

For the Scientific American.

**The Carpet Manufacture.**  
(Concluded from our last)

In order to preserve as much as possible the form and regularity of the several coils made by each thread and set of threads, around the cylinder, after they are taken therefrom, and during the process of washing and steaming them, it is proper to pass a small cord of worsted amongst the convolutions, under and over them alternately, tying its ends together. This interlacing of a cord across the several coils may be applied at two different places of each set of coils, before they are taken off from the cylinder, and it will facilitate the winding afterwards upon bobbins, as it will preserve the threads from entanglement.

The warp being thus composed of party-colored yarns, suitably variegated with colors and arranged in suitable order in the warp, according to the intended pattern, the weaving is to be conducted in the usual manner of what is called *plain weaving*, and will produce a fabric with a figured pattern in colors *without any of the troublesome manipulations which are necessary for what is called figure weaving.*

According to the ordinary mode of weaving Turkey carpets, the weavers must have in use as many different skeins or clews of different colors as the variegation in his pattern requires, and must select first a skein or clew of one color, and then another, with discretion to suit his pattern; he will, according to this improved mode of Mr. Whytock's require to use only *one* skein or clew of yarn, which, being rendered party colored in due order of succession of colors, will furnish all the variation of coloring necessary for forming the successive tufts which he will require in his work, and following each other in due order as they will be wanted. And as he works up the skein or clew of party-colored yarn by putting in tuft after tuft, and cutting off the yarn each time, those successive tufts will change their color according to the intended order of succession of colors which the pattern requires, without any trouble of selecting colors and changing skeins with *perpetual* reference to the pattern, as heretofore, but only occasional references thereto, and without the same liability to mistake in so selecting, and the waste of colored yarn which is occasioned by such mistakes: and also, the number of ends remaining from the number of skeins which must be used, will be much diminished by rendering the yarns party-colored. By this mode of party-coloring the yarns, the joinings of the patches of color which were applied successively, will indicate the exact place where the yarn is to be cut off as the tufts are introduced, whereby waste of material in cutting off too long may be avoided, as well as imperfections in the face of the work by cutting off too short. [Note.—A saving of coloring material may be made in rendering the threads for Turkey carpets party-colored, by omitting to apply any color to those parts of the yarns which are afterwards to be looped or knotted around the threads of the warp, and which parts will therefore only appear at the back of the fabric, and will consequently require no color; these omissions can be easily made in their proper places along the party-colored threads, by setting out the pattern so that those parts of the threads will be known when they are wound round the cylinder, and may be passed over without applying any coloring matter thereon. The places which are left uncolored in the threads will be *extremely useful* as indications to the weaver of the places where the tufts are to loop and knot around the threads of the warp.—GILROY.

**The Size and Age of Trees.**

The traveller Adamson discovered in India a baobab tree to which the largest oaks would be mere saplings, and the stem of which measured from 60 to 120 or 130 feet in girth. As they could not cut a tree down every time they wished to ascertain its age, they measured it, and thus formed an approximate guess. They thus came to the conclusion that baobabs existed for five thousand years. The celebrated cypress of Mexico was at least as old, if not older still than

these. It must be remarked that the deluge did not destroy the trees, since the dove brought to Noah a branch of the living olive tree. Records still exist in the library at Milan, by which it was ascertained that a cypress which grows in that city was in existence in the time of Julius Cæsar. Now that tree is only twenty six feet in circumference while the Mexican cypress was 120 feet. There was nothing in the constitution of trees at present existing to prevent their living on to the end of time, whether measured by hundreds or thousands of years. There has been exhibited a section of the largest branch of a yew tree which grew at Forthampton, Gloucestershire. It was nine inches in diameter, yet 228 perfect and distinct rings could be counted in it. Decandolle from an examination of a number of yew trees, ascertained that the average amount of its growth laterally was three-twelfths of an inch in a year. The circumference of the whole tree was twenty-seven feet, and hence its age would be 1370 years. This lands us in the time of the Saxons; and we have not the least doubt that there are yews still in existence which began to grow long before the Romans marched over Britain. At Fortingal, a village among the Grampians in Scotland, there is a yew tree the age of which must be more than 2,500 years. It is evident that, as the vitality exists in the *liber*, the tree can go on constantly pushing forth its fresh rings of wood, when the centre is dead: the vital principal is still working, and seems as if it could go on forever.

**Protecting Wall Fruit From Insects.**

The ant occupies a distinguished position as a depredator on wall-fruit. No sooner has an insect "of a larger growth" commenced the destruction of a fruit than these little pests assemble in myriads and complete the demolition: and this is often carried on by means of a minute aperture in the cuticle of the fruit next the wall, so that some of our finest fruit is often destroyed ere we become aware of the fact. The usual wasp-trap is of little or no service in the destruction of the ant, and even muslin bags, so effectual for the exclusion of flies, &c., are often ineffectual. The best remedy for the prevention of the attacks of the whole insect race is common tow or hemp. As soon as the fruit, from its ripeness, begins to become attractive envelope a thin coating of this substance, packing it well between the fruit and the wall, and no insect will venture to molest it. The fine filaments of the hemp form a complete *chevaux de frise* to their attacks. Even the minute ant fails to penetrate them. A fine crop of peaches, which were required to be preserved for a particular occasion was treated in the manner described, and out of several dozen from one tree, not one fruit had the least blemish from the attack of an insect.

**Egypt and her Ancient Arts.**

The hieroglyphic system of Egyptian writing, like the Sanscrit of India, was sacred. It was the most ancient of all languages and is the depository of the records of the monumental annals of a mighty empire. In its nature it was alphabetic, symbolic and pictorial. Its meaning was conveyed through the medium of *sounds*—the *names* of things, and *pictures* of the things themselves. The representation of a lion, for example, might, as a symbol, mean the animal itself, or it might convey the qualities of his power, or alphabetically, it might express the letter L. These three modes of hieroglyphic writing were used singly or together, and were incident to great obscurity from this undermixture. All of the sculptural history of Egypt is transmitted in this system.

For the recording of continuous events, leaves of the Papyrus, an aquatic plant of the Nile, and slips of fine linen were used. Numerous rolls of this species of manuscript are found in all the temples and tombs, and their secrets have been revealed by science. Champollion perfected a key to the entire system. The process was to decipher the characters—next to interpret the words they formed. To accomplish this last process, it was necessary to refer to the ancient Coptic language.

The excavations of the French explorers

exhumed a new book of Monumental Egyptian history. Upon the immense walls of the tombs and temples were spread out pictorial or sculptural representations of all the economy of Egyptian life, with the arts and occupations, customs and costumes of all grades, vocations and professions. Volumes could not have contained such exact and copious details of the most minute facts and events in Egyptian history. The entire social economy of the Egyptians, 1800 years B. C., with a delineation of all their mechanical vocations and the progress of artisans thus set forth with wonderful truthfulness and vividness, are faithfully represented in Rosselin's Plates of monumental history. These pictorial delineations prove that many arts which have been supposed unknown to antiquity, were as well understood then as at the present day. The manufacture of glass and porcelain, and of fine linen—the imitation of precious stones with glass, and the staining of that material, afterwards for ages lost. Thebes, 4,000 years ago, if less advanced than the 19th century in some respects, is thus proven to have surpassed it in others. Astronomical discoveries and tables prove, also that the wise men of Egypt must have possessed the art of bringing scientific instruments to a high degree of perfectness; and the minutest sculpturing on some of the hardest porphyry, demonstrate that the artisan's tools must have possessed the keenest edge and most exquisite temper. The principle of the Artesian Well as also that of the Railway, was plainly known and practised. The engraving of cameos, the tempering of copper, and the manufacture and use of burning glasses, were also known; while the elevation of the enormous lintels on the domes of the temple of Carnac, and the position and removal from great distances of other vast and ponderous masses of stones, prove the possession of motive and mechanical powers now lost. The motive principles possessed by the Egyptians could not be so applied at the present time. By means of these powers and arts, were constructed those mighty and mysterious masses of architecture which have been the wonder of all subsequent ages—those giant sentinels of the dead past,—labyrinths whose rocky masses imitated the heavenly zodiac—huge statues with the semblance of the shadowy phantoms of a Titanic race, and whole temples of siennite marble, transported a hundred miles from its bed!—and the dread and awful pyramids, next to the works of Omnipotence, the mightiest on our earth. Yet, all these, to the spectator, gazing down from the summits of the porphyry mountains of the Nile, seem but the fragments of the architectural skeletons of an elder time, whose spires glitter amid the blue heavens, but whose depths were based in blood.

**Coal on the Pacific Coast.**

The Valparaiso Neighbor of October, 1847 says:—The prospects of obtaining coal from the neighborhood of Conception have lately become very fine. By the last accounts the promise was excellent both as to the amount to be had, and as to quality of the coal. A gentleman writing from Talcahuana states that one mine has been opened on land lying at the right hand of the road leading to Conception, in which a seam of coal has been found one and a-half yards thick. In the tide way of Phinco they are working another, some 200 yards from the beach, and have cut vertically to the distance of ten feet. And have not passed the coal even at that. Then a third has been opened at the Pareles, also on the side of the road to Conception. The coal obtained from this is of most excellent quality. In all there are now five mines, and the main question at present is to find a purchasing demand equal to the supply.

**Longevity.**

There is nothing in the system of nature, which, in our present state of knowledge, appears so unintelligible as the scale of longevity. It must be admitted, indeed, that our knowledge, upon this subject is very imperfect, for all that is known of domestical animals, and the accidental facts which have been preserved concerning others, leads to the strange result, that longevity bears no relation either to strength size complexity of

organization, or intellectual power. True it is, that birds, which seem to rank higher than beasts in the scale of being, are also much longer lived. Thirty is a great age for a horse: dogs usually live from fourteen years to twenty; but it is known that the goose and hawk exceed a century. But fish, evidently a lower rank in creation than either, are longer lived than birds; it has been said of some species, and certain snakes also, that they grow as long as they live, and as far as we know, live till some accident puts an end to their indefinite term of life. And the toad, it cannot indeed be said that the toad lives forever, but many of these animals who were cased up at the general deluge are likely to live till they are baked in their cells at the general conflagration.

**Decease of a Mechanic Naturalist.**

There lately died on his passage from New Orleans to Liverpool John Miller, who had been for sixteen months in our western wilds collecting and preserving rare specimens of birds, reptiles, insects, &c. Though only a working man, and laboring under the disadvantage of poverty, and a very limited education, he displayed a skill and shrewdness in the pursuit of his favorite study, which stamped him as a man of very superior abilities and natural talents. Through a strong desire to explore different parts of North America in quest of birds and other natural curiosities, he contrived to save a few pounds by dint of rigid perseverance and economy, and sailed from Liverpool on the 17th of September, 1846, in pursuit of his favorite object. He remained eight months about St. Louis, in killing and preserving animals, supporting himself during that time by preparing and selling specimens amongst the inhabitants. The assiduity with which he followed his pursuit, and the variety of climates he had to encounter, brought on an illness, under which he labored six months, gradually growing worse: in which condition he embarked at New Orleans for England, and died after being about a month on the passage. The specimens of curiosities he had acquired, consisting of birds, insects, serpents, and other things, have been carried to Liverpool.—He left a widow and seven children.

**Schiller's Use of Bodily Suffering.**

I have often been acquainted with persons both men and women, in whom this condition of (constant bodily suffering) was habitual, and who had not even a single probable hope of ever getting free from it unless by death. To this class, especially, Schiller belonged. He suffered much, suffered constantly, and, knew too, that as was actually the case these perpetual pains were drawing him nearer to death. Yet of him it might truly be said, that he kept his sickness imprisoned within the limits of his body; for at whatever hour you might visit him, in whatever state you might find him, his mind was always cheerful and tranquil, and ready for friendly intercourse, and for interesting and even profound conversation. He would even say, at times, that a man could work better in certain states of bodily ailment,—not those, of course of acute suffering, and I have found him, while actually in this uncomfortable condition, composing poems and prose essays in which no one, surely, could discover a trace of this circumstance of their birth.—*Letters by W. Van Humboldt.*

**The Bond of the House.**

The English term "husband" is derived from the Anglo-Saxon words *hus* and *band* which signify the "bond of the house;" and it was anciently spelt *house-bond*, and continued to be spelt in some editions of the English bible, after the introduction of the art of printing. A husband then, is a house-bond—the bond of a house—that which engirdles the family into the union of strength and the oneness of love. Wife, and children, and "stranger within the gates"—all their interests and all their happiness are encircled in the *house-bond's* embrace, the objects of his protection, and of his special care. What a fine picture is this of a husband's duty, and a family's privilege?

The old house in which Louis Phillippe lived in Philadelphia has just been torn down.