

# IN THE CAUSE OF ARCHITECTURE

BY FRANK LLOYD WRIGHT

## IV. THE MEANING OF MATERIALS—WOOD

FROM THE fantastic totem of the Alaskan—erected for its own sake as a great sculptured pole, seen in its primitive colors far above the snows—to the resilient bow of the American Indian, and from the enormous solid polished tree-trunks upholding the famous great temple-roofs of Japan to the delicate spreading veneers of rare, exotic woods on the surfaces of continental furniture, wood is allowed to be wood.

It is the most humanly intimate of all materials. Man loves his association with it, likes to feel it under his hand, sympathetic to his touch and to his eye. Wood is universally beautiful to Man. And yet, among higher civilizations, the Japanese understood it best.

They have never outraged wood in their art or in their craft. Japan's primitive religion, "Shinto," with its "be clean" ideal, found in wood ideal material and gave it ideal use in that masterpiece of architecture, the Japanese dwelling as well as in all, that pertained to living in it.

In that architecture may be seen what a sensitive material, let alone for its own sake, can do for human sensibilities.

Whether pole, beam, plank, board, slat or rod, the Japanese architect got the forms and treatments of his architecture out of tree-nature, wood-wise, and heightened the natural beauty of the material by cunning peculiar to himself.

The possibilities of the properties of wood came out richly as he rubbed into it the natural oil of the palm of his hand, ground out the soft parts of the grain to leave the hard fibre standing—an "erosion" like that of the plain where flowing water washes away the sand from the ribs of stone.

No western peoples ever used wood with such understanding as the Japanese did in their construction—where wood always came up and came out as nobly beautiful.

And when we see the bamboo rod in their hands—seeing a whole industrial world interpreting it into articles of use and art that ask only to be *bamboo*—we reverence the scientific art that makes wood *theirs*.

The simple Japanese dwelling with its fences and utensils is the *revelation* of wood.

Nowhere else may wood be so profitably studied for its natural possibilities as a major architectural material.

Material here fell into artistic hands—a religious sentiment protecting it, in all reverence for simplicity.

Sometimes in the oak-beamed and panelled rooms of Old England, when "carpentry" was restrained, oak was allowed to be something similar as is seen in oak-timbering of the Middle Ages. In the veneering of later periods the beauty of wood came out—but the carpenter-forms of the work invariably did violence to the nature of wood. The "cabinet-maker" had his way with it.

Woodwork soon became what we learned to call carpentry; more or less a make-shift. Panelling was its sum and substance where the pilaster would not stick nor the cornice hang.

All wooden joinery of the periods, soon or late, fell to pieces, and interruption by too many ingenious "members" frittered away wood-nature in confusion or in contortions of an ingenious but false or inferior "taste."

Outside primitive architectures, sympathetic use of wood in beautiful construction would be found far north or far south—

among the Norsemen, or among the South Sea Islanders.

Because of wood we have—the carpenter.

The carpenter loved wood in feeble ways—but he loved his tools with strength and determination. He loved his tools more. Good wood is willing to do what its designer never meant it to do—another of its lovable qualities—but therefore it is soon prostitute to human ingenuity in the makeshift of the carpenter. Wood, therefore, has more human outrage done upon it than man has done, even upon himself.

It has suffered more—far more than any of the materials in our category.

Where and when it is cheap and, so, become too familiar as it nearly always does in a new country, it soon falls into contempt. Man's longing for novelty tries to make it something else. To the degree that the carpenter-artist has succeeded in doing this—one might think—is he the artist-carpenter.

In his search for novelty, wood in his hands has been joined and glued, braced and screwed, boxed and nailed, turned and tortured, scroll sawed, beaded, fluted, suitably furbelowed and flounced at the carpenter's party—enough to please even him. By the aid of "modern" machines the carpenter-artist got it into Eastlake composites of trim and furniture, into Usonian jigger porches and corner-towers eventuating into candle snuffer domes or what would you have?; got it all over Queen Anne houses outside and inside—the triumph of his industrious ingenuity—until carpentry and millwork became synonymous with butchery and botchwork.

Queen Anne! What murder!

And even now—especially now—in the passing procession of the "periods" I never see orderly piles of freshly cut and dried timber disappearing into the mills to be gored and ground and torn and hacked into millwork without a sense of utter weariness in the face of the overwhelming outrage of something precious just because it

is by nature so kind, beneficent and lovely.

Man has glorified the Tree in the use he made of the Stick—but that he did long before the Louis, or the Renaissance got by way of Colonial and Eastlake—or was it Westlake—to Queen Anne; and then by way of the triumphant Machine to General-Grant-Gothic and the depths of degradation that soon came in the cut-and-butt of the fluted "trim," with turned corner-block and molded plinth-block.

This latter was the fashion in woodwork when I found the uses of wood I shall describe.

Machinery in that era was well under way and ploughed and tore and whirled and gouged in the name of Art and Architecture.

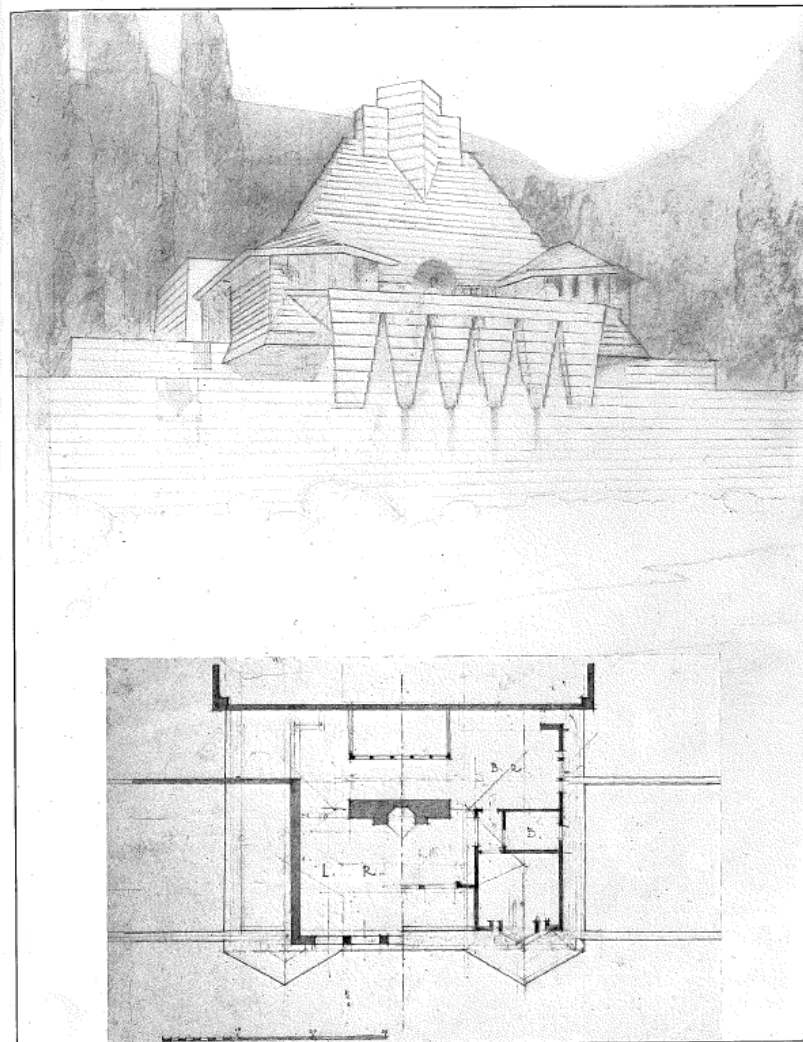
And all this was so effectually and busily done that the devastation began to be felt in the "boundless" Usonian forests. Conservative lumber-men took alarm and made the native supply go a little further by shrinking all the standard timber-sizes first, one-eighth of an inch both ways—then a little further on one-eighth inch more both ways—now still a little further—until a stud is become a bed-slat, a board kin to a curling veneer.

All standardized sticks great and small are shrinking by a changing standard to meet the deadly facility which the Machine has given to man's appetite for useless things.

Usonian forests show all too plainly terrible destruction and—bitter thought—nothing of genuine beauty has Usonia to show for it.

The darkness of death is descending on wood by way of unenlightened architecture.

The life of the tree has been taken in vain as the stick, the substance of the shapely stick to become imitation-a-la-mode; the precious efflorescent patterns of wood, to be painted out of sight; its silken textures vulgarized by varnish in the misshapen monstrosities of a monstrous "taste."



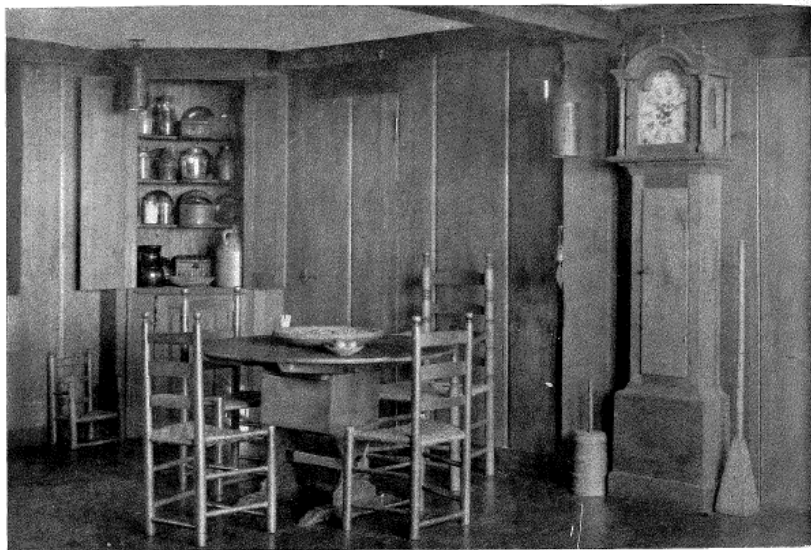
TAHOE CABIN, "SHORE TYPE"  
FRANK LLOYD WRIGHT, ARCHITECT

The noble forest is become an ignominious scrap-heap in the name of Culture.

The Machine, then—was it—that placed this curse on so beautiful a gift to man? so friendly a material—this brother to the man—laid thus low in murder.

No.

Unless the sword in the hand of the swordsman murdered the man whose heart it ran through.



WALLS OF WOOD, UNPAINTED, "LET ALONE AS WOOD"

The Machine is only a tool. Before all, the man is responsible for its use.

His ignorance became devastation because his tool in callous hands became a weapon effective beyond any efficiency such hands had known before, or any sensibilities he ever had. His performance with his Machine outran not only his imagination which, long since, it vanquished, but the endurance of his own sensibilities as human.

No. Blame the base appetite the Machine

released upon the forest, for its devastation. Blame the lack of imaginative insight for the scrap-heap we have now to show for the lost trees of a continent—a scrap-heap instead of a noble architecture.

What should we have had to show were it otherwise? Vain speculation. What may we have to show for what is left—if base appetite becomes enlightened desire and imagination awakes and sees?

Well—we may have the nobility of the material if nothing else.

We may have simple timber construction, at least over-head, as a scientific art, free of affectation. The wood let alone as wood or as richly ornamented by hand in color or carving.

We may have satin-boarded wainscots—polished board above polished board, the joints interlocked by beaded insertion, so that shrinkage is allowed and the joint

ornaments the whole in harmony with its nature, individualizing each board.

We may have plaster-covered walls banded into significant color-surfaces by plain wood-strips, thick or thin, or cubical insertion, wide or narrow in surface.

We may have ceilings rib-banded in rhythmic arrangements of line to give the charm of timbering without the waste.

We may use flat wood-strips with silken surfaces contrasting as ribbons might be contrasted with stuffs, to show what we meant in arranging our surfaces, marking them by bands of sympathetic flat-wood.

We may use a plastic system of varying widths, weights of finely-marked wood rib-bands to articulate the new plastic effects in construction never dreamed of before. The flat-strip came so easily into our hands, by way of the machine, to give us—the "back-band" that follows all outlines even in an ordinary dwelling, by the mile, for a few cents per foot.

We may compound composite-slabs of refuse lumber glued together under high pressure and press into the glue, facings of purest flowered wood veneer on both sides—making slabs of any thickness or width or length, slabs to be cut into doors, great and small, tops thin or thick—preserving the same flower of the grain over entire series

or groups of doors as a unit, (see page 488).

We may mitre the flowered slabs across the grain at the edges of the breaks to turn the flowering grain around corners or down the sides and thus gain another plastic effect from the continuity of the flowering.

We may economically split a precious log into thin wide veneers and, suitably

"backed," lay each to each, opening one sheet to lay it edge to edge with the sheet beneath it, like the leaves of a book so the pattern of the one becomes another greater pattern when doubled by the next.

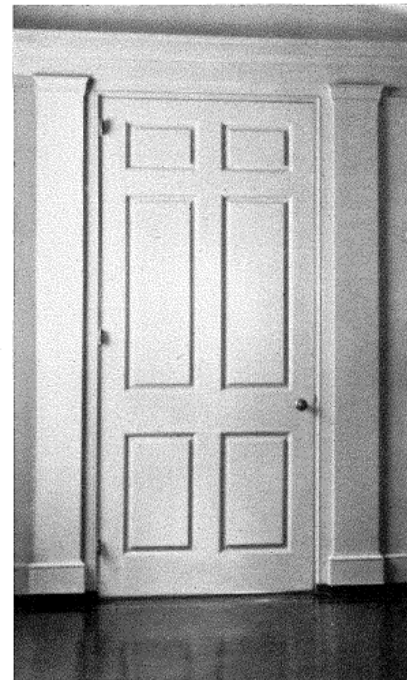
We may cross-veneer the edges of top-surfaces so that the grain of the top carries the flower unbroken down over the ends as it does on the sides.

There is the flat fillet (it happens to be true to wood) to "talk" with—if one must "explain."

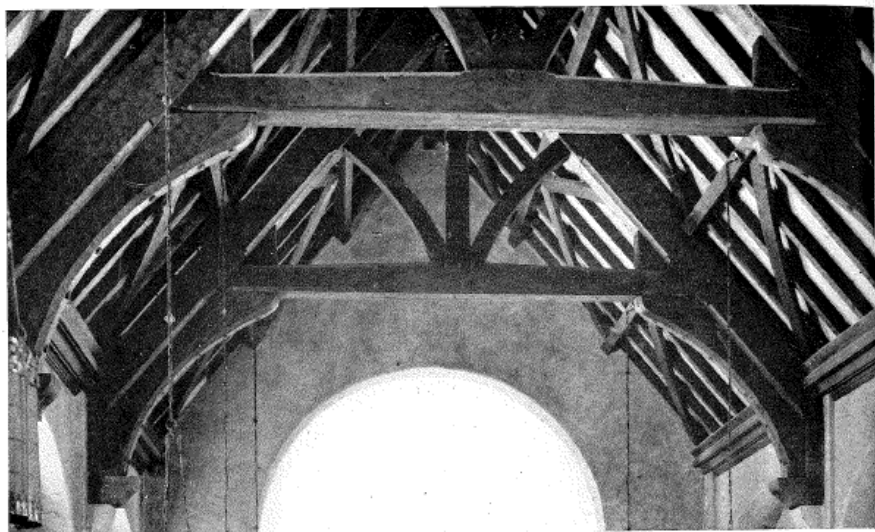
We may use the plain-spindle alternating with the thin flat-slat or square or round ones in definite rhythms of light and shade—allowing the natu-

ral color and marking of the wood to enrich and soften the surface made by them as a whole. With this we may bring in the accent block.

We have the edgewise and flatwise-strip or cubical stick and accent-block to "ingeniously" combine into screens for light-filters or for furniture.



WOOD ENCASED IN AN ARMOR OF PAINT



TIMBER, ROUGH HEWN FROM THE LOG AND USED STRUCTURALLY

These treatments all allow wood to be wood at its best and the machine can do them all surpassingly better than they could be done by hand—a thousand times cheaper.

Thanks to the machine we may now use great slabs compounded under heat and pressure, where rotary-cut veneers unrolled from a log in sheets ten feet long and as wide as the circumference of the log will yield, in thicknesses of one-thirty-second of an inch, wood wall-paper. And we may lay these sheets, against various compounds, on ceilings—with any manipulation of the efflorescence, now exaggerated by the rotary cut, but still true to wood, and do this to any extent.

The finer properties of wood have been emancipated by the machine.

Observe that, naturally, all these are plastic effects. That is, used for the sake of the surfaces and lines of their "wood-quality" in contrast to other materials. Carving has a small place in the grammar of these effects, except as an "insert."

There is always the limiting frame or border, constricting surfaces—the most obvious of all uses to which wood is put. And there is always a use of the solid wood stick to be made into honest furniture. There is the wooden frame to be over-stuffed for deep comfort—wood showing only at extremities. In light stick-furniture wood combines well with plaited rattan or raffia.

In other words the beauty of wood as silken-texture or satin-surfaces upon which nature has marked the lines of its character in exquisite drawing and color qualifying flat-surfaces and rib-bands of infinite delicacy, in all variety—because we work with the machine, understanding wood, is more liberally ours.

Another opportunity is wood-inlay. There is the chequered turning of the grain to crossgrain in the same wood.

There are the patterns of inlay in contrasting woods.

There are the cunningly cut, denticulated or machined strips to be inlaid between

boards or used as edging flat surfaces of veneer: the denticulations to be picked out by polychrome in transparent bright stains, perhaps.

There is the whole gamut of transparent color stains from brilliant red, green, yellow and blue, to all hues in between, to aid and intensify or differentiate these uses of wood.

And for exterior work there are characteristic board-and-batten effects—horizontal, vertical, diagonal or checkered, got out of planks or boards with surfaces rough from the saw to be color-stained or allowed to weather.

There are roofs boarded lengthwise of the slope, likewise inlaid between the joints but with properly devised ornamental copper flashing to come up over the edges and the ends.

There are brilliantly decorative treatments of poles, free standing as the Alaskan totem stood, or in rows, horizontal or vertical. Palisaded walls.

There are combinations of the slender pole and square-stick and the spindle-rod, alternating with the slat or the board in endless rhythmic variety.

All these undressed-wood, plastic treatments, are much the same as for inside work, allowing wood to be wood but coarser in scale with an eye to weathering in the joinery.

And finally after we have exhausted the board and machined inlaid-batten, and the spread of the figure of the wood-flowering over flat surfaces, and the combinations of the following back-band and the varying rib-band—the spindle-stick, the flat-slab and the rod, the marking-strip and the accent-block, the ornamental-pole—rectangular timbering ornamentally planked, the undressed, interlocking boards on walls and roof slopes—then—

We have combinations of all these. A variety sufficient to intrigue the liveliest imagination for as long as life lasts—without once missing the old curvatures and im-

aging of organic-forms; the morbid twists and curious turns, the contortions imposed on wood in the name of the "Styles" mostly using wood as a makeshift—or, if not, as something other than wood.

A most proper use of wood, now that we must economize, are these treatments using marking-bands or plastic-ribbons, defining, explaining, indicating, dividing, and relating plaster surfaces. It is economy in the material, while keeping the feeling of its beauty. Architectural-articulation is assisted and sometimes had alone by means of the dividing lines of wood.

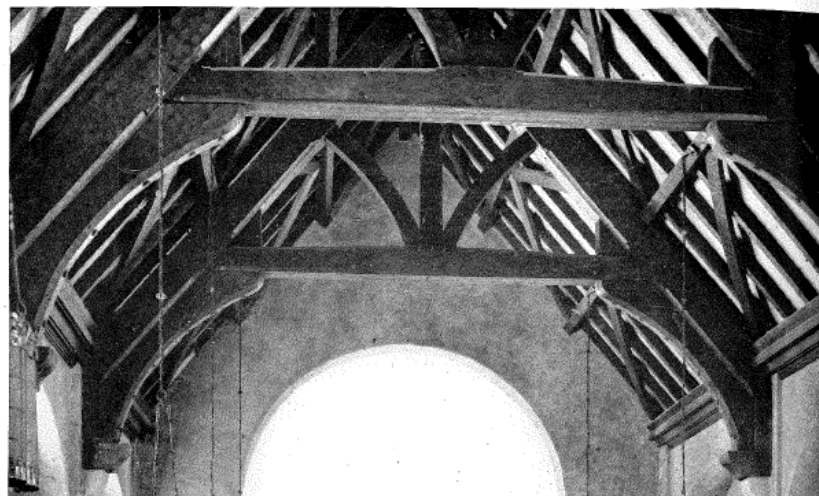
In these plastic treatments—using wood gently banded or in the flat allowing its grain and silken surface even in the spindle-screens to assert itself and wood-quality to enter into effect of the whole, we have found the Machine a willing means to a simple end. But for the Machine this free plastic use of wood either in rib-bands or extended flowered surfaces would be difficult, uncharacteristic and prohibitive in cost.

Moreover this is true conservation of wood because in these effects it is used only for its qualities as a beautiful material. The tree need no longer be lost.

In these papers we are not speaking of "building" as a makeshift, but of building as the Art of Architecture. And while all building, as things are, cannot be architecture but must make shift—architecture should hold forth such natural ways and means for the true use of good materials that, from any standpoint of economical realization of the best the material can give to structure, architecture would put mere building to shame. Stupid waste characterizes most of the efforts of mere builders, always—even or especially when, building for profit.

Wood grows more precious as our country grows older. To save it from destruction by the man with the machine it is only necessary to use the machine to emancipate its qualities, in simple ways such





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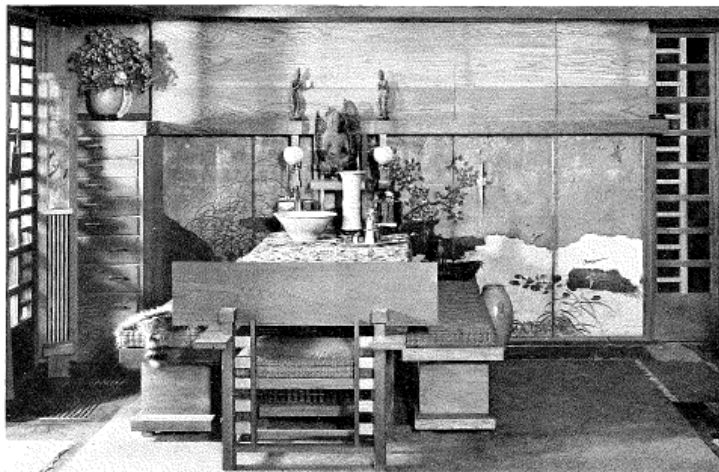
Wood grows more precious as our country grows older. To save it from destruction by the man with the machine it is only necessary to use the machine to emancipate its qualities, in simple ways such

as I have indicated, and satisfy the man.

There is no waste of material whatever in such uses, either in cutting up the tree or adapting the cutting to the work done when it is of the character described. The machine easily divides, subdivides, sands and polishes the manifold surfaces which any single good stick may be made to yield by good machine methods.

Wood can never be wrought by the

machine as it was lovingly wrought by hand into a violin for instance, except as a lifeless imitation. But the beautiful properties of wood may be released by the machine to the hand of the architect. His imagination must use it in true ways—worthy of its beauty. His *plastic* effects will refresh the life of wood, as well as the human-spirit that lost it—as inspiration—long since.



THE FIVE DOORS OF THE CUPBOARD ABOVE THE TABLE WERE CUT FROM A SINGLE  
CYPRESS VENEERED SLAB  
LIVING ROOM, TALIESIN  
FRANK LLOYD WRIGHT, ARCHITECT