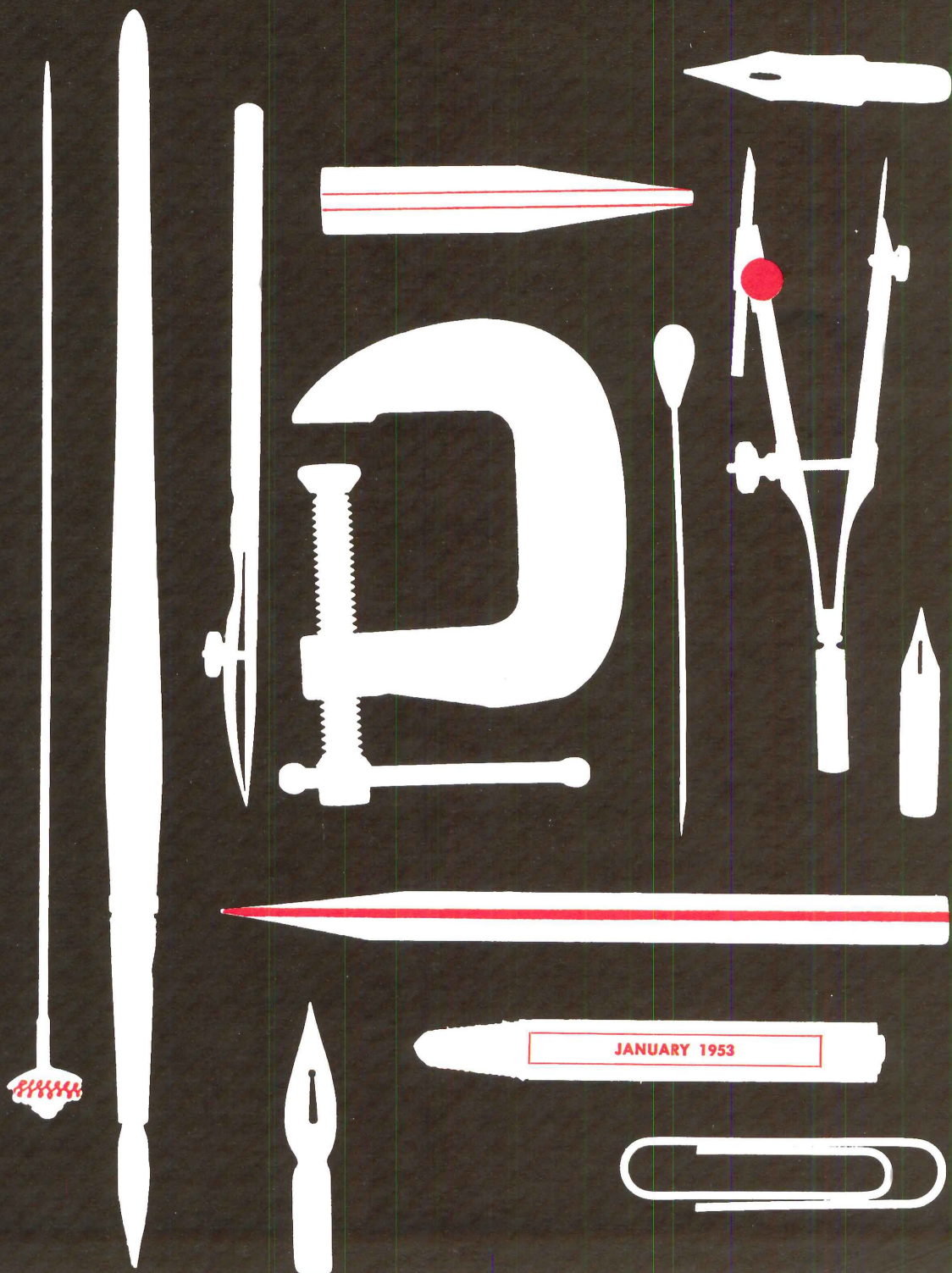


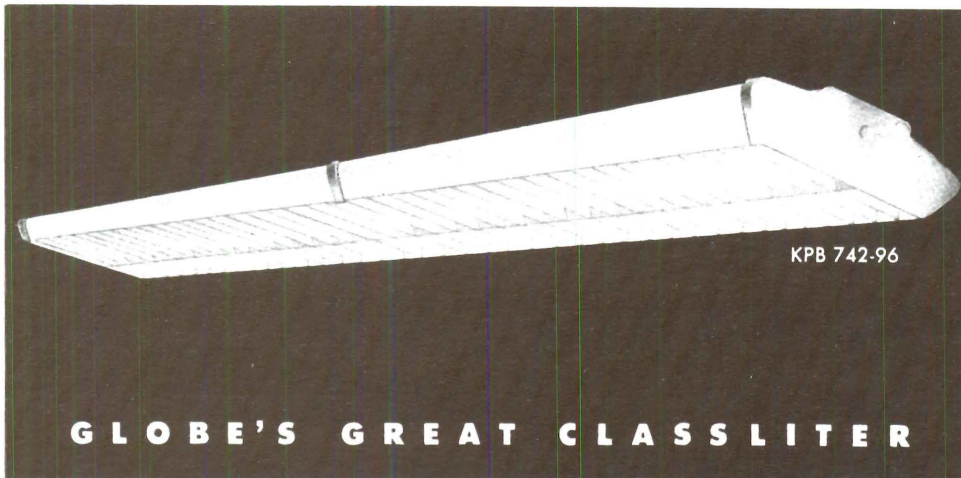
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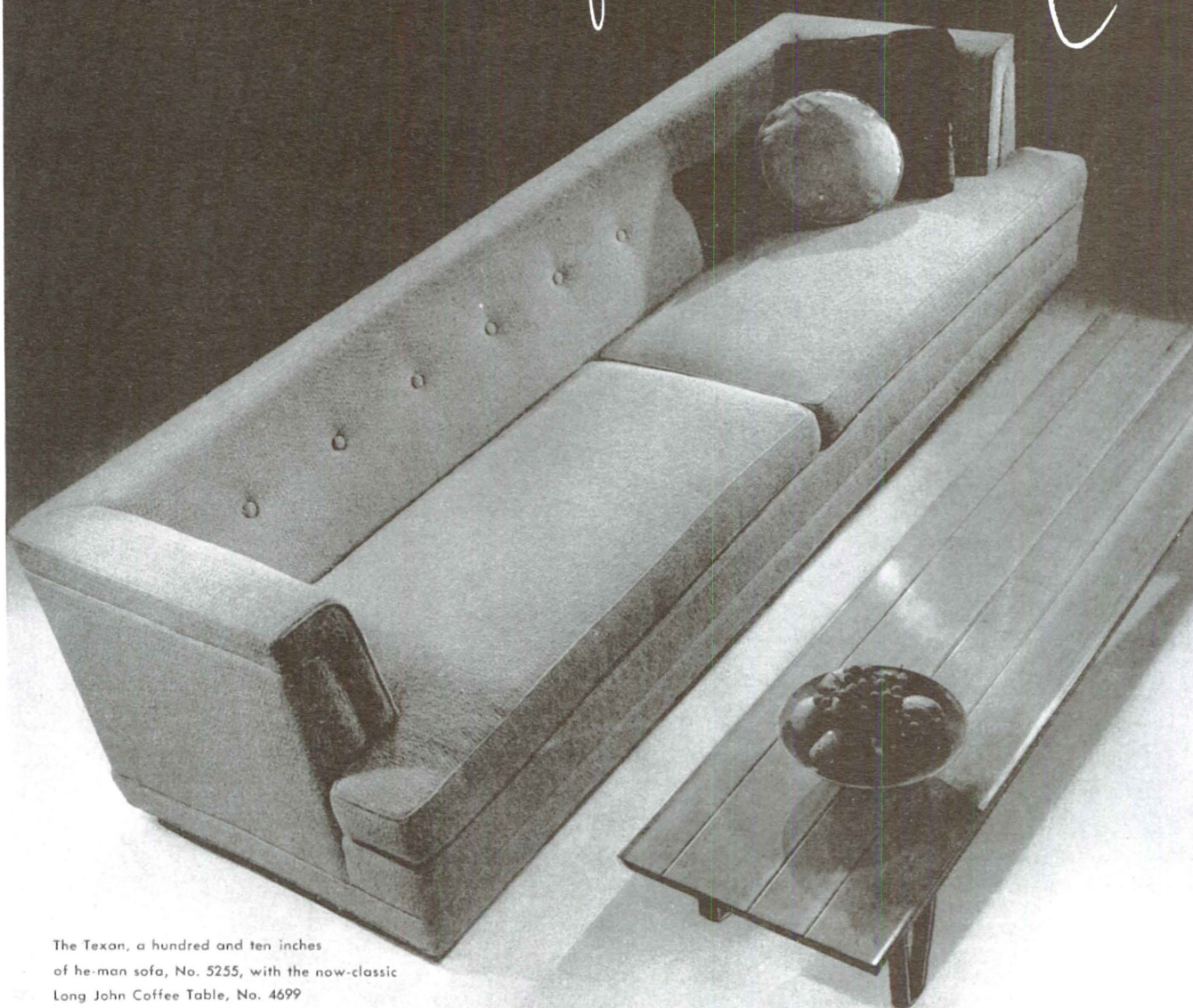
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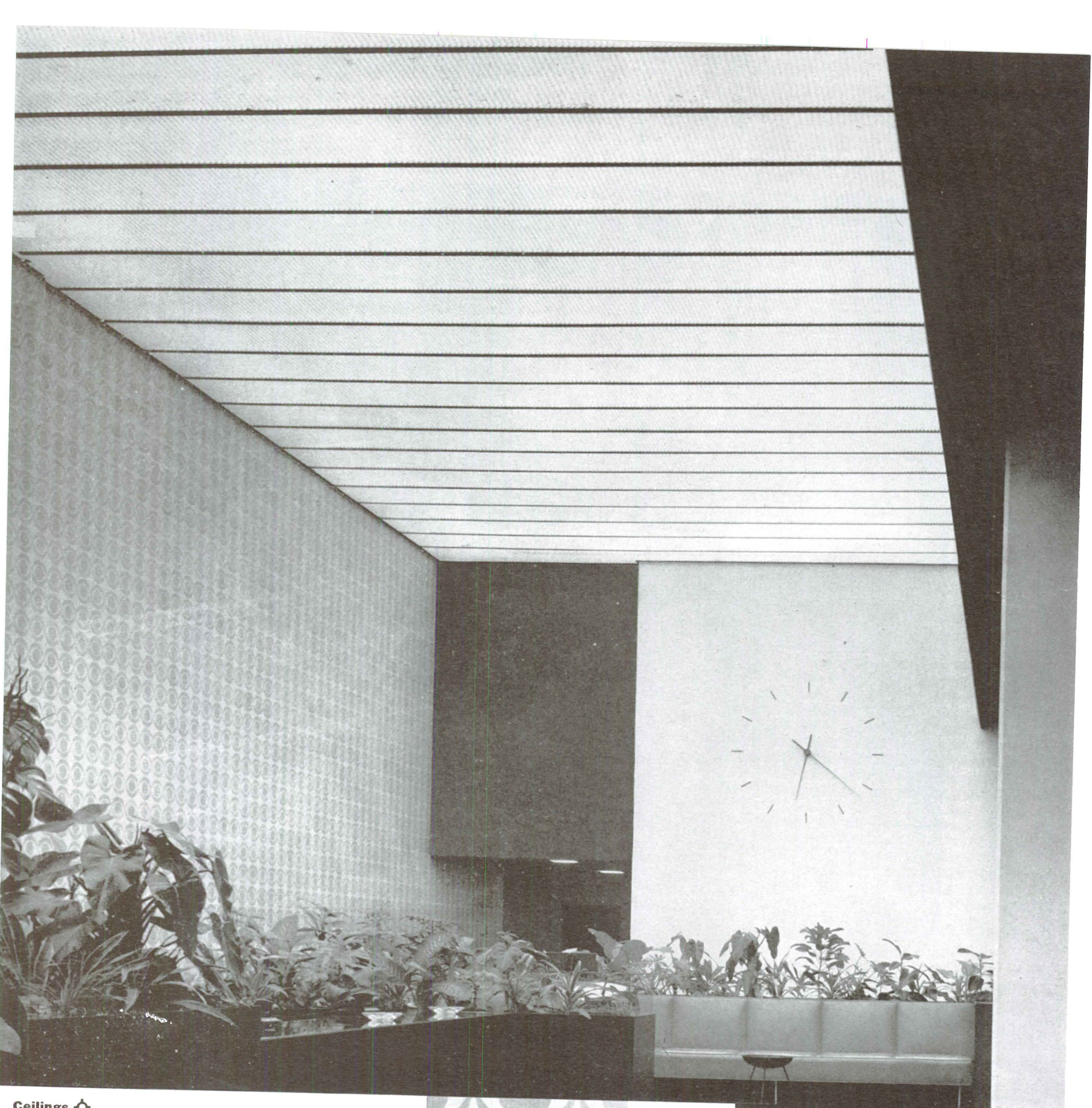


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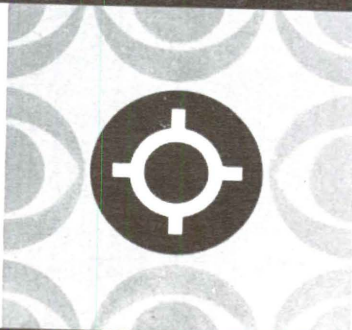
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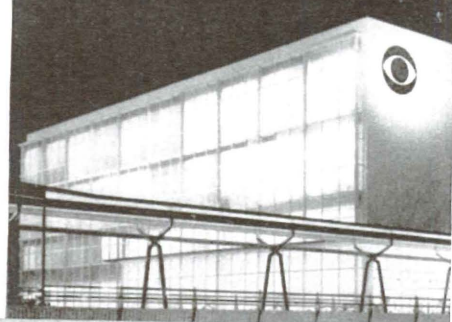
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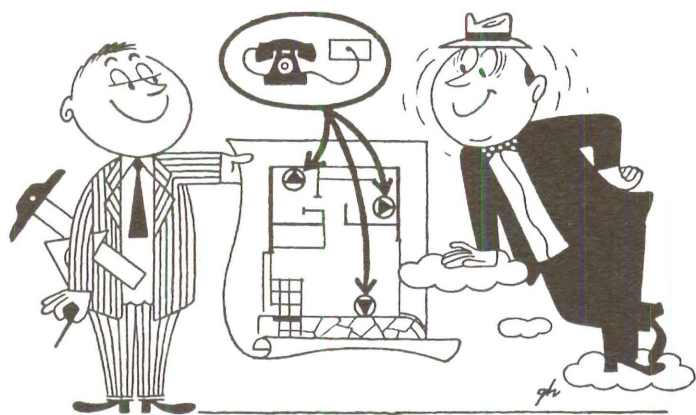
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CINEMA

ROBERT JOSEPH

From time to time this column has lapsed in its observations about films to delve a little into the adjoining field of television, and it will be recalled that some years ago we were enthralled by the potentialities of this new and exciting medium. The novelty has worn off, the newness of the notion of having entertainment visually at home has lost some of its fresh-paint sparkle, and it might be time to evaluate what we have some four years later.

As originally stated, television is potentially the most powerful of all media. The very fact that it invades the privacy of the home, the very ease of its availability gives it a strength which movies have never had. What it lacks in its potentials as visual entertainment to be seen and its enjoyment shared in company with hundreds or thousands of other people in the immediate vicinity—namely, the motion picture theater itself—it more than makes up in a sense of immediacy.

So much for the medium from the spectator sense. Technically television can do almost everything that films can do, do it more quickly and in some instances better. Optical effects which take days and often weeks to achieve in photographic laboratories, can be achieved in seconds by the use of ingenious camera work. Superimposition, for example, is not a difficult cinematic effect, but it takes careful laboratory blending which requires the utmost in skills and know-how. On television, superimposition becomes a matter of button-pushing, the visual amalgam of two cameras concentrating on two sequences of action (sometimes only one from two different angles).

The "fade," the "dissolve" and the "wipe" have become standard aspects of motion picture grammar to indicate time passage; to underscore an emotion, a characterization or a mood; to suggest the end of one chapter or act of a story and the beginning of another. These were the grammatical devices which were evolved by D. W. Griffith and have become accepted usage. Technically they are usually worked out in the laboratory after the entire picture has been finished, and the producer, the director and the film editor then return to their story to weave in emphasis, continuity, suspense, and that ephemeral portion of dramaturgy called "play structure." The TV director accomplishes these grammatical tricks while the show is on, again by pushing buttons and by advising his on-the-set cameraman to either wipe, fade or dissolve right then and there. The audience sees these effects simultaneously with the director of the show. In films these are expensive "tricks"; in television there is no cost factor beyond the cost of production itself.

In the better television shows the director has at least three cameras at his command, and sometimes as many as five and six, depending on the budget. By switching from one to the other, by going in on close-ups, dollying back, panning, crossing and moving in, the TV director is, of course, doing all the things that the film director takes so much more time to do with individual "set-ups" for each different camera position. This, too, is an enormous stride forward in the art of presenting on the screen that which is going on, on the TV sound stage.

In short, technically the TV producer and director have most of the advantage. Their disadvantage lies, as I see it, in the material with which they must work—the Stories, the Scripts, the Continuity Ideas. It is a fact, that there is a growing and serious concern with a slow and steady diminution of the enthusiastic audience which TV held about a year ago. Although it is true that new TV stations in areas which have not had TV before—Denver, for example—always attract a mushroom audience—various public polls indicate a growing dislike for the medium because of its failure to offer programs of quality and continuing interest.

The comics, those weekly zanys who come to our homes, are the easiest and earliest victims of this new trend. Their comedy palls after a few weeks of viewing, and even the standby stalwarts are finding that they no longer hold their captive audience. The comedy situation shows, husband and wife teams, face the same problem in failing to offer fresh ideas and fresh comedy. There are seven basic plots, so we are told, and there is a mathe-



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matematical limit beyond which these seven situations and the parlor-bedroom-and-bath locale cannot be parlayed.

The dramas on film seem to offer the best hope of the viewer. "Dragnet," for all its occasional pretensions, offers good visual entertainment. There is excitement, novelty and suspense and a fairly evenly changing background. "Foreign Intrigue," produced and directed by Sheldon Leonard in various European capitals is another series which offers different backgrounds. A newcomer to the series scene is "Biff Baker, U. S. A.," which co-stars Alan Hale, Jr., and Randy Stuart, and which offers every promise of being outstanding in this field and of this genre.

The program seems to exhibit something of the material with which TV serial shows must soon concern themselves—changing backgrounds and different plots. We tire quickly of a comic portraying three or four different stock characters week after week; we look at television in the hope that our screen will offer us something new. That something new can come out of the backgrounds and the stories. The show alluded to above consists of a series of spy plots and counterplots, which, in themselves are nothing new, but the series does have the advantage of fresh locales. Several units were dispatched to Europe to shoot process plates and stock footage for this particular show. It is offered only as an example of things to come, for TV producers are beginning to discover that shows hold audiences only when there is visual interest, and there is little visual interest on TV today.

MUSIC

PETER YATES

LISTENING

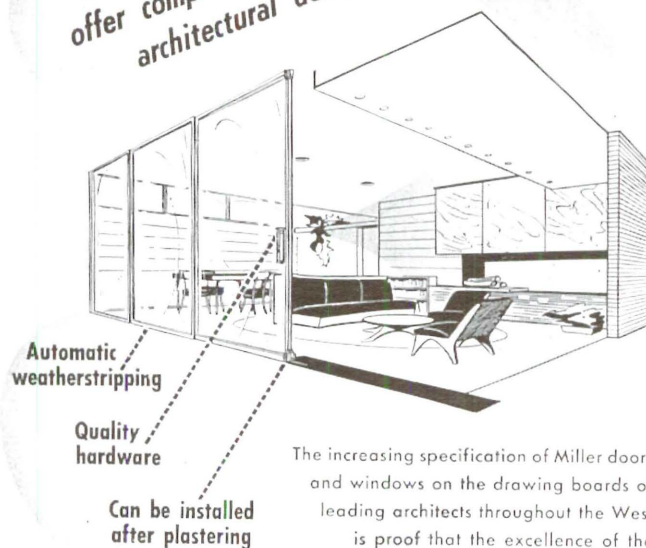
Visiting an exhibition of working models after the inventive plans and sketches of Leonardo da Vinci one grows aware of the single element lacking to draw all these skills together into usefulness. Here is a great swinging crane for excavating, and along the frame at ground level project at each side posts, for fifty or a hundred men to raise and inch it forward. Here are multiple gears, a roller bearing, a lathe with chuck, a horizontal drill press, a swinging bridge, but no motor. The power is supplied by hand screw, as in the printing press, by the bowstring and handle which motivate the drill. Men on foot inside push forward an armored tank. A man lying on a frame with wings, pedalling at great speed, hopes to fly like a bird. Two men and a sort of windlass with spring turn a sky screw, intended to rise in the air. Except for the strength of men or, less often, horses, because of the imperfection of the wheel, and the mobile weight of water, for which Leonardo developed a simple turbine, there is no means of power. Everything stands still, unless it is shoved, pulled by a windlass, hauled on a rope, urged clumsily by a wooden screw or a coarse gear.

We ourselves so take for granted the self-powering machine that we are inclined to regard these models as if they were amusing toys, quaint and precocious; to think of them more seriously as artifacts found on the highest level of one of the great ages of mankind. It is hard for us to imagine their inventor crying for a means of power, when Michelangelo was raising the dome of St. Peter's in the century of Erasmus and the Field of the Cloth of Gold—less difficult when we recall that the cloth of gold was used to make tents.

We cannot conceive the separate individuality, the spiritual inwardness of any one of the slaves who built the Egyptian pyramids, or of the Mayan sculptors who incised with stone cutters upon stone stelae the contorted faces of their calendric ritual mathematics. Surely these men had none of our awareness of the minute, our nerve-wracking distraction in the passage of time. Except hieratic figures who stood for many, kings, high priests, and as always personages of great wealth, one may doubt whether folk of earlier eras had any of our feeling of the self for the individual self. Probably not, unless it were a holy man or a philosopher, who earned by mental or spiritual labor the right to physical release.

So the courtiers of Ur ranked themselves calmly to receive the stroke of death in the king's tomb, their bodies not contorted, their delicate ornaments unruffled by the knife; the Aztecs ranked themselves lifelong for war, that no month should be without the

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precise quota of human sacrifices; and even this year a Hindu woman has attempted to defy the European law that denies her the ancient privilege of being burned alive beside her husband on his funeral pyre.

You can mark the scholar, in most instances, or as Mark Twain would be more inclined to say, the learned damfool, by the special reverence he shows for those prejudices of learning in which he has been trained. The foundations of our liberty were laid when voting was not a right but a privilege; now it is urged upon us as a duty, though we anticipate the outcome of our duty by statistical means; and in other lands voting has become a confirmatory rite.

I have at my side a photograph of my friend Tamada playing the ancient bamboo flute (shakuhachi). His face is rapt with the concentration of the music, many centuries old, in which the Zen monks meditated. To hear this music played is a privilege, but the art is intended for the player, with perhaps a small group of devout companions. Though it earns no fee and does not wish to entertain an audience, this very quiet music, scarcely to be heard above the outside din of our traffic, requires the most complete art of tone production, of sound from breath and glottis, an esthetic ritual connotating a religious experience, which has been passed on by word of mouth more than a thousand years. My friend robes himself for the occasion; he prepares himself in mind and spirit; in the Zen way he arouses the imagination by liquor; and before playing he ceremoniously lights the stick of incense in the bowl before him on the mat. In my photograph, incongruously, a microphone stands beside the bowl. This breath sounding from the past is being made a permanent record, a sound electrically and mechanically reproducible, requiring no more art. Can this permanent record, by any stretch of the imagination, be expected to endure and be heard again after so long a time as the intangible tradition has survived?

The scholar is as jealous of his prejudice as Tamada, worthily, is jealous of his rite. He will not sit down and play for you as you please, nor will the sound scholar abate a single footnote. Who is to distinguish the spiritual or esthetic worth of the rite from the worthlessness of a prejudice?

In late years we have grown accustomed to hearing sonorous recordings of music for the harpsichord, amplified to orchestral dimensions. When we go to hear a harpsichord played in concert we expect no less volume and are disturbed or distracted unless the instrument is forced always to the utmost of its tone, supplemented much of the time by a sixteen-foot stop and perhaps amplified. To hear the natural voice of a harpsichord, properly registered, in one of our too large concert halls we are required to listen with unusual effort, to concentrate, to eliminate from our attention the interference of distracting noises.

Even more when we listen to Suzanne Bloch, playing solo music for the lute with nineteen strings, we must concentrate to hear the murmuring of distinguished sound. When Suzanne Bloch played for Evenings on the Roof last spring, in a packed hall seating six hundred persons, the temperature rose until the audience became uncomfortable and some felt faint. Another evening, with music no less demanding but more audible, the gathering was as large but there was no discomfort from heat, though the temperature outside was probably warmer than the time before. I may be fanciful, but I believe that the difference in temperature within the hall was produced by so many persons listening with effort, instead of with the usual indifferent attention. When I listen with effort I perspire until the drops run off my nose; and, like an athlete, I am happiest. I cannot voluntarily drive myself to such extreme attention; the performance must urge me to it.

We hear much these days about freedom, and about liberation, the conferring of freedom upon others who presumably do not have it. Those who use the word with discretion, instead of shouting it into the air through a microphone, know that there are many contradictory kinds of freedom: the freedom of Thomas Merton, the poet, to become a silent Trappist, while writing books that have become best-sellers; the freedom of the Antarctic explorer or a climber in the Himalayas to perish in failing to reach a goal of dubious significance—the failing is indeed the freedom; the freedom of the mind as it acquires the many disciplines of learning; the freedom of the mouth to lie and slander, within the law, to any sympathetic audience; the freedom of the spirit to accept avoidable responsibility, possibly for fame, perhaps by inward necessity, or it may be because increase of burden means increase

of freedom; the freedom to go or not to go, when unobserved, through the traffic stop light. These freedoms cannot be conferred; they are earned. To liberate a community from its accepted culture may be to destroy it.

The civilization we know has been liberated from that lack of power which imposed on Leonardo limitations he could not overcome, neither by knowledge nor invention, by gifts of mind or spirit. Power throbs and thunders around us; we vibrate to it even as we sleep. We translate power into light, and can do as well without windows; into heat; into sensory organs that see and feel through darkness or beneath the ocean; into recreated sound and pictures from across the face of the earth. So much can be done for us by power that we must turn the children away from the television screen to read a book or study. This freedom may become a trifling, a disastrous impediment to thought. The power to go wherever we wish in a short time makes us careless of seeing where we are. Yet I am aware that all around me children, who until recently would have gone through school with none but the most casual experience in music, are now learning with enthusiasm at school one of the most ancient disciplines of culture, to play a musical instrument. Learning with so much voracity, with such unprecedented quantities of preserved music at their service, that the entire literature may soon be insufficient to nourish their capabilities to use it. Was there ever a time when so many learned men spoke so many different languages as at the end of the nineteenth century, seventy or a hundred tongues understood, read, spoken by one person; and now, fifty years later, the study of languages has become a narrow science.

Painting, which has reached among specialists so great a technical precision that the advanced artist eschews sight and prefers some feeling abstraction, is regaining an earlier innocence as the recreation of a multitude—the same educated multitude that until lately read detective stories. I wonder whether among that multitude some one person can see at once so simply and so clearly as the neolithic representationalist drawing his bison in a dim cave. He drew with a purpose to capture in some way, for hunting or

totemic power, the spirit of the beast. Or can our specialists find symbols of the abstract so meaningful to the eye as those prescribed by authority upon the Egyptian, the African, or the Mayan craftsman.

When we listen to music, or go to look at paintings now confirmed in a museum, that were once the glory of the room or altar-space for which they were made, or labor the obsolete language of a book that was written when style, like the illuminated manuscript, was composed as much for the embellishment as for the conveyance of thought, can we in any way restore to the public exhibition something of the original intimacy, the privacy of the unique experience, the meditative timelessness of an era that did not think by minutes, see by collections, hear by concerts. If we cannot find the need to attempt this, however imperfect the result, we shall be left on the outside, aware only of the minutes, the collections, the boredom, the visible display producing pleasant noise.

We need to regain in music some of the inward spiritual tradition of the shakuhachi, the intimacy of the clavichord which is intended to be heard only by the player and a few persons in the room, the freedom of the part-singer, the player upon the recorder, the lutenist who at once reads a part and accompanies the group, the improvisatory eloquence that was the great style of the harpsichord; but not only in the performing of old music and the playing of old instruments. During the last few years as never before young people the world over have been returning to the old instruments, learning to play them and their music, as a manner of private withdrawal from a civilization overly possessed by power and explosive noise.

An eighteenth century author wrote in his book on the building and playing of instruments that there were two kinds of clavichord tone, the soft and the softer, and the softer is the better.

Yet though I love the old instruments and their music and have been admitted to their secrets, I cannot believe that love of music can wisely end by withdrawing into the past. Composers are ex-

(continued on page 30)

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It has never been the purpose of Unesco to turn citizens from their national loyalties. Each one of us belongs to a country, and has towards that country an essential duty of loyalty which we cannot and should not evade. But each of our countries, in turn, is engaged in accomplishing a series of acts, in taking a series of measures, without which the peace, security and progress of all would constantly be threatened. Now, these duties are so closely linked together that it is difficult to draw a line of demarcation between them that would hold good for everybody, and in every particular case.

Unesco did not make history, but it cannot ignore history. There are millions of people who yearn to live in a free and peaceful world community, but who are discouraged by the difficulties and dangers which beset them. Let none of us underestimate the magnitude of the obstacles in the way of adjusting national policy and national interest to the new system of international co-operation.

Faced with the discouragement that such difficulties might produce, we adults need to be reminded, our children need to be informed, in what circumstances and for what purposes the peoples of the world established the international organization of the United Nations. Yes, we adults need to be reminded again and again.

Twice in our lifetime the tidal wave of war has swept across the world. Twice we set our hands to the task of rebuilding the shattered community of nations and making it secure. We have seen private hopes and plans of individuals wrecked in the catastrophe of society. Economic systems have been wrecked, the normal development of manufacture and commerce has been violently distorted, currencies have been debased, savings made worthless, rich lands made desolate, great cities reduced to rubble and to ash.

Unesco bears no responsibility for the political evolution of the past, but must nevertheless insist that this evolution should be known. Unesco lives in a world where, whether we like it or not, we are all dependent upon one another. Governments are only too sadly and precisely aware that they are not free to take decisions in accordance only with their own immediate and limited interests, unless they wish to expose themselves to all kinds of sanctions, or else to expose other countries to all kinds of troubles. Unesco considers that the people whose destiny lies in the hands of these governments should know this, too.

So long as the obligations which hold the United Nations system together remain valid, it would be contrary to the spirit of democracy to keep populations in ignorance. To do so would mean in practice that education was being used, not as a means of access to a better and fuller life, but as a preparation for aggression, or to confirm the resignation of weakness in the face of aggression.

To teach young people about the obligations which arise out of the necessity of living in an international community, does not imply that we should hoodwink them with the promise of an immutable world order that can be established as if by magic. International laws, like national laws, always run the risk of being broken by the most powerful and the most cynical. But although this danger exists in every country, education has nevertheless continued to include courses in civics. The more fragile the protection which the law offers us, the more necessary it is to train people to help ensure that protection. To say that comprehensive teaching about the machinery, activities and problems of the United Nations would incite young people to forget the respect they owe their own country, amounts to saying that the country in which that teaching took place either did not belong to the United Nations system or else belonged to it only in appearance.

I do not believe in virtues which lessen a man. He who, out of so-called love of his country, despises his native town, loves neither his town nor his country; and whoever, out of alleged devotion to some international order, repudiates his loyalty to his own country, does not really love his own country nor the international order he claims to admire.

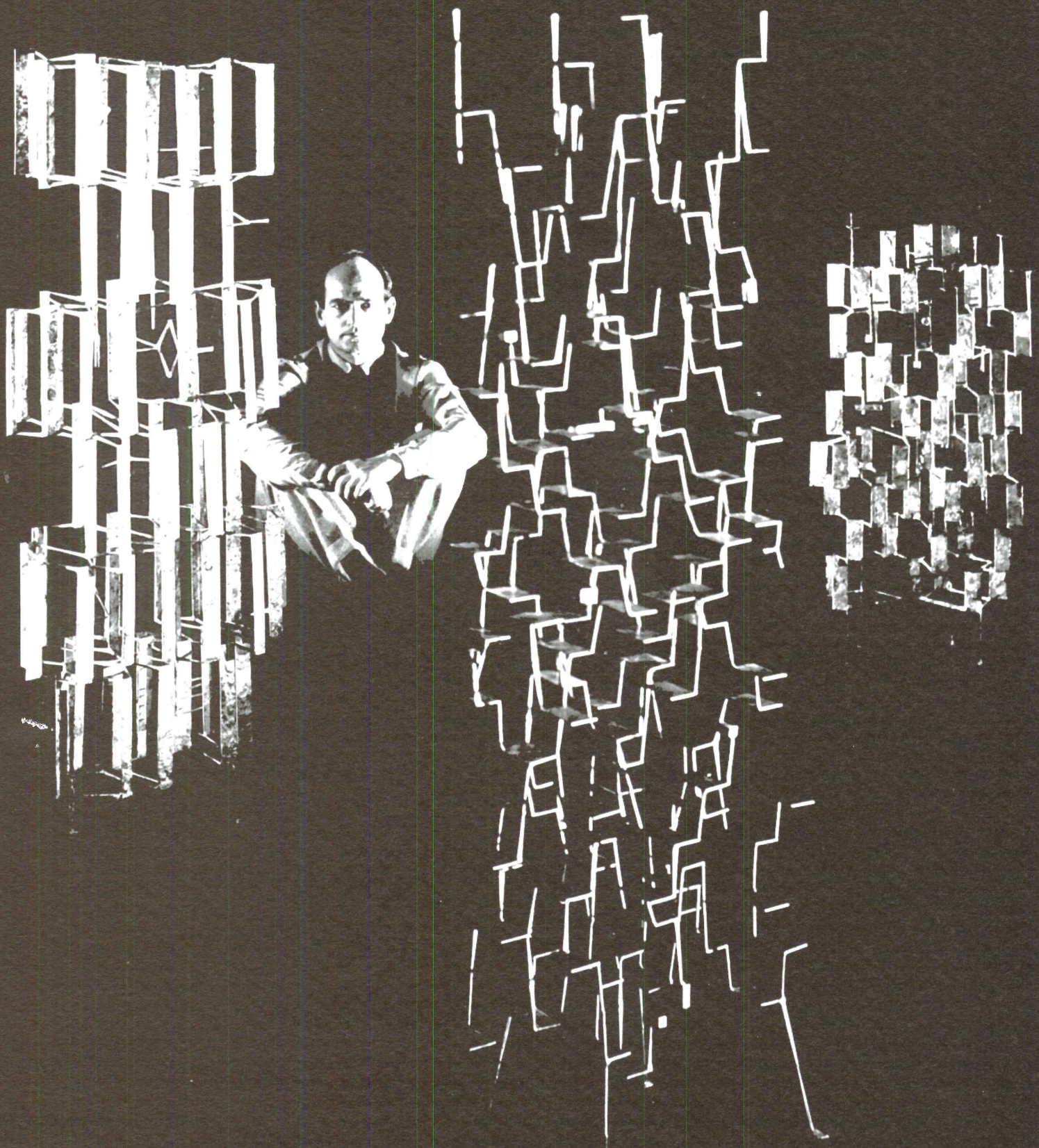
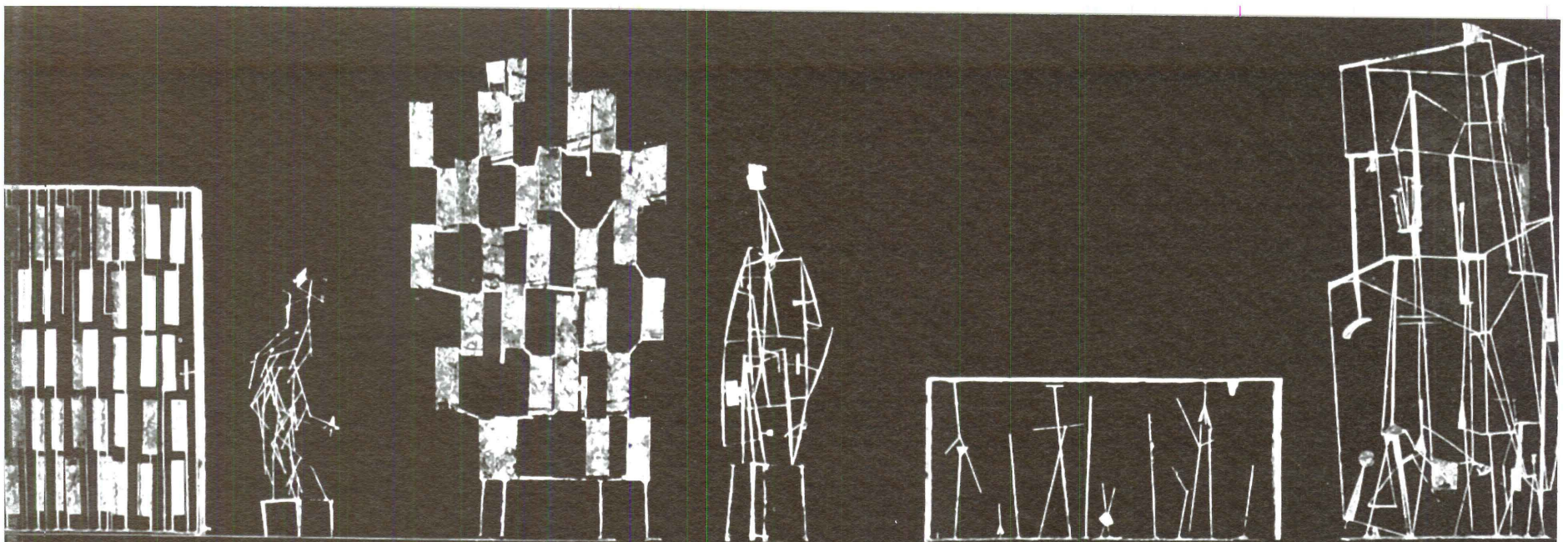
In a system of interdependent nations, internationalism can consist neither in the predominance of one State nor in the development of a superficial cosmopolitanism. Education for national democracy accepts as a corollary, and often as a premise, a clear idea of what the individual owes to the nation and what the nation owes to the world: whence the expression "international understanding" which was used in the programme of Unesco in its early days. But understanding others is not everything. It has been said that "to understand everything is to forgive everything." But international solidarity depends less upon forgiveness than upon justice—not a vindictive justice, but social justice applied to all sections of the population alike.

Now, what helps to give collective security its noblest human significance is the progress which it enables all the peoples of the world to make. The founders of the United Nations solemnly recognized this when they laid it down in the San Francisco Charter that:

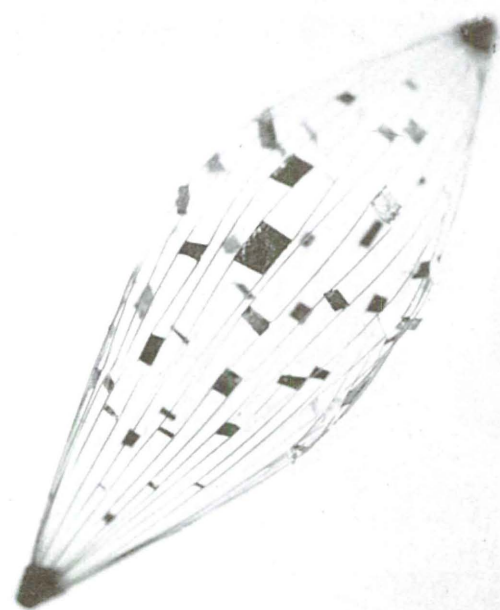
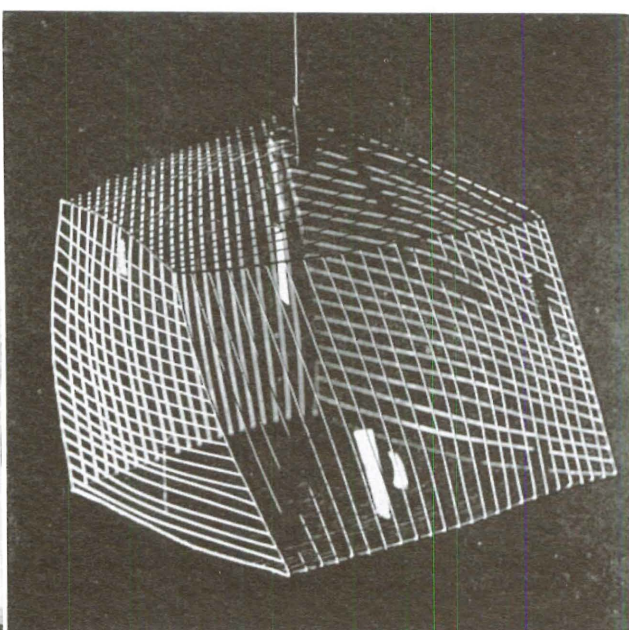
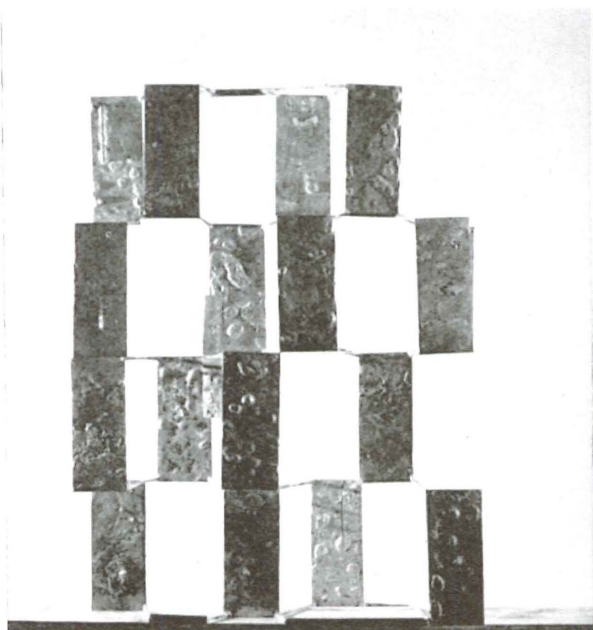
"With a view to the creation of conditions of stability and well-being which are necessary for peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, the United Nations shall promote:

(a) higher standards of living, full employment, and conditions of economic and social prog-

(continued on page 30)



HARRY BERTOIA



Painter, printmaker, sculptor, designer, Harry Bertoia enjoys the rare good fortune (in these days of the corporate Table of Organization) of being able to bring to bear a common body of skills and insights to each of several kinds of creative activity. Both "abstract" metal sculpture and new wire cage chairs (illustrated here) emerged and took shape as facets of the same impulse. The problems (and the solutions Bertoia has found to the problems) while given different stress in the chairs than in the sculpture, are so closely bound together as to be, in a sense, one and the same.

It would be rash to assert categorically that sculpture or chair (or for that matter earlier paintings or monoprints) best express the Bertoia charm and inventiveness.

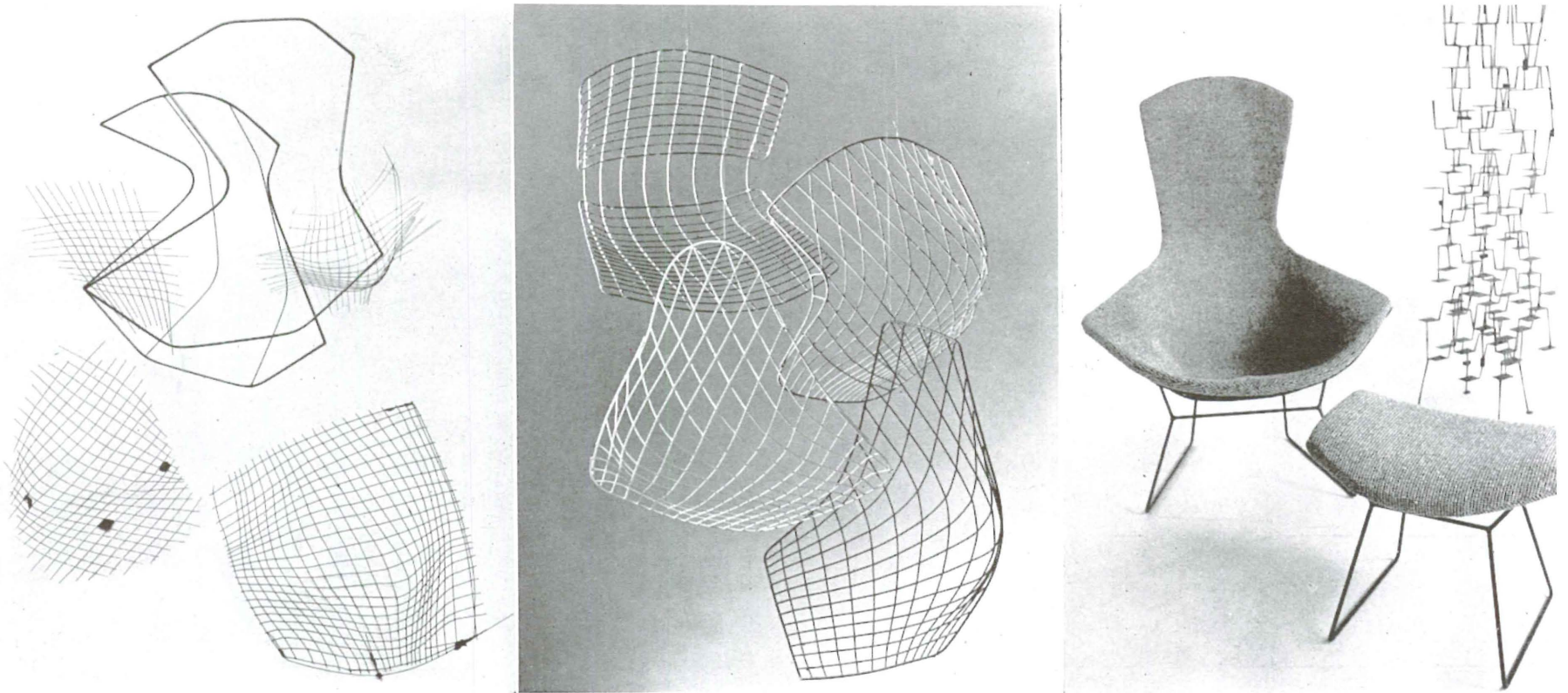
Result: integrity of conception in both chair and sculpture. At once elegant and sturdy, esthetically satisfying and humanly habitable the Bertoia chair takes metal furniture completely out of the category of the fashionable new look that has a period date stamped upon it two years later. Though the use of the metal rod in furniture too quickly degenerated into the novelty and the oddity, the production rationale for such an approach made sense. Unfortunately the esthetic adaptation of the material too often reveals an incredible poverty of resources in the handling of formal values. Without felicity of form, coherence of shape and color to space, a piece of furniture suffers every bit as much as a painting or sculpture.

There is an absolute clarity of design and uncompromising validity in the use of material in the Bertoia version of wire and metal rod furniture that is a hopeful signal of the end of the elephant-on-stilts school of design.

BERTOIA

Here Bertoia's background as artist enabled him to proceed with assurance. His feel for aerated, rectilinear forms suspended in an atmosphere peculiarly their own dates back to student experiments at Cranbrook. Crystalline transparency, subtly adjusted, shifting movement of squares and rectangles, open space as a buoyant medium, all entered into the making of the Bertoia chair, and are traceable to the earlier paintings and monoprints.

The diamonded, wire cage of the chair, padded in



colorful, receptive material, provides "allowance" for the changing stresses of the human figure. Your engagement with a Bertoia chair is not an athletic contest. You are not snatched, imprisoned, immobilized, gripped within an implacable wrestler's hold. To enlarge the user's freedom of movement, the chair seat is pivoted with a rubber "brake" permitting just enough leniency backwards and forwards to allow shifts of posture; a sheer physiological necessity fatally overlooked in so much of the string, wire, plastic and plywood furniture of the last decade.

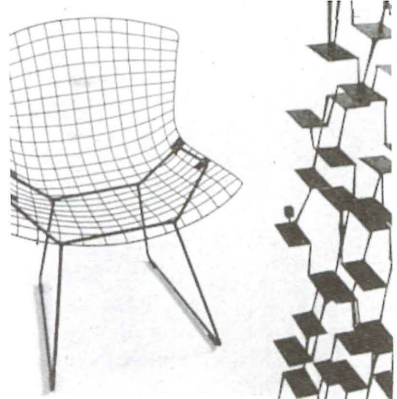
Result: a fusion of form and function in the chair that enhances its position in the room as an object pleasurable to look at.

The sculpture was conceived by Bertoia as a construction for the purpose of contemplation of geometric forms in space. Yet so interrelated are the parts of the Bertoia creative program that the sculpture possesses the properties of an architectural screen, providing the kind of semi-privacy often desirable in a contemporary building.

Whether useful baffle or contemplative geometry, the sculpture presents to us the Bertoia cellular construction in its purest state. In the sculpture the eye benefits from the observer's mobility, flowing in and around the units, catching reflections of braised metallic surfaces, giving life to hollows as well as solids. The identical principle can be seen in the pictorial space of a Bertoia painting and in the engineering of the Bertoia chair accommodated to the oddities of the human frame.

It is difficult to understand why the metamorphosis of art into useful objects raises a tumult among certain designers and architects. No amount of backing and filling can obscure the deep, rich influence upon contemporary designs of painters like Klee or Mondrian, sculptors like Brancusi or Arp. The Bertoia achievement erases, once and for all, any lingering doubts about the complementarity of art and design.

—Jules Langsner.



Harry Bertoia was born thirty-seven years ago in Italy. He calls himself an "amateur in the field of art." He might well call himself a professional in certain fields of science. He found that the fundamental principles that unite the fine arts applied equally to the useful arts of architecture and furniture design: For buildings he has produced glittering metallic wall elements; for interiors, he has produced elegantly formed wire chairs. Through combination of pure art and pure science he produces objects that are both useful and beautiful. His works in sculpture, painting, and furniture were on exhibition at Knoll Associates, Inc., New York City, through December.



AN EXPERIMENT IN CORRELATION

The psychological impact of atomic science on modern art

BY FELIX MARTI IBAÑEZ, M. D.

This first of three articles examines the unique developments in science that distinguish our age from its predecessors. How these developments have changed profoundly our mode of vision will be considered in the next two installments.—
Editor.

THE PHILOSOPHICAL BACKGROUND OF THE NEW ATOMIC SCIENCE

A. The new scientific ideology of the twentieth century

The year 1900 is a decisive date in the history of human thought. In that year there began to appear on the intellectual horizon of the new century a series of new ideas which differ radically from those which formed the philosophical and scientific subsoil of the nineteenth century. Now, half a century later, these new concepts have already become integrated into an ideology peculiar to our time.

Man today is demonstrating the great creative value of ideas. Backed by new theories of physics, he is succeeding in harnessing even the remotest stars in equations formulated by a human brain in the solitude of a laboratory. Just as the Copernican theory was the educating principle of the Modern Age, the ideas of a four-dimensional universe, curvilinear space, and finite spheres, joined to the present-day autonomy of each scientific discipline, mark the historic countenance of our century. Just as the sun sheds different colors on the countryside as it rises, the new ideology of the twentieth century is coloring all human activities, from scientific thought and artistic accomplishment to the humblest routine tasks.

The year 1900 also marks the beginning of an historic crisis in the evolution of scientific thought. It is a date comparable to the year 1300—Dante's hour—when a new conception of the world was born which was to prevail for many generations. One system of scientific convictions has succeeded another, not by continuity but in jumps, which makes the transition even more dramatic.

The crisis in scientific thought, which brought in its wake a crisis in artistic thought, left modern man without a solid universe by upsetting his convictions, isolating him in a vacuum and shattering the ideas which underlay the world of the nineteenth century. But thought, like nature, abhors a vacuum, and tends to fill it in immediately with culture patterns, just as the body fills with conjunctive tissue any hollow which occurs in it.

In modern life, science acquires the character of a supreme organ which pumps animating strength into other artistic or philosophic organs, which are more adipose or conjunctive, and less vital than scientific thought. To sketch the lines of modern scientific thought is to trace the framework within which the other forms of contemporary life, especially that plastic creativity we call modern art, can be interpreted.

At the turn of the century it was thought that everything had already been invented. Since 1880 people had been using internal combustion engines, which later made possible the development of automobiles and airplanes; wavelengths had been discovered by Hertz in 1887; the first radiogram had been sent from the Isle of Wight in 1898; the first public telephone had been inaugurated in New Haven, Connecticut, in 1878; the germ

theory had been in circulation since 1860. And yet, if a man who had been living for the last half century in suspended animation were to wake up today and look about him, how dumbfounded he would be by the changes which have occurred in the world around him!

Has the universe changed then? No, the universe has not changed throughout the course of history; what has changed is only our mental attitude towards the universe. Life has existed for 1,200 millions of years; man has existed for about a million years; he has made use of his brain for his own progress for 50,000 years; he has been able to record his thoughts for about 6,000 years; but he has been using science as an educational factor for only about 300 years. In the last three centuries, the mission of science has been to draw up for man an inventory of the universe, to reveal to him all available possibilities and how to use these possibilities for his own betterment, or sometimes for his own destruction.

Perhaps no other science has influenced human thought as profoundly as physics. Starting from that historical crisis which we call the Renaissance, physics has tried to uncover the laws which govern material objects in time and space. Only a century ago physics was still subject to the laws of causality which ruled the universe with an iron hand. But the development of mathematics—genius's chosen field—has revolutionized the physics of the twentieth century, thus marking a critical moment in the history of civilization. The new physics has brought forth manifold geniuses, just as the Florentine art of the *Quattrocento* produced a plethora of artists.

The change in our mental attitude towards the universe has signified notable progress for man. This progress is due less to scientific discovery than to the conception of new relationships among various ideas; it has been due more to man's ability to see old physical and mental phenomena through new eyes, following the rule set down by the German mathematician of the last century, Karl Jacobi: *Mann muss immer umkehren* (One must always turn things around).

This new spirit of scientific research has caused the basic concepts underlying the universe up to 1900, such as space and time, inertia, energy and symmetry, to be upset by a demon which has shaken physics, shattered the Aristotelian notion of natural motion and converted these classic ideas into theories like space-time intervals, the curvature of the universe, and atomic vortices.

B. Historico-philosophical roots of the new atomic science

By "atomic science" we understand the new physico-mathematical thought initiated at the beginning of the century, which has supported the most revolutionary changes in the history of human thought.

In the mind of the layman there is usually a close association between the idea of atomic science and its spectacular application in the explosions which marked a supreme advance in the science of killing. But in our study we shall not speak of the atom bomb, which is only a "practical" aspect (what was Dante's *Inferno*, after all, in comparison?) of physico-mathematical thought which has governed the development of atomic energy.

What we are setting out to do here is to sketch the philosophic profile of the principal advances

Félix Martí Ibáñez is a Spanish psychiatrist who has resided in the United States since 1939. A man of wide interests and many talents, he has managed to find time to be an editor, lecturer, novelist, pharmaceutical consultant, newspaper columnist, foreign correspondent, translator, and student of the arts in addition to practicing his medical specialty.

in physical and mathematical thought in the last fifty years, and study its repercussions in other intellectual activities of man in our time.

Man has needed so many years to be able to develop his ideas about the atomic structure of matter because the conceptions of the atom were from the very beginning in apparent contradiction with the testimony of his own senses. Sight and touch tell us always that our body, and everything that surrounds us, is solid and continuous matter. The idea that matter is neither solid nor continuous seems as fantastic to certain people in 1952 as it was in the fifth century B.C. to even the most enlightened, when the Greek philosophers expressed for the first time the theory of the atomic structure of matter. So fantastic did it strike them, that when a wandering philosopher called Democritus of Abdera said, in 420 B.C., that things were made up of an infinite number of invisible atoms separated by large spaces and in constant motion, educated men thought he was mad, and advised him to take treatment from a physician called Hippocrates. (1) Democritus, a legendary figure, adopted the atomic theory of his master Leucippus—the true creator of that theory, according to some—who established that the “essence” of the matter which forms water, or, in other words, the immutable particles which change only with reference to their spatial relationships, does not vary when the water changes to ice and then changes back to water. Democritus, one day at the beach, picked up in one hand some sand and in the other a little sea-water and explained to his disciples that matter, like sand, was formed of minute grains which he called “atoms” (that is, indivisibles), and that the structure of matter was not continuous as the water he had in his hand seemed to be. We are also indebted to Democritus for the idea that light emitted by the Milky Way proceeded from innumerable stars invisible to ordinary sight, a hypothesis which Galileo confirmed 2000 years later as he looked through his telescope at the stars in the skies of Venice.

A century later, Epicurus of Samos continued this theory, establishing the existence of atoms endowed with “internal liberty, or free will” which allowed them to break away from their directions, which, according to Democritus, were predetermined.

But eighteen hundred years had to go by before chemistry would become a scientific discipline and atomism could be confirmed, thus establishing atomic structure as the only explanation of the laws governing chemical reaction. Dalton, in 1808, and Avogadro, in 1811-17, confirmed the molecular atomic structure of matter; Lavoisier in the eighteenth century discovered the law of the conservation of matter; and Mayer and Helmholtz discovered the law of conservation of energy. These contributions clinched the doctrine of atomism, full confirmation of which came in our time when it became possible to count atoms. In biology, atomic structure was also confirmed when it was established that the transformation of one type of molecule into another in the metabolic processes of organic matter, came about through the liberation or absorption of energy, as happens in physical reactions which take place in inanimate matter. With the advent of these doctrines, the world keeps on being a machine, but a machine made up of much tinier parts than before.

The seventeenth and eighteenth centuries are dominated by mechanistic thought, making of the inanimate world a self-perpetuating system in

which all changes take place in accordance with natural laws. Copernican thought scientifically replaces the old ideas symbolized by Dante's concept that the earth is the center of the universe and is encircled by ten spheres.

Nevertheless, even in an age as scientifically important as the age of Newton, science attempts to prove that God is the creator of the law of gravity and other physical laws of the universe. The role of man in the universe is both elevated and lowered in this supreme attempt to conciliate science and faith. In that eternal conflict between tradition and observation, the history of human thought can be summarized.

For the physicists of the nineteenth century, the universe was built on the scaffolding of the Newtonian laws of motion. They took no account of the idea of force, merely of material changes. Matter was thought immutable. The most they accepted was the idea that combustion liberated energy, although they did believe that matter was transformed into energy. The chemical elements were considered indestructible and it was not thought that one atom could be transformed into another, as in the romantic dreams of ancient alchemists. Only the impossibility of explaining phenomena like atomic stability, X-rays and radioactivity, indicated that classical, mechanical, and deterministic physics, was incapable of interpreting all the phenomenon of the universe. (2)

C. The quantum theory—milestone in atomic physics

In 1900, Max Planck, in Berlin, was convinced that the spectrum of radiation of dark bodies could not be explained by the principles of classical mechanics. Instead, he thought that perhaps irradiated energy was not emitted continuously but rather in quanta or finite quantities, proportionate in each case to the frequency of the radiations, said frequency being expressed in a figure which would be later called Planck's constant. (3)

This theory was received with great skepticism; it seemed strange to abandon the wave theory and return to the old corpuscular concept of light; but Einstein proved this theory by applying it to the emission of electrons by metals and to the thermic properties of crystals.

The inspired intuition of Max Planck inclined him to the hypothesis that the emission of light by radiant bodies came about through tiny indivisible explosions, an idea which struck people as fantastic as saying that a bullet reached its mark by short leaps. (4) This hypothesis was expressed with the modesty characteristic of genius, and remained submerged at the bottom of the stormy ocean of speculative theories which raged at the beginning of the century. But it meant that atoms, too vast to be considered the cornerstones of the universe, were being replaced by something infinitely tinier: the *quanta* or leaps of energy.

The quantum was thus born: the smallest possible action at play in a physical phenomenon. It was a bold concept which later would grow gigantically and become a veritable quantum revolution, forcing the dethronement of the rigid laws of ancient physics by laws of probability. Planck had demonstrated, at first only to a select elite of physicists and mathematicians, and as the years rolled by to the whole world, that the philosophic concept of continuity in the universe was only statistically apparent. The classical theories were the confirmation of the imperfection of our senses which created the idea of continuity in a universe

where everything was discontinuous and spasmodic.

Planck's theory represents the cornerstone of the entire atomic science of our century, and its formulation was perhaps the most crucial hour in the history of science. The layman is still not fully aware of its importance. The man responsible for it has not yet received his due. Laurels do not always crown the heads of true victors in the Marathons of science.

The quantum theory proved that not only was matter discontinuous, but that energy was too. (5) This theory contained the germ of the theory of relativity. The atomism of energy also implied the atomism of time, since the new vision of the universe could not be static, but dynamic. In a way, it was a pity that the quantum theory was formulated five years before Einstein published his theory of relativity, because if it had been the reverse, it would not have been difficult to conceive that if matter and energy were simply different facets of the same reality, and if matter was discontinuous, energy had to be too. The veil which hid this very elementary truth could not be lifted for research men because in 1900 relativity was unknown and the ideas of Planck were considered by many as simply the expression of an empirical thought. Planck had to wait more than a quarter of a century to see the blossoming of his conception, which would entirely transform the structure of the universe in the mind of the present-day scientist. (6)

The quantum theory reduced matter, up to then considered solid, to “waves of probability,” an idea from which would be born, forty-five years later, the atom bomb. At first the public did not perceive the all-importance of the theory, perhaps because it is still so difficult for the popular mind to grasp anything expressed in terms of pure, higher mathematics without symbolic, graphic dramatization. But the scientific revolution was already on the march. Physics had been shaken to its very foundations.

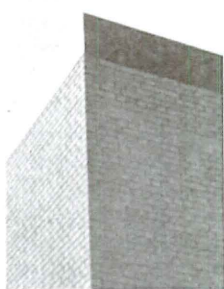
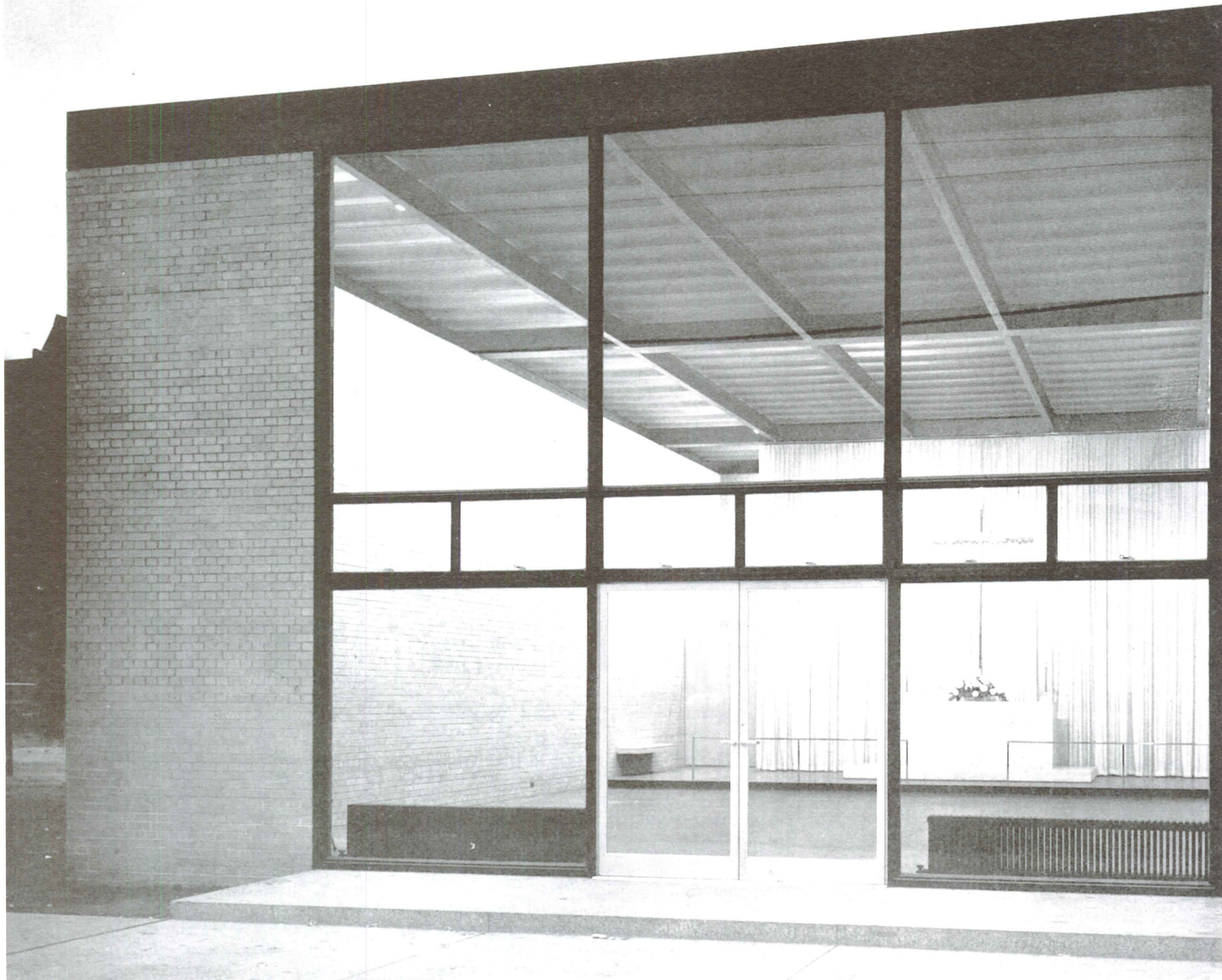
D. Philosophical meaning of Einstein's theory of relativity

The next stage in the development of the new physics begins with the revelation of Einstein's theories which reduced to naught the old concepts of space and time. It was claimed that the conception of absolutely simultaneous events in different places has no physical meaning because the speed of the most rapid signals (light) is the same for all observers. (7)

Einstein's contribution to modern atomistic thought has been to revolutionize ideas about space and time, just as the quantum theory revolutionized ideas about matter and energy. The physics of the last century was materialistic and mechanistic. Today, matter is no longer considered solid, but rather a hollow in space and time, a tangle of electricity, a wave of probability undulating in a void.

Einstein has changed the twentieth century along with mathematics. Instead of level Euclidian space, he has created curved space, the curvature of which varies from one point to another, and the intensity of which at one point measures the intensity of the field of gravitation in the same point. But the fundamental philosophic significance of Einstein's ideas lies in the creation of a theory incorrectly called “of relativity,” (since the relativity refers only to the values of reality—

(continued on page 30)



MIES VAN DER ROHE

A CHAPEL

A special religious structure for students and staff at Illinois Institute of Technology, the Robert F. Carr Memorial Chapel of St. Saviour, was dedicated at a public ceremony, October 26. The chapel is the first ecclesiastical building to be designed by Ludwig Mies van der Rohe, director of architecture at Illinois Tech.

It is a brick, steel, and glass construction, 6 feet long, 37 feet wide, and 19 feet high. Eastern and western exposures are floor-to-roof panels which are over two-thirds the width of the edifice. The eastern, or front panel, is transparent, and the western, translucent. The altar is a 7 1/2-ton block of unadorned Roman Travertine marble, imported from Italy. Both the altar rail and altar cross are stainless steel.

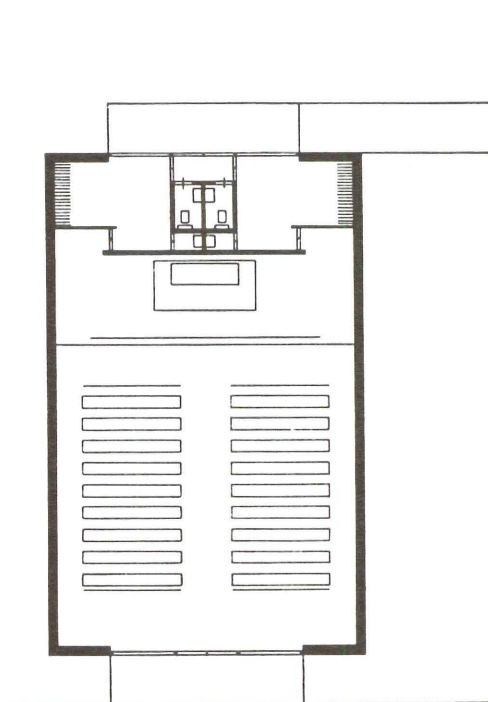
Walls are of buff brick, topped by a flat roof of prefabricated concrete slabs. The partitions are oak and the floor grey terrazzo. The subdued lighting with invisible spotlights set in the exposed steel roof supports plays on the unfinished interior brick walls.

The chapel is divided into three areas: the chapel proper which seats around 100 and the two smaller chambers behind the altar. Future plans call for an organ of classical design and a voicing to extend in gallery from one of the walls with all pipes to be exposed.





PHOTOGRAPHS BY HEDRICH-BLESSING



"I chose an intensive rather than an extensive form to express my conception, simply and honestly, of what a sacred building should be.

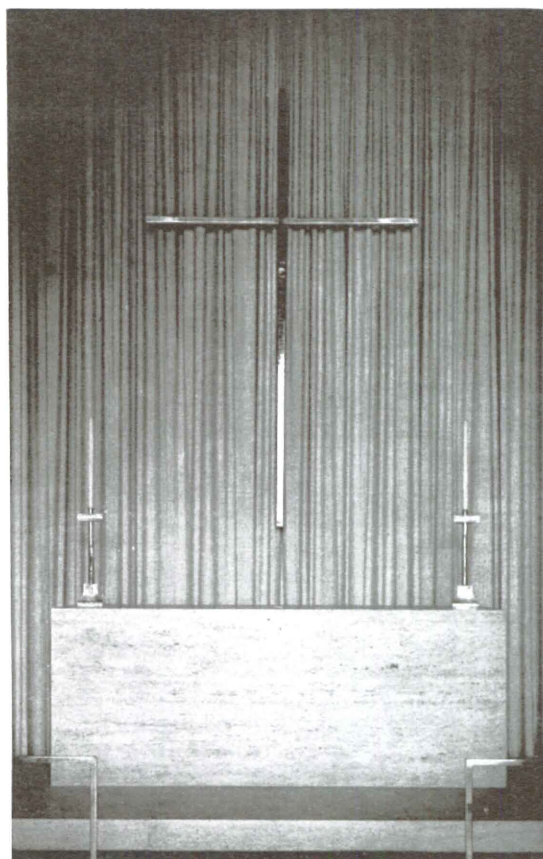
"By that I mean a church or chapel should identify itself, rather than rely upon the spiritual associations of a traditional fashion in architecture, such as the Gothic. But the same motives of respect and nobility are present in both instances.

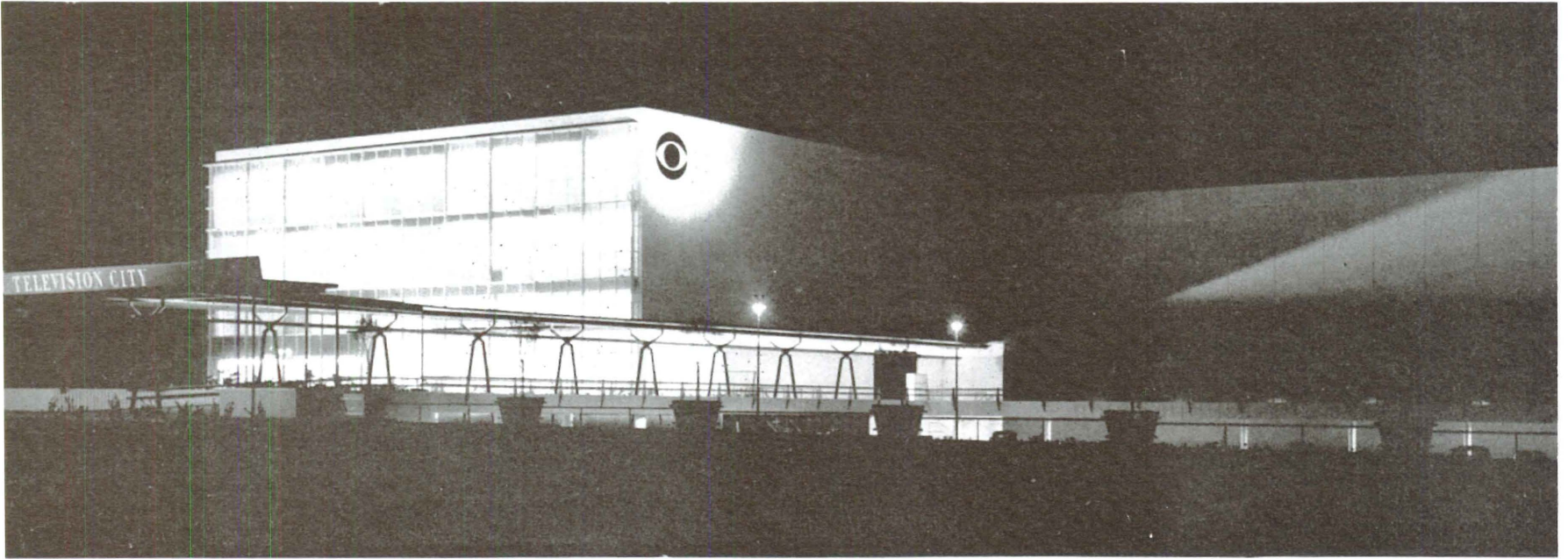
"I know there are those who may take exception to the chapel, but it was designed for the students and staff at the school. They will understand it.

"Architecture should be concerned with the epoch, not the day. The chapel will not grow old . . . it is of noble character, constructed of good materials, and has beautiful proportions . . . it is done as things should be done today, taking advantage of our technological means. The men who did the Gothic churches achieved the best they could with their means.

"Too often we think of architecture in terms of the spectacular. There is nothing spectacular about this chapel; it was not meant to be spectacular. It was meant to be simple; and, in fact, it is simple. But in its simplicity it is not primitive, but noble, and in its smallness it is great—in fact, monumental. I would not have built the chapel differently if I had had a million dollars to do it."

MIES VAN DER ROHE

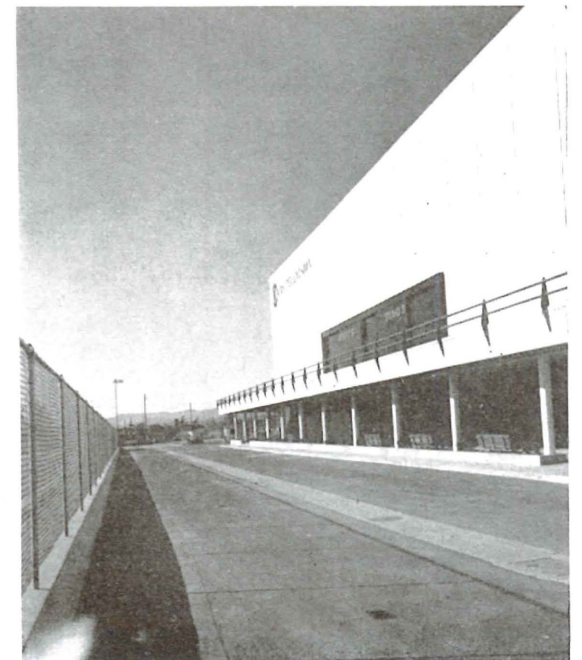


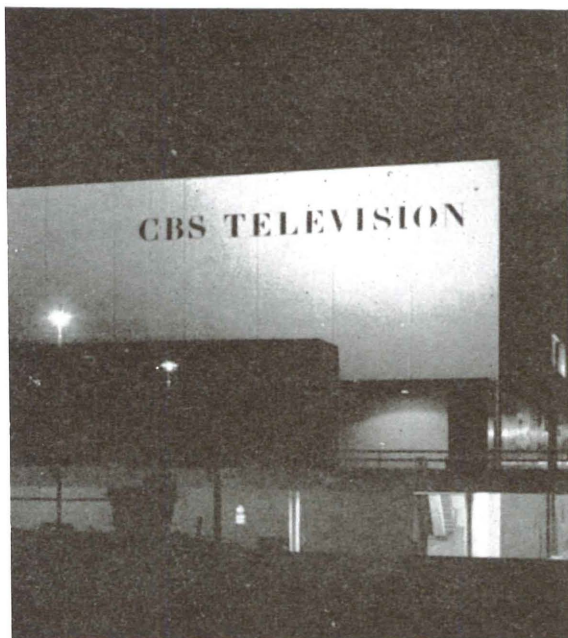


CBS – TELEVISION CITY – LOS ANGELES

ARCHITECTS: WILLIAM L. PEREIRA AND CHARLES LUCKMAN

The William Simpson Construction Company, General Contractors





One of the basic design problems in developing CBS-Television City was to create a building that would achieve two objectives which, while not diametrically opposed to each other, do not necessarily follow parallel paths. Our aim was to develop a facility in which the creative elements in television—the actors, musicians, writers and directors—were provided with the best environment for working and for projecting their talent; and at the same time design a plant in which entertainment could be mass-produced with enough economy and efficiency to meet the requirements of the management group in reducing operating costs. Since these objectives are common to the entire television industry, we felt that, in a sense, we had an opportunity to do a trail-blazing job for an uncharted industry.

We were in the position architects often dream about but seldom actually encounter—we were really given carte blanche. We were faced with a problem and asked to develop a solution without reference to tradition or precedent, because when we started the design phase of the program, television was without tradition and without precedent. We were asked to design the first facility to be built expressly for television—at a time when neither our client nor our staff could quite determine what the needs for television production were likely to be. While we do not presume that in the new CBS-TV facility now completed we have developed a packaged solution to all the housing needs for the new medium, we may have established a pattern which will be followed by other television facilities to be built throughout the country in the next few years.

The premise underlying our design approach to the new CBS television facility was the requirement for complete flexibility. Two factors imposed this need for flexibility: first, in terms of size alone, it was necessary that the facility could be expanded as the growth of television called for enlarged quarters; second, the very newness of the medium required flexibility to accommodate technological changes which will almost inevitably develop in the years ahead and which may drastically revise our current conception of the production, distribution and merchandising of television programs.

In the initial unit, the requirement of expandability has been met through, among other things, the use of movable walls. Three of the four exterior walls of the building are hinged on iron connections at each supporting point on the structural frame. When it becomes desirable to enlarge the building, the walls can be detached from the frame, the additional construction carried on within the overall design plant of the unit and the walls then re-attached to form the exterior of the enlarged building.

In the course of our preliminary research, we considered handling the studio buildings in circular, octagonal or pentagonal forms. These were all renounced in favor of the form which was ultimately adopted; the studio unit has been constructed on the sandwich-loaf principle, with four large rectangular studios divided by service corridors. At a level just above the studios are the rehearsal halls, to which we have allotted approximately 60 per cent as much space as has been given to the studios. However, within the total rehearsal-performance area, an infinite amount of rearrangement is possible and the size and shape of any or all of the studios can be altered.

The craft shops, which will house carpentry, painting and scenery warehousing, have been planned for high-speed, efficient production. The need for efficient dispersion of traffic has

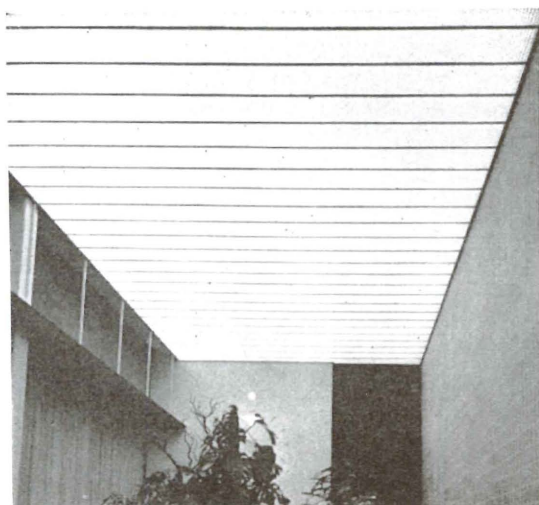


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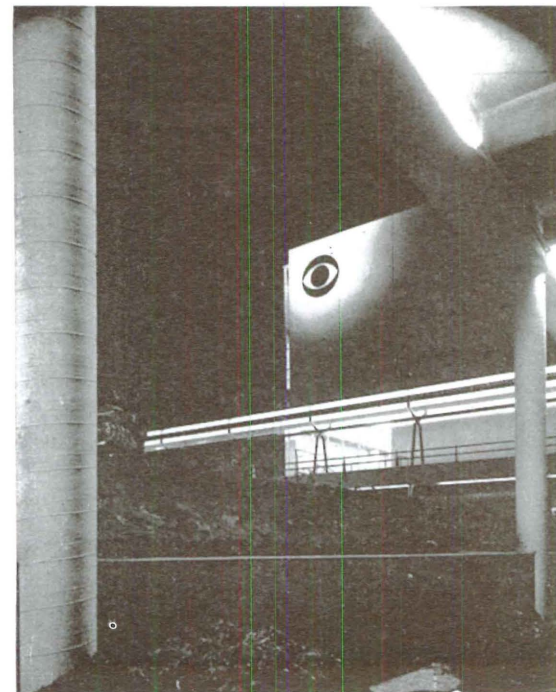
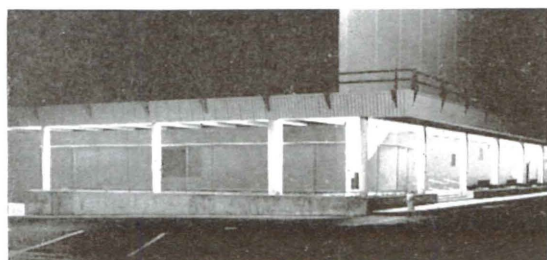
TED HOLMES

J. WINSTON PENNOCK

WALT DAVIS



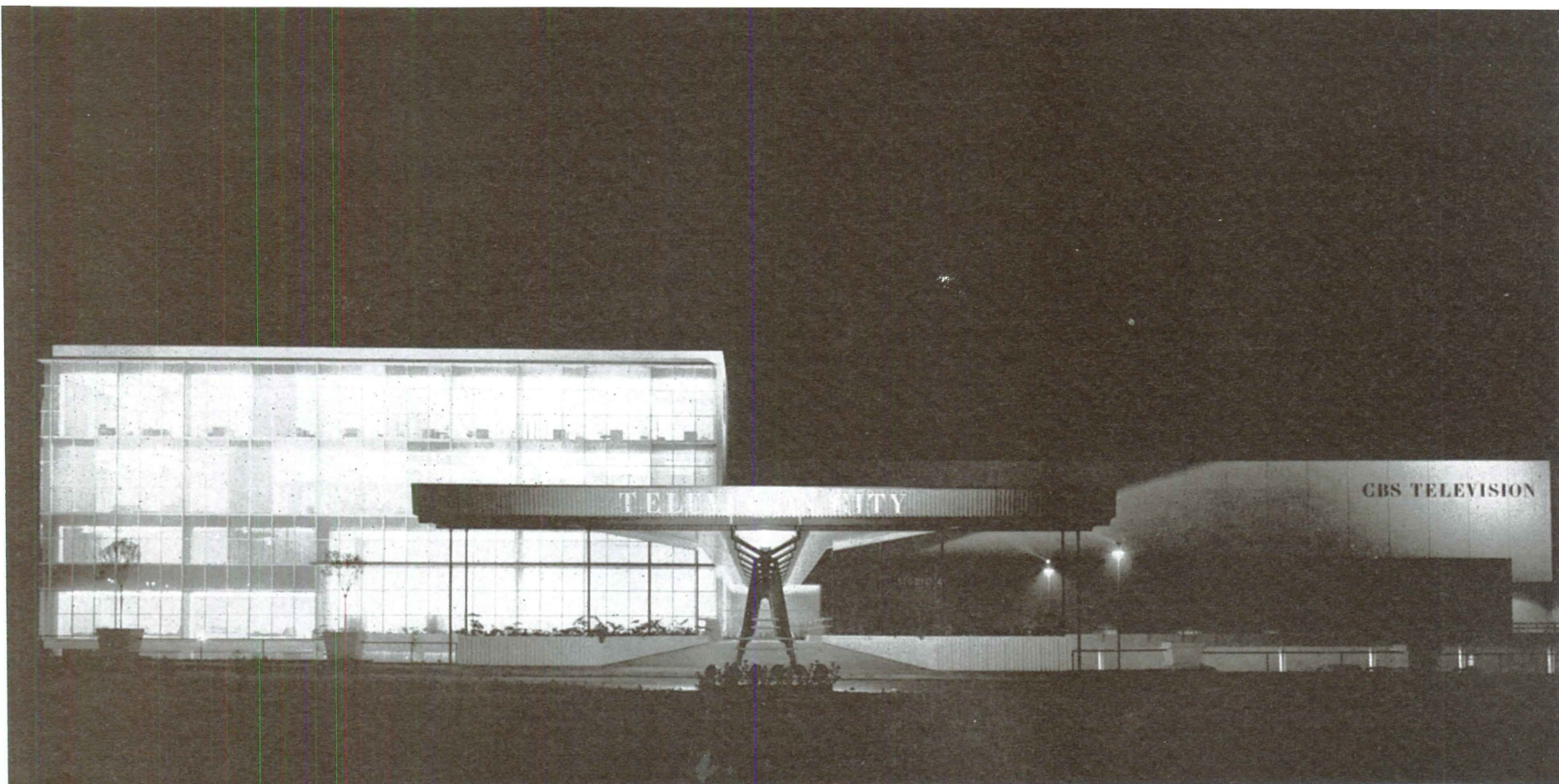
LUMINOUS CEILING IN THE LOBBY



CBS

also determined our plans for transporting scenery and props to the production areas. This will be handled in such a way as to eliminate interference and congestion caused by the movement of talent, members of the audience or business visitors to the building. All transportation of massive units can be handled either through the central passageways between the studios, or by means of outside runways which encircle the building. In effect, the actors coming down into the studio from the rehearsal halls will meet their scenery being moved up from the storage area on the lower level. This emphasis on split-second timing, which has not been a major consideration in architectural planning for any other entertainment medium, becomes mandatory in television, where the volume of production surpasses anything before achieved, and where production costs can become uneconomic unless the most optimum conditions for efficient operations are provided.

The size and layout of studios in which audiences will be accommodated were problems requiring intensive research, since a great diversity of opinion has been registered about how large an audience should be permitted at a television show, and where that audience should be placed in relationship to the performers. Our final solution has resulted in rooms which will seat an audience of 350, with the audience placed between the center camera range and the stage floor. The audience section begins at a level lower than the stage, and rises halfway back in the auditorium to stage level. This seating arrangement was agreed upon because it offered the maximum number of seats in an arrangement around the camera platform without disrupting production. With the camera platforms in the midst and on the sides of the audience, the spectators will feel that they are actually a part of the production that is taking place.

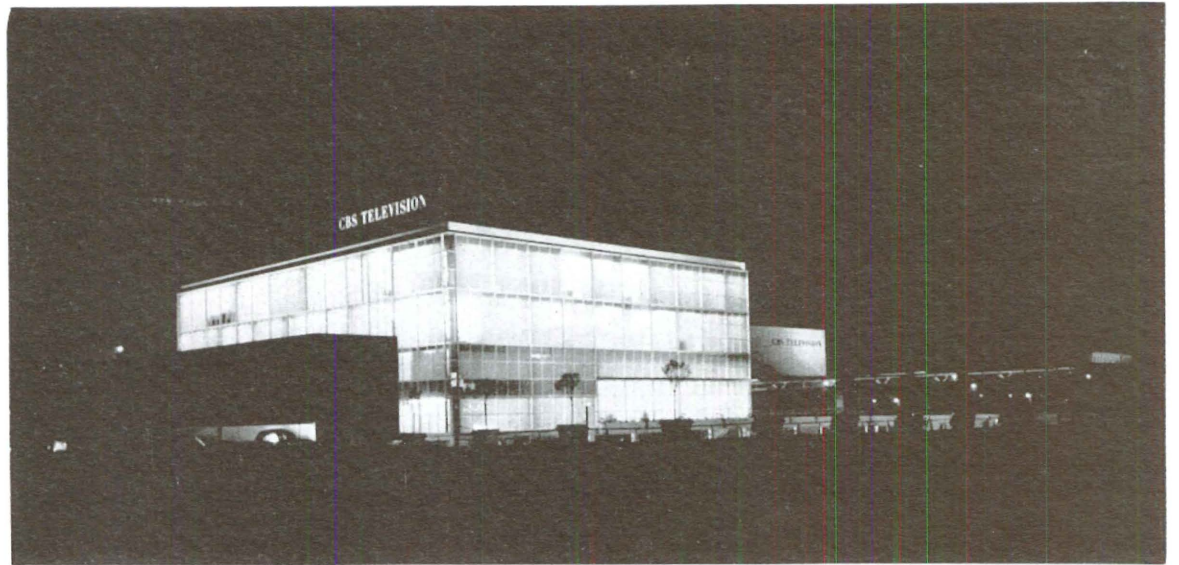
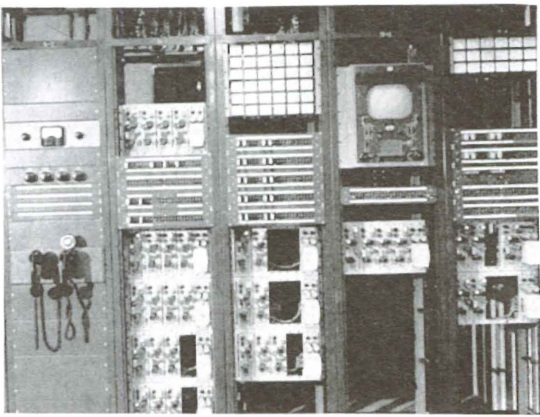


PHOTOGRAPH BY EZRA STOLLER

"CBS Television City is the first great operating studio plant to be erected for the production of television programs. Actually, until the planning by the executives and architects began no one knew exactly what a television studio is supposed to look like, or exactly how it was to be designed to function. Theater men were very sure that it should resemble a theater; motion picture men thought only in terms of sound stages; radio men in terms of radio-type studios. As a result the first accommodations for a television studio were conversions from other fields of entertainment: converted theaters, converted radio studios, and converted warehouses.

When this project was first proposed by CBS executives, they faced new and challenging problems in architecture and engineering. The result is the world's first great television installation with its many complicated and interrelated functions, which marks a successful beginning for the expanding phase of this great medium."

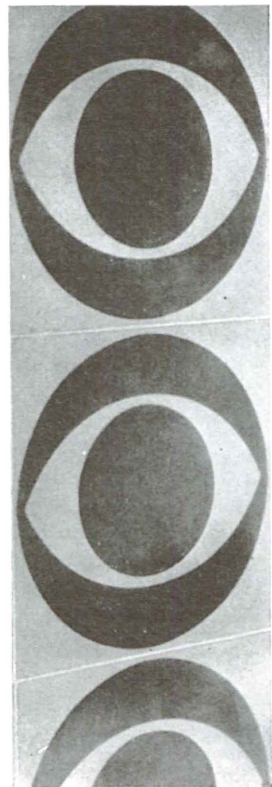
Harry Ackerman, Vice President, CBS



In making our major architectural decisions, we, of course, could derive no guidance from what has been done in other television facilities, since most of them in use at that time were converted structures which had originally been built for other purposes. We relied on what we could develop through research, on continuous consultation with our client, whose own concepts of its needs were in the process of being crystallized, and on deducing what we could from the requirements of the other major entertainment media of radio and motion pictures. In many instances, we consider that the decisions we finally made are exploratory ones—to be tried out and, if they do not work, to be revised in terms of the actual functioning of the facility.

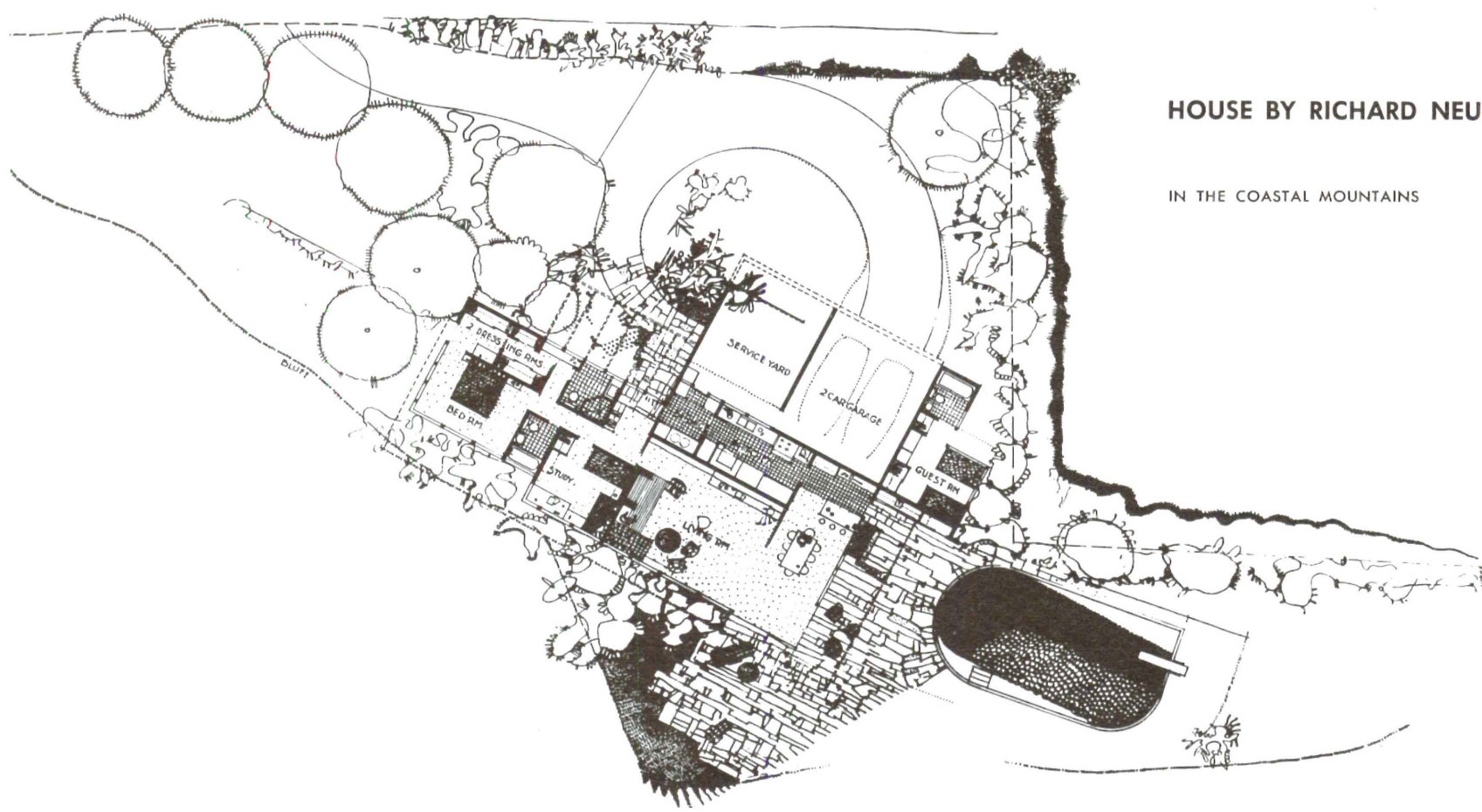
In other words, we think of this initial unit as an experimental workshop. We are well aware of the fact that the building, when it is first put into use, may not completely meet all the needs of all the people who will use it. But we do know that the initial unit has been so planned that any changes needed—in terms of requirements which were not anticipated or new developments which have matured—can be made economically and effectively within the terms of the basic design concept.

William L. Pereira
Charles Luckman



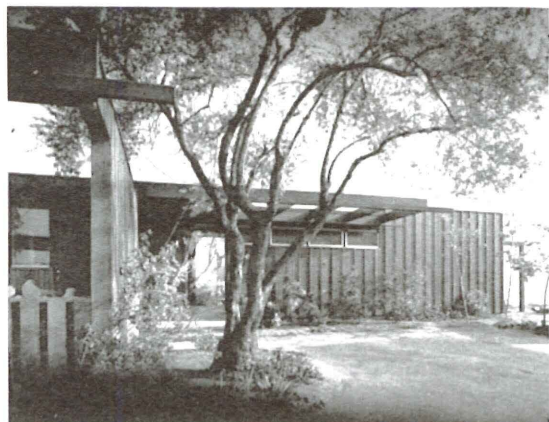
SYMBOLS ON FLOOR AND WALL TILE





HOUSE BY RICHARD NEUTRA

IN THE COASTAL MOUNTAINS

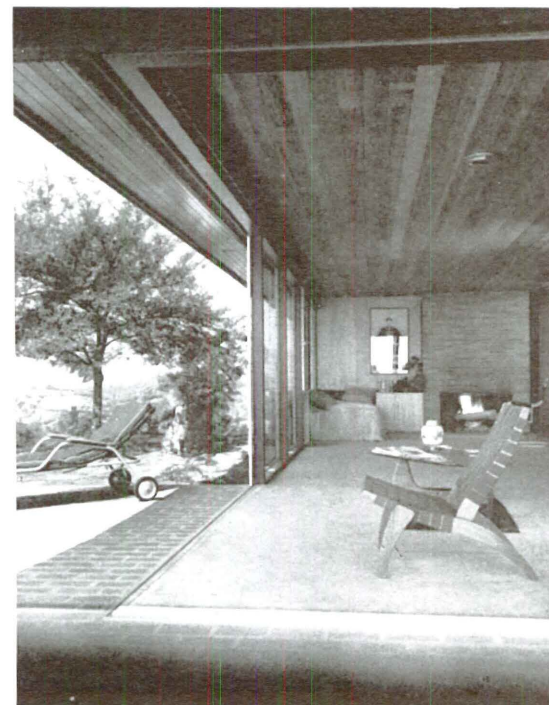


This project was designed for a young couple who, with a moderate budget, wanted to live in a contemporary house. After many futile attempts to find what they wanted, they bought a whole hilltop, one of the highest, inaccessible peaks of the Santa Monica mountain range. They subdivided the land, built roads and picked the best view lot for themselves and put the others up for sale.

Their house, built in redwood board and batten, takes full advantage of the spectacular view over the western part of the city, Hollywood, and the distant Pacific ocean. The approach road from the valley is narrow and winding. A two-car garage and a drying yard are concealed when the visitor finds himself in a splendid entrance patio.

When entering the living room one is entranced by the tremendous vistas through the broad glass front and the sparkling pool to the left. Large glass sliding doors open up the most important view corner completely and the brick paving runs out flush with the interior cement floor.

As both the owners like to cook, the self-service kitchen, barbecue, deep freeze are much more elaborate than is usual for such a small house. They both love to entertain, and very special care was given in the layout to make this easy and pleasant within and about the house. The ceiling and most of the interior walls are of different beautiful woods for which the owner shopped in distant lumber yards, and which have been brought by the architect to an attractive harmony.



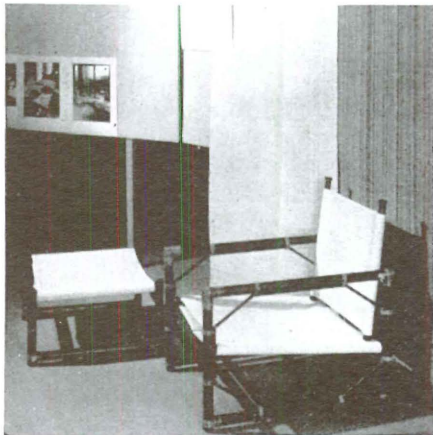


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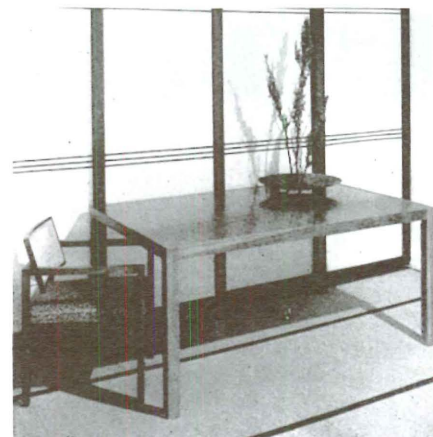


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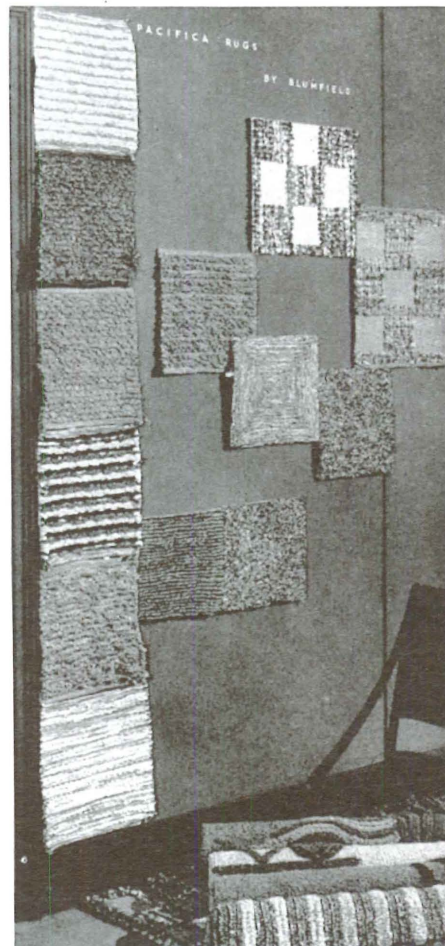
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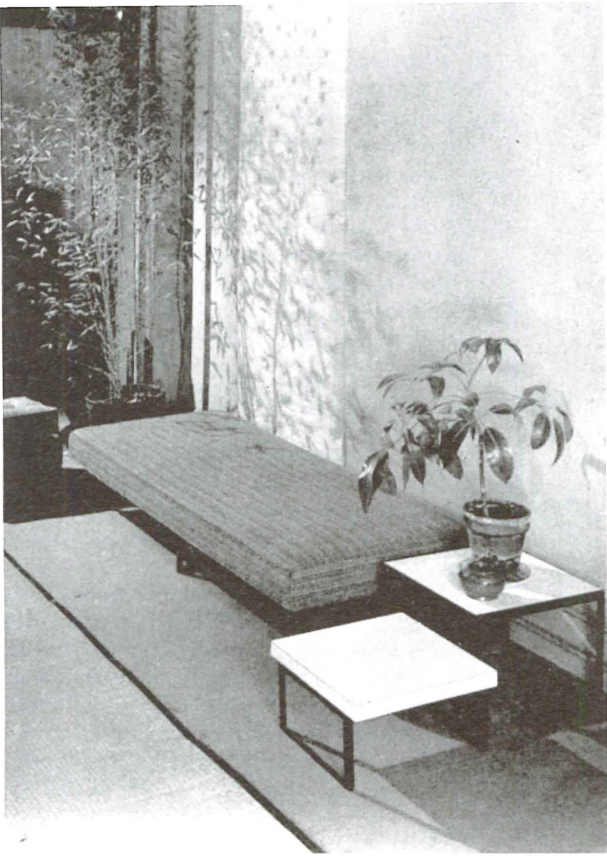
PACIFICA 1953

This marks the third annual presentation of Pacifica designs. It is, however, the first projection of the program on a national level.¹ Pacifica Interior Designs is the controlling organization which has to do with the initiation of new projects, the development of those projects through design selection, supervision, manufacture and distribution. The idea originated several years ago with Harry Jackson who devised it as a means by which modern furniture could be developed and handled through his merchandising establishments.

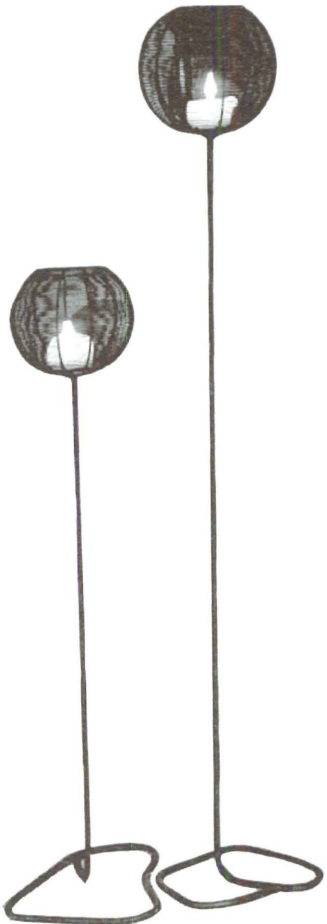
This initial project was developed into the present program which has been expanded to supply the contemporary need for simply designed modern furnishings. Having successfully solved many of the problems of informal living—the small servantless house, congested living areas that necessitated functional yet pleasing designs—the Pacific region seemed to supply the most logical basis from which the idea could grow.

1. "Hightide," a new PACIFICA pattern, is the first square coupe shape fine china; handwoven bamboo and linen place mat designed by Lee Barkley.
2. White micarta and black metal are used on a drum table with expanded metal apron manufactured by California Contemporary; a two-branch candelabra of metal and wood was designed by Edna Hesthal; the casement fabric is from Menlo Textiles.
3. A chair and ottoman derived from a Japanese officer's chair, designed by John McGuire. Gun metal finished frame with reed bindings and white elastic bamboo. Black vicot casement from Menlo Textiles.
4. This dining table and chair are fine examples of the simplicity that characterizes all PACIFICA designs. The angular outline is tempered by the beautifully grained wood, the contrast of cane, tweed and walnut in the chair and the raised rim of the table top. The burnished iron bowl is by John Read.
5. A series of accent rugs designed for PACIFICA by Joseph Blumfield; some are a pebbly weave, others a variation of stripes and checks, while others have a bold raised pattern on a solid background. California Contemporary designed the three-panel screen using a dark frame and light cypress wood.

Right: PACIFICA 1953 as displayed at Jackson's. The windows at the far end of the gallery are treated in a variation of the shoji screen; space to the left and right is divided into small areas and the furniture is grouped to suggest room arrangements.



Turquoise tweed couch mounted on a simple base; white micarta and black metal are used in the pagoda table manufactured by California Contemporary.



Black metal candle ball stands in several heights are from Lijo of California.

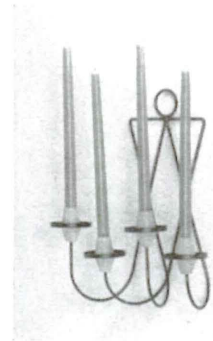
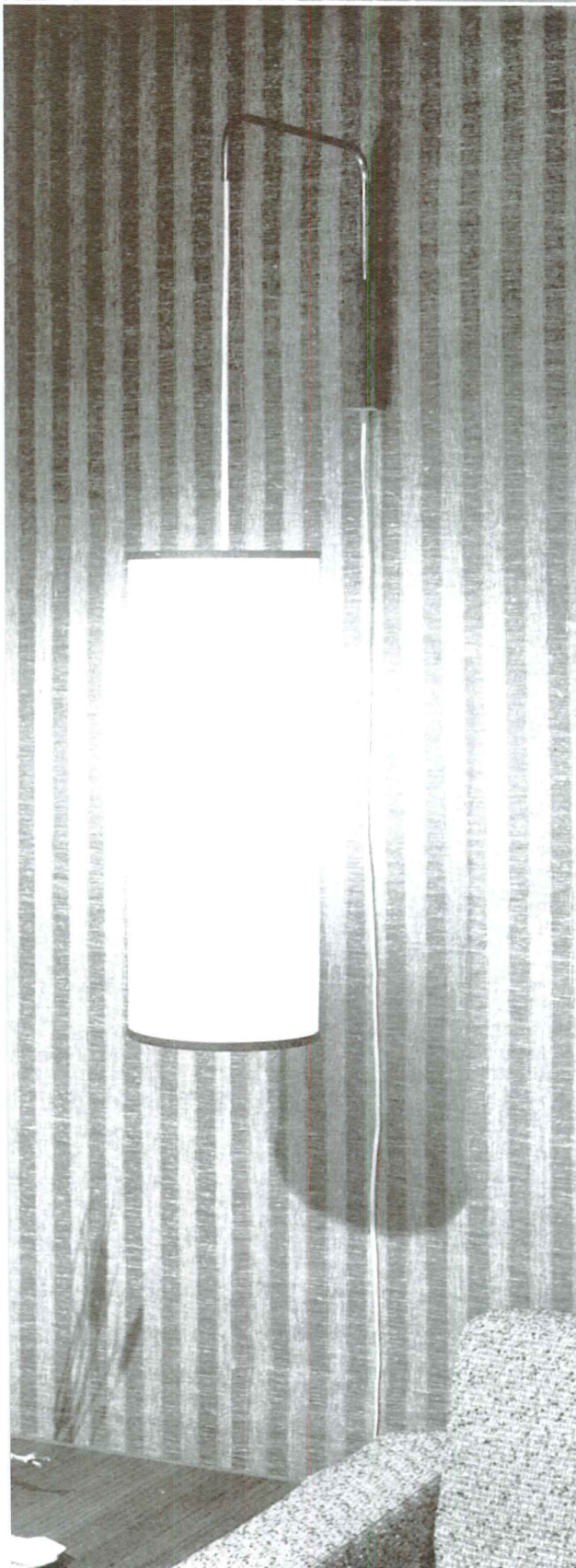


PACIFICA

The region itself was taken as a rich source of inspiration. The designers and the manufacturers undertook to translate in tangible forms the content of the theme which expressed itself in low lines, simple round forms, direct use of materials, naturalism as opposed to mechanism, functionalism and versatility. The result is warm, informal, unpretentious, and uncluttered.

In the current Pacifica group the Japanese influence is obviously dominant. A case in point being the various adaptations of the shoji, a screen which makes excellent room dividers and allows light to filter through and air to circulate around them. This year the theme is clearly and strongly developed and though the designs are keyed closely to the sources the results are expressed freely and vigorously and are equally at home in any region and in any environment.

The program is inclusive and covers the wide range of home furnishings, fabrics, furniture, accessories, rugs, lamps; all the accumulations necessary to pleasant, effortless living have been given a unity and a point of view which has been successfully developed and expanded into a richly acceptable idea that is not only good merchandising but good living.



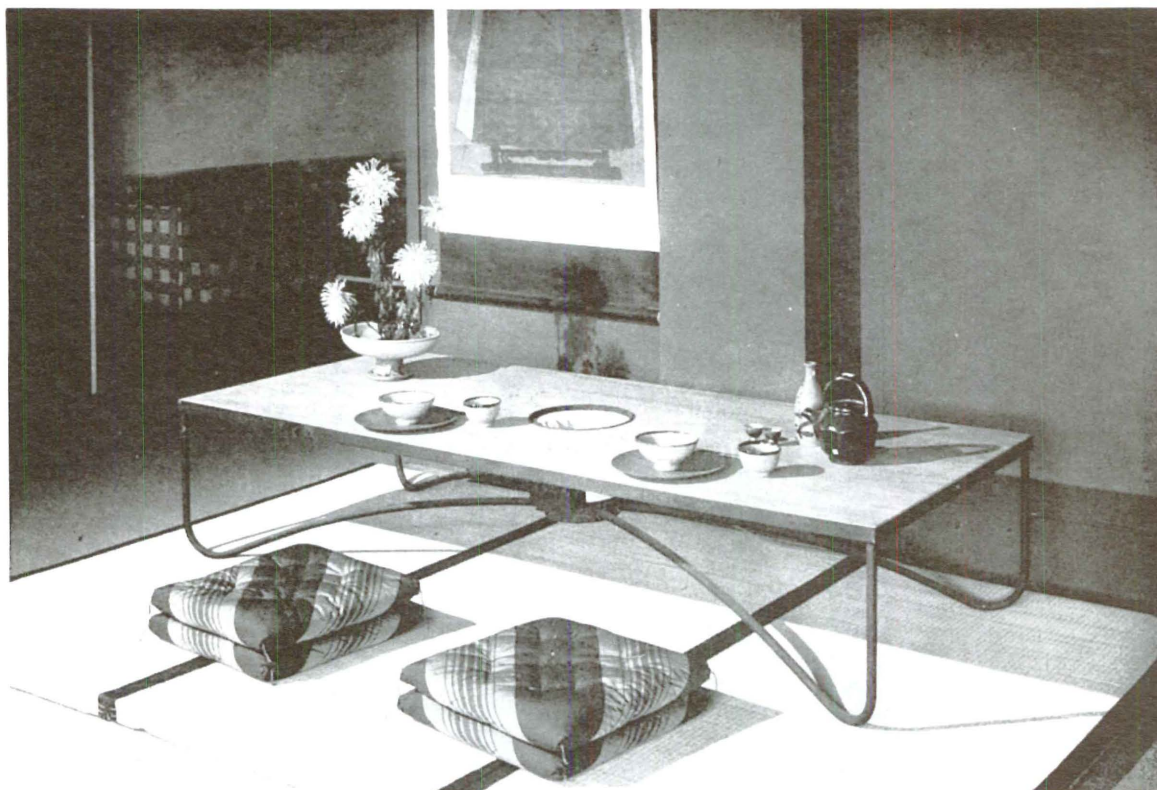
Above, left: Harlequin screen of Japanese silk wallpaper; sofa covered in mottled blue linen manufactured by Metropolitan Furniture Company; American counterpart of a Japanese Samurai stand in black metal with brass trim and white leather; white and black are used in the drum table with apron of expanded metal; table top is micarta. Both stand and table designed by California Contemporary.

Bottom, left: A parchment cylinder lamp is suspended by an adjustable cord; the brass arm is bracketed to the wall; designed by Lydia Rogers; striped linen and grass cloth wallpaper from Kneedler-Fauchere.

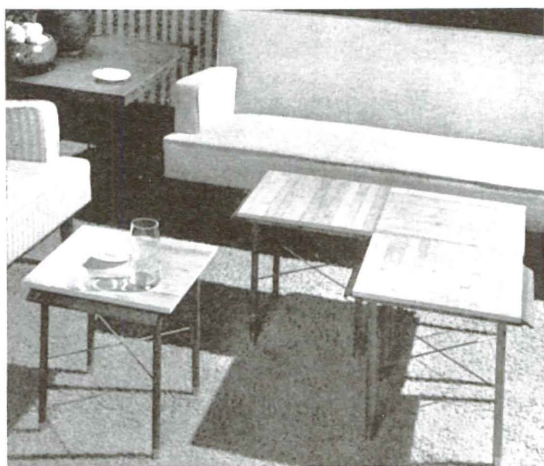
Below: Low Corner sofa in sand colored textured fabric from the Metropolitan Furniture Company; the lacquer table in an overall pattern in red and black was designed by L. H. Krusi; correlating textiles and Japanese wallpaper make an effective background.



Right: A Sukiyaki table, from Kneeder-Fauchere, complete with sunken cooking arrangement; mounted on graceful black metal legs. Japanese handmade pillows and imported accessories are shown with it.

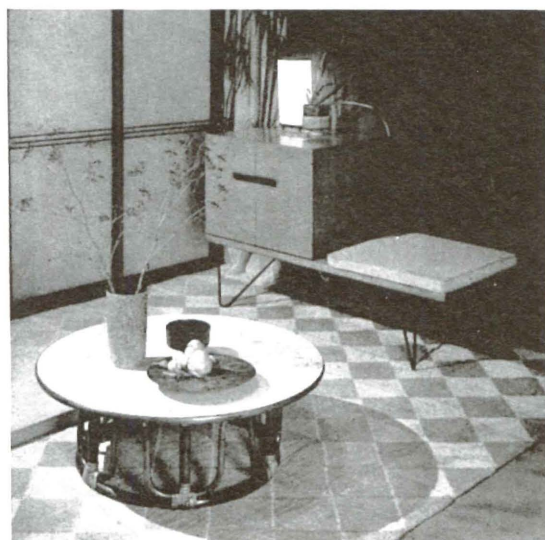
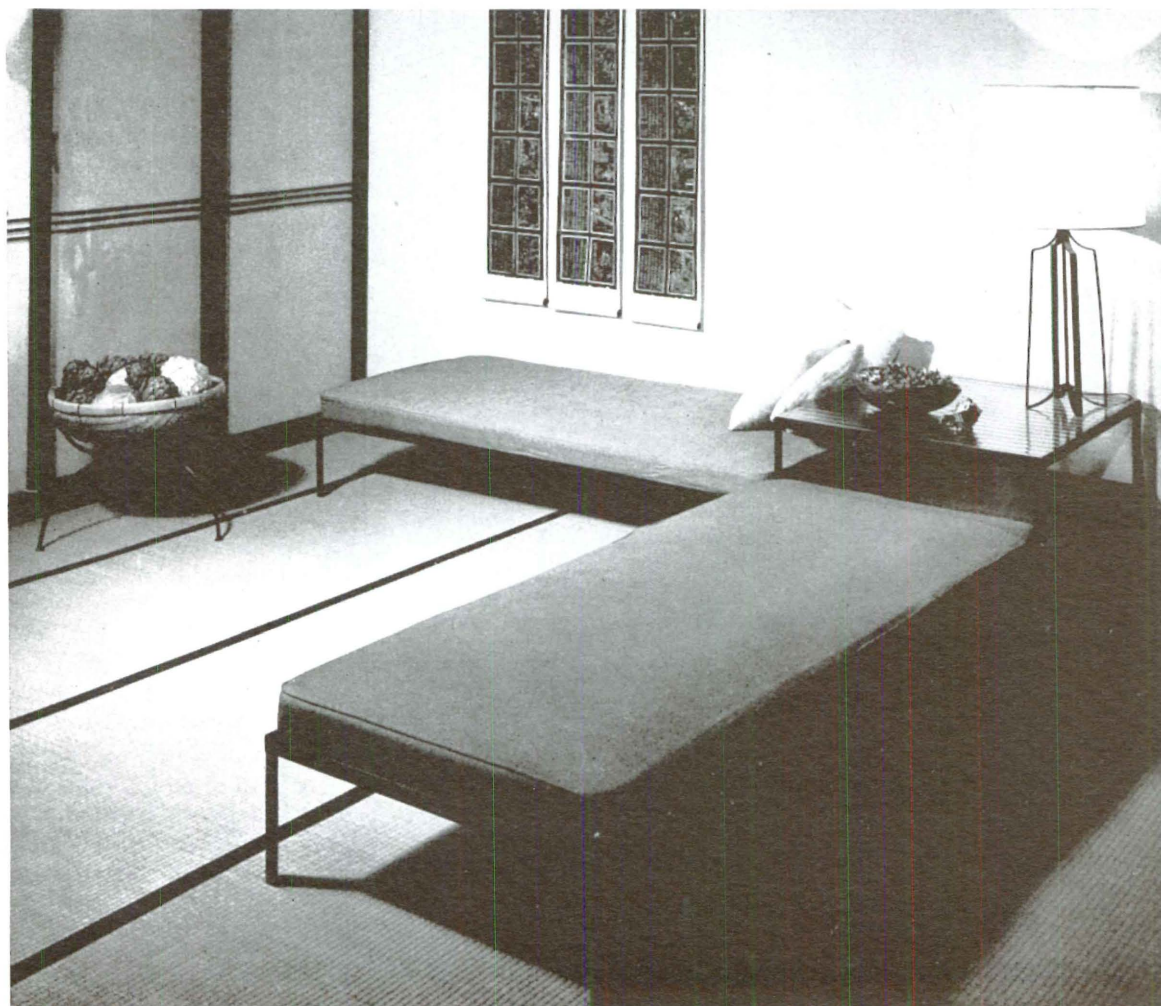


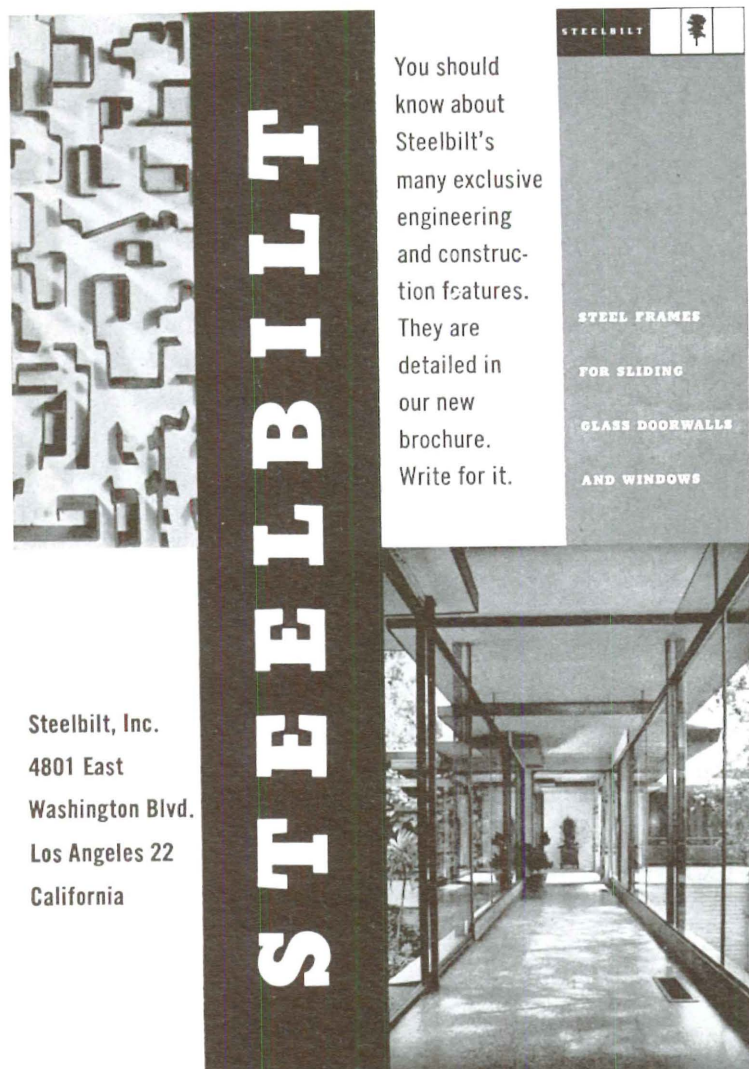
Below: Bamboo domino tables susceptible of varying arrangements are from Brown-Saltman; the sofa and chair are from the Hayes Manufacturing Company; the square corner table from California Contemporary.



Right: Furniture group designed by California Contemporary. Black metal is combined with a wide variety of materials. Persimmon colored flaxweave is used on the couches, novoply and glass for the corner table, and a chonchin basket on a metal stand. Lamp by Ray Pfenning.

Below: The TV set housed in a well-designed cabinet resting on a low bench is from the Hoffman Corporation; the round cocktail table is a John McGuire design with a white micarta top mounted on a rattan and reed base. James Lavera did the ceramic jars and covers in brown granite and mat charcoal glazes. The burnished iron pieces are from Edward McFettridge.

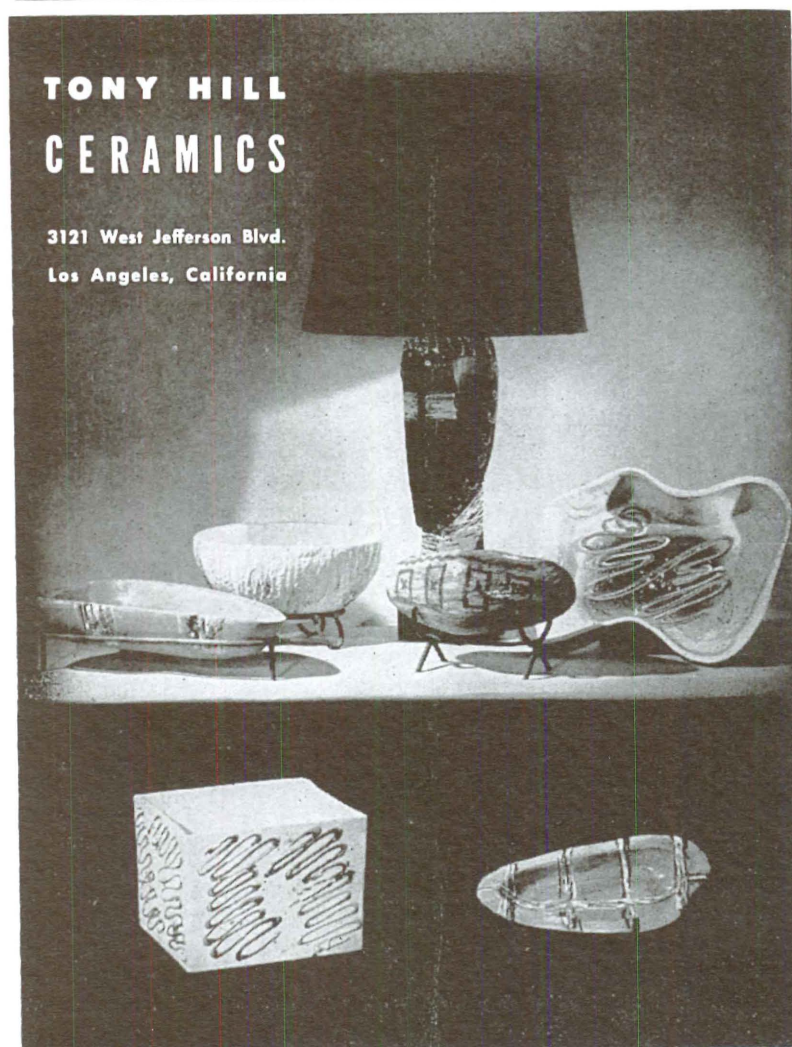




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MUSIC

continued from page 9

perimenting with new types of sound; new manners of organizing and of making more complex the formal-technical experience; instruments capable of producing finer tonal divisions; notational means to preserve unprecedented esthetic intentions; sound-paintings, if the term will serve, produced by sonic and mechanical methods, which can exist only as recordings, incapable of live performance.

Prejudice, habituation to one sort of sound patterns, is all that stands between the present-day listener and the enormously enhanced experience of listening which now waits at our cultural threshold. To get rid of prejudice the listener need only cultivate his ability to listen. A good part of the worth of any culture is being able to move around in it.

NOTES IN PASSING

continued from page 11

ress and development;

- (b) solutions of international economic, social, health, and related problems; and international cultural and educational co-operation; and,
- (c) universal respect for, and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language or religion."

Such is the function which, within the United Nations, devolves principally upon the Economic and Social Council; such is the role assigned to the Specialized Agencies; such is the goal which the Technical Assistance Programme, with inadequate resources, is trying to attain. If we really want these organizations and enterprises to succeed, it is not reasonable to keep schoolchildren in ignorance of the reasons which led to these efforts being made and of the objectives which, in the opinion of Governments, justify them; for schoolchildren will become essential collaborators in this work, the builders of the community of the future.

If Governments cannot recommend that the children in their schools should be taught what their representatives publicly declare at the rostrum of the United Nations, whom are we to believe? The diplomat who makes speeches, or the teacher who keeps silence? History is no doubt full of these tragic discrepancies between the man who commands and the man who teaches. And that is one reason why history is bathed in tears and blood.

Unesco invites you to think over these matters. Our activities in this field are faced with two dangers: one is propaganda, and the other verbalism—by which I mean paying too much attention to the letter and not enough to the spirit.

It is a long story, this quest for human freedom. Our children should know it. It is their story. Let them then, with knowledge and understanding, enter as responsible citizens into the human assembly. Let them undertake their part in the never-ending endeavor to build a community of free men and women who one and all enjoy the rights proper to human dignity in a world of peace.

Jaime Torres Bodet.

AN EXPERIMENT IN CORRELATION

continued from page 17

space, time, matter, energy—which were until then considered absolutes) in contrast with the absolute, which is human awareness of the aforesaid values minus the classical notion of the infinite. What this theory does is to make the universe in which we live a finite sphere, subject therefore to laws which can be investigated by man.

The fundamental metaphysical concepts of space and time, matter and motion, cause and effect, have therefore been replaced by new ideas and have suffered a holocaust as a result of the impact of the new science. (8)

E. Philosophical topography of the new atomic science

Recently, a voice (E. M. Forster) has been raised, making the "implacable offensive of science" responsible for the present chaos. But the civilization of the twentieth century, like a bicycle in motion, cannot stop short, because the only thing which supports it is its own

motion directing it to new frontiers of energy. Just the same, the impact has been terrible. Scientific tradition, along with other traditions, has suffered a tremendous shock. Once again, science has collided with tradition—made up of the ideas of the past, according to Freud's concept of the super-ego—which plays a very important role in human life.

As a result of these portentous years, the complex structural edifice of classical science has crumbled. Modern science speaks a language totally different from that of former times. The practical difference between the Newtonian theory of gravity and Einstein's is probably small, but the theoretical difference is tremendous. When we speak, for example, of space-time instead of space and time as separate entities, we are simplifying scientific language, just as a physician by the name of Copernicus did in his own doctrine many centuries ago. When we describe the universe as a four-dimensional sphere of finite diameter, we are simplifying the concept of this universe. When we refer to curved instead of straight lines in the theory of relativity, we are witnessing a semantic change along with a scientific one. Ideas have changed and with them, language.

If we go over this gigantic revolution in the spheres of physics and mathematics, we see that it has resulted in the disintegration of the old ideas which prevailed up to 1900 and conceived the universe as a solid and immutable stage on which our life was acted out.

This picture has been converted into one of a fluid world where there is nothing constant, fixed, or immutable, and in which waves of energy, laws of probability, discontinuity, change by leaps, relativity of space and the unity of space and time, have replaced the former rigid notions. (9)

To sum up, the characteristics of physical atomism which have left an indelible mark on the face of our times are the following: a) a new science has been established—atomic physics—idealistic in its conceptions and so hypothetical that one of its basic factors, the concept of the electron, is purely imaginative; b) as against observation and experimentation as bases of the biologist's work, and as against the physicist's measurements, the new mathematics accepts reason as superior to experiment for arriving at an integral comprehension of the universe; c) the discontinuity of matter is accepted; d) matter and energy have been proved identical; e) it has been established that space is finite; f) the relativity of time has been proved; g) the continuity of time and space has been demonstrated; h) it has been demonstrated that the universe is curved and four-dimensional; i) it has been demonstrated that matter moves by leaps of energy, and the latter has been accepted as the basis of modern physics; j) the substratum of mental life has been reduced to molecules and irreversible processes subject to physical determinism. (10), (11)

These principles summarize the new scientific philosophy elaborated from 1900 forward: the psychological impact of such philosophy on the mind of the artist has determined the features of modern art.

NOTES

(1) His doctrine was revived with Heisenberg's atom, just as Democritus' more deterministic notion of the atom was reborn with Rutherford and Bohr. Around his idea of the atom, Democritus created a Cosmology based on atomism, and was opposed by Plato and Horace. Lucretius (75 B.C.) and Aristotle, contributed to the development of atomic theories; as a matter of fact, Aristotle laid the bases of scientific physics.

(2) In 1900 when Newton's theory of space and time was still accepted, "ether, absolutely at rest" was conceived as a substantial vehicle bearing waves of light through interstellar space. In that year, physical research still supported the idea of continuous matter; it was interested in the behavior of gross matter and paid no attention to its atomic structure. Technological advances were formidable in the fields of thermodynamics, electricity, aerodynamics, acoustics and ultrasonic waves. The most notable difference between the physics of 1900 and 1950 is the complete victory of contemporary atomists who have revived the old speculations of the medieval alchemists.

In 1900 the history of the atom began; its milestones have been the discovery of the electron (1894) by J. J. Thomson, the discovery of X-rays (1895) by W. K. Roentgen, of radioactivity (1896) by Henri Becquerel, of radioactive elements—radium and thorium—by Pierre and Marie Curie (1898), and the identification of atomic nuclei and alpha and beta rays from 1902 on, by the brilliant research of Rutherford and his school.

Today we know that the atom is made up of nucleons—protons of positive electric charge—of neutrons without electric charge, and electrons of negative charge, 1,800 times lighter than the nucleons. The nucleus of the atom is only one millionth of a millionth of a millimeter in diameter, and is surrounded by moving electrons like the planets around the sun, in orbits with diameters that are 10,000 times larger than those of the nucleus.

(3) As he developed his equations, Max Planck observed that they could describe the emissions of radiant energy through leaps—which he called *quanta*—

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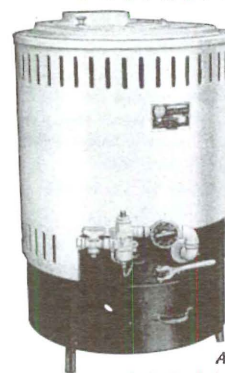
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DESIGNED FOR THE MAGAZINE ARTS AND ARCHITECTURE BY CRAIG ELLWOOD

The new Case Study House for the magazine, ARTS & ARCHITECTURE, by Craig Ellwood, is now under construction and should, barring ill winds, be ready for showing in approximately three months. The magazine will record the building procedures up until the time of opening, and it is hoped that with the next issue we will be able to show substantial progress by way of construction illustrations and explanations.

The following is a list of those materials which have been specified by the designer for the magazine's new Case Study House, representing a careful selection of products on the basis of quality, design, and general usefulness. They have been selected from among many good products as the best suited to a specific purpose, or at least best suited to the use to which this individual designer intends to put them. They are, therefore, (within the meaning of this program) Merit Specified. Other specifications will be added as the project develops.

PALOS VERDES FIREPLACE ROCK.—The three basic qualities which have resulted in the popularity of this flagstone and field rock are the wide color range, from bluish grey through browns, yellows and creams to grey and white; the texture which varies from flat planes to remarkable weather surfaces; and the extreme durability because of its unusual hardness. Limestone in origin, it becomes harder the longer it is exposed to the elements. It will not peel, flake, crumble or otherwise deteriorate or crack under weather or high temperature, and thus is ideal for fireplaces or barbecues. It is especially good to work with because it absorbs water and effects a good fusion with cement. Although the stone is separated primarily into flat sheets of flagstone or rock wall and buttress type field stone of convenient size, unusually shaped or marked rocks of larger size are used as lintels over fireplaces or as distinctive decorative stones in landscaping. This Palos Verdes native stone may be obtained from the Palos Verdes Corporation, Administrative Building, Rolling Hills, California.

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GARDEN FLOOD LIGHTS.—STONCO 300 OR 500 WATT SEALED BEAM TYPE FLOOD-MASTER ASSEMBLY. These inexpensive weatherproof units, precision engineered, have been devised for general use wherever maximum lighting efficiency is desired. Created to utilize the new 300 or 500 watt SEALED BEAM type weatherproof FLOOD lamps, they are adjustable to any angle, easy to install, economical to use. They are made of non-corrosive cast aluminum and are completely pre-wired for installation. Manufactured by the Stonco Electric Product Company, Elizabeth, New Jersey, these units are available through The McLoughlin Company, 811 East Fourteenth Place, Los Angeles 21, California.

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Allenco Fire Hose Stations

Manufactured by W. D. Allen Manufacturing Company, Chicago 6, Illinois
West Coast Office at 2330 West Third Street, Los Angeles 5

American Maid Shower Door

Manufactured by the American Shower Door Company, Inc.
1028 North La Brea Avenue, Los Angeles 38

Aquella Waterproofing material

Manufactured by Prima Products, Inc., 10 East Fortieth Street, New York 16

Bendix Automatic Washer, Automatic Dryer

Manufactured by Bendix Home Appliances, Inc., South Bend 24, Indiana

Built-in Television Outlet

The T. V. Outlet Company, 6510 Teesdale Avenue, North Hollywood, California

Ceramic Mosaic Tile

Manufactured by The Mosaic Tile Company, Zanesville, Ohio; distributed in Southern California by The Mosaic Tile Company, 829 N. Highland, Hollywood 38

"Edco" Delayed Action Light Switch

Manufactured by Electric Deodorizer Corp., 9993 Broadstreet, Detroit 4, Mich.

Fasco Wall Ventilator

Manufactured by Fasco Industries, Inc., Rochester 2, New York and distributed through H. E. Gaygill, 409 Second Street, Los Angeles

Fiberglas Insulation

A product of Owens-Corning Fiberglas Corporation, Toledo 1

Gas-Fired Automatic Incinerator

Manufactured by Bowser, Inc., Incineration Division, Cairo, Illinois.

Geneerco Doors

Manufactured by the General Veneer Manufacturing Co., 8652 Otis St., South Gate

General Water Heater

Manufactured by General Water Heater Corp., 1 East Magnolia Blvd., Burbank

Glide-All Sliding Cabinet Doors

Manufactured by Woodall Industries, Inc., 4326 Van Nuys Blvd, Sherman Oaks

Globe Lighting Fixtures

Manufactured by Globe Lighting Products, Inc.,
2121 South Main Street, Los Angeles 7, California

Globe Vanity

Manufactured by the Globe-Wernicke Company, Cincinnati, Ohio
Distributed by Thomas W. Berger, Inc., 701 American Building, Cincinnati

Heat Registers and Ventilating Grilles

Manufactured by The Hart and Cooley Manufacturing Company, Holland, Michigan
Distributor: The Rueger Company, 1335 South Hill Street, Los Angeles 15

Loafer Lawn Chair, Utilitee Folding Chair

Manufactured by the Crescent Aluminum Products Company, Allegan, Michigan

Lytacaster Lighting Fixtures

Manufactured by Lightolier Company, Jersey City 5, New Jersey

Marco Recessed Lighting Fixtures

Manufactured by Marvin Manufacturing Company
3071 East Twelfth Street, Los Angeles, California

Milwaukee Fluorescent Bathroom Cabinet

Manufactured by Northern Light Company, 1661 North Water Street, Milwaukee

Modernfold Accordion Doors

Manufactured by New Castle Products, Indiana, and distributed by Modern Building Specialties Company, 579 East Green Street, Pasadena, California

Modular Hollow Clay Block

Manufactured by the Davidson Brick Company, 4701 Floral Drive, Los Angeles 22

Moen Mixing Faucets

Manufactured by Moen Valve Company, a division of Ravenna Metal Products Corp., 6518 Ravenna Avenue, Seattle 5, Washington

Nevamar Laminate

Manufactured by the National Plastic Products Company with warehouse and sales office at 2252 East Thirty-seventh Street, Los Angeles

NuTone Products

Manufactured by NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio, and distributed through NuTone, Inc., 1734 South Maple Street, Los Angeles 15

Payne Perimeter Heating Unit

Manufactured by the Payne Furnace Company, Monrovia, California; the unit will be installed by La Brea Heating Co., 734 E. Hyde Park Blvd., Inglewood, Calif.

Plexolite

Manufactured by Plexolite Corporation and distributed by
Plexolite Sales Company, 4223 West Jefferson Boulevard, Los Angeles 16

Plugmold

Manufactured by the Wiremold Company, Hartford 10, Connecticut

Portland Cement is manufactured by more than 150 different plants in 34 of the United States and in Canada.

Pumice Aggregate

Crownite is exclusively distributed in California by the Blue Diamond Corp., Los Angeles; Pacific Coast Aggregates, Inc., San Francisco; Squires-Belt Materials Company, San Diego

Ramset Fastening System

Ramset Fastening System, Inc., 12117 Berea Road, Cleveland 11

Revolvodor Wardrobes

Manufactured by Coast Store Fixture & Manufacturing Corporation, and marketed by Revolvodor Corporation, 1945 North Central Avenue, El Monte, California

Rotir Electric Barbecue Spit

Manufactured by the Rotir Company, 8470 Garfield Avenue, Bell Gardens, Calif.

Russwin Locksets

Manufactured by the Russell and Erwin Division of The American Hardware Corp., New Britain, Conn. West Coast Rep.: R. C. Bolt, 1139 Meadowbrook, Altadena

Servei Refrigerator

Manufactured by Servei, Inc., Evansville 20, Indiana

Shirley Steel Kitchen Sink and Cabinets

Manufactured by the Shirley Corporation, Indianapolis 2, Indiana

Steelbilt Sliding Glass Doors and Windows

Manufactured by Steelbilt, Inc., 4801 East Washington Boulevard, Los Angeles 22

Square Tubing

Manufactured by Drake Steel Supply Company
3071 East Twelfth Street, Los Angeles, California

Superfan Portable Forced Air Blower

Manufactured by Queen Stove Works, Inc., Albert Lea, Minnesota

Thermodulor Forced Air Heating Controls

Manufactured by Carvell Heat Equipment Co., 1217 Temple Street, Los Angeles 26

Van-Packer Chimney

Manufactured by the Van-Packer Corporation, 209 South La Salle Street, Chicago 4

Western-Holly Automatic Built-in-Gas Cooking Units

Manufactured by Western-Holly Appliance Company, 8536 Hays St., Culver City

which varied with the frequency of light. His equation, now famous in the history of Science, was that "a quantum of energy equals 'h' times the frequency of the light." The 'h' was the so-called constant of Planck.

(4) To the theory of the discontinuity of energy, Planck added the idea that just as atoms differ, depending upon the type of matter from which they come, some being heavier than others, energy atoms are also different one from the other, depending upon their source. The magnitude or quantum of the energy of radiation was directly in proportion to the frequency of the radiation. Planck's constant was then not a granule of energy, but a quantum of kinetic momentum.

(5) The quantum theory cleared up the puzzle of atomic stability, and allowed for interpretation of the periodic systems of elements, but both the undulatory and the corpuscular theories of light kept on being popular. Planck's formula was as follows: $E = h\nu$ (the quantum of energy equals Planck's constant of time-energy); Broglie verified the fact that waves behave as particles and vice versa. The unity of both aspects of matter and light was formulated mathematically by Heisenberg, Born, Jordan, Schroedinger.

(6) In 1913, Niels Bohr successfully applied the quantum theory to the phenomena of the atom, describing it as a sun in miniature surrounded by electronic planets which leap like waves from one to another orbit emitting (or absorbing) quanta of light without obeying regular laws.

(7) The most important Einsteinian law is the one which establishes the equivalence between mass and energy: $E = mc^2$; c representing the speed of light.

Later, in 1908, Minkowski established the mathematical theory that space and time fused in a four-dimensional extension in which each point represents an "event" and in which the generalization of regular Euclidian geometry is maintained.

In 1915 Einstein extended the theory of relativity to the accelerated systems, obtaining a theory about fields of gravitation which embraced the Newtonian theory as its first approximation. His principal contribution was the prediction and verification, during the total eclipse of 1918, that the light which came through to us from the stars detoured when it passed near the sun. Astronomers developed the idea of the expansion of the universe, taking as their basis the discovery that distant nebulae or galaxies drew away from our planet at speeds proportionate to their distances. Later (1927), mathematicians developed a modification of the Einsteinian equation, which described a closed, expansional universe of curved spaces.

(8) Albert Einstein has said (in his article "Physics, Philosophy and Scientific Progress" [J. Internat. Coll. Surgeons 14:755-58, Dec. 1950]): "As a matter of fact, one easily recognizes certain principal features to which science has firmly adhered ever since those times:

First, thinking alone can never lead to any knowledge of external objects. Sense perception is the beginning of all research, and the truth of theoretical thought is arrived at exclusively by its relation to the sum total of those experiences.

Second, all elementary concepts are reducible to space-time concepts. Only such concepts occur in the "laws of nature"; in this sense all scientific thought is "geometric." A law of nature is expected to hold true without exceptions; it is given up as soon as one is convinced that one of its conclusions is incompatible with a single fact which has been proved by experimental investigation.

Third, the spatio-temporal laws are complete. This means that there is not a single law of nature which, in principle, could not be reduced to a law within the domain of space-time concepts. This principle implies, for instance, the conviction that psychic entities and relations can be reduced in the last analysis to processes of a physical and chemical nature within the nervous system. According to this principle there are no nonphysical elements in the causal system of the processes of nature; in this sense, there is no room for "free will" within the framework of scientific thought, nor for an escape into what has been called "vitalism."

Just one more remark in this connection. Even though modern quantum theory contains a weakening of the concept of causality, it does not open a back-door to the advocates of free will, as is already evident from the following consideration: the processes determining the organic phenomena are irreversible in the sense of thermodynamics and of such a kind as to eliminate the statistical element ascribed to molecular processes."

(9) Astronomy of the last half-century has made strides like the analysis of stellar movements, the confirmation of the theory of relativity, the concept of spiral galaxies, the construction of gigantic telescopes, radioastronomy, the birth of modern trigonometric parallaxes, the exploration of stellar structures and of interstellar dust and gases, advances in photocellular astronomy. Immediate objects of study, according to Harlow Shapley, are cosmic physics, stellar spectroscopy, the study of the structure of the Milky Way, drawing of maps of remote galaxies, determination of the origin of the planetary system, and the study, through radio microwaves, of the meteors and cosmic rays.

(10) Atomistic physics is the physics of the moment, and tends to treat everything in a fragmentary, atomistic way. According to this theory the electron passes from one to another orbit through a series of very strange leaps because the electron does not pass from one orbit to another through intermediary space, but disappears from one place to appear in another. The electron does not move by leaps, but rather exists in leaps, evaporates in one place and appears in another, without having transferred to that other place. Therefore, the electron is the series of separate aspects it would present in continuous movement if such a thing existed. As the universe is matter and matter is composed of electrons, it has been suggested that the universe moves by leaps between which it disappears. Perhaps a similar theory might be applied to the human psyche.

(11) We admit today that living beings are made up of biogenetic elements of low atomic weight, situated at the start of the periodic scale, and they all have—all except zinc, arsenic, and iodine—atomic weights less than that of iron (56). At the other end of the periodic scale, we find the elements of greatest atomic weight, among which we have—beginning with lead (207), radon (222), radium (226), actinium (227) and uranium (238)—elements

which, along with their isotopes, are all radioactive, that is, easily disintegrable atoms the fission of which takes place with liberation of energy.

The most unstable atoms are found at both ends of the periodic scale; silver is the only element of perfect stability and is near the middle point of the scale (108). The other elements are metastable in either direction, and liberate energy through the conversion of their atoms either when their nuclear components are added together in the lighter elements or when the nucleus of the heaviest disintegrates.

The biogenetic elements have, on the other hand, a greater nuclear stability. Seaborg compiled in 1944 a list of isotopes known at the time, of which 45 were radioactive. Tracing the frequency of radioactivity in the isotopes and in normal atoms, in successive groups within the periodic series, and considering the proportion of radioactive bodies in each group, we see that the curve superimposes itself on the curve of stability of the atomic nucleus. Gamow said in 1946: "the best opportunity of producing atomic transformations and liberating their hidden energy lies in both extremes of the periodic system: the heavy isotope of hydrogen deuterium or the light isotope of uranium (U235), both very rare elements on the planet."

This represents the first third of an article reprinted through the courtesy of the JOURNAL OF CLINICAL AND EXPERIMENTAL PSYCHOPATHOLOGY, and originally presented as a lecture to the Thirteenth International Congress of Psychology held in Stockholm, Sweden.

CURRENTLY AVAILABLE PRODUCT LITERATURE AND INFORMATION

Editor's Note: This is a classified review of currently available manufacturers' literature and product information. To obtain a copy of any piece of literature or information regarding any product, list the number which precedes it on the coupon which appears below, giving your name, address, and occupation. Return the coupon to Arts & Architecture and your requests will be filled as rapidly as possible. Items preceded by a dot (•) indicate products which have been merit specified in the Case Study House Program.

APPLIANCES

• (956) Indoor Incinerator: Information Incinerator unit for convenient disposal combustible refuse, wrappings, papers, garbage, trash; gas fired, unit is 35" high, 22" in diameter, weighs 130 pounds, has capacity of two bushels; heavy steel plate combustion chamber; AGC approved; excellent product. merit specified CSHouse 1952.—Incineration Division, Bowser, Inc., Cairo, Ill.

• (123a) Gas Ranges, Colored Tops: Illustrated color folder describing new 1951 Western-Holly gas ranges with pastel colored tops; tops available in pastel green, blue yellow, lifetime porcelain enamel to harmonize with kitchen colors; body of range in white enamel to avoid over-emphasis on color; other features include top-burner Tempa-Plates, disappearing shelf, vanishing grille, oversize expandable baking oven; well-designed, engineered, fabricated; merit specified CSHouse 1952.—Western Holly Appliance Company, Inc., Culver City, California.

• (365) Kitchen Appliances: Brochures, folders complete line Sunbeam Mixmasters, Wafflemasters, Ironmasters, Toasters, Shavemasters; recent changes in design well illustrated.—Sunbeam Corporation, Roosevelt Road and Central Avenue, Chicago 50, Ill.

ARCHITECTURAL PORCELAIN ENAMEL

(929) Architectural Porcelain Veneer: Brochure well illustrated, detailed, on architectural porcelain veneer; glass hard surface impervious to weather; permanent, color fast, easy to handle. install; lends well to all design shapes; inexpensive; probably best source of information on new, sound product.—Architectural Division, Porcelain Enamel Publicity Bureau, P. O. Box 186, East Pasadena Station, Pasadena 8, California.

CABINETS

• (124a) All-Steel Kitchens: Complete information, specification details, plan-

ning data Shirley all-steel kitchens; quality units, good contemporary design, excellent engineering; produced in standard series of individual matched units; sinks formed from deep-drawing 14-gauge porcelain-on-enamel to which acid-resistant glass-porcelain is permanently bonded; cabinets cold-rolled furniture steel, solidly spot-welded; finish inside and out baked-on synthetic enamel; flush door, drawer fronts, semi-concealed hinges; rubber bumpers on doors, drawers; exceptionally quiet operation; includes crumb-cup strainer or Consume-away food disposer unit; this equipment definitely worth close study, consideration; merit specified CSHouse 1952.—Shirley Corporation, Indianapolis 2, Indiana.

DECORATIVE ACCESSORIES

(137a) Contemporary Architectural Pottery: Information, illustrative matter excellent line of contemporary architectural pottery designed by John Follis and Rex Goode; large man-height pots, broad and flat garden pots; mounted on variety of black iron tripod stands; clean, strong designs; data belongs in all files.—Architectural Pottery, 3562 Meier Street, Venice, California.

(122a) Contemporary Ceramics: Information, prices, catalog contemporary ceramics by Tony Hill; includes full range table pieces, vases, ash trays, lamps, specialties; colorful, well fired, original; among best glazes in industry; merit specified several times CSHouse Program magazine Arts & Architecture; data belong in all contemporary files.—Tony Hill, 3121 West Jefferson Boulevard, Los Angeles, California.

(145a) Antiques and Decorative Accessories: Information excellent collection carefully chosen antique decorative accessories; all pieces reflect quality, good taste; good source for the trade.—

(Continued on Page 35)

J.O.B.

JOB OPPORTUNITY BULLETIN

FOR ARTISTS, ARCHITECTS, DESIGNERS AND MANUFACTURERS

This is prepared monthly by the Institute of Contemporary Art, 138 Newbury St., Boston 16, Mass., as a service to manufacturers and to individuals desiring employment with industry either as company or outside designers. No service or placement fee is charged to artists, architects or designers.

J.O.B. is in two parts:

I. Openings with manufacturers and other concerns or institutions interested in securing the services of artists, architects or designers. We invite manufacturers to send us descriptions of the types of work they offer and the kinds of candidates they seek. Ordinarily the companies request that their names and addresses not be given.

II. Individual artists and designers desiring employment. We invite such to send us information about themselves and the type of employment they seek.

Please address all communications to: Editor, J.O.B., Institute of Contemporary Art, 138 Newbury Street, Boston 16, Mass. The manufacturers request that candidates communicate with the Institute rather than directly with the companies.

I. OPENINGS WITH COMPANIES

A. ARCHITECTURAL DESIGNER

For large, well-established manufacturer of aluminum building materials; to design new structures and products, to redesign structures and products, to assist in developing new architectural uses and applications, and to promote the use of aluminum as a building material. Qualifications: training and experience as an architect, desire to work full-time in industry rather than to engage in private architectural practice, ability to work with engineers and other designers.

B. ARCHITECTURAL SALES MANAGERS AND SALESMEN

For large, well-established national manufacturer, as Regional Sales Managers or Salesmen of aluminum and aluminum building materials to Architects and Contractors. Attractive salaries for mature men with architectural background or interest, extensive sales experience, strong connections with architects and builders in their area.

C. AUTOMOTIVE DESIGNERS

The Institute knows of several manufacturers interested in obtaining the names, addresses and qualifications of industrial designers experienced, or desiring employment, in the field of automobile designing. Training in engineering is considered a desirable asset in applying for such positions.

D. BOOK DESIGNERS

An excellent and progressive New York publisher has requested names of designers interested in free-lance book design: fiction, biography and politics.

E. CERAMIC DESIGNER

Male or female designer with experience in ceramic design for full-time staff position in large well-established manufacturer of both hotel and fine china. Good starting salary and excellent opportunity for advancement. Company located near Pittsburgh.

F. DESIGNERS OF WATCHES, JEWELRY, PACKAGING

An excellent opportunity for a male or female designer with at least two years' experience in industrial design for full-time employment in the company's large design studio near Chicago. Should be a design school graduate; preferably with interests in metalworking, modelmaking, sculpture and working on small ob-

jects such as watch cases, dials, attachments, packaging, compact design and design of men's and women's jewelry.

G. MODELMAKERS

From time to time the Institute hears of companies desiring the services of a modelmaker with training in art and design. At present we know of one company, located in New England, which may wish to hire such a person.

H. NEW YORK CITY POSITIONS

The Institute knows of two first-class opportunities in established situations in New York City for young designers with architectural training and an interest in interior design and home furnishings design, especially furniture. An ability to work with clients would be desirable.

I. PACKAGE DESIGN DIRECTOR

For large, well-established national manufacturer, to head group of artists and designers of packages and labels for wide variety of products. Qualifications: maturity and experience as a package designer with good record of successful packages and labels for wide variety of products, knowledge of merchandising, ability to lead and administer group, willingness to live elsewhere than in New York City.

J. PRODUCT DESIGNERS

1. A large, well-established manufacturer of aluminum invites product designers to apply for staff positions in an expanding design and styling department, offering considerable variety in types of products designed for the company's customers.

2. A New England plastics manufacturing firm seeks for its resident design staff a full-time 3-dimensional product designer, a graduate of a design school, preferably with a year or two of experience.

K. TWO-DIMENSIONAL DESIGNER

1. To design labels and stickers for packages, and to do general typographical lay-out design, for the design staff of a New England manufacturer.

2. Free-lance: to design embossed and decorated plastic and leather articles for a New England manufacturer.

3. (Female) For full-time employment with Boston company which makes rubber plates for printing on corrugated boxes. Job consists of tracing, lettering, etc., and company prefers young woman with some experience in lettering. Modest beginning salary with opportunity for advancement.

L. TYPOGRAPHICAL DESIGNER

A large educational institution in the New England area has a promising opening for an experienced young typographical designer to work on a variety of publications and printed material. Modest beginning salary; excellent long-range prospect.

II. ARTISTS AND DESIGNERS SEEKING EMPLOYMENT:

This Institute does not necessarily endorse the following individuals, who are listed because they have asked the Institute to help them find employment.

ART INSTRUCTOR OF BASIC DESIGN AND COLOR, PAINTING AND DRAWING: Oli Sivhonen, Voluntown, Connecticut. 5 years teaching experience: individuals, children's classes, evening adult classes, in contemporary art institute. Various exhibits. Paintings currently with Shyte Gallery, Washington dealer. Desires industrial or other connection in other than commercial art. (age: 32)

BOOK MANUSCRIPT AND SKETCHES: John A. Urbain, 3445 Holcomb Avenue, Detroit 14, Michigan, has Parisian sketchbook and notes which are available for publication. (age: 32)

CERAMIC DESIGNING: Robert A. Sigmier, 1006 North 4th Street, Broken Arrow, Oklahoma. Experience in designing and manufacturing of porcelain giftware items (contemporary). Mainly interested in ceramics but does not insist on specializing. Desires connection with manufacturer of "high quality merchandise." (age: 32)

FURNITURE DESIGNING: Leo T. Andreadis, 164 Bloomington Street, Chelsea, Mass. Modest experience in furniture design, renderings, sketches, floor plans. Education in interior decoration, design, business administration. (age: 26)

INDUSTRIAL DESIGNER: Roy W. Bloch, 700 South State Street, Ann Arbor, Mich. Training in many phases of industrial design at University of Michigan, will graduate in June, 1953. Interested in joining industrial design studio.

PACKAGE DESIGNING: Sanford S. Brown, 2630 Longview Avenue, Louisville 6, Ky. Interested in openings in Southern New England or New York; must move there for personal reasons. Considerable experience in appearance design; eleven years with General Electric Co. Well qualified. (age: 39)

PRODUCT DESIGNING (free-lance): Experience in display work and experimental design: has been art director, assistant designer and contractor. Now employed as mechanical designer. Would like part-time design work with manufacturers in Philadelphia area. Excellent background. The Institute will forward inquiries from interested companies. (age: 30)

TEXTILE DESIGNING—CERAMIC DESIGNING: Daniel F. Lane, 7753 South Tripp, Chicago 29, Ill. Experience in package design, layout lettering, charting industrial surveys. Education in textile design and ceramic design. At present self-employed. (age: 32)

Castleton China, which retains the Institute as an advisor in design matters, invites ceramic designers to submit sketches for conventional and coupe shape decorations. Sketches accepted will be paid for at current market rates. Sketches will be returned within thirty days if not purchased. Send all sketches to: Mr. William Craig McBurney, Art Director, Shenango Pottery, Newcastle, Pennsylvania.

PRODUCT LITERATURE

continued from page 33

Charles Hamilton, 18 East Fiftieth Street, New York 22, N. Y.

(176a) Wire Sculpture: Information on complete line of wire sculpture wall pieces in three dimensions. Ten distinctively different designs for walls, fireplaces, bars, etc.—Jer-O-Mar Creations, 12028 Guerin Street, Studio City, California.

• (426) Contemporary Clocks and Accessories: Attractive folder Chronopak contemporary clocks, crisp, simple, unusual models; modern fireplace accessories; lastex wire lamps, and bubble lamps. George Nelson, designer. One of the finest sources of information,

worth study and file space.—Howard Miller Clock Company, Zeeland, Mich.

• (152) Door Chimes: Color folder Nu-Tone door chimes; wide range styles, including clock chimes; merit specified CSHouse 1952.—Nu-Tone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio.

FABRICS

(171a) Contemporary Fabrics: Information one of best lines contemporary fabrics by pioneer designer Angelo Testa. Includes hand prints on cottons and sheers, woven designs and correlated woven solids. Custom printing

offers special colors and individual fabrics. Large and small scaled patterns plus a large variety of desirable textures furnish the answer to all your fabric needs; reasonably priced. Angelo Testa & Company, 49 East Ontario Street, Chicago 11, Illinois.

(161a) Highly original fabrics for custom lamp shades. Contemporary in design, utilizing unusual and striking decorative details. Individually designed to carry out all specified decorative motifs. Most unusual. Fabulous Fabrics.—8273 Clinton Street, Los Angeles 48, Calif.

(148a) Fabrics: Sample book available to qualified buyers, architects, designers, interior decorators, etc. Good collection, both Belgium and English imported linens. Large line of woven textures, specializing contemporary fabrics. Also broadly diversified line casements. Wide color ranges. Harmill Fabrics, 106 S. Robertson Blvd., Los Angeles 48, Calif.

FLOOR COVERINGS

(309) Rugs: Catalog, brochures probably best known line contemporary rugs, carpets; wide range colors, fabrics, patterns; features plain colors.—Klearflax Linen Looms, Inc., Sixty-third St. at Grand Ave., Duluth, Minn.

(166a) Imported Danish Cork Tiles: Information and samples, tongue and groove, 5/16" thick, 50% more Cork, 50% denser, no fillers, longer wearing, fine precision cutting, flat laying, light and dark random colors, ultimate style and beauty, reasonable, direct from importer.—Hill Corporation, 725 Second Street, San Francisco 7, California.

(989) Custom Rugs: Illustrated brochure custom-made one-of-a-kind rugs and carpets; hand-made to special order to match wallpaper, draperies, upholstery, accessories; seamless carpets in any width, length, texture, pattern, color; inexpensive, fast service; good service, well worth investigation.—Rug-crofters, Inc., 143 Madison Avenue, New York 16, N.Y.

FURNITURE

(168a) Furniture, Accessories, Retail: A remarkably comprehensive selection of contemporary furniture, fabrics and accessories. Emphasis on good design. Equipped for execution of interiors, commercial and residential.—Dan

Aberle, 14633 Ventura Blvd., Sherman Oaks, Calif.

(181a) Baker Modern Furniture: Information complete line new contemporary furniture designed by Finn Juhl, tables, cabinets, upholstered pieces, chairs; represents new concept in modern furniture; fine detail and soft, flowing lines combined with practical approach to service and comfort; shelf and cabinet wall units permit exceptional flexibility in arrangement and usage; various sections may be combined for specific needs; cabinet units have wood or glass doors; shelves and trays can be ordered in any combination; free standing units afford maximum storage; woods are English hawthorn, American walnut, white rock maple in contrasting colors—almost true white and deep brown; most pieces also available in all walnut; special finish preserves natural finish of wood and provides protection against wear and exposure to moisture; excellent craftsmanship; data belong in all contemporary files; illustrated catalog available.—Baker Furniture Company, Grand Rapids, Michigan.

(15a) Swedish Modern: Information clean, well designed line of Swedish modern furniture; one of best sources.—Swedish Modern, Inc., 675 Fifth Avenue, New York 22, N.Y.

(6a) Modern Office Furniture: Information one of West's most complete lines office, reception room furniture; modern desks, chairs, tables, divans, matching accessories in woods, metals; wide range competitive prices on commercial, custom pieces; professional, trade discounts.—United Desk Company, Twelfth and Olive Streets, Los Angeles, Calif.

(169a) Contemporary Furniture—New 28-page illustrated color brochure gives detailed information Dunbar new modern furniture designed by Edward Wormley; describes upholstered pieces, furniture for living room, dining room, bedroom, case goods; woods include walnut, hickory, birch, cherry; good design, quality hardware; careful workmanship; data belongs in all files; send 25 cents to cover cost; Dunbar Furniture Corp. of Indiana, Berne, Indiana.

(180a) Dux: A complete line of imported upholstered furniture and related tables, warehoused in San Francisco and New York for immediate delivery; handcrafted quality furniture moderately priced; ideally suited for



All painting
and
decorating
done by

Smith Palas Co.

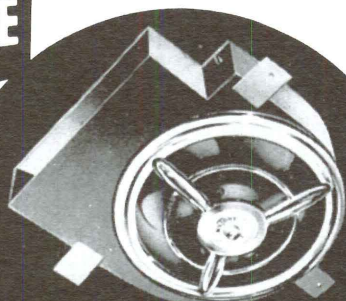
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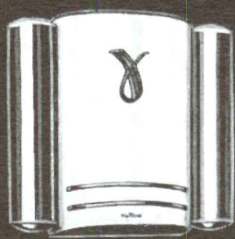
NU TONE



NU TONE VENTILATING FANS
For Kitchen, Bathroom, Recreation or Utility Rooms. 26 Wall and Ceiling Models. \$24.20 to \$38.50 list.

FRESH CLEAN AIR IN THE KITCHEN

NU TONE



NU TONE DOOR CHIMES
For a friendly musical greeting at the door. 15 Models for Kitchen, Hall or Living Room. \$4.25 to \$82.75 list.

A "CHEERFUL EARFUL" AT THE DOOR

NU TONE



NU TONE HEAT-A-LITE
The world's safest electric heater . . . built into the ceiling. No burns, no shocks. 8 Models. \$49.95 to \$67.95 list.

A "TOASTY-WARM" BATHROOM

FREE . . . Complete details, literature, diagrams, specifications, installation data.

Write NuTone, Inc., 1734 S. Maple Ave., Los Angeles, Cal.

residential or commercial use; write for catalog.—The Dux Company, 25 Taylor Street, San Francisco 2, California.

HEATING & AIR CONDITIONING

(542) Furnaces: Brochures, folders, data Payne forced air heating units, including Panelair Forced Air Wall heater, occupying floor area of only 29- $\frac{3}{8}$ " x 9- $\frac{1}{2}$ "; latter draws air from ceiling, discharges near floor to one or more rooms; two speed fan.—Affiliated Gas Equipment, Inc., 801 Royal Oaks Avenue, Monrovia, Calif.

• (127a) Registers, Grilles: Comprehensive 44-page illustrated catalog giving complete information, technical data, sizing charts Hart & Cooley registers, grilles; include full range gravity and air conditioning, furnace accessories; good source of information, particularly in terms of installation, requirement features; well worth file space; these products merit specified CSHouse 1952.—Hart & Cooley Manufacturing Company, Holland, Mich.

(907) Quick Heating: Comprehensive 12-page catalog featuring Markel Heat-aire electrical space heaters; wall-attachable, wall-recessed, portable; photographs, technical data, non-technical installation data; good buyer's guide.—Markel Electric Products, Inc., Buffalo 3, N. Y.

(111a) Packaged Attic Fan: Literature giving full data simplified packaged attic fan; vertical discharge unit, built-in suction box 3' square projects only 17- $\frac{1}{2}$ " above attic floor; good for use over narrow hallways, in low attics; fan, motor, suction box in one unit; automatic ceiling shutter operated by wall switch; shutter, trim finished in light ivory baked enamel; available in 4750 and 6800 CFM capacities; other models in capacities of 7600 and 977 CFM; air delivery ratings certified.—Robbins & Myers, Inc., 387 South Front Street, Memphis, Tennessee.

(142a) Residential Exhaust Fans: Complete information installation data Lau Niteair Rancher exhaust fan for homes with low-pitched roofs; quiet, powerful, reasonably priced, easily installed; pulls air through all rooms, out through attic; available in four blade sizes; complete packaged unit horizontally mounted with belt-driven motor; automatic ceiling shutter with aluminum molding; automatic time switch optional; rubber cushion mounted; well engineered, fabricated.—The Lau Blower Company, 2017 Home Avenue, Dayton 7, Ohio.

(994) Heating Facts: Remarkably well prepared 20-page question-and-answer brochure "How to Select Your Heating System" featuring Lennox heating equipment, now available; practical, readable information by world's largest manufacturers; should be in all files.—Dept. AA-5, The Lennox Furnace Company, 974 South Fair Oaks Avenue, Pasadena.

• (143a) Combination Ceiling Heater, Light: Comprehensively illustrated information, data on specifications new NuTone Heat-a-lite combination heater,

light; remarkably good design, engineering; prismatic lens over standard 100-watt bulb casts diffused lighting over entire room; heater forces warmed air gently downward from Chromalox heating element; utilizes all heat from bulb, fan motor, heating element; uses line voltage; no transformer or relays required; automatic thermostatic controls optional; ideal for bathrooms, children's rooms, bedrooms, recreation rooms; UL-listed; this product definitely worth close appraisal; merit specified CSHouse 1952.—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio.

• (827) Kitchen Ventilating Fans: Well illustrated 4-page folder featuring new NuTone kitchen ventilating fans; wall ceiling types; more CFM than competitive models in same price range; only screw driver needed to install; quickly removable grille, lever switch, motor assembly rubber mounted; well designed, engineered; merit specified for CSHouse 1952.—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio.

LANDSCAPING

• (63a) Plants, Landscaping, Nursery Products: Full color brochure most complete line of plants, including rare, trees, nursery products in Southern California; fully qualified landscaping service, consultation both in field and in nursery; firm chosen to landscape six CSHouses; best source of information.—Evans & Reeves Nurseries, 255 South Barrington Avenue, Los Angeles, Calif.

LIGHTING EQUIPMENT

(34a) Accent and Display Lighting: Brochure excellently designed contemporary Amplex "Adapt-a-Unit" Swivelite fixtures; clean shapes, smart appearance, remarkable flexibility, ease of handling; complete interchangeability of all units, models for every type of dramatic lighting effects; includes recessed units, color equipment; information on this equipment belongs in all files.—Amplex Corporation, 111 Water Street, Brooklyn 1, New York.

(909) Architectural Lighting: Exceptionally well prepared 36-page catalogue architectural lighting by Century for stores, display rooms, show windows, restaurants, museums, churches, auditoriums, fairs, exhibits, hotels, night clubs, terminals; features optical units, downlights, decorative units, reflector units, fluorescent units, spots, floods, strips, special signs, color media, dimmers, lamps, controls; full data including prices; worth study, file space.—Century Lighting, Inc., 521 West Forty-third Street, New York 36, New York.

(965) Contemporary Fixtures: Catalog, data good line contemporary fixtures, including complete selection recessed surface mounted lense, downlights incorporating Corning wide angle Pyrex lenses; recessed, semi-recessed, surface-mounted units utilizing reflector lamps; modern chandeliers for widely diffused, even illumination; selected units merit specified for CSHouse 1950.—Ledlin Lighting, Inc., 49 Elizabeth Street, New York 13, N.Y.

(782) Fluorescent Luminaries: New two-color catalog on Sunbeam Fluorescent Luminaries; clear, concise, inclusive; tables of specifications; a very handy reference.—Sunbeam Lighting Company, 777 East Fourteenth Place, Los Angeles 21, Calif.

C R A N B R O O K A C A D E M Y O F A R T

BLOOMFIELD HILLS, MICHIGAN

Announces the opening of competition for three scholarships of \$1500 each

for advanced study at Cranbrook in Architecture, Ceramics, Design, Metalsmithing, Painting, Sculpture, or Weaving and Textile Design. Applications received until February 16, 1953.

For information address inquiries to the Secretary.

(119a) Recessed and Accent Lighting Fixtures: Specification data and engineering drawings Prescolite Fixtures; complete range contemporary designs for residential, commercial applications; exclusive Re-lamp-a-lite hinge; 30 seconds to fasten trim, install glass or re-lamp; exceptional builder and owner acceptance, well worth considering.—Pressteel Company, 802 Bancroft Way, Berkeley 2, California.

(159a) Decorative Lighting: Custom-made lighting fixtures, residential and commercial, specially designed by our staff of designers and artists and executed by skilled craftsmen. Designing service available on modern and period styling; special attention given to your specifications and design.—Sidney C. Dorner Company, 548 North La Cienega Boulevard, Los Angeles 48, California.

(964) Bank, Office Lighting: Brochure planned lighting for banks, office; covers recent advances use standard lighting equipment for architectural, illuminating results and influences properly maintained foot-candle levels to improve efficiency, increase working accuracy, add visual comfort; data costs, installation, maintenance; well illustrated; one of best sources information on subject.—Pittsburgh Reflector Company, 452 Oliver Building, Pittsburgh 22, Pa.

(910) Theatrical Lighting: Smartly designed 48-page catalogue showing best in contemporary theater lighting for state, exhibits, window displays, pageants, fashion shows, dance halls, cabarets, night clubs and fairs by Century; lights, special equipment, control equipment, accessories; one of most complete workbooks published, completely illustrated and with prices; this is a must.—Century Lighting, Inc., 521 West Forty-third Street, New York 36, New York.

(909) Architectural Lighting: Exceptionally well prepared 36-page catalogue architectural lighting by Century for stores, display rooms, show windows, restaurants, museums, churches, auditoriums, fairs, exhibits, hotels, night clubs, terminals; features optical units, downlights, fluorescent units, spots, floods, strips, special signs, color media, dimmers, lamps, controls; full data, including prices; worth study, file space.—Century Lighting, Inc., 419 West Fifty-fifth Street, New York 19, New York.

(Z7A) Contemporary Commercial Fluorescent, Incandescent Lighting Fixtures: Catalog, complete, illustrated specification data Globe contemporary commercial fluorescent, incandescent lighting fixtures; direct, indirect, semi-indirect, accent, spot, remarkably clean design, sound engineering; one of most complete lines; literature contains charts, tables, technical information; one of best sources of information on lighting.—Globe Lighting Products, Inc., 2121 South Main Street, Los Angeles 7, Calif.

(170a) Architectural Lighting: Full information new Lightolier Calculte fixtures; provide maximum light output evenly diffused; simple, clean functional form: square, round, or recessed with lens, louvers, pinhole, albalite or formed glass; exclusive "torsionite" spring fastener with no exposed screws, bolts, or hinges; built-in fibreglass gasket eliminates light leaks, snug self-leveling frame can be pulled down from any side with fingertip pressure, completely removable for cleaning; def-

initely worth investigating.—Lightolier, 11 East Thirty-sixth Street, New York, New York.

• (375) Lighting Fixtures: Brochures, bulletins Prylites, complete line recessed lighting fixtures, including specialties; multi-colored dining room lights, automatic closet lights; adjustable spots; full technical data, charts, prices.—Pryne & Company, Inc., 140 North Towne Avenue, Pomona, Calif.

(155a) Contemporary Lighting Fixtures: Complete range of fixed and adjustable recessed units, dome lights, lamps; articulate new shapes in modern finishes, reel lights; new concepts in ceiling and wall mounted candelabra fixtures.—Showroom: Gruen Lighting, 8336 West Third Street, Los Angeles, California.

PAINTS, SURFACE TREATMENTS

(164a) Wallpapers: Information Katzenbach and Warren latest "architectural" wallpaper collection. This sculpture wallcovering is a three-dimensional moulded material of great durability, fadeproof, waterproof; especially noteworthy are hand-screened papers simulating materials: Roman Brick, Ancient Wall, Melton Marble, Mosaic; other interesting papers include Spanish Doors and Mirage of Mexican and Guatemalan inspiration. Katzenbach and Warren, Inc., 575 Madison Avenue, New York 22, New York.

(924) Sash and Trim Colors: Folder strong, durable sash and trim colors ground in treated oils; pure, light-fast pigments combined with specially formulated synthetics; won't check, crack, withstands discoloration, retains gloss, dows easily but won't run, sag; good hiding capacity; worth investigation.—General Paint Corporation, 2627 Army Street, San Francisco, Calif.

(162a) Zolatone Process: Information on new revolutionary painting system; true multi-color paint permits application to a surface of multi-color pattern in single spray coat; no special spray equipment required nor special techniques; multiple colors exist separately within Zolatone finish, do not merge nor blend; intermixing of varying ratios of colors and sizes of aggregates produces infinite number of possible multi-color blends; washable, exceptionally abrasion resistant; provides excellent finish for most materials used in building construction: wood, metal, plaster, cement, stone, glass, tile, wall boards, Masonite, paper; tends to conceal flaws and surface imperfections; used to paint exterior surface of new J. W. Robinson Building in Beverly Hills; information belongs in all files.—Manufactured by Paramount Paint and Lacquer Company, 3431 E. 15th St., Los Angeles 23.

(938) Paint Information Service—authoritative, complete—especially for Architects. Questions to all your finish problems answered promptly and frankly, with the latest information available. No obligation. Also color samples and specifications for L & S Portland Cement Paint, the unique oil-base finish for cement masonry, galvanized steel. Used on the West's most important jobs. Write to General Paint Corp., Architectural Information Department, 2627 Army St., San Francisco 19, Calif.

(925) Portland Cement Paint: Folder L & S Portland Cement paint merit specified for use CSHouse 1950; for concrete, stucco, masonry, new galvan-

ized iron, other surfaces; long wearing, won't absorb moisture, fire retardant; easy to apply with brush, spray; used for 30 years.—General Paint Corporation, 2627 Army Street, San Francisco, Calif.

MISCELLANEOUS

(360) Telephones: Information for architects, builders on telephone installations, including built-in data.—P. E. Dvorsky, Pacific Telephone & Telegraph Company, 740 South Olive Street, Los Angeles 55, Calif.

PANELS AND WALL TREATMENTS

(902) Building Board: Brochures, folders Carrco Wallboard, which is fire resistant, water resistant, termite proof, low in cost, highly insulating, non-warping, easy to work, strong, covered with one paint coat, finished on both sides, semi-hard, and uniform; 4'x8' sheets 1/4" in thickness; merits close attention.—L. J. Carr Company, Post Office Box 1282, Sacramento, Calif.

(175a) Etchwood and Etchwall; textured wood paneling for homes, furniture, offices, doors, etc. Etchwood is plywood; Etchwall is redwood lumber T & G preassembled for fast, easy installation; difficult to describe, easy to appreciate.—Davidson Plywood & Lumber Company, 136 East Washington Boulevard, Los Angeles, California.

(160a) Mosaic Clay Tile for walls and floors—indoors and out. The Mosaic Line includes new "Formfree" Patterns and Decorated Wall Tile for unique random pattern development; colorful Quarry Tile in plain and five "non-slip" abrasive surfaces; and handcrafted Faience Tile. The Mosaic Tile Company, 829 North Highland, Hollywood 38. Hillside 8238.

(178a) Plymolite translucent-fiberglass reinforced-building panels. A new lightweight, shatterproof material with a thousand uses; for home, office, farm or factory. Lets light in but keeps weather out. Plymolite is permanent, beautiful, weatherproof, shatterproof, and easy to use. Plymolite may be worked with common hand or power tools and may be fastened with ordinary nails and screws. Available in a variety of flat and corrugated sizes and shapes, also a selection of colors. Both

structural and technical information available. Plymold Company, 2707 Tulare Ave., Burbank, Calif.

(585) Etchwood Panels: Literature Etchwood, a "3-dimensional plywood" for paneling, furniture, display backgrounds; soft grain burnished away leaving hardwood surface in natural grain-textured surface; costs less than decorative hardwood plywood; entirely new product, merits close consideration.—Davidson Plywood & Lumber Company, 3136 East Washington Boulevard, Los Angeles, Calif.

(179a) Plexolite-fiberglass reinforced-translucent sheet: Folder illustrating uses of corrugated or flat Plexolite in industry, interior and outdoor home design and interior office design. Technical data on Plexolite together with illustrated breakdown of standard types and stock sizes; chart of strength data and static load. Additional information on Plexolite accessories for easy installation.—Plexolite Corporation, 4223 W. Jefferson Boulevard, Los Angeles, Calif.

PLUMBING FIXTURES, ACCESSORIES

(55) Water Heaters, Electric: Brochure, data electric water heaters: good design.—Bauer Manufacturing Company, 3121 W. El Segundo Boulevard, Hawthorne, California.

ROOFING

(995) Aluma-Life Roofing: Folders, specification data light-weight Aluma-Life roofing; uses aluminum foil, 99.4 per cent pure, between cotton gum base layers with a coating of marble or granite chips of selected colors; rated "A" by National Board of Fire Underwriters, approved by FHA; hurricane specifications; insulation value equals 2" of mineral wool; particularly good for modern design.—Aluminum Building Products, Inc., Route 1 Atlantic Boulevard, Jacksonville 7, Fla.

• (95) Roof Specifications: Information packed 120-page manual built-up roof specifications featuring P-E built-up roofs; answers any reasonable roofing problem with graphs, sketches, technical data.—Pioneer-Flintkote Company, 5500 South Alameda Street, Los Angeles, Calif.

SASH, DOORS AND WINDOWS

(522) Awning Windows: Brochure Gate City Awning Windows for homes, offices, apartments, hotels; controlled by worm

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and gear drive operating two sets of raising mechanisms distributing raising force to both sides of sash; standard and special sizes; contemporary design.—Gate City Sash & Door Company, 15 Southwest Third Avenue, Fort Lauderdale, Fla.

(356) Doors, Combination Screen-Sash: Brochure Hollywood Junior combination screen-metal sash doors; provides ventilating screen door, sash door, permanent outside door all in one.—West Coast Screen Company, 1127 East Sixty-third Street, Los Angeles, California (in 11 western states only).

(165a) Wardrobe Sliding Doors: Full information, specification data Glide-All sliding doors for low-cost, highly functional wardrobes, closets; floor-to-ceiling installation eliminates studding, framing and plastering time; easily adaptable to less-than-standard heights; smoothly-finished extruded aluminum alloy floor track, threshold type; velvet finished aluminum allow channel top track guides and conceals rollers; quiet, smooth, dependable operation; easily installed. Suited for domestic or commercial buildings; one of the best products in field.—Jule Meyn, Jr., 4326 Van Nuys Boulevard, Sherman Oaks, Calif.

(901) Hollow Core Flush Door: Brochure Paine Rezo hollow core flush door featuring interlocking air-cell grid core combining the strength of cross-banded plywood with lightness in weight; accurately mortised and framed together, and overlaid with matched resin-glued plywood panels; one of best products in field.—L. J. Carr and Company, P. O. Box 1282, Sacramento, Calif.

(163a) Horizontal Sliding Glass Door-walls: Unique 8-page brochure—detail and isometric drawings; also 16-page illustrated editorial reprinted from Arts and Architecture; installation and full scale cross sectional details; pioneer and leading producer; top roller-hung and bottom roller types; many exclusive important engineering features; sealed against wind and water; available in hot-dip galvanized, or bonderized under zinc chromate primer; Thermoglaze, Thermopane and T window units; minimal maintenance; favored by leading contemporary architects; carefully engineered, quality product; completely factory assembled—no loose parts.—Steelbilt, Inc., 4801 E. Washington Blvd., Los Angeles 22, Calif.

(117a) Stock Sash: Information new Kawneer stock sash; designed for mod-

ern building needs; new glazing assembly; attractive appearance; resilient-grip principle insures maximum safety, reliability; strong steel clip minimizes breakage due to sudden shocks, high winds, building settling; data belongs in all files.—The Kawneer Company, 1105 North Front Street, Niles, Mich.

SOUND CONDITIONING

(800) Acousti-Celotex Sound Conditioning: Products for every sound conditioning problem; Fissuretone, a new and "different" random-fissured surface, gives a beautiful new pattern and style to Sound Conditioned ceilings. Is highly sound absorbent, lightweight, rigid, incombustible. Suited for commercial or domestic buildings; Gates Ferguson, The Celotex Corporation, 120 So. La Salle St., Chicago 3, Ill.

STRUCTURAL BUILDING MATERIALS

(970) Douglas Fir Plywood: Basic 1950 catalog giving full data Douglas Fir Plywood and its uses; delineates grades, features construction uses, physical properties, highlights of utility; tables specification data; undoubtedly best source of information, belongs in all files.—Douglas Fir Plywood Association, Tacoma Building, Tacoma 2, Wash.

VISUAL MERCHANDISING

(152a) "Effective Use of Space": New 80-page illustrated brochure featuring SPACEMASTER line of standards, brackets and complete units designed to create outstanding open-sell merchandise displays. The good design and amazing flexibility of these fixtures also makes many of them ideal for shelving in homes and offices where movability is required. Complete with suggested layouts, charts, information on installation. Write for free copy of Catalog 50-S.—Dept. AA, Reflector-Hardware Corporation, Western Avenue at 22nd Place or 225 West 34th Street, New York 1, N.Y.

SPECIALTIES

● (106a) Accordion-Folding Doors: Brochure, full information, specification data Modernfold accordion-folding doors for space-saving closures and room division; permit flexibility in decorative schemes; use no floor or wall space; provide more space; permit better use of space; vinyl, durable, washable, flame-resistant coverings in wide range colors; sturdy, rigid, quiet steel working frame; sold, serviced nationally; deserves closest consideration; merit specified CSHouse 1952.—New Castle

Products, Post Office Box 823, New Castle, Ind.

(937) Magnetic Tape Recorder: Brochure high fidelity magnetic tape recorder for custom installation in studios, schools, houses, industrial plants; instantaneous monitoring from tape while recording, separate heads for high frequency erase, record, playback; well engineered, reasonably priced.—Berlant Associates, 9215 Venice Boulevard, Los Angeles 34, Calif.

(16a) Contemporary Lockets: Full color contemporary Kwikset pin-tumbler, cylindrical locksets; clean design, simple operation, precision engineered, rugged construction; unique cam action locking device provides positive knob locking; half-round spindle reduces number working parts; hand-finished in satin and brass.—Kwikset Locks, Inc., Anaheim, Calif.

● (1a) Door Lookout: Information new B-Safe wide angle door lookout; glass optical system encased in slender cylinder of lock metal with silent-operating eye-piece shutter; wide angle lens system permits viewer to inspect those outside in full figure, but visitors cannot see in; easily installed wood or metal doors up to 2" thickness; tamperproof, well designed; merit specified for CSHouse 1950.—Danca Products Corporation, 52 Broadway, New York 4, New York.

(173a) Information: Folding steel bleacher on wheels, easy to move, and requiring no wall or floor anchorage added to line of Beatty Scaffold, Inc. A section 16' long, 9 rows high, seating nearly 99 persons, can be rolled by one man and made ready to occupy in seconds. Another new development is double-fold Rollway bleacher for buildings with lower-than-average ceilings. This is 3'4" less in height than single-fold bleacher of same capacity. Also new is addition of "jump seat" row to standard Rollway bleacher. This can be pulled out for seating without extending entire structure . . . convenient when small seating section with extra floor space desired.—Beatty Saffway Scaffold, Inc., Tunnel Ave. and Beatty Rd., San Francisco, Calif.

(39a) Iron Work: Illustrated 44-page catalog showing 200 photographs case iron lacework from old New Orleans Vieux Carre designs; pilasters, balustrades, friezes, other details all exact replicas of authentic originals; also includes photographs wide range modern installations; descriptions, weights, measurements, architectural suggestions; highly useful reference work, be-

longs in all files.—Lorio Iron Works, 738 South Gayoso Street, New Orleans 19, Louisiana.

(149a) Steel Roof Deck: Descriptive booklet with physical properties, complete loading tables, suggested specifications Granco Steel Roof Deck; rotary-press formed sheets for uniform pattern; most effective shape, longitudinal ribs 1½" deep (same thickness as 2"x4") spaced on 5¾" centers; wide cover width of 28¾"; maximum sheet length 14'4"; available in 18, 20 or 22 gauge; attractive, durable finish; quick to erect; worth close investigation.—Granco Steel Products Company, Subsidiary of Granite City Steel Company, Granite City, Illinois.

(19a) Decorative Glass: "Modernize Your Home With Decorative Glass" is the title of new Mississippi Glass Company booklet featuring actual photographs that show how figured glass adds charm to the home; enlivens and brightens every room in the house; makes each radiant with interest; free copy on request.—Mississippi Glass Company, 88 Angelica Street, St. Louis 7, Missouri.

● (116a) Packaged Chimneys: Information Van-Packer packaged chimneys; economical; saves space, hangs from ceiling or floor joists; installed in 3 man-hours or less; immediate delivery to job of complete chimney; meets FHA requirements; worth contacting; merit specified CSHouse 1952.—Van-Packer Corporation, 122 West Adams Street, Chicago 3, Illinois.

● (378) Plastic Screen Cloth: Brochures, samples Lumite plastic cloth; impervious to corrosion, stains, wear, bulging; does not need painting, comes in colors; cleans with damp cloth.—James W. Veeder, Chicopee Manufacturing Corporation, 47 Worth Street, New York 13, N. Y.

(23a) Swimming Pools: Well prepared book "Planning Your New Swimming Pool" giving full data Paddock swimming pools; nationally known, widely accepted; one of best sources of information on subject.—Paddock Swimming Pools, 8400 Santa Monica Boulevard, Los Angeles 46, Calif.

(818) Louvered Ceilings: Folders Alumigrid louvered ceilings for contemporary interiors; non-glare illumination, contemporary styling; aluminum, easy to install, maintain; can be used over entire ceiling; full installation, lighting data; well worth investigation.—The Kawneer Company, 730 North Front Street, Niles, Michigan.

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