AMERICAN AND FOREIGN WOODS.

By George J. Henkels.*

AMERICAN WALNUT.

In a previous communication, we gave a cursory history of the different woods, both native and foreign. This article we will confine to the descriptions and uses of Walnut.

Beginning with our first knowledge of its adaptability for cabinets, &c., we find that many of the old pieces of furniture, family relics, which were brought out to America by the first settlers, were made of Walnut. The quaint-looking, old escrutoires, cases of drawers, and chairs, which are so much prized for their antiquity, are either made of walnut, or mahogany, both woods being in use in Europe at the general period of pioneer emigration.

As to grain, the walnut of Europe widely differs from our Western walnut, but much resembles the white walnut, or butternut, which is found on the western slope of the Alleghanies.

In Europe, from the scarcity of the wood, they are obliged to work economically, and consume all, even to the roots, which they cut into veneers,† producing from 60 to 100 of these to the inch.

The process of cutting veneers will be explained at the proper time.

The root of French walnut is beautifully variegated, the markings being map-like, with black lines intersecting the light ground. For panels of beaufets, and for ornamenting the plain walnut, by raised veneered tablets, this wood has no equal. French cabinet-makers make the most of it, as they skilfully piece up the holes in the veneer, which are the natural result of defects in the root. Sometimes a panel-veneer will have a hole in the middle, large enough to put a man's head through; but the natural diversity of figure in the wood, aiding the skill of the workmen, enables them to match or fit in another piece of veneer, which is difficult to detect, in many cases actually adding to the beauty of the panel. Every square inch is pieced up, and worked in cross-banding, giving us an example of economy in the use of wood, which we will do well to follow, as we are notoriously prodigal in working all kinds.

Walnut was first introduced to any extent, as a furniture wood, about 1845. Cabinet-makers had no experience in working it, and were timid about recommending it to their customers. The only kind to be had, on the seaboard, was a very hard-grained Pennsylvania and Delaware wood, such as is now used almost exclusively for gun-stocks. This was prior to the completion of the Pennsylvania Central railroad, and before the States of Ohio and Indiana were aware of the great wealth of their walnut forests, as walnut, to their inhabitants, was of less value than any other wood, being used extensively for fencing. The growing demand, in the Eastern States, induced the shipment of large quantities of a soft-grained northern wood, which was sent, by way of the lakes, to Albany, N. Y., and thence distributed to the Eastern cities. There is still a great quantity of this wood sent by this route, and New York and the New England States depend on it for their principal supply. The Pennsylvania Central railroad is the avenue to market for all of the best Ohio and Indiana wood, and Philadelphia cabinet-makers of course have the advantage of the best stock to select from. Throughout Northern Ohio, and in Indiana, Illinois and Michigan, there is in the forests a large proportion of walnut, many of the trees being three to four feet diameter, with a trunk rising eighty feet, without a limb or a defect. All over this territory there are numerous saw-mills, that cut the wood to sizes for the owners of the land, who are mostly farmers. Agents from the Eastern cities establish themselves in a convenient locality, and are prepared to purchase all the timber that is brought to them. During the dull season, when the farmers have but little employment, they cut down their trees, and have them sawed to all sizes and every thickness, from ½ inch to 8 inches, every intermediate quarter of an inch being a marketable dimension. This wood they haul, entirely green, to the agents of the Eastern dealers, and they get the money for each wagon-load, as it is delivered. This lumber is piled up on the ground, and left to remain for from six months to a year, before it is considered marketable. In fact, walnut one inch thick is not fit to work into furniture, until two years have elapsed after the cutting; but the greater part of the cheap furniture, sold in the Eastern cities, was growing in the tree six months previous.

It must not be understood that there are whole forests of walnut alone, as ten to fifteen good walnut trees to the acre is considered a very liberal supply. At the present rate of consumption, it can be but a few years, before we will be in the same condition for walnut that St. Domingo is in for mahogany, that is, possessing plenty of it in many parts of the country, but not within reach.

The grain of walnut is more diversified than that of any other wood. We have plain-grained, striped, blister, curl, mottled, and burl, or wart. Sometimes, from a defect in, or injury to, the sapling, the tree grows crooked, and the grain interlocks; this results in *striped*, *mottled*, and *blister* wood. The *curl* is in the forks of the boughs, or the principal branches from the trunk. The *burl* or *wart* is produced from disease in the tree; the sap oozes out, and forms a wart, which increases in size with the growth of the tree, till it sometimes reaches the enormous weight of a ton. All of these varieties are reserved for veneering, and are brought, mostly in bulk, to the Eastern cities, where there are a number of appliances for reducing them to veneers.

Until within the last few years, all veneers in this country were cut with *circular saws*. The Veneer Saw was a specialty, used for no other purpose. It was a cast-iron disc, about five feet in diameter, and from two to three inches thick at the axle, running off tapering on one side to a feather-edge. The saw-plates, containing the teeth, were made of thin steel, in sections of ten to twelve inches wide, conforming to the radius of the disc, on the flat side of which they were nicely fitted into a rebate, and secured by screws, with their heads countersunk, so as to present a perfectly level surface to the log to be sawn. The log was secured to a sliding carriage, and fed to the saw as fast as it would cut. From fifteen to thirty veneers were cut to the inch, varying according to the wood, whether tough or brash. The waste from the saw-kerf* was about one-half, so that American ingenuity was exercised to produce a cutter, that would not waste; and soon produced it. This is a huge knife-blade, secured firmly in its place. The *log* to be cut *is first steamed*, to *make the wood soft*; and then is *suspended*, by heavy gearing, *above the knife*, so that in descending it must have a drawing, or slicing, as well as a downward movement. This machine is capable of cutting 200 veneers to the inch; but, for cabinet-

† The term veneer (a double corruption—the English being from the German noun *furnier* or *furnir*, and that in turn, from the French verb *fournir*, to furnish) is not confined to wood; but signifies any thin leaf or layer of a more valuable and beautiful material used to overlay an inferior one.

* Cabinet and Upholstery Warerooms, N. W. corner of Thirteenth and Chestnut streets, Philadelphia.

* *Kerf* is from the same root as *curve*. It is sometimes improperly spelled *curf*.

work, the veneers are too thin at more than 60 to the inch. The thinner veneering is used for wall-hangings, as a substitute for paper, and is so thin as to be transparent.

A new and valuable invention cuts a veneer by A CORRUGATED KNIFE. This method of cutting in and out of the side of a plain striped log, makes a most beautiful wavy veneer, and not only adds to the beauty of the wood, but secures great economy, in the use of fine woods, as *an elegant, natural, grain-figure is produced from a plain log.* Properly to appreciate the advantage of this great invention, we must understand that not one tree in a thousand is good enough for veneers, if cut by the old process; but, *by the corrugated knife, the plainest wood is made handsome.*

Walnut wood should never be kiln-dried, if intended for furniture, or interior work in dwellings. When steamed, and afterwards dried in a kiln, the wood loses its vitality and beauty of grain, and is rendered much more susceptible to the changes in the atmosphere of this climate. Experience has demonstrated that, when the tree is felled at the time the sap is down, that is, in the fall and winter, and the wood well air-seasoned, it makes the best furniture.

Well-polished walnut will compare favorably with any other wood, both in appearance and durability. Walnut, well oiled, with sculpture-carving, in appearance makes a near approach to bronze, and shows more effectively than any other wood. The old oak carvings, preserved from the destruction of ancient palaces, and other buildings of note, have become, from age, of the same color as our walnut. This fact led to the introduction of oil for finishing walnut, as the same tone produced on oak, in Europe, by extreme age, or through staining with nut-galls, considered so essential for effect in what is called by the French, "*Style Renaissance,*" or revival of the old style, or in true antique furniture, *is obtained in walnut by simply oiling with linseed oil.*

There is no doubt, that the oil finish is good for richly-carved work, where varnish or French-polish destroys the effect of sculpture. On the other hand, oil is, assuredly, a rather unsightly and unsatisfactory finish on plain furniture, and, as such, will soon run its race.

In this country, the cabinet-maker is driven to his wits' end to make furniture that will not shrink. If the wood is well varnished, it is protected from the winter's stove, furnace, and other heat; from the dry March wind, and the summer sun; and the tenacity of the glue is never impaired by the atmosphere, penetrating through the wood: from the fact, that the polish reflects the heat, the wood being, as it were, protected by a coat of glass, excluding the atmosphere. If finished in oil, the wood absorbs the heat; and the air, penetrating to the glue, destroys its tenacity. Before the introduction of oil-finish, it was a rare thing for the mouldings on first-class furniture to be falling off. But now it does not matter how dry the wood, nor how skilful the workman, the adhesive quality of the glue is destroyed; and mouldings are continually dropping off, to the annoyance of the housekeeper, and the serious detriment of the workman; though, to be sure, the mouldings can be glued, nailed, or screwed on again; and, after a while, the cabinet-maker regains his reputation, for the interim so unwittingly and undeservedly lost.

The use of walnut in the interior of dwellings is daily growing in favor. Although very beautiful, when employed in moderation and with good taste, there is danger of inordinate recourse to it, as it has a very gloomy look, particularly if oiled, as is usually done, with dark red oil, and placed in contrast with light-colored frescoing. The best finish is the natural color of the wood, toned to a *nut brown* by the material used in finishing it. The grain of the wood should be well filled with *material on which the atmosphere will have no effect,* care being taken not to get the wood too dark, by the ignorant use of oil. A relief of polished ebony ornaments and mouldings, or gold-leaf inlaid in engraved lines, adds greatly to the effect of the wood, when kept light in color.

As walnut is used at present for doors, window-frames, and window-sashes, it gives a gloomy appearance to our light and graceful style of interior architecture, heightened with light-papered walls and white ceilings. It looks much more appropriate with heavy wainscotings, massive groinings in panelled ceilings and dark-painted walls. Having the wood of a light color adds much to the happiness of the inmates, by increasing the cheerfulness of a room.

HERALDRY.

THE SHAPE OF THE SHIELD.

A COAT of Arms being invariably depicted upon the surface or superficies of a shield, called in heraldry, an escutcheon, it now becomes necessary to ascertain the heraldic rules concerning the proper shape and disposition of the escutcheon. Heraldry having arisen long after the classic ages, and being originally an invention rather of the camp than the cloister, assimilated that which lay immediately around. Hence the Greek and the Roman bucklers are not found here, except occasionally as charges, or perhaps in the accoutrements of supporters.

The targe or target, tarian or clasher of the Scotch Highlanders, round, small and full of metal knobs or bosses, to be managed either in the ordinary and most natural way—braced upon the left arm—by the motion of the elbow and the shoulder, or, if of the minimum size, at arm's length, in a single hand, is excluded from heraldry by its dome-like centre. For the chief material of this shield we have, in Scott's Lady of the Lake, sufficient authority, not near so dry as most of that we present:

> "Ill fared it, then, with Roderick Dhu,
> That on the ground his targe he threw—
> Whose brazen studs and tough bull-hide
> Had death so often turned aside."

The mere outline of this picturesque Gaelic shield, as a circular disc, is of course admissible, under the rule that escutcheons, unless designed for women, may be of any external shape whatever. The shield of the present American Indian of the plains—for the aborigines of the coast did not use any—seems to have been an adaptation, by way of the south, of that portion of the armor of the early Spaniards in Mexico, under Cortez, just as they ultimately obtained the American wild horse, from the offspring of the discarded or stray steeds of the Hispanian conquerors.

George Catlin, in his "Letters and Notes on the North American Indians," Vol. I., pp. 33, 34, speaking of these cavaliers of the prairie, says: "Many of them also ride with a lance of twelve or fourteen feet in length with a blade of polished steel; and all of them (as a protection to their vital parts) with a shield or arrow-fender made of the skin of the *buffalo's neck,* which has been smoked and hardened with glue extracted from the hoofs. These shields are arrow-proof, and will glance off a rifle shot with perfect effect by being turned obliquely, which they do with great skill. This shield or arrow-fender is, in my opinion, made of similar materials, and used in the same way and for the same purpose, as was the clypeus or small shield in the Roman and Grecian cavalry. They were used, in those days,