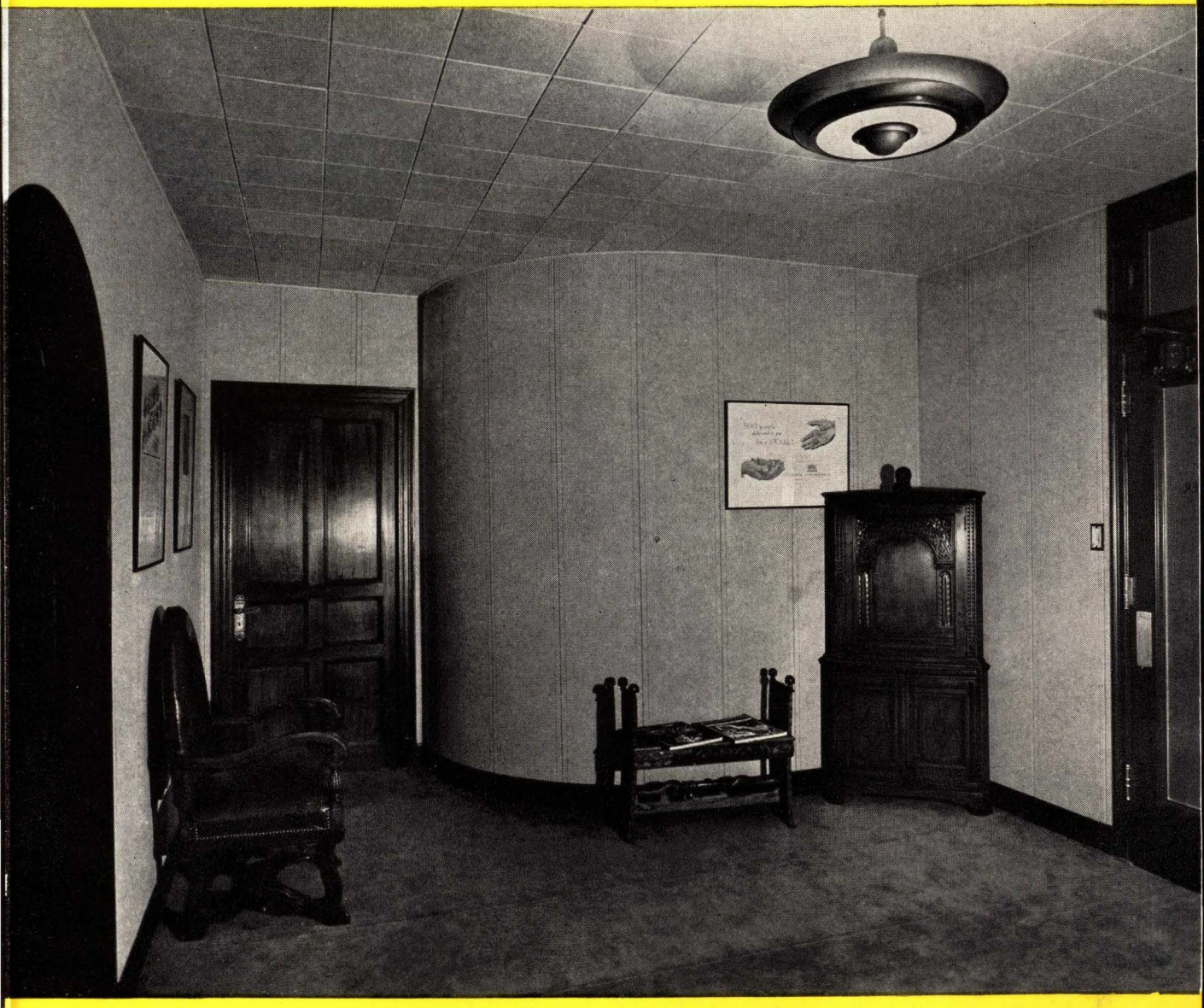
# PRODUCTS FOR
# THERMAL INSULATION
## AND
# SOUND CONTROL

certain-teed



OFFICE OF JEFFERSON TESTER, NEW YORK, N. Y.
Walls and Ceiling of Beaver Decorative Plank and Tile

**CERTAIN-TEED PRODUCTS CORPORATION**

**GENERAL OFFICES: NEW YORK, N. Y.**

# BEAVER INSULATING BOARD

TERMITE 100% CANE FIBRE PROOF

Certain-teed

**Beaver Insulating Board**
**Beaver Insulating Sheathing**
**Beaver Insulating Key Lap Lath**
**Beaver Insulating Tile and Plank**
**Beaver Insulating Decorative Tile**
**Beaver Roof Insulation**
**Beaver Insulating Blocks**
**Beaver Batten Strips**

A complete specification covering the uses and recommended methods of application of Beaver Insulating Products is available on request from any of the sales offices listed below.

## 100% CANE FIBRE

Beaver Insulating Board products are manufactured 100% from cane fibre produced in the Hawaiian Islands. Ample supplies of raw material are accessible and definitely assured due to control of 90% of the Hawaiian Island sugar crop by the manufacturers.

The use of pure cane fibre without any binder or added filling material assures a board that has utmost structural strength plus full dead air space. When foreign material is added, it detracts from the grip of the fibres and fills up the dead air space. *Therefore, the ideal insulating board is 100% cane fibre.*

In the preparation of the fibres for manufacturing, only a gentle low temperature cooking process is used. This avoids any injury to the individual fibres while permitting their thorough softening and refining. The fibres are separated without losing any of their original strength through over-heating and the processing provides for the complete interlocking of the fibres in forming the board.

The ease of separation and complete refining of the cane fibres also permits thorough treatments for moisture resistance, termite and rot proofing. These treatments are administered under strict control in manufacturing Beaver Insulating Board Products.

## TERMITE PROOF

The termite proofing process used in the manufacture of Beaver Insulating Board is no longer dependent upon laboratory tests to demonstrate its effectiveness against these highly destructive insects. Beaver Insulating products have now been long in use in many foreign countries where termites for many years have menaced and destroyed buildings constructed from non-termite proofed materials.

Prevalent in 45 of the 48 states, termites now exact an annual toll in the United States of 50 million dollars. Termite proof Beaver Insulating Board does its part in combating this menace.

## INSULATING VALUE

In tests conducted by such an authority as J. C. Peebles, Mechanical Engineer of Armour Institute of Technology, Chicago, the heat conductivity of Beaver Insulating Board, flat plate method, was found to be 0.33 B.t.u.'s per hour, per square foot of material, per degree Fahrenheit of temperature difference between the surfaces of the material for a 1-in. thickness.

## COLORS

Beaver Insulating Board and Beaver Insulating Tile and Plank are now available in two colors—natural and ivory.


## CERTAIN-TEED PRODUCTS CORPORATION

GENERAL OFFICES

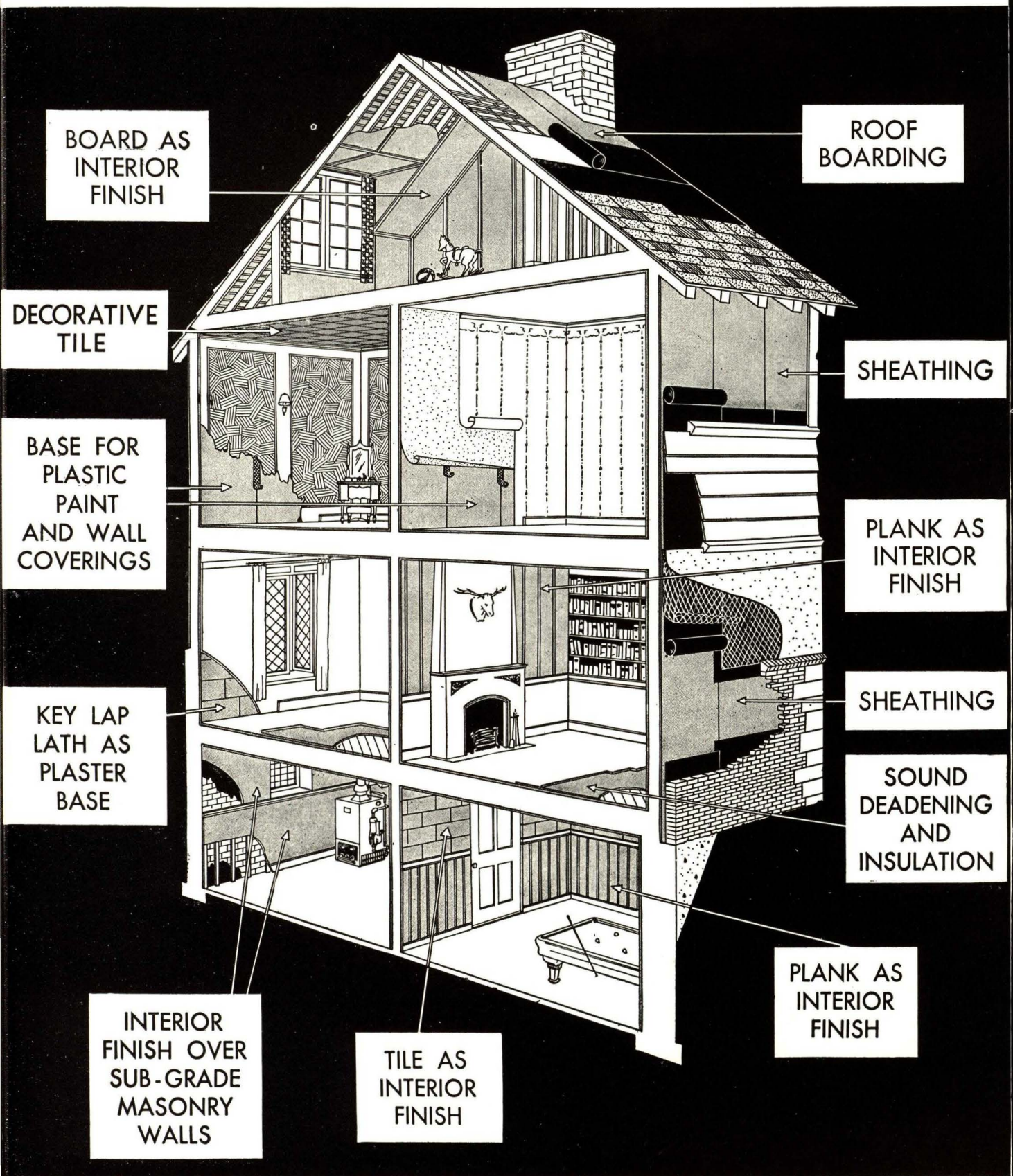
100 East 42nd Street, NEW YORK, N. Y.

SALES OFFICES

ATLANTA, GA.
BALTIMORE, MD.
BUFFALO, N. Y.
CHICAGO, ILL.
CLEVELAND, OHIO
DALLAS, TEX.
HONOLULU, T. H.
KANSAS CITY, MO.
LOS ANGELES, CALIF.
NEW YORK, N. Y.
ST. LOUIS, MO.
ST. PAUL, MINN.
SAN FRANCISCO, CALIF.
SEATTLE, WASH.

# BEAVER INSULATING PRODUCTS

## WHERE BEAVER INSULATING BOARD IS USED

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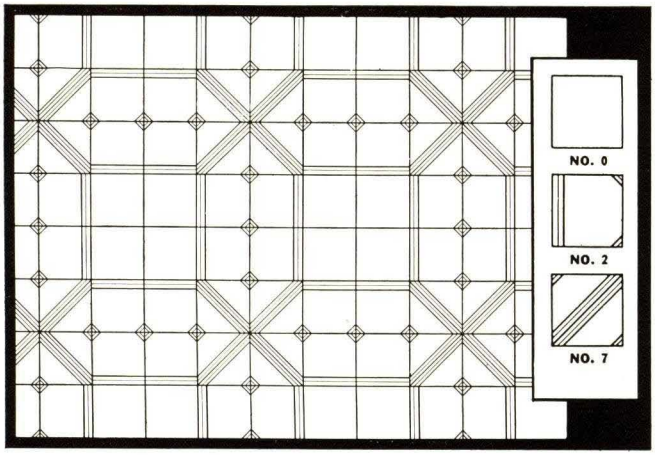
# BEAVER INSULATING DECORATIVE TILE (Patent Applied For)

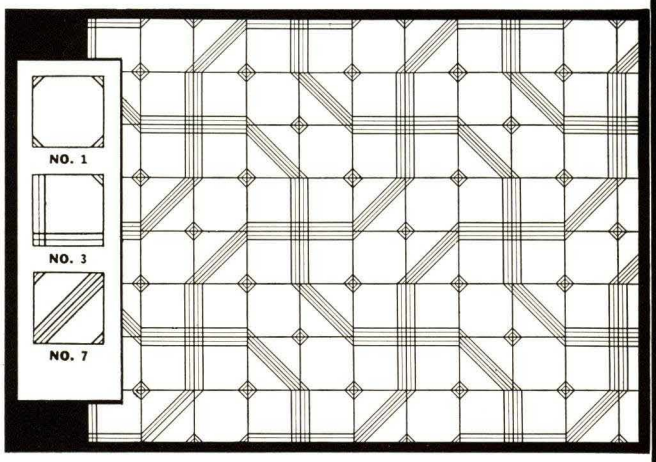
Certain-teed

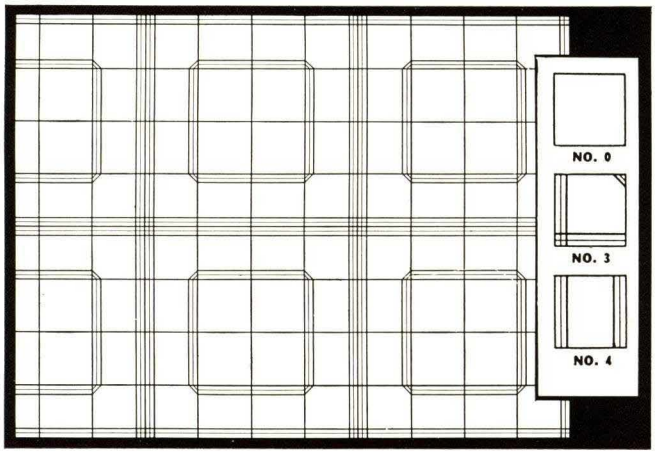


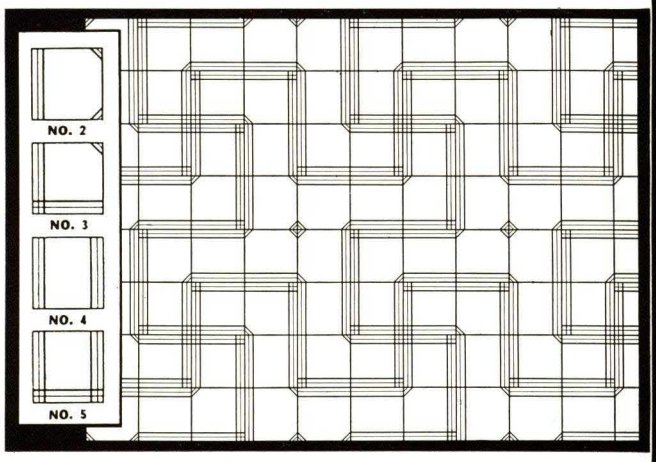
# BEAVER INSULATING DECORATIVE TILE (Patent Applied For)

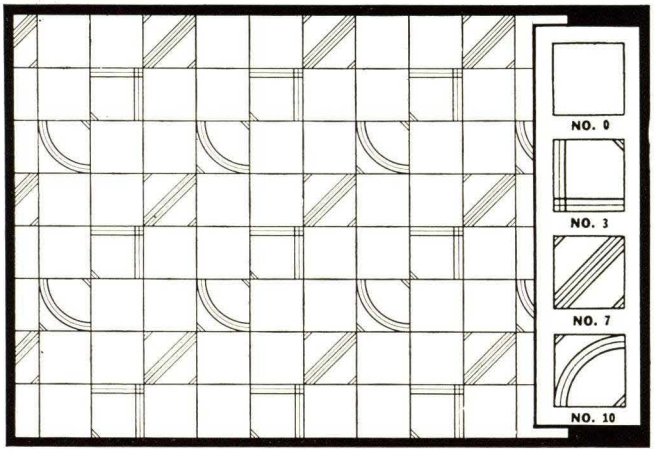
**Each of the designs shown below is composed of the Units shown at the side**

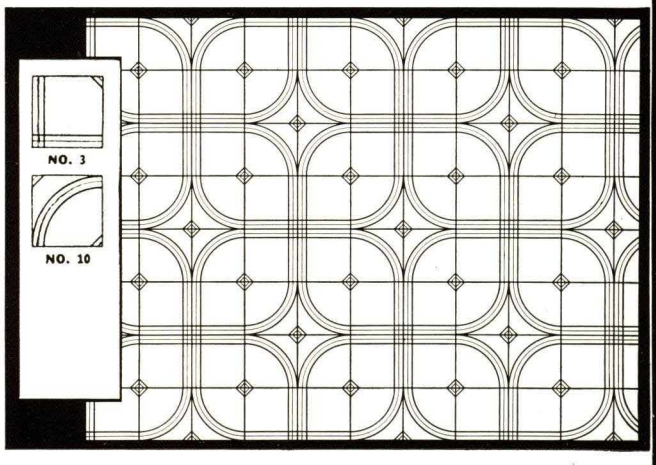



Certain-teed now offers a new decorative and insulating medium in the form of Beaver Insulating Decorative Tile, designed by Vahan Hagopian, Architect, A.I.A. Diplomé par le Gouvernement Francais, 40 E. 49th St., New York City. Mr. Hagopian has specialized for many years both here and abroad in the development of building products from the esthetic point of view, as well as in their use and application.

Beaver Insulating Decorative Tile are produced in eleven individual design units which offer an amazing variety of possibilities from a decorative standpoint. While these units are all very simple in individual surface decoration, they are so designed that endless combinations of units may be made to form all-over patterns ranging from plain, dignified effects to extremely modernistic and elaborate decorative fields. The texture, the natural color and the play of light over these designs are attractive without any additional decoration. They may, however, be painted and decorated to suit any required color scheme. They are offered as a stock item, ready cut, ready to put up. Packed in cartons of 4, 6, 12 and 24 units each, the units are 12x12 in. and ½ in. thick, and are beveled on all sides. Additional variations may be obtained by combining them with the board or plank.



Certain-teed

Certain-teed

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# BEAVER INSULATING BOARD PRODUCTS

Certain-teed offers the following products for decorative treatments which also have the advantage of sound and heat control. Beaver Insulating Board, which comes in plain sheets, can be readily shiplapped, bevelled, grooved and otherwise decorated by the use of standard cutting tools either in the shop or on the job.

Beaver Insulating Board comes in sheets 4 ft. wide, and 6, 7, 8, 8½, 9, 9½, 10 and 12 ft. long. Thicknesses of ⅜, ½, ¾ and 1 in. are available. Beaver Insulating Board is composed 100% of cane fibre matted under pressure and is homogeneous in all thicknesses. It is available in natural and ivory colors.

## BEAVER INSULATING PLANK

Beaver Insulating Planks are similar to Beaver Insulating Boards, but they are shiplapped, beaded and bevelled on the long edges, and made at the factory in the shape of planks of varying widths and lengths.

They may be applied vertically or horizontally for decorative wall or ceiling treatment, providing heat and sound insulation and acoustical effects.

The use of Beaver Insulating Planks will give the effect of old Colonial interiors. Easily installed against any surface or suitable framing arrangement.

Random widths permit a wide variety of designs.

Beaver Insulating Plank are made in the following sizes: 6, 8, 10, 12 and 16 in. wide and 6, 7, 8, 9, 10 and 12 ft. long. Thickness: ½ in.

Planks are available in natural and ivory colors.



Interior with Beaver Insulating Plank Walls and Insulating Tile Ceiling

## BEAVER INSULATING TILE

Beaver Insulating Tile is different from the Beaver Insulating Decorative Tile in that it is furnished with plain surfaces, and in large and small sizes. It is manufactured and supplied from Grade A Beaver Insulating Board only, which is selected for its perfection of surface, color, natural or ivory, and texture, thus assuring pleasing and neutral tone effects.

All sizes of Beaver Insulating Tile carry a standard bevel and shiplap so that they are readily fitted, and provide continuous heat and sound insulation and acoustical effects.

Various designs of Beaver Insulating Tile in combination with Beaver Insulating Plank and standard size sheets of Beaver Insulating Board, plain or decorated on the job, make possible pleasing interior treatments for any type or size of meeting hall, room or office.

Beaver Insulating Tile comes in the following sizes: *Large sizes* are 16x32 in. and 24x48 in. *Small sizes* are 12x12 in., 12x24 in., 16x16 in., and 24x24 in. Thicknesses, ½ and 1 in.

The large sizes of Beaver Insulating Tile are bundled into easily handled packages which fully protect all edges and surfaces. The small sizes are packed in cartons specially designed to provide extra protection for shiplapped edges during shipment and delivery to the job. Tiles are available in natural and ivory colors.

## BEAVER INSULATING KEY LAP LATH

Beaver Insulating Key Lap Lath is composed entirely of cane fibres compressed into sheet form and treated to render it moisture resistant and vermin proof. Manufactured in the form of panels of suitable size for plastering, packed in bundles for protection and convenience in handling.

The Key Lap joint gives to plasterers what they have long desired—a deep, straight side, easy-to-fill, mechanical key along the horizontal edge. This makes deep penetration of plaster possible and also better keying of plaster to lath, thus increasing the plaster bond and giving added protection against cracks. The shiplap feature of Key Lap Lath prevents heat and cold leakage at horizontal joints by providing continuous insulation.

Specifying Beaver Insulating Kay Lap Lath insures getting better mechanical key, better plaster bond, better insulation. Additional information on request.

**Sizes**—18x48 in. Thicknesses: ½ in., ¾ in. and 1 in.

**Weight**—Average 650 lbs. per 1000 sq. ft. for full ½-in. thickness.

# *Certain-teed* GYPSUM WALLBOARD AND BEAVER GYPSUM LATH REFLECTIVE INSULATION

Certain-teed Gypsum Wallboard and Beaver Gypsum Lath are manufactured in the form of gypsum wallboard and gypsum lath with one surface covered with a bright reflective metal foil. (Gypsum wallboard is also available with foil on both surfaces.) The reflective features of the metallized surfaces which are applied to the water resistant tough fibre surfaces as additional covering, provide effective insulation not heretofore available in this type of product.

It has been proved by scientific tests that ⅜-in. gypsum wallboard or lath surfaced with metal foil on one side has an effective insulating value equivalent to that of ½-in. fibre insulating board when used as specified in building construction. In addition to this remarkable insulating feature it has the structural strength and fireproof qualities inherent in gypsum wallboard and lath.

For further information, consult nearest sales office.



Application of Gypsum Lath (Reflective Insulation) with Metal Foil Against the Studs

# DRY THERMOCRETE

## SUPERIOR DRY FILL INSULATION

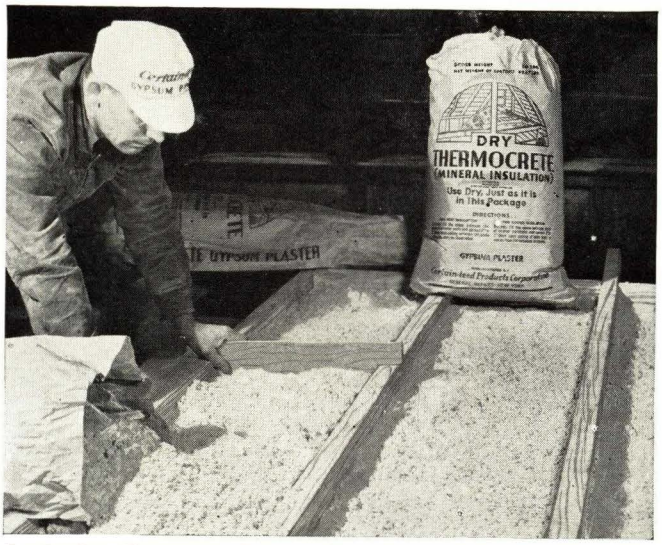
Dry Thermocrete is a light, fluffy gypsum material possessing the natural insulating properties of gypsum, plus the bulk thickness and millions of insulating dead air cells assured by its fluffy consistency. It stops the passage of heat through the walls and floors of a building and deadens the sound.

Gypsum being fire resistant means that Dry Thermocrete acts as a fire-stop between wood members as well as an efficient insulator when poured between the studs of a wall—an always dangerous area for conducting fire.

Dry Thermocrete also provides economy in heating during cold weather and comfort in warm weather.

## EASILY APPLIED

Dry Thermocrete is put in place by the simple process of pouring the dry material directly from the easily handled 50-lb. paper sacks into the space between the inner and outer walls and floors, or spread between attic joists. Either new or old buildings may thus be insulated.




Pouring Dry Thermocrete Between Attic Joists and Leveling Off to the Proper Depth with a Notched Board

EFFICIENCY OF TYPICAL CONSTRUCTION, UNINSULATED AND INSULATED

| Walls | Uninsulated | Insul. with 3⅝-in. Dry Thermocrete |
|---|---|---|
| Clapboard, paper, sheathing, stud, lath and plaster | 0.227 | 0.094 |
| Brick veneer, paper, sheathing, stud, lath and plaster | 0.165 | 0.082 |
| Stucco, paper, sheathing, stud, lath and plaster | 0.257 | 0.099 |
| **Ceilings** | | |
| Lath and plaster—no floor | 0.502 | .... |
| Lath and plaster—single floor | 2.234 | .... |
| Lath and plaster—no floor—(insulated with 2 in. of Dry Thermocrete) | .... | 0.127 |
| Lath and plaster—no floor—(insulated with 3 in. of Dry Thermocrete) | .... | 0.092 |
| Lath and plaster—no floor—(insulated with 4 in. of Dry Thermocrete) | .... | 0.073 |

THERMAL CONDUCTIVITY

| Weight per cu. ft. | B.t.u. per sq. ft. per hour per 1° F. per in. thick | Authority |
|---|---|---|
| 19.8 lbs. | .35 | Bureau of Standards |

Conductivity slightly higher when used in walls.

COVERING CAPACITY

| Position of use | Per 50-lb. bag | | Per ton | |
|---|---|---|---|---|
| | Sq. ft. 1-in. thick | Cu. ft. | Sq. ft. 1-in. thick | Cu. ft. |
| Walls | 25 | 2 | 1000 | 83 |
| Ceilings and floors | 30 | 2½ | 1200 | 100 |

Dry Thermocrete is made in one weight only and is packed in 50-lb. paper bags with complete directions printed on back.



Certain-teed

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# KALITE SOUND ABSORBING PLASTERS

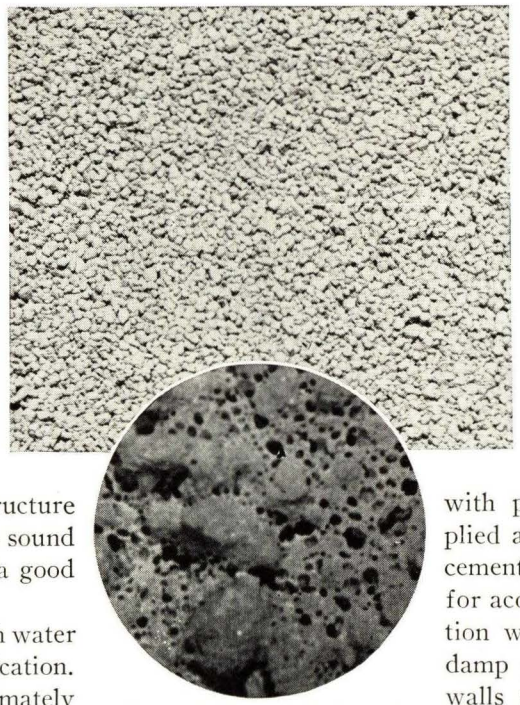
## A SUPERIOR MATERIAL FOR SOUND CONTROL

### For Plain and Ornamental Acoustical Plaster Treatments

### WHAT KALITE PLASTER IS

Kalite Sound Absorbing Plaster has the basic properties that adapt it to the requirements of modern construction. Kalite is a highly cellular plaster that absorbs sound. It is made of carefully graded and sized pumice of a special variety, mixed with calcined gypsum and other necessary ingredients. When the plaster sets, there are minute air spaces around the pumice particles. Through the body of the plaster, these small air spaces intercommunicate either directly or through the porous structure of the pumice and produce those sound absorbing qualities necessary in a good acoustical material.

On the job, Kalite is mixed with water only and is then ready for application. Kalite mortar weighs approximately one-half as much as ordinary sanded gypsum plaster mortar, and furnishes a smooth, or textured hard finish.



**Photograph Showing Surface of Kalite Plaster. Enlarged View Shows Great Porosity of Surface**

### THREE TYPES OF KALITE PLASTER

In addition to Kalite Cast, the two types of Kalite Plaster are offered as follows:

KALITE "H" PLASTER—Made of a pumice aggregate with a gypsum binder, available in either natural gray or buff.

If Kalite Sound Absorbing Plasters are to be decorated, consult the nearest sales office of CERTAIN-TEED PRODUCTS CORPORATION for recommendations.

KALITE HYDRAULIC PLASTER —Made of a pumice aggregate with portland cement binder and applied as a finish coat over the portland cement base coat plaster, it is suitable for acoustical correction or noise reduction where physical conditions require damp proof construction, such as the walls and ceilings of steam kitchens, swimming pools, etc. It is the color of natural portland cement. Kalite is finished with either the wood float or steel trowel.

The growing use of Kalite to increase efficiency by reducing the reverberations of sound is exemplified by the installation of Cast Kalite in the new 59th Street Branch of Dry Dock Savings Bank in New York. It was used in ceilings of work spaces to improve working conditions by reducing the noise level and was used in public spaces to build good will by increasing customer comfort and minimizing possible errors.

### SOUND ABSORPTION COEFFICIENTS OF KALITE PLASTERS

**KALITE "H" PLASTERS, AS MEASURED BY U. S. BUREAU OF STANDARDS UNDER DATE OF OCT. 16, 1935**

| Kalite thickness | Frequency 128 | 256 | 512 | 1024 | 2048 | 4096 | Noise coefficient |
|---|---|---|---|---|---|---|---|
| ½-in. trowel finish | .36 | .33 | .46 | .70 | .66 | .68 | .55 |
| ¾-in. trowel finish | .43 | .38 | .63 | .78 | .65 | .70 | .60 |

**TEST BY U. S. BUREAU OF STANDARDS UNDER DATE OF MARCH 25, 1936 ON KALITE "H" PLASTER WHEN DECORATED WITH TWO COATS OF CERTAIN-TEED NON-BRIDGING LACQUER APPLIED WITH A BRUSH**

| Kalite thickness | Frequency 128 | 256 | 512 | 1024 | 2048 | 4096 | Noise coefficient |
|---|---|---|---|---|---|---|---|
| ½-in. trowel finish | .26 | .31 | .46 | .67 | .65 | .68 | .50 |

At the left are given tables showing the results of tests for sound absorption as measured on Kalite "H" panels constructed of 1½-in. angle iron carrying bars spaced 3 ft. 10 in. on centers, 1-in. furring channels spaced 12 in. on centers, 3.4-lb. expanded metal lath with standard thickness of scratch and brown coats of gypsum hardwall plaster.

In the application of both of these tests Kalite was applied in what is called "one coat doubled up."

The doubled up coat applied after the scratch-in coat had taken up—after about one hour lapse of time.

*Samples of Kalite Plasters will be sent on application to any Certain-teed Sales Office*

*See page 11 for partial list of completed Kalite jobs*



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# KALITE SOUND ABSORBING PLASTERS

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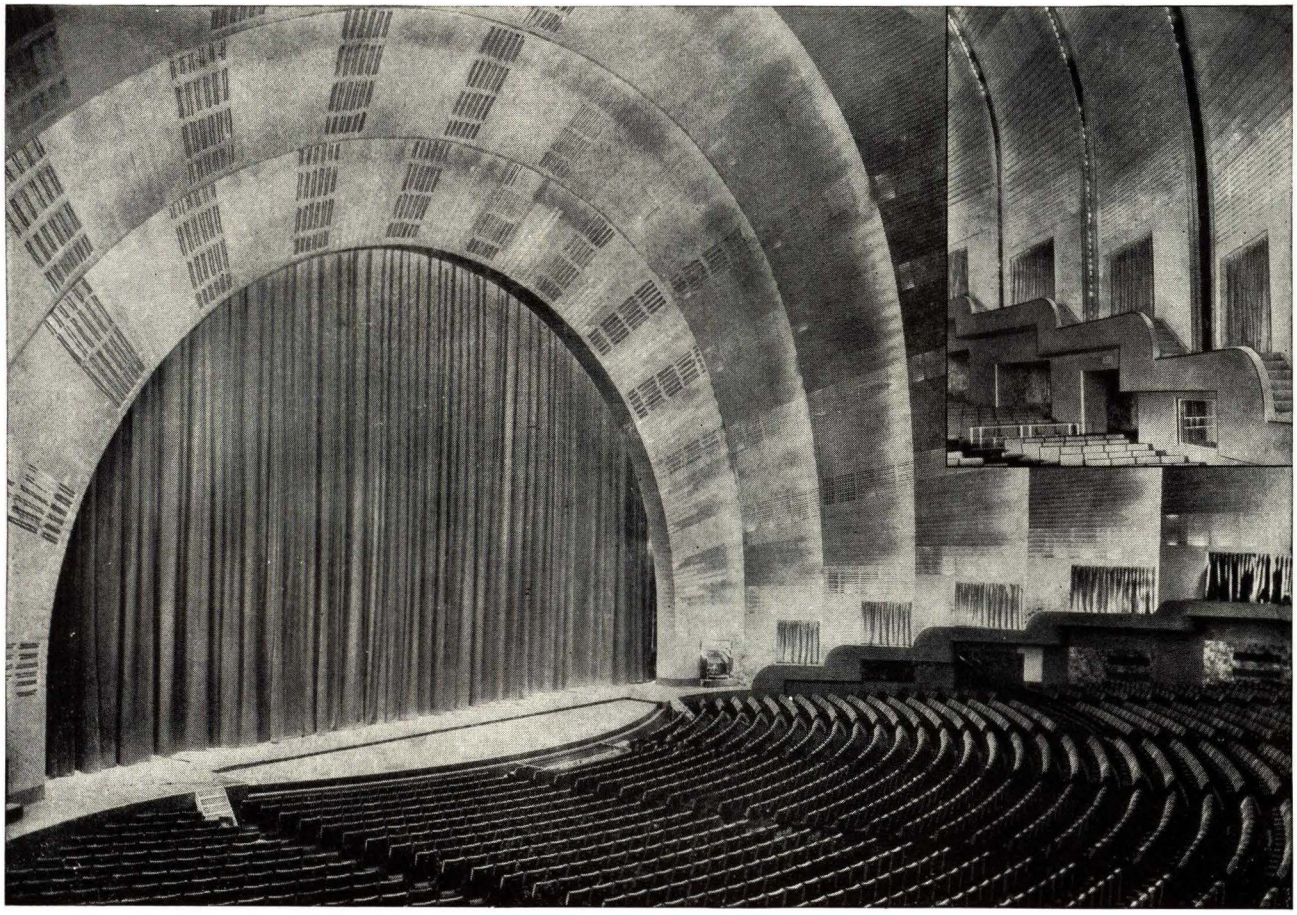
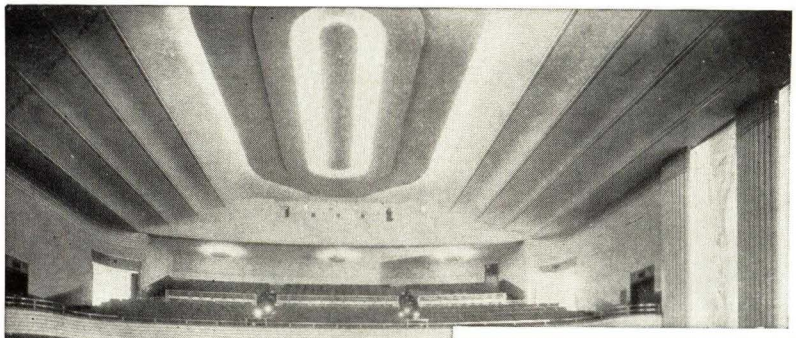




*Above:*

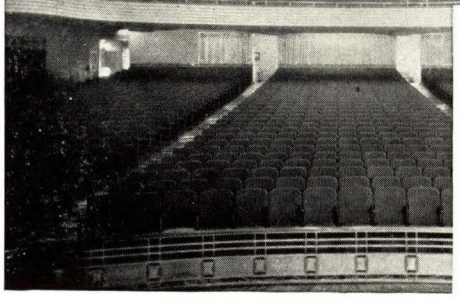
**Interior of International Music Hall, Rockefeller Center, Radio City Section, New York, N. Y.**

Entire fluted ceiling and walls produced in Kalite Sound Absorbing Plaster.

*Left and Below:*

**New Criterion Theatre, Broadway, 44th and 45th Sts., New York, N. Y.**

Eugene De Rosa, Archt., N. Y. C.
Hegeman Harris Co., Inc., Bldrs., N. Y. C.





Ceiling and Side Walls treated with Kalite Sound Absorbing Plaster. Note mural decoration painted over Kalite in panels between fluted pilasters on the side walls.

# KALITE SOUND ABSORBING PLASTERS



**KALITE CAST**—This is a high grade material for plain and ornamental casting purposes; it is made of a pumice aggregate and gypsum binder and furnished in a medium coarse and fine texture. This product combines high sound absorbing properties with structural strength, sharp outline of arrises, decorative detail in the finished casting, and a most pleasing texture and appearance.

Kalite Cast in either the coarse or fine textures is available in five colors: Natural White, Sandstone, Limestone, Light Buff, Medium Buff.

If Kalite Sound Absorbing Plasters are to be decorated, consult the nearest sales office of CERTAIN-TEED PRODUCTS CORPORATION for recommendations.

Kalite Cast opens another and extremely interesting avenue to the architect and engineer to combine sound control with ornamental and decorative design at a reasonable cost.

Practically any architectural motif or ornamental design as produced in ordinary white casting plaster can be carried out in accurate detail with Kalite.

Kalite Cast is recommended for ornamental cast work in all types of buildings, such as assembly rooms, libraries, theatres, churches, auditoriums, banks and all monumental types of buildings, lobbies, and corridors, public meeting rooms, or wherever it is desirable to combine sound control with decorative architectural motifs.

Kalite Cast has been thoroughly proven in commercial work and has been successfully developed both from the technical standpoint of acoustics and practical workability.

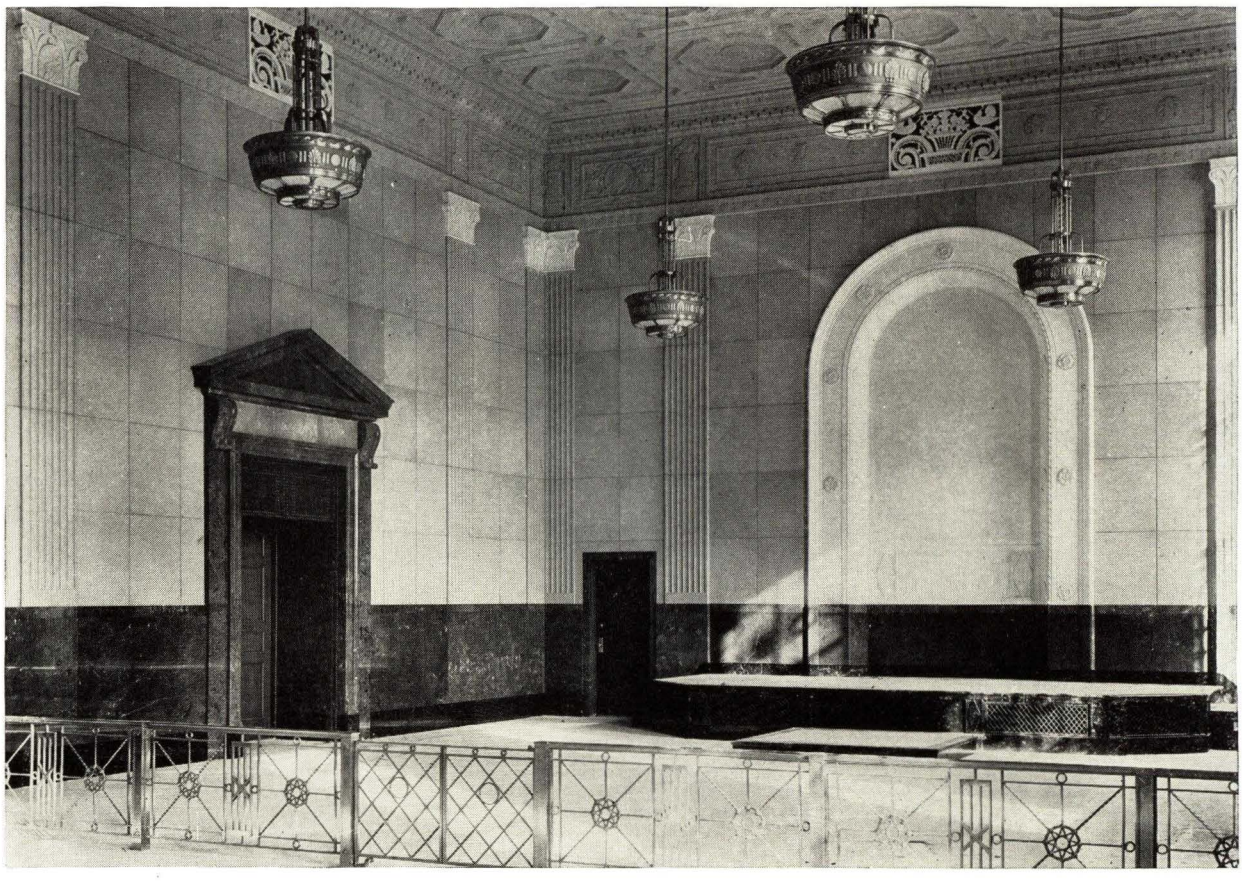
In field tests, conducted in interiors where Kalite Cast has been installed, this Certain-teed material proved completely satisfactory, meeting all specifications. (See Bureau of Standards Tests below.)

**BUREAU OF STANDARDS SOUND-ABSORPTION TESTS ON KALITE CAST, MARCH 14, 1936**

| *** Frequency cycles per second | GRADE D Fine Aggregate | | | GRADE A Coarse Aggregate | | |
|---|---|---|---|---|---|---|
| | Thickness | | | Thickness | | |
| | 1 inch | 1½ inch | 2 inch | 1 inch | 1½ inch | 2 inch |
| 128 | .09 | .20 | .22 | .06 | .15 | .23 |
| 256 | .30 | .39 | .48 | .19 | .34 | .55 |
| 512 | .49 | .59 | .55 | .42 | .64 | .73 |
| 1024 | .54 | .61 | .58 | .69 | .74 | .67 |
| 2048 | .47 | .60 | .54 | .74 | .60 | .64 |
| 4096 | .48 | .67 | .53 | .64 | .69 | .62 |
| Noise reduction coefficient | .45 | .55 | .55 | .50 | .60 | .65 |

## Specifications

Specifications for decoration are available upon application at any sales office of the CERTAIN-TEED PRODUCTS CORPORATION.



**Interior of Court Room No. 1, Post Office and Courthouse Building, Columbus, Ohio**

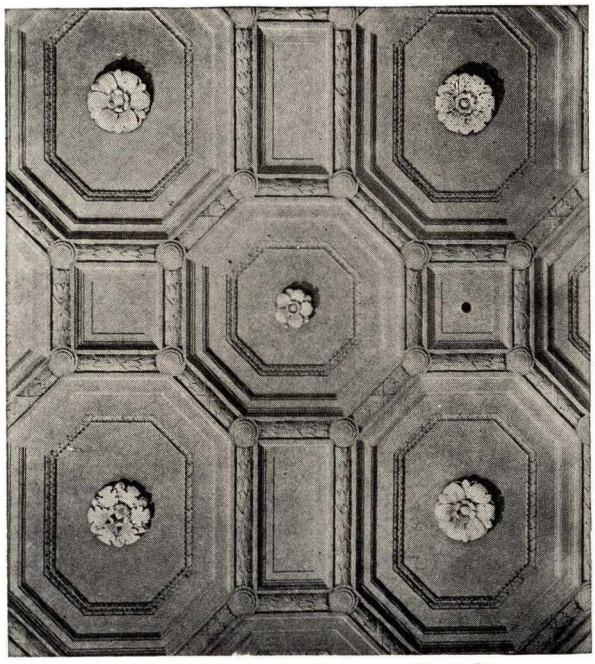
HENRY ERICSSON COMPANY, General Contractors, Chicago, Ill. RICHARDS, MCCARTHY & BULFORD, Architects, Columbus, Ohio

Ornamental Coffer Ceiling, Cornice and Frieze, as well as Wall Treatment of Fluted Pilasters, and Ashlar Panels in between. Pilasters are fabricated of Kalite Cast. The acoustics of the courtroom were tested by the U. S. Bureau of Standards after installation of Kalite, and accepted as satisfactory.

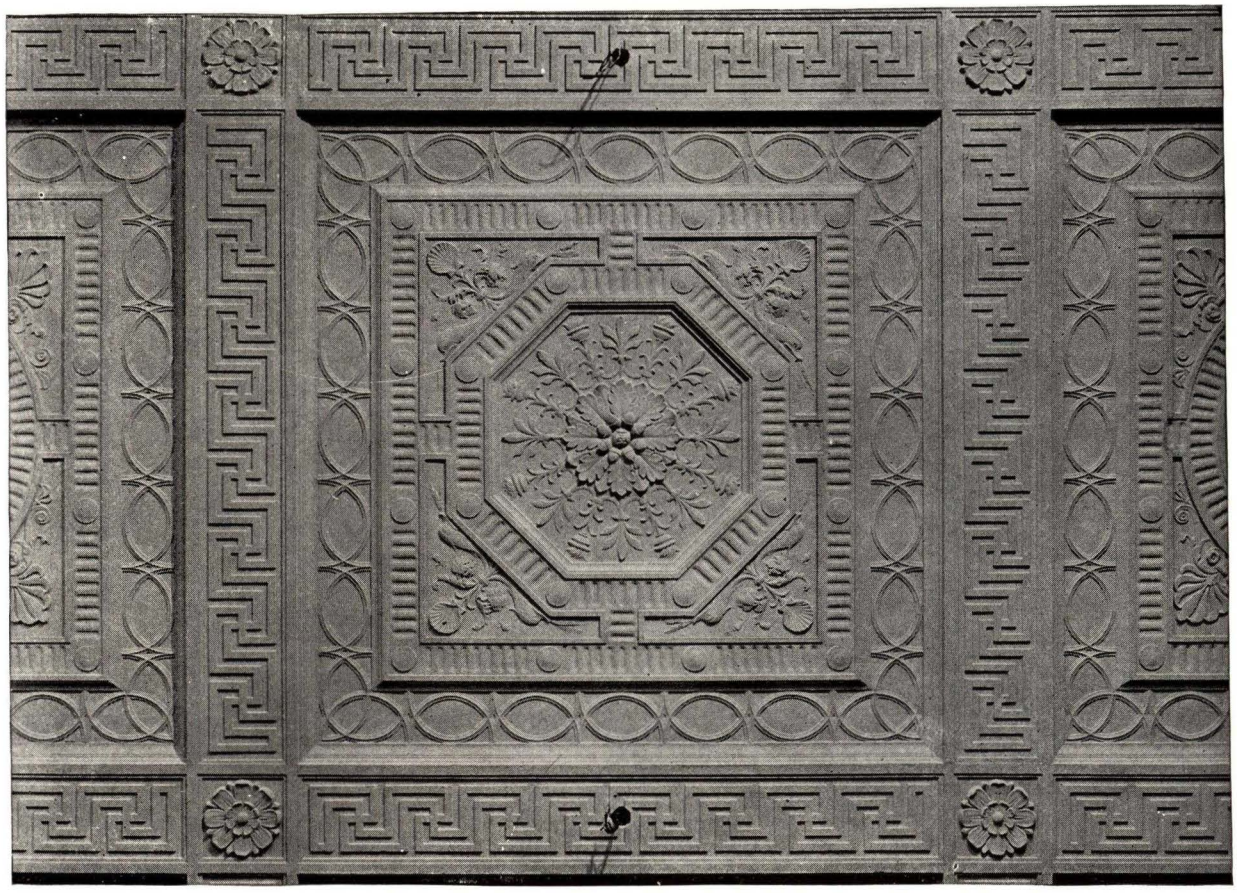
# KALITE SOUND ABSORBING PLASTERS

## PARTIAL LIST OF KALITE INSTALLATIONS

Radio City Theatre (Music Hall), New York, N. Y.
Radio City Theatre (New Roxy), New York, N. Y.
Radio City Building No. 10
Auditorium, Department of Interior, Washington, D. C.
Bankers Trust Building, New York, N. Y.
Continental Bank Building, New York, N. Y.
Loew's Boulevard Theatre, New York, N. Y.
Metropolitan Life Insurance Building, New York, N. Y.
Translux Theatre, 49th Street, New York, N. Y.
Lincoln Bank Building, Brooklyn, N. Y.
Vitaphone Studios, Brooklyn, N. Y.
Warner Brothers Studio, Brooklyn, N. Y.
Radio Station WEBR, Buffalo, N. Y.
Empire Theatre, Mobile, Ala.
Yale University Buildings, New Haven, Conn.
Manteno State Hospital, Manteno, Ill.
St. Mary's Church, Pontiac, Ill.
Technical High School, Springfield, Mass.
U. S. Post Office Building, New Bern, N. C.
RKO Theatre, Trenton, N. J.
Post Office and Courthouse, Columbus, Ohio
Wooster College Auditorium, Wooster, Ohio
City Hall and Courthouse, Easton, Pa.
Easton Hospital, Easton, Pa.
Yorktown Theatre, Ogontz, Pa.
Grange Theatre, Philadelphia, Pa.
Midway Theatre, Philadelphia, Pa.
Court Rooms, Federal Court Building, New York, N. Y.
Ascot Theatre, 183rd St. and Grand Concourse, New York, N. Y.
Alteration to Vitaphone Studio of Warner Bros. Studios, Brooklyn, N. Y.
Transmitter Building, WHN, Astoria, L. I., N. Y.
Fenimore Cooper School, East Chester, N. Y.
U. S. Customs and Court House Building, Mobile, Ala.
Knickerbocker Theatre, Nashville, Tenn.
French Casino, Washington Avenue and 12th Street, Miami Beach, Fla.
New Criterion Theatre, Broadway and 44th to 45th Sts., New York, N. Y.
Aluminum Company of America, New Kensington, Pa.
Drydock Savings Bank, New York, N. Y.
Federal Courthouse, Buffalo, N. Y.



**Federal Courthouse Building, New York City**
CASS GILBERT, Architect
JAS. STEWART & CO., INC., Builders Executed by F. L. HEWES, INC.
Ornamental Precast Sound Absorbing Ceiling Fabricated with Kalite Cast—Courtroom No. 3



**Ornamental Precast Sound Absorbing Ceiling Fabricated with Kalite Cast, Court of Appeals, Federal Court Building, New York City**

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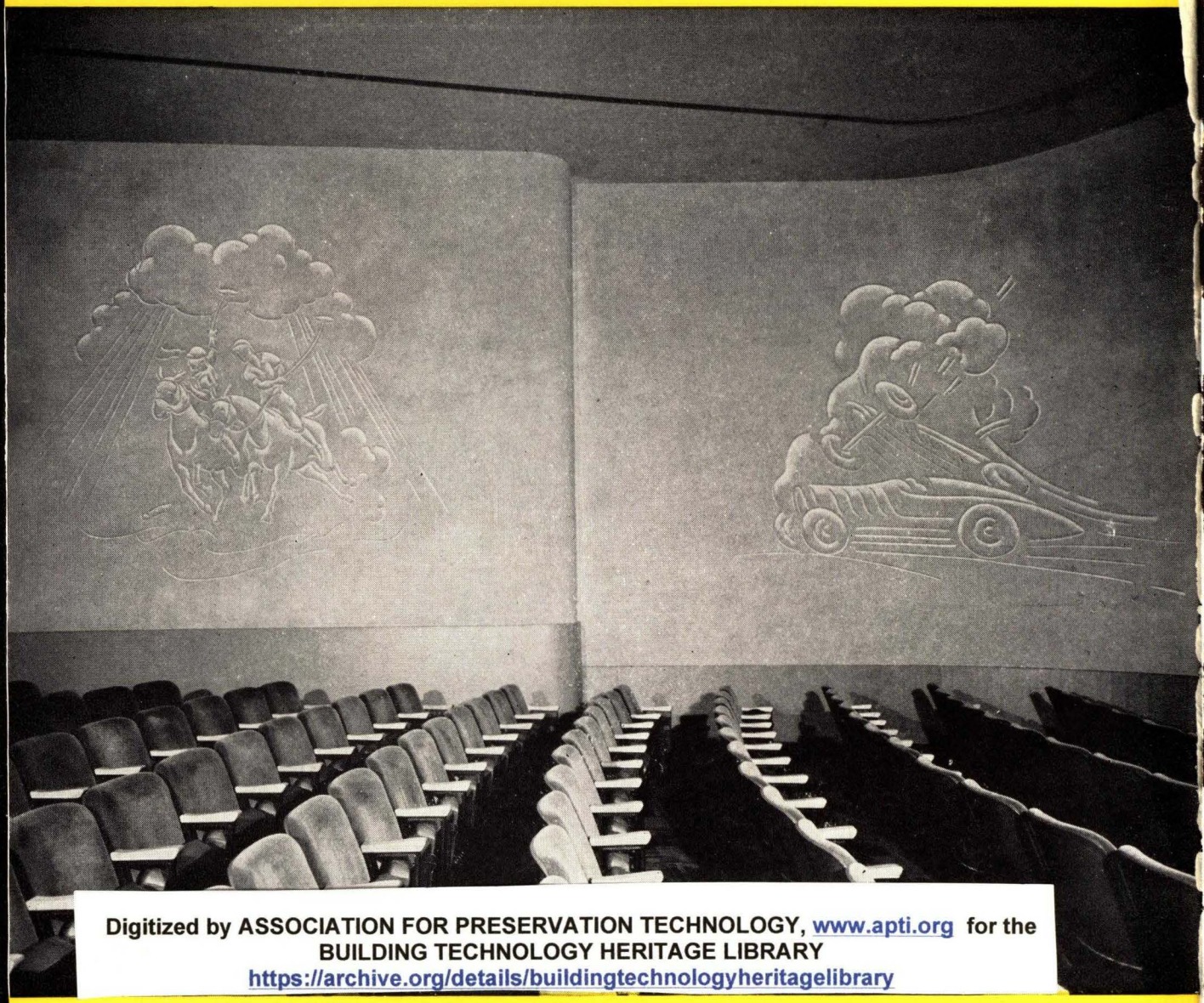
Certain-teed

# PRODUCTS FOR THERMAL INSULATION AND SOUND CONTROL



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TRANS LUX THEATER, WASHINGTON, D. C.
Kalite wall panels, trowel finished and carved after application

**CERTAIN-TEED PRODUCTS CORPORATION**

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