# GIFTS OF FIRE AND EARTH

**Shin'ichi Okada**
**(Japan)**

*In 1955 graduated from the Departament of Architecture of University of Tokyo. In 1957 graduated from the Graduate School of the Departament of Architecture of University of Tokyo. In 1963 graduated from the Graduate School of Yale University and worked at Skidmore, Ownings and Merril Office in New York City.*

*Lectured at Chiba University, Toritsy University and Tokyo University. In 1969 he established Okada & Associated with 70 assistant architects. Member of the Committee of The Study of Urban Design for Historical Cities. Member of the design prize of the Architectural Institute of Japan. Jury of the design prize of the Architectural Institute of Japan. Jury of the Japanese Institute of Hospital Architecture Prize. Architectural commissioner of Creative Town Okayama (CTO).*

*Registered Architect (1st Class) Japan and Singapore.*

*MAIN AWARDS*

*1969 First place award in a competition for the design of the japanese Supreme Court Building.*
*1974 Award from the Building Contractors Society for the design of Nippon Dental College Campus in Niigata.*
*1975 Award from the Architectural Institute and from the Building Contractors Society for the design of the Japanese Supreme Court.*
*1979 Award from the Building Contractors Society for the design of Gumma prefectural Library.*
*1988 Award from the Public Buildings Association for the design of the Orient Museum of Okayama City and the desig of Fukushima City Concert Hall.*
*1991 Award from the Public Buildings Association for the desing of Okayama Prefectural Museum and the design of Mt. Hakodate Observatory.*

The tiles I use as architectural finishing materials belong to the immense group of things made by firing earth or clay - vessels in earthenware or porcelain, bricks, tiles, and in more modern times insulators and machine parts - which have been both useful and cherished by humankind from time immemorial.

## Tiles. Architecture. Space

### 1- Vessels

Like people everywhere, the Japanese have made, used, and loved ceramic vessels for long ages. From the fifth to the third century BC, their dominant pottery type was Jomon ware, so named from its bold straw-rope-pattern (Jomon) decoration. Somewhat later (from the third century BC to the third century of the Common Era), the people of Japan abandoned hunting-and-gathering for a more settled agricultural way of life. This epochal change was accompanied by the appearance of a more restrained style of pottery, known as Yayoi. Nonetheless, Yayoi pottery, though unglazed - glazing techniques were still unknown in Japan - made good aesthetic use of color variations produced by firing. Today many people greatly admire simple pottery of this kind. Bizen ware, produced in my home district of Okayama (Ibe), in some respects resembles ancient Yayoi pottery.

At a still later era in the development of Japanese pottery, techniques like porcelain manufacture and the use of blue underglaze and multicolor overglaze were imported from China. Potters in Imari (Arita), in Northern Kyushu employed these techniques in the development of Imari porcelains, which combine both blue underglaze and multicolor overglaze. Extensively exported to Europe from the fifteenth century, Imari ware exerted a strong influence on Western ceramics, especially in the Netherlands. Both Dutch Delft and German Meissen ware can be said to resemble Imari. Today, between the extremes of unglazed, simple Bizen and elaborately decorated Imari, Japanese ceramics includes a whole range of wares like Iga, Shino, Hagi, Kutani, Fujima, Kiyomizu, and so on.

Three factors establish the characteristics of a ceramic style: the clay from which it is formed, the glaze covering it, and the potter's skills. Since these factors vary from place to place, different locales produce distinctive ceramic styles. The people of Japan cherish these styles as embodiments of local culture. Everyday, my own table is set with representatives of several ceramics styles. A still wider array is used for the small amounts of many different foods served in the traditional kaiseki meal in which the diner is delighted by the beauty of the dishes as well as by the flavors of the delicacies contained in them. Of course, other cultures all over the world produce and enjoy their own kinds of interesting and appealing ceramic wares.

### 2- Tiles in Architecture

Traditionally, the Japanese people have made limited use of ceramics in architecture, roofing tiles and flat tiles set in plaster walls called namako kabe being the major exceptions. In both these instances, the tiles are of field earth fired at low temperatures. Mostly they are an unglazed gray, although glazed tiles are employed in cold regions. As is the case in Spain, roof colors and luster can set the mood of an entire town. This is why predominantly gray roofs make most Japanese towns and cities (particularly Kyoto) look somber and unobtrusive from the distance. In the north, a somewhat different atmosphere is created by brown-glazed roofing tiles.

Other sophisticated cultures have made more colorful use of roofing tiles. For example, the roofs of the Forbidden City in Beijing are clad in tiles glazed yellow. Mosques in the Middle East often have golden ceramic-tiled roofs on domes, the interiors of which are faced in turquoise-blue mosaics. Portuguese exterior walls are sometimes decorated with interesting patterns in colored tiles, and their spacious interiors may be enriched by murals in colored tiles. For instance, Oporto Station is graced by tile mural of high artistic caliber.

Ceramics would appear to be indispensable to the very existence of the designs of the Spanish architect Antonio Gaudi. It would be interesting to know where and by whom the ceramics he used were made.

In our age, in the architectural field, industrially produced materials are gradually taking over from natural ones, like ceramics. But, as the foregoing brief summary suggests, ceramics have played too important a role in human culture for architecture to be able to dispense with them now. Indeed, such a thing must not be allowed to happen. Losing such a high- quality, potentially artistic material would be tantamount to losing a vital part of our cultural heritage. My use of ceramics as cladding in my architectural design derives from a desire to help prevent this from occurring.

### 3- Spatial Fluidity

The Japanese and the European approaches to architecture differ fundamentally. Composed primarily of masonry bearing walls, European buildings are interpreted in terms of mass. In such examples as Palladio's Villa Rotunda and Saint Peter's Basilica in Rome, the emphasis is on a piece of architecture as an independent entity with its own individuality. Traditional Japanese architecture, on the other hand, relies on a post-and- beam structural system that, making no clear demarcations among zones, is characterized by fluidity of internal-external space. In place of the strictly evident walls of Western buildings, Japanese architecture employs sliding paper-covered or paper- filled panels - fusuma or shoji - to interrupt the spatial fluidity only temporarily. Although both are independent pieces of architecture, a comparison between the Villa Rotunda and the five-story pagoda at the temple Horyu-ji makes the basic difference clear. Deep eaves resulting from the post-and-beam structure cast dramatic shadows on the pagoda. Although it includes many Western-style walls, my own design too is characterized by a spatial fluidity always oriented farther onward and inward.

At the beginning of a celebrated Japanese literary work called the Hojoki, written in the thirteenth century by Kamo no Chomei, occurs this passage: "The river flows on ceaselessly but is never the same river it started out as...."

The river is fluidity itself. It lacks permanence because it never stands still. Nevertheless, in its endless flow, water gives form to the spatial entity called the river. To my mind, architectural spatial fluidity embodies the permanence - permanent space - implied in the Hojoki philosophy. My design work attempts to treat fluid space in such a way as to express permanent space. The flow connects with the next space. Thus, transcending planar expanses and isolated individual entities, my architecture is related to the creation of broader environment.

Wall surfaces serve as a means of achieving the primary aim; that is, creating interior and exterior spaces. Interior walls enclose human beings as does the womb. Exterior walls function as a skin enclosing the building itself.

Contemporary architects rely on Modern Architectural materials like steel, concrete, and glass. But, as an architectural integument, unfinished concrete looks so pathetically naked and embarrassed in the crowded urban setting that I always feel I would like to offer it some clothes to put on. Covering concrete up is practically as well as aesthetically advisable because exposure shortens its durability. Cladding prolongs a building's life, and tiles are an extremely convenient material for this purpose.

## 4- Combining the Abstract and the Elaborate

Like dishes, clothes reveal much about the nature of a given culture. As if by wonderful invention, traditional Japanese clothes are entirely rectilinear; that is to say, the cloth of which they are made is never cut in curved lines. Furthermore, no reference is made to the body size of the wearer when they are cut from cloth sold in rolls, called tan, of standard width and length. The garment, for instance the kimono, is cut and sewn in straight lines. In donning it, the wearer adjusts it to his own body and fixes it in place by means of several under sashes and one main sash (obi), which in the case of women's clothes can be rich brocade. Colors and patterns of fabric and obi as well as a few such accessories as sash ornaments (obidome) express individual tastes and personality. The concept reflected in such clothing is a splendid combination of abstract rectilinear cutting with the intricacy and varied textures of cloths, sometimes damask or elaborately embroidered fabric.

My architectural design too is founded on harmonizing two fundamental elements: the abstract and the elaborately detailed. Spaces are realized by abstractly positioned walls. Then the surfaces of those walls are decorated with detailed textures and *matières*.

I find tiles an effective *matière* to use either in a cladding skin or as ornament. Many of the materials around us - some synthetic, but others natural materials like ceramics, lacquer, textiles, cast metal, stone, brick, and wood - can serve the same purposes. In addition to them, diverse cultural factors like music, literature, and poetry are intimately related to architectural design.

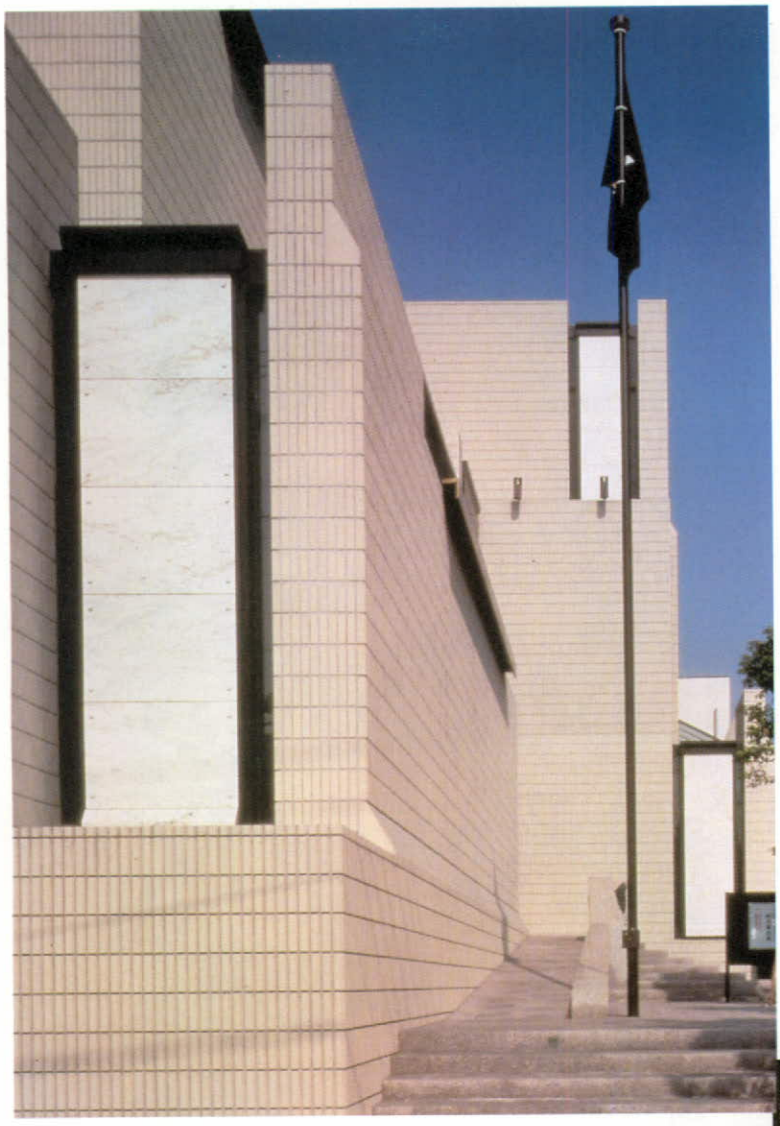
## 5- Examples

### • Walls as Expressive Elements

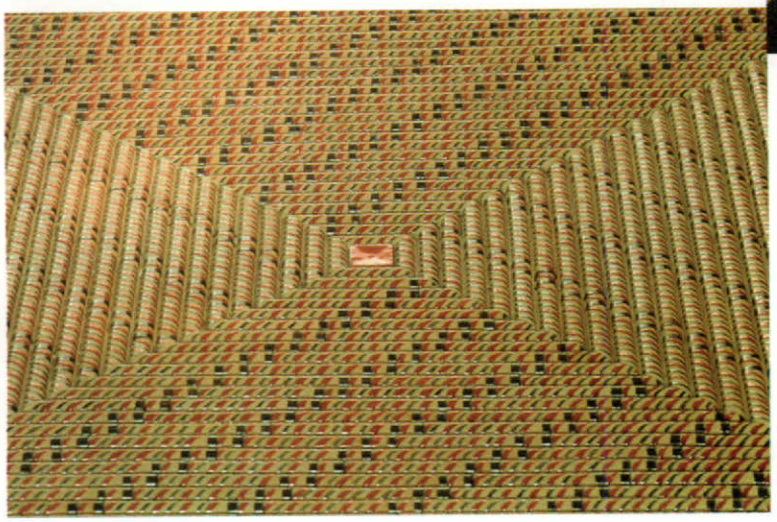
A major theme in my architectural design is determining how to express space. In creating space, I interpret walls as an indispensable conceptual vocabulary item.

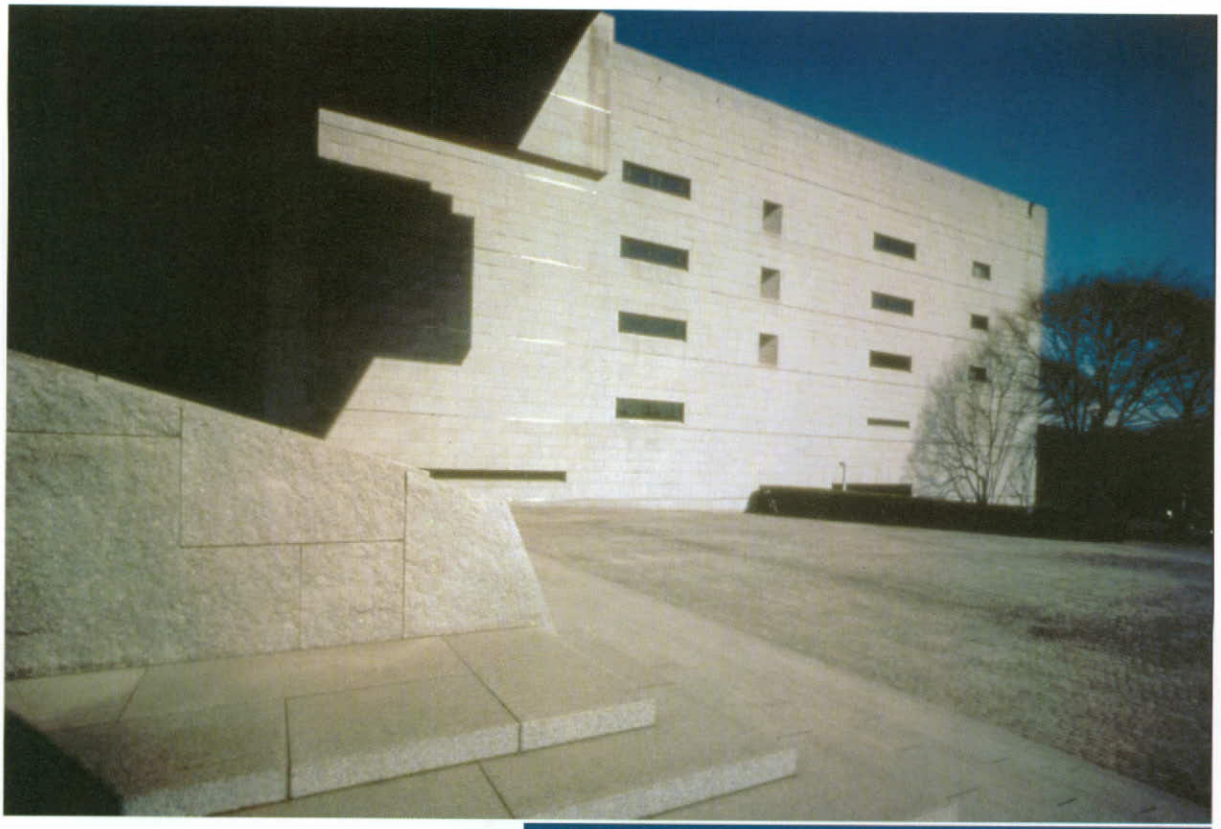
In the "Nippon Dental College, Niigata" space is created by means of overlapping walls using ceramic tiles. In 1972, when the building was built, exfoliation was so serious a problem that many architects and builders decided against using tiles. But, reluctant to lose so valuable a material, I devised a method of attaching them to the architectural body that enabled me to clad the whole building with tiles. This was the first time I used them in my work.

The "Sengawa Primary School" is characterized by masonry walls of bricks made in England. Its earthquake-resistant system called for laying bricks while attaching them to a homogenous reinforcement of steel bars installed along the surface of the concrete body. Using this warmly human building material in balcony walls adjacent to classrooms created a buffer zone between interior and exterior.



**Oriental Museum of Okayama**





Supreme Court of Japan in Tokyo

Prefectural Art Museum of Okayama

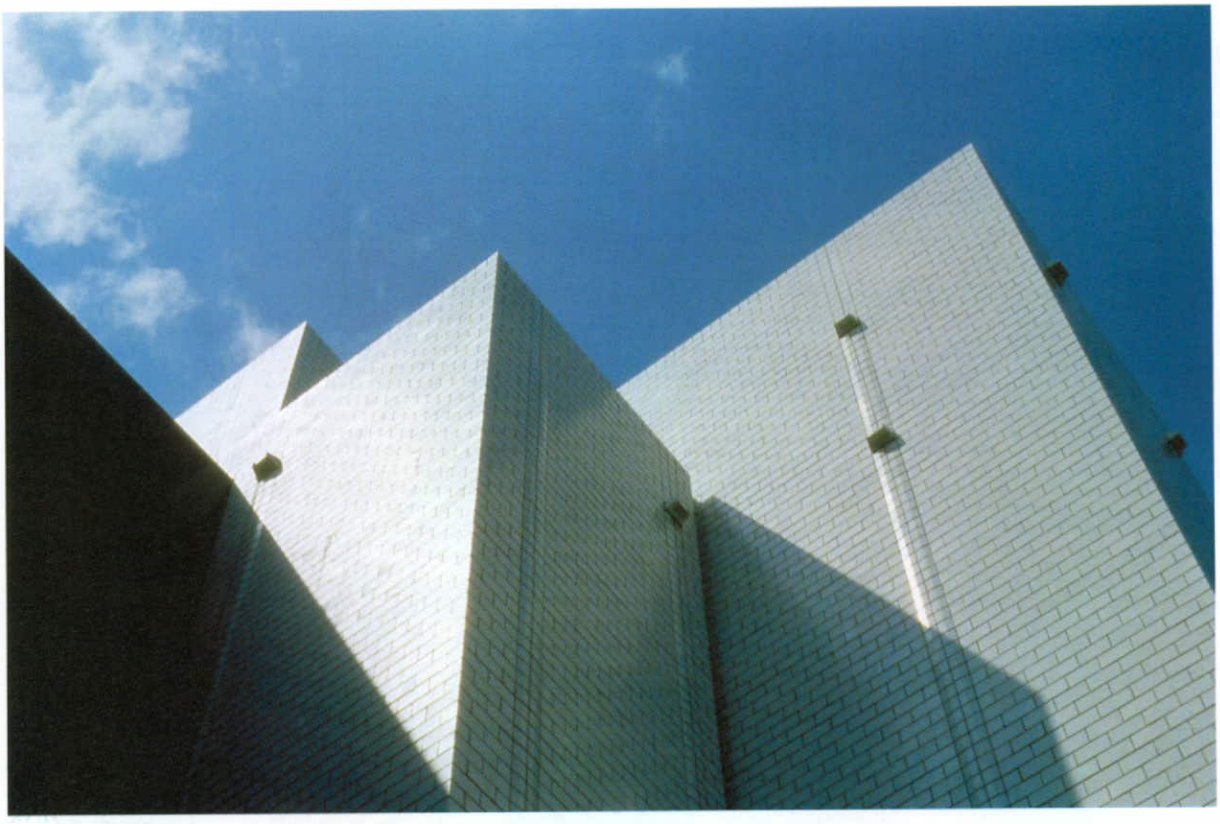
**Metropolitan Police Headquarters in Tokyo**

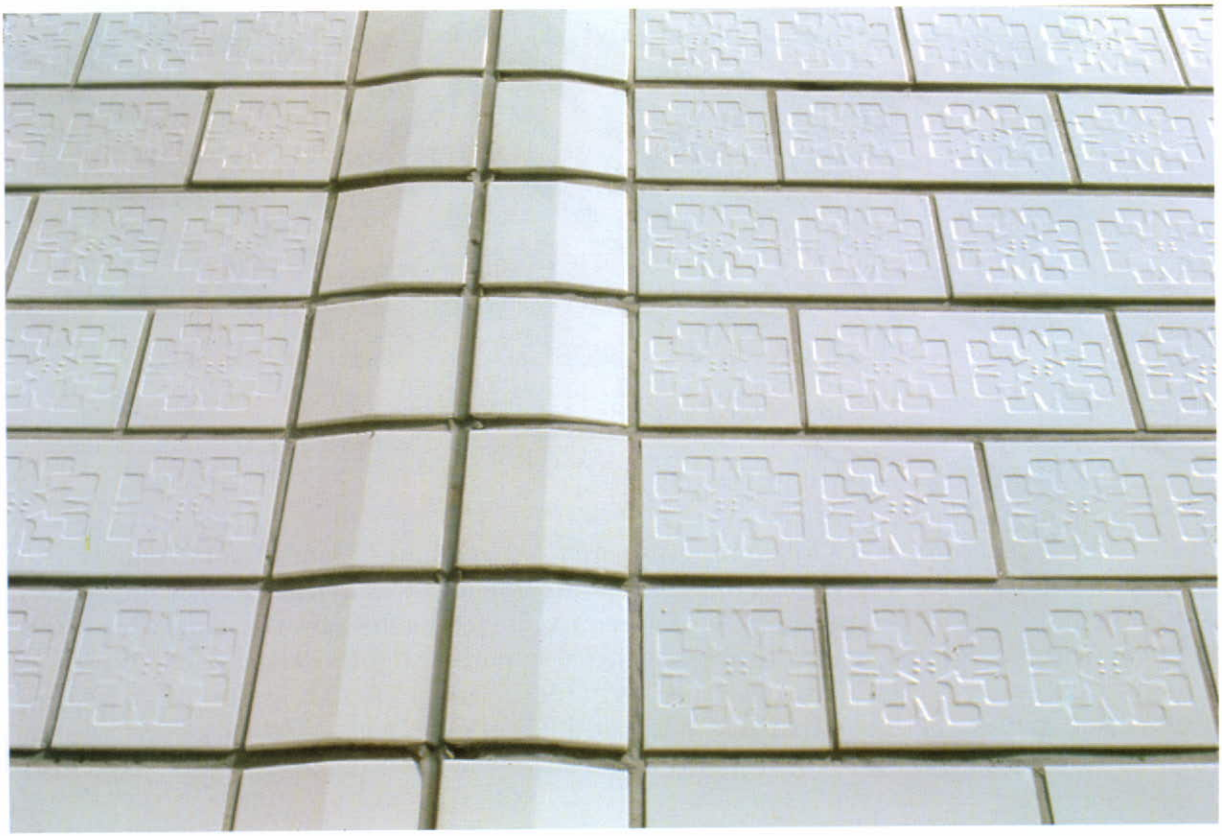
"The Okada Residence in Hakusan"
"Sangan Art Center"

At the "Utsunomiya Art Museum", tiles are used in a somewhat different fashion in an attempt to simulate the appearance of plaster walls. My aim was to produce the impression of a white monolith by means of wall surfaces unprotected by the eaves or coping necessary in Japan, where rainfall is heavy. To achieve this aim, white, slightly glossy porcelain border tiles (30x227) were set with joints pointed with mortar mixed with white sand. Expansion joints used against thermal expansion and contraction were concealed by means of a dry method in which border tiles were inserted in ribs in the undercoating.

- **Harmony with Design Motifs**

The "Middle East Cultural Center" is an annex where the Idemitsu Art Museum displays its oriental collection. In preparation for its design, I traveled in the deserts of the Middle East, where I saw ziggurats and the tower at Samarra. My experiences there led me to try to





**Gumma Prefectural Public Library in Maebashi**

express the Mid-Eastern landscape by means of tiles (90x227) with slightly irregularly textured surfaces reminiscent of the feeling of sun-dried brick.

Designed at about the same time as the Middle East Cultural Center, the "Okayama City Orient Museum" too houses a collection of Mid-Eastern art. While providing a museum suitable to the nature of its exhibits, I wanted to harmonize the building with the venerable Okayama historical environment. I elected to achieve the aim, not with form elements - a mosque-like roof, for instance - but with wall surfaces faced with vertically set, ribbed tiles (60x227).

By means of the very primitive method of piling walls one on another, I attempted to find points in common with the Orient. The ceiling of the double-height hall is decorated with oriental- style colored-tile mosaics. Some people see a resemblance between this building and ziggurats.

The "Metropolitan Police Board" is located in the heart of Tokyo's governmental district, down the street from the granite Supreme Court, another building designed by me. The National Diet Building too, the heart of the district, is clad in granite. Furthermore, the stone ramparts of the imperial palace (formerly Edo Castle) are not far away. Taking this environmental context into consideration, I came to the conclusion that stone was the most fitting image for the seventeen-story police building. But, since real stone was out of the question because of its mass and volume, I researched the diverse possibilities of tile in the hope of finding one that would produce a stone-like effect. It seemed to me that porcelain, which is made of kaolin (decomposed feldspar), would be more likely to produce a mineral-like appearance than earthenware. This line of thought led to the creation of fairly large (120x227) porcelain tiles with regularly positioned surface projections.

- **Interior Expression**

As is classically illustrated by Gaudi's decorative tiles and the *Azulejos* mural I saw in Portugal, by their very nature as surface cladding, tiles play a decorative role unlike the structural function that bricks serve in masonry buildings. (Though of course not tiles, the thin plates of marble facing the walls of Santa Maria del Fiore, in Florence, perform the same kind of ornamental function). The decorative effects of tiles are especially useful in interior spaces, where we live and work.

Blue kiln-deformed tiles (60x227) cover the interior walls of the "Fukushima Concert Hall" for classical music. Small mosaic tiles (60x108) create textile-like figures on those of the small auditorium of the "Okayama Art Museum".

As cities grow larger, the scale of the urban plaza tends to grow smaller. Whereas plazas were once the city's main exterior spaces, today's urbanites tend to regard them as something like living rooms. The best kind of wall treatment in such plazas is one of an interior - that is, an ornamental - nature. Consequently, kiln-deformed tiles with slight depressions in their upper surfaces and with a Tang Chinese three-color glaze clad the exterior walls facing the entrance plaza at the "Okayama Prefectural Museum of Art". Set in vertical stripes against the lustrous gray of the walls, they are intended to produce a tapestry-like effect.

The same design aim dictated the treatment of the walls surrounding the entrance plaza at the "Gumma Prefectural Library". Ornamental designs have been stamped into the surfaces of its white tiles.

- **Combination**

The "Gifu Prefectural Library" consists of two main architectural blocks. Large inset tiles are used in the massive main library block, and border tiles in the post-and-beam block housing daily- life facilities.