Perse" with the following interesting remarks : "In spite of the numerous and terrible revolutions which have disturbed the kingdom of Persia, it is to-day in Asia, and indeed the world, the only one worthy by its great antiquity to be compared with the Chinese empire. The period of its foundation is one of those chronological problems which perpetually baffle the researches of scientists, and upon which one has not even the satisfaction of being able to form reasonable conjectures. We have, in fact, no compass to direct our steps across the night of time, and to discover at what epoch the Persians and the Indians had the same religious and political system, and perhaps even spoke the same language ; it may be that they both had a common origin ; it may be that in the earliest times they were one and the same nation ; it may even be that one of these nations gave birth to the other.

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These are problems which we shall not attempt to solve ; but the observations we have made in the notes attached to this new edition of the *Travels of Chardin*, concerning the resemblances which in former times existed between the Persians and the Indians, are not less exact than, while they are in perfect agreement with, the ideas expressed in the *Dábistán* of Mohhammed Fâny."

It is not necessary to follow M. Langlès farther, my desire only being to establish some connection between the two countries which have shown an aptitude in dealing with the inner mysteries of carpet-weaving, and an instinct for design and colour, which compels one to think that at some point in the dim past the two peoples touched hands, and perhaps for a time walked side by side, even if they did not come into more intimate association by intermarriage and the mixing of blood. It is not uninteresting to speculate upon how far the conquest of the two countries by Alexander the Great brought about a closeness of touch between the two peoples, whose great men, probably following in his train, having mutual wrongs and a common enemy, found this bond sufficient for a time at least to unite them in a destiny the limits of which they could not foresee while their conqueror dominated the world.

The vast accomplishment of that greatest of world-wide conquerors, Alexander the Great, was only possible from the self-abnegation in which he not only exercised the full strength of his overpowering personality, and the charm of his manner in conciliating enemies, but even entrusted them with important commands, which illustrates on the largest scale that "confidence begets confidence." It is to be noted further that Alexander had a shrewd appreciation of the fact that a mutual self-interest is the strongest cement with which to bind apparently conflicting interests ; an important point for consideration to those far too apt in Imperial affairs to rely upon the well-worn adage, "Blood is thicker than water." Self-interest is stronger than both, and it will be only upon these lines that a full working bond of unity will be established between the wide apart, and from nature and climate more or less inimical greater and lesser countries that should in time be one Great United Empire in fact, as they are by fiction. It will be time to talk of blood being thicker than water when, by virtue of a close union founded upon an identity of commercial and artistic interests, it has been brought home to all concerned in the bargain that self-preservation behoves a further consideration that in the conflict of Empires the victory rests with the patriotism of those strongest in a good cause in wielding the best Arms, with the most perfectly

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trained hands of an athletic body. Money may be the sinews of War, but Machiavelli more justly said "War had no sinews but those of good Soldiers." Lord Bacon in quoting and commenting on this continues: "In the same manner, it may be truly affirmed that the sinews of Fortune are not Money, but rather the powers of the Mind: Address, Courage, Resolution, Intrepidity, Perseverance, Moderation, Industry, etc." I am unable to verify the quotation, but it is in my mind that when the famed legislator Solon visited the court of Croesus, this synonym of Wealth sought to impress and astonish him by displaying his treasures, the greatest of which consisted of an immense chamber packed with gold. The great Athenian, with a far-seeing mind, undisturbed by the glamour of mere wealth, answered the unspoken demand for adulation by saying to Croesus, "Iron will conquer this Gold."

Alexander the Great left nothing to chance, and recognized the advantage of alliances, if not by blood, at least by the sometimes even stronger bond of the marriage tie. This feature of his rule, and also other potent influences in the same direction, are admirably emphasized in Professor Mahaffy's *Greek Life and Thought*, to which I am already indebted. I feel sure that the learned author's patriotism will stand the strain of the following lengthy extracts from his work, for which I offer grateful acknowledgments. In an earlier page it has been recorded that Alexander, in spite of his previous acquaintance with the Arts of the Greeks, was nevertheless astonished at the luxury and extravagance of the Persians, when he inspected the captured royal tents of Darius, after the battle of Issus. This battle of Issus is such an important object-lesson as to the futility of mere numbers as opposed to the greater qualities of mind and body already enumerated, that in the interests of the nation I will extract from that invaluable compendium of informing and practical wisdom, *Haydn's Dictionary of Dates*; I presume its aim and object in life is to be freely made use of, so I will not apologize for appropriating the complete entry:—

Issus (Asia Minor), the site of Alexander's second great battle with Darius, whose queen and family were captured, October 333 B.C. The Persian army, according to Justin, consisted of 400,000 foot and 100,000 horse; 61,000 of the former and 10,000 of the latter were left dead on the spot, and 40,000 were taken prisoners. Here the emperor Septimius defeated his rival Niger, A.D. 194.

Professor Mahaffy, in dealing with historians, gives expression to a truth which is by no means confined to the writers of ancient times, in spite of Napoleon's confidence in the value of the study of

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History, as laid down for his infant son, the King of Rome, who nevertheless unhappily did not live to justify his father's teaching, let alone equal or rival his renown. "Rhetorical descriptions are apt to disguise or pervert the truth, and in descriptions of battles especially, to hide the real truth altogether." In a footnote to this passage the vast and unmanageable size of the Persian army at Issus, and the accounts of the slain, are subjected to the test of a more practical and common-sense estimate than the ancient accounts that have come down to us. "All the numbers set down in ancient accounts of battles are thoroughly untrustworthy, especially the numbers of the slain, which the historians deliberately magnified on patriotic grounds." However "Greek vanity" may have exaggerated the numbers of the Persians, the victory undoubtedly was gained by a mere handful of Greeks, whose efforts, inspired by their young and magnetic leader, were probably augmented in the same way as St. Cyr estimated Napoleon's presence as worth 50,000 men, while Wellington admitted its value at 40,000.

Whatever may have been the respective numbers, the battle of Issus placed within the hands of the conqueror a vast dominion which from its extent experiences the extremes of heat and cold at one and the same time within its limits. With the inspiration of genius he instantly adopted the only means of holding his conquest, not only assuming Persian dignity, and the luxurious freedom of their dress, but with an insight born of an intimate knowledge of human nature, he did not neglect the insidious persuasion of the palate, and the humourings of the body, which, judiciously handled, minister so largely to the amity of nations, and the promotion of professional, artistic, and business interests. Reading from the Professor's entrancing pages: "We hear that the expenses of his table—he always dined late—rose to about £400 daily, at which limit he fixed it. Nor is this surprising when we find that he dined as publicly as the kings of France in the old days, surrounded by a brilliant staff of officers and pages, with a bodyguard present, and a trumpeter ready to summon the household troops. All manner of delicacies were brought from the sea and from remote provinces for his table." A footnote to this account, derived from Plutarch, says: "His circle included from sixty to seventy guests. Others add that whenever he offered libation at table the trumpet sounded that all the army might know the king drank."

The splendid picture by Paul Veronese in the National Gallery, "Alexander and the Family of Darius," will delight those to whom the wealth of colour and imaginative detail lavished by the artist gives suggestive reality to an episode which the lapse of time

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has not robbed of its interest. Paolo Caliari (or Cagliari), or, as he is familiarly known, Paul Veronese, was born at Verona in 1528, or at the period which saw the work of Maksoud half finished. In 1543 the great Mosque of Ardebil probably witnessed the magnificent ceremonial in which the "Holy Carpet" was formally dedicated to the particular service for which it was intended, and it may be supposed that every detail of Oriental pageantry and splendour was lavished upon the occasion. It is impossible not to regret that even the boy of fifteen, who was just placing his foot upon the first rung of the ladder of Fame, could not have exercised his talents in bringing the scene home to us; while Tintoretto (so called from his father having been a dyer) at the age of twenty-five, or Titian with his matured powers, would have produced effects of design and colour the thought of which may well tempt Sir L. Alma-Tadema to crown his artistic career by finding in the Oriental atmosphere and surroundings of the ancient Holy City of Ardebil, and in the inimitable carpet available for his inspiring brush, a worthy pendant to the great picture "Caracalla and Geta," to which reference has already been made.

To resume the lines upon which Alexander sought to permanently establish his new conquest of Persia, Professor Mahaffy records that this young man, who at thirty-two years of age had occasion to lament that "there were no more worlds to conquer," succumbed to the seductions of the effeminate and luxurious Eastern life, and in so doing sowed the seeds which led to his early death, which might not have occurred had there been more outlets to his ambition, more "worlds to conquer." "In other respects (that is, outside Persian forms and ceremonies, and the pleasures of the table), in dress, and manners, he drifted gradually into Persian habits also. The great Persian lords, after a gallant struggle for their old sovran, loyally went over to his side. Both his wives were oriental princesses, and perhaps too little has been said by historians about the influence they must have had in recommending to him Persian officers and pages. The loyalty of these people, great aristocrats as they were, was quite a different thing from that of the Macedonians, who had always been privileged subjects, and who now attributed to their own prowess the king's mighty conquests. The orientals, on the other hand, accepted him as an absolute monarch, *nay, as little short of a deity* (the italics are mine), to whom they readily gave the homage of adoration."

I have had occasion to refer to the symbolism of the "Horse-shoe and Cloud Forms" in the Ardebil Carpet, instancing the historical fact that Alexander practically idolized his great war-

Plate XX

PLATE XX

ORIENTAL RUG

Size 4-6 × 3-0

WARP—15 knots to the inch

WEFT—13 knots to the inch

195 KNOTS TO THE SQUARE INCH

(See Analysis)



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charger Bucephalus, and that this fact accounted for the symbol of his warrior soul, and his divine origin, which is the leading feature in the carpet in question, and innumerable others probably which have perished, while being as the flames from which the Ardebil Phoenix arose. It might be urged with some plausibility that a conquered nation, or nations, would not be likely to adopt the symbol of a conqueror, in some directions doubtless an oppressor; but the belief in Alexander's divine origin, which he took some pains to suggest and foster, removes all objection, as it doubtless salved the minds and consciences of those who, first fighting against, accepted service with one whom they at least ranked with Achilles, if not with the gods; and who can strive with the gods?

Alexander the Great was the Hymettan honey-bee whose hive was the world, and while sipping from the flowers of the East, became the fertilizing medium which has resulted in hybrid characteristics which are not sufficiently definite to analyse, but which are still there, and perhaps betray themselves in a direction in which climate, customs, and the Oriental instinct for colour tended towards the love of ease, luxury, and magnificence which it cannot be denied that the Carpet above all textiles ministers to.

It may be said that the art of carpet-making was introduced into India from Persia, and that this is the natural explanation of its taking root. It may with equal truth be said that the art was in much the same way introduced into Persia by the ancient Egyptians. The fact is that the three nations Egypt, Persia, and India are weavers by instinct and tradition, and much the same might be said of China and Japan; but, not having come under the civilizing influence of Greek culture, the two latter nations have preserved their primitive artistic simplicity, and this is shown in a marked degree by the quite distinct style of their art, and even by their handwriting, which is formal and precise, as compared with the free, flowing script of the Persians, which is characteristic of their easy adaptation of the most elaborate stem and trellis forms in nature, and their power of transforming these into a material which offers conventional difficulties at every turn.

Centuries upon centuries of weaving, in which the arts of both design and colouring are circumscribed by the limits of the fabric, have a tendency which is illustrated by the popular saying in India, relating to the Jolaha, or Musalman weaver, "The weaver weaves what he has in his mind." The convention shown by the tenacity with which the Oriental clings to the most trivial of ancient customs; the primitive music which most appeals to his senses; the arts of

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the scribe and the illuminator ; the costumes worn, and the construction and furnishing of the houses ; and the habits of speech—all these are characteristic of an occupation entailing concentration upon the exigencies of warp and weft, and the building up of a fabric knot by knot, in which the misplacement of a single dot of colour so formed affects both design and colouring ; and this absorption in apparently insignificant actions of a delicate nature, each one affecting the final accomplishment, must have had its effect upon the temperament of the weaving nations, which a more scientific inquiry may show to have had interesting results.

The way in which individuals, and even whole tribes, retained and jealously guarded the intricacies of design and colouring of their traditional carpet patterns may account for the perfect genius for secrecy which, when there is an object, can be observed in a way quite foreign to the European mind, with its love of speech and tendency to gossip. The Oriental is a born diplomatist, and the reticence upon essential points which shape and affect policies may be a phase of the "Weaving Mind," which will bear closer examination than it has hitherto received.

The Westminster Gazette of March 24, 1900, under the heading, "An Unsuspected Treasure," had notice of a carpet which for over two centuries and a half had been lost to its possessors and the world at large under the guise of a "table-cloth," in which capacity, it is probable, its merits were obscured by the superior attractions of the table furniture before dinner, and perhaps afterwards by the natural deviousness of vision consequent upon a civic banquet. The notice in question reads as follows : "For many years past a large carpet of Persian manufacture has been used as a table covering at Girdlers' Hall, Basinghall Street. The value and rarity of this carpet were never suspected until it was discovered that the carpet had been presented to the Girdlers' Company by one Robert Bell, 'in remembrance of his love,' in the year 1634. The Company, of which the Lord Mayor is the Master, has had the carpet framed in an oaken border appropriately carved in a style belonging to the period of its date and hung in the banqueting-hall. This has been done under the advice of Mr. C. Purdon Clarke, of the Victoria and Albert Museum (now Sir Caspar Purdon Clarke, of the Metropolitan Museum, New York). *The Times* states that the carpet is nearly 30 feet long by 8 feet in width."

It is hopeful for future discoveries of a like nature that this exceedingly interesting if not unique carpet should have been under the eyes of officers and members of the Company and their privileged

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guests for such a length of time without provoking either comment or inquiry, until the expert instantly recognized something exceptional, with the result chronicled. There is something ironical in the fact that at the present moment there are native criminals in the jails in India who are producing artistic work which not one English gentleman in a hundred is capable of understanding and appreciating; it is true that many of these natives have, through their caste, preserved an unbroken pedigree through several centuries, and that their artistic instinct is almost part and parcel of their natures. Race instinct and Art instinct are of the blood, and the sharp line of distinction between the Eastern and the Western nations always has been, and will be to the end of time, one of the most subtle paradoxes the student of human nature has to grapple with.

In the Indian Section of the Victoria and Albert Museum there is a very fine coloured reproduction of the Girdlers' Company carpet, which bears the inscription, "Photograph painted by the Misses Ada and Blanche F. Hunter." Beneath the carpet, which is painted with an exactness which seems to have aimed at even reproducing the effect of the pile of the original itself, the following particulars are given: "Woollen Pile Carpet, presented to the Girdlers' Company by Mr. Robert Bell, the Master, in 1634. The Carpet, which bears the Arms of the Company, was made at Lahore, Northern India."

An excellent reproduction of the coloured illustration is given in *One Hundred Carpet Designs from Various Parts of India*, with a Monograph by F. H. Andrews; accompanying this is an account of the carpet itself, which I venture to make use of, as follows: "The Carpet, which appears from the Minute-books of the East India Company to have been made at the Royal Factory of Lahore, established by Akbar the Great, is of Persian design, being about 8 yards long and $2\frac{1}{2}$ yards broad. It contains the Company's Arms, namely, St. Lawrence on the Gridiron, holding a Book of the Gospels in his right hand and a gridiron (the emblem of his martyrdom) in his left; underneath is a scroll, with the Girdlers' motto, 'Give thanks to God,' whilst flanked right and left Mr. Bell's Arms are wrought, namely, Azure, an eagle displayed argent-in-chief, three fleurs-de-lys or, and introduced in between these and the Company's Arms are two bales of merchandise, stamped with Mr. Bell's initials and trade marks."

The heraldic devices and the trade symbols are upon a red field, covered by a rich scroll-work design, formed of stem-work supporting palmette and conventional floral figures and leaf forms; the Herati colour divided leaf, lying upon two rosette figures, here and

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there indicating the origin of the design. A curious figure, resembling an American "corn-cob" tapering to a point, is very freely used, both in colour effects and (what is more unusual) in a lighter colour of red toning with the ground, a similar effect of colour being used throughout the carpet, in the smaller flower-work. The general effect of the colour scheme, with the cream stems outlined in dark blue, with a free touching of a lighter shade of blue, and the liberal introduction of an orange yellow where the ornamental figures require relief, is brilliant without being gaudy, and the two tones of red referred to give a charming and high-class tone to the carpet which is very satisfying to the eye, while it would not meet with the approbation of the lover of the more refined Persian sixteenth-century designs and colourings.

The narrow inner border dividing the field from the main border band is in two shades of yellow, and is enclosed within narrow bands of colour damasked with a running key design, a kind of serpent-like leaf meander breaking up a similar effect already spoken of as being in two shades of yellow. The main border band, which is of unusual width for the size of the carpet, is nothing more or less than a repetition of the field design, though upon a dark blue ground, the two colour red effects being still a noticeable feature, but in this case with the colours reversed, the dark red being next to the dark blue ground colour. In this main border band lies one of the defects of the carpet: a greater contrast in the design would have afforded more variety, and have been more in accordance with the traditions of the finest period of Persian manufacture. This feature of the border "matching" the field or centre of the carpet is quite a modern convention, and essentially British, and it is not improbable that Mr. Robert Bell, when he was ordering the carpet, expected to find, or insisted upon having, a border which unmistakably belonged to the main portion of the carpet. It only rests to speak of the outer border band, consisting of a foliated key pattern, the inner yellow, and outer key band of red, outlined with a dark shade of blue; a neat S-shaped continuous key band in two shades of red, and a similar band of blue upon white, both enclosed within straight lines of plain colour, guard the foliated key band on either side, and plain bands of red and dark blue, the latter colour finishing the extreme edge, complete the carpet, which is well balanced in every detail.

It is obviously impossible for any description of such a carpet to do more than give a general impression. The infinite variety of design and colouring in these Oriental carpets, which in many cases is accidental in the fact that the dyer seldom quite accurately matches

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his shades, makes it necessary to draw largely upon the imagination in endeavouring to realize a colour effect in which Time has had a good deal to answer for. No art can reproduce the softening effects of wear and tear and the toning down which can only be arrived at by natural exposure to light. The Orientals would never dream of exposing carpets to the glare of a strong light, and it follows that the fabrics arrive at their perfection of shade, as we know them, after centuries of well-cared-for existence, in much the same way as the wines of European nations arrive at their full flavour and bouquet under the care of the experienced cellarman, whose anxiety to preserve an even temperature of the exact degree would be worthy of doctor or nurse fighting for the life of a patient.

The entrance to the Indian Section of the Victoria and Albert Museum, South Kensington, opens upon a staircase leading to the rooms above, and the wall space immediately around is covered with frames enclosing most beautiful colour reproductions, which are inscribed with the words, "Illuminations from a Manuscript Copy of the *Akbar-Namah*, by Abu'l Fazl. Mogul Work, about 1597-98 A.D." These plates, about 150 in number, including reproductions of the original covers, are quite surprising in the variety and richness of the detail and colour, and of the very greatest interest in revealing the artistic merits of the artists who were engaged on the work. They are all designed with the prim precision of the weaver mind, which characterizes Persian work of the same class, and indeed most miniature work; but there is no denying the beauty of the work, while one is amazed at the lavish care with which such historical records were given permanence.

At the time when I visited this Museum (March 12, 1909), a very interesting example of Indian (Mogul) early-seventeenth-century carpet-weaving occupied the wall space above the small landing facing the main staircase. The colours were of the conventional order, rich red centre with a dark blue border, both being figured with appropriate ornamental work of the stem, leaf, and flower order. The main feature of the field of the carpet was an inverted horseshoe, with the usual cloud forms, behind which spreading stems, terminating in leaves, were formally arranged. A detached seven-stemmed flower form occupied the space between the cloud forms continuing the arms of the horseshoe; while the curve of the shoe itself rested upon a diamond-shaped trellis, which commenced a free variation of the Herati pattern.

Four woollen carpets, labelled "Indian (Mogul) early 17th century. Probably made at Lahore, Panjab," occupied the right-

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hand wall, ascending by the staircase I have mentioned, and one of these, the largest, which is under glass, in 1886 cost £400, by no means an insignificant sum in those days. All these four carpets have a hybrid resemblance to the sixteenth-century Persian carpets; but instead of the clear, delicate, magenta-toned blood-red of the field, and the rich grass-green of the border, the Indian examples show a dullness of the red tone, and an undecided compromise between green and blue in the border, which prevent any doubt as to their origin.

On the same wall as the four Indian carpets referred to there was a very fine example of Persian carpet manufacture, of about the year 1600, which is one of the five examples depicted in *Ancient Oriental Carpets*. The design consists of scalloped panels, each on its separate ground colour, and filled with an important centre figure, surrounded by small flower and leaf work, with connecting stems. These panels, which lie on a dull but rich red ground, are placed within a delicate ogee trellis, which is intersected with another trellis of the same shape; the points of contact of these two trellis movements are covered by important conventional flower figures, while the panels themselves are made one with the general design by means of the stems of the intersecting trellis which connect with the figures in the centre of each panel. A separate stem, flower, and bud scroll movement fills the intervening spaces of the design; this apparent elaboration of detail is restful to the eye. The very narrow border consists of a conventional flower figure, enclosed within leaves formally arranged; a stem movement connects leaves and figures together; and the whole border design is on a dark blue ground. A narrow cream band, damasked with a leaf and bud scroll, separates this main border band from the field of the carpet, while the outer band consists of a foliated key pattern in alternate light blue and reds. This carpet is labelled "Woollen Carpet, Persian; 16th or 17th century. Bought £380—1884."

Without any intention on my part, the accidental fact of the carpet last described being in the same room as the four Indian carpets previously referred to has led me back to Persia, from which home of the carpet I must again turn to India, which now has almost the same claim. In the room beyond the large one containing the five carpets I have spoken of were two Indian carpets, evidently made in the Yerrowda Jail, some three miles from Poona. If my memory serves, they are of the conventional type of red field and blue-bordered carpets, with formal flower, leaf, and stem scroll movement. The interest of these carpets lies in the indication shown by their labels of the way in which Persian carpets have

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been reproduced through the kindness of the native Rajahs, who, I believe, are very liberal in allowing the use of these treasures, which probably came to their ancestors as presents from the factories of the kings of Persia. The two carpets in question are labelled "Reproduction of an old Persian Carpet in the Assar Mahal Palace at Bijapur. Poona Jail, Bombay Presidency."

Runners have next to be dealt with. I have used the term "runners," instead of "strips" (as some call them), because the latter description might lead one to suppose that only a fragment of a carpet was intended, whereas the runner is distinct and complete in itself, and has, in fact, its separate use. My view of runners—which may be so called because in modern use they run the full length of corridors, or the narrow entrance from the hall door to the main rooms in flats—is that they were made for use in the probably long passages leading from the main chambers of town buildings, and of the large tents used for country travelling, to the separate apartments religiously kept quite distinct for the male and female members of the court, family, and their respective households. Oriental houses are not usually more than one story, and it can readily be imagined that, with the observed division of the apartments, two separate corridors or passages might run right and left of the centre main room, or parallel at opposing corners, connecting the women's living apartments with the main room, leaving an open courtyard in the centre, when space would not be a consideration. Runners are, in fact, very long rugs, and have no distinctive features as regards design and colouring; yet they are to my mind a separate class, and should be so treated.

Runners are not uncommonly found in pairs, and with closer suggestion of an endeavour to make the one match the other than is usually the case with Oriental fabrics. This again seems to indicate their use in pairs in ancient times. Another possible explanation is that in formal conferences, especially on occasions where a neutral strip of ground may have been conducive to the preservation of peace, the consulting parties would be equally accommodated in the matter of carpeting to sit on, while facing one another, and able to converse or dispute without danger of coming to too close quarters.

Mr. Mumford in *Oriental Rugs* accounts for these curious specimens by domestic usage, "which explains the prevalence of long, narrow shapes in so many varieties of imported rugs—the shapes which are called 'runners' in our market, and are used chiefly for stair and hall coverings."

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From the earliest times it is not unreasonable to suppose that special sizes and shapes in carpeting have been made, as well as special designs and colourings. Some ten or twelve years ago I saw in one of the leading London carpet houses a very curious runner, which, instead of being one comprehensive design (whether pine, panel, or connected or detached conventional figures), consisted of five prayer rugs with the conventional arch, all comprised in one piece, with the points of the arches lying in one direction. The only apparent explanation of this freak is that the happy father of a united family, desiring the morning and evening prayers to be observed at one time, and with the due formality attached to each one possessing a separate prayer rug, with its separate mosque arch, had this prayer-runner specially made to his own instructions ; and it remains to-day as an example of pitfalls of the sort which are laid for the expert and connoisseur who derive their data from solitary specimens instead of expanding their outlook.

As to the distinctions in size between carpets, runners, and rugs : the division is arbitrary. A large carpet is always a carpet ; whereas a small carpet may by some be regarded as a large rug. A long rug I have classed as a runner ; a small rug might be called a mat, or, as Sir Richard Burton described it, a "foot-carpet." Generally speaking, Oriental carpets are not large, unless made for a particular purpose ; the average private house in the East is not large, and unless within the mosque or palace precincts, the weaving accommodation was not such as to admit of large carpets.

In his "Monograph on Oriental Carpets," in the Vienna Carpet Book, Sir C. Purdon Clarke writes of "the large carpet in the hall of the Chehel Sutoon (Ispahan), said to be the largest ever woven and measuring 60 feet by 30." Mr. Vincent J. Robinson, in his contribution to the same grand Carpet Book, under the title "Indian Carpets," writes : "In 1882 Mr. Purdon Clarke visited the factory of Masulipatam, and at the Palace of the Nawab saw a remarkable suite of large carpets, each fitting one of the reception-rooms. On expressing admiration for their size and beauty, and inquiring as to their place of manufacture, he was informed by the Nawab that they were all made in the Palace, in his father's time, about sixty years before, adding the explanation that no weavers' houses were large enough for the looms, nor were any weavers rich enough to make such carpets for chance sale."

Here are two sufficient reasons for the smallness of the average Oriental carpet—the size of the houses in which they were woven, and the fact that the smaller size meant a quicker turning over of

Plate XXI

PLATE XXI

ORIENTAL RUG

Size 9-3 × 4-11

WARP—12 knots to the inch

WEFT—9 knots to the inch

108 KNOTS TO THE SQUARE INCH

(See Analysis)



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the weaver's small capital, for it may be assumed that privately woven, as most of them doubtless were before the trade was organized upon the European system, a very small carpet would naturally tax the resources of the weaver.

Apart from the limitations of design and colouring caused by the size, there are no distinguishing features in the average carpet, runner, and rug; but in the last-named class there is the well-known "Prayer Rug," which is quite distinctive in style and has inner meanings which are worthy of notice. There are the inscription prayer rug, the prayer rug with the open arch, and the variety of the same rug which has the representation of a lamp hanging from the crown of the arch. The arch is sometimes partly filled with a hanging band of small figures joined together; indeed, the variety is infinite. Some of the larger prayer rugs, of more advanced design, have a representation of the supporting pillars of the arch, the older ones having a single detached pillar of simple design; others are of more elaborate design, with two pillars, the hanging lamp in both cases being a feature.

It remains to speak of another type of prayer rug, in which the arch is filled with an elaboration of Persian flower forms, with connecting stems and buds, the whole springing from a vase, which apparently is raised upon a kind of "billowy" cushioned dais, the vase itself being upon a flat ornamental board. The supports of the arch have the appearance of a divided pineapple, and the flanks of the arch are pierced, the opening being filled with an appropriate ornamental form. This delightful specimen of Oriental Art is one of the rare examples in which no fault can be found. The field of the rug is a dark blue, upon which the Persian ornamental work is thrown into relief, the effect being the scintillation of precious stones from a reflected light, with night for a background; surrounding this is a similar effect of design, but relieved from the dark field by being upon a rich yellow ground; the pierced flanks of the arch open to the eye a glimpse of rich red, of much the same tint as the vase already referred to. Finely proportioned and richly coloured and damasked inner and outer border bands enclose the main border, which, of a ripe red tint, is delicately figured with a flower, stem, and leaf treatment of some formality, which, in absolute harmony of both design and colouring, frames the picture.

This little gem was No. 1285 in the Marquand Sale, and has already been mentioned as realizing £1400, a sum which is merely nominal when it is considered that no other example of the exact design, colouring, size, and condition is likely to exist. Measuring

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5 feet 5 inches by 3 feet 8 inches, and with 468 knots to the square inch, this little rug contains 1,338,480 *hand-tied* knots, which, at the rate of one penny per knot, makes the price £5577. Truly the purchaser of this prayer rug purchased in the "lucky minute," and will be wise to keep his treasure for the time when such unique works are appreciated at their real value.

In my judgment this particular form of prayer rug had its origin as follows. I have already referred to the Ardebil Carpet having been made for the purpose of screening the tombs of Sheikh Sefi and Ismail I. from the common gaze of the faithful. Whether this supposition is correct or not, I conceive this rich example of Persian Art behind the pillar-supported arch; the pillars themselves perhaps coloured red, and arabesqued; the flanks of the arch, coloured gold, with inscriptions, would be relieved from heaviness by being appropriately pierced, permitting the colours of the carpet to show through, with the arranged symmetry the weaver would doubtless have the art for. With a little stretch of imagination, the vase might be one of those richly enamelled glass vases described in Gustav Schmoranz's *Oriental Enamelled Glass*, and might even be a particularly fine example presented to the sacred shrine by Tamerlane, who, in carrying away to Samarkand the art-craftsmen of Damascus, doubtless also relieved the city of all available specimens of an art he so practically showed his appreciation of.

Now it seems to me that it is quite possible that on some occasion or occasions a carpet-weaver of the true artistic instinct must have been struck with the superb effect of this Ardebil Carpet, in all its pristine brilliancy and beauty, being framed behind the pillared arch, with the accessories hinted at, and with his religious enthusiasm fully aroused, lost no time in reproducing an idea, mentally noted at the time, upon which he would work with the concentrated effort of the devotee, determined upon perfection.

There are variations of this particular type of prayer rug, and as usual with differences in detail which characterize all Oriental reproductions, and in the same way that the hanging lamp of the prayer rugs of this particular class is replaced by a purely ornamental figure of the like suggestion, so the vase in the early Marquand rug is replaced in later examples by ornamental forms, conveying the same meaning, but quite distinct in detail.

Chardin deals very fully with the religion of the Persians, and opens his fifth chapter, entitled "Prayer," as follows: "Of all the peoples of the world, the Mahometans, assuredly, pray to God the most assiduously, and with the most fervent zeal." We have nothing

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to do with Chardin's opinions upon this point, or of the religion of which he speaks ; but there is much of interest in his remarks, especially as to the use of the prayer rug.

The Moslem law forbids the use of statuary and paintings of human figures in Mosques ; and the same prohibition applies to chambers in hotels or private houses which are specially devoted to prayer. Of this Chardin writes as follows : "There is one thing of which the Persian takes particular care : it is that there are no representations of the human form in the places in which they exercise their devotions, this being forbidden by God, and any prayers offered where such figures are to be seen are vain, and devoid of merit."

Moslem theologians differ on this point of the imitation of the human form divine, for which, in the Mosques, verses from the Koran are substituted. Some hold that if the figures are incomplete—for instance, with only one eye—they are not strictly images, but grotesques ; which is supposed to evade the penalty of prayers not being heard. Some doctors of the religious laws absolutely forbid any delineation of what has life, under pain of being cast into hell ; others permit pictures of the bodies, but not of the faces, of human beings.

Chardin mentions that the Turks, and the Tartars especially, are even stricter than the Persians in the matter of the human form, and that when lodged in the king's houses, which is the custom of the country, they did not scruple to slash with a knife, or scratch out with a nail, the faces of the beautifully gilded and decorated figures which adorn the rooms—acts of vandalism, Chardin naively remarks, "which are a sure indication that ambassadors have occupied such places."

As the prayer rug, both from its associations and from the quaintness and beauty of the designs and colourings, is decidedly the most interesting example of any class of textile fabric, I will deal with the subject at some length, making full use of Chardin's account, although he has little or nothing to say as to its varieties from an artistic point of view, its religious significance engaging all his attention, which is much to be regretted.

"For the purpose of their devotions the Persians carry with them, or have brought to them, the small carpet which they make use of solely to say their prayers on. It is only made of straw in the homes of the poor, and with the lower classes of lawyers and ecclesiastics. With the well-to-do it is made of felt or thick cloth, but in the case of the nobility it is of a fine woven fabric. This small carpet is about 4 to 6 feet long, and between 2 and 3 feet broad, and the design generally represents the upper arch of a Mosque, to remind those that make use of it of the sacred Mosque

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at Mecca. They unroll this small carpet, in which there are several articles which they make use of in their devotions; for instance, their Koran, which is always in its own separate cover, a flat cake of earth, a rosary, a pocket mirror, a comb, and sometimes holy relics, the use of all which will be referred to later. They spread out this small carpet, upon which they prostrate themselves, with the head turned towards Mecca, so that, being abased, they have Mecca in front of them; this they call making obeisance to the Kaaba, or sacred temple of Mecca, which contains the famous stone supposed to have fallen from paradise with Adam, and which, being preserved at the Deluge, the angel Gabriel brought to Abraham when he was building the Kaaba. It is said that this stone was at first white, but that from constant kissing by the lips of the faithless and impure, it became black."

The reason why the devout Persians make use of these "small carpets" (or rugs, as I will now call them) is that they may be able to offer their prayers in natural simplicity and humility. The rugs are specially made to serve this purpose, and presumably to enable them to perform their ablutions and religious observances, without coming in contact with the earth, which might have been defiled, for, failing the use of the rug, they are enjoined to dig up the earth upon which they pray, to make sure that the ground has not been contaminated by any human or animal excretions. It is also commanded that rich clothes and ornaments should be laid aside, these trappings of earthly vanity and power being deemed likely to inspire pride and arrogance, which are inconsistent with that sense of self-abasement with which a supplicant should address the Deity. It will be recognized that the prayer rug serves as a useful depository of the rich habits and ornaments of which the devotees denude themselves before beginning their prayers; further, the ground on which they address their prayers is holy, and is therefore to be honoured, and only walked on with bare feet, or in any case without shoes.

When the rug is spread out as already mentioned, the observer of these religious duties sits upon the lower portion of the rug in the attitude of prayer, the heels close together, upon which they let the body rest. Then the articles previously referred to are arranged near one another. Taking the comb and the mirror, the beard is combed, to make sure that there are no impurities within, the face being washed for the same reason; then moving towards the top of the rug, stopping at the middle, and taking hold of the rosary and the small cake of earth, the beads are told, and the cake of earth is placed exactly in the centre of the rug, under the arch of the Mosque

Plate XXII

PLATE XXII

ORIENTAL PRAYER RUG

Size 5-10 × 3-10

WARP—12 knots to the inch

WEFT—11 knots to the inch

132 KNOTS TO THE SQUARE INCH

(See Analysis)



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represented in the design. Taking off the neck the purse, containing money, and to which seals are attached, the rings are next drawn from the fingers, and placed near the other articles lying upon the rug. Gold must not be upon the person of the worshipper in any form when offering prayer, as it would make the ceremony null and void ; for this reason the men in Persia never wear gold rings, as, according to their way of thinking, it would be imitating idolaters to do so. All that is worn in the shape of jewellery is in silver ; but, when praying, even this is removed, in order to appear before God in the most abject humility. In the same way, neither sword nor dagger is worn, and soldiers who are unable to remove their arms in order to offer prayer, after assuming the prescribed attitude, hold their weapons in their hands, extending the arms.

It has already been remarked that Persians seldom or never wear seals in their rings, the reason being that such seals generally bear their own names, or the names of saints, or those of ancestors, and they regard it as a profanation to wear anything of the sort when relieving nature, or touching what might be regarded as impure.

Chardin devotes several pages to minute particulars of every small detail of man's observance of these religious rites, for it must be remembered that women are not allowed to join in public prayers at the Mosques, and must offer their devotions either in their own homes or when no men are present. It would be wearisome to pursue this subject ; but it may be mentioned that of the relics referred to, one consisted of a small piece of the pall covering the tomb of Mahomet ; this being renewed each year, the old one is made use of by the faithful for the purpose already described, the relic, of some black cloth, being deposited with the other articles upon the prayer rug. All the observances here recorded having been fulfilled with religious exactness, the offerers of prayers prostrate themselves upon their rugs, and with the face inclined towards Mecca, the feet placed close together, and the arms hanging by the side, prayers are begun.

It may cause surprise that year after year genuine antique Oriental carpets and rugs are offered for sale by the leading carpet houses in this and other countries ; but when it is remembered that carpets almost take the place of shops with the Persian merchant, who in the large bazaars of Ispahan and other cities seat themselves, display their wares, and perhaps hold their title to their position by the space covered by the carpet, and that each father of a family at least has from time immemorial had his prayer rug, the wonder is not so great. I have been informed that two of the largest carpet-

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importing houses in the world have agents in the East, who from the various carpet centres purchase each £40,000 worth of Oriental carpets and rugs annually ; at this rate the supply of the genuine antique will in time be exhausted, and even in recent years the supply of the finer examples has become sufficiently limited to cause a considerable increase in the cost.

Whatever may be said as to the evil results of the Eastern carpet trade having in some directions got into the hands of mere "farmers" of the industry, who use the cheapest materials and aniline dyes of an inferior quality, it can be said, on the other hand, that for whoever wishes to have either a fine reproduction of an antique carpet or rug, or even a fine modern example in design and colouring, and will pay the price, it is quite possible to emulate the precedent of Mr. Robert Bell of the Girdlers' Company, and hand down a specimen of Oriental Art which will make his name famous when an ungrateful public has quite forgotten the particular qualities which should have kept his memory green without any such adventitious aid.

I can only just refer to three interesting and instructive monographs on the state of the modern carpet industry in India. The first is *Carpet-Making in the Punjab, 1905-1906*, by Mr. C. Latimer, who writes from Delhi, November 10, 1906. A frontispiece to this slim paper-covered book illustrates an "Amritsar Carpet Loom," and a double-page coloured plate at the end of the book illustrates a "Dari Loom"; the former being a woollen pile carpet, and the latter a pileless cotton fabric. Mr. Latimer deals with all the processes of weaving, and gives particulars of the materials and dyes used, and many statistics, to which I must refer the reader. For my purpose, the most interesting portion of the monograph is the discussion of evidence as to the introduction of carpet-weaving into India, as to which, although the experts as usual disagree, the balance of evidence seems to confirm the tradition of the credit belonging to the great Mogul Emperor Akbar, who procured weavers from Persia and established them at Lahore. "Carpet-making as an Art Industry in the Punjab" is very fairly discussed, the verdict being that "the Punjab carpet at its best is a creditable production, its materials are good, its dyes are fast, its designs appropriate, and its workmanship such that it will wear for generations. At its worst it is none of these things. But even at its best it is a trade product and not a work of art." We can leave Mr. Latimer here ; any attempt to make further use of the vast amount of information he has gathered together would take up too much

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space, and it would be an injustice to the author to make extracts that might convey a false impression if made use of in any other sense than what it really is, a work for Government information and for the expert.

The second monograph is *Carpet-Weaving in Bengal*, by N. G. Mukerji, Assistant Director of Agriculture, Bengal, and is dated from Calcutta, 1907. The author calls attention to points of manufacture which have intimate bearing upon the quality of the carpets produced. He makes two observations which are well worth the closest consideration by those who wish to give commissions for really fine Oriental work. He opens section 40 with these remarks: "There are now few who will be willing to pay for the cost of a first class carpet like the famous Warangol (Hyderabad) carpet which belongs to Mr. Vincent Robinson, and which was shown in the Indian Section of the South Kensington Museum. This carpet has 400 knots to the square inch, and the patterns on it are so complicated that a change of needle is required for every knot." Section 41 is very significant, and I reproduce it in full: "I saw at Obra a large ($9 \times 4\frac{1}{2}$ cubits) and to all outward appearance a very good carpet which was made for a rich zamindar, on order, out of a pattern supplied by him, and the weavers had used cotton out of old quilts, aniline dyes, and the pressing of the woof and the pile had been done very lightly. I asked the weavers why they had behaved like this, and their reply was they could not do any better when the price was fixed at Rs. 45. They could have done what was right if they were allowed Rs. 100 as price. If Obra weavers get Rs. 8.8 per square yard they can use new raw materials, Indian dyes, and they can press home the pile, with the woof, while weaving."

It cannot be too strongly urged that if reproductions of the fine old Persian designs and colourings are asked for, the conditions upon which they were originally created must be followed as closely as can be arranged nowadays, when weavers willing to weave their whole life into a single carpet are naturally difficult to find. The materials can be procured; but the enormous demand for wool in multitudinous directions has led to sheep-farming on a large scale, and it is impossible to think that thousands and hundreds of thousands of sheep can receive the specialized attention which the small flocks of fine-fleeced bearers of the choicest carpet wools had, when probably every single animal was known by name, and treated with a consideration which its importance deserved. Vegetable dyes can be procured, equal to the best of ancient days; but, the demand for them being limited, they are not so easy to procure at a reasonable

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price as formerly, and moreover, their expert use upon the old lines is a greater difficulty still, with the machine methods now so largely in use. The plain fact is that in the palmy days of hand-work in all classes of Art, with the leisurely study of every minute point tending towards perfection, artistic products were for the few and the wealthy. The very essence of modern manufacturing methods is a large and continuous production. Good work and artistic work can be produced, and is produced ; but it is only in very exceptional cases that opportunity of ample time and unlimited price is offered, permitting close study of details.

It cannot be said that the falling off in artistic quality is all loss : variety and change are part and parcel of modern life, and in the artistic development of a nation the fact that a thousand can now have constantly before their eyes a very presentable reproduction of a fine old masterpiece, which originally was the exclusive delight of an individual, offers compensation for the fact that the necessity for cheap and speedy production has the inevitable result of some loss of permanency, which, as it means constant replacement, cannot be deplored in the interests of the manufacturing classes and masses.

The third and last monograph referred to is by Mr. Henry T. Harris, and is of such importance that some general review of its pages is necessary. Issued from the Government Press, Madras, in 1908, it is the latest publication of its class, and the work has been carried out with a thoroughness which should make it of the greatest use to those practically interested. The title, *Monograph on the Carpet Weaving Industry of Southern India*, sufficiently explains the scope of the book, which I shall only make use of to illustrate and elucidate certain points which require more light than I have been able to throw upon them. The modestly-named "monograph" is really an exhaustive study of all the essential points of carpet manufacture as practised in this twentieth century, in the direction particularly selected ; and in the endeavour to give some idea of its contents, the difficulty has to be faced of being unfair to the author by quoting too freely from his pages, or of being equally remiss in not presenting my readers with facts which they have a right to expect.

An illustrated frontispiece, drawn by Mr. Harris, gives particulars of four different kinds of knots, and is admirably clear as to the method in which this vital part of carpet manufacture is performed.

In the opening section, entitled "Some Notes on the History of Oriental Carpets," Mr. Harris writes : "An ancient Jewish legend tells us that Naameh, the sister of Tubal Cain and the

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daughter of Lamech, invented wool-spinning and cloth-weaving," which goes more than half-way to justify my idea that the origin of the carpet can only be measured by the creation of man. There are quite sufficient references in ancient authors to justify the antiquity of the carpet ; but the time has come to corroborate the various accounts handed down to us, and in this direction the assistance of the archaeologist is indispensable. The author in dealing with the introduction of the art of carpet-weaving into India, which he does in connection with various important centres of carpet manufacture, writes as follows : " Few of the ruling chiefs in South India do anything for the support of an industry, which, in its best days, was almost entirely carried on in the interests of Sovereigns, Princes, nobles, and the rich. There is little doubt that Akbar, 'the Great,' brought the art into North India from Persia, and established in Lahore a factory for the making of carpets for himself and his great oomras and feudatories. And, although carpet-weaving evidently came to South India with poor immigrants from Persia, it is reasonable to suppose that for a long time, at any rate, Princes and nobles were the best patrons of the weavers of the South." The reference to " poor immigrants from Persia " agrees very happily with Chardin's comment upon the decadence following the death of Shah Abbas the Great, when " the people began to pass into India," owing to the diminishing prosperity of Persia, which was very marked at the period when Soliman II. succeeded to the throne in 1666.

Mr. Alfred Chatterton writes on " Carpet Weaving at Ellore," and has something to say as to jail carpets, the manufacture of which presents so many difficulties, and offers so many openings for bitter controversy, that I prefer to evade the subject here. From a purely common-sense point of view, if the sale of the really fine examples produced in such jails as the one at Yerrowda was regulated not by the cheapness of the labour, but upon the basis of the current commercial value of the fabrics produced, the charge of unfair competition would be largely removed. There should be no difficulty in having the prices of jail goods regulated, if not controlled, by recognized experts, both manufacturing and retail, and any possibility of unfairness in the decisions arrived at.

Deeply interesting sections are devoted to " The Wool in the Carpet," and " The Spinning of the Wool." The author opens the first-named section with these significant words : " Unlike most other textile materials, such as cotton and silk, wool is not the product of certain latitudes only, but may be said to be a product of

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all parts of the world. *Few animals adapt themselves so readily to diversities of climate and pasturage as the sheep,* AND FEW ARE MORE SUSCEPTIBLE TO IMPROVEMENTS INDUCED BY THE CARE OF MAN AND SELECTION IN BREEDING.” The italics and capitals are mine, and are worth the concentrated attention of our future Minister of Commerce. In the huge sheep farms in Australia, some of them dealing with millions of sheep, it is obviously impossible for this close personal care and attention being given to the comparatively small number of sheep required for the carpet industry ; but there is nothing to prevent sufficient encouragement being given to the farmers in the British Isles, and in the Colonies if need be, to make it *worth their while* to cater specially for what is really quite a separate and distinct demand from that of the great revenue-producing industries.

“The Spinning of Wool” is obviously of the greatest importance, especially when the evenness of the thread for the finer classes of carpets is considered ; but the first point is its quality, as to which the following remarks are vital : “The worth of any quantity of wool is determined by carefully observing a number of its physical properties, *e.g.* softness, fineness, length of staple, waviness, lustre, strength, elasticity, flexibility, colour, and the facility with which it can be dyed.” All these virtues can be completely discounted by the use of improper soaps and chemicals in the cleaning processes preparatory to dyeing, the aim being to preserve all the fine natural properties of the wool fibres themselves, while eliminating all impurities which would prejudice the full absorption of the dyes, and the assimilation of their clear and essential tones.

In dealing with the “Dyeing of the Wool,” Mr. Harris rightly emphasizes the paramount importance of the process, which he gives historical interest to by going back to the year A.D. 1450, when “one Gehan Gobelin,” of the famous family of Gobelins of tapestry fame, lived in a poor quarter of Paris, but helped to keep up the family repute, which has survived to the present day. “At Beauvais, Aubusson, and the Savonnerie, the dyeing for a long time had a great deal of the character of old Persian carpet colours, and it was only after nearly a century that French taste began seriously to influence the character of the colouring.” At the Gobelins factory each shade is apparently graded into twelve tones, a minuteness of subdivision which may be useful in following the colours of a picture ; but even in tapestry of the legitimate school, let alone carpets of the finest period, such close shading is hardly necessary, when it is remembered that in the ordinary course of wear and exposure to

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light of varying degrees a further breaking up of the original tones is bound to occur. It is surprising what effects of colour can be obtained by making use of not more than from four to six tones of the same shade ; the variety of tones that can be suggested by the *same tone*, placed in juxtaposition to contrasting shades, can only be realized by the close examination of the work of a capable artist and colourist, thoroughly familiar with the effect produced when the pile is cut, and inserted in the fabric, for which the colours have been prepared.

Mr. Harris has naturally a good deal to say as to aniline dyes, and very little good ; yet he admits there are aniline dyes *and* aniline dyes ; and as I have already had occasion to mention, when particular care is exercised in their selection, and the best process of using them is consistently observed, it may be said that for machine-made carpets aniline dyes are the inevitable concomitant of the modern requirement for low prices and speedy delivery. In connection with this subject, Mr. Harris writes : “The alizarine and chromo-alizarine colours are many of them quite as fast as, or faster than the old vegetable ones, but their proper use needs a certain amount of skilled training, the possession of exact scales and weights for getting out very minute quantities, and a certain number of fairly pure European drugs.” This is a very fair summing up of the case for the best class of aniline dyes, of which Mr. Harris goes on to say : “Many of the best of these colours have not been on the market long enough for one to be able to decide whether their ‘ripening,’ or fading, is likely to be in the direction of ‘softening down,’ as is the case with most of the old vegetable colours.”

Mr. Harris devotes twenty pages to dyeing, and gives some seventy recipes, which should be of the greatest value to the manufacturer, and also to the expert. It is not to the purpose of this volume to go practically into such matters ; sufficient has been said to bring home to those unfamiliar with any carpet-manufacturing process that the production of the masterpieces of Oriental Carpet Art has not been the happy accident of climate, locality, and royal patronage, but is due to the infinite art and knowledge of the weaver, steeped in centuries of tradition.

Mr. Harris treats of “Looms, Warping, Weaving, etc.” ; he has a most interesting section devoted to the “Symbolism of the Oriental Carpet,” and another on “The Patterning of the Carpet.” An “Extract from Monograph on the Woollen Fabric Industry of the Madras Presidency,” a “List of Questions, upon the Replies to which some of the Information given in this Monograph is based,”

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“Statistics,” and an “Appendix” conclude the literary portion of his work, which is almost inexhaustible in its interest. It only remains to mention, among the illustrations, a section of a carpet loom ; a page devoted to “Carpet-weaver’s Tools” ; two full pages, with description, illustrating the “Symbolism of the Carpet,” consisting of flower, fruit, and emblematic forms ; characteristic border edgings, and narrow dividing bands ; and lastly, 30 plates of carpet and rug designs.

I have nothing further to say with regard to the main object of this division, but, before concluding, may as well mention that while signs of age naturally accompany even the best preserved genuine antique carpets and rugs, they are copied so skilfully that it is not safe to rely solely upon them. By constant folding, I have seen a really fine example of a sixteenth-century carpet marked by a series of creases, in the hollows of which the surface pile has entirely disappeared ; the same carpet had the worn-out edges bound with silk ribbon ; this is sometimes done by sewing the edge over and over, the colour of the thread used generally being as near as possible to the lost colour. It will be understood that the outside edges of a carpet or rug present the first signs of wear, there being no protection from the effect of the foot treading upon the uneven surface. This binding is easily done to the most modern example, and is an unsafe guide. After continual wear, the surface of a carpet frequently does scant justice to its original design and colouring ; but the back, in which the appearance of the surface colours is shown in uncut pile effect, will sometimes give indications of virtues beneath the accumulated dirt of ages, which surprise the purchaser or owner who entrusts it to a capable cleaning process, in which chemicals should be rigidly excluded. Few desiring to become the possessors of fine pictures, tapestries, historical furniture, first editions of the great authors, china and porcelain, violins, and the hundred and one artistic trifles that tempt the amateur collector, would dream of doing more than risk a chance sale in an auction-room, without the guidance of a recognized expert ; or if they did, regret would be the only result, for choice things seldom get out of their class, and are not lost sight of by those whose life interest it is to know all about them, and to keep in touch with them, however often they change hands. The same wise discretion applied to the Oriental Carpet will save much heart-burning, for the amount of precise information even now available will not prevent disappointment to those who think they can rely upon word descriptions and coloured plates, however well done. Constant familiarity with every phase and characteristic of design and colour-

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ing, and constant actual *handling* of authentic examples, are the only means of arriving at a sure judgment.

The centenary of the birth of Edgar Allan Poe seems to be a suitable occasion to refer to an essay of his, entitled the "Philosophy of Furniture," with which I will conclude this division, not only on account of its general interest, but also because the excerpts selected have some bearing on carpets generally, and on the question of expert judgment.

It will not be forgotten that Poe died in 1849, and that the essay from which the following extracts are selected was probably an early magazine article, some seventy or eighty years ago.

"In the internal decoration, if not in the external architecture of their residences, the English are supreme. The Italians have but little sentiment beyond marbles and colours. In France, *meliora probant deteriora sequuntur*—the people are too much a race of gad-about to maintain those household proprieties of which, indeed, they have a delicate appreciation, or at least the elements of a proper sense. The Chinese and most of the Eastern races have a warm but inappropriate fancy. The Scotch are *poor* decorists. The Dutch have perhaps an indeterminate idea that a curtain is not a cabbage. In Spain they are *all* curtains—a nation of hangmen. The Russians do not furnish. The Hottentots and Kickapoos are very well in their way. The Yankees alone are preposterous.

"Carpets are better understood of late than of ancient days, but we still very frequently err in their patterns and colours. The soul of the apartment is the carpet. From it are deduced not only the hues but the forms of all objects incumbent. A judge at common law may be an ordinary man; a good judge of a carpet *must be* a genius. Yet we have heard discoursing of carpets, with the air '*d'un mouton qui rêve,*' fellows who should not and who could not be entrusted with the management of their own *moustaches*.

"Every one knows that a large floor *may* have a covering of large figures, and that a small one *must* have a covering of small—yet this is not all the knowledge in the world.

"As regards texture, the Saxony is alone admissible. Brussels is the preterpluperfect tense of fashion, and Turkey is taste in its dying agonies.

"Touching pattern—a carpet should *not* be bedizened out like a Riccaree Indian—all red chalk, yellow ochre, and cock's feathers. In brief—distinct grounds, and vivid circular or cycloid figures, *of no meaning*, are here Median laws. The abomination of flowers, or representations of well-known objects of any kind, should not be

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endured within the limits of Christendom. Indeed, whether on carpets, or curtains, or tapestry, or ottoman coverings, all upholstery of this nature should be rigidly Arabesque. As for those antique floor-cloths still occasionally seen in the dwellings of the rabble—cloths of huge, sprawling, and radiating devices, stripe-interspersed, and glorious with all hues, among which no ground is intelligible—these are but the wicked invention of a race of time-servers and money-lovers—children of Baal and worshippers of Mammon—Benthams, who to spare thought and economize fancy, first cruelly invented the Kaleidoscope, and then established joint-stock companies to twirl it by steam.”

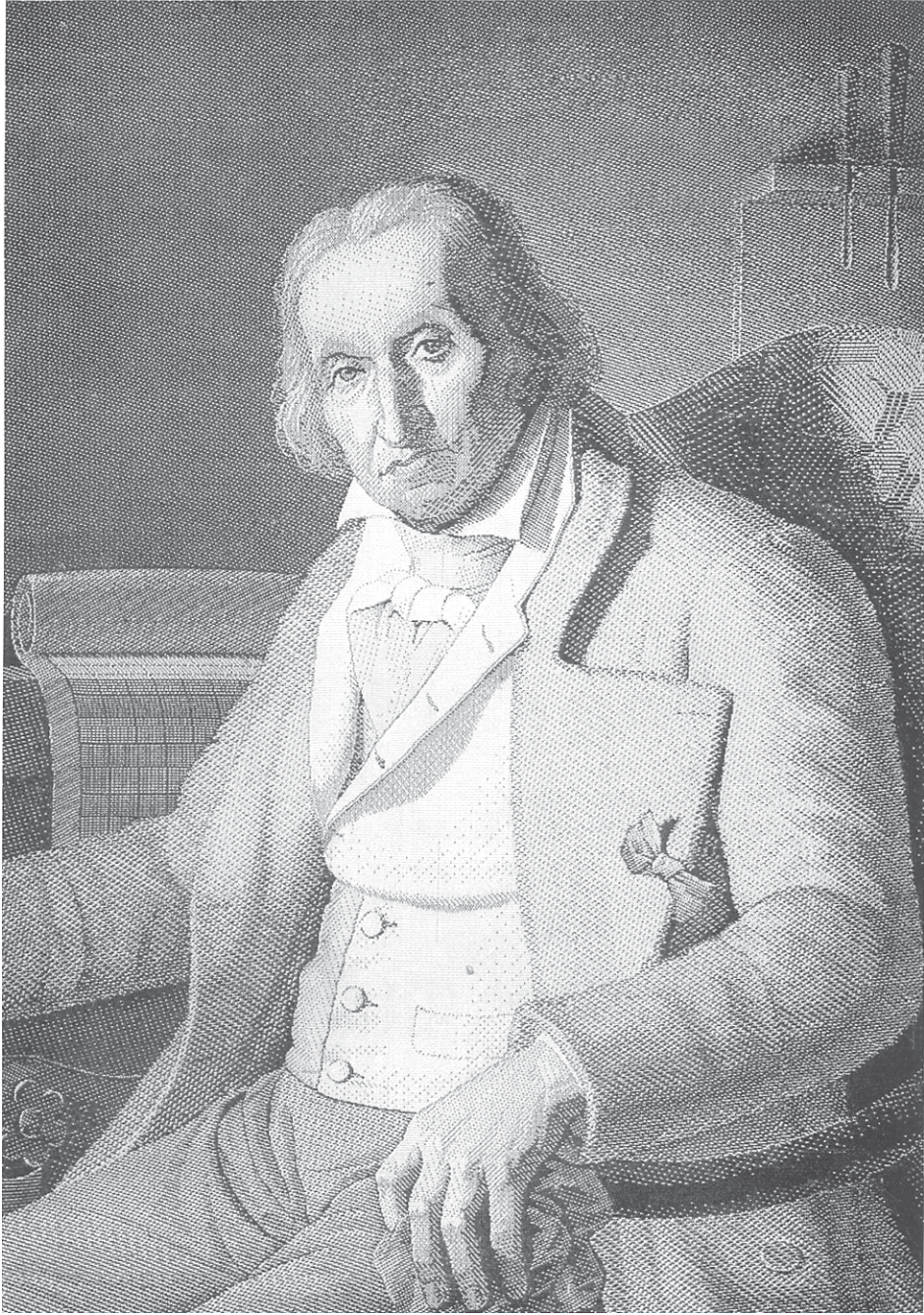
Poe describes all the appointments of an ideal room, which in his judgment should be oblong—“some thirty feet in length and twenty-five in breadth—a shape affording the best (ordinary) opportunities for the adjustment of furniture.” Writing of the curtains and other draperies, which are of an exceedingly rich crimson, with confining thick ropes of gold, he continues: “The colours of the curtains and their fringe—the tints of crimson and gold—appear everywhere in profusion, and determine the *character* of the room. The carpet—of Saxony material—is quite half-an-inch thick, and is of the same crimson ground, relieved simply by the appearance of a gold cord (like that festooning the curtains) slightly relieved above the surface of the *ground*, and thrown upon it in such a manner as to form a succession of short irregular curves—one occasionally overlying the other.”

Readers can form their own conclusions as to how far the effects described accord with modern ideas of furnishing; taste is notoriously an “unknown quantity” in the average, and the ideas of any new school of decoration may at any moment temporarily upset pre-conceived ideas; for instance, the *Art Nouveau*, one of the leading features of the Paris Exhibition of 1900, bids fair eventually to go the way of the Directoire gown. Poe undoubtedly described what might be considered the acme of taste in his time; the essay is interesting and instructive from this point of view.

It is only fair to close his description with opinions as to which little objection on the score of judgment can be urged, except in the matter of the number of the pictures. He writes:

“The walls are prepared with a glossy paper of a silver gray tint, spotted with small Arabesque devices of a fainter hue of the prevalent crimson. Many paintings relieve the expanse of the paper. The tone of each picture is warm, but dark. There are no ‘brilliant effects.’ *Repose* speaks in all.”

JOSEPH MARIE JACQUARD



JOSEPH MARIE JACQUARD

(See Analysis)

CHAPTER IV

JOSEPH MARIE JACQUARD

The old and famous silk industry of Lyons had suffered greatly through the Revolution. Napoleon did all in his power to revive the fashion for Lyons silks. Jacquard invented the loom bearing his name, which executed by purely mechanical means even the most intricate designs in the richest materials.—*The Cambridge Modern History*, vol. ix., 1906, "Napoleon."

In the silk industry, one notable invention was made at Lyons in 1804—the Jacquard-loom for weaving complex patterns without the intricate "harness" and endless labour of the old looms. As an invention it ranks with the greatest of those made in England.—*The Cambridge Modern History*, vol. x., 1907, "The Restoration."

Jacquard (Joseph Marie). Vie. See Grandsard (Antoinette), Madame. Jacquard, sa vie, etc.

— See Du Saussois (A.). Galerie des hommes utiles. 1875, etc. 16mo.

— See Kohl (F.), Professor of Drawing at Plauen. Geschichte der Jacquard-Maschine . . . nebst der Biographie Jacquards. 1873. 4to.—*The British Museum Library Catalogue*, March 11, 1909.

JOSEPH MARIE JACQUARD was born at Lyons on July 7, 1752, and died at Oullins on August 7, 1834. What Johann Gutenberg, Johann Fust, and Peter Schöffer were in printing by means of movable types, so was Joseph Marie Jacquard in his application of the perforated-card principle to the machine which bears his name.

Before dealing with the meagre details of Jacquard's life, I will endeavour to establish his claim to rank with those to whom the world owes a debt of gratitude which the reading of the daily paper should bring to the minds of all, in the same way as the comforts of the home, with its carpet, curtains, furniture coverings, damasked table-linen, and other necessities and luxuries, should gratefully recall the fine old man who by his inventive powers has placed the best examples of the textile arts within the reach of the humblest person with the means to pay the rent of a house.

The great printers of the fifteenth century, by the invention of movable type, displaced the hand-printed and illuminated manuscripts and the old block-books, and in so doing, set rolling upon the world a wave of good and bad literature which from its first

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tiny ripple has steadily and continuously gathered strength, until it has acquired a momentum which may yet overwhelm the earth. Inventive genius may perhaps check this modern Deluge of type by a contrivance which on the lines of "wireless telegraphy," and in the form of a neat pocket instrument, tuned in sympathy with a central bureau of news, will enable its possessor to keep in touch with the "affairs of the day" as easily as he consults his watch to ascertain the time.

Early in the nineteenth century, Joseph Marie Jacquard of Lyons, by adapting the perforated-card system to the machine which he has named for all time, at one stroke of genius converted the labour of days into a mechanical means of reproducing practically unlimited effects of design and colouring, and in saving the cost of hand labour has, while enormously increasing employment all over the world, cheapened the production of artistic fabrics of all grades of material, in a way which can only be compared with the dissemination of literature through the medium of the machine printing-press. The comparison between machine printing and the mechanical production of design and colouring in the weaving process is in one respect largely in favour of Jacquard's invention. To those familiar with the picture of Caxton in his comfortable woollen garments, sitting at ease examining the proof page of (say) *Game and Playe of the Chesse*, surrounded by devoted assistants and apprentices, one of whom is apparently working the hand-press for a further proof, there will seem to be no room for sympathy with those engaged upon a work which was in those days as enjoyable as it was artistic. It was very different in the days when Jacquard relieved children, youths, and men from an occupation which, almost cruel in its laboriousness, first crippled the bodies of those engaged in the weaving industries, and then to a great extent affected their minds.

The comparison drawn between Printing and Jacquard Weaving may seem extravagant to the uninitiated ; but there are many points of resemblance, which I shall endeavour to make clear in the following pages. In the meantime it is interesting to note that the child Joseph Marie, his health having given way under the cruel labour he was compelled to undergo, even when working under his father's eye, was at last apprenticed to a bookbinder. Is it too much to imagine that, with the natural curiosity of an intelligent youngster, after constantly binding the printed sheets, he would avail himself of the opportunity which would be offered of becoming acquainted with the art of printing itself? The ready and simple means of unlimited duplication and multiplication afforded by the types when

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once set might not perhaps impress him at the time ; but later in life, when he seriously took up the problem of utilizing perforated cards to enable his machine to select the coloured threads required row by row to form the pattern, it is extremely likely that his mind would go back to his early experiences, and the arrangement of the printing type, letter by letter, very probably suggested to him the arrangement of the punches, which, punch by punch, have to be placed in the metal frame for the perforation of the cards, which is as important an operation as the compositor's work of setting up a page of type. The comparison here is identical ; for, as the misplacement of a letter causes a fault and necessitates correction, so the misplacement of a single punch equally affects design and colouring, and before the process of weaving can be undertaken the hole wrongly perforated has to be filled in, and a similar perforation made in the proper position. In the two operations of "correcting proofs," it will be seen, the balance of expense and difficulty rests with the Jacquard card process, as before any error can be detected a trial pattern has to be woven of the complete design, at the cost of all the materials. It is a trifling expense for the printer to pull a proof, and the rectifying of any mistake is simple in the extreme, compared with the work of handling a heavy set of cards, filling in the wrong hole, and hand-punching the perforation, which has to be exact, or a further mistake will result.

Considering the bewildering complications of design and colour which the Jacquard machine overcomes in a single process, the actual operation is comparatively simple, and it is only possible to arrive at a full understanding and proper appreciation of the genius of the inventor by closely inspecting the means adopted for selecting the coloured threads in their respective groups, drawing up those required to form the pattern, and leaving the others to fall into the back of the carpet. The fact of Jacquard not having invented the perforated-card system might be supposed to deprive him of some of the merits of his invention ; but this is by no means the case, any more than the invention of modern ships can diminish the credit due to James Watt in realizing and applying the power of steam to the means of locomotion.

The names of the great German printers, Gutenberg, Fust, and Schöffer, have already been mentioned, and it is pleasant to associate with them the Englishman, Watt, and the Frenchman, Jacquard ; and it can be affirmed with some confidence that this small group of men, in their respective spheres of Art and Industry, have done more

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for human civilization and progress than can be claimed with equal reason for any other names in the records of the past. Towards the close of this division we shall see that James Watt and Joseph Marie Jacquard made acquaintance with each other late in life, under circumstances which reflected the highest credit on both, while forming a coincidence which happily illustrates how small the world really is.

It is assumed that the reader has some acquaintance with the steps by which the processes of setting the type from the manuscript, printing the first proofs, arranging the sequence of pages, making the index, and finally printing off and binding the book, are accomplished. The processes of arranging the punches from the coloured design to perforate the cards, the numbering of the cards in proper sequence, sewing the cards together to make a continuous chain round the roller, weaving the first trial pattern, then weaving the goods in bulk, and finally making the "index," or, as it is called, "plant," by means of which the frames are again arranged when the pattern is required for goods again—all these processes are so similar that a close bond of union seems to be formed between the two arts, which from time immemorial have flourished side by side, without apparently knowing it. To pursue the resemblance, the set of stereotyped plates which modern printing makes such large use of has analogy with the sets of cards of different patterns; and both can be stowed away in suitable compartments or cribs, and made use of for infinite republication of the original book or carpet, without any necessity for the first expense involved,—which frequently reduces the profit of the initial production to a negligible quantity.

To describe fully the Jacquard machine would require considerable technical details and diagrams, neither of which enter into the scope of this volume. No textile town of any importance is without the Jacquard system in some form or other, and those with sufficient interest or curiosity can readily gratify their desire for information beyond the very broad description which follows. Taking (for the mere convenience of figures) a carpet the width of which is bounded by 100 courses, or continuous lengths of coloured worsted threads, it is to be understood that each of these courses contains five distinct coloured threads, which, it is to be noted, are of the same colour throughout their entire length. It will be seen that these rows of threads, from edge to edge of the carpet, consist of 500 threads, 100 of which appear on the surface, *selected by the Jacquard machine*, and the other 400 fall into the back of the carpet, giving it strength and bind.

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It is the greatest defect and the greatest merit of the Jacquard process of weaving that the colour effect is limited (for economical reasons only) to a normal five colours in each course, owing to the fact that only one out of the five can be drawn to the surface ; the remaining four colours go to form the back, and, alternately rising and falling as selected for the pattern, interweave one with another, and result in a fabric which has most of the merits attached to the finest of the Oriental carpets. It is necessary to mention that if required 100 different colours could be arranged and drawn up in the *width* of the carpet. In the *length* the colour effect is restricted by the fact that only one "cord" or knot of colour can appear at a time ; but the full five colours in each of the 100 courses can be drawn up row by row, in alternate colour effect, or in repetition of the same colour, according to the design. It will be seen that, if the nature of the pattern would permit, the whole 500 colours could be made to appear within a space of 100 courses, or the width of the carpet, by five rows of "cords" (equivalent to knots), representing a length, which of course depends upon the fineness or coarseness of the fabric.

It is impossible (for the reasons stated) to convey a full explanation of the means by which the Jacquard machine selects the threads required to form the pattern ; but it may be mentioned that each of the 500 threads is attached to a suspended piece of whipcord. Operated by the Jacquard, a lifting board raises the 100 threads forming one row in the full width of the carpet, under which a wire is passed, which remains in position while the shuttle containing the weft is passed backward and forwards, which binds the 400 worsted threads to the warp, these threads and the warp itself forming the foundation upon which the pattern or 100 surface threads hold up their heads, and like the lines of type in the pages of a book, by reason of arranged repetition, at last afford to the eye and mind the intention of the artist who designed the work.

It may be desirable here to explain that the wire above referred to, which is passed under the threads required for the pattern, which are drawn up by the Jacquard machine, is a plain wire leaving a rounded loop of worsted for Brussels fabrics ; and that for all classes of velvets made by the same process, a keen knife blade at the end of the wire cuts the whole series of loops forming the full width of the carpet, when withdrawn, thus creating the velvet surface or "pile" characteristic of the Wilton and Saxony fabrics. A high pile, or row of uncut loops in a Brussels carpet, is not desirable : it offers too much temptation to projecting tags in boots, and the claws of dogs and cats. In velvet pile carpets, the height of the pile

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is regulated by the depth of the wire ; and the cut pile is firmly kept in position by the weft being passed twice between each row of tufts, instead of once as in Brussels.

When it is mentioned that, the cards having been once perforated, or stamped, according to the coloured design, the Jacquard machine by one operation selects from the 500 threads the 100 required to form each complete row of loops, or pile tufts—whilst under the old hand-loom system each group of threads had to be selected and drawn up by hand—the importance of the Jacquard system will be realized, and the genius of the inventor better understood.

To prevent the use of two different terms for the same thing—such as “course,” or continuous lengths of worsted ; or “pile,” which refers to both the uncut loop of the Brussels fabrics and the cut loops of the Velvet fabrics—a brief explanation of terms is necessary. It is well to note that the terms vary in each centre of the Jacquard carpet industry, and this fact is likely to cause confusion, unless the circumstances in each district are well understood. My information is derived from a town of some importance, which in the old coaching days ranked high as a posting centre ; it is natural, therefore, that the terms in use in the staple industry of the town should have a significance of interest to the philologist.

Broadly speaking, in the old hand-loom weaving the *harness* consisted of the “lash cords” to which the coloured threads were attached in the same way as they are at present. These lash cords were attached to what were called “long cords,” for the simple reason of their greater length, which will be understood later. A kind of inverted saddle was fixed upon the top of the loom, in much the same position as the Jacquard machine in the present-day loom ; the left side of this wooden-framed “saddle” was filled with wheels, over which the long cords passed in direct connection from the lash cords. The ends of the long cords, passing over the space between the two arms of the saddle, were fixed to the right arm, which was of open framework. *Draw cords* attached to the portions of the long cords between the two arms referred to depended straight to the ground at the right hand of the loom, and were fixed to a wooden bar, level with the ground. It will be understood that when these draw cords were pulled down they operated first the long cords, and then the lash cords, which drew up the coloured worsted threads under which either a plain wire or a knife wire was placed by hand, and withdrawn by hand, forming respectively the Brussels and the Wilton or Saxony cut pile. Each lash cord had its metal eye (attached to the cord and lingoe by twisted brass wire) at a suitable level,

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through which the worsted threads were passed ; and each lash cord was kept taut by means of a “lingoe” or long narrow iron weight, about the thickness of an ordinary lead pencil, and nearly twice as long.

The bobbins of coloured worsted were placed in frames as at present, the number of frames of worsted also denoting the frameage of the carpet. The frames were divided into separate compartments—one for each bobbin of coloured worsted, a round wooden peg passing through the familiar hole in the bobbin, resting upon a slot cut in the frame, which permitted the worsted to be unwound freely from the bobbin. Each thread of worsted had a leaden bullet attached to it, which hung down on the slack of the worsted, immediately beneath each compartment. This bullet kept the worsted threads taut, and firm over the wires.

It remains to mention that the draw cords were grouped together according to the nature of the design, and were attached by short cords to four guide cords, at right angles to the draw cords, and at about a foot's distance. The short cords enabled the draw boy to grasp the draw cords regulating the design with precision, and to raise them lash by lash until the whole of the pattern had been produced. This operation was repeated by hand as described, until the fabric had been woven the required length, the same result now being arrived at by the continuous chain of cards passing round and round the Jacquard cylinder, and in its repeated revolutions forming both design and colouring, lash by lash.

In the days of this complication, the designs were of short length, and frequently of a geometrical pattern, the former being of economical advantage to the manufacturer, and the latter easier for the draw boy to raise the lashes, the “turn over” of the design in the width permitting each long cord to be attached to two lash cords, which nearly halved the consequent labour in raising the lash.

The *harness* of the hand-loom was therefore the whole series of lash and draw cords, and in fact the whole apparatus connected with the formation of the pile of the carpet, and consequently the first essential towards forming the pattern, which embraces both design and colouring. The weight of this harness was enormous ; and in the same way as it was required, and was of the utmost importance in connection with the bulky and heavy four-horse coaches of past days, so the harness of the old hand-loom had a complication and bulkiness which required heavy framework to support it, while as a prime necessity of the woven fabric running its “course,” the harness was as needful for the loom as the harness for the coach.

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The term "course" has been applied to the continuous lengths of coloured threads running throughout the entire length of the carpet, in parallel lines, those required for the pile being drawn to the surface, and the remainder falling into the back, and mixing with the linen and cotton threads forming the back of the carpet. These coloured worsted threads are all embraced in the term "warp," the full significance of which, however, is applied to the linen or cotton threads which form the back exclusively, and do not appear on the surface, and are literally warped or "wrapped" upon a huge beam or "bobbin," as it is in shape; this beam being firmly fixed at the back of the loom, and unwound in the hand-loom days by hand, and nowadays automatically by machinery.

In again recalling the coaching days, the whole breadth of the long length of woven fabric, gradually lengthening under the weaver's hands, can be picturesquely likened to the broad open roads unfolding themselves to the four-in-hand coachman on his long journeys in Old England.

It remains to speak of the term "lash," which has a particular and practical significance. It has been mentioned that the coloured worsted threads are attached to the lash cords, and it must be remembered that in the 100 courses of five threads each, 500 lashes would be required to make a five-frame carpet. No mention has yet been made of the "gears," frames upon which brass wires holding eyelet holes are fixed, half-way between the top and bottom bars. The linen or cotton threads forming the warp are passed through these eyelet holes, and in the hand-loom days alternately rose and fell by means of foot-treadles, dividing the warp to enable the weft to bind the fabric. The same process is now done by machinery. It will be understood that, being required to support the weight of the lingoe, and to withstand the continual rise and fall of the lifting board drawing up the surface or pile threads—and a second and lower lifting board drawing up the remaining threads to a level to allow of the warp threads to combine with them, thus forming a solid and substantial back—the lash cords had to be of the firmest and toughest string available, and such as would not stretch, or suffer from damp. The whip-lash of the long four-in-hand whips naturally attracted the attention of those to whom the constant renewal of the cordage, and the consequent delay, would be of consequence; so the tough "cracking lash" of the old coach whip was adopted, and is used to the present day.

Thus the simple terms, harness, course, and lash, have their special significance. The two former have been explained. The

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lash represents the whole row of loops or velvet pile threads forming the entire width of the carpet, which, repeated row by row, in the first instance comprise the whole design, and, in again repeating the design, form the whole length, or woven course of the carpet.

The Jacquard machine was patented in France on December 23, 1801, and, the invention being appropriated by an English inventor, Francis Lambert, "for a new method of producing the figure in weaving gold and silver lace, etc.," appeared in the English patent list in 1820. The complications and laboriousness of the old hand-loom process were at once removed; but it must not be forgotten that, until the application of steam power in 1851, the Jacquard apparatus was worked at first by hand, and then by a foot-treadle.

Truth to say, the displacement of the old-fashioned hand-made Brussels and Velvets of the old coaching days, removed some of the quaint characteristics of hand work, such as the firm but irregular surface, the solid and strongly-knitted back, and (of greater interest still) the small geometrical patterns which in colour effects were confined to cochineal red, indigo blue, madder yellow, a composite green, and a sulphur-bleached white, which in strong tones had the excellent lasting qualities of the old Oriental dyes. The extremely picturesque, smartly-turned-out coach, with its four horses, and coachman, groom, and postilion, gave way to the steam locomotive; and who will gainsay that in some respects the country lost thereby? In precisely the same degree, even the introduction of the Jacquard machine gradually swept away not only the old cumbersome and lengthy processes, but also a large body of men who could not accustom themselves in their later years to the activity of brain and body required by the more advanced methods. This transition from hand-weaving to first the use of the Jacquard apparatus on the hand-loom, and then to the steam-power loom, had a result somewhat similar to that of the displacement of the hand-printed and illuminated manuscripts in the fifteenth century. Charles Reade in his master-work, *The Cloister and the Hearth*, suggests the results of the change so clearly, that I reproduce in full his account, in which it is to be understood that the Gerard of the novel is on his way to the palace of the Cesarini, to paint the portrait of Princess Claelia.

Gerard, hurrying along to this interview, was suddenly arrested, and rooted to earth at a shop window.

His quick eye had discerned in that window a copy of Lactantius lying open.

"That is fairly writ, anyway," thought he.

He eyed it a moment more with all his eyes.

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It was not written at all. It was printed.

Gerard groaned.

“I am sped ; mine enemy is at the door. The press is in Rome.”

He went into the shop, and affecting nonchalance, inquired how long the printing-press had been in Rome. The man said he believed there was no such thing in the city.

“Oh, the Lactantius ; that was printed on the top of the Apennines.”

“What, did the printing-press fall down there out o’ the moon ?”

“Nay, messer,” said the trader, laughing ; “it shot up there out of Germany. See the title-page !”

Gerard took the Lactantius eagerly, and saw the following :—

OPERA ET IMPENSIS SWEYNHEIM ET PANNARTZ
ALUMNORUM JOANNIS FUST.
IMPRESSUM SUBIACIS. A.D. 1465.

“Will ye buy, messer ? See how fair and even be the letters. Few are left can write like that ; and scarce a quarter of the price.”

“I would fain have it,” said Gerard sadly, “but my heart will not let me. Know that I am a caligraph, and these disciples of Fust run after me round the world a-taking the bread out of my mouth. But I wish them no ill. Heaven forbid !” And he hurried from the shop.

“Dear Margaret,” said he to himself, “we must lose no time ; we must make our hay while shines the sun. One month more and an avalanche of printer’s type shall roll down on Rome from those Apennines, and lay us waste that writers be.”

And he almost ran to the Princess Claelia.

The artistic and broad-minded Gerard, reputed father of Erasmus, recognized the benefits humanity at large would eventually reap from the invention of printing ; but it was not so with Jacquard’s fellow-citizens, as will be seen later ; in the meantime, this lengthy extract from one of the finest novels ever written will fittingly prelude the comparison between the art of printing and the art of weaving by means of the Jacquard machine, which, it is necessary to impress upon readers, is quite distinct from the loom itself.

I have already claimed for plaiting and weaving an earlier origin than can be reasonably urged for printing, holding that human desire for occupation of some sort, and the mere animal desire for comfort, ruled before any necessity arose for intercommunication, for which speech at first would amply suffice. It is fortunate that the necessity to make permanent records of facts and incidents of more than ordinary importance led to the use of materials which from their nature have come down to us to provide sufficiently distinct records to enable the learned in such matters to arrive at deductions, upon the basis of comparison, which may be taken as a near approach to approximate facts.

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Innumerable writings upon leaves, bark, linen, clay, and pottery, wall-spaces, lead, bronze, wood, waxen and other tablets, papyrus, skins, parchment and vellum, and paper, already exist, and it may almost be said are yearly being discovered under circumstances which go to show that much still awaits the archaeologist. If all these records exist, why not similar evidences of carpets and other textiles? The answer is simple. In the first place, textiles of great antiquity have been discovered. As to how far these may have served as carpets is an open question; but the severer wear to which the carpet would from the first be subjected would naturally decrease its life in the first instance, and at the death of the owner certainly prevent its being numbered amongst his penates, and buried with him to accompany his departed spirit to the realms above. The fugitive nature of all textiles is sufficient to preclude the possibility of their preservation beyond a thousand years—that is to say, anything in the nature of a carpet—and any claims beyond this period for an actual example will demand the closest examination.

But it may be said, If records have survived of the written word, why not at least of the designs for woven fabrics? Here again the reply is sufficiently obvious. Thoughts and speech are lost if not recorded, and lost for ever; this fact alone would cause the earliest scribe to select the most permanent material known to him, for it may be regarded as a fact beyond the criticism of science that the first individual of any sex who blossomed out into “print” was fully impressed with the fact that no safeguard too great could be adopted to secure the transmission of the inspirations to the remotest posterity. Thus there is no lack of evidence as to the early practice of some form of recording thoughts and speech.

It will readily be understood that, as the earliest form of carpet was a practical record in itself, no necessity existed for any further record, especially as by constant repetition the very simple early designs would soon be memorized. When the carpet designs were of sufficient importance to require a guide to the weaving, it is very probable that the copy would be simply drawn upon the ground near by the weaver, or prepared beforehand upon a smooth sanded space, the design being traced with finger, stick, or stylus. In my judgment, the earliest designs were so traced, and also the earliest records of communication.

The sand records naturally suggest the Roman wax tablets, in which the previous impression of the stylus on the soft wax can be obliterated time after time, thus making the means adopted

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permanent. There is no end to these suggestions as to the similarity of the means by which carpet and other textile records *might* have been handed down, as printing has been.

But what has all this to do with Joseph Marie Jacquard? It is not too much to say that Jacquard, even in his own country, has been shamefully neglected, and the fact is a distinct reflection upon the carpet at large, for even the priceless Oriental carpets and rugs only received suitable recognition at the time of the great Vienna Carpet Exhibition of 1891, although an eminent Frenchman, M. Goupil, had collected some fine specimens, and Mr. Vincent Robinson also evidently felt sure of sufficient appreciation to publish his book in 1882. Notwithstanding this, justice has still to be done to the practical creator of the modern carpet industry, and in attempting to draw some analogy between the modest art of carpet-weaving and the potent if sometimes blatant art of printing, the latter in its strength may perhaps see its way to further cementing the *entente cordiale* by recognizing the merits of a Frenchman whose invention, in the eyes of the Syndics of the University of Cambridge, ranks with the great inventions of William Lee, Richard Arkwright, Edmund Cartwright, Samuel Crompton, and James Watt.

For convenience of reference, and as a more direct contrast, I have placed the coincidences between Printing and Jacquard Carpet-weaving in parallel columns. My information as to palaeography, already made use of, is derived from the late Mr. Bernard Quaritch's *Palaeography* and Sir Edmund Maunde Thompson's *Handbook of Greek and Latin Palaeography*. As Mr. Quaritch's work, which reproduces some exquisitely coloured pages from illuminated manuscripts, was issued privately for personal friends, I have thought it desirable to make use of the modestly-named work of Sir E. M. Thompson, which, in its third edition, under date 1906, should be in the hands of all, as dealing with an art which can almost be taken as the "measure of all things," as its data can be also best authenticated.

For reasons already given, it is difficult to select an example of Oriental carpet-weaving whose date will compare with the earliest illuminated manuscripts, which naturally lead up to the periods in which first the book blocks and movable types of the hand-press, then the introduction of the machine-press, and finally the steam printing-press, made the older methods a thing of the dim past, in the same way that the Jacquard machine, applied to the hand-loom and at last to the steam-power loom, left the practice of hand-weaving to the Orientals and the Savonnerie weavers of the Gobelins factory, the manufacturers of hand-made Axminster in this country,

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the small body of weavers in London, and some of the carpet-manufacturing towns which still make the old-fashioned "finger-rug," said to have been introduced from China—and indeed the heavy firm fabric produced from the primitive loom bears resemblance to the heavy Chinese rugs I have seen.

The *Gazette des Beaux-Arts*, March 1, 1896, contains an interesting notice of an illustrated monograph by the famous carpet expert, Dr. Alois Riegl, entitled *Ein orientalischer Teppich vom Jahre 1202 n. Chr., und die aeltesten orientalischen Teppiche*. Berlin, G. Siemens, 1895; grand in 4to. It appears from an article by Professor Josef Strzygowski (translated by Mr. L. I. Armstrong), in the 1908 October number of *The Burlington Magazine*, that this claim for antiquity could not stand the test of critical examination; so this example must be passed by. In *A History of Oriental Carpets before 1800*, by Dr. F. R. Martin, recently issued from the Imperial Press, Vienna, the author claims to have in his possession a carpet made under the Mongol dynasty, to which he assigns the date A.D. 1250. As Dr. Martin is likely to have taken particular care to test the pedigree of this example, with the experience of Dr. Riegl in his mind, I shall accept the date A.D. 1250 as established, and am only too pleased to take an example associated with the invasion of India in 1219 by the famous Tartar conqueror, Genghis Khan, rather than the Armenian example put forward by Dr. Riegl. Dr. Martin's carpet shows Chinese influence, which may perhaps be accounted for by the fact that from 1206 to 1227, when he died, Genghis Khan, in addition to his invasion of India, obtained empire over China, Persia, and all Central Asia, and it is reasonable to suppose that the vast hordes of slaves and mercenaries which he would add to his following from the conquered countries would carry their influences wherever he penetrated in his progress.

As, with the sole exception of the Ardebil Carpet, dated 1539, and the Girdlers' Company Carpet, which although bearing no date, ranks next in importance from the record of its presentation in 1634, the dated records of manuscripts and printing (printing particularly) have a definiteness which cannot at present be claimed for carpets, I have in the following table given the place of honour to Printing, which must not, however, be taken as in any degree implying the yielding of one iota of the precedence due to the father of all the arts, the Carpet.

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COMPARATIVE TABLE OF PRINTING AND CARPET-WEAVING

HAND-PRINTED AND ILLUMINATED MANUSCRIPTS	HAND-WOVEN, DESIGNED, AND COLOURED CARPETS
<i>a</i> Coloured reproduction from the Suabian Breviary, written at Ottenbeuren about 1160.	<i>a</i> Guild of Carpet-Makers existed in France under Philippe II., surnamed Auguste, 1180-1223.
<i>b</i> Coloured reproduction from a Latin Bible, written probably in England about 1290-1300. "The thirteenth century was the first and finest period of medieval 'Gothic,' so far as handwriting is concerned."—QUARITCH.	<i>b</i> Dr. Martin's Mogul Carpet, showing Chinese influence, and with the assigned date, 1250. The Ardebil Carpet, dated 1539, shows such perfection of design, colouring, and texture as to imply at least three centuries of previous proficiency.
<i>c</i> Printed letter by letter, from left to right, line by line.	<i>c</i> Woven knot by knot, from left to right, row by row.
<i>d</i> Designed and coloured by hand; frequent mixing of colours gives variety of effect, even in the same colours, throughout the illuminations; the same variety observable in the designs, which are of infinite diversity, and never repeated exactly.	<i>d</i> Designed and coloured by hand; frequent re-dyeing of colours gives variety of effect, even in the same shades, throughout the carpet; the same variety observable in the forms, which change constantly in both design and colour, and are never repeated exactly.
<i>e</i> Manuscript composed of successive lines of writing, generally from top to bottom of the page, but in some ancient writings from bottom to top.	<i>e</i> Carpet woven in successive rows of knots, commencing from the bottom of the carpet, and finishing at the top. The Ardebil Carpet an interesting example.
<i>f</i> Continual care and judgment required in preserving uniformity of size and style of writing; in appropriately arranging spaces for the illuminations; and in avoiding errors which are not easily rectified, and prejudice the finished result. The hand-printer and illuminator not bound by any conventions of style, design, or colouring beyond uniformity of spacing.	<i>f</i> Continual care and judgment required in design and colouring to avoid incongruities; and in arranging the design so as to avoid empty and unmeaning spaces. Weaving infinitely more difficult than hand-printing and illumination, owing to the exigencies of the fabric, and having to work upon conventional lines. An error necessitates untying the knots.
<i>g</i> Writing and illumination done upon vellum, parchment, or paper, all easily procured, and prepared for use.	<i>g</i> Carpets woven of wool, or silk, requiring some cleaning process, and spinning into suitable threads before dyeing.
<i>h</i> Design and colouring perhaps generally decided upon before illumination began, especially when, as often happened, the book was a commission from some person who would give indications of the style required. In the execution of Missals and other liturgical books the style and colour-	<i>h</i> The traditions of certain styles of design and colouring handed down through individuals, and even districts, and reproduced from memory. New designs of any complication would certainly be prepared beforehand; the Ardebil Carpet, and many others of the same class, undoubtedly ordered

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ing sufficiently conventional to be evolved as the work proceeded. It is worth remembering that, with sufficient facility, it would be easier and quicker to originate ordinary detail than to follow a copy.

i Gold and silver freely used in illumination and easily applied. The burnishing of the gold, and its use in both bold effects and in touching up, characteristic of the art, and the brilliancy so given probably resulted in the term "illumination."

j Finished result unique, in the sense of absence of repetition in design and colouring in the book itself, and the practical impossibility of exact duplication, even by the same artist, and especially when copied by others; variations in handwriting alone being sufficient to prevent absolute reproduction.

The great masters of painting practised the art of the miniaturist; and the art of the illuminator was a distinct art only as far as the writing was concerned.

for the special purpose, and perhaps designed by the Court artist. In conventional work the weaver would find it easier to originate than to be bound down to copy, which the Oriental mind artistically objects to.

i Gold and silver thread freely used in the finer silk carpets, perhaps suggested by the illuminated manuscripts, or vice versa. The finely-drawn metal threads, wound upon a silk thread, used in much the same way as in book illumination.

j Finished result unique, in the sense of absence of repetition in design and colouring, in the carpet itself, and the practical impossibility of exact duplication even by the same weaver, and especially when copied by others; variations in knotting, materials, and dyeing preventing absolute reproduction.

Carpet-weaving quite a distinct art, and it is not known that any artist of note provided designs, or gave aid in any direction.

PRINTING FROM WOOD-BLOCKS BY HAND-RUBBING AND BY HAND-PRESS

k Block-printing is said to have been invented by the Chinese about A.D. 593.

l Earliest known book illustration cut on wood printed in 1331. Earliest dated wood-block picture 1423. Assigned dates for the earliest block-books from about 1450 or 1460.

m Process rude but effective; has some similarity to Caxton's early efforts with movable types.

n Early block-books printed only on one side of the leaf, the impression being taken by rubbing, with a dabber or burnisher, the back of a sheet of paper laid on the thinly-inked wood-block. The later ones were printed in a press on both sides of the paper.

WEAVING BY HAND-LOOM, AND THE OLD FINGER-RUG PROCESS

k The old English Finger-rug weaving process said to have been derived from the Chinese.

l Carpet manufacture introduced into England by William Sheldon under the patronage of King Henry VIII., 1509-1547. Probably the Finger-rug process also.

m Process rude but effective, and fabric very durable. Distinct resemblance between Chinese carpets and English Finger-rugs.

n The coloured surface yarns in the Finger-rug process do not show through the back, whereas in Oriental carpets the design and colour is as clear on the back as on the front, giving almost the effect of the Brussels and Wilton piles. No record of Sheldon's other carpet processes.

Oriental Carpets

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| <p>o No great variety of text or illustrations possible—owing to nature of process, which was slower and more laborious than hand-work, and hampered by the material worked in. Special advantage of the process consisted in the fact that, once cut, the reduplication of copies was simple, and even more convenient than movable types, when the latter were once distributed.</p> | <p>o No great variety of design and colouring probable, the process of weaving being very simple, but still a skilled one. Finger-rug fabric coarse in texture, offering limited scope for reproducing anything but the simplest forms. Loom itself and implements required of the simplest; the elaborate “harness” of the Brussels and Wilton hand-loom being dispensed with.</p> |
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PRINTING FROM MOVABLE TYPES AND BY HAND-PRESS

WEAVING BY HAND-LOOM, WITHOUT, AND WITH HARNESS

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| <p>p Printing from movable types probably practised by the Chinese in the twelfth or thirteenth century. The invention in Europe, variously attributed to Johann Gutenberg, Johann Fust, and Peter Schöffer. First printed documents, two Indulgences, issued from Mainz in the autumn of 1454. The Mazarin Bible printed before August 1456, on vellum; and the splendid Mainz Psalter, also printed on vellum, and in three colours, black, red, and blue, dated 1459. Caxton's Press set up in Westminster, 1477, from which he issued nearly eighty distinct books, printed from six different founts of type. The first real newspaper published in England, 1663.</p> <p>q The earliest known representation of a printing-press is on the title-page of Hegeppus, printed at Paris, 1511. At this time it resembled an ancient wine-press. A flat board, called a platen, is raised vertically up and down, by means of a screw, in much the same way as the letter-copying press now in use. A piece of paper placed between this platen and the forme of type immediately below received the impression, the requisite pressure being regulated by the screw to a nicety. This simple but effective process was gradually improved, until the hand-press arrived at its greatest perfection towards the close of the seventeenth century.</p> <p>r The earliest inventors of “printing” machines coupled together the two arts of printing on paper and on calico</p> | <p>p A photograph in the author's possession represents a bordered carpet of a simple conventional flower and leaf design. A plain diamond-shaped panel in the centre of the carpet is occupied by the Royal Arms, enclosed within a garter, and supported by a lion and another figure, which, having been apparently woven in a negative tint, has not come out in the print. The crown surmounting the arms has on the left side the initial E., and on the right, R.; and immediately above both, the date, 1570. The motto DIEU ET MON DROIT is placed in the lower portion of the panel, which is in plain relief upon the figured ground.</p> <p>q The earliest representation of a loom in this country dates from the thirteenth century, and is to be found in the MS. of the <i>Alexander Romance</i>, in the library of Trinity College, Cambridge; two pictures in this MS. respectively depict “A Loom” and “Folding the Woven Fabric.” An engraved plate by Hogarth, produced 1747, and entitled “Industry and Idleness,” represents Weaving at Spitalfields, and is extremely interesting in showing, with the artist's usual minuteness of detail, the hand-loom before the use of the complicated “harness.” This loom may be an improvement of the Dutch loom, introduced into London from Holland about 1676.</p> <p>r The Wilton hand-loom introduced from France in 1745, and the Brussels loom, derived from Belgium, and first</p> |
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Joseph Marie Jacquard

and other textile fabrics. Adkin and Walker in 1772 patented a machine which was the type of a modern rotary letterpress machine. It was for "stamping and printing" on paper, cotton, and other cloths, "whereby the printing on such materials would be greatly facilitated and rendered much less expensive, and more perfect and exact."

- s The process of setting up a page of type is more closely followed when comparing it with the Jacquard system of weaving; suffice to say here that the various operations result in the printing of first a page, and then the series of pages of literary matter comprised in the complete book. The comparative simplicity of the printing machine at this period must have been in marked contrast to the multiplicity of cords required to produce the design and colouring by harness, the subsequent displacement of which was the triumph of the Jacquard machine.
- t The various operations of inking the rollers, feeding the paper, and receiving the printed sheet presumably done by hand in the earlier printing machines.
- u William Nicholson of London in 1790 took out a patent which foreshadowed nearly every fundamental improvement even in the most advanced machines of the present day. Nicholson never actually constructed a machine, and so cannot be awarded the honour of being the inventor of the printing-machine. The distinction of first actually making a printing-machine was reserved for a German printer, Frederick König, who, coming to London in 1806, took out his first patent; improving upon this, probably after becoming acquainted with Nicholson's ideas, König abandoned his early project for accelerating flat printing, and in 1811 took out a patent for a single-cylinder machine. Mr. John Walter of *The Times* was so impressed with the possibilities opened
- built in England in 1749, were both probably provided with the "harness," which, operated by hand, drew up the coloured worsted threads forming the design and colouring. An illustration of a "Ribbon Weaver at his Loom," published in *The Universal Magazine*, 1747, gives a good idea of a system of harness corresponding with that used on a carpet-loom.
- s The process of "reading in" the pattern was the most exacting and laborious feature of the harness hand-loom. The 1300 coloured threads, divided into five frames of 260 colours each, were passed through separate eyelet holes in the lash cords; to these cords were attached long cords, passing over the inverted saddle at the top of the loom, upon pulley wheels to ease the friction. The colours required to form each complete row of threads were drawn up by hand, row by row, until the full design was produced, and this operation, repeated, at last resulted in a piece of goods of the required length.
- t The dividing of the warp worked by foot-treadles; the shuttle containing the weft passed across by hand; the plain and knife wires forming the Brussels and Wilton piles inserted and drawn out by hand.
- u M. Bonchon in 1725 invented the application of perforated paper for working the draw-loom; and in 1728 M. Falcon substituted a chain of cards, turning on a cylinder, to effect the same result, both inventions thus foreshadowing Jacquard's practical application of the combined principles. Jacques de Vaucanson in 1745, making use of M. Falcon's invention, advanced the principle of automatically producing both design and colouring at one operation, without the use of the complicated draw-cords. In 1790 Joseph Marie Jacquard first turned his attention to the machine bearing his name; probably in 1799 discovered Vaucanson's discarded machine in the Conservatoire of Arts and Industries, Paris; adopted its principles, and on December 23, 1801, took out his