

through the ever-recurring bereavement and the bitterness of the never-ending strife. The somber features of the popular religious beliefs seem to have been intensified by the cruel assaults of the savages, which were sometimes regarded as visitations of divine wrath; and the gross notions of witches, tormenting fiends, and a material perdition of everlasting tortures, which filled so large a place in the thought of that time, were no doubt reënforced by the impressions which captivity and its accompanying barbarities had made upon the imaginations of men and by the vindictive feeling that is born of a chronic and cruel war. The military virtues of courage and fortitude and a daring spirit of enterprise were

fortified by such a strife. Rude and strenuous energy is inconsistent with elevation of feeling and refinement of manners; but it is a quality very necessary in nation-builders and the subduers of a savage continent, and this, by the Indian wars and other tempestuous buffetings, was developed in our forefathers and remains yet a characteristic trait of the planters of new states on the Western border and of many who carry forward great schemes of material improvement. In that hard time the perseverance, alertness, and hardihood persistent to-day in American national character were brought to maturity; learning and refinement were, for the most part, pushed to the wall.

ORNAMENTAL FORMS IN NATURE.

A RIVULET runs past the door of the log-house that has stood for seventy years upon the edge of the road, squeezed between that and the nearly perpendicular wall of rock behind. The miserable little mountain farm through which it flows produces nothing salable but a stack or two of hay mixed with thistles. Its owners have to go off its bounds to earn their bread; but people who want to fill their eyes, not their mouths, might stay on it all the year round. It bears splendid crops of weeds. It is part wooded and rocky, part swampy; and in its patchy meadows, its stony and briery woods, a taste for what is beautiful may be gratified, one's interest may be excited over new objects, and his knowledge of art as well as of nature improved by the observation of countless forms, such as have furnished the types from which most of our stock of ornament has been derived.

The stream rises about a stone's throw from the house in an angle between a projecting rock and the shoulder of the mountain. It is formed by a great many films that trickle down and varnish the face of the cliff, flowing from springs in the wood far above. These collect in a gravelly trench at the foot of the rock and make a runnel which, in rainy seasons, is from two to four inches deep and from one to two feet across. Led through a dark channel of flat stones and a mossy wooden pipe, it soon finds its single place of usefulness in an old tub which is placed before the door. On the way, much of it escapes in dribblets that convert the old orchard at the side of the



house into a marsh overgrown with a semi-aquatic vegetation of water-cress and horse-tails. The greater part after overflowing

the tub (of many uses) burrows under the road-bed and makes off across some sloping meadows to the bottom of the valley, where it finds an outlet to the lowlands through a miniature

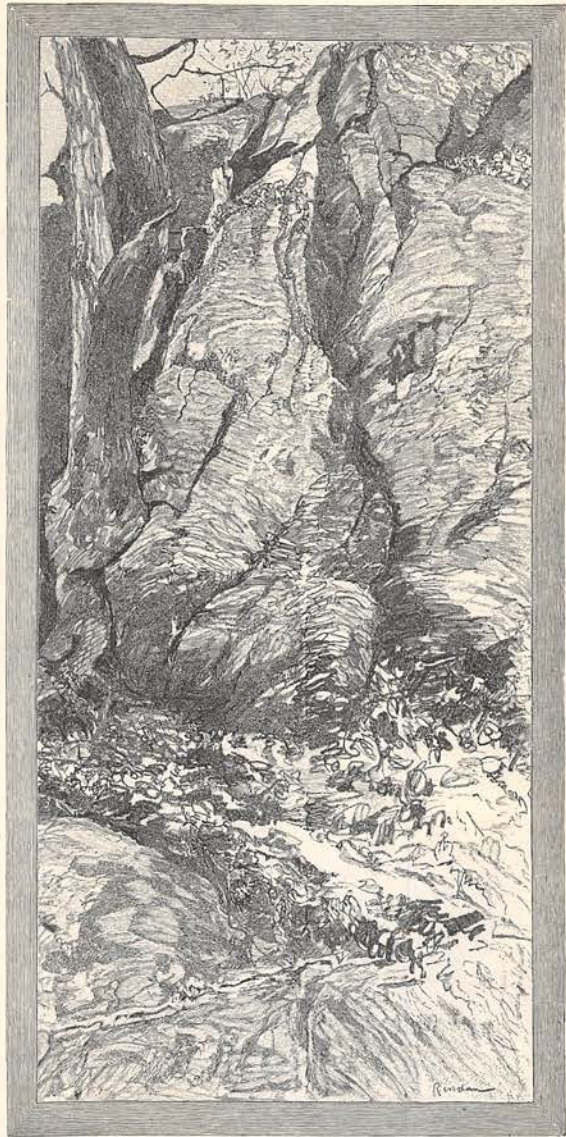


THE STREAM.

ravine. There can be no finer study of crystalline effect than is afforded by the ripples and eddies of the stream. It coils around small obstacles and dashes over foot-high precipices, flashing and shining, mixing up in a most charming manner reflections of clouds and sky and perspective of weeds and pebbles. The chimeras and the dragons that the Chinese carve in rock crystal, with their glittering spines and horns, their undulations and their gleaming wave-like scales, are not half so well managed for the play of transparencies and sudden lights. The art of diamond cutting is vulgar in comparison. The little stream has the fiber and the flow of old Venetian glass in places where a mere thread of water, drawn out to the utmost fineness, flashes to a sheet over the smooth roundness of a nodule of granite.

When satiated with color, nothing is so restful to the eye as a clear substance such as this; and nothing so readily leads one back to the enjoyment of color as the constantly bright and fresh mosses, the shining quartz and vari-colored pebbles over which it flows. And then, the matters that, being a mountain streamlet, it bears along submerged or dissolved in it,—rootlets, scales of mica, cloudings of earthy substance, ochereous, milky from white marl, tawny yellow from soaking beds of dead leaves,—for a colorist, what a feast is all this!

About twenty feet from the house, and the same distance above the ground, there is a recess in the face of the cliff. It is partially hidden from view by branches and hanging vines. It has been made easy of access by steps, some of them built of flat slabs of stone, and some cut in the rock. It is commodious and sheltered enough to be used as a sort of out-of-doors sitting room; and it is furnished with a table, a couple of chairs, a settee of squared stone cushioned with moss, a few books shoved away on one of the ledges, and some odds and ends belonging to the young ladies who generally occupy it. Its walls and its shelving roof are tufted with ferns and brambles and wisps of delicate long grass. The dark rock is veined with white quartz and colored with metallic oxides and scintillates with mica. The whole place is dotted with lichens and gray mold and seamed with iridescent tracks of snails.



A NATURAL WALL-COVERING.

This "cave" is in the most advanced part of the projecting rock before mentioned. Its roof is a big boulder which has fallen into its present position, two-thirds of it resting on a ledge of the solid rock, the other third overhanging the lower platform that makes the floor. On the outside, the mass is as richly tapestried as within, and, in addition, trees rooted in its larger clefts and flowers springing from every crevice make a rich covering of wall-space that no art can parallel.

Most of these flowers and plants recall, with endless variety, the beautiful ornamental forms of ancient art. There is a clump of

willows where the stream reaches the bottom of the valley whose growing twigs, seen against the sky, repeat the form of the well-known anthemion design common on Greek temples and Yankee table-cloths. Each shoot is tipped by a few close-curved leaves, which stand straight up together with incurved points almost meeting. Those next lower straighten out slowly from the stem, their curled margins becoming at first wavy and finally plain. At last, they curve downward, so that the tips of the leaves are much farther apart than their stalks. It is the general form (in elevation) of all growing plants; and, as such, it was copied by the Chaldeans, from whom the Greeks had it. Across the stream, a thicket of sassafras has every spray adorned with a more elegant variety of "anthemion," most of the spreading shoots enriched with small greenish-white flower-clusters which help to push apart the folded leaves. Black-berry-vines, wild cherries, young shoots of the oak put forth different versions.

The horse-tail, which grows all through the orchard and makes deceitful patches of bright green in wet, sandy places in the woods, offers a very ornamental variety of the pattern. It may usually be compared to a miniature model of a basalt column, or to a pile of fairy thimbles. It is composed of small, hollow joints, each finished at the rim with an upright, toothed fringe, and at

the top it bears a flower-spike, that resembles in shape an Egyptian capital. Several of these little pillars appear in a sort of Druidic ring; and then, in the center, another with longer joints, branched, and apparently flowerless, springs up and dominates the group. The proportions of these joints and branches, the regular radiation of the latter and the gradual change of the angle at which they leave the stem, and the repetition through-



BED-STRAW.

out of the little toothed cup, which is, as it were, the unit of construction of the plant, make it almost solemn in its strict adherence to decorative laws.

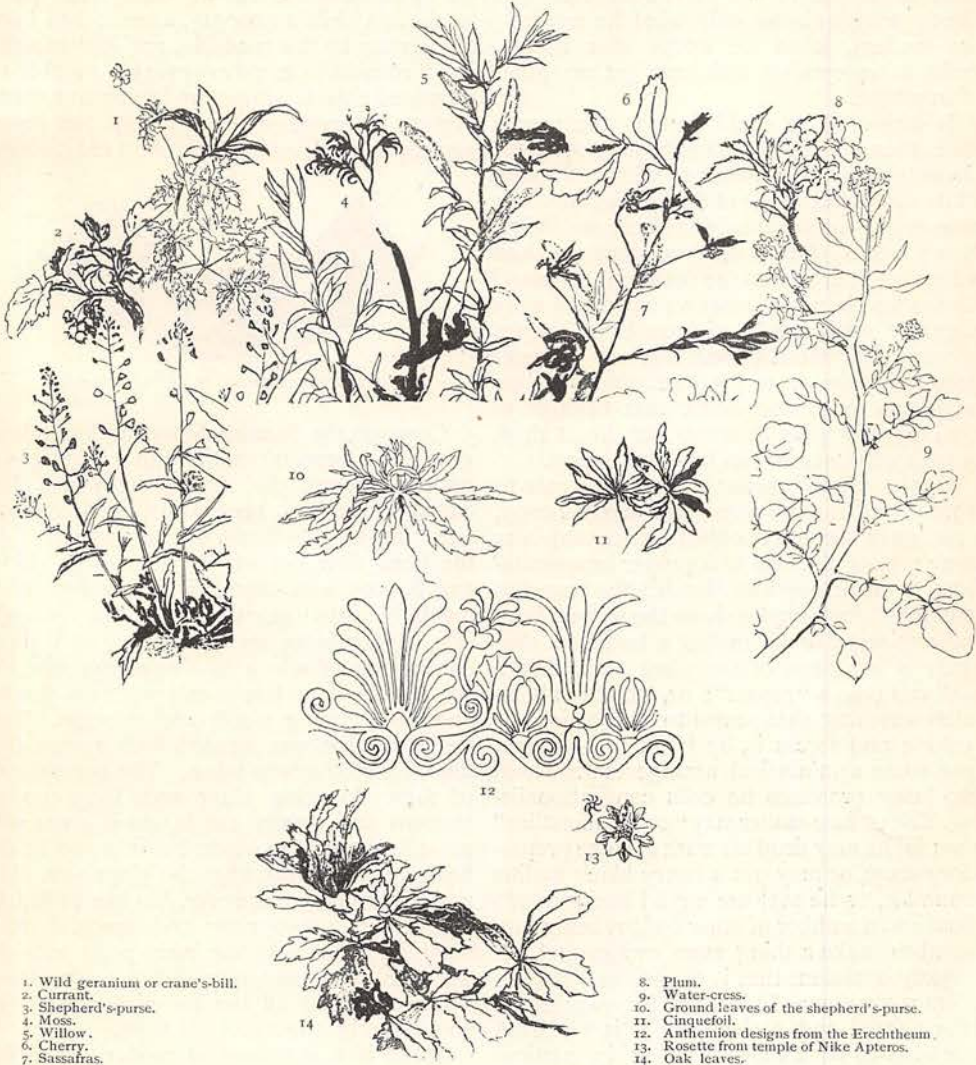
The bed-straw is another plant which is almost as simple in plan as the horse-tail, and which offers particularly beautiful variations on the usual theme. Its jointed stem is ringed with circles of lance-shaped leaves, from the base of some of which start angular branches bearing small white flower-clusters. The stem is weaker than the horse-tail's and the joints much longer in proportion. Stem and leaves are covered with asperities, which help, very often, to bind the plants together in tangled masses of a disorderly appearance, belying their true character. The leaves and branches of these two plants being set like the spokes of a wheel, and not, as in most plants, spirally, produce a very definite anthemion, really comparable to a flower, and very like the ornament which we have derived from Chaldean plant-worshippers through the Greeks. The thousands of architects and others who, every year, weary their own souls and those of their neighbors with clumsy imitations of antique styles which were themselves based on an intelligent observation of nature, might draw a needed fresh inspiration from the study of these common plant-forms.



HORSE-TAILS.

The type of the growing plant has furnished us, from the most ancient times, with another extremely popular ornament, the rosette. It is the plan of a plant, as the anthemion is the elevation. With the ancients, though at first a

line; the rosette was good to fill out a circle; the vine was a rich and beautified waved line or scroll. With conceptions so general as these, it was no trouble to an inventive people to vary their patterns to any extent, and, in



ANTHEMIONS AND ROSETTES.

symbol of plant life, and though it always preserved somewhat of its original signification, it was used in the best periods of art simply as a beautiful radiant figure, exactly as if it were a geometrical form, but with a clear perception that it was much handsomer than any geometrical figure. Simple as were the ideas of the growth of plants conveyed by antique ornaments, the most important ideas connected with them in the designers' minds were simpler yet. The upright growing plant-form was useful to suggest or carry out a perpendicular

fact, good Greek and Roman art is varied enough in its ornamental portions as well as in its figures, and that without showing much direct reference to nature. The hint once got from nature of some graceful arrangement of leaves or petals, or some notching of their edges, or modeling of their surfaces, was carried out with an eye single to the production of something elegant, rich, refined, and fitting to fill a space which, without it, would be a painful blank. There is, judged by modern standards, little nature in the anthemions

and rosettes from the buildings on the Athenian acropolis, and as little in the vine-scrolls on Greek vases, which might be intended for ivy, or for grape-vines, or for any other plant of vine-like habit. But the little that there is is put to the very best use. The Greek designer took only what he needed; the modern, when he works after nature, grabs at everything and can get no good of anything.

If we would or could work in the proper way, there is no reason why the splendid Greek system of ornament, which, through all its variations, is one of the heir-looms of our race, might not be kept always fresh and living. If we would change only on occasion, and with strict reference to the occasion, we would always find in nature what we wanted of more pliant or more sturdy, of broader or longer, of sparser or more close. But our designer goes to nature or to the past, not as a man might go to a store-house that belongs to him, to select what he wants, but, like a thief, to take whatever he can lay hands upon.

Our modern designer after nature goes to work in one of three ways. He makes a copy, a picture of his chosen object (which may bear some remote likeness to a proper ornamental form, as in the opposite sketches the branches laden with crab-apples do to the festoon from the antique); or he makes a botanical diagram of the parts of the plant or its flower and uses it as a "repeat"; or, worst of all, he takes anything that seems to him curious or striking and forces it, by hook or by crook, into some symmetrical arrangement. These two latter processes he calls conventionalizing. The picture-maker may "conventionalize" also; for he may drop his work at some preparatory stage, or may put a heavy black outline around it, or he may use a gold background: these and a number of other dodges being supposed to make a thing more ornamental. It is sorry ornament that is thus turned out. It belongs nowhere. It is fitted for no position. It is a fraud and a sham, for it is not even intended to ornament anything in particular. If painted on a plate to-day, it may be sprawled on a ceiling to-morrow.

Among some designs after nature recently published is a clover design for a plate. The artist plucked his flowers and leaves and stuck them around loosely in a circle; then copied them bit by bit, as well as he could, without any further attempt at order. They fill the rim of the platter badly. They would look worse when colored, for the pink blossoms and the green leaves are disposed at hazard and would not balance. The arrangement at first suggests that it was intended to convey the idea that the flowers and leaves

grow from the center out, in a ring, a way in which clover does not grow; and then one perceives that, even if the broken stems were produced, there never would be anything like organic connection between them. There is no more design about the thing than there is about a child's nosegay, after it has been flung away by the roadside, and its "naturalism" consists in merely copying a number of unrelated objects without understanding them. Nature is travestied in such work, not represented, and the requirements of art are ignored.



PAINTED DECORATION. HISPANO-MOORISH.

Compare the Spanish-Moorish design here given. It repeats itself, with constant variations, around the rim of the plate. The circular form has been considered and has been made the basis of the pattern. All the lines flow out of the bounding circles and flow on with them. It is divided pretty regularly into segments, by the straight side of the large recurring leaf, and those panels, one of which is always opposite the eye, are filled up less evenly with the flowers and their curling pistils and stamens. This being all that was wanted from nature that time, it is all that was taken. The general idea of some flowering plant with long curving stamens and deeply cut leaves is given with great freshness and vigor, but it would be difficult to guess just what the plant was. The rim of the platter, however, has been filled by its aid with appropriate and graceful ornament, and that was the main point with the designer, who evidently did not care three straws for what all the botanists and florists on earth might think of his work.

There is a specimen of modern "conventionalizing" by a trained designer and a very learned man, Dr. Dresser. There is no mistaking the plant intended this time, though it is to be recognized by ear-marks, so to speak, rather than by any important feature. It is that victim of modern decorators, the alisma. Its stems are tortured into ugly predetermined curves; its leaves are slit in half and provided with æsthetical curly-wurlies. With machine-like regularity the first half of the first division is reversed for symmetry, and then the "motive" is repeated without a change all along the wretched band, as if that were to be chopped off wherever it might happen to be conven-



FESTOON IN NATURE (CRAB-APPLES).



ient and stuck on to anything—a cupboard-door or the dado of a room.

It is plain enough that the clover “design” is better and prettier than this, though it is, strictly speaking, no design at all. So would the picture of the hanging apple-boughs be a better decoration than most modern designs of festoonery drawn by people who have never seen fruits and leaves put together in

a festoon, but who have copied from copies of the antique until all meaning, pictorial or decorative, has gone out of their work.

Bad ornaments as the naturalists are, the copyists are worse. In fact, if it were not for the badness and the baldness of their copies, no branch of the naturalistic school would ever have arisen. If people had continued on the old lines, exercising judgment, taste, discretion, invention, eked out when necessary by a reference to nature, no one would have thought of painting pictures of solidagos on plush for a portière, or of making pin-wheels with milk-weed pods for a frieze. It is the copyists, in fact, that are responsible for all that is wrong in our arts of design. They are the people who have pandered to the vulgar desire for all sorts of ornament at once, and as much of it as possible for the money. They have debauched all known styles by running them together without rhyme or reason, and they have lacked the imagination to create out of them a new style. They have applied their invention to contriving processes by which



FESTOON IN MARBLE. (FROM THE ANTIQUE.)



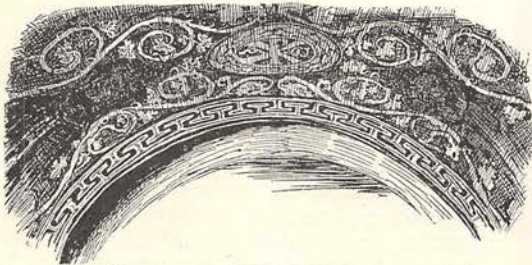
THE VINE IN NATURE.

work which ought to be costly might be cheaply travestied, and to "adapting" to machinery the old patterns, all the beauty of which was due to their being wrought by hand.

All this is to be changed, and indeed is being changed under our eyes. The man who last year was satisfied with bad copies of fine things, only was not satisfied with any reasonable number of them, must now have originals. It has begun to be understood that machine work is poor and uninteresting; and, most important, our social life is taking form and demanding to find expression in those arts that have so long helped to obfuscate and disorganize it. A new spirit is creeping into the arts of design (beginning, as is right, with architecture) which must end in completely revolutionizing them. Opinions differ about it, from that of the Georgia man who writes to the "American Architect" to say that the American mind requires "sky-scrapers," cheap elaboration, and Fourth-of-July sentiments expressed in stone and metal; who thinks that the art of the future will include wonderful combinations of dome and steeple, zinc roosters and spread eagles, and stars and

If we can assume that the architectural style of the near future will embody our ideas of wholesomeness, active strength, vitality, and our common sense, unmythic views, the demand will soon be made on the decorator that he also give form and expression in his work to the same conceptions. We shall want more action than has been put into European ornament for a long period; a high vitality will demand pure and splendid coloring; a sound intelligence will see to it that the entire arrangement is understandable, governed by exact relations and definite canons of proportion. Neither Romanesque, nor Gothic, nor Renaissance ornament answers all of these demands. The first two systems contain too much of religious symbolism; the last, with all its beauty, is too flat, tame, and meaningless for our uses. In all the fine work of the Italian Renaissance there is visible a self-satisfied smirk, a look of greasy contentment which does not suit a sharper generation; and the livelier French styles were but the beginning of that wonderful artistic spree which the French people have been keeping up ever since the fifteenth century, but which they have not succeeded in getting other nations to participate in. We shall have to return to ornaments such as are common to all styles, based upon necessary structure and the capacities of materials, and are given beauty and character by the adaptation of proper natural forms. There are precedents enough to guide designers and others in making such a change.

In many ways the present art movement is similar to that which brought Byzantine architecture to life, and remodeled all classic ornamentation at the beginning of our era. Then, as at present, among a great commingling of races, a new and fresher life had begun which had its say in a free and logical architecture, in the splendid coloring of mosaics, and in exuberant and fanciful ornament. Variations of the old designs were made necessary by the new shapes of arch and dome and pendentive, but not less by the



THE VINE IN ART. (FROM CEILING AT RAVENNA.)

stripes everywhere in red, white, and blue paint—from this gentleman's notions to the judgments of good architects who have endeavored, with some modification of the Romanesque or the early French Renaissance, to meet the requirements of our time and circumstances. The choice of these styles is suggestive, as they agree in using active rather than passive support.



PLANT-FORMS ADAPTED TO DECORATIVE TREATMENT FOR PILASTER AND CAPITAL: FERN, DICENTRA, SKUNK-CABBAGE.

quicken feeling for a truth and power and grace that all could understand, and which, as much as any religious need, had produced the new forms of building themselves. The novel designs of the Byzantines show a closer and keener observation of nature than that of the ancient Greeks or Romans. The acanthus foliage of the capitals, from the soft and graceful ornament of the Greeks, became crisp and sharp, like the stronger variety of the plant. The rolling scrolls, borrowed from the Romans, were given life, growth, and variety. The vine especially (its significance in Christian symbolism made it specially important) became more like the natural vine than it has ever been before or since in decorative work. In a sketch of a portion of a ceiling at Ravenna, the grape-vine, with its large leaves and bunches of fruit, is not, it is true, so thoroughly naturalistic as modern French drawings from nature of sprays of the same plant, with leaves and their shadows, which admirably suggest an ornament but do not furnish one. But it states, nevertheless, a clearer and more virile conception of the nature of a vine. The top of the big boulder that overhangs the cave before described is clambered over by a Virginia creeper. It has this barren spot all to itself, and is at perfect liberty to run straight ahead over it, or to indulge in caprices and zig-zags to any extent. It does both. It stops and gathers itself up occasionally to fling some budding sprays in the air; but, for the most part, it

proceeds by the shortest road in search of nourishment. This double propensity of all vines struck the Byzantine workman as a useful thing to note about them. The grapes and the large leaves of the grape-vine he was interested in, both for their symbolic meaning and their decorative appearance; but the long bare coils of brown stem, and the sudden bursting out into leaves and tendrils which are characteristic of vines in general, — these were still more to his purpose, and he was more earnestly bent upon reproducing them in his work than upon giving exact representations of foliage or of fruit. His barren lengths of stem he needed to frame in the lanky figures of his saints; the luxuriance of grape cluster and leaf and tendril served to fill the blanks between them. The resulting ornament is more like nature than the soft and regularly foliaged vine-forms that preceded it. And it was the attention which the designers of early Christian times gave to the development of their own



PILASTER AND CAPITAL, ITALIAN RENAISSANCE.

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superior principles of elasticity and strength in construction that opened their minds to the perception of the same qualities in nature and enabled them to make such excellent use of natural forms in their decorations.

The new needs and ideas of life which have produced so many constructive problems

ingraft upon them a new expression of force or grace, and to fit them for positions and purposes not, in all respects, like the old. He may get on such points plenty of useful hints from the nature that surrounds him. Every twig and ground plant will furnish him with crestings and rosettes, every vine and creeper



NATURAL FORMS SHOWING DISTRIBUTION OF COLOR: FEATHERS OF GOLDEN-WINGED WOODPECKER; WING OF CECROPIA MOTH; PETALS OF FLOWERS, LEAVES, ETC.

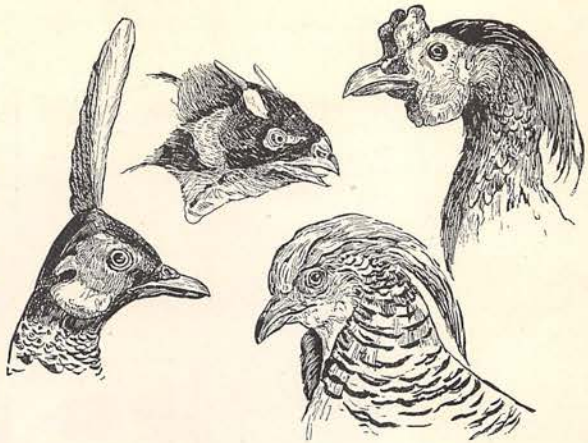
which architects and engineers have found means to solve must soon begin to exercise an important influence on ornamental design. The artist in this way will have to put into his work some of the feeling for constructive truth, for economy of materials and of work, and for practical usefulness that is beginning to distinguish our architecture. He will be expected to enliven and beautify whatever he touches, without taking from its apparent strength and effectiveness; to add an elegance, a magnificence, a wealth of real meaning that without him the work would lack. In doing this he will doubtless have constant opportunities to base his endeavors upon the traditional forms whose uses and general significance are well known; but he will have to

with new scrolls. He will find that at times it may be better to follow the leaf of the crow-foot or of the columbine than that of the acanthus, which he has never seen. The beautifully divided leaves of the dicentra and its pretty drooping racemes of two-horned white flowers might readily suggest the leafage and the flower ornament between the volutes of a capital, as in the cut of the Renaissance capital here shown. Curled ferns might answer for the volutes themselves, and the channelings of the shaft might be copied from those of the skunk-cabbage as it pushes up through the black mud in early spring.

In the meantime, and in the absence of a sound and living art, the student may find in nature exemplifications without end of the

laws which should always govern the creation and application of ornament. In nature, most things owe whatever beauty of form they possess to perfect adaptation to their use and circumstances. An animal or plant which is only partly adapted to its conditions of existence is ugly in exact proportion to its lack of viability. In nature, any excess of force beyond what is needed for structural or functional purposes is immediately applied to the production of ornamental excrescences or fine colors. Ornament is turned again to use: the bright colors of flowers serve to attract insects; the markings of animals are for disguise or recognition, or to create fear or inspire affection.

The strictest utilitarian cannot find fault with the way in which the crane's-bill and the meadow-violet expend their surplus revenue in adding to their attractiveness. In their case, as in that of the dark chevrons of the chick-weed leaf and the white crescents of the clover, the distribution of the color is guided both by the radiating or branching structure of leaf or petal and by the distances from the source of supply. The leaves of the dog-tooth violet, which have a frame-work of parallel veins bound together by cross veins, are spotted with dark color in the centers of the rectangular spaces between them. These ornamental markings represent a remnant of force left over from the construction of the leaf, and not sufficient to flush it all with color. They occupy the exact place where a good decorator would put them, close to the important points and lines but seldom upon



PHEASANTS' HEADS.

them. This relation of color to vitality in its intensity and power, and to structure in its distribution, is very obvious in birds. The head, the gorge, breast, back, wings, and tail—the most important parts of the superficies—get the most of it. In the neighborhood of these parts, at least in vigorous species, there is sure to be some accumulation of force, which shows itself in ornamental appendages like crests and gorgets and wing covers, or in striking colors, or both. The heads and necks of several varieties of pheasants show this very plainly, but it is easily observable even in our smaller and more plain colored birds, in the tessellated wings of the hairy woodpecker, and in the painted eyebrows and quill-feathers of the wood warbler (in the same picture with dicentra, etc.). The color is seldom applied upon the working parts. It is vague and diffuse on the larger, unimportant spaces. In feathers, it is at some distance from the shaft and between it and the edge that the darkest color shows itself. In butterfly wings, the bands and spots show the same dependence on the general form and on the veining.

There is a strict analogy between all this and the way in which the work of decoration should always be carried on. In amount and intensity it should bear a relation to the importance of the work. Its distribution should be as if the builders or manufacturers, after the completion of the necessary portions of their work, would not rest at that, but proceeded to cover the contiguous spaces with decorations. Some such feeling has always regulated the distribution of ornament in every good period of art; and the corresponding notion that it is true economy, for either nation or individual, to hold surplus wealth in the form of splendid decorations seems to have been general in all former periods of great social activity and power.



THE HAIRY WOODPECKER.

Roger Riordan.