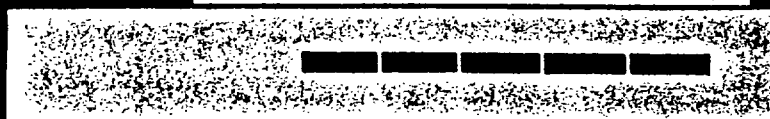
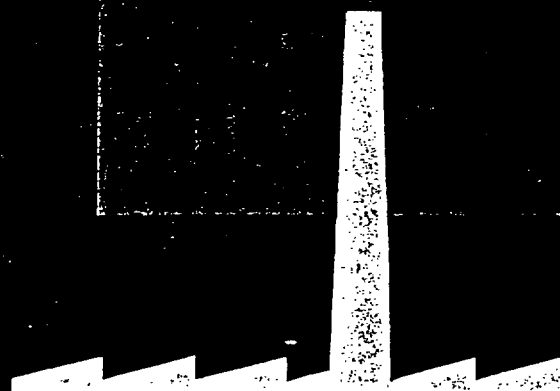
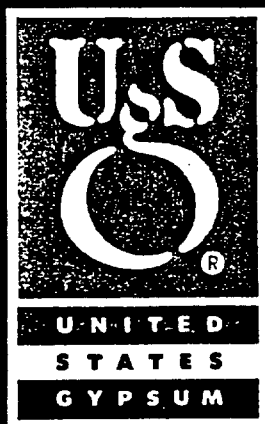


PLAINTIFF'S EXHIBIT

USG-1553



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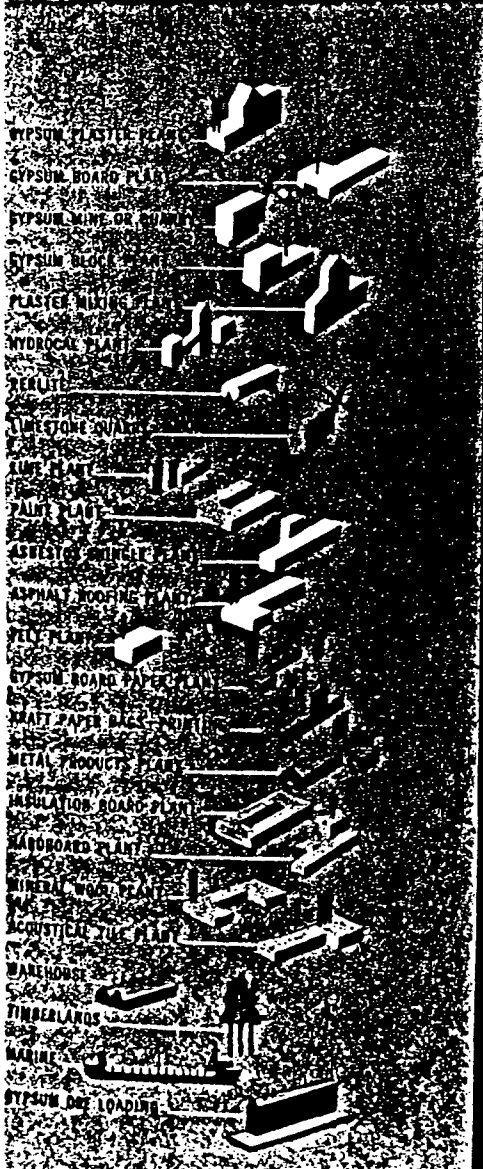
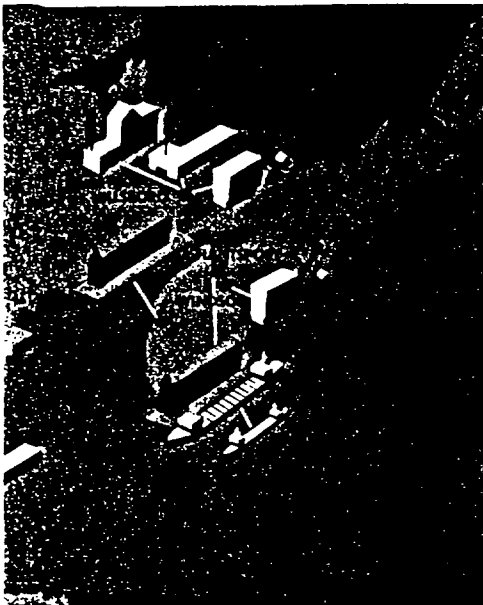
BUILDING

A

BETTER

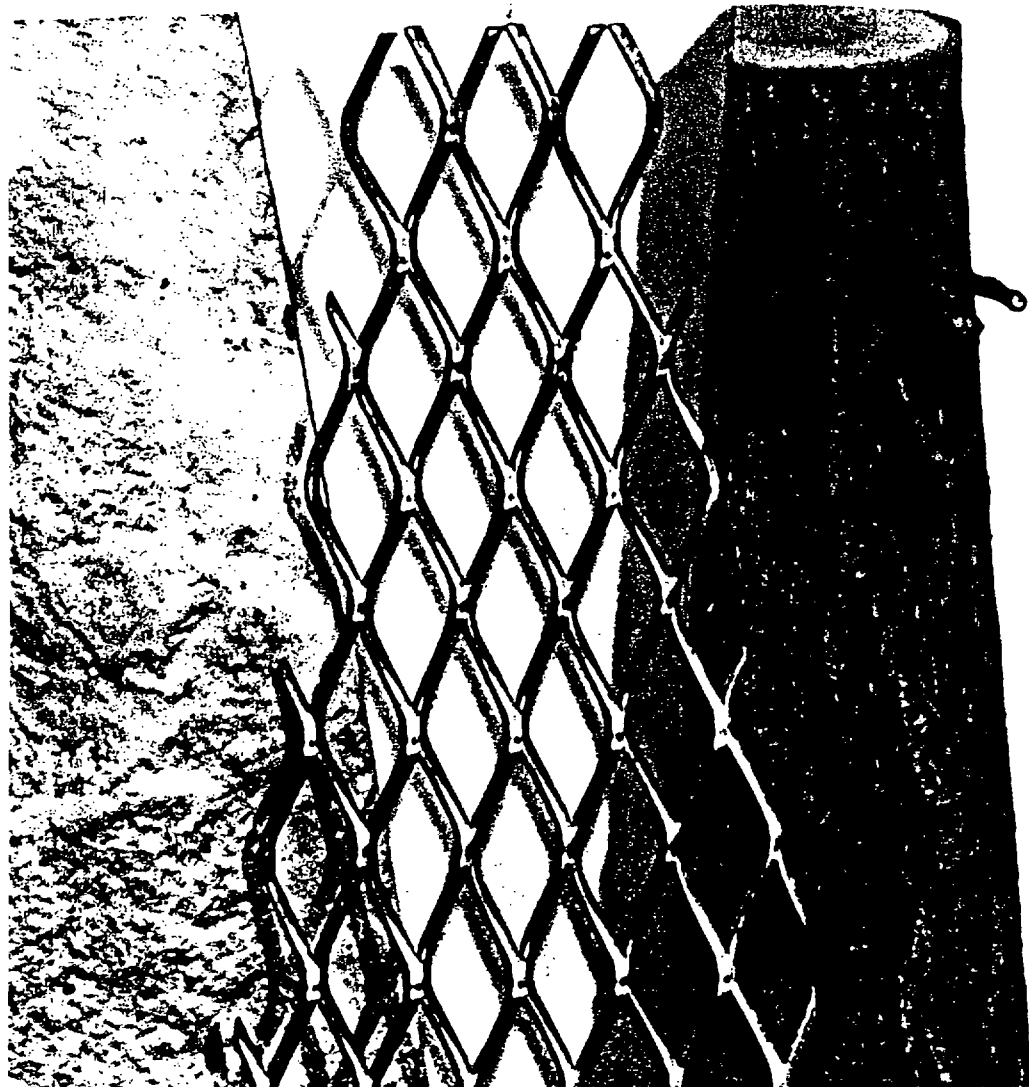
TOMORROW

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Ideas for Industry



BB019 0466

*pioneering
ideas for
industry*

For the many products and systems it has developed to help the construction industry build better, the United States Gypsum Company has long been recognized as . . .

The Greatest Name in Building. But it is not in building alone that U.S.G. has made significant contributions. Industry, too, benefits from this Company's half-century and more of research and development in three basic materials—stone, and metal, and wood.

THE STONE GYPSUM is a mineral of many uses in many industries:

cement, automotive, aircraft, ceramics, plastics, metal casting—to name but a few.

Limestone is important in construction, in agriculture, and in the chemical and

paper industries. FROM METAL come U.S.G.'s expanded meshes, broadening horizons in many directions—particularly for those people concerned with product design and with plant efficiency and safety.

AND FROM WOOD—from its fibers and its lignins—come U.S.G.'s hardboards and insulation boards: products that are finding increased uses in fields as widely varied as furniture making and transportation.

As you consider the *Ideas for Industry* presented in the following pages, you will see how

U.S.G., through research, is constantly pioneering with stone and metal

and wood to create products that serve and benefit industry—

products to help you in your business, whatever it may be.



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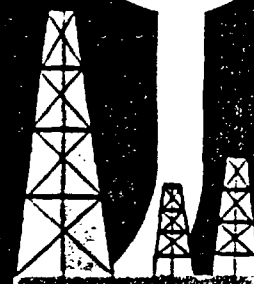
Portland
cement

Chemicals
Agriculture
Glass

Plastics
Automotive
Foundry
Aircraft

Pottery
Ceramics
Novelties

Petroleum



Gypsum
rock

Ground
gypsum

Gypsum
plasters

Precast
gypsum
planks

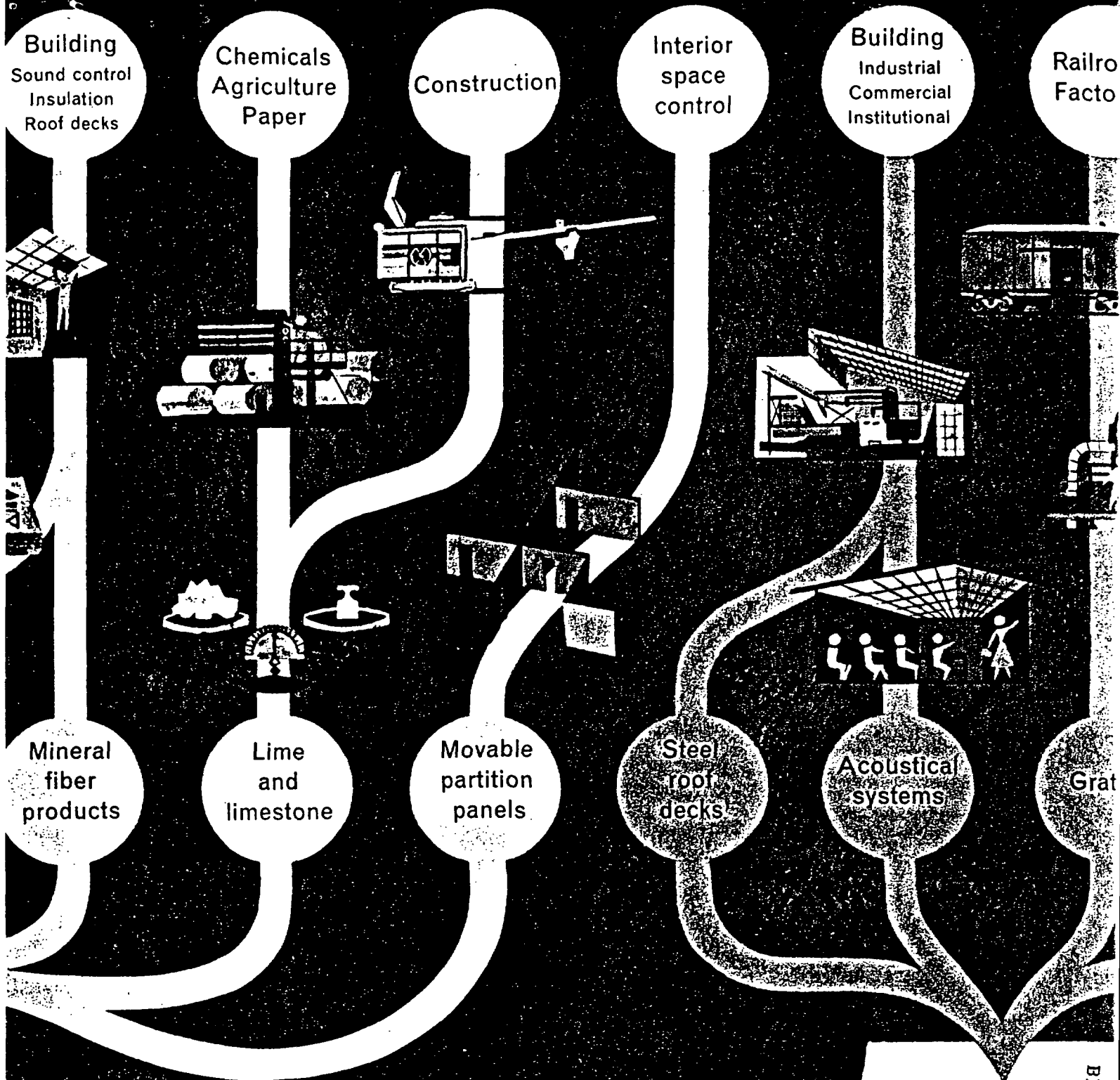
Poured
gypsum
roof decks

how the resources

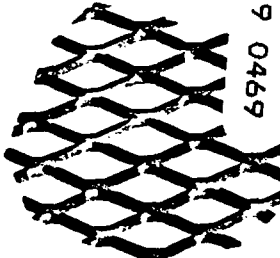


stone

BB019 0468



of a great company can serve

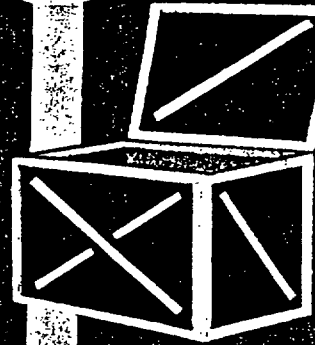
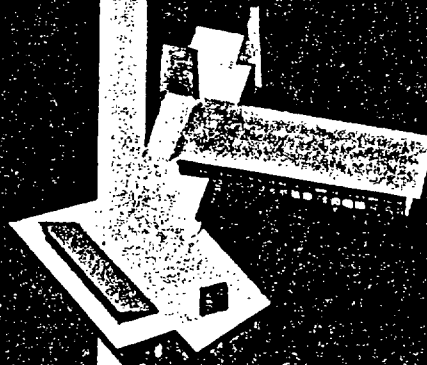
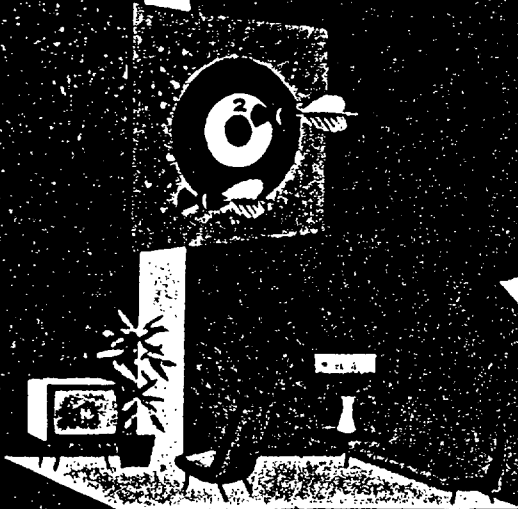
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metal

Displays
Furniture
Machinery
Novelties

Toys
Cabinets
Displays
Furniture
Building

Building
Industrial
Commercial
Institutional

Toys
Trailers
Refrigeration
Packing



Expanded
metals

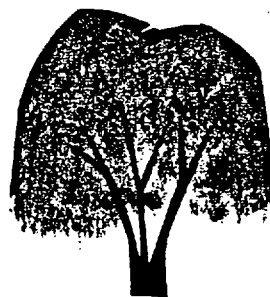
Hardboard

Roof deck
formboard

Acoustical
tile

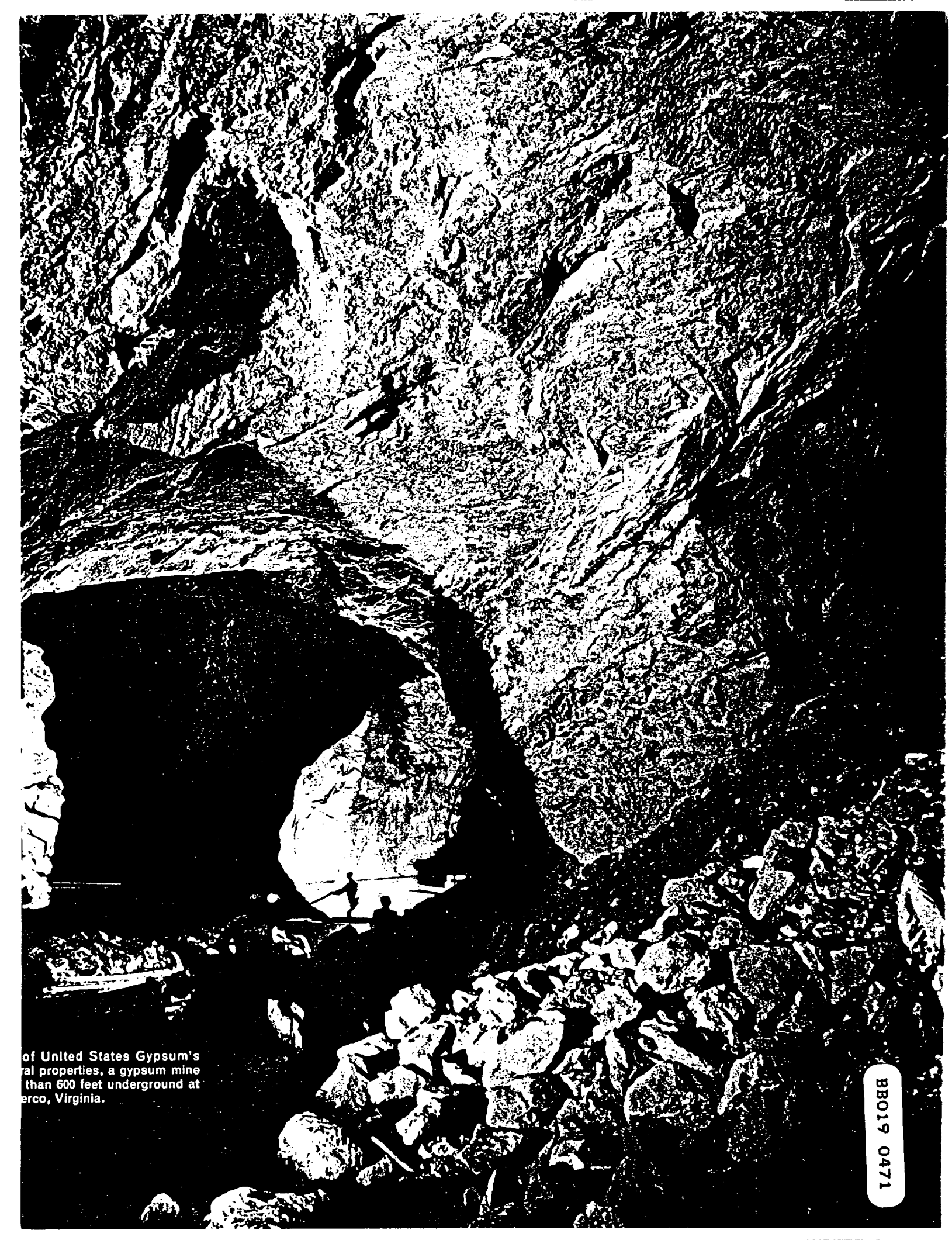
Insulation
board

any industries



wood

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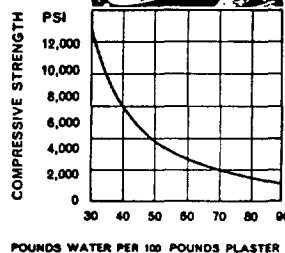


of United States Gypsum's
al properties, a gypsum mine
than 600 feet underground at
erco, Virginia.

BB019 0471



gypsum the mineral with a memory



The above photos show how the addition of water to gypsum plaster produces a plastic, creamy mix. It is during this "period of plasticity," which is precisely controllable, that gypsum can be molded, shaped, or cast. As shown in the chart above, the strength of the gypsum mass can be controlled by varying the amount of water added.



*Controllable set...
secret of gypsum's
usefulness to industry*

1 As seen through a microscope—water has been added to gypsum plaster, and the hardening or setting action has begun.

2 Tiny crystalline needles have started to grow and interlace as the plaster re-combines chemically with the water.

3 Brilliant as jewels, crystals are re-forming into stone of controllable hardness, density, and strength.

When you see finely ground gypsum plaster pour out of a bag, you might wonder what characteristic it possesses that—given water and a little time—the plaster sets into a material of rock-like hardness.

Well might you wonder, for it is a rare characteristic among minerals, the "ability to remember"—a characteristic that has been utilized for at least 5,000 years, as gypsum has served the artists and craftsmen, the architects and builders of many civilizations.

What gypsum plaster seems to remember is that it was originally stone. In processing, it is crushed and ground to powdery fineness, then heated to drive off water with which it is chemically combined.

When water is added to gypsum plaster, however, it "remembers"—and returns once again to a rock-like state. Only now, of course, it has been shaped into a useful form—into a delicate mold, perhaps, or the roof deck of a building, or one of the many other gypsum products described in this book.

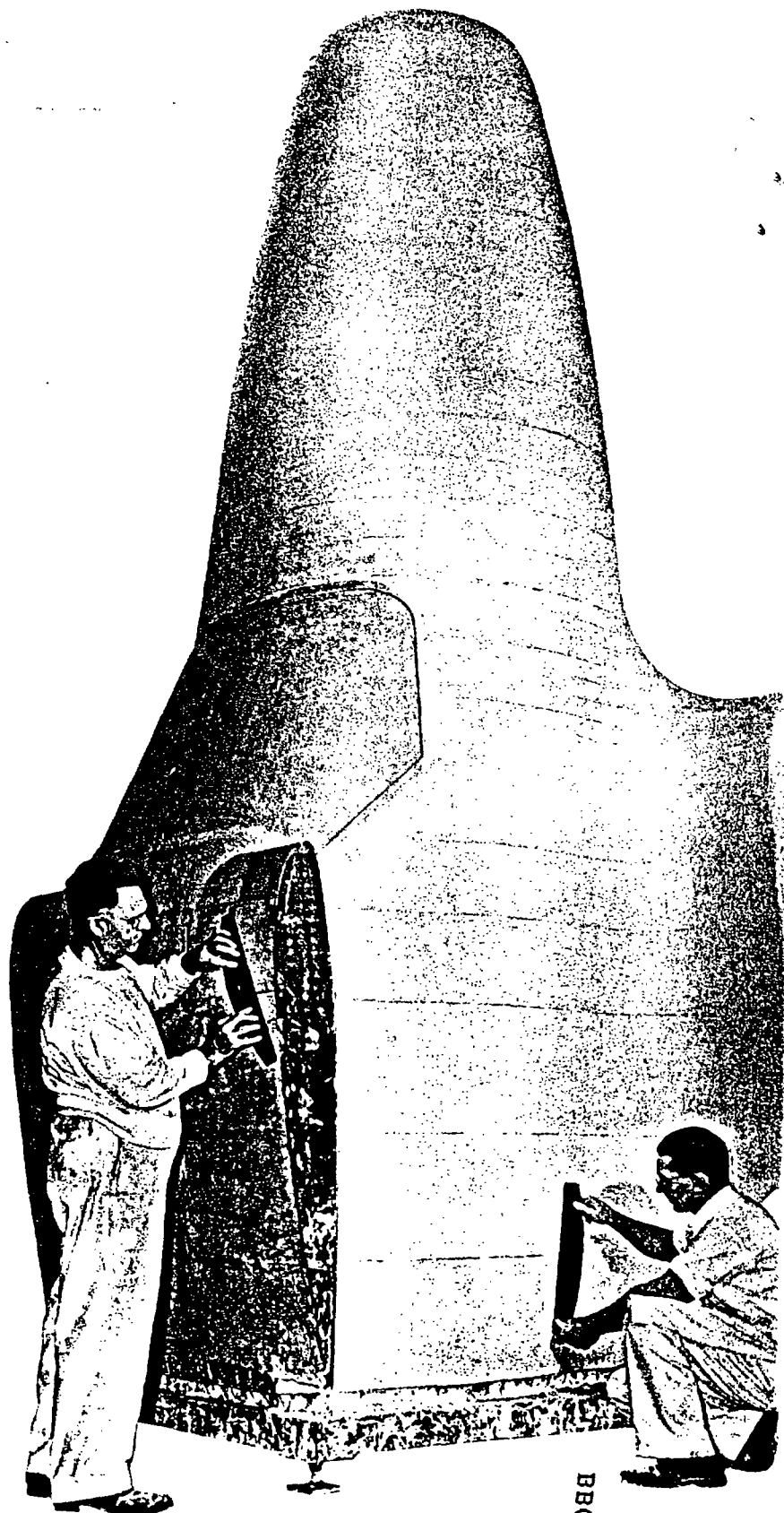
shape of things still to come

The aircraft and automotive industries stand out among the many, large and small, that have long recognized the advantages of gypsum plasters for pattern-making, non-ferrous metal casting, and, more recently, for the tooling of plastics.

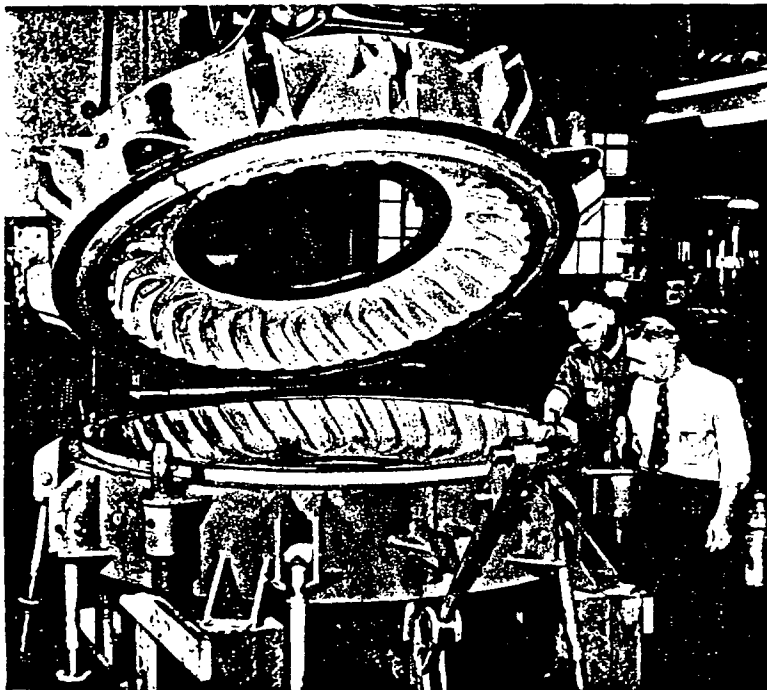
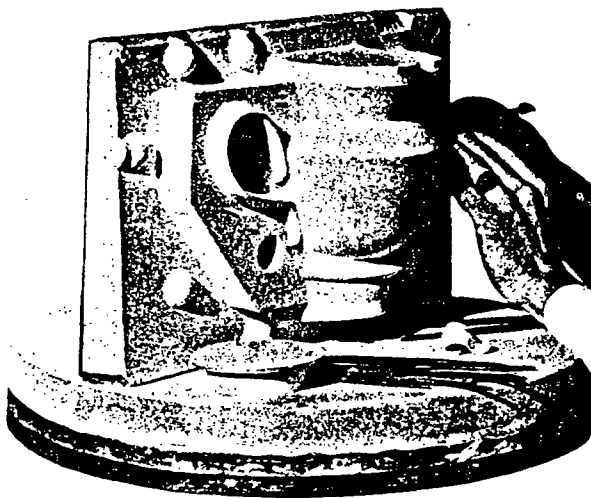
As a pioneer in developing better tooling methods, United States Gypsum is today the leading manufacturer of a full line of industrial plasters. Each of these plasters is suited to a basic tooling technique. Each has been specially formulated to meet specific requirements. All have two particularly desirable advantages—the extraordinary ease and the extreme accuracy with which they can reproduce a shape, no matter how complex or delicate it may be.

Thus, patterns and models are completed quickly and economically; and if modifications are needed later, they are easily achieved. The investment in tools, equipment, and inventory is relatively small.

It is this combination of advantages, found only in gypsum plasters, that makes them the preferred materials today for the shaping of things still to come—tomorrow.



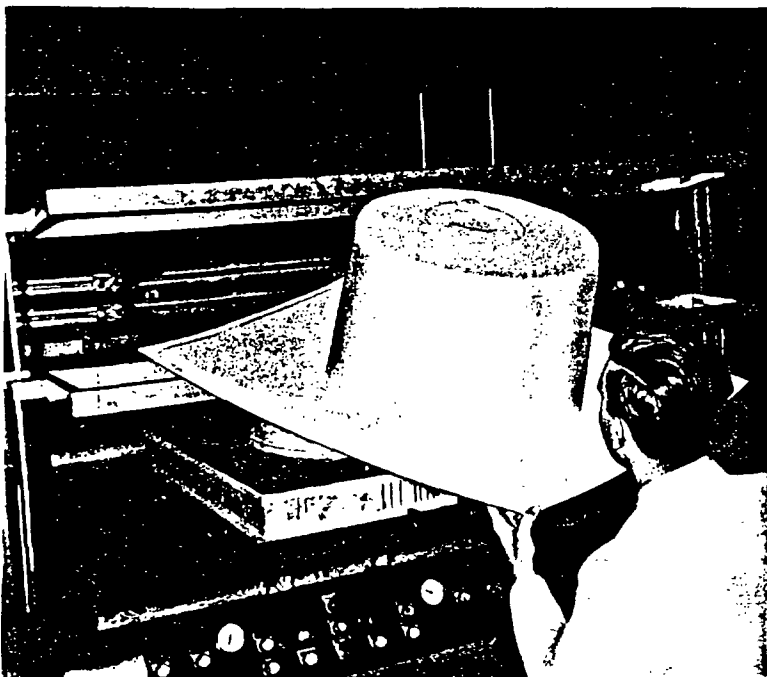
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OPPOSITE PAGE: The full-scale model of an aircraft fuselage section was made in one-third the time required by wood pattern-making methods. The section was built up rapidly with a series of templates, which were filled with plaster. Simple screeding then finished the surface to specified accuracy. Curves and contours like this can be made to a tolerance of plus or minus .005 of an inch.

ABOVE: Whether for massive airliners or for intricate art objects, craftsmen, like the one shown, can create original patterns of full-size models in infinite detail, easily and economically, with one of the industrial plasters in U.S.G.'s complete line.

LEFT: Aluminum molds for giant tractor tires, match plates, core boxes, stamping, and forming dies—all cast in molds of gypsum—demonstrate Industry's wide acceptance of this material. As parts emerge from the mold, they are usually so smooth and clean that no finishing is necessary.

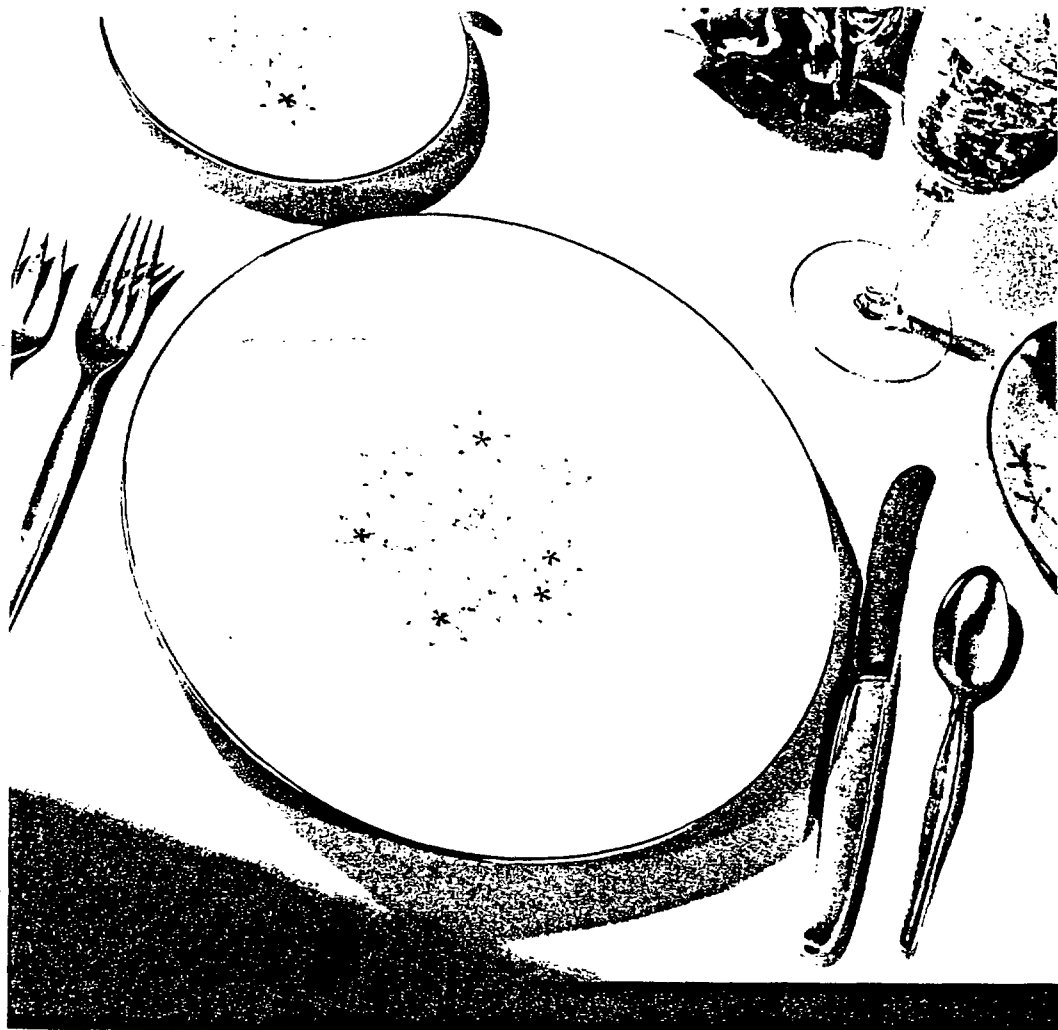


Gypsum for plastics tooling

LOWER LEFT: HYDROCAL®, ULTRACAL®, and other U.S.G. industrial plasters have made significant contributions to the rapid growth of the plastics industry. For example, the plastic piece in the picture—a washing compartment of a home laundry—was vacuum-formed over an ULTRACAL model. This particular gypsum plaster was selected because of the ease, speed, and low cost it offered in making the original model.

*HYDROCAL and ULTRACAL are trademarks Reg. U. S. Pat. Off. for super-strength gypsum cements manufactured by United States Gypsum Company.

for
delicate
chinaware
or giant
industrial
insulators

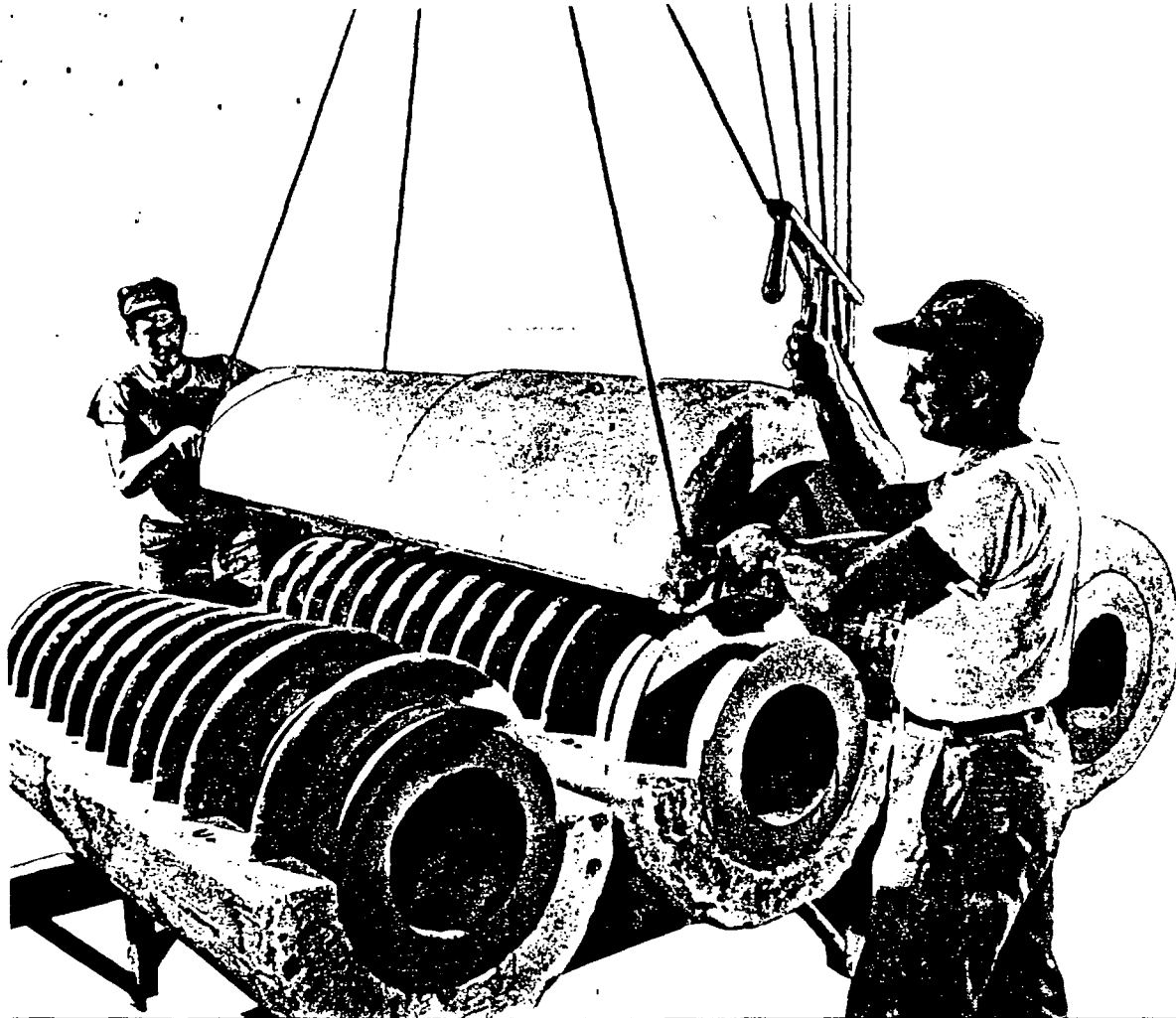


gypsum molds meet practically every requirement

CONTROLLABLE ABSORPTION, or the ability to "de-water" a fluid mass, is the key to the growing popularity of gypsum molds. To understand this unique characteristic, a gypsum plaster mold should be visualized as a three-dimensional rigid sponge. Like a sponge, the mold will absorb water from a fluid mass, but its peculiar pore structure makes it possible to regulate the amount and rate of this absorption.

Since this pore space can be controlled, the density or porosity of a gypsum mold can be adjusted to the requirements for molding products as varied as delicate chinaware and huge industrial insulators. This controllable absorption permits the forming of simple or complex objects from clay, latex, refractories, abrasives—from almost any fluid mass that can be shaped by casting, jiggering or pressing.

As early as 1915, U.S.G. introduced its first gypsum plaster specifically designed for ceramic processes. The Company now offers a complete line of such plasters, backed by years of technological experience to meet the multiple requirements of the ceramic industry.

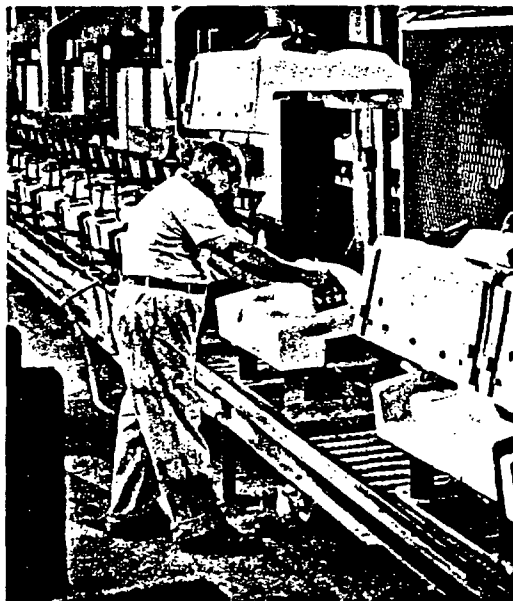


OPPOSITE PAGE: American chinaware now ranks with the world's finest in durability, quality, and beauty. The classic example shown is Haviland ware, created from original models and molds of U.S.G. plasters.

LEFT: This picture shows a six-foot porcelain housing for a 300-KV circuit breaker that was formed in a U.S.G. plaster mold. Because of their weight and size, industrial insulators are cast in plaster molds reinforced with steel rods.



Molds for this automatic jigger must be strong, uniform, and accurate to permit the high degree of mechanization required by American ceramic plants to compete with foreign producers. Molds made of U.S.G. pottery plaster fulfill these requirements.

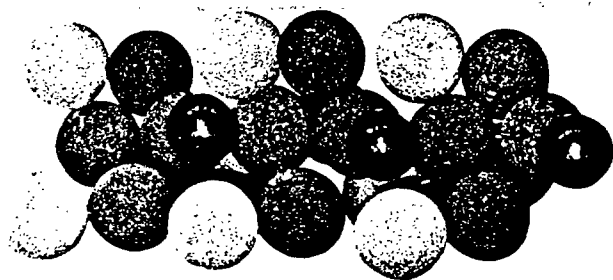


A typical production line in an American sanitary ware plant. The use of molds made of U.S.G. plaster, with their uniform quality and exceptional durability, makes possible mass production of bathroom and lavatory equipment at low cost.



This is how latex toys are stripped from multiple cavity molds of U.S.G. plaster. Because of the speed and economy of this process, American-made rubber toys and novelties of all types are well designed and attractive—yet mass produced.

gypsum as a chemical...



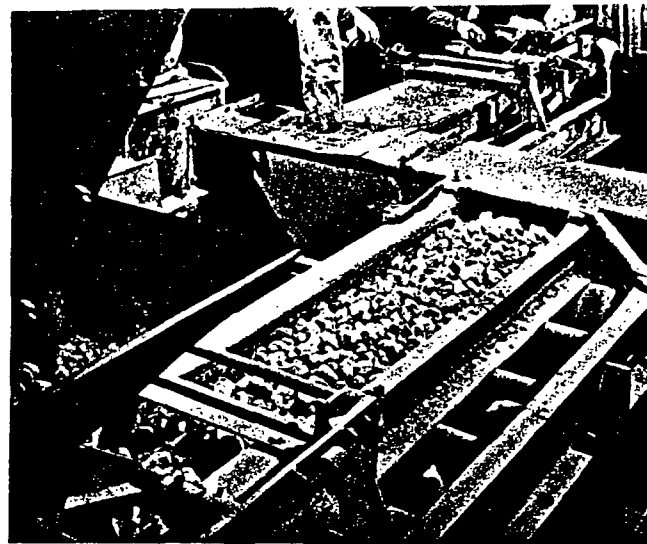
unique source of calcium and sulfur

A crystalline compound of calcium, sulfur, and water of hydration ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$), gypsum as a chemical has many important uses in widely varied fields. In the manufacture of portland cement, for example, it is essential in the control of set; in the brewing industry, it is used as a clarifier.

Under the name of land plaster, gypsum has been used in soil treatment for centuries. Today it is finding ever-increasing application as a soil conditioner and source of calcium and sulfur; millions of acres of previously alkali soils have been made productive with gypsum.

Because of the ability of one of the forms of calcium sulfate to absorb water, it is widely used in the drying of gases. Being non-toxic and readily soluble, it has a myriad of uses in the food industry, too—as in canning, where it helps keep vegetables firm.

With the constant advance of research and technology in gypsum, more and more uses are being discovered for this abundant and versatile mineral. It is already recognized as a valuable sulfur reserve, which is important because of the diminishing supply of this element. It is possible that gypsum will someday become a major raw material in the production of sulfuric acid, one of the most essential chemicals.

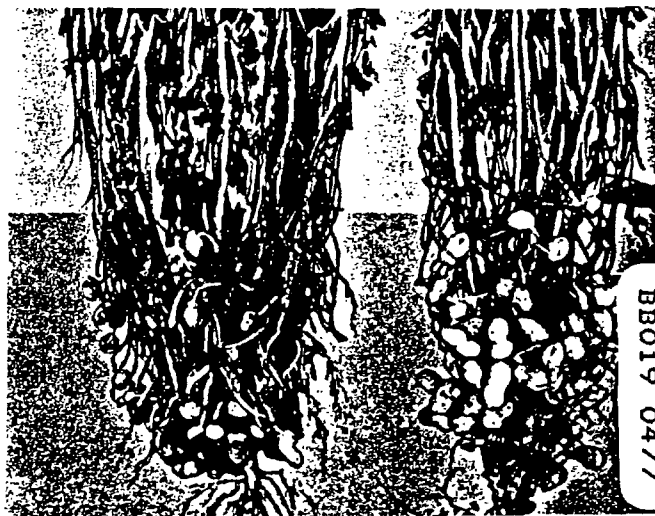


ABOVE: Typical feeding equipment used to introduce gypsum rock into portland cement clinker before grinding.

CENTER: In the manufacture of glass containers, gypsum, with its high sulfate content, is replacing salt cake and barium sulfate in clarifying glass.



BELOW: Gypsum aids agriculture as is shown in this picture. The peanut plant at the left was grown in calcium-deficient soil. The plant at the right flourished in soil treated with gypsum. Besides supplying neutral calcium and sulfur, gypsum improves soil structure, neutralizes alkali soils, corrects high-sodium irrigation water, conserves nitrogen in manure, and clears muddy ponds.



lime... a basic chemical in many industries

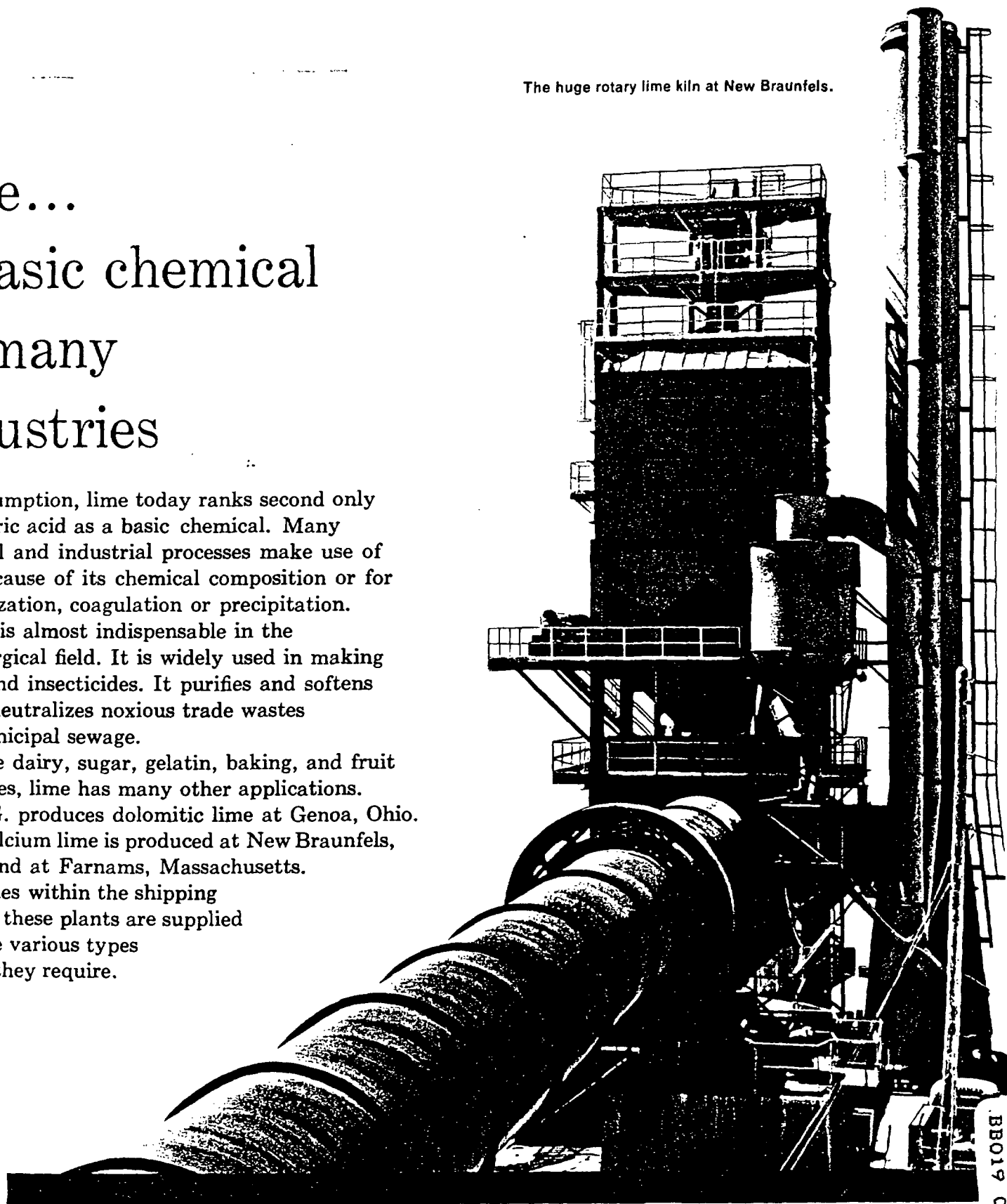
In consumption, lime today ranks second only to sulfuric acid as a basic chemical. Many chemical and industrial processes make use of lime because of its chemical composition or for neutralization, coagulation or precipitation.

Lime is almost indispensable in the metallurgical field. It is widely used in making paper and insecticides. It purifies and softens water, neutralizes noxious trade wastes and municipal sewage.

In the dairy, sugar, gelatin, baking, and fruit industries, lime has many other applications.

U.S.G. produces dolomitic lime at Genoa, Ohio. High-calcium lime is produced at New Braunfels, Texas and at Farnams, Massachusetts. Industries within the shipping areas of these plants are supplied with the various types of lime they require.

The huge rotary lime kiln at New Braunfels.

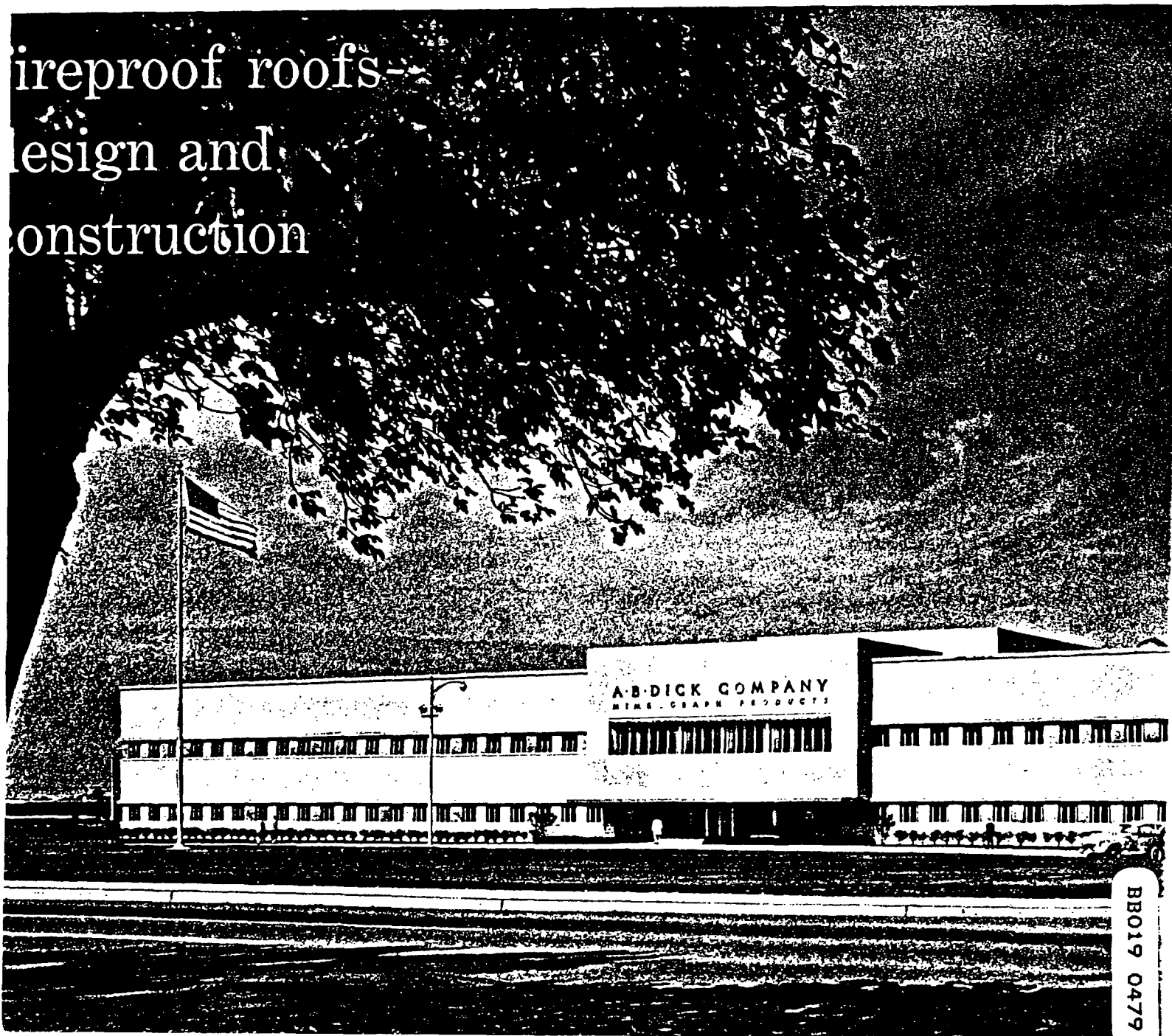




To architects, engineers, and builders, gypsum has long been synonymous with fire-protection. Its role as a fire-fighter is more significant today than at any other period in history, as adequate fire-safety is sought for millions of people, their properties, and their possessions.

Gypsum roof decks will not support combustion. Further, they have so much ability to withstand intense heat that the likelihood of roof failure in event of fire is almost negligible. As a result, insurance rates for buildings with incombustible gypsum roof decks are usually substantially lower; personnel safety is greatly increased; and the possibility of loss of plants, inventory, and

fireproof roofs—
design and
construction



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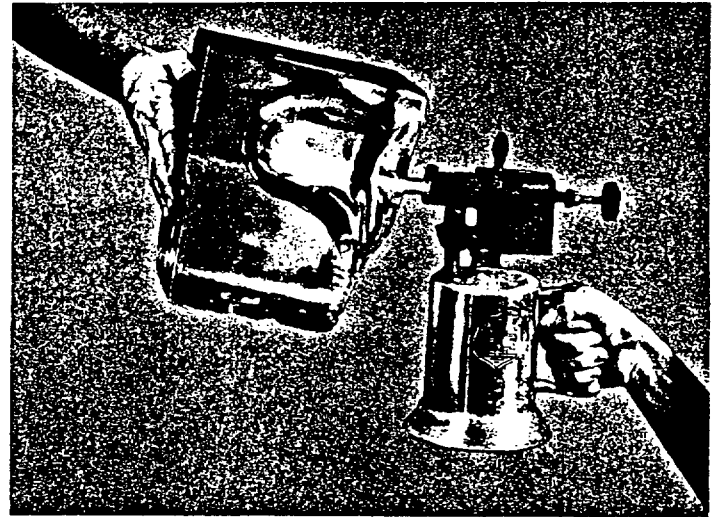
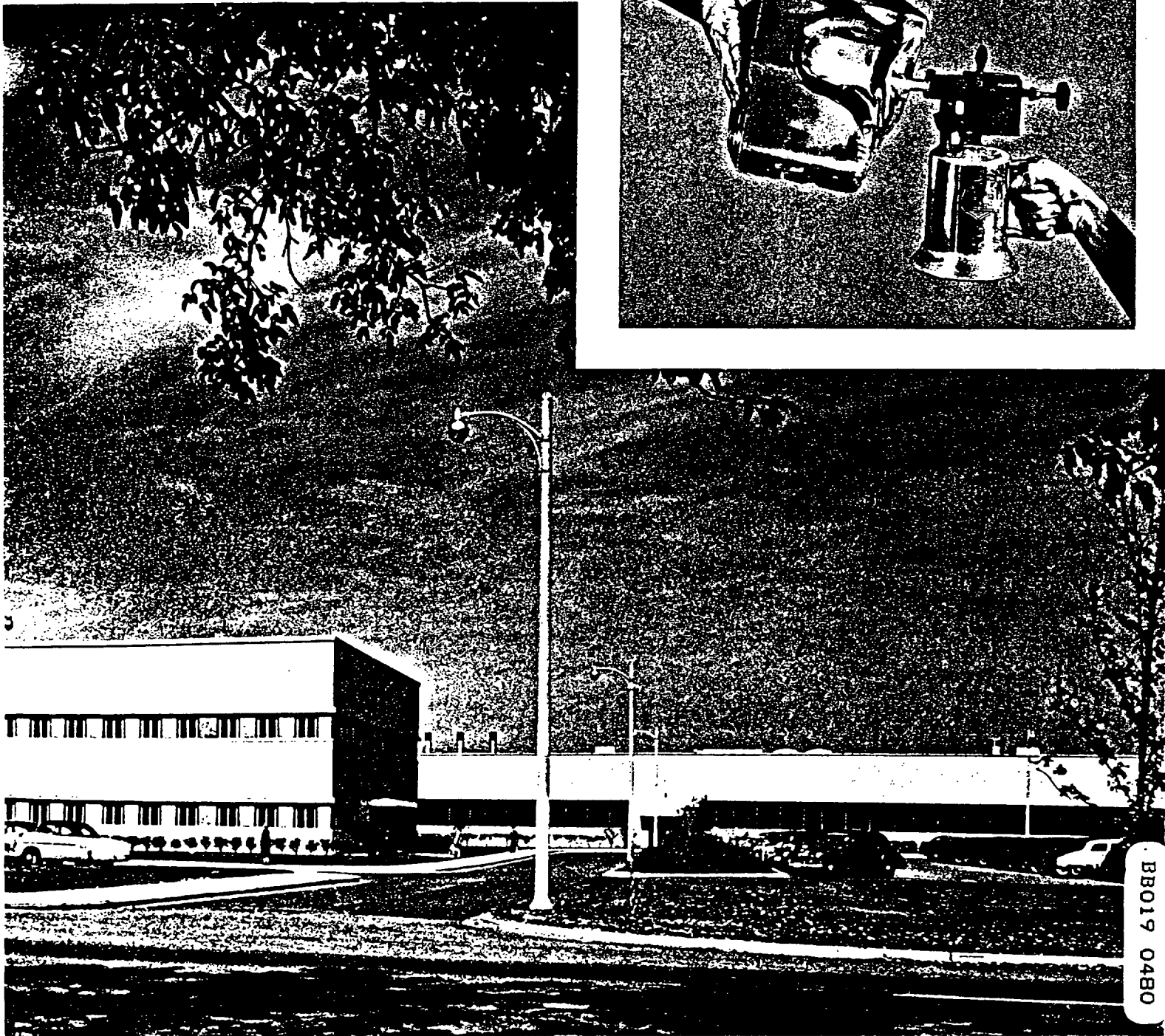
equipment, as well as the sales position and establishment which go with them, is greatly decreased.

Because Gypsum is so resistant to fire, more construction men, than ever before, are considering and specifying incombustible gypsum roof decks. They are doing this to provide the additional fire-safety so essential in buildings where conventional fire-stops cannot be used.

The modern plant of A. B. Dick Company, (shown below), with its poured gypsum roof deck, is an example of this trend, as are the thousands of other factories, schools, stores, warehouses, and institutions across the nation which have roof decks of gypsum, the construction pioneered by U.S.G.

The heat from this blowtorch cannot be felt until the ice is melted. Exposed to fire, gypsum performs in much the same way. The unexposed surface remains relatively cool until its chemically combined water is driven off in the form of steam. This is an extremely slow process, requiring a full hour for heat of 1700° F. to penetrate a one-inch thickness of gypsum to a harmful degree.

Thus, gypsum is the mineral with a "built-in fire-protection system," a unique physical characteristic that makes it incombustible—without equal as a fire-proof material for roof deck construction.



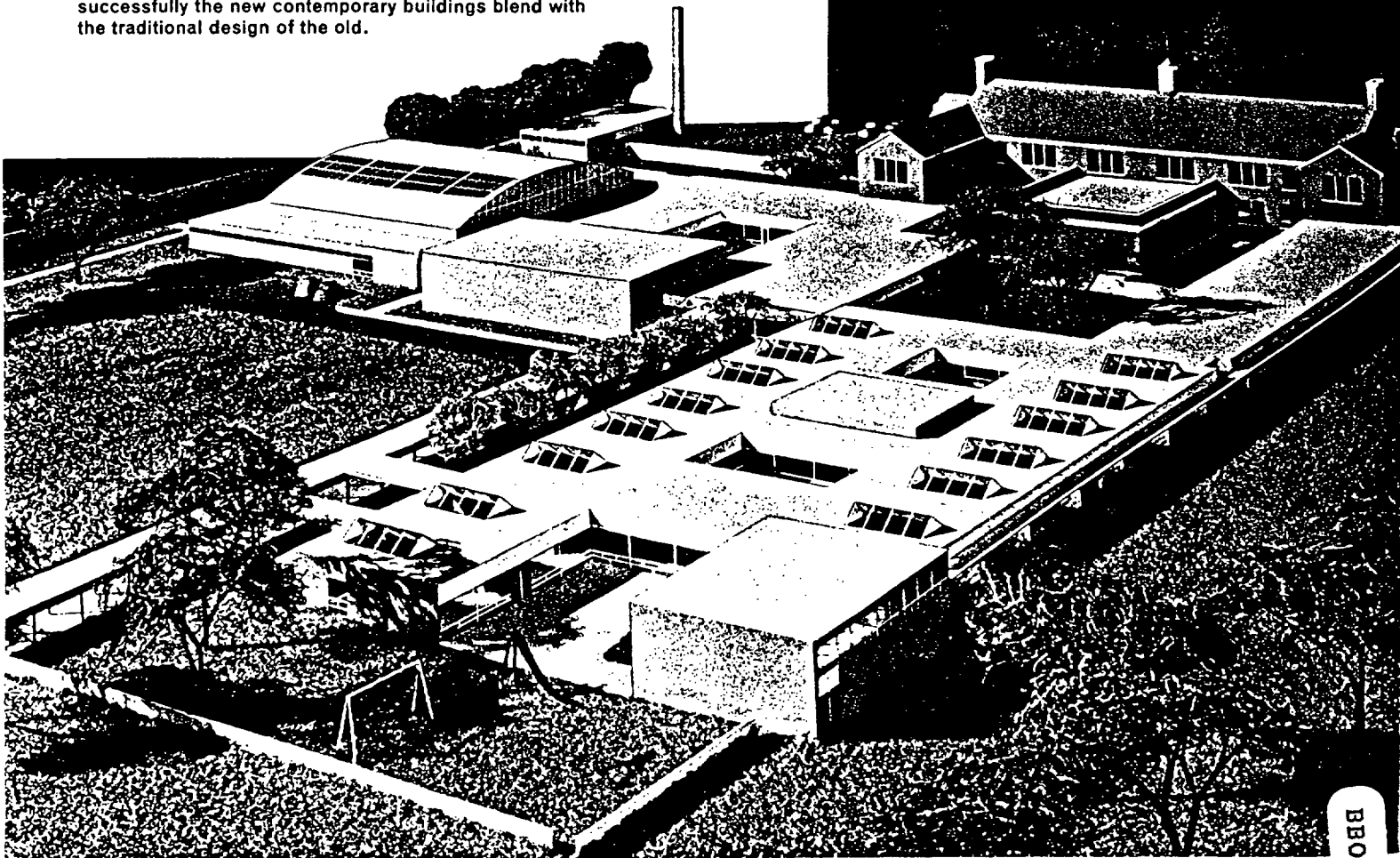
incombustible, adaptable, low-cost

PYROFILL*... the essential component of modern

poured roof decks

As America's schools are built, enlarged, modernized—it is of vital importance that they be given the utmost in fire protection. Materials and methods of construction must also be adaptable to modern design with its emphasis on economy and expandability. PYROFILL Gypsum Concrete meets all these requirements.

BELOW: PYROFILL Gypsum Roof Deck was used for the extensive addition to this school at Grosse Point Woods, Michigan. In the architectural model shown, note how successfully the new contemporary buildings blend with the traditional design of the old.



*T.M. Reg. U.S. Pat. Off.

BB019 0481

When mixed with water, PYROFILL Gypsum Concrete can be pumped from ground level to roof level. As seen here, it flows freely through a hose and quickly covers the formboard, sub-purlins, and steel reinforcing mesh. The resulting slab sets hard and strong enough to walk on in about 15 minutes, so there is no need for costly planking and scaffolding.

Because PYROFILL Gypsum Concrete can be poured rapidly, a typical 12-man crew can often finish up to 30,000 sq. ft. of roof area in a day. The roof deck is ready for the roof covering as soon as the PYROFILL sets. Ordinary inclement weather does not affect PYROFILL. Thus, the building is quickly "under roof." Interior work can be started and finished sooner, which means that buildings are ready for occupancy ahead of the schedule that would be required for materials with longer setting and curing times.

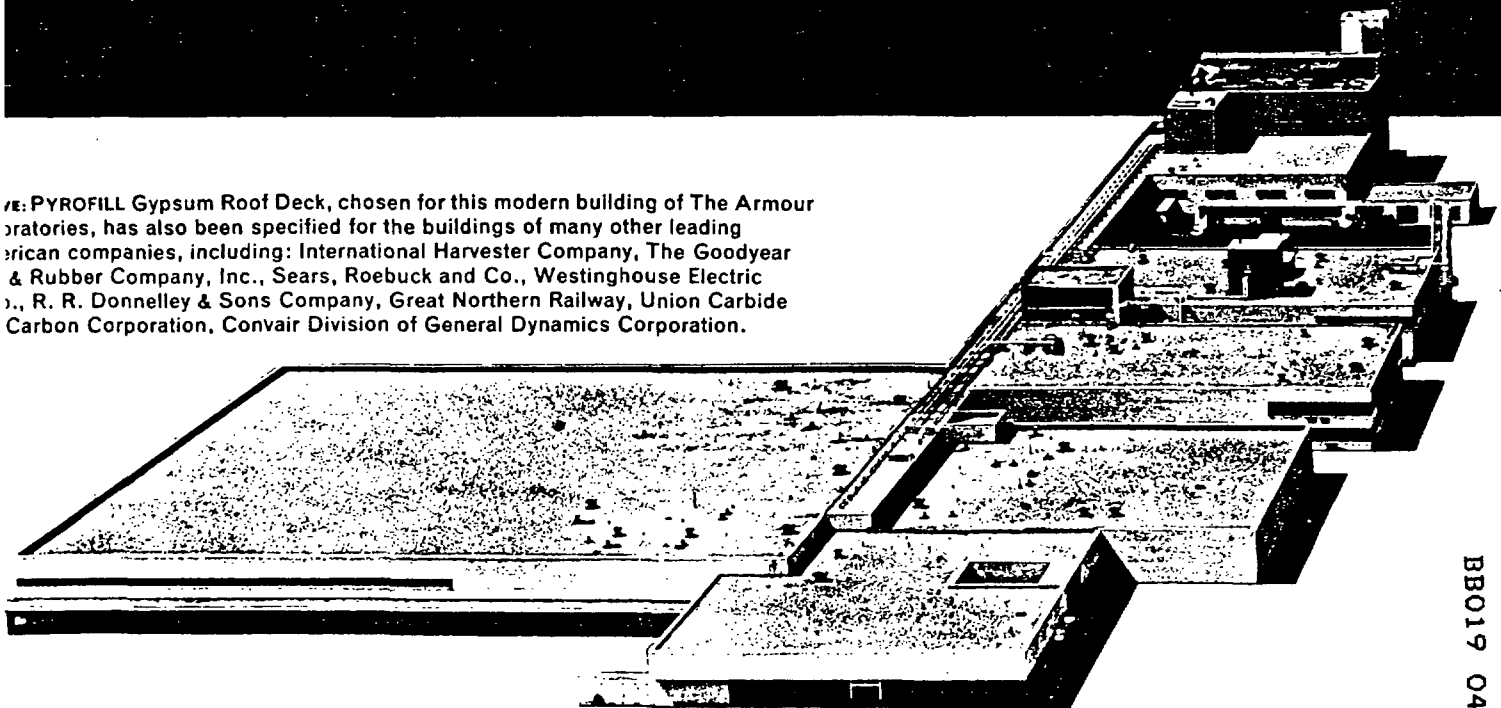


PYROFILL ROOF DECKS FEAR NO FIRE! Monolithic, joint-free, steel-reinforced—a PYROFILL deck forms a positive barrier to heat and flame. It also imparts excellent lateral rigidity to the roof structure. The adaptability of PYROFILL to flat, curved, or pitched roofs offers broad freedom of design to architects and structural engineers. Since it can be finished in just a few days, a PYROFILL Roof Deck effects substantial savings in time and money.

This modern roof deck construction is available through a nation-wide group of selected independent contractor organizations that specialize in pouring U.S.G. PYROFILL Gypsum Roof Decks. Administered by competent, responsible businessmen, each of these organizations operates modern equipment manned by skilled personnel.



PYROFILL Gypsum Roof Deck, chosen for this modern building of The Armour
 Laboratories, has also been specified for the buildings of many other leading
 American companies, including: International Harvester Company, The Goodyear
 & Rubber Company, Inc., Sears, Roebuck and Co., Westinghouse Electric
 Co., R. R. Donnelley & Sons Company, Great Northern Railway, Union Carbide
 Carbon Corporation, Convair Division of General Dynamics Corporation.



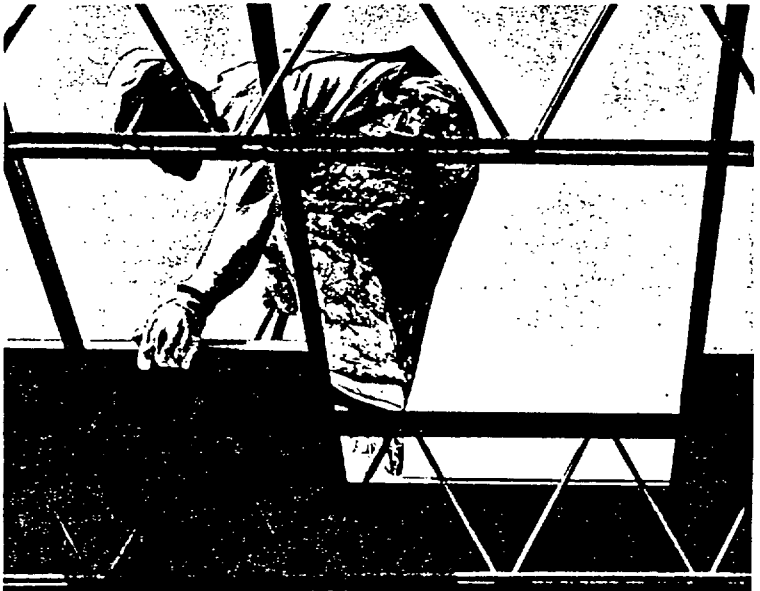
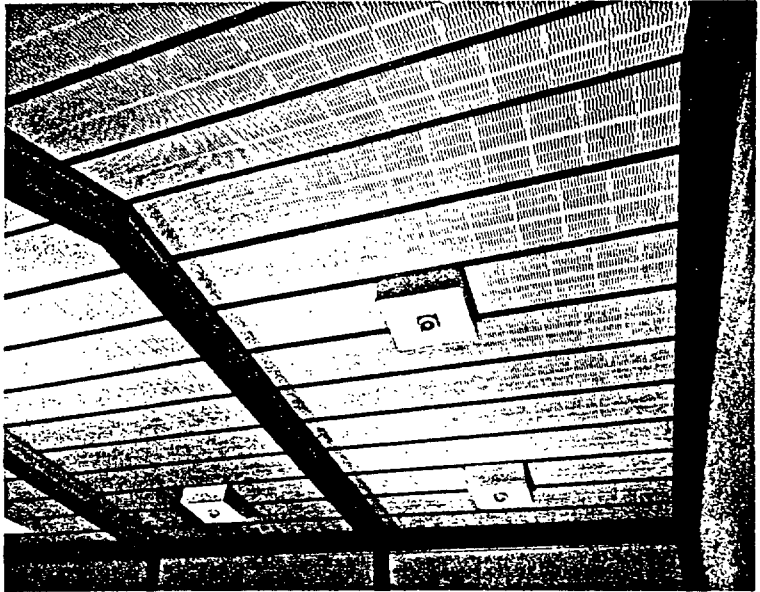
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formboards
of varied types
increase
the utility of
PYROFILL

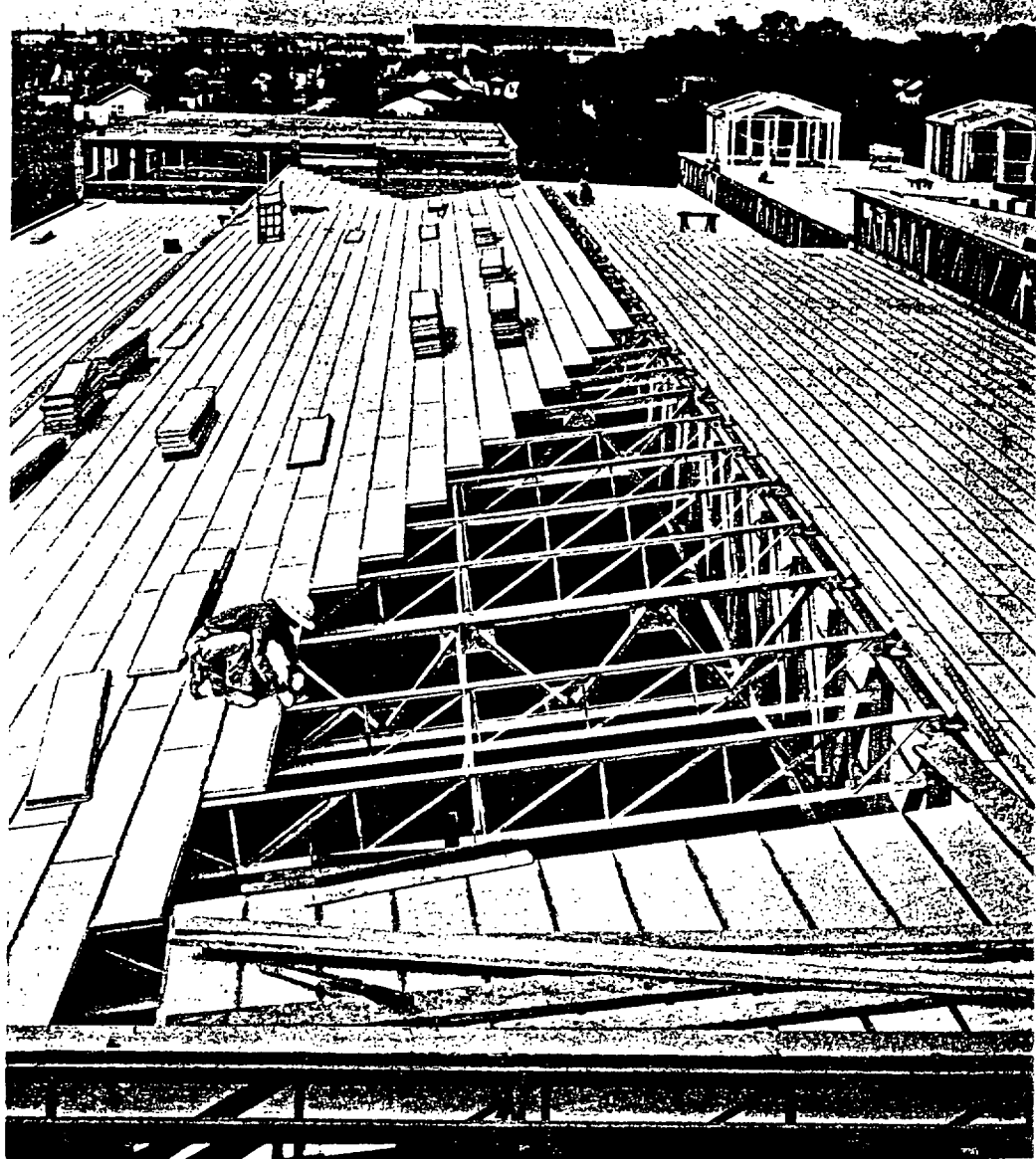
TOP RIGHT: Formboards are the base materials over which PYROFILL Gypsum Concrete is poured to create the complete roof deck. When incombustibility at minimum cost is the major requirement, SHEETROCK® Gypsum Formboard is used. Fireproof SHEETROCK is available in large panels that are easily installed. Because its exposed surface is hard and smooth, light-colored SHEETROCK forms an attractive ceiling with good light reflection. If further decoration is desired, it can be painted with brush, roller, or spray equipment.

CENTER RIGHT: For effective sound control and pleasing beauty, U.S.G. Acoustical Formboard is preferred. Its unique slotted pattern permits a wide range of interesting ceiling designs to complement the contemporary architecture of today's schools, churches, auditoriums, and shopping centers. It can be painted repeatedly without noticeable loss of noise reduction qualities.

LOWER RIGHT: This new formboard, called PYROFORM®, is the latest product of U.S.G.'s constant research to improve roof deck construction. Specifically developed to be used with PYROFILL, it consists of millions of tiny mineral fiber filaments separated by minute air spaces. Thus, in one material are offered the outstanding advantages of incombustibility, thermal insulation, and sound absorption. In addition, the under surface of PYROFORM may be left exposed as the finished ceiling.



roof decks of pre-cast gypsum planks



In order to extend the advantages of gypsum to other types of roof deck construction, U.S.G. manufactures Metal Edge Gypsum Plank which differs from poured PYROFILL in that it is a dry unit system. No special skills are required to erect the units which can be installed in any kind of weather in which it is possible for men to work.

The planks are 10 feet long, 15 inches wide, and 2 inches thick. As shown in the photo at right, all four edges are reinforced with heavy gauge, galvanized sheet steel formed into interlocking tongues and grooves. Strength and rigidity are further increased by specially designed steel reinforcing mats imbedded in each plank during manufacture.

USG* Metal Edge Gypsum Plank is incombustible, and particularly adaptable to either flat or pitched roof surfaces. High light reflectance makes the underside suitable for finished ceilings.



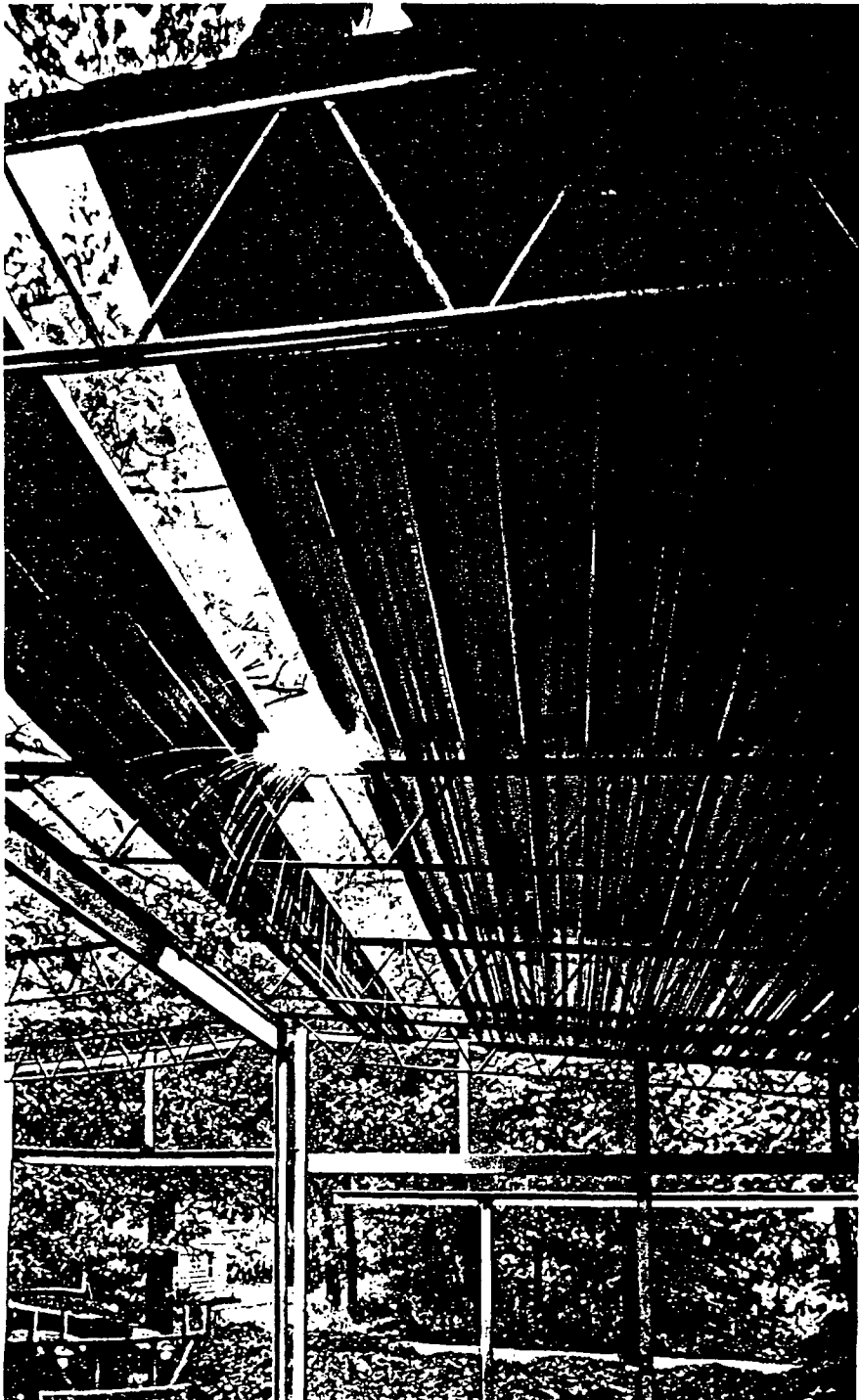
*T.M. Reg. U.S. Pat. Off.

BB019 0485

Steel has long been used as a roof deck material. USG* Steel Roof Decks are cold rolled from high quality carbon steel, with a rib design specially engineered to take advantage of the inherent strength of the metal. They are prime painted and pre-formed to provide edge interlocks for ready installation upon delivery to the job site.

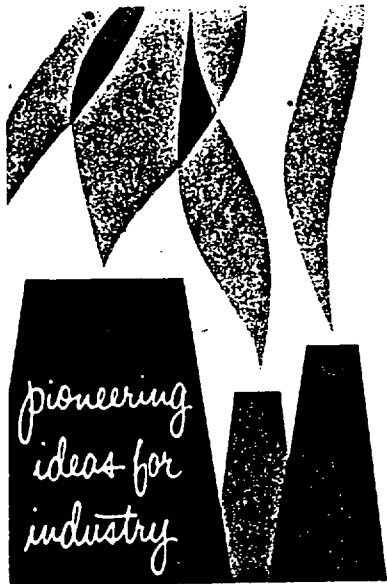
In addition to strength and speedy erection, USG Steel Roof Decks offer economy, good appearance, and easy maintenance. They are finding increasing use in vertical curtain wall construction, interior spandrel paneling, decorative fencing, and sliding doors.

roof
decks of
pre-formed
steel
sheets



*T.M. Reg. U.S. Pat. Off.

BB019 0486

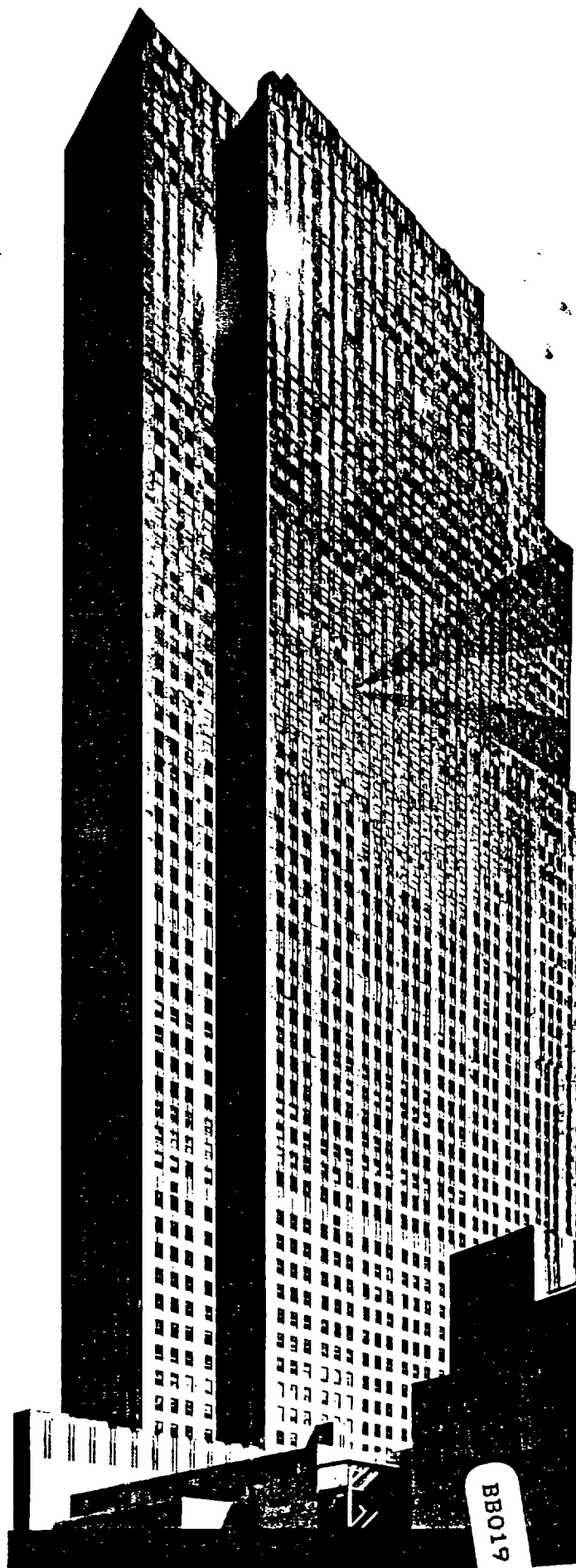


controlling sound and space to coordinate environment and activities

In almost every business operation there are many activities which, though unrelated, must take place at the same time in the same area. Often the only difference between order and confusion is the effective control of sound and space that can be achieved with acoustical ceilings and movable walls.

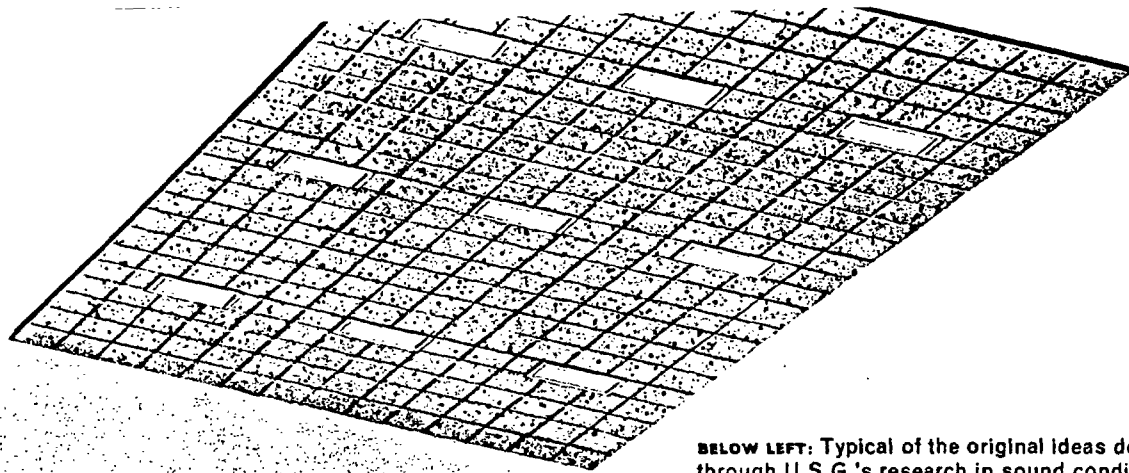
Ceilings of U.S.G. Acoustical Tile, either of incombustible mineral fiber or of wood fiber, reduce nerve-wracking noise as they beautify a room. USG* Movable Partitions create areas of needed privacy at reasonable cost.

Together, these products coordinate environment and activities in such places as schools, offices, banks, plants, hotels, restaurants, and stores, while helping to increase the efficiency, comfort, and well-being of people as they go about their daily activities.

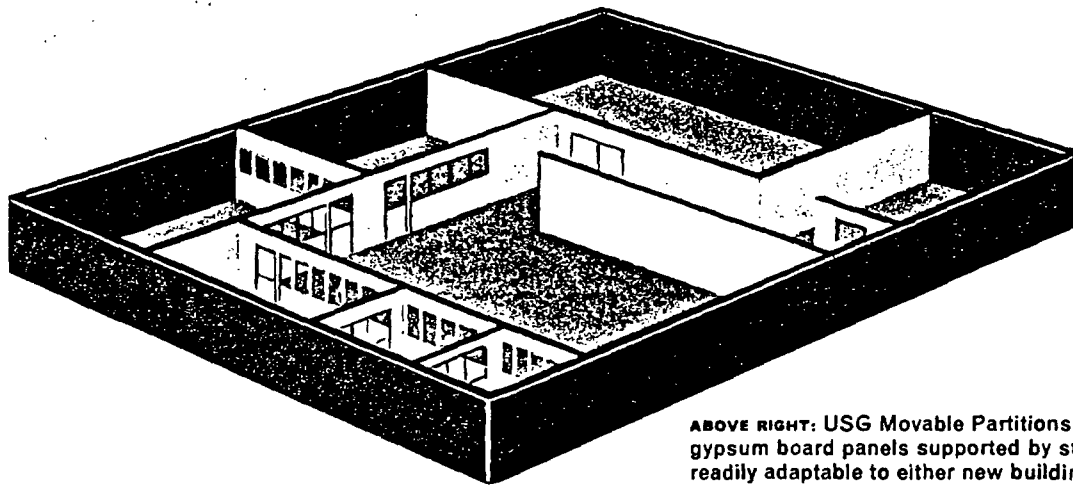
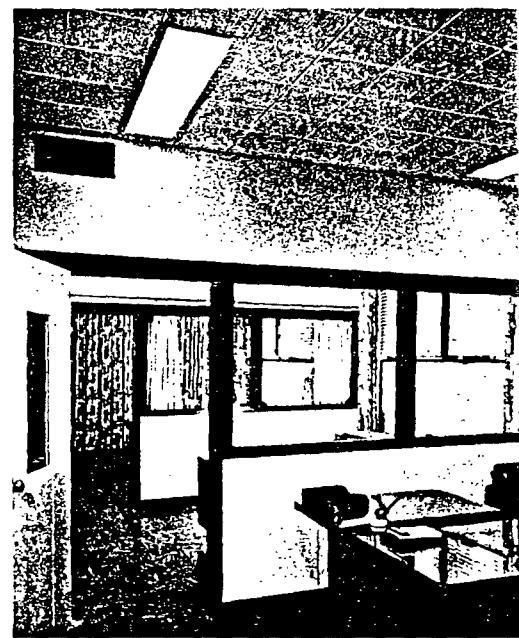
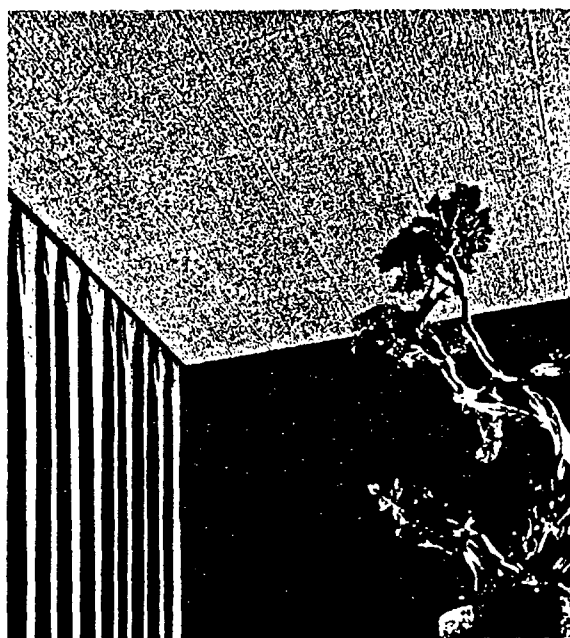


*T.M. Reg. U.S. Pat. Off.

BB019 0487



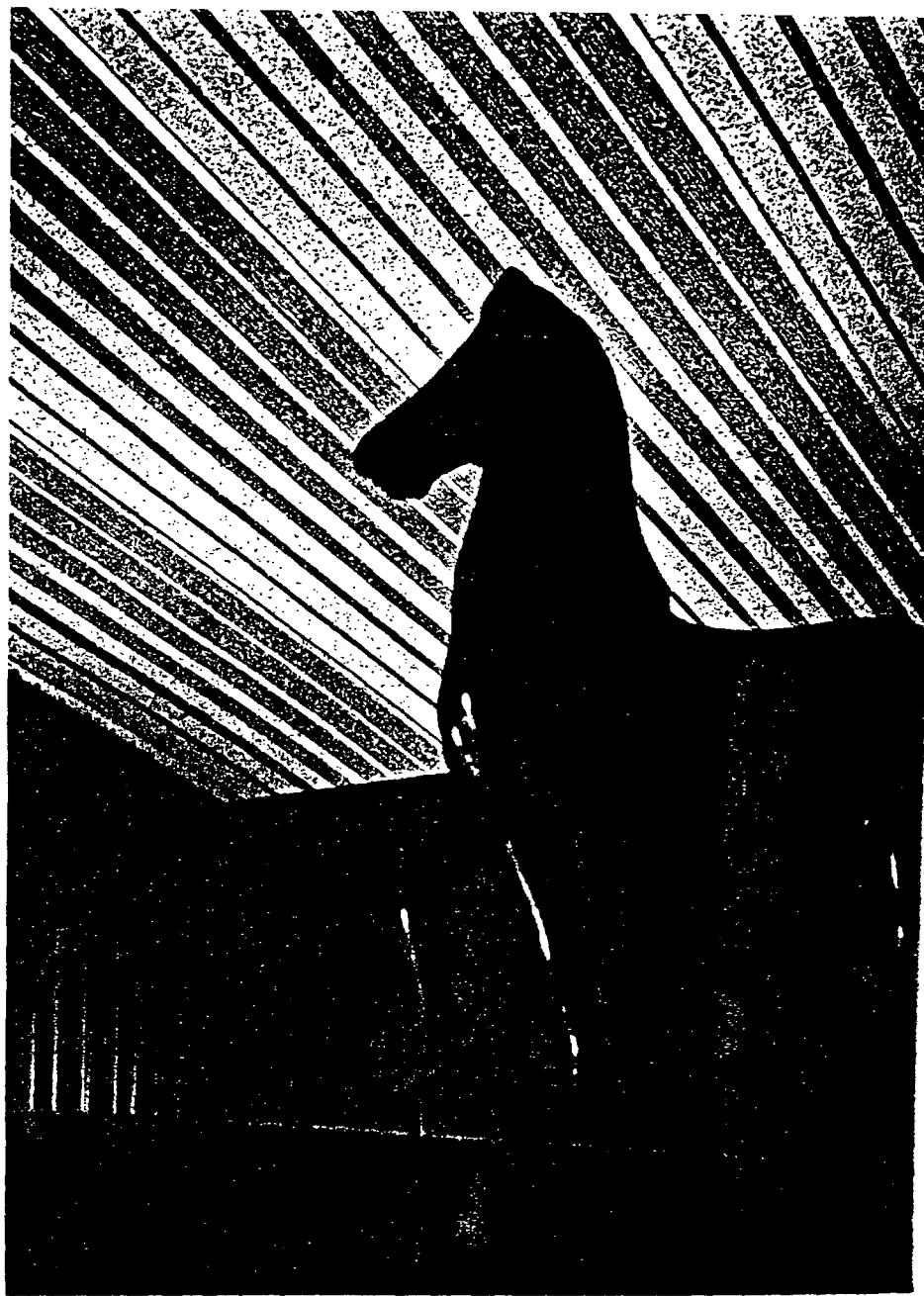
BELOW LEFT: Typical of the original ideas developed, through U.S.G.'s research in sound conditioning is exclusive MOTIF'D* ACOUSTONE* ceiling tile, which combines outstanding beauty with excellent sound-absorbing efficiency. The picture shows STRIATED, one of a number of surface finishes and patterns.



ABOVE RIGHT: USG Movable Partitions, fireproof gypsum board panels supported by steel studs, are readily adaptable to either new building or modernization. In addition to being strong, versatile, fire-resistant, and easily maintained, these modern partitions systematize personnel traffic, and improve lighting conditions and air circulation. Three types are offered to meet virtually any requirement. The picture shows the cornice-height style.

*T.M. Reg. U.S. Pat. Off.

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ACOUSTONE*

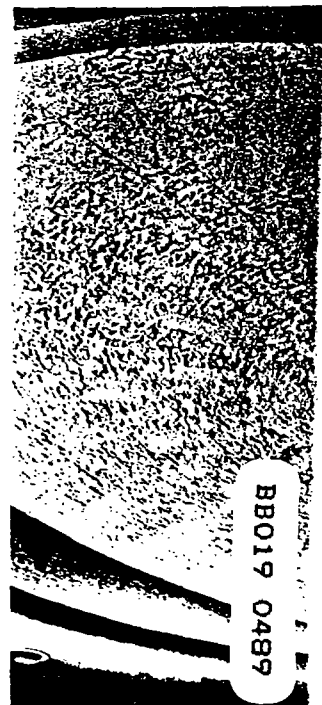


Created from stone, ACOUSTONE was the first incombustible mineral fiber acoustical tile. Still incomparable in beauty and efficiency, it has become the standard by which all other acoustical treatments are judged.

ACOUSTONE alone offers a wide choice of patterns to complement every architectural and decorative need. Above is one of many striking new designs in MOTIF'D ACOUSTONE. Called LINEA, it is notable for its classic sculptured lines.

At right is the often-imitated fissured pattern of regular ACOUSTONE. Closely resembling fine Travertine marble, it creates a singularly attractive ceiling.

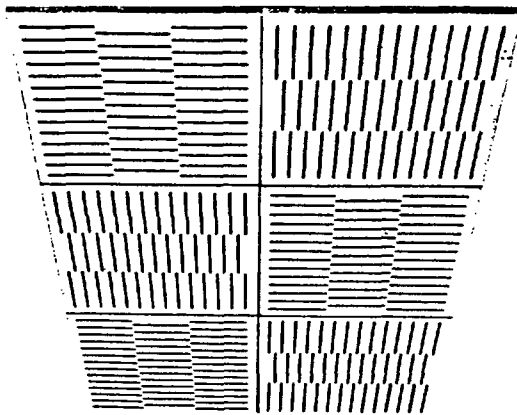
Other distinctive advantages of ACOUSTONE are paintability, cleanability, durability, and high light reflectivity. These features, along with its beauty and efficiency, have gained wide acceptance for ACOUSTONE in industrial, commercial, and institutional buildings.



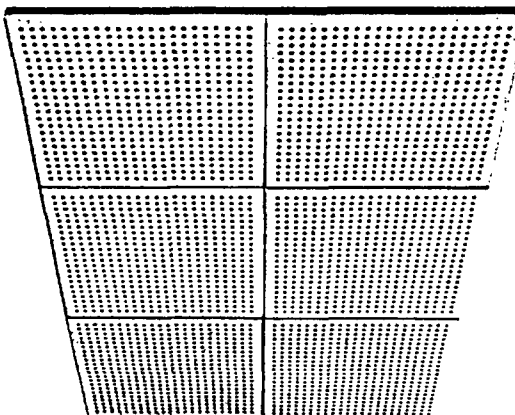
*T.M. Reg. U.S. Pat. Off.

other
acoustical
products
that beautify
as they
reduce noise

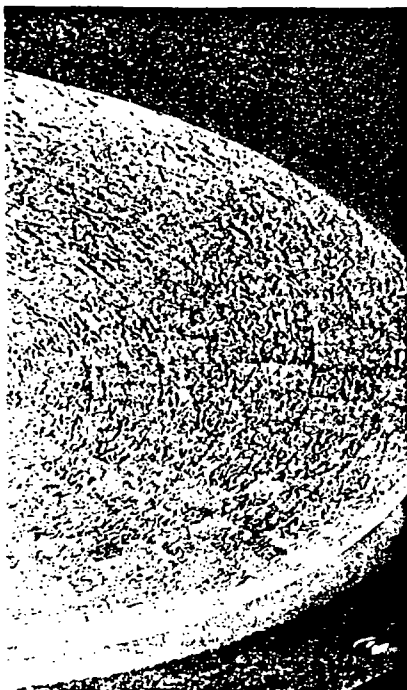
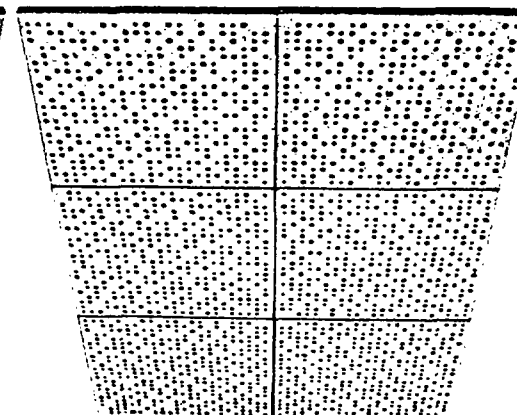
Slotted AUDITONE



Regular Perforated AUDITONE



Random Perforated AUDITONE



Because economy is frequently the deciding factor in sound conditioning, U.S.G. manufactures AUDITONE* Acoustical Tile, a wood fiber product available in the three patterns shown above. A variety of six unusual ceiling effects can be achieved with Slotted AUDITONE by positioning the tiles so as to vary the direction of the slots. The regular perforated pattern provides a clean overall design; the random perforated tile is in keeping with contemporary interior design. Any one is a logical choice for effective, low-cost sound control in auditoriums, recreation centers, cafeterias, gymnasiums, stores, offices, and homes.

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U.S.G. acoustical systems



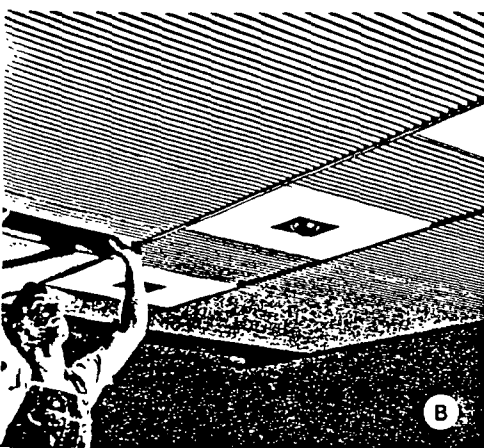
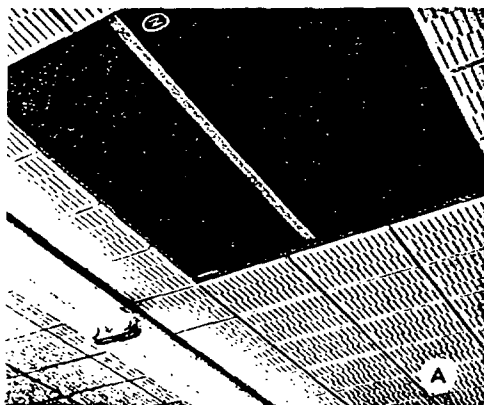
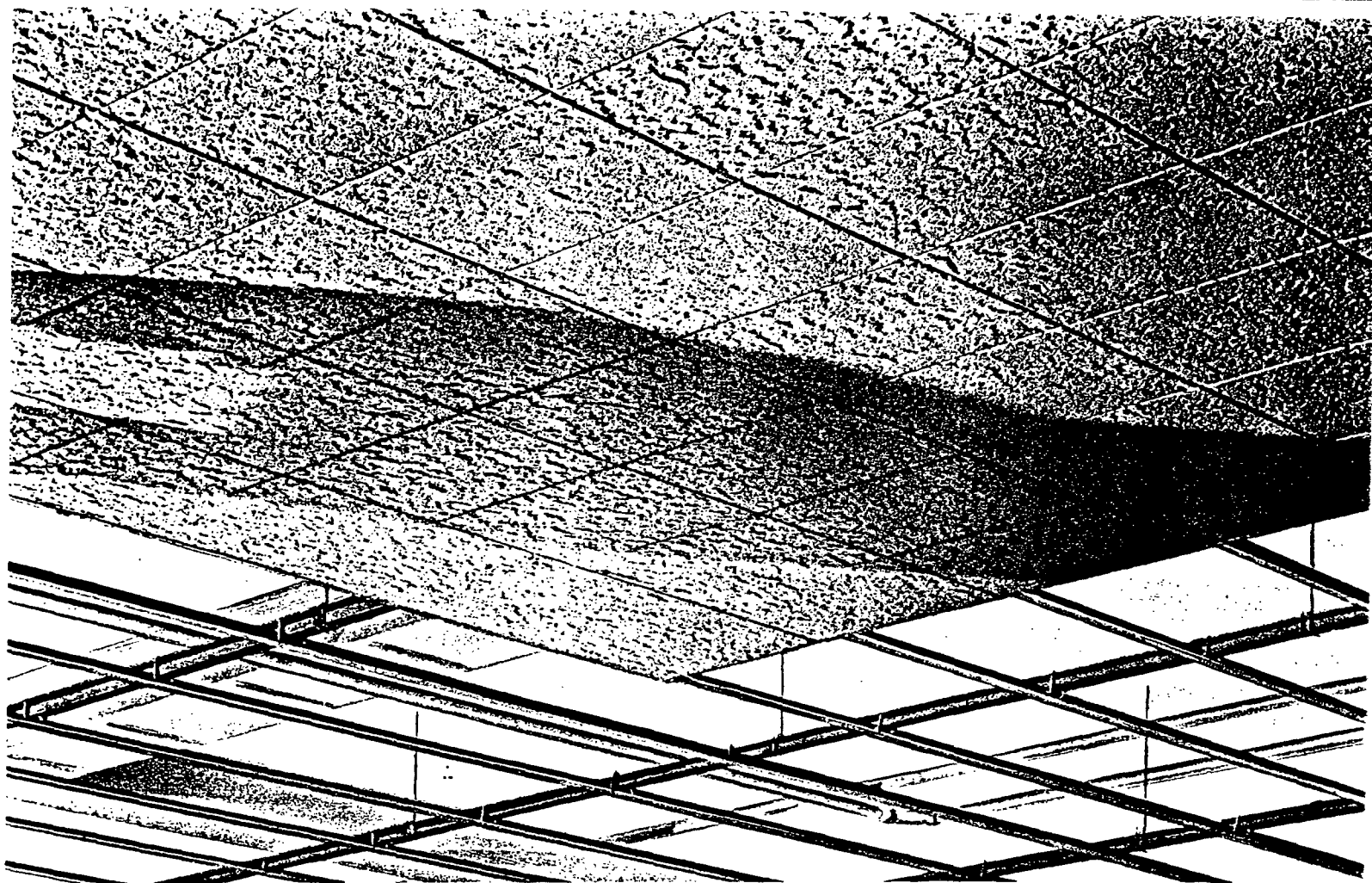
provide practical solutions to ceiling problems



Using any one of several U.S.G. systems, ceiling problems can be solved and acoustical treatments installed at the same time. The systems shown here are adaptable to either new construction or existing buildings, and will accommodate nearly all the newer types of lighting fixtures.

ABOVE: Here ACOUSTONE Tile, suspended by the Concealed Z-Spline System, lowers the old ceiling level and provides space for air-conditioning ductwork.

LEFT: Lightweight, portable "cones of silence"—called ACOUSTOSORBER units—suspended in series from the ceiling—give "quiet" where and when it is needed in industrial plants.



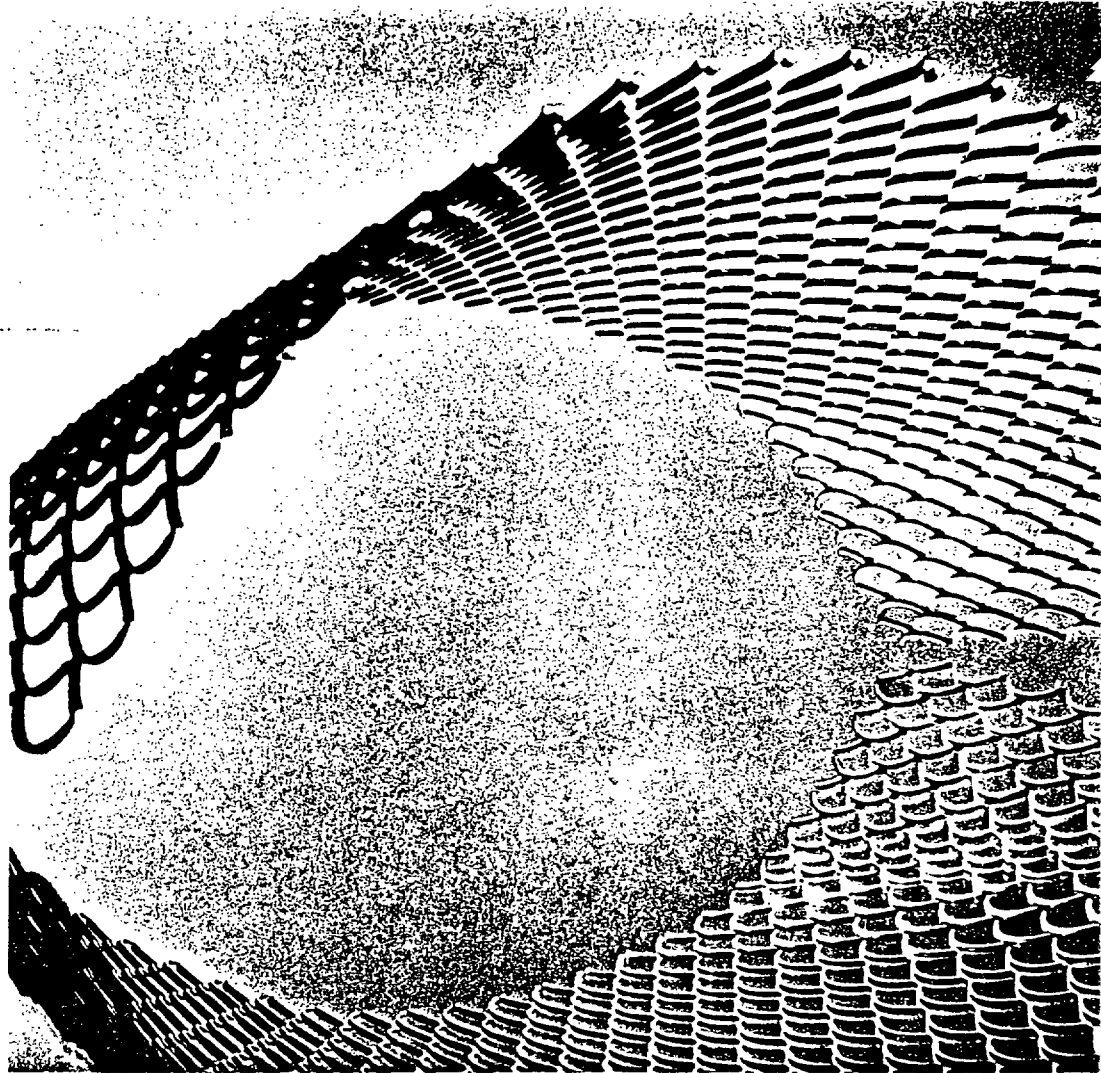
skill shapes the ceiling that softens sound

Sound control is a job for experts. For that reason it is sold as a service—a complete job—rather than a product. Nationwide, there are many contractor firms which have been trained to apply United States Gypsum acoustical materials and systems. Each has broad knowledge of the science of acoustics and is equipped to compute the exact acoustical installation required. Each is a competent, financially responsible firm, employing experienced supervisors and skilled craftsmen. Thus, for sound advice in sound conditioning, you can turn with confidence to the U.S.G. Acoustical Contractor serving your area.

LEFT: (A) AUDITONE Tile is shown adhered to mechanically suspended, fireproof gypsum Z-Board for low-cost sound control. **(B)** E-Z-S System for concealing utilities and CORRUTONE enameled steel panels, backed with highly sound-absorbent mineral wool pads, form the ceiling surface. Panels slide open for easy maintenance of services above.



versatile
U.S.G.
expanded
metals



Those who design, make, and market America's products are finding that USG* Expanded Metal is broadening their horizons in many directions.

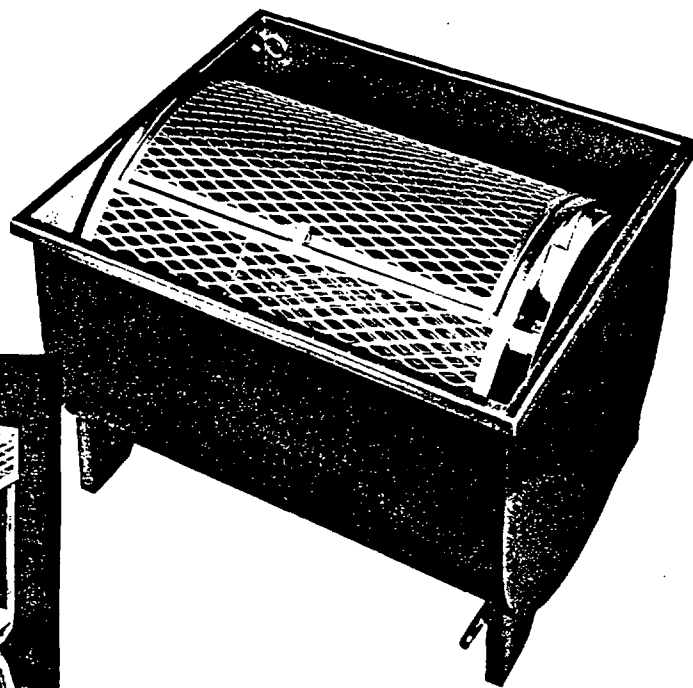
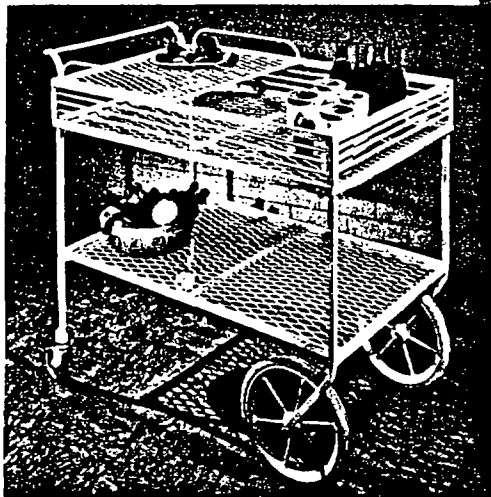
Of its numerous uses in manufacturing plants, personnel safety and machinery protection stand out as perhaps the most important. Enclosures, ventilator panels, filter screens, and sorting bins are additional examples of its utility. In the heavier gauges known as GRATE-X* Expanded Metal Grating, it provides sure footing on walkways, stairs, platforms, and industrial flooring.

In the fields of product design, architecture, and display, the potential of USG Expanded Metal is virtually unlimited. Furniture, novelties, housewares, partitions, ceilings, decorative trim—these are but a few of the imaginative uses already found for this versatile product.

USG Expanded Metal is cold drawn from a solid metal sheet resulting in a product of greater rigidity than the original sheet. Carbon steel or aluminum and, in some meshes, stainless steel are used. The open mesh pattern not only permits free passage of light and air, but also results in less weight, for important savings in shipping and handling costs. Other advantages include: attractive appearance, easy fabrication and welding, easy cutting without raveling, and ready paintability by accepted industrial methods. USG Expanded Metal is available in regular expanded design; or in a flattened pattern, if level surfaces are desired.

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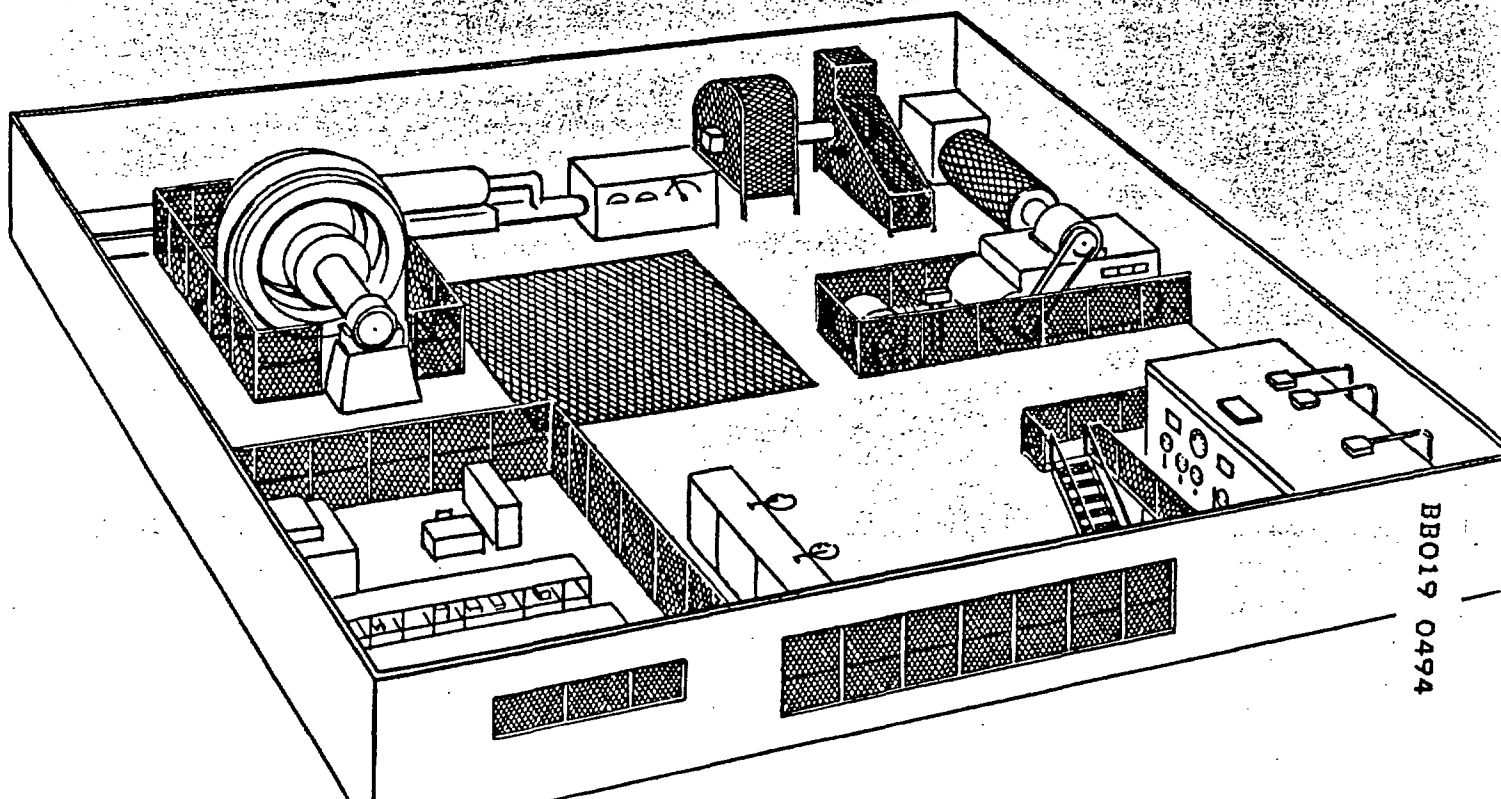
BB019 0493



These two examples demonstrate the broad utility of USG Expanded Metal. It adds ornamentation and utility to the design of the tea cart, yet its ease of fabrication makes it ideal for the photo-print washer.

for added salability in your product

for added safety in your plant



BB019 0494

ew meshes n expanded metals that hallenge the nagination

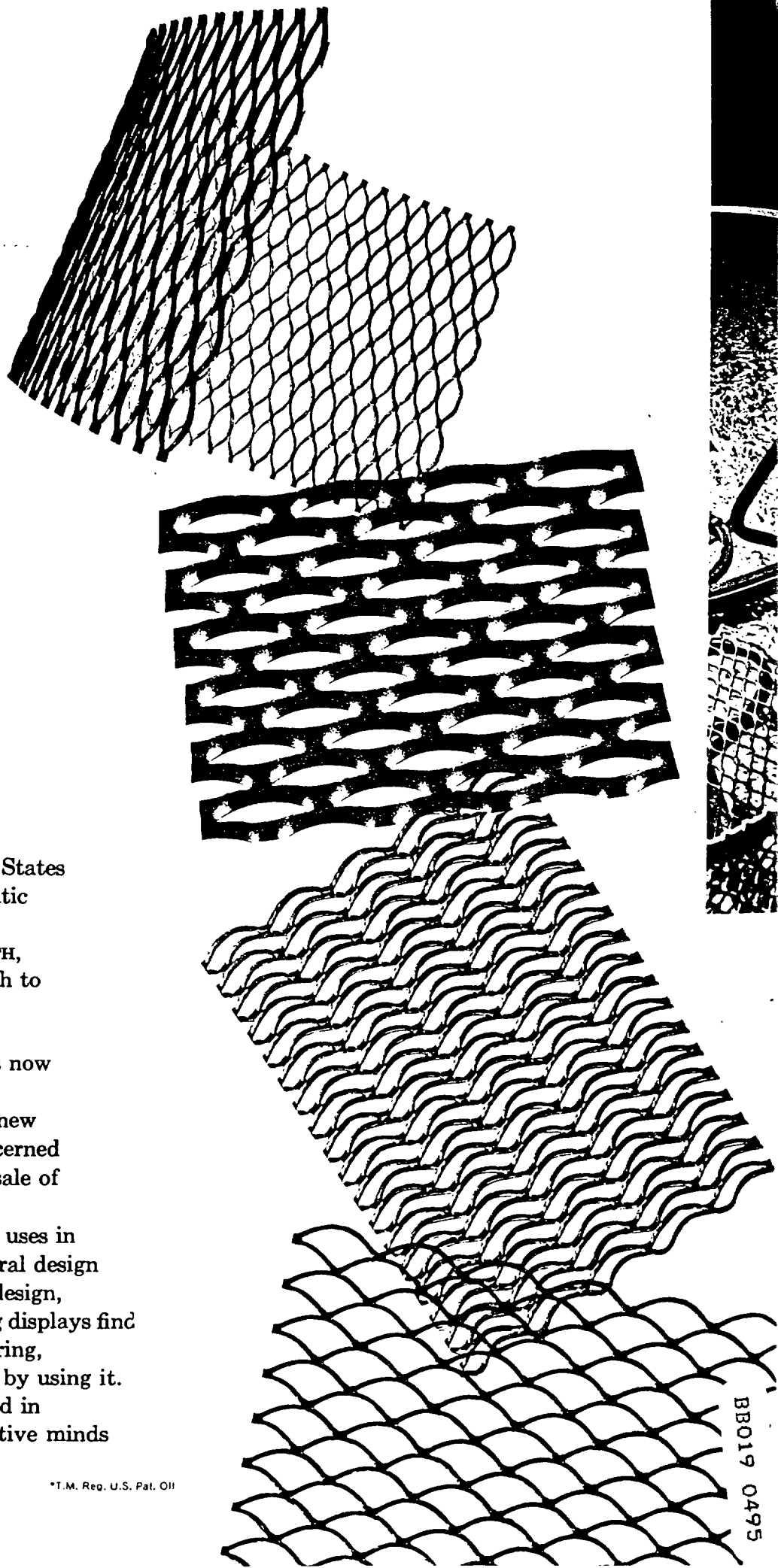
From the creative efforts of United States Gypsum designers come four dramatic new meshes in expanded metal: RONDO, ARMORWEAVE, WAVELENGTH, and FESTOON—each versatile enough to carry the main design theme or to serve as ornamentation.

These new and exclusive patterns now join long-popular EXPAND-X*, in traditional diamond mesh, to open new avenues of expression for those concerned with the design, manufacture, and sale of products for better living.

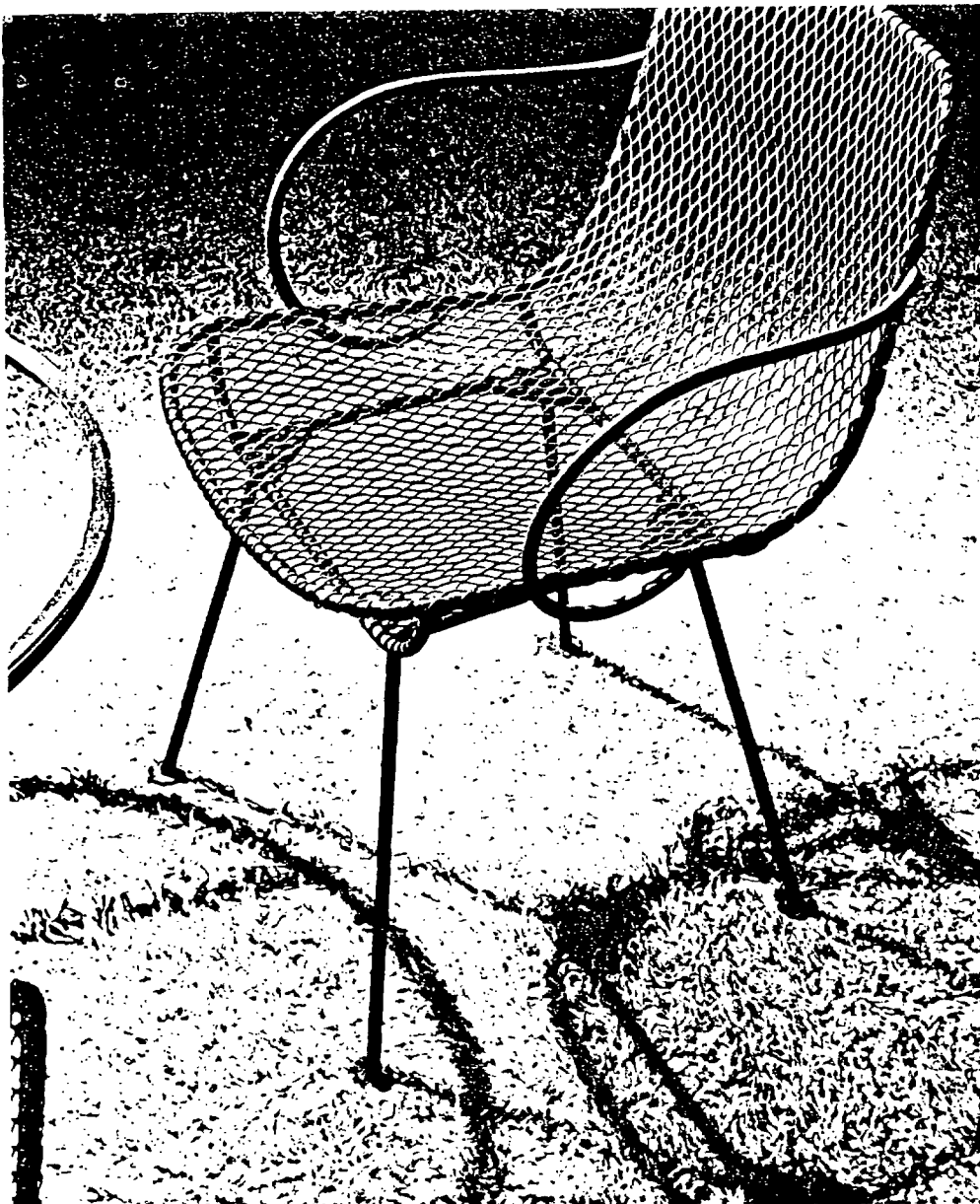
USG Expanded Metal has varied uses in many fields. It is used in architectural design and interior decoration. Industrial design, product engineering, and advertising displays find many places for it; and, manufacturing, transportation, and farming benefit by using it.

USG Expanded Metal will be used in many, many other ways as imaginative minds discover its exciting possibilities!

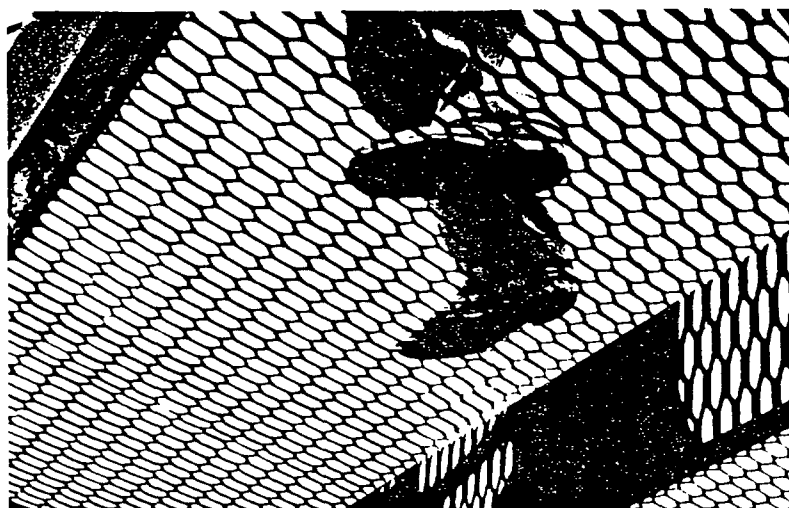
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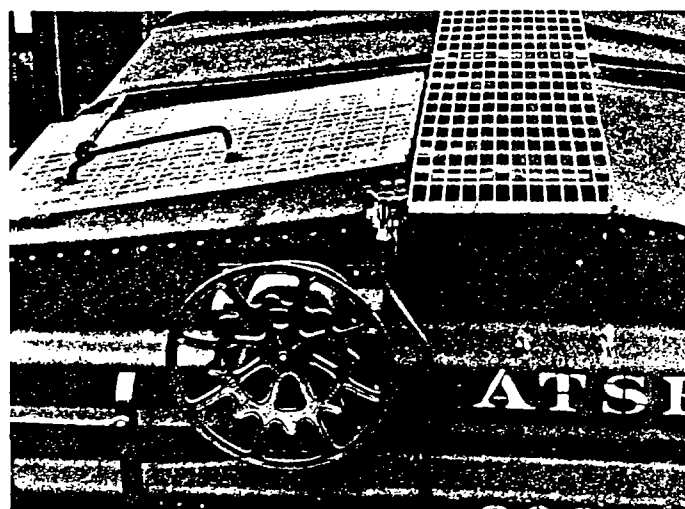
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This is RONDO, exclusive new USG Expanded Metal favored by one of America's foremost manufacturers for an attractive line of metal furniture. Note how gracefully the single sheet of RONDO forms both the chair seat and back.



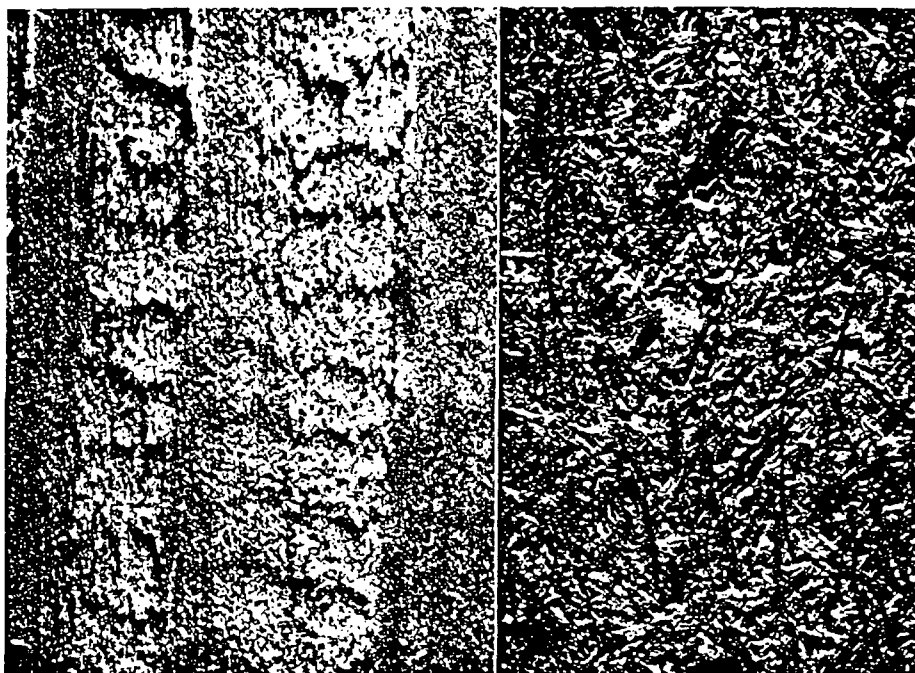
GRATE-X, another USG Expanded Metal, is especially suitable for industrial walkways and flooring, as it offers exceptional strength and sure traction underfoot. It is easy to maintain, and its "transparency" improves lighting conditions as well as air circulation.



Specially designed U.S.G. welded steel grating has broad application throughout the railroad industry. Its non-skid surface makes it ideal for freight car running boards and brake steps.



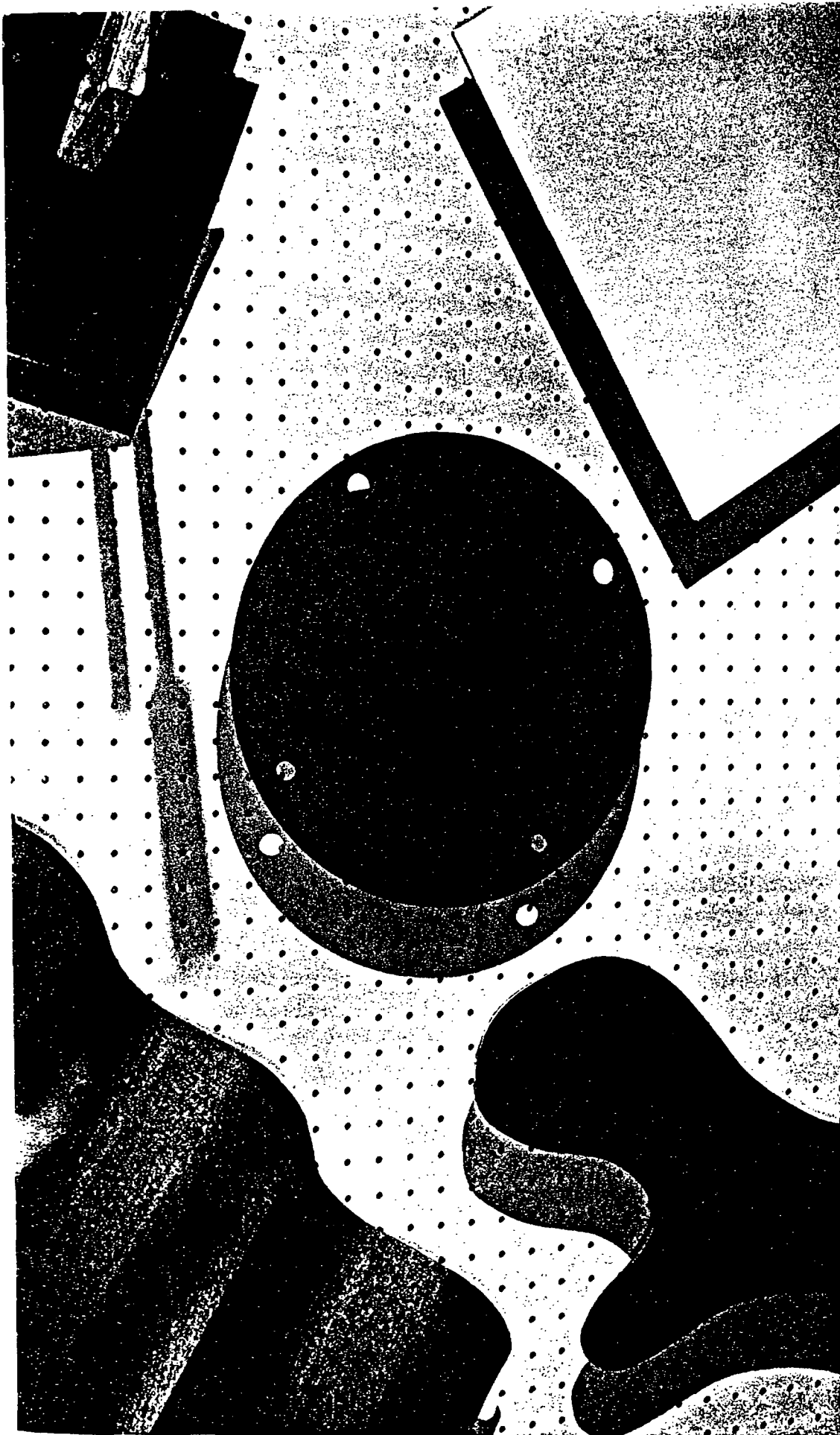
DURON*, the
hardboard
that
improves
on
wood



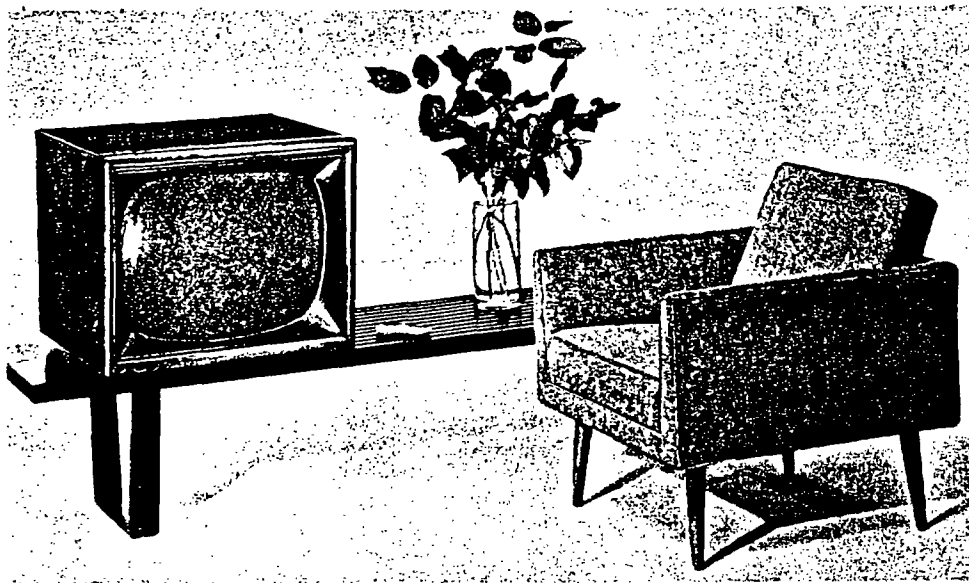
WOOD

DURON

Due to the natural grain structure of wood, (see the photomicrograph above left), it is subject to splintering, face-checking, splitting and warping. Sheets of DURON, on the other hand, while retaining the desirable characteristics of wood, do not have these disadvantages. The wood from which DURON is made is first reduced to fibers. Further processing rearranges these fibers, (see photomicrograph above right), and finally compresses them into stable, homogeneous sheets of hardboard. DURON Hardboard has an important extra feature—it is smooth on both sides, so either or both faces can be finished as desired. In this manner U.S.G. improves on nature's most valuable resource, wood—by creating DURON Hardboard to serve business and industry in an almost endless variety of ways.



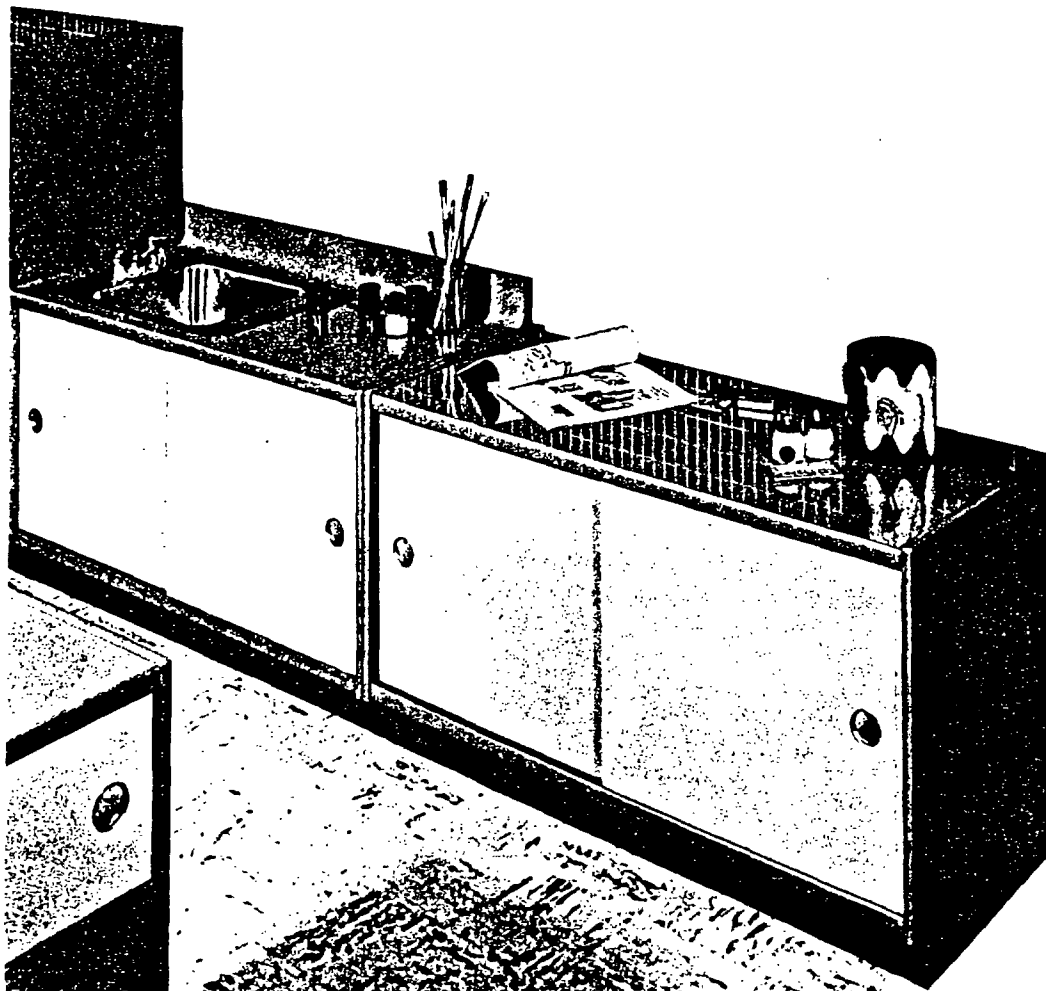
DURON is exceptionally well suited to a variety of operations, and these are performed by selected fabricators strategically located across the country. DURON can be laminated to other materials with adhesives; or sheets of DURON can be laminated together. It can be machined with hand or automatic shapers; it can be punched, die-cut, perforated, or bent. Just as important as the "smooth-both-sides" feature of DURON is its ability to take a wide variety of finishes, such as paint, enamel, lacquer, wood graining, and plastic.



ABOVE: The television cabinet industry is one of the largest users of DURON, because of the ease, speed, and economy with which it can be finished to resemble natural wood graining. One major cabinet manufacturer has estimated that, with the use of DURON Hardboard as a basic construction material, savings of nearly 40% were achieved in cabinet-making costs.

for
beauty,
strength,
utility...

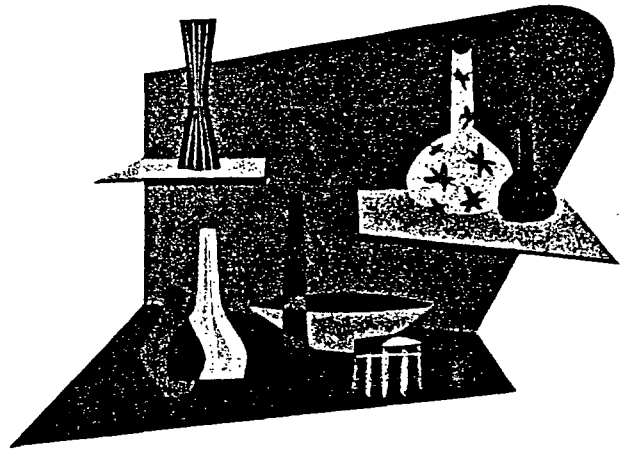
...DURON
the
product of
1001 uses



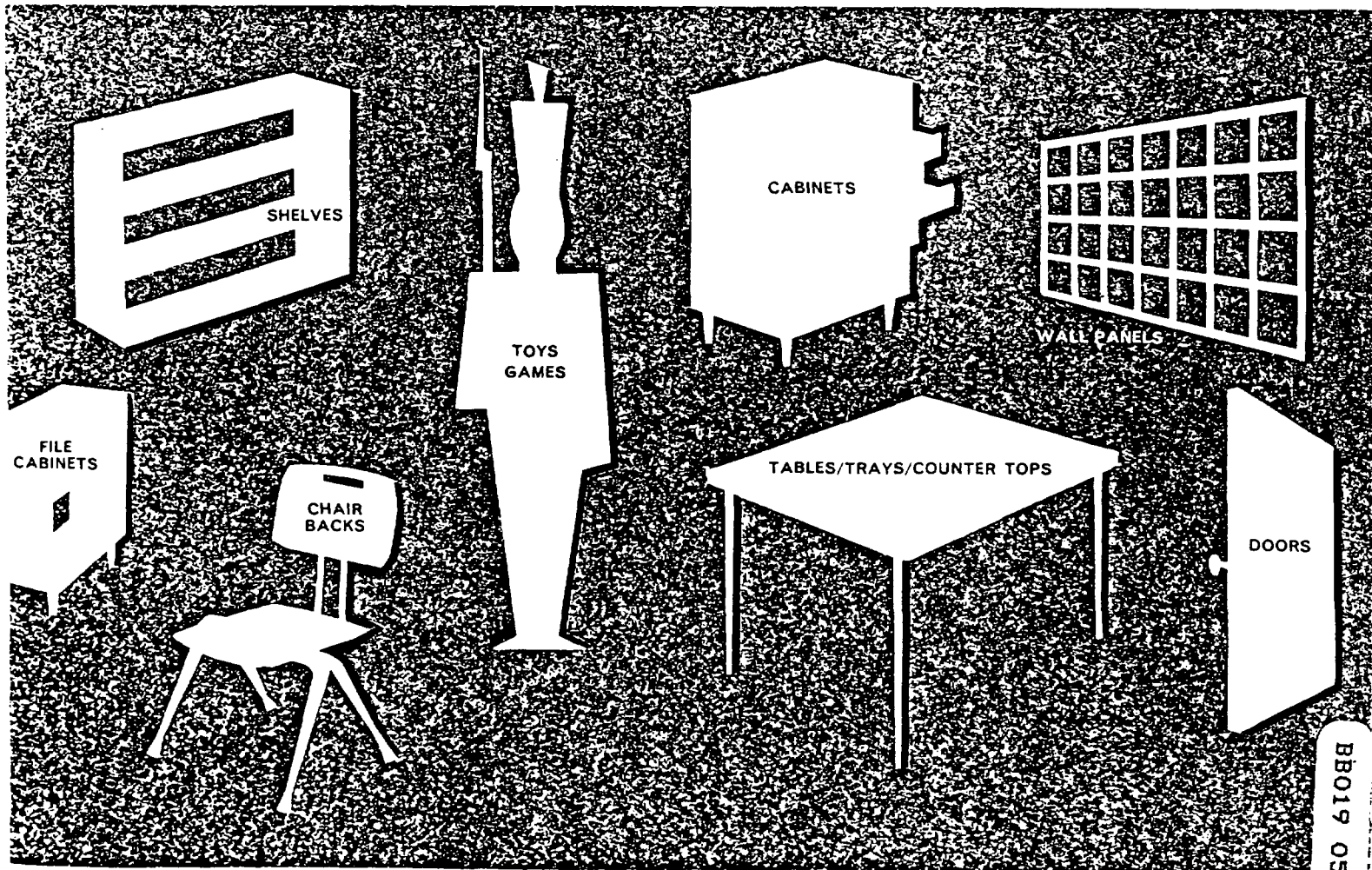
LEFT: The suitability of DURON for cabinet making is further emphasized by its wide acceptance in the manufacture of furniture. The picture shows a functional arrangement of cabinets, as often seen in the libraries and classrooms of today's new schools. The sliding doors and cabinet tops, shelves, sides and backs are formed of this smooth, sturdy material.

OPPOSITE PAGE: Graphically portrayed here are but a few of the ideas developed as manufacturers have learned the multiple advantages of hardboard.

BB019 0499



Scores of different industries are represented by the many users of DURON Hardboard. Among these users are the display and prefinished wall panel industries, furniture manufacturers, and companies whose toys, games, and novelties are distinguished for quality and durability. As designers, engineers, and manufacturers see how others are using this versatile material, ideas will undoubtedly arise that will warrant consideration of DURON Hardboard to improve products and reduce costs.



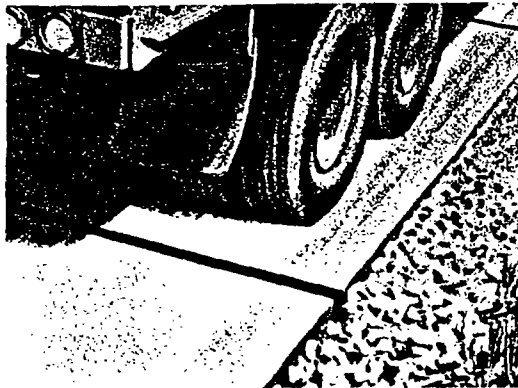
J.S.G. Insulation Board for Industry



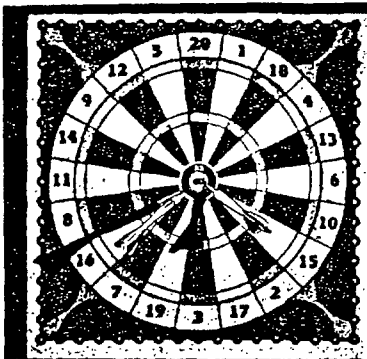
Like hardboard, USG* Industrial Insulation Board is formed into large sheets from wood fibers. In contrast to hardboard, however, it is resilient and light in weight. Yet, it is exceptionally sturdy, tough, shock-resistant—and low in cost. Another advantage of USG Insulation Board is that no special equipment is required in its fabrication, for it can be sawed, drilled, punched, and shaped by hand or standard machines.

The photo above shows the use of USG Industrial Insulation Board in the prefabrication of floor sections for mobile homes. Although its high degree of thermal insulation is the quality for which it is most prized in the design and manufacture of house trailers, its inherent rigidity further increases the structural strength of the trailer framework.

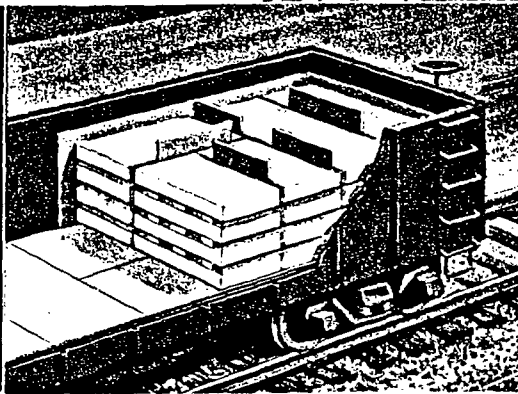
Because it has so many practical advantages, possible uses of versatile USG Industrial Insulation Board should be studied carefully. Still unrealized are many of its potentialities in industrial operations and manufacturing processes.



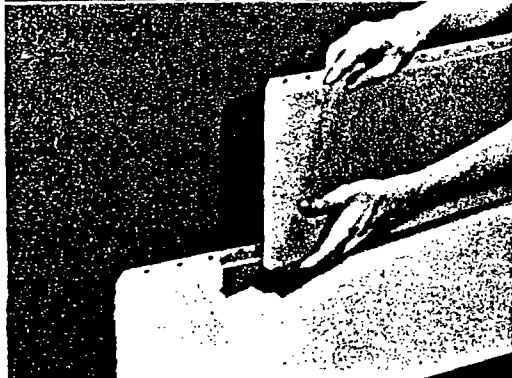
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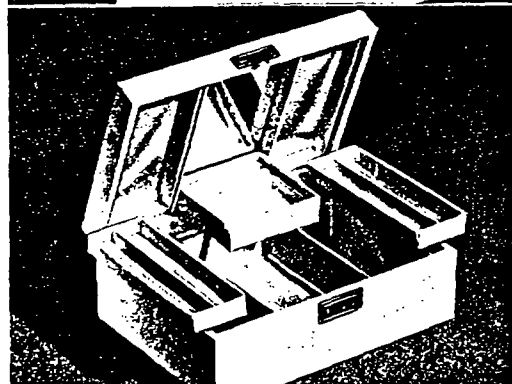
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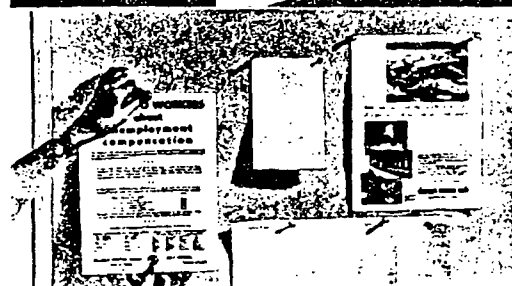
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E



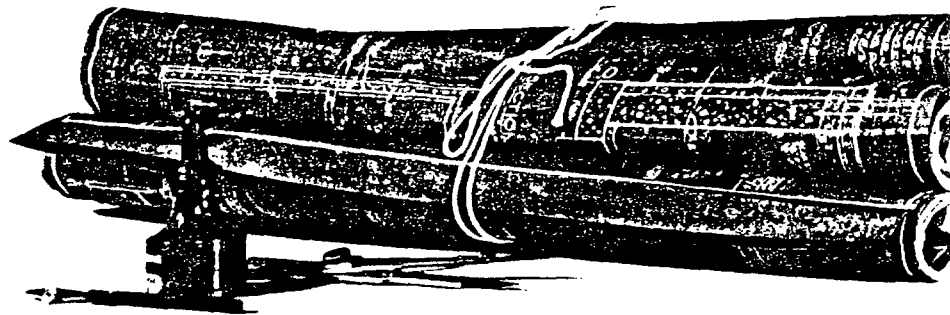
- (A) Specially treated Industrial Insulation Board is often used as a filler for expansion joints in highways.
- (B) As protective packing, Industrial Insulation Board helps prevent damage to heavy objects in transit, such as stone and machinery parts; its light weight means easier handling and lower shipping costs.
- (C) Its soft but durable composition and good paintability make it an ideal material for games—such as dartboards.
- (D) With a "k" value of .33, it is rated as effective insulation and is widely used as backing for aluminum and other siding materials.
- (E) Utility boxes are made of this resilient material—for holding jewelry and other small items, for example—because it is economical and easy working.
- (F) Industrial Insulation Board is the accepted standard material for bulletin boards.



BB019 0503

Typical U.S.G. training program in session.
Here a U.S.G. engineer explains and demonstrates the application
of gypsum plaster in making a master pattern.

the practical application of ideas for industry



U.S.G. welcomes the opportunity to work with you

As you have read this book, you have no doubt been particularly interested in those ideas that can be applied to your business. U.S.G. will welcome the opportunity to help you develop and utilize these ideas.

We maintain completely equipped facilities, staffed by qualified technicians, to demonstrate our products and systems, and to test ideas you may have for adapting these products and systems to your needs.

If you prefer, our engineers will visit your office or plant to work with your organization in developing your ideas.

Or, as we have done on many occasions, we will conduct a complete program using our facilities and instructors, to train your personnel in the basic techniques required to make use of the ideas outlined in this book.

Also, at your disposal are numerous technical papers and publications describing U.S.G.'s many materials and methods, together with an up-to-date library of educational motion pictures and sound-slide films.

U.S.G. extends a cordial invitation to you to consider use of these services—without cost, and of course, without obligation on your part. Please direct your inquiries to: Dept. 122, 300 West Adams Street, Chicago 6, Illinois.



BB019 0505

from coast to coast

United States Gypsum and its subsidiaries have many different plant and operating properties strategically located to serve their customers—a fleet of ships, timberlands and mineral reserves. The company maintains sales offices in these principal cities:

ALBANY	NEWARK (Clifton, N.J.)
ATLANTA	NEW HAVEN (Hamden, Conn.)
BALTIMORE	NEW YORK
BIRMINGHAM	OAKLAND
BOSTON (Newton Centre, Mass.)	OKLAHOMA CITY
BUFFALO	OMAHA
CHARLOTTE	PEORIA
CHICAGO	PHILADELPHIA
CINCINNATI	PHOENIX
CLEVELAND (Cleveland Heights, Ohio)	PITTSBURGH
DALLAS	PORTLAND
DENVER	PROVIDENCE (Warwick, R.I.)
DETROIT	RICHMOND
GRAND RAPIDS	SACRAMENTO
HARRISBURG	ST. LOUIS
HOUSTON	SALT LAKE CITY
INDIANAPOLIS	SAN ANTONIO
JACKSONVILLE	SAN DIEGO
KANSAS CITY	SAN FRANCISCO
LOS ANGELES	SEATTLE
LOUISVILLE	SYRACUSE (DeWitt, N.Y.)
MILWAUKEE	WASHINGTON (Arlington, Va.)
MINNEAPOLIS	

CANADIAN GYPSUM COMPANY, LIMITED

Toronto • Montreal

GENERAL OFFICES

300 West Adams Street, Chicago 6, Illinois



BB019 0507



BB019 0508

U.S.
PLASTER
in
red top
BAGS

UNITED STATES GYPSUM COMPANY

300 WEST ADAMS STREET

CHICAGO



BB019 0509