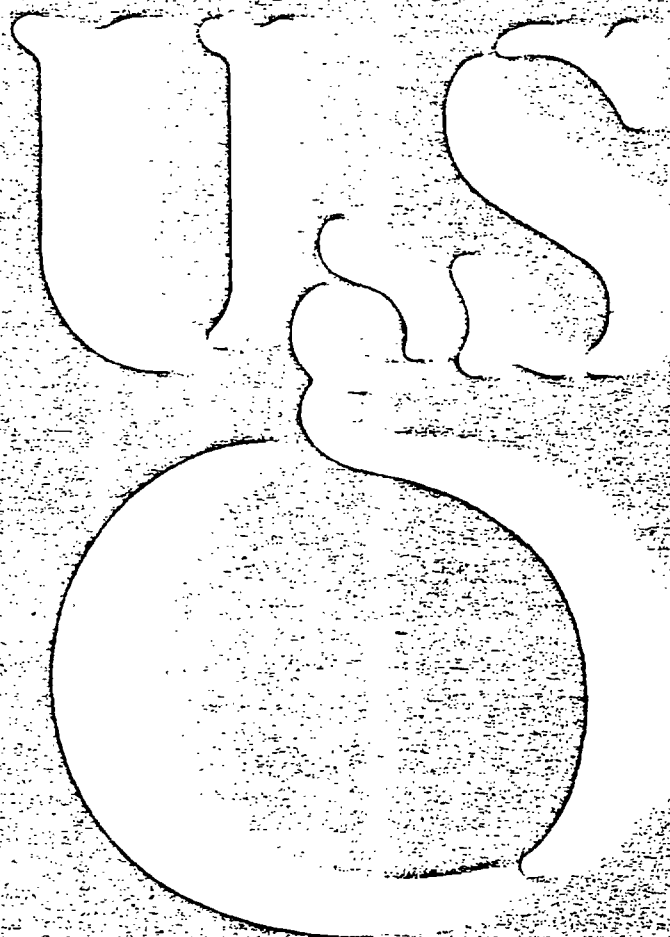




DATA BOOK

LATH AND PLASTER PRODUCTS

UNITED STATES GYPSUM

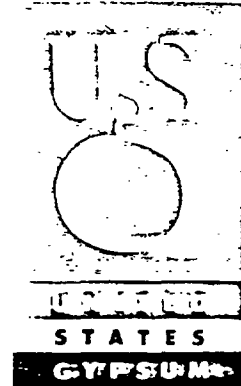
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IMPORTANT TRADE-MARK NOTICE

Trade-marks of the United States Gypsum Company are the buyer's guide to value.

Below is a list of trade-marks distinguishing particular products manufactured and distributed by the United States Gypsum Company. They are the exclusive property of this company and cannot lawfully be used in connection with the products of any other manufacturer.

Developed in modern research laboratories, thoroughly tested in the field, manufactured to conform to the highest standards of the building materials industry, products bearing the trade-mark of the United States Gypsum Company are *uniformly excellent*.



RED TOP Plaster and Finishes, Lime, and Insulation
ROCKLATH Gypsum Lath
BONDCRETE Plaster for Concrete Surfaces
ORIENTAL Colored Plaster and Stucco Finishes
SABINITE Acoustical Plaster
CHAMPION Gauging Plaster
STAR Gauging Plaster
ELDORADO Cement Plaster
IMPERIAL Finishing Plaster
COVER COAT® Finishing Plaster
GRAND PRIZE Finishing Lime
IVORY Finishing Lime
MORTASEAL Masons Lime

SNOW DRIFT Hydrated Lime
PYROBAR Gypsum Partition Tile
COLOR-RITE® Metal Lath
THE STEEL HEART OF PLASTER Metal Lath
TRIPLE-VENT® Basement Sash
TRUSSTEEL Truss Designed Studs
BRACE-TITE® Attachment Clips
BRIDJOINT Attachment Clips
WHITE STAR Dental Plaster
TEXOLITE Paint Products
USG Gypsum, Lime and Steel.

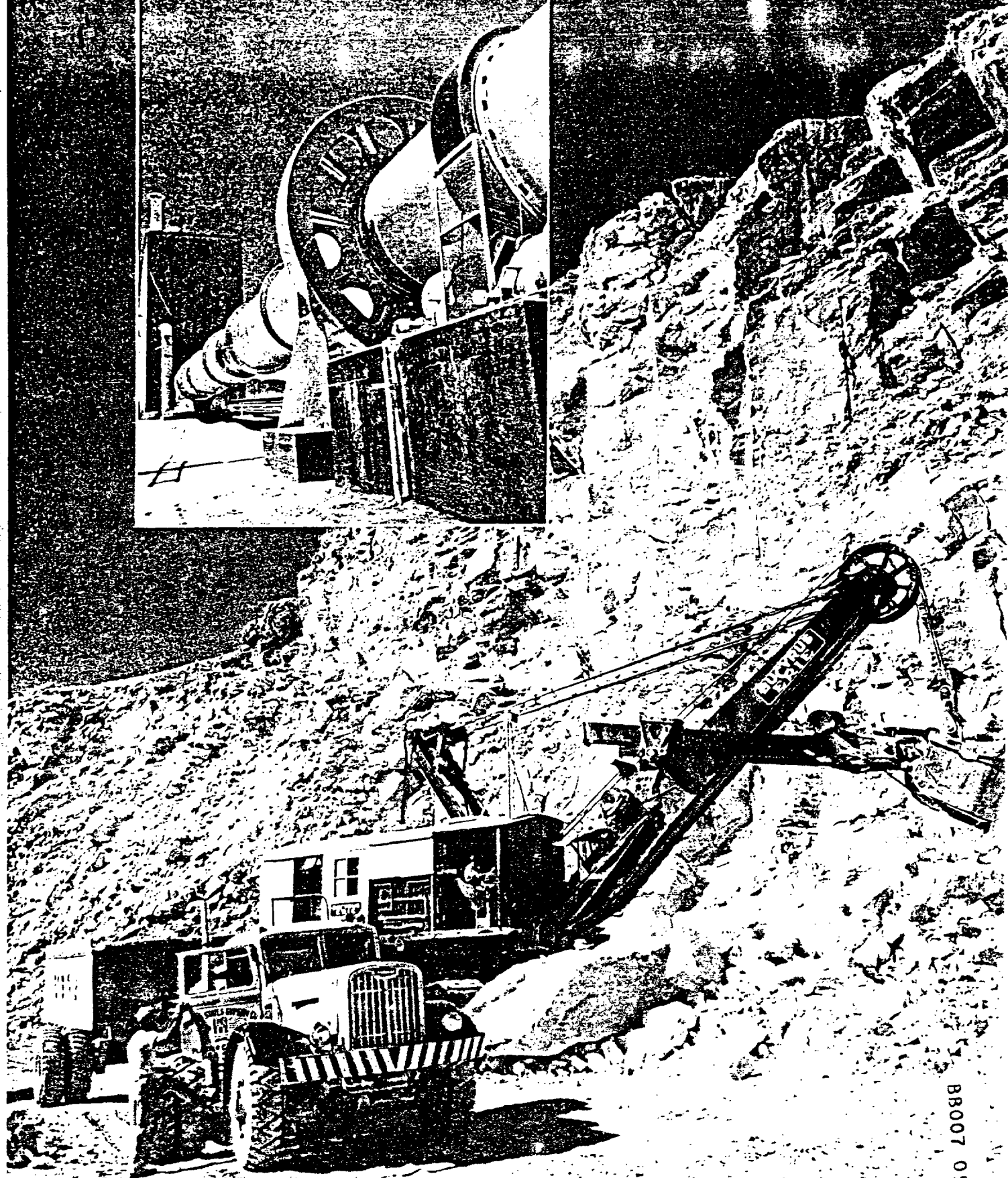
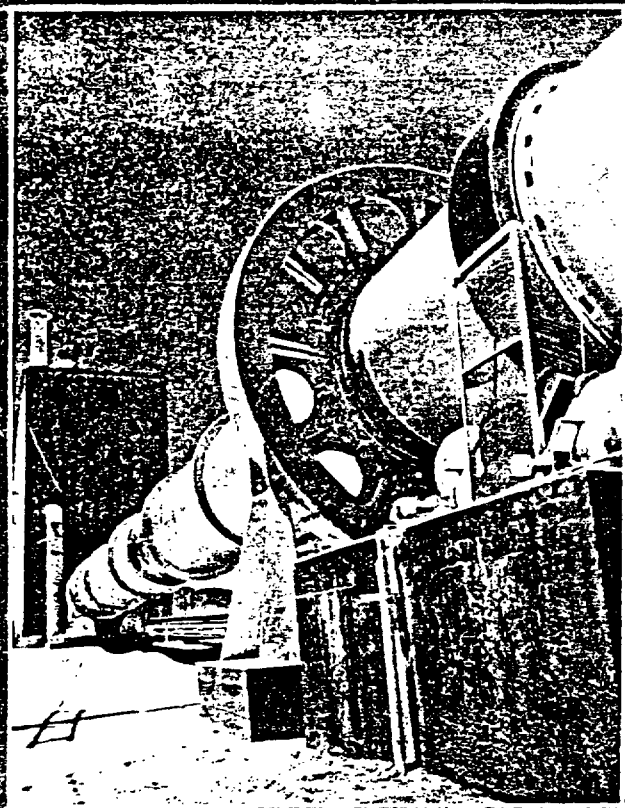
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RB-2 Copyright 1949 United States Gypsum Company

Data Book

LATH AND PLASTER PRODUCTS

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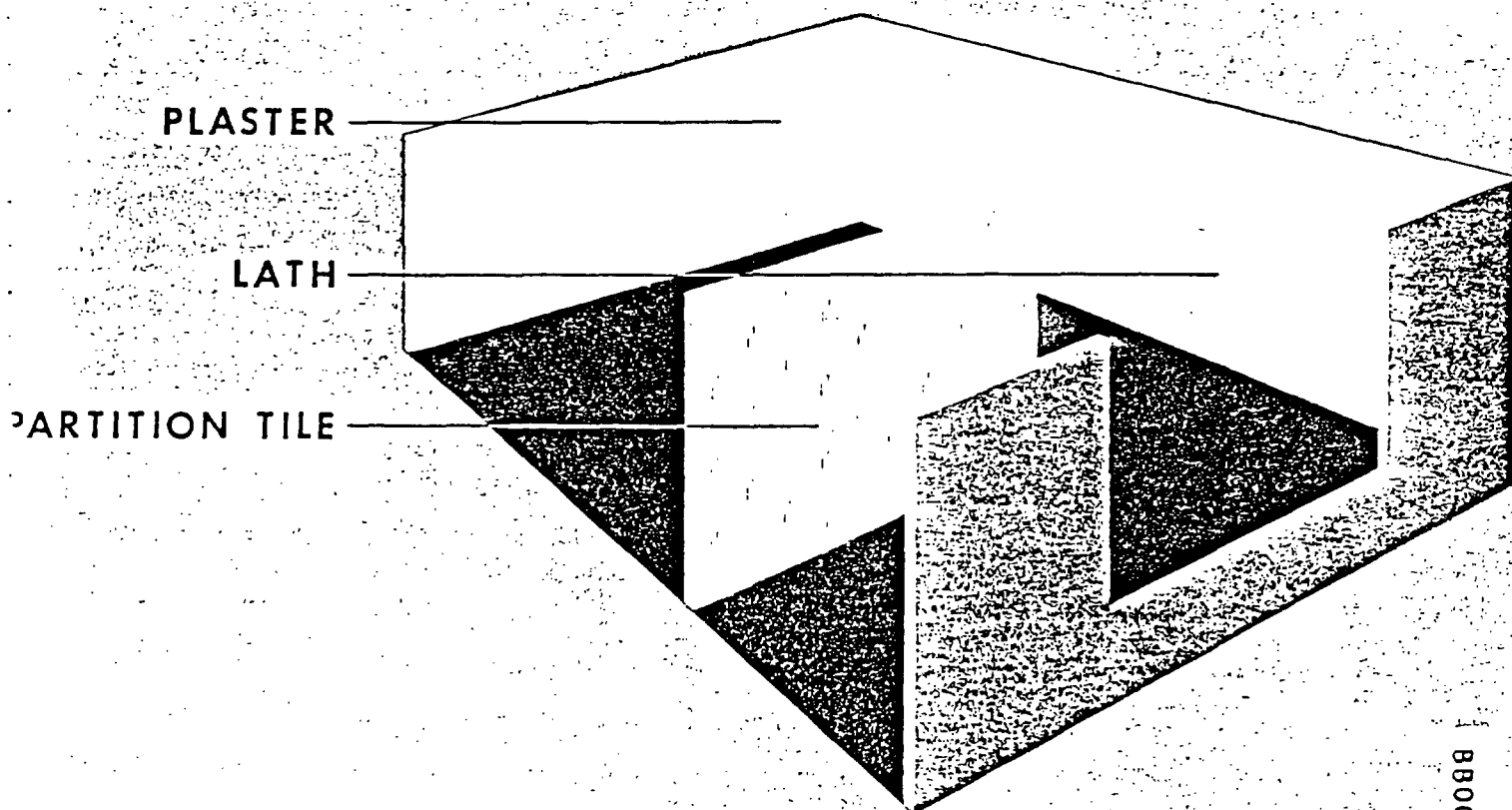
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Gypsum

the fireproof
building material

There are vast deposits of gypsum throughout the world. It is particularly common in Canada and the United States, where the mineral is converted into a wide range of useful building materials.

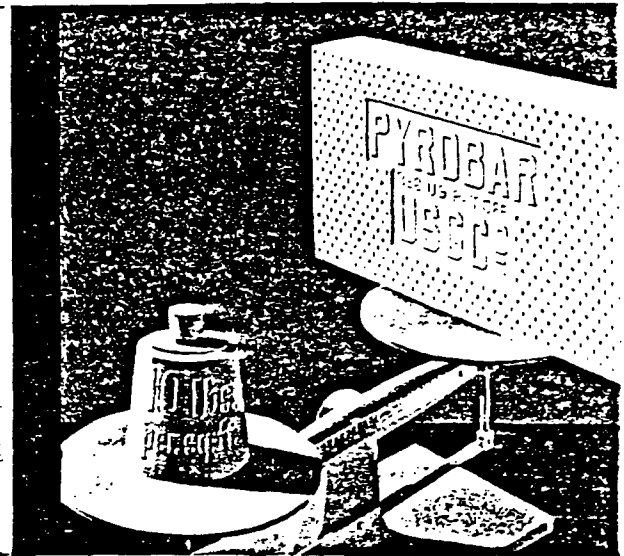
Lath, plaster, partition tile, and other high quality building materials are made from properly processed gypsum by the United States Gypsum Company. These products are readily available to dealers from many U.S.G. mills located throughout the country.



... GYPSUM



abundant
lightweight
strong
fireproof



By U.S.G.'s modern methods, crude gypsum is transformed into high quality building materials.

These USG products are uniform and dependable. Rigid quality controls at every plant and frequent tests in the great U.S.G. research laboratories maintain their unsurpassed quality.

Because gypsum is adaptable, light in weight, strong, easy to handle—and because it is fireproof—it is the basic ingredient of many building materials.

The remarkably light weight of gypsum building materials is demonstrated by PYROBAR, U.S.G.'s partition tile, lightest of all such masonry units.

Gypsum building materials are made more than adequately strong, thereby adding strength to the frame of the building.

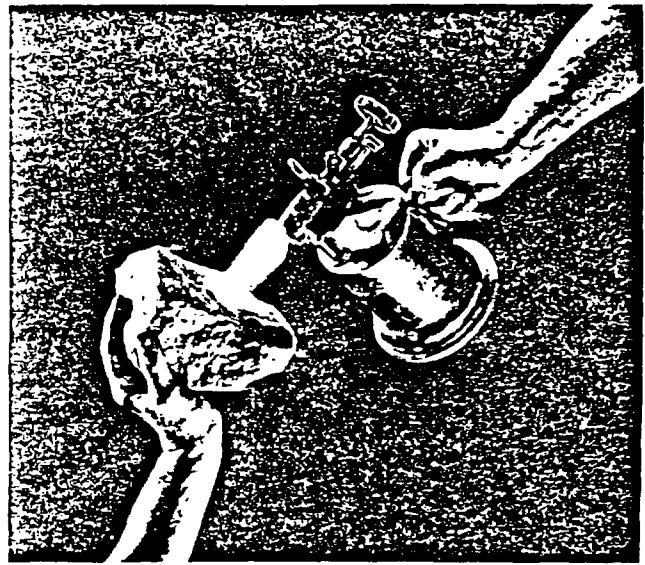
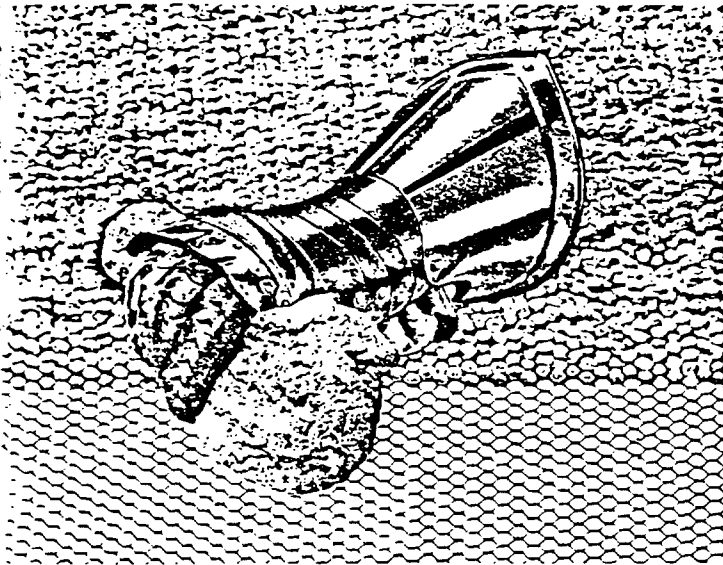
They are durable and withstand normal usage for the lifetime of the building.

Gypsum building materials are incombustible themselves, and provide remarkable protection against fire to the other materials used in the building, as well as to the building's contents.

GYPSUM IS FIREPROOF—whether it be in lath plaster, partition tile or any other form.

In fact it is MORE THAN FIREPROOF—it delays the progress of fire by shielding combustible materials. In the language of chemistry, gypsum is hydrous calcium sulphate—calcium sulphate chemically combined with water. This "dry water" of crystallization comprises 21% of the weight of gypsum.

Gypsum, the fireproof building material



When exposed to fire, intense heat attacks the gypsum and little by little drives the water out of it in the form of steam, a slow process known as calcination.

As fire struggles to eat through a gypsum material by driving off this water of crystallization, it is repeatedly attacking new layers of uncalcined gypsum. The temperature behind the material does not reach the ignition point of ordinary combustibles until all the water in the gypsum has been released and driven off.

Thus it becomes evident that gypsum is not only incombustible, but in addition it *fights fire* because of its reluctance to transmit heat.

Think what this means as a guard for wood construction protected with gypsum lath and gypsum plaster walls and ceilings. Wood burns at about 400° F.—but as long as a saving barrier

of uncalcined gypsum stands against the flames, temperatures on the other side *cannot* become much hotter than the boiling point of water (212° F.). The framing cannot ignite as long as the gypsum protecting it is intact.

The National Bureau of Standards in an official report assigns to wood stud partitions with $\frac{3}{8}$ " perforated gypsum lath and $\frac{1}{2}$ " gypsum plaster sanded (2:1) (2:1) a fire resistance rating of 1 hour. A six-inch partition built of gypsum tile and gypsum plaster will turn back the flames for hours.

The fire-fighting action of gypsum, while much slower, is not unlike that which takes place when a flame is turned against one side of a cake of ice. The ice melts at the point where the flame strikes it—but on the other side the temperature remains at freezing. You can hold your hand there until the wall of ice is melted *all the way through*.

Walls and Ceilings
as you want them
with adaptable
Lath and Plaster

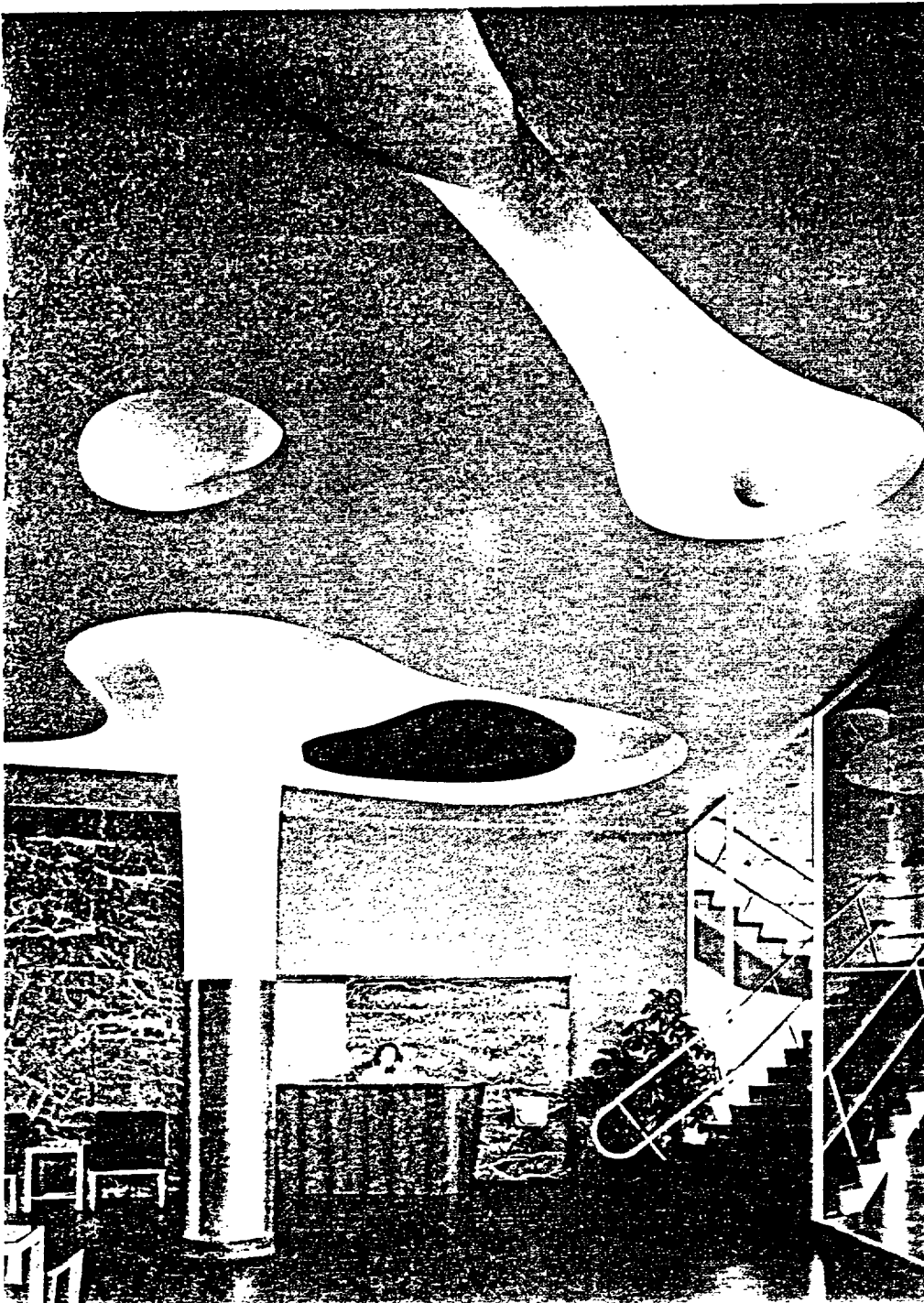
RED TOP plaster and ROCKLATH gypsum lath or USG COLOR-RITE metal lath are favored for fine interiors because they place no limitations on architectural plans and lend themselves perfectly to the best in design and construction—including the creation of curving contours and smooth, sweeping surfaces right on the job.

Resulting walls and ceilings are strong, sanitary and fire-resistant. They take any form of decoration beautifully—are easy to clean and re-decorate.

In the event of fire, the gypsum releases its water of crystallization when attacked by flame, retarding the fire and protecting the underlying construction.

Architects, home owners and builders recognize these merits of USG lath and plaster. ROCKLATH plaster base or USG COLOR-RITE metal lath and RED TOP gypsum plaster create fine interiors that stay fine through the years.

Gypsum Plaster and Building Lime





**Cement
plaster**

Neat gypsum plaster requiring the addition of an aggregate and water on the job.

Use only where good plastering sand, or other good aggregate is available.

RED TOP Cement Plaster is lowest in cost of the four types of gypsum basecoats described on this page. It is mixed with low cost aggregate, increasing bulk and coverage.

RED TOP Cement Plaster requires the addition of an aggregate proportioned strictly according to specifications. Use of too much aggregate drastically reduces finished plaster strength. See data, page 12.



**Wood fiber
plaster**

Mill-prepared gypsum basecoat plaster contain finely shredded selected wood fiber for use where extra strength is desired. Requires the addition of water only on the job.

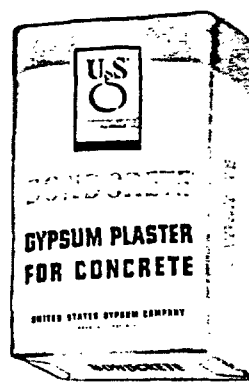
The strongest of the four types of basecoat plaster has greater compressive and tensile strength, greater resistance to lateral impact, greater surface hardness, greater resistance to cracking. Also provides from 30% to 130% greater fire resistance than sand plaster and is about 25% lighter in dead load. Greater coverage and workability, up to one part sand may be added in mixing, although strength and fire resistance are then somewhat reduced.



**Sanded
plaster**

Sanded at the mill to insure correct gradation and proper proportioning of sand. RED TOP Sanded Plaster is manufactured for use in areas where good plastering sand is costly or not available.

Ready to use—requires addition of water only on the job. Better than most job-sanded plasters because only selected aggregate, properly proportioned, is used.



**Bondcrete
plaster**

Factory prepared gypsum basecoat plaster specially formulated to bond with rough interior monolithic concrete surfaces. Requires addition of water only on the job. Total thickness of plaster, including finish coat, not to exceed $\frac{3}{8}$ " on concrete ceilings, $\frac{5}{8}$ " on walls.

Apply only on concrete surfaces properly prepared for plastering and free from oil from form board. Full directions are printed on the bag.

The leadership enjoyed by USG RED TOP gypsum plasters is the result of the most extensive scientific research program in the industry, plus superior manufacturing and marketing facilities.

As a result of U.S.G.'s research and development work, plasterers and contractors expect today's plaster products to be uniform, plastic and fireproof; they must be free spreading, easily mixed by hand or machine, and must provide high coverage while setting dependably to maximum hardness and high tensile strength.

RED TOP gypsum plasters fully meet all these requirements. The complete RED TOP line offers a USG product for every plastering need. Each product more than meets applicable standard specifications.

Basecoat plasters

Gypsum basecoat plasters are applied to bases of masonry or lath and support the finish coat. The United States Gypsum Company is continuing to improve these important products. New materials are tested in laboratories and in the field before being offered. Tests are made at all stages of manufacture and on finished products in warehouse stock. Special grinding equipment has been devised to produce super-fine, easily mixed plasters having increased slip under the trowel.

There are four distinct USG basecoat plasters—each designed for a specific use—each best on the market for its specific purpose.

Packed in convenient 100 lb. multi-wall paper bags.

When in doubt read the instructions on the bag

RED TOP plasters will give the most satisfactory results when instructions are carefully followed. Observe the directions on the bags, or consult the specifications in U.S.G. technical literature.

RED TOP plasters are for interior use and should not be used on the exterior where exposed to the elements. They should not be used where contact with excessive moisture is expected, whether on the exterior or interior.

Only RED TOP BONDCRETE (see page 10), or RED TOP COVER-COAT Finishing Plaster (see page 17), should be applied over concrete. Special care should be taken in preparing the bonding surface in accordance with directions printed on the bag.

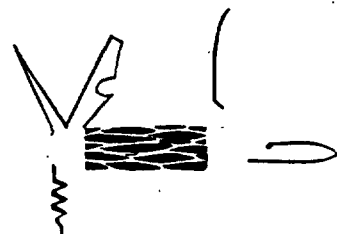
Gypsum basecoat plasters are not recommended for application over surfaces that have been treated with asphalt or other bituminous compounds, nor for application directly over interior surfaces of exterior masonry walls.

The widespread usage of RED TOP plasters can be attributed principally to these outstanding features:

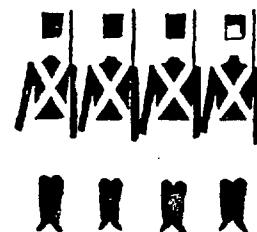
Made from the mineral gypsum, RED TOP plasters are incombustible, will not transmit high temperatures and will completely calcine; actually fight fire.



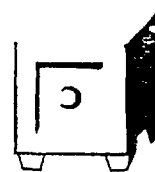
RED TOP Basecoat plasters bond firmly to approved plaster bases and are specially processed to receive any type of finish coat in common use. Plastic, they permit wide latitude in design of either plain or curved surfaces.



Manufactured on a nationwide basis in 23 modern mills, RED TOP plasters are held to rigid specifications. Their setting time is stabilized to minimize the hazards of impure additives, unexpected job conditions and seasonal irregularities.



RED TOP plasters are made to withstand normal usage for the life of the building. (Compressive and tensile strength data Page 13.)

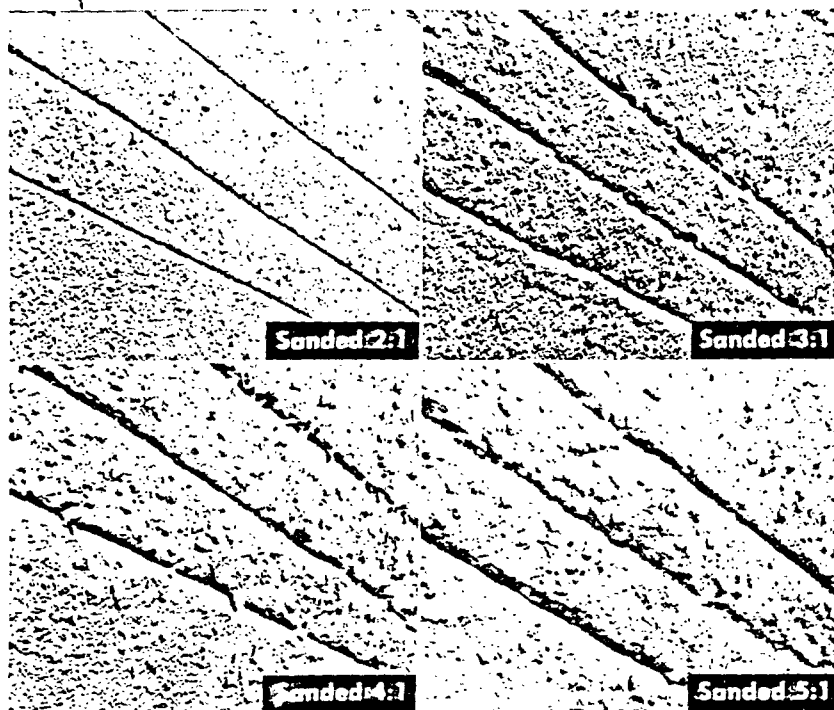


Processed to give high coverage with minimum effort, RED TOP plasters, by their easy working qualities and additional bulk, assure good work at low cost for both material and labor.



BB007 0567

AD MIXTURES TO PLASTER



For ideal strength and hardness, the proper proportion of aggregate to plaster must be used

Illustrations show reduced hardness with increasing proportion of sand.

Recommended proportions of gypsum cement plaster to sand by weight and approximate covering capacity at recommended grounds

Plaster Base:	Gypsum Lath	Insulation Lath	Metal Lath	Brick-Clay Tile	Gypsum Tile
Two Coat Work Scratch Double-back Plaster	1:2½	1:2½	—	1:3	1:3
Three Coat Work Scratch Coat Plaster	1:2	1:2	1:2	—	—
Brown Coat Plaster	1:3	1:3	1:3	—	—
Coverage Range Sq. Yds. Per Ton	175-220	175-220	90-125	175-200	200-240

Water

All gypsum plasters require the addition of water to the job. As a general rule any water fit to drink is suitable for mixing plaster.

Sand

Neat or gypsum cement plaster is designed to be mixed with an aggregate on the job. Sand is the most commonly used plaster aggregate because it is economical and generally available.

Proper proportioning and gradation of sand are most important in determining bulk and working quality of plaster, and the ultimate quality of the finished work. Over-sanding or the use of an excessive amount of fine sand, each reduce the strength and hardness of gypsum plasters.

The American Society for Testing Materials in ASTM Designation C35-39 has established the following specifications which are regarded as standard for the proper gradation of good plastering sand:

Size of Sieve	Percentage of Sand Retained	
	Max.	Min.
No. 4 (4760-micron)	0	..
No. 8 (2380-micron)	10	0
No. 30 (590-micron)	80	15
No. 50 (297-micron)	95	70
No. 100 (149-micron)	..	95

The amount of material finer than a No. 200 (74 micron) sieve shall not exceed 5%.

B8007 0563

Lightweight plaster aggregates

The use of lightweight aggregates is growing in many markets. When properly used their light weight, fire resistance, adaptability to winter plastering and ease of handling on the job make them highly desirable.

Perlite

This is an excellent lightweight plaster aggregate, and is becoming increasingly available. It is a product derived from lava ore which is exploded under heat.

When used as a plaster aggregate it must conform with the ASTM Specifications for Plastering Sand and weigh from 7½ to 15 lbs. per cu. ft.

It is generally sold in bags containing 3 or 4 cu. ft., and is mixed on a *volume* of aggregate to weight of gypsum plaster basis.

Perlite has excellent fire-resistance qualities. When mixed with gypsum plaster it provides a plaster strength greater than that with vermiculite and nearly equal to that with sand.

Premixed plasters containing the correct propor-

tions of gypsum plaster and perlite are available in some markets.

Vermiculite

This aggregate is produced from a non-metallic mineral of the mica family. It is ground and exploded under heat into lightweight granules. As an aggregate for plastering, vermiculite must conform in particle size to ASTM Designation C35-39 for gradation of plastering sand, and shall weigh between 7½ and 10 lbs. per cubic foot.

Vermiculite plaster aggregate is generally sold in bags containing 4 cu. ft. and is mixed with gypsum plaster on a *volume* of aggregate to weight of plaster basis. Premixed plasters containing the correct proportions of gypsum plaster and vermiculite are available in some markets.

Walls plastered with a mix containing vermiculite as an aggregate have lower strength and require a longer period for drying than walls of sanded plaster, but are lighter in weight and have greater fire resistance.

Recommended proportions of lightweight aggregate per 100 lbs. plaster.

	Gypsum, fiber insulating, or metal lath	Masonry bases
Scratch Coat	Not over 2 cu. ft.	Not over 3 cu. ft.
Brown Coat	Not over 3 cu. ft.	Not over 3 cu. ft.

Note: In two-coat plaster work over gypsum or fiber insulating lath not more than 2½ cu. ft. of lightweight aggregate should be used per 100 lbs. gypsum plaster. Masonry surfaces should be moderately wetted to reduce suction. When perlite is used and wetting is impractical, amount of perlite may be increased to not more than 4 cu. ft.

Gypsum plaster—strength data

	Wood Fiber	Cement Plaster: Sand			Cement Plaster			
					Vermiculite		Perlite	
Mix	Neat	1:1	1:2	1:3	100 lbs.: 2 cu. ft.	100 lbs.: 3 cu. ft.	100 lbs.: 2 cu. ft.	100 lbs.: 3 cu. ft.
Compressive strength—lbs. per sq. in. (typical test results)	2600	2100	1200	750	500	300	1000	650
Tensile strength—lbs. per sq. in. (typical test results)	440	245	170	120	130	90	165	105



Plastering specifications may indicate either two-coat or three-coat work. Two-coat work consists of one base coat and one finish coat, and it is generally used over a masonry plaster base and often over gypsum or insulation lath. In three-coat work there are two separate base coats and a finish coat; three-coat work is required over metal lath. The first coat is known as the "scratch" coat and the second coat as the "brown" coat.

Two-Coat Work

Where base coats are applied by either the "single coat" or "scratch-double-back", the overall plastering operation is termed two-coat work. The basecoat plaster is applied to slightly less than the thickness of the grounds and rodded and darried to a true, even surface left rough enough to take the finish coat.

Three-Coat Work

The scratch coat is sanded 2 parts of sand to 1 part of plaster by weight (for vermiculite or perlite, proportion by volume of aggregate to weight of plaster). It is applied to a thickness of approximately $\frac{1}{4}$ " over the face of the lath and then cross-raked before it sets to provide a mechanical key for the brown coat.

The brown coat is sanded 3 parts of aggregate to 1 part of plaster, and is applied directly to the set scratch coat. The brown coat is used to fill out to just slightly below the grounds and is rodded and darried to a true, even surface. It is left rough enough to receive the finish coat.

How to use Basecoat plaster

RED TOP plasters are the best that research and efficient production methods can provide. Nevertheless, to assure best results care and skill should be exercised in handling and application. U.S.G. provides detailed directions and complete specifications for proper use of each of its plastering products. Compliance with Standard Specifications for Gypsum Plastering of the American Standards Association is recommended.

Warehousing

Store plaster in a dry, well ventilated warehouse. Rotate stocks by shipping oldest material first. RED TOP plasters are mixed for use in the same season shipment is made from the mill.

Delivering

Protect plaster bags from moisture, both in transit and stocking on jobs. Wet bags cause trouble.

Mixing

In hand mixing, determine proper proportion of aggregate to be used (if aggregate is required), and place aggregate and plaster in one end of box. Hoe dry from one end to the other, working aggregate and plaster together until thoroughly blended. Then add water and hoe plaster into the water, mixing thoroughly to proper mortar consistency.

In machine mixing, put in water, then half the required amount of aggregate, then dry plaster, then balance of aggregate. Mix to desired consistency.

Never mix plaster in dirty mixing boxes or machines. Do not prolong mixing beyond time required for uniform intermixture of the components.



Machine mixing of plaster is economical on large jobs

Keep moisture away from plaster before mixing

Use only clean water

Use only properly graded aggregate in proper proportions

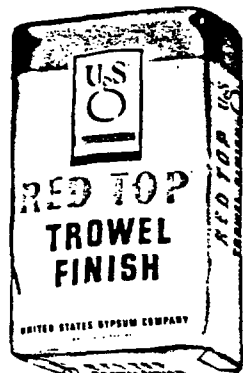
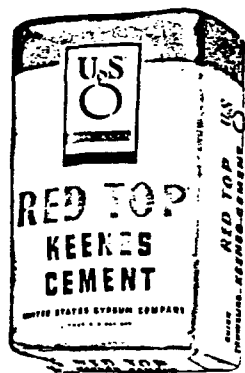
Keep set-up plaster out of the mix

Mix no more than can be applied in one hour

Do not retemper plaster that has started to set

In cold weather provide adequate heat to prevent freezing

Prevent plastered walls from drying out until set



Available brands, setting times and finishes

Brand	Set with Lime Putty
RED TOP CHAMPION Gauging Plaster (white)	Quick set—10-15 min.
RED TOP STAR Gauging Plaster (white)	Slow set—45-60 min.
RED TOP Gauging Plaster (gray)	Slow set—45-60 min.
RED TOP Gauging Plaster (gray)	Quick set—10-15 min.
RED TOP Regular Keenes Cement (white)	3-6 hours
RED TOP Quick Trowelling Keenes Cement (white)	1-2 hours

Brand	Type of Finish
RED TC Trowel Finish Plaster	smooth
RED TOP IMPERIAL Finish Plaster	smooth
RED TOP Skim Coat Finish Plaster	smooth
RED TOP Sand Float Finish Plaster	sand float

All finish plasters are shipped in 100 lb. multi-wall paper bags.

Finishing plaster

Finish coat plaster completes the architectural design and provides a suitable base for decoration. Finishes are either factory prepared, usually requiring the addition of water only, or they may be job mixed, involving a blend of lime putty and gauging plaster or lime putty and Keenes cement. The finish coat is applied to a thickness of $\frac{1}{8}$ " to $\frac{1}{4}$ ". Several types of finish coat are available, each designed to serve specific requirements.

Lime-Gauging Finish Coat consists of hydrated finish lime or finishing quicklime soaked or slaked to putty consistency, and blended in proper proportion with gypsum gauging plaster. For complete description and data on finishing limes, see page 20.

Gauging Plaster. The function of gauging plaster in a lime-gauging finish is to provide initial set and strength and hardness to the surface finish. It is ground to the proper fineness to blend readily and completely with the lime putty. To serve various job and market requirements, USG gauging plasters are produced in 2 setting times and in a choice of gray or white colors.

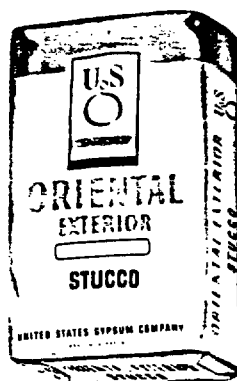
Gauging plasters are used only with finish limes as described on page 20 in the proportion of one part gauging plaster to three parts of lime putty by volume. This is the equivalent of one part gauging plaster to two parts of dry lime by weight.

Keenes Cement is a high strength, pure white gypsum plaster used with finish lime putty for extremely hard, dense surfaces. Keenes cement provides the strength and the lime putty imparts the necessary plasticity. When mixing, proper proportions must be carefully observed.

For "medium hard" finish, mix in the proportion of 50 lbs. of dry hydrated lime (100 lbs. lime putty) to 100 lbs. of Keenes cement.

For "hard finish" limit the quantity of lime to 25 lbs. of dry hydrated lime (50 lbs. lime putty) to 100 lbs. of Keenes cement.

Gypsum Trowel and Float Finish Plaster. Factory prepared gypsum plasters requiring the addition of water only on the job. These finish plasters have a natural bond to gypsum base coats, develop superior hardness, are non-alkaline, may be decorated safely much sooner than lime putty finishes, and contain nothing injurious to paint or other final decoration.



ORIENTAL Interior Finish Plaster. Integrally colored in a choice of 12 colors at the factory, this finish plaster requires the addition of water only. It has a natural bond to gypsum basecoat plaster, may be finely floated or textured and requires no further decoration.

Colors: White Tusk Ivory Golden Buff Shell Pink
Sahara Cream Harvest Buff Mist Gray Desert Rose
Ivory Parchment Caenstone Cool Green

For coverage see data below.

ORIENTAL Exterior Stucco Finish. Exterior stucco finish in eleven pastel colors and white. It is uniformly pre-mixed, water-resistive, non-staining, easy to apply, and enduring. Eliminates much of the uncertainty inherent in a job-mixed stucco finish. Uniformity of aggregate and color standards permits matching of colors between batches mixed at different times and under different conditions. ORIENTAL Stucco sets slowly to facilitate proper finishing, minimizing unsightly streaks and shading. Will produce either period textures or smooth trowel, stipple sponge, rough coat or spatter-dash finishes.

Applied over a base coat of portland cement, lime and sand. Coverage approximately 150-200 yds. per ton.

Colors: White Sun Tan Alamo Buff Pueblo Tan
Pewter Gray Stone Gray Mission Cream Indian Coral
Eggshell Ivory Copper Rose Cascade Green Rancho Brown

RED TOP COVER COAT Finishing Plaster, unlike all other types of plaster, bonds directly to smooth unpainted concrete surfaces and provides a smooth finish ready for decoration. Because COVER COAT bonds directly to such surfaces, considerable time and expense are saved by using COVER COAT instead of other procedures such as surface roughening plus bond plaster, buffing plus spackling compound, or furring, lathing and plastering in the conventional manner.

Factory prepared, RED TOP COVER COAT requires the addition of water only on the job. It is applied in two thin coats to a total average thickness not exceeding 1/8". Careful adherence to directions on the bag for surface preparation is necessary. Coverage, 300-700 yds. per ton depending on surface.

Finish plaster data

	Gauging Plaster to Lime	Quick Trowelling Keenes to Lime		Gypsum Trowel Finish	Gypsum Float Finish	ORIENTAL Finish
Mix by weight of dry materials:	1:2	2:1, Medium Hard	4:1, Hard	NEAT	NEAT	NEAT
Color	White or Gray (1)	White	White	White	White or Gray	12 Colors
Finish Texture	Smooth	Smooth	Smooth	Smooth	Float	Float
Hardness in Kilograms (2)	34	50	70	55	(See Note 3)	(See Note 3)
Workability	1	3	6	2	5	4
Coverage	1 ton gauging 2 tons lime cover approx. 1000-1400 yds.	2 tons Keenes 1 ton lime cover approx. 850-1200 yds.	4 tons Keenes 1 ton lime cover approx. 1300-1700 yds.	1 ton will cover approx. 350-400 yds.	1 ton will cover approx. 250-275 yds.	1 ton will cover approx. 250-300 yds.

(1) Gray with "local" gauging plaster. (2) Kilograms required to force a 10MM ball .01" into plaster face.

(3) These are hard finishes but the aggregate in the surface does not permit an indication with this test.

Special plasters

In addition to its complete line of wall plasters, U.S.G. has perfected and formulated a number of special plasters for other applications. They are recognized as quality leaders in their respective classes because of the carefully controlled scientific processing by which they are made.

RED TOP Moulding Plaster—used in specialized work such as casting ornamental enrichments or running cornices. The grind is conducive to fine detail. In cast work, moulding plaster is used neat, whereas for running cornices a small portion of lime is used.

RED TOP Moulding Plaster is available in white and local, or grayish colored, grades.

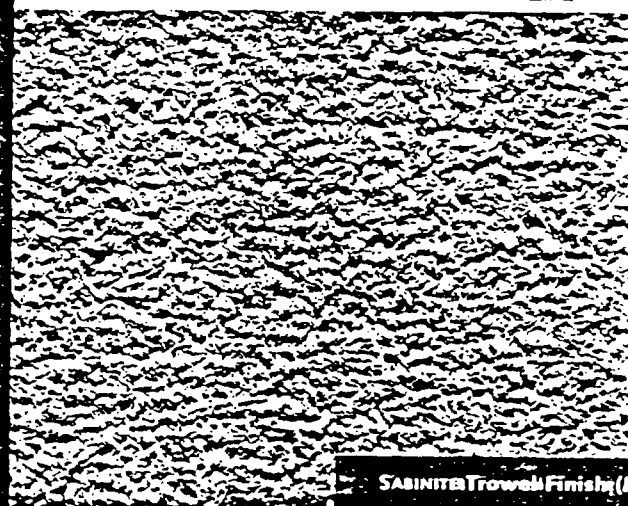
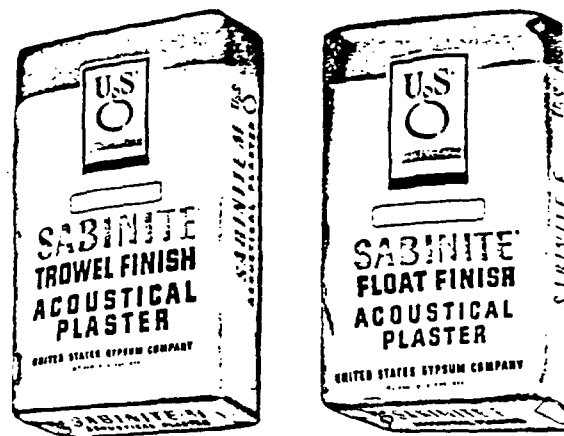
RED TOP Casting Plaster—for moulding done directly in the plaster. Results in smoother castings showing excellent detail—ideal for making fine plaques and art statuary.

Art Plaster—different from any other class of plaster, being designed especially for casting novelty artware ready for painting. It contains additives to produce surface hardness in the finished work that minimize paint absorption. Available in white or ivory colors.

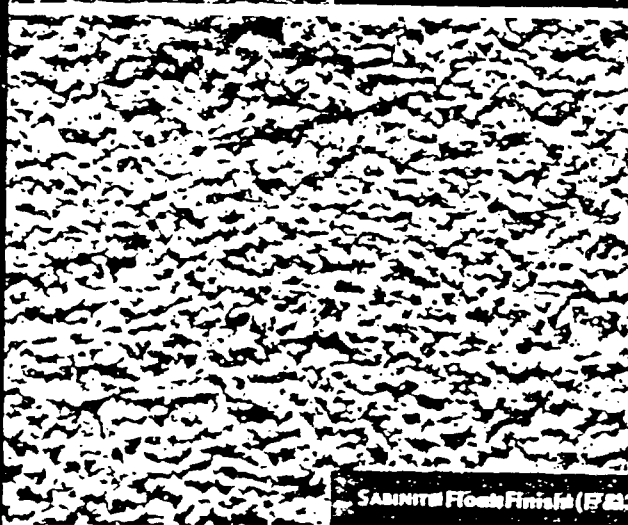
Dental and Orthopedic Plaster—made from selected gypsum and remarkably free from grit and other foreign elements. Extremely fine grind—exceptional quality. These plasters are very well known under the brand names: WHITE STAR Dental Plaster and USG Orthopedic Plaster.

RED TOP Partition Tile Cement—a specially prepared gypsum cement used with water and sand as a mortar for setting interior partitions of gypsum or clay tile and gypsum fireproofing and column covering. RED TOP Partition Tile Cement makes an easy working, economical mortar having early high strength that provides strong mortar joints for any non-bearing partition tile work.

SABINITE acoustical



SABINITE Trowel Finish (F 22)



SABINITE Float Finish (F 23)

plaster absorbs unwanted noise...incombustible...provides wall and ceiling beauty...easily applied

SABINITE Trowel Finish (M)

A highly efficient acoustical plaster, prepared to produce a continuous surface with exceptional sound absorbent qualities.

Sound absorption. With countless sound traps, SABINITE Trowel Finish absorbs a high percentage of all noise that strikes its surface. Has a Noise Reduction Coefficient of .60 (see table below).

Fire resistance. Basically mineral, it is incombustible.

Flexible in use. Like any plaster, SABINITE Trowel Finish is adaptable to any architectural design. Its continuous trowel finished surface lends beauty to any decorative plan. For use on any ceiling area and on sidewalls not subject to contact.

High light reflection. Laboratory tests indicate reflection of 64% for SABINITE Trowel Finish Oyster White.

Easily applied. SABINITE Trowel Finish is applied as a finish coat plaster and requires only the skill of a competent plasterer.

Economical. More sound absorption per dollar than most other commonly used acoustical materials.

Maintenance. SABINITE Trowel Finish plaster may be cleaned with a good putty-type wallpaper cleaner or with a vacuum cleaner using hose and brush attachments.

Redecoration. SABINITE Trowel Finish may be redecorated with TEXOLITE paint (Standard or Imperial). Apply according to U.S.G. directions. Tests by a nationally recognized laboratory showed SABINITE Trowel Finish had no loss in noise reduction coefficient after 2 spray coats of Imperial TEXOLITE were applied.

Colors. Available in Oyster White, Colonial Cream, Antique Ivory, Spanish Buff and Caenstone. Color samples are available on request.

Over existing ceilings. SABINITE Trowel Finish may be applied over most existing surfaces through use of a special asphalt emulsion bonding coat. Refer to U.S.G. representative or to technical literature for data.

SABINITE Float Finish (F)

A highly efficient acoustical plaster used where a float finish is desired.

Sound absorption. Noise Reduction Coefficient of .55 (see table below).

Fire resistance. Basically mineral, it is incombustible.

High light reflection. Laboratory tests indicate reflection of 54% for SABINITE Float Finish Oyster White.

Flexible in use. Similar to SABINITE Trowel Finish, SABINITE Float Finish is economical, easily applied.

Maintenance. SABINITE Float Finish plaster may be cleaned with a vacuum cleaner using hose and brush attachments.

Redecoration. SABINITE Float Finish may be redecorated with TEXOLITE paint (Standard or Imperial). Apply according to directions. See statement under SABINITE Trowel Finish for results of redecoration tests.

Colors. Available in same colors as SABINITE Trowel Finish.

SABINITE 38

A float finish acoustical plaster specially prepared for sound conditioning in locations subjected to high moisture conditions, such as ceilings in shower rooms, ceilings and sidewalls in swimming pools, etc.

Sound absorption. Noise Reduction Coefficient of .50 (see table below).

Fire resistance. Basically mineral, it is incombustible.

Maintenance. SABINITE 38 plaster may be cleaned with a vacuum cleaner using hose and brush attachments.

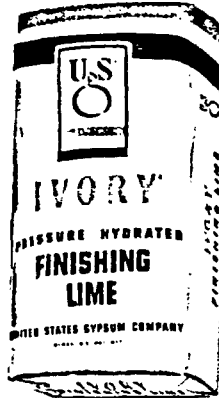
Redecoration. It may be painted with TEXOLITE Imperial paint applied according to U.S.G. directions, which will vary according to conditions encountered. Directions available on request. See statement under SABINITE Trowel Finish for results of redecoration tests.

Colors. Available in White only.

SABINITE Acoustical Plasters are ordered on a yardage basis... sufficient material is provided for application to a thickness of 1/2 inch. All standard colors are immediately available.

Sound Absorption Data

SABINITE Type	Thickness	128	256	512	1024	2048	4096	NRC	Authority
Trowel Finish ("M")	1/2 inch	.18	.24	.45	.78	.85	.83	.60	National Bur. of Stds.
Float Finish ("F")	1/2 inch	.19	.22	.43	.80	.75	.75	.55	National Bur. of Stds.
"38".....	1/2 inch	.25	.26	.32	.60	.76		.50	Riverbank Lab.



The finest of finishing limes! Produced by exclusive U.S.G. patented process... for hand or mechanical mixer... requires no more than 15 minutes mixing on the job.



Highly plastic, easy working, pure white... smooth, hard finish when properly mixed with gauging plaster... requires 12 hours soaking for a plastic putty.



Long known as a quality product... proper slaking and aging determine job results. Age at least 16 hours before using to obtain maximum plasticity.

Double Hydrated Finishing Lime

Brand	Type Material	U.S.G. Mfg. Mill	Size Container	Approximate Coverage per ton
IVORY	Dolomitic Double Hydrate	Genoa, Ohio	50 lbs.	700 yds.

Hydrated Finishing Lime

Brand	Type Material	U.S.G. Mfg. Mill	Size Container	Approximate Coverage per ton
GRAND PRIZE	Dolomitic Hydrate	Genoa, Ohio	50 lbs.	700 yds.
RED TOP	Dolomitic Hydrate	Genoa, Ohio	50 and 25 lbs.	700 yds.
RED TOP	High Calcium Hydrate	Farnams, Mass.	50 lbs.	700 yds.
RED TOP	High Calcium Hydrate	New Braunfels, Tex.	50 lbs.	700 yds.

Finishing Quicklime

Brand	Type Material	U.S.G. Mfg. Mill	Size Container	Approximate Coverage per ton
RED TOP	High Calcium Quicklime	Evans, Wash.	60 lbs.	1000 yds.
RED TOP	High Calcium Quicklime	New Braunfels, Tex.	50 lbs.	1000 yds.
RED TOP	High Calcium Quicklime	Farnams, Mass.	80 lbs.	1000 yds.

The purpose of finishing lime is to provide plasticity and bulk to the finish coat. Lime, however, does not set, is subject to considerable shrinkage when drying, and will not produce a hard finish when used alone. For these reasons it is mixed with gypsum gauging plaster to provide hardness and resistance to shrinkage. For complete description of USG gauging plasters see page 16.

USG finishing limes are manufactured under carefully controlled processes. Dolomitic hydrates from the northwestern Ohio fields, where U.S.G. operates the largest finishing lime plant in the world, are preferred because of the high purity, whiteness, plasticity, smoothness and excellence of the finish they produce. Since the development of dolomitic double hydrated finishing lime there is a growing preference for this type.

IVORY Double Hydrated Finishing Lime

Double hydrate is the finest achievement in finishing limes. As produced by patented U.S.G. methods under the new autoclave process it produces a completely hydrated, highly plastic putty. This permits soaking by *either hand or mechanical mixing*, speeds up job operations, and assures freedom from further expansion due to subsequent hydration of the finish plaster.

IVORY Double Hydrated Finishing Lime is the standard of excellence for modern, durable walls and ceilings. Smooth, easy working putty is developed without long soaking. Use 5½-6 gal. water per 50 lb. bag of lime, sifting the lime into the water. Mix thoroughly in a mechanical mixer; or hoe in a box, screen, and the putty is ready for use. If overnight soaking is desired,

sift lime into the water using same amount as indicated above; screen putty before using. For the finish coat, blend together gypsum gauging plaster and lime putty exactly as shown for regular hydrated finishing lime. Meets ASTM Designation C206-49 type S, and Federal Specification SS-L-351 type F, including the added requirement of not more than 8% unhydrated oxides.

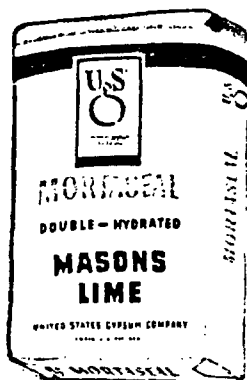
GRAND PRIZE and RED TOP Hydrated Finishing Lime

Highly plastic, easy working, pure white, RED TOP and GRAND PRIZE hydrated finishing limes provide extremely smooth, hard finishes when properly mixed with gauging plaster. For proper results, soak hydrated finishing lime 12 hours (overnight) in box using 6-6½ gal. of water per 50 lb. bag of lime. Blend together gypsum gauging plaster and lime putty in the proportion of 1 part gauging plaster to 3 parts lime putty by volume (1 part dry gauging plaster to 2 parts dry lime by weight). Meets ASTM Designation C6-49 type N, and Federal Specification SS-L-351, type F.

RED TOP Finishing Quicklime. Because it is smooth, easy working and economical, RED TOP Finishing Quicklime is known as a quality product. Proper slaking and aging determine job results. Slake with 15 gal. of water per 50 lb. bag (18 gal. per 60 lb. bag), screen, and store in aging box for at least 16 hours before using. Add gauging plaster in the same proportions as with hydrated finishing lime. Meets ASTM Designation C5-26 and Federal Specification SS-Q-351.

Lime putty ring is formed and water placed in center. Gauging is sifted into water and thoroughly blended.





Double Hydrate Hydrate Quicklime

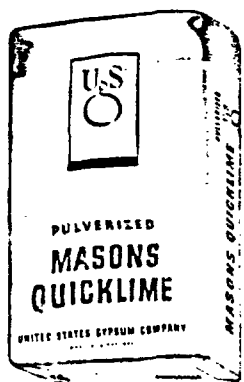
For masonry mortar, masons lime is generally mixed with portland cement and sand in varying proportions, depending on the strength and workability desired. Hydrated or double hydrated lime is also used as an admix in concrete to increase workability and water-resistance.



Recommended Mortar Mixes

(Portland Cement-Lime-Sand,
by volume)

Above grade	1-2-9
Below grade	1-1-6
Specialized use	
Abnormal strength	1-2-7 to 8 1-1-4 to 5
Excessive continuous moisture conditions	1-1/4-3



MORTASEAL Double Hydrated Masons Lime—The latest development in building lime. Requires no soaking as it develops its maximum plasticity immediately. Its superior working qualities, water retention properties and maximum sand carrying capacity assure high quality, economical masonry mortar. Mix by volume with portland cement, sand and water to specified proportion. Meets ASTM Designation C207-49 type S and Federal Specification SS-L-351, type M, including the added requirement of not more than 8% unhydrated oxides.

Advantages of using MORTASEAL double hydrated lime in masonry mortars:

Easier working — MORTASEAL transforms mixes with cement and sand into plastic, smooth-working, uniform mortar.

Better bond — Plastic MORTASEAL in mortar makes it easier to get full joints and maximum bond because it retains water remarkably well and stiffens slowly.

Weather-resistant — Full joints and proper bond help produce walls that repel rain, snow, ice and wind.

Lower cost — Maximum sand-carrying capacity, less retempering, faster construction and easier laying—all these factors add up to lower cost for finished walls.

Better walls—Exceptional plasticity, remarkable water-retention, adaptability to volume changes, slow stiffening and better bond—all help to produce better masonry walls.

RED TOP Masons Hydrate—The smooth working qualities of RED TOP Masons Hydrated Lime increase the plasticity and adhesive properties of portland cement-lime-sand mortars. Full plasticity is developed by soaking to putty overnight, using approximately 6½ gal. water per 50-lb. bag. Mix with portland cement, sand and water by volume in specified proportions. Meets ASTM Designation C207-49 type N, and Federal Specification SS-L-351, Type M.

RED TOP Masons Quicklime—Uniform quality quicklime with high putty yield and excellent plasticity. Improves the working quality and sand-carrying capacity of masonry mortars. After slaking it is best to age pulverized and ground quicklimes at least 16 hours before using. Mix with portland cement, sand and water by volume in specified proportions. Meets ASTM Designation C5-26 and Federal Specification SS-Q-351.

RED TOP General Purpose Hydrated Lime—Specially processed for consumer use around the home and on the farm. Ideal for such purposes as soil sweetening of lawns and gardens, whitewash, sanitation around barns, etc. Attractively packaged and shipped in convenient master containers.

Double Hydrated Masons Lime

Brand	Type Material	Use	U.S.G. Mfg. Mill	Size Container	Approx. Putty Yield Per Ton
RTASEAL	Dolomitic Double Hydrate	Masons	Genoa, Ohio	50 lbs.	45 cu. ft.

Masons Hydrate

Brand	Type Material	Use	U.S.G. Mfg. Mill	Size Container	Approx. Putty Yield Per Ton
TOP	Dolomitic Hydrate	Masons	Genoa, Ohio	50 lbs.	45 cu. ft.
TOP	High Calcium Hydrate	Masons	Evans, Wash. & Farnams, Mass.	50 lbs.	45 cu. ft.
TOP DOW DRIFT	High Calcium Hydrate	Masons	New Braunfels, Texas	50 lbs.	45 cu. ft.

Masons Quicklime

Brand	Type Material	Grind	Use	U.S.G. Mfg. Mill	Size Container	Approx. Putty Yield Per Ton
TOP	High Calcium	Pulverized	Masons	Evans, Wash.	60 lbs.	85-90 cu. ft.
TOP	High Calcium	Pulverized, Fine Grain, Super Fine	Masons	Farnams, Mass.	80 lbs.	85-90 cu. ft.
TOP	High Calcium	Pulverized, Pebble	Masons	New Braunfels, Texas	80 lbs.	85-90 cu. ft.

General Purpose Hydrated Lime

Brand	Type Material	Use	U.S.G. Mfg. Mill	Size Container	Neutralizing Power
TOP	Dolomitic Double Hydrate	General Purpose	Genoa, Ohio	5, 10, 25 lbs.	140
TOP	High Calcium Hydrate	General Purpose	Evans, Wash.	5, 10 lbs.	126
TOP	High Calcium Hydrate	General Purpose	Farnams, Mass.	5, 10 lbs.	126
TOP	High Calcium Hydrate	General Purpose	New Braunfels, Texas	5, 10 lbs.	126

RED TOP agricultural hydrate is used for soil sweetening and general sanitation purposes. RED TOP spray hydrates are used for mixing insecticides and fungicides, and may also be used for dusting.

Agricultural and Spray Hydrate

Brand	Type Material	Use	U.S.G. Mfg. Mill	Neutralizing Power	Soil Coverage per 100 lbs.
TOP	Dolomitic Hydrate	Agriculture	Genoa, Ohio	160	3000 sq. ft.
TOP	High Calcium Hydrate	Agriculture	Farnams, Mass. and New Braunfels, Texas	126	3000 sq. ft.

Because of variations in market practices, aggregates, plaster bases, weather and workmanship, this chart has been prepared to assist in the understanding, diagnosis and treatment of job problems.

SYMPTOM:	CONDITION	MATERIALS	CAUSE	REMEDY OR PREVENTION
CRACKS	1. Connected vertical and horizontal cracks at somewhat regular intervals, often in "stepped" pattern.	Plaster over any sheet lath: fiber, metal, or gypsum.	Plaster too thin. Weak plaster. Lath not properly applied.	Apply another coat of plaster. See "Weak Soft Walls" opposite page. Apply Metal Lath and replaster.
	2. Cracks around and over openings.	Plaster over brick clay tile, gypsum tile or cement block. Plaster over gypsum lath and other bases (except rarely metal lath).	Lintel construction is poor. Improper door buck construction. Plaster too thin. Weak plaster. Failure to use Striplath. Expansion of wood frames.	Remedy—patch. Prevention—follow manufacturers' specifications. Apply another coat of plaster. See "Weak Soft Walls" opposite page. Cut out and repair. Prime frames—cut basecoat free of ground.
	3. Fine cracks, random pattern usually less than 12" apart. Map cracks Crazing Chip cracks Fine cracks	Cracks in gauged lime putty over gypsum base coat. Cracks in base coat over brick, clay tile, gypsum tile or cement block.	Insufficient gauging plaster. Base coat too wet or too dry when finished. Insufficient trowelling. Slow set gauging plaster. Shrinkage due to high suction. Undersanding of base coat.	Strip off finish and replaster with correct mix. Strip off finish and refinish over partially dry basecoat. Water trowel sufficiently. Add moulding plaster or accelerator to gauging. Spray water on masonry to reduce suction. Remove plaster and replaster with correct mix after adjusting suction.
	4. Crack at wall or ceiling angles.	Plaster over gypsum lath. Plaster over brick, clay tile or gypsum tile.	Thin plaster coat, or failure to use Cornerite, or poor lumber in framing. Failure to wedge at ceiling, or to interlock or tie walls together.	Cut out and patch. Add Cornerite if possible. Prevent by correct construction.
	5. Ceiling cracks not due to any of the above causes, or to structural failures.	Plaster on metal lath or gypsum lath. Plaster on metal lath or gypsum lath on channel frame.	Metal lath too light, not lapped or not properly tied. Thermal shock. Improper spacing of channels. Thermal shock.	Prevented by following manufacturers' specifications. Control job temperatures from sudden change. Prevent by proper spacing. Prevent by job temperature control.
	1. Water soluble mildew-like fuzz on surface generally white but may be colored. Can be brushed off.	Base coat or finish plaster over concrete, brick, or clay tile.	Efflorescence. As masonry units dry out, water-soluble salts from the masonry are being deposited on the surface of the plaster.	Eliminate source of moisture, furr, lath, and replaster.
	2. Streaky discolorations.	Lime finishes gauged with gauging plaster or with Keenes Cement.	Lime and gauging not thoroughly mixed. Too much water used in trowelling. Efflorescence from masonry. Dirty tools or dirty water.	Prevented by thorough mixing. Remedied by painting with white TEXOUTE Imperial paint. Paint with white TEXOUTE Imperial Paint. See condition 1, above. Wash tools and obtain clean water. Remedied by painting as above.
	3. Streaked—joinings show. "Slobbers."	Gypsum trowel finish.	Improper trowelling—too much water on brush. Dirty water.	Paint with white TEXOUTE Imperial paint.
	4. Light and dark spots due to causes other than "dry out."	Float finish.	Improper floating or too much water used in floating. Variable suction in basecoat.	Paint with TEXOUTE Imperial paint to get uniform color. Dampen basecoat uniformly.
	5. "Pops"—peak-like projections which fall out making little craters or pits; often with fine radial cracks	Lime base coats and finish.	Unslaked lime in mortar which slakes and swells after it is applied.	Remove core of "pops" and patch. Prevented by using double hydrated lime.
	6. Same as (5) above except pit is discolored tan or greenish tan.	Gypsum base coats and finishes.	Retarder spots. Lumpy or undissolved retarder added at job. Retarder lumps swell or "pop" when wet.	Cut out spots and patch. Prevented by screening retarder thru 40 mesh screen.
	7. Blisters (do not confuse with (5) above).	Gauged lime putty finish. Gypsum trowel finish.	Base too green, insufficient suction; or too much water used in trowelling. Finish lime too plastic. Base coat too wet when finish applied.	After finish has "set," trowel with very little water. Cut putty with small amount fine white sand or increase amount of gauging plaster. After finish begins to "set," trowel with very little water.
	8. Uneven color (not due to texture shadows).	Interior colored plaster finishes.	Uneven absorption of base coat, or too much water used in finishing, or dirty box and tools, or variation in water content of successive batches. Finish not dry.	Prevented by following specifications. Remedied by painting with TEXOUTE Imperial paint. Ventilate to dry wall properly.
	9. Uneven color—light, or "flat" spots in light colors (See 13 below).	Oil paint over gauged lime putty finish.	Painted too soon after plastering (alkali in lime saponifies paint); or, pigment not lime-proof.	Repaint with TEXOUTE primer and TEXOUTE paint.
COLOR, SURFACE STAINS and BLEMISHES	10. Uneven color—dark colors.	Any colored paint over any plaster finish.	Color variation due to non-uniform absorption. Binocular strikes unevenly. Contaminated sand.	Apply TEXOUTE Sealer and repaint. Prevent by using clean sand.
	11. Yellow surface stains—"yellowing."	Any finish over any plaster base.	Burning green wood in fireplace. Open gas heaters not vented to outside. Tar paper back of plaster base. Creosote treated framing lumber, tar, or tar derivatives used around job.	Improve draft to stop smoke. Vent heaters to outside. Use asphalt paper. Avoid source of air contamination. Seal with TEXOLTE Sealer. Redecorate.
	12. Paint peels (new work).	Oil paint over any finish.	Weak finish (worked thru set). Plaster not dry when painted.	Patch with patching plaster and paint with TEXOUTE paint. Repaint after areas are completely dry and loose paint removed.

BB007 0531

SYNOPSIS	CONDITION	MATERIALS	CAUSE	REMEDY OR PREVENTION
WEAK, SOFT WALLS	1. Soft, white, chalky surfaces, occurring during hot, dry weather, usually near openings.	Gypsum base coat over any plaster base.	Dry-out. Too much ventilation has removed water before plaster could set.	Remedy—Persistent spraying will set-up the dry out areas. Prevention—Screen openings in hot, dry weather and spray during setting period if necessary.
	2. Soft, dark, damp surfaces occurring during damp weather.	Gypsum base coat over any plaster base.	Sweat-out. Too little ventilation has allowed water to remain in wall after plaster set. Some of plaster has re-dissolved.	Remedy—Dry the walls with heat and ventilation. Prevention—Heat and ventilate as soon as plaster has set.
	3. Soft (exactly as 2 above), but occurring in freezing weather.	Gypsum base coat over any plaster base.	Frozen plaster.	Close building, supply heat. When plaster has set, continue heat and ventilate.
	4. Soft, weak wall. Condition general—not spotty nor due to slow set.	Gypsum base coat over any plaster base.	Use of too much aggregate.	No remedy. Prevent by use of proper amount of aggregate.
	5. Soft, weak wall.	Gypsum trowel finish over any base coat.	Dry-out or retempered finish.	If dry-out treat as condition (1) above. Trowel well when set. If retempered, no remedy except tear off and refinish.
	6. Soft, weak wall.	Gauged lime putty finish over any base.	Insufficient gauging plaster, retempered material, or insufficient trowelling.	No remedy except to remove finish and replaster.
BOND FAILURE	1. Separating from plaster base.	Gypsum plaster over gypsum lath or fiber insulating lath.	Too much aggregate, freezing, or addition of lime or portland cement.	No remedy except to replaster.
	2. Separating from plaster base.	Gypsum plaster over metal lath.	Too much aggregate.	Replaster with correct mix.
			Freezing.	Thaw and allow to set and dry, or replaster.
			Lack of fiber.	Replaster with more fiber added, or use extra fibered plaster.
	3. Separating from plaster base.	Gypsum plaster over masonry.	Excessive suction.	Dampen masonry surfaces.
			Masonry non-absorbent; has glazed surface.	No remedy. Prevent by hacking masonry surface.
			Efflorescence.	Eliminate source of moisture. Furr, lath and replaster.
	4. Separating from plaster base.	Gypsum plaster over concrete.	Use of ordinary gypsum plaster.	Remove and replaster with BONDCRETE.
		Gypsum bond plaster over concrete.	Surface oily, too smooth, dirty, or efflorescing.	Remove plaster. Clean and roughen surface. Replaster.
	5. Finish separating from brown coat.	Gauged lime putty finish over gypsum brown coat.	Brown coat too smooth, too dry, too wet or too weak; finish improperly applied; incomplete hydration of finish lime.	Where brown coat is cause, strip off finish, correct condition of brown coat and replaster. Where finish is cause, refinish properly using completely hydrated lime.
	6. Finish separating from brown coat.	Gypsum float and trowel finish over gypsum brown coat.	Brown coat too smooth.	Roughen brown coat.
			Brown coat too dry.	Dampen brown coat until half green.
			Brown coat too weak.	Strip down to lath and replaster.
	7. Finish separating from brown coat.	Colored interior finishes over brown coat.	Finish improperly applied.	Apply as directed.
			Brown coat not broomed.	Roughen brown coat and refinish.
			Thin finish not ground in.	Finish following application directions.
			Brown coat too weak.	Correct condition of base coat and re-finish.
"SET" AND WORKING QUALITIES	1. Soft walls for over 6 hours after application.	Gypsum base coat over any plaster base.	Dry-out, sweat-out, frozen plaster, over-sanding, sand too fine, or dirty sand. Slow set due to error in manufacture. Slow set due to poor sand or poor water.	See "Weak, Soft Walls" above. Send samples to manufacturers' representative. Obtain good sand and water or accelerate plaster.
	2. Sets in box or sets on wall before it can be troweled or straightened.	Gypsum base coat over any base.	Quick set due to dirty water, tools and mixing equipment.	Use clean water, tools, equipment.
			Mixing too long.	Reduce mixing time.
			Quick set due to poor sand.	Use good washed sand or add retarder.
			Quick set due to error in manufacture.	Add retarder. Send samples to manufacturers' representative.
	3. Works hard or "short." Will not spread. Does not carry proper amount of sand.	Gypsum base coat over any plaster base.	Quick set due to machine mixing.	Add retarder.
			Aged or badly stored plaster.	Get fresh plaster, or use equal parts fresh and aged plaster, or use less sand.
			Over-sanding.	Correct conditions using proper proportions.
	4. Works hard or "short." Will not spread.	Gypsum base coat over any plaster base.	Old material partially carbonated; warehoused too long.	No remedy. Can be used for masons lime.
			Improper soaking, aging or slaking.	No remedy. Prevented by proper preparation.
			Low temperatures.	Do not soak at temperatures below 40° F.
	5. Tough and short working, rubbery or lumpy lime putty.	Gauged lime putty over gypsum base coat.	Unusual temperatures.	Use quick set gauging or heat building in cold weather. Use slow set gauging in hot weather.
			Improper gauging.	Use proper type and amount of gauging plaster.
	6. Lack of uniformity in set.	Gauged lime putty over gypsum base coat.	Mixed too stiff. Base too dry.	Use more water. Apply to half green base. Spray dry base
	7. Finish works hard.	Gypsum finishes over base coat.		

USG Plastering Bases
and Plastering Systems **tried and**
tested essentials for successful wall and
ceiling construction

Covered up, hidden from sight by base coat plaster, finish coat and decoration in the completed job, the plaster base and the partition structure must be RIGHT or the job may go wrong.

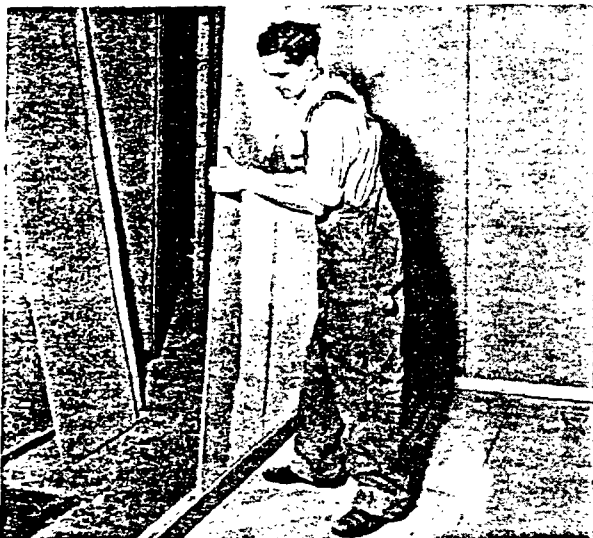
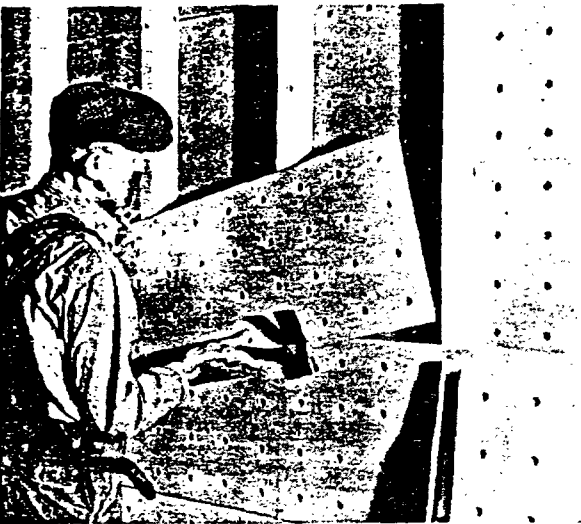
Through almost fifty years of constant research, the United States Gypsum Company has developed the plaster base materials and partition construction methods best suited to every situation.

ROCKLATH plaster base—plain, perforated or insulating—is today the most widely used plastering base. Metal lath—including USG COLOR-RITE metal lath—is second in variety of uses and volume produced. USG PYROBAR, precast gypsum partition tile, precision molded and 30 to 50% lighter than comparable products, is the ideal partition and plaster base material for some types of installation, such as large office buildings. Hollow partitions for concealing pipes, ducts, etc., are best made by USG TRUSSTEEL Studs supporting USG COLOR-RITE metal lath or ROCKLATH. For maximum savings in floor space, the USG 2" Solid Partition Systems are increasingly favored by progressive architects and builders.

There is a tried and tested U.S.G. wall construction system and material for every type of job.

Plaster Bases and Plastering Systems





ROCKLATH plaster base is a gypsum lath made in broad flat units. The fibered gypsum core is faced on sides and long edges with specially manufactured paper.

ROCKLATH has an incombustible gypsum core, and will not transmit temperatures much in excess of 212° F. until completely calcined. Tests by the National Bureau of Standards show that gypsum plaster bonds with ROCKLATH with a factor of safety of 144; a pull of 864 pounds per square foot is required to separate plaster from gypsum lath.

The low cost of ROCKLATH, its ease and speed of erection as well as the savings in plaster it permits have made this plaster base the standard of value throughout the country.

Sizes—16 x 48 inches, $\frac{3}{8}$ or $\frac{1}{2}$ inch thick.

(Also made 16 $\frac{1}{2}$ " wide in Pacific Coast areas.)

Packaged 6 pieces or 32 square feet per bundle.

(Packaged 5 pieces, 3 sq. yds. per bundle in Pacific Coast areas.)

Perforated ROCKLATH plaster base is identical in all respects with plain ROCKLATH, except that perforations are provided at regular intervals. These perforations allow the applied plaster to "mushroom" through the holes and form rivets to mechanically key the plaster to the ROCKLATH, thus effecting both a mechanical and a chemical bond.

As a result of this dual bond, bearing partitions built of wood studs, perforated ROCKLATH and gypsum plaster sanded 1:2; 1:2, received a fire-resistive rating of one hour in tests conducted by the National Bureau of Standards.

Perforated ROCKLATH plaster base is cut, fitted and applied with all of the speed and economy of plain ROCKLATH. However, the perforations in perforated ROCKLATH encourage application of the proper thickness of plaster and reduce droppings and wastage.

Sizes and Packaging—Same as Plain ROCKLATH.

Long Length ROCKLATH plaster base is manufactured for two specific purposes:

1. For use in the 2-inch Solid ROCKLATH and Plaster Partition System. This ROCKLATH is $\frac{1}{2}$ inch thick, 24 inches wide, and comes in ceiling height lengths up to 12', with longitudinal V-joint edges. For complete description of this studless, non-load bearing partition system, see page 50 of this Directory.
2. For use on furred masonry walls. Long Length ROCKLATH is manufactured $\frac{3}{8}$ " thick, 2' wide, square edged, in ceiling height lengths up to 12 feet. Long Length Insulating ROCKLATH, manufactured in same sizes, has a sheet of bright aluminum laminated to the back side at the mill.

Insulating ROCKLATH plaster base is manufactured by attaching a sheet of bright aluminum foil to the back of plain 16" x 48" or $\frac{3}{8}$ " Long Length ROCKLATH. This lath, with the foil facing the stud space, has all of the advantages of plain ROCKLATH listed above, *plus* insulation against heat and cold. It also provides an effective barrier to the passage of water vapor.

With a $\frac{3}{4}$ -inch air space next to the foil, Insulating ROCKLATH plaster base offers thermal insulation equivalent to that of $\frac{1}{2}$ -inch fiber insulation board. Aluminum foil is one of the best vapor barriers known; its use on the back side of ROCKLATH on all exterior walls and ceilings will effectively safeguard against harmful condensation in stud spaces. Such condensation can ruin or damage interior decoration, cause exterior paint failure, and possible rotting of framing members.

See pages 30-31 for the complete story of Insulating ROCKLATH.

Application of 16" x 48" ROCKLATH plaster base

Nail-on construction

Apply ROCKLATH face out, with the long dimension at right angles to the framing members. On walls, make end joints fall on different supports in alternate courses. On ceilings, stagger end joints as for side walls, or erect ROCKLATH so that the end joints are made continuous on a support, in which case end joints should be covered with 3 inch Striplath and the long or edge joints should be off-set or staggered. In all cases butt ROCKLATH joints together. Space nails approximately 4" apart, 5 nails per lath, per support, using 1 $\frac{1}{2}$ ", 13 gauge, blued $\frac{3}{8}$ " flat head, smooth diamond point nails. Cut accurately and fit ROCKLATH neatly around all electric outlet boxes, etc.

Reinforce all re-entrant angles with Cornerite over the ROCKLATH. Fasten the Cornerite only sufficiently to retain its position until secured by the plaster. Apply Cornerbead to all exterior angles, nailing it through to the framing.

$\frac{3}{8}$ " ROCKLATH is designed for application to studding or other supports not exceeding 16" on centers. Use $\frac{1}{2}$ " ROCKLATH for framing members over 16" and up to 24" on centers.

ROCKLATH, a gypsum plaster base, is for use with gypsum plaster only. It is not intended as a base for the application of lime or portland cement plaster.

obtained

with ROCKLATH plaster base:

Fireproof—ROCKLATH has a gypsum core which is incombustible. Perforated ROCKLATH, with $\frac{1}{2}$ " of gypsum plaster sanded 1:2; 1:2, is used for partitions where one-hour fire ratings are required.

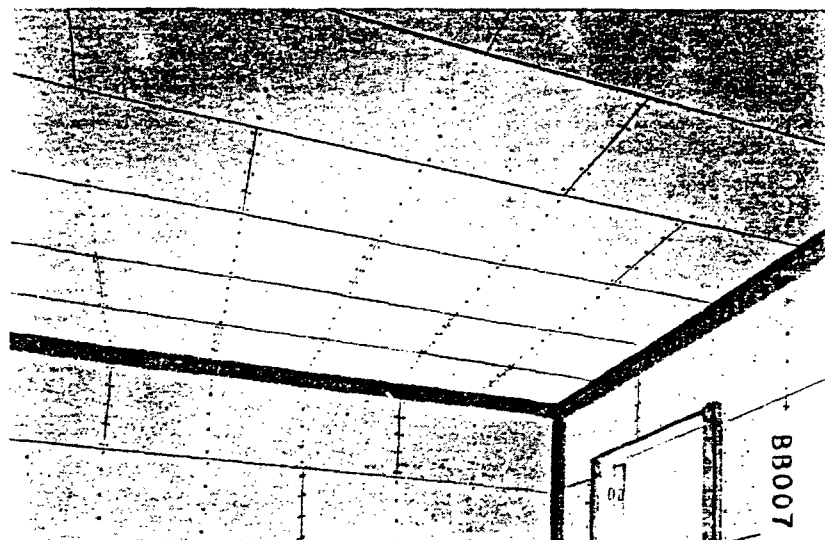
Resistance to sound transmission—Wood stud partitions with ROCKLATH and gypsum plaster on both sides have a favorable Sound Transmission Loss rating. For unusual resistance to sound transmission see ROCKLATH Resilient System, pages 44-45.

Strong Bond—The bonding strength of gypsum plaster to ROCKLATH is unusually high—far higher than is required to meet adequate construction standards.

Structurally Strong—The large units of ROCKLATH plaster base add appreciable resistance to lateral distortion of the framing members, and when plastered the construction gives high transverse strength between framing members.

Durable—Gypsum, a mineral, is not harmfully affected by time, decay, dry rot, or normal moisture, and does not attract vermin.

Economical—ROCKLATH is low in cost. Labor cost is low because the large units are quickly erected. Less plaster is required—approximately 45% less than with metal lath.



A fireproof gypsum lath with all the advantages of plain ROCKLATH described on page 28.

Effective insulation against heat and cold.

A superior vapor barrier that helps keep harmful quantities of moisture from entering wall spaces, thus saving the framework from damaging condensation.

Speed and economy in building.
Lath, insulation and vapor barrier applied in one operation.

Application

To function effectively as insulation, Insulating ROCKLATH plaster base should be installed with at least a $\frac{3}{4}$ " air space between the inner wall and the outer wall. The aluminum foil faces the outer wall. Otherwise 16" x 48" Insulating ROCKLATH is applied in the same manner as plain or perforated ROCKLATH. See page 29 for application directions.

Where to use

Insulating ROCKLATH is used to provide thermal insulation in exterior walls and top floor ceilings, effectively retaining much furnace heat in winter and reflecting a high proportion of sun's heat in summer. For these reasons it is used in all climates.

Insulating ROCKLATH plaster base provides an efficient vapor barrier, and for that purpose is recommended for all exterior walls and ceilings in climates where below-freezing weather occurs for extended periods of time.



Insulating ROCKLATH

- ... Does not "store up" as much summer heat.
- ... Meets normal lending requirements of FHA, banks, building and loan associations, and other sources of mortgage funds.
- ... Has great fire resistance... because gypsum is incombustible.
- ... Is not harmfully affected by time, decay, or normal moisture conditions... has endurance similar to that of the mineral gypsum in its natural state.
- ... Resists corrosion. There's little loss of efficiency through the years with Insulating ROCKLATH... because the aluminum foil adequately retains its ability to resist vapor and reflect heat. Insulating ROCKLATH plaster base will continue to provide protection for the life of the building.
- ... Has negligible expansion as compared to other normal insulating laths.

Protection Against Condensation

Moisture is dangerous. Condensation of moisture in exterior walls is a common cause of peeled paint, warped siding, rotted studding.

During periods of low winter temperatures, as much as 2½ gallons of water a day may condense in each 1000 square feet of exterior wall that is not protected by a vapor barrier.

Insulating ROCKLATH prevents up to 95% of this condensation. A sheet of aluminum foil laminated to the ROCKLATH plaster base at the mill keeps most of the warm, moisture-laden vapor within the house during cold weather. This aluminum foil is one of the most efficient vapor barriers known!

During the winter season, moisture within the building is needed to maintain proper, comfortable humidity—and property owners can't afford to risk the damage that may result if this water vapor is allowed to escape and condense in exterior walls.

Comfort and Economy of Insulation

Insulation keeps homes warmer in winter, cooler in summer—more comfortable all year 'round. The greater comfort enjoyed in a house protected with effective insulation is one of the reasons such houses are worth more than houses that lack this protection.

And—it always costs less to heat the insulated house! In most cases, the cost of insulation has been more than paid for by the savings in fuel bills over just a few years. In summer, it makes interior temperatures as much as 15° cooler.

When properly installed with at least a ¾-inch air space next to the foil. Insulating ROCKLATH plaster base has the same insulating value as a full half inch of fiber insulating board similarly installed. When used on horizontal surfaces, its insulating value is increased more than 3 times in retarding downward flow of heat—an important feature when insulating ceilings against summer heat! It is one of the least expensive types of insulation, because the insulation is installed with the plaster base at no added installation cost. It lasts the lifetime of the building!

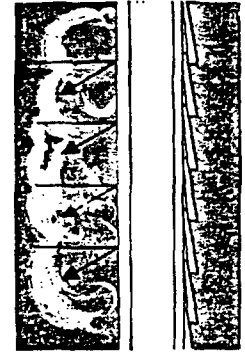
Insulation for Solid Masonry Exterior Walls

In a masonry wall of conventional construction where 1-inch furring strips are used, there is no room for bulky blanket or batt type insulation. With Insulating ROCKLATH plaster base, positive insulation of proven value can be provided in walls of this type and the plaster base, insulation, and vapor barrier are installed in one operation, at one application cost.

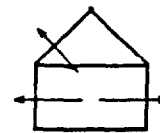
Insulating ROCKLATH is a practical way to insulate as well as provide a proper vapor barrier for masonry walls.



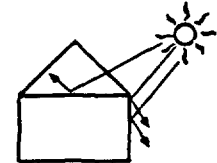
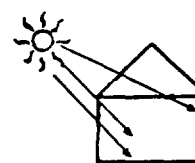
(a) Water vapor readily passes through unprotected exterior walls.



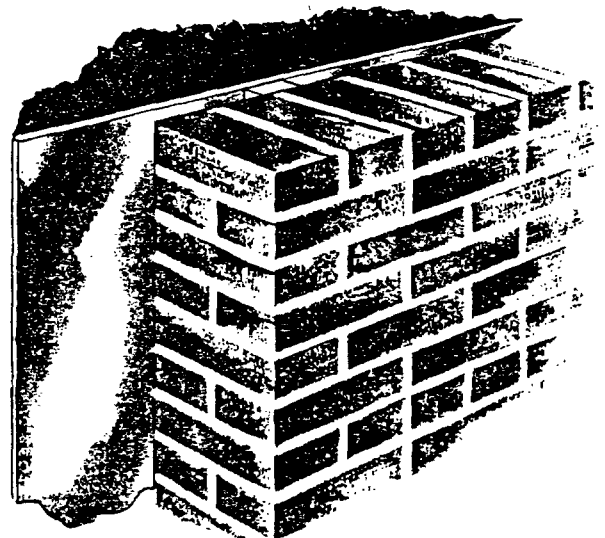
(b) Vapor barrier wall prevents passage of harmful quantities of water vapor.



(a) Unprotected home (left) releases heat in all directions. Insulated home (right) retains heat—fuel is used to heat the house, not the neighborhood!



(b) Sun's heat readily penetrates uninsulated wall and top floor ceiling (left). Insulating ROCKLATH (right) impedes passage of sun's heat.



Insulating ROCKLATH is a practical insulation for solid masonry walls!

1. Fireproof—Fireproof ratings are shown in data table opposite.

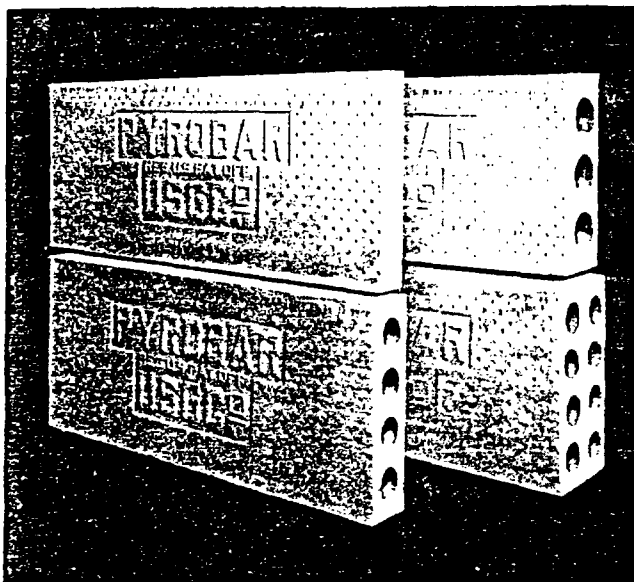
2. Lightweight—30 per cent to 50 per cent lighter than other commonly used masonry units. See table on opposite page.

3. Plaster Bond—A safety factor of 173.

4. Saves Plaster—Large size machine-moulded units lay up accurately. Grouds are $\frac{1}{2}$ inch instead of $\frac{5}{8}$ inch or $\frac{3}{4}$ inch.

5. Resistant to Sound Transmission—See table opposite.

6. Low in Cost Because: Material cost is low—large units lay up fast—light weight—fewer joints—ease of cutting reduces waste.



PYROBAR is a pre-cast gypsum tile for building non-load bearing fireproof partitions. The surfaces are indented to receive plaster. Because of the natural affinity of plaster for PYROBAR, the bond has a safety factor of 173.

PYROBAR is 30 per cent to 50 per cent lighter than most masonry partitions of approximately equal thickness. This light weight results in reduced handling costs in the warehouse and on the job. Of even greater importance, partitions built of PYROBAR require no structural steel to support them.

Because PYROBAR is machine molded, the edges and surfaces of each block are straight and true. The block can be laid up accurately to a straight line.

The large units ($2\frac{1}{2}$ square feet of wall surface per side of each tile) lay into a wall fast, further reducing labor costs. Since larger blocks mean fewer joints, up to 40 per cent of the mortar ordinarily used in masonry partition is saved.

Fixtures, such as sinks, etc., are easily attached with bolts and large steel washers on both sides. The bolts are set before the partition is plastered.

PYROBAR can easily be cut on the job with a saw, thus reducing waste. In buildings requiring constant alterations to suit tenants' needs, such as office buildings,

RECOMMENDATIONS

Use only RED TOP Cement Plaster for plastering PYROBAR and RED TOP Partition Tile Cement for mortar.

Portland Cement and lime mortars do not bond adequately with PYROBAR and should not be used with this product.

PYROBAR should not be subjected to excessive water or moisture. Where damp floors may be expected, use structural clay tile as a base or starter course, 12 inches high.

ings. PYROBAR is the ideal partition material. Because PYROBAR can easily be cut and fitted on jobs of any type, it has been the accepted material for non-load bearing partitions for many years.

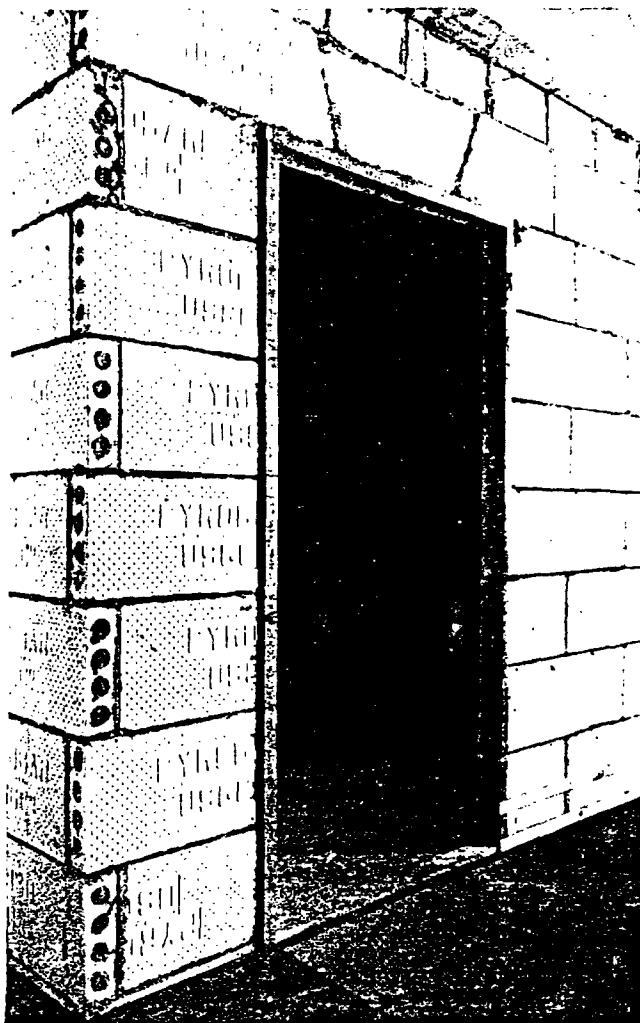
Erection

Only RED TOP Partition Tile Cement should be used for mortar. Mortar should be sanded 1:3 by weight and should never be retempered.

Lay first course with core holes horizontally by bedding in mortar. Lay succeeding courses in $\frac{1}{2}$ " mortar beds, with vertical joints staggered. Anchor partitions to intersecting masonry walls with wall ties, or by interlocking tile on alternate courses. Wedge tightly at ceiling and slush full with mortar. All chinks and crevices should be slushed full with mortar.

Wood nailing blocks should be nailed to one end at each tile, before setting into wall, wherever lightweight fixtures or heavy trim, etc., are to be attached.

Heavy fixtures should be secured to PYROBAR partitions with bolts, set before plastering, using large steel washers on both sides.



PYROBAR Partition Tile—Data

Size of PYROBAR Partition Tile	Limiting Partition Height	Weight Per Sq. Ft.		Partition Tile Cement Required Per M Sq. Ft. Tile	Avg. Sound Transmission Loss in Decibels Plastered 2 Sides	Fire Ratings
		Partition Weight No Plaster	Partition Weight (1) Plastered			
2"x12"x30" Solid	10 ft.	11.5 lbs.	20.5 lbs.	500 lbs.	38.1 Db. (2)	1 hr. (no plaster)
3"x12"x30" Hollow	15 ft.	12.0 lbs.	21.0 lbs.	700 lbs.		2 hrs. (Plas. 2 sides)
4"x12"x30" Hollow	17 ft.	15.5 lbs.	24.5 lbs.	900 lbs.		3 hrs. (Plas. 2 sides)
6"x12"x30" Hollow	30 ft.	22.0 lbs.	31.0 lbs.	1300 lbs.		5 hrs. (Plas. 2 sides) (3)

(1) Plastered partition weights include plaster on both sides of solid and hollow tile.

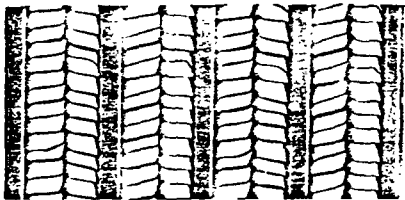
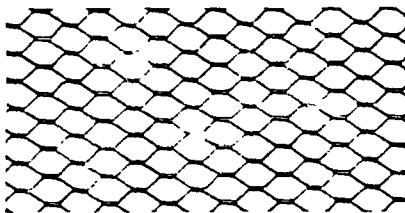
(2) When furred, one side only, with USG No. 500 Resilient Clips supporting metal lath and plaster (other side plastered direct), average transmission loss is 52.7 decibels. See BMS Report 17, National Bureau of Standards.

(3) Calculated.

USG COLOR-RITE metal lath

THE STEEL HEART OF PLASTER

- ... A superior plaster base. Made of steel, it is exceptionally strong.
- ... Steel mesh reinforces the plaster; just as steel rods reinforce concrete.
- ... So flexible that it permits ornamental plastering that is almost impossible to achieve with any other plaster base.



Advantages of USG COLOR-RITE Metal Lath:

1. USG COLOR-RITE Metal Lath represents the new development in the metal lath industry. Ends of bundles are spray painted *red* for all 3.4 lb. lath, *white* for 2.5 lb. diamond mesh and 2.75 lb. Z-rib, *blue* for 4.0 lb. Z-rib lath. This makes warehousing, inventory and job distribution easier and *positive*. An architect may quickly and *visually* inspect a job to make sure the weight lath he specified is used. When the lather erects the colored end to the right as we recommend, the plasterer saves up to 25 per cent of his sidewall scratch coat, saves time and effort because of the uniform "drag" on his trowel since all sheets lay in the same direction.
2. Helps assure good plastering. An over-sanded scratch coat will not key to it. Scratching with the correct method to the proper thickness is the easiest, fastest way.
3. Thousands of openings per sq. yd. give metal lath bulldog grip on plaster, and increase crack-resistance.
4. Full plaster thickness plus overall steel reinforcement produces walls of maximum fire resistance.

The all purpose metal lath, for plain and ornamental plastering. Contains approximately 11,000 openings per square yard. Trimmed square at ends. Rigid sheets provide fast, easy erection. "Self-furring" Diamond Mesh has $\frac{3}{8}$ " indentations, 1 $\frac{1}{2}$ " O.C.

Sheet size: 27" x 96", 10 sheets, 20 sq. yds. per bundle. Weights available: 3.4 lb. and 2.5 lb. copper alloy steel, painted. Galvanized, available only in 3.4 lb.

A more rigid lath than Diamond Mesh. Rigidity achieved by wide, solid $\frac{1}{8}$ " ribs, 1 $\frac{1}{2}$ " on centers, and by herringbone design mesh. Ideal for double back plastering, "plaster saving" lath—a minimum of plaster dropping.

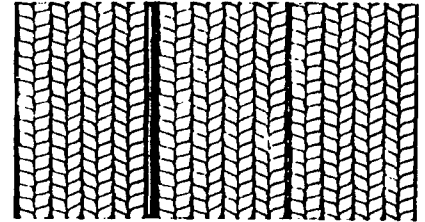
Sheet size: 24" x 96", 9 sheets, 16 sq. yds. per bundle. Weights available: 3.4 lb. and 2.75 lb. copper alloy steel, painted.

A flat rib type of lath with $\frac{1}{8}$ " ribs and smaller mesh openings. Equally suitable for *tie-on* or *nail-on* work. Also a plaster saving type of lath.

Sheet size: 27" x 96", 10 sheets, 20 sq. yds. per bundle. Weights available: 3.4 lb. and 2.75 lb. copper alloy steel, painted.

A rigid, self-furring lath. Also a reinforcement for light concrete slabs. As a plastering base, permits a greater span—up to 24"—than other types. Distinguished particularly by the lapping or nesting feature of outside ribs—no bulky, uneven surfaces to hinder the plasterer. Sheet size: 24" x 96", 9 sheets, 16 sq. yds. per bdl.

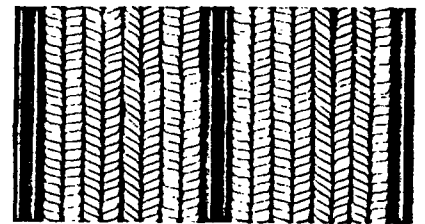
Weights available: 4.0 lb. and 3.4 lb. copper alloy steel, painted.



Most effective as a centering and reinforcement for concrete roofs and floors and for use on much greater spans than are permissible with $\frac{3}{8}$ " riblath. Seldom used as a plaster base. It is also used for column and beam protection, tanks, fences, walls, etc.

Sheet sizes: 24" x 6', 7', 8', 9', 10', 11', and 12' (8', 10', and 12' sheets are stocked).

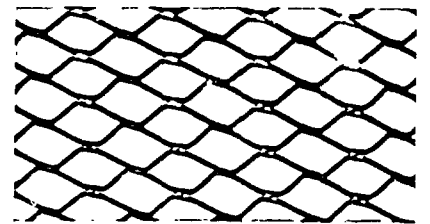
Weights available: .75 lb. and .60 lb. per sq. ft. Copper alloy steel, painted.



So called because of its original use as a reinforcing for concrete burial vaults. Its large $\frac{1}{2}$ " wide diamond makes it suitable as a reinforcement for many types of light concrete slab work, and as a stucco base. Also available in self-furring type.

Sheet size: 24" x 96", 9 sheets, 16 sq. yds. per bdl.

Weights available: 3.4 lb. and 2.5 lb. copper alloy steel, painted.

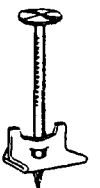
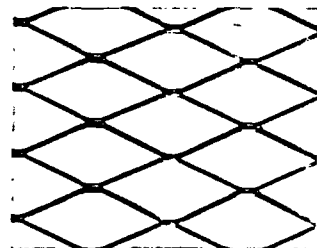


Expanded steel mesh for stucco work. Diagonal strands enable the stucco to resist cracking due to shrinkage, temperature changes and wind stresses. Also provides protection against impact. Apply with USG Stucco Furring Nails.

Sheet size: 48" x 99", 10 sheets, 36 $\frac{2}{3}$ sq. yds. per bdl.

Nails: 1 $\frac{1}{2}$ " Stucco Furring nails, 850 nails per box (sufficient for 50 sq. yds.), 12 boxes per carton.

Weights available: 3.6 and 1.8 lb. copper alloy steel, painted.

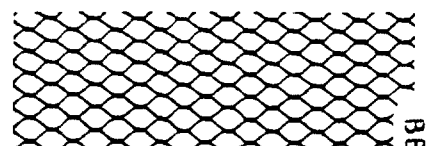


A 3" wide strip of Diamond Mesh lath used for a variety of purposes—stripping joints on other types of lath, reinforcing pipe chases cut in masonry partitions, diagonal reinforcing over door openings, etc.

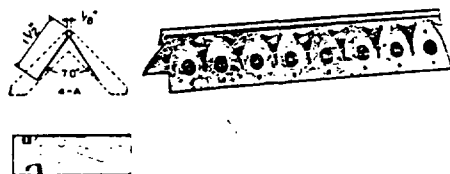
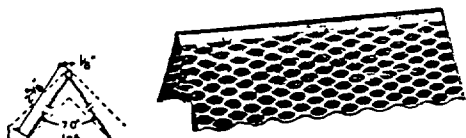
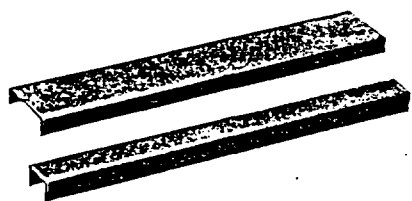
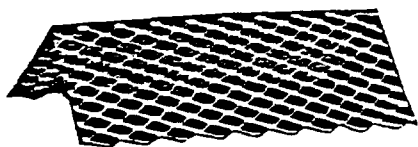
Weight: 70 lbs. per 1000 lin. ft.

Packaging: Master bundles of 600 lin. ft. (75 pieces of 8', containing 3 separate bundles of 25 pcs. each).

Size available: 3" wide copper alloy steel, painted.



B8007 0591



A Diamond mesh lath angle used over gypsum lath and masonry (or where different plaster bases abut), and as reinforcing for inside wall and ceiling corners to help protect against corner cracks.

Weights: 2" x 2"—100 lbs. per 1000 lin. ft. 3" x 3"—150 lbs. per 1000 lin. ft.

Packaging: Master bundles of 600 ft. (75 pcs. of 8' 0") containing 3 separate bundles of 25 pcs. each.

Sizes available 3" x 3" and 2" x 2" copper alloy steel, painted.

Used in most "fireproof" construction as secondary structural members; for furring; as studs in non-load-bearing partitions; for suspended ceilings; for ornamental work. Formed from plain steel strip and painted. Corners are square and the legs and webs are straight, free from harmful wrinkles or curvatures.

Weights, Lengths and Packaging— $\frac{3}{4}$ "—300 lbs. per 1000 lin. ft. 16' and 20' lengths, 20 pcs. per bdl. $1\frac{1}{2}$ "—475 lbs. per 1000 lin. ft., 16' and 20' lengths, 10 pcs. per bdl.

The wide, sturdy expanded flanges provide a valuable feature for rough irregular corners. They give maximum plaster reinforcement close to the nose of the bead.

Lengths and Packaging—8', 9', 10', 12' lengths, packed 60 pieces per carton (6 bundles, 10 pcs. ea.) regardless of length. Shipped in cartons only.

Product Designation—No. 1A $2\frac{1}{2}$ " Expanded Flange Bead, 26 ga. galv. Weight: 204 lbs. per 1000 lin. ft.

The all-purpose bead; has great flexibility. Ideal for straight corner work. By snipping one flange, may be hand-formed into almost any corner. Corner bead clips facilitate fastening bead far back from the nose.

Lengths and Packaging—8', 9', 10', and 12' lengths, shipped in cartons of 6 bdl., 10 pcs. per bdl., regardless of length.

Product Designation—No. 4A— $1\frac{9}{16}$ " flange flexible bead, 26 ga. galv. No. 9A—Corner Bead Clips (1000 pcs., 25 lbs., per box). Weight: 179 lbs. per 1000 lin. ft.

$\frac{3}{4}$ " radius nose for rounded corner construction with exposed steel surface. Preferred in hospitals, public buildings. Often applied with corner bead clips.

Lengths and Packaging—(shipped in crates, or in bundles of 10 pcs.) Weight: 245 lbs. per 1000 lin. ft.

8'—560 ft. per crate	10'—500 ft. per crate
9'—540 ft. per crate	12'—600 ft. per crate

Product Designation—No. 5A—Short flange Bull Nose Bead 26 ga. galv. No. 9A—Corner Bead Clips (1000 pcs., 25 lbs., per box).

A superior type $\frac{3}{4}$ " radius bead. Easily fastened to uneven and irregular surfaces. Expansion flanges flex in and out to accommodate irregularities. Easily plumbed.

Lengths and Packaging—(shipped in cartons only): 7', 8', 9', 10' and 12' lengths. Packed 30 pcs. per carton regardless of length.

Product Designation—No. 10A $2\frac{1}{2}$ " Expanded Flange Bull Nose Bead 26 ga. galv. Weight: 375 lbs. per M lin. ft.

Flush type. Used as a dividing strip or screed between plastered surfaces and cement or terrazzo surfaces. Expanded flange makes it suitable for uneven surfaces.

Weight—230 lbs. per 1000 sq. ft.

Lengths and Packaging—10 ft. lengths only. 500 ft. per crate. Shipped in full crates only.

Product Designation—No. 3A Expanded Flange Base Ground, 26 ga. galv. $\frac{1}{2}$ " grounds only.

The most popular type base ground. Flush type. Can be shimmed out from the surface if more than $\frac{1}{2}$ " grounds are necessary.

Weight—160 lbs. per 1000 lin. ft.

Lengths and Packaging—10 ft. lengths, and $\frac{1}{2}$ " grounds only. Packed 60 pcs. per ctn. (6 bdl. —10 pcs. ea.) Shipped in cartons only.

The offset design provides for a $\frac{1}{2}$ " plaster ground above the screed face and for 1" thick cement or terrazzo below the point.

Weight—195 lbs. per 1000 lin. ft.

Lengths and Packaging—10 ft. lengths only. 1000 ft. per crate. Shipped crated only.

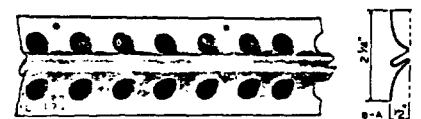
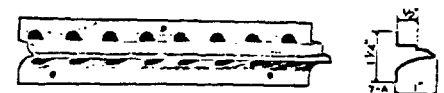
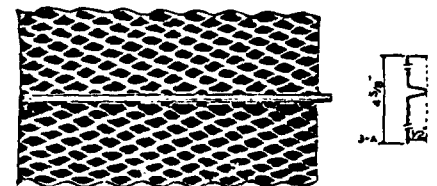
Product Designation—No. 7A—Curved Point Base Ground 26 ga. galv. $\frac{1}{2}$ " grounds only.

Erected before plastering. After plastering, only a $\frac{1}{4}$ " line opening is visible. Also acts as a plaster ground to accomplish a uniform plaster thickness.

Weight—260 lbs. per 1000 lin. ft.

Lengths and Packaging—10 ft. lengths only. 1000 ft. per crate. Shipped crated only.

Product Designation—No. 8A Concealed Picture Mould, 26 ga. galv. $\frac{1}{2}$ " grounds only.



Short and Expanded Flange Casing

Economical, sanitary, durable steel casing for doors and windows. Four designs available: No. 4 (quarter round), No. 6 O.G. (old gothic), No. 60 (semi-square), No. 66 (square nose).

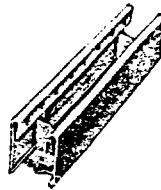
Weight per 1000 lin. ft.: Expanded No. 4, 320 lbs.; Expanded No. 6, 350 lbs.; Expanded No. 60, 320 lbs.; Expanded No. 66, 320 lbs. All short flange casings, 220 lbs.

Lengths and Packaging—(Shipped crated only)
7 ft. and 8 ft.—560 ft. per crate. 10 ft.—500 ft. per crate.

Product Designation—No. 4, No. 6, No. 60, or No. 66 Expanded Casing, $\frac{1}{2}$ " and $\frac{3}{4}$ " grounds, 24 ga. galv.

Metal Base

A flush type of metal base for use with either metal lath or gypsum lath solid plaster partitions. Made from 18 gauge plain steel and painted. Erected by snapping onto floor or wall clips. 2 $\frac{1}{2}$ " high, 2" wide. Further details on pages 51-52, and from U.S.G. representatives.



No. 4 Expanded Flange Casing

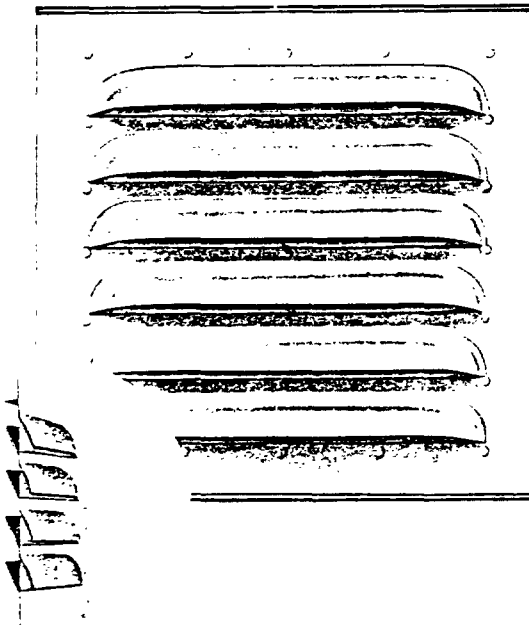
No. 66 Short Flange Casing

USG Metal Base

Lath Attachment Clips

Tie Wire

Wall Ties



USG Aluminum Louvers (Ventilators)

Unheated attic spaces in insulated homes need ventilation to prevent undesirable condensation in the winter and to ventilate and admit cool night air in the summer.

Made of sheet aluminum. The front face and back face are stamped in one piece. The insect screen, of heavy gauge galvanized wire, is sandwiched between the two faces and the three pieces riveted together. Will not rattle or rust. No painting maintenance. No nesting place for birds.

Easier to install because of wide nailing flanges. More flexible and more available. Aluminum nails furnished.

Size	Opening Size	Free Area	Shipping Weight Per Carton	Pieces Per Carton
8 x 8	8 $\frac{1}{2}$ x 8 $\frac{1}{2}$	42 sq. in.	6	6
8 x 12	8 $\frac{1}{2}$ x 12 $\frac{1}{2}$	63 sq. in.	8	6
8 x 16	8 $\frac{1}{2}$ x 16 $\frac{1}{2}$	84 sq. in.	9 $\frac{3}{4}$	6
12 x 12	12 $\frac{1}{2}$ x 12 $\frac{1}{2}$	99 sq. in.	10 $\frac{1}{2}$	6
12 x 18	12 $\frac{1}{2}$ x 18 $\frac{1}{2}$	148 sq. in.	14 $\frac{1}{2}$	6
12 x 24	12 $\frac{1}{2}$ x 24 $\frac{1}{2}$	199 sq. in.	16 $\frac{1}{2}$	6
14 x 15	14 x 15	143 sq. in.	13	6
14 x 24	14 x 24	233 sq. in.	19	6
30 x 12	30 $\frac{3}{4}$ x 12 $\frac{3}{4}$	260 sq. in.	11	2
30 x 18	30 $\frac{3}{4}$ x 18 $\frac{3}{4}$	390 sq. in.	14 $\frac{1}{2}$	2
30 x 24	30 $\frac{3}{4}$ x 24 $\frac{3}{4}$	522 sq. in.	16 $\frac{1}{2}$	2
30 x 30	30 $\frac{3}{4}$ x 30 $\frac{3}{4}$	652 sq. in.	20 $\frac{1}{2}$	2
Pitched Roof	12 $\frac{1}{4}$ x 5 $\frac{1}{4}$	49 sq. in.	16	6
Masonry*	16 x 8	72 sq. in.	6 $\frac{1}{2}$	6
Wood*	14 x 8	72 sq. in.	5 $\frac{1}{2}$	6
Cornice	14 $\frac{1}{4}$ x 4 $\frac{3}{4}$	36 sq. in.	4	6

*For Foundations

USG Coal Doors—Consult U.S.G. representative

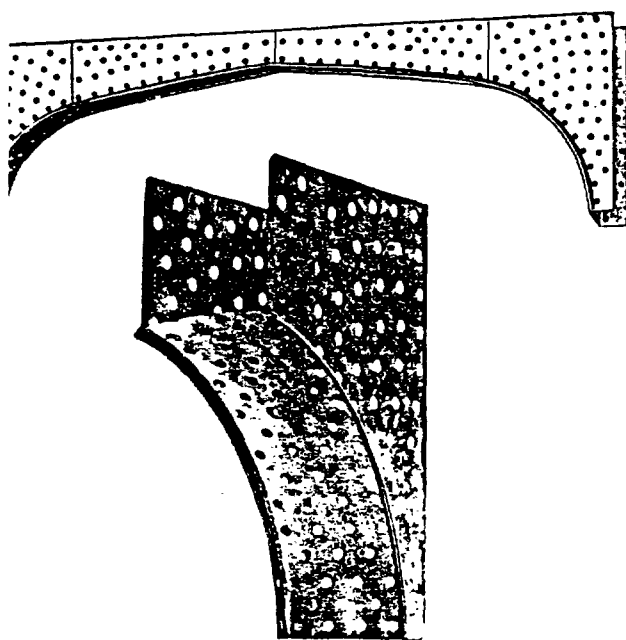
8B007 0594

USG Ready-formed Metal Arches

The economical way to modernize old fashioned wood-trimmed openings. Also ideal for new construction. They can be made to fit any size opening and partitions of any thickness. No forms to make. No corner bead to bend or shape by hand. Each metal arch gives a true, symmetrical, beautifully arched opening.

Arches are individually packed in strong corrugated cartons, each carton containing illustrated, easy-to-follow directions. Three styles: Half circle, Gothic, or Elliptic. Seven sizes for 2'6" to 6' openings.

Style of Arch (for 2 x 4 Studding)	No. of Pieces Per Set
No. 11 Half circle design, 10" radius	2
No. 22 Half circle design, 15 3/4" radius	2
No. 33 Gothic design for 2'6" opening	4
No. 44 Gothic design for 4'0" opening	4
No. 36 Elliptic design for 3'0" opening	4
No. 55 Elliptic design for 5'0" opening	4
No. 66 Elliptic design for 6'0" opening	4



TRIPLE-VENT Basement Sash and Screens

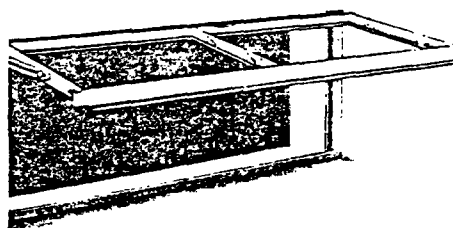
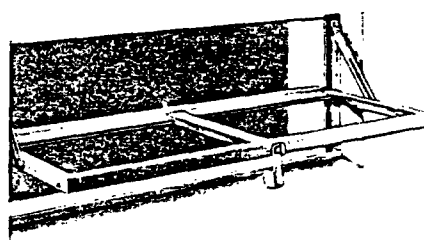
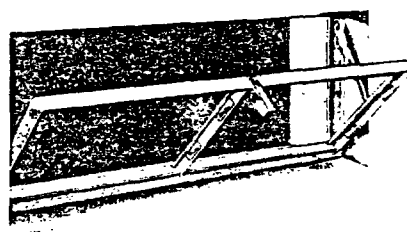
Sturdily designed for positive, weathertight and easy, long time performance.

Three ventilating positions. Top position avoids direct bottom drafts. Bottom position aims incoming air at the floor. Mid-position gives clear circulation top and bottom.

Each light is factory lined with cork strips for putty-less glazing. Glazing clips supplied with each sash. Can be putty-glazed if desired.

Screens have strong, cold rolled steel frame painted gray. Bronze wire screen cloth. Packed with clips provided for attaching to sash.

Sash Size	Weight	No. of Lights	Size of Glass	Masonry Opening
			Width Height	Width Height
2L 1512	15 1/2 lbs.	2	15" 12"	33 1/4" 15"
2L 1516	16 3/4 lbs.	2	15" 16"	33 1/4" 19"
2L 1520	18 1/2 lbs.	2	15" 20"	33 1/4" 23"



Diamond Mesh Lath, $\frac{3}{8}$ " Rib Lath and $\frac{1}{8}$ " Flat Rib Lath

24 Inch Width

27 Inch Width

No. of Bundles	Yards	Weight of Lath				No. of Bundles	Yards	Weight of Lath		
		2.5 lb.	2.75 lb.	3.4 lb.	4.0 lb.			2.5 lb.	2.75 lb.	3.4 lb.
1	16	40	44	54.4	64	1	20	50	55	68
2	32	80	88	108.8	128	2	40	100	110	136
3	48	120	132	163.2	192	3	60	150	165	204
4	64	160	176	217.6	256	4	80	200	220	272
5	80	200	220	272.0	320	5	100	250	275	340
6	96	240	264	326.4	384	6	120	300	330	408
7	112	280	308	380.8	448	7	140	350	385	476
8	128	320	352	435.2	512	8	160	400	440	544
9	144	360	396	489.6	576	9	180	450	495	612
10	160	400	440	544.0	640	10	200	500	550	680
11	176	440	484	598.4	704	11	220	550	605	748
12	192	480	528	652.8	768	12	240	600	660	816
13	208	520	572	707.2	832	13	260	650	715	884
14	224	560	616	761.6	896	14	280	700	770	952
15	240	600	660	816.0	960	15	300	750	825	1020
16	256	640	704	870.4	1024	16	320	800	880	1088
17	272	680	748	924.8	1088	17	340	850	935	1156
18	288	720	792	979.2	1152	18	360	900	990	1224
19	304	760	836	1033.6	1216	19	380	950	1045	1292
20	320	800	880	1088.0	1280	20	400	1000	1100	1360
21	336	840	924	1142.4	1344	21	420	1050	1155	1428
22	352	880	968	1196.8	1408	22	440	1100	1210	1495
23	368	920	1012	1251.2	1472	23	460	1150	1265	1564
24	384	960	1056	1305.6	1536	24	480	1200	1320	1632
25	400	1000	1100	1360.0	1600	25	500	1250	1375	1700
26	416	1040	1144	1414.4	1664	26	520	1300	1430	1768
27	432	1080	1188	1468.8	1728	27	540	1350	1485	1836
28	448	1120	1232	1523.2	1792	28	560	1400	1540	1904
29	464	1160	1276	1577.6	1856	29	580	1450	1594	1972
30	480	1200	1320	1632.0	1920	30	600	1500	1650	2040
31	496	1240	1364	1686.4	1984	31	620	1550	1705	2108
32	512	1280	1408	1740.8	2048	32	640	1600	1760	2176
33	528	1320	1452	1795.2	2112	33	660	1650	1815	2244
34	544	1360	1496	1849.6	2176	34	680	1700	1870	2312
35	560	1400	1540	1904.0	2240	35	700	1750	1925	2380
36	575	1440	1584	1958.4	2304	36	720	1800	1980	2448
37	592	1480	1628	2012.8	2368	37	740	1850	2035	2516
38	608	1520	1672	2067.2	2432	38	760	1900	2090	2584
39	624	1560	1716	2121.6	2496	39	780	1950	2145	2652
40	640	1600	1760	2176.0	2560	40	800	2000	2200	2720
41	656	1640	1804	2230.4	2624	41	820	2050	2255	2788
42	672	1680	1848	2284.8	2688	42	840	2100	2310	2856
43	688	1720	1892	2339.2	2752	43	860	2150	2365	2924
44	704	1760	1936	2393.6	2816	44	880	2200	2420	2992
45	720	1800	1980	2448.0	2880	45	900	2250	2475	3060
46	736	1840	2024	2502.4	2944	46	920	2300	2530	3128
47	752	1880	2068	2556.8	3008	47	940	2350	2585	3196
48	768	1920	2112	2611.2	3072	48	960	2400	2640	3264
49	784	1960	2156	2665.6	3136	49	980	2450	2695	3332
50	800	2000	2200	2720.0	3200	50	1000	2500	2750	3400

Lathing Accessories

Bundling, crating, packaging and weight data are included with the description of products on the preceding pages.

Application Instructions, Nail-on Jobs

1. Lath ceilings first. Carry sheets six inches on down the walls. If metal lath is not used on ceiling but is used on sidewalls, it should be carried out six inches on joists.
2. Apply with long dimension running across the studs or joists. Secure by nailing or stapling along studs or joists at not more than six-inch intervals.
3. On sidewalls, lathing begins at the top and is continued downward. Lower sheets should always overlap the upper sheets. Diamond mesh lath should be carried around corners to at least one stud spacing.
4. Riblath on both sidewalls and ceilings should be applied with ribs against the supports.
5. Diamond mesh should be lapped at sides not less than $\frac{1}{2}$ inch, and at ends not less than one inch. Riblath should be lapped at sides by nesting outside ribs, and at ends by lapping not less than one inch.
6. All side laps should be tied with 18-gauge tie wire at least midway between joist or stud supports, but at not more than 9 inch intervals.
7. Ends of sheets generally should occur over supports; if between, ends of sheets should be securely laced together with 18-gauge tie wire.
8. Staggering is preferable but is not essential.

Nailing Diamond Mesh and Flat Riblath

On walls—use 4d common nails driven $\frac{3}{4}$ " and bent to engage three strands, or 1" roofing nails with $\frac{7}{16}$ " heads driven home, or 1" No. 14 gauge wire staples. On ceilings—use $1\frac{1}{2}$ " No. 11 gauge ($\frac{7}{16}$ " head) barbed roofing nails driven home.

$\frac{3}{8}$ " Riblath

On walls—use 4d common nails driven through rib, or 6d common nails driven $\frac{3}{4}$ " and bent over rib. On ceilings—use $1\frac{1}{2}$ " No. 11 gauge ($\frac{7}{16}$ " head) barbed roofing nails driven through the rib.

For Tie-up Work

For tying metal lath to channels—No. 18-gauge galvanized annealed tie wire. For tying channels to chan-

nels (horizontal or vertical construction) use 4 strands of 18-ga., or 2 strands of 16-ga., galvanized annealed wire.

Estimating Quantities

For Suspended Ceilings

The following "rule of thumb" method will be found helpful in making a quick quantity estimate.

1. Determine surface area in square feet. Example: ceiling area 30x100 feet = 3,000 square feet. Divide by 9 to determine square yards of metal lath required. Assume standard suspended ceiling construction of $1\frac{1}{2}$ " runner channels 4 feet apart, and $\frac{3}{4}$ " furring channels either 12", 16" or 24" apart, depending on type and weight of metal lath used.
2. Quantity of $1\frac{1}{2}$ " channels 4 feet apart—divide square foot area by 4. (3,000 divided by 4 = 750 lineal feet.)
3. Quantity of $\frac{3}{4}$ " channels 12" apart—multiply square foot area by 1. (3,000 x 1 = 3,000 lineal feet.)
4. Quantity of $\frac{3}{4}$ " channels 16" apart—multiply square foot area by $\frac{3}{4}$. (3,000 x $\frac{3}{4}$ = 2,250 lineal feet.)
5. Quantity of $\frac{3}{4}$ " channels 24" apart—multiply square foot area by $\frac{1}{2}$. (3,000 x $\frac{1}{2}$ = 1,500 lineal feet.)
6. Figure tie wire at approximately 10 pounds per 100 square yards of lathing.
7. Lathing nails—for 16" stud spacing, nailing 6" o.c. requires approximately 17 nails per sq. yd.

	Length	Gauge	No. per lb.
Large Hecded Barbed Roofing Nails $\frac{7}{16}$ " head	1 "	No. 11	275
	$1\frac{1}{2}$ "	No. 11	188
Common Nails	4d	No. 12 $\frac{1}{2}$	316
	6c	No. 11 $\frac{1}{2}$	181

For Partitions (Per 100 Sq. Yds.)

Ceiling Height	Spacing of Studs	Approx. Lineal Feet of Studs Required	Lineal Feet of Floor and Ceiling Members Required
7 ft.	12 in.	910 ft.	260 ft.
8 ft.	12 in.	912 ft.	225 ft.
9 ft.	16 in.	684 ft.	200 ft.
10 ft.	20 in.	550 ft.	180 ft.
11 ft.	24 in.	460 ft.	164 ft.

Lath one side — 100 sq. yds.

Lath two sides — 200 sq. yds.

Erection Data

Type of Lath	Weight per Square Yard	Type of Steel	Size Sheets	Maximum Allowable Spacings				
				Vertical Supports			Horizontal Supports	
				Wood	Metal		Wood or Concrete	Metal
Diamond Mesh	2.5 lb.	Copper Alloy	27"x96"	16"	16"	12"	(1)	(1)
Diamond Mesh	3.4 lb.	Copper Alloy	27"x96"	16"	16"	16"	16"	13 1/2'
Z-Rib (2)	2.75 lb.	Copper Alloy	27"x96"	16"	16"	16"	16"	12"
Z-Rib (2)	3.4 lb.	Copper Alloy	27"x96"	19"	24"	19"	19"	15"
$\frac{3}{8}$ " Rib	3.4 lb.	Copper Alloy	24"x96"	24"	24"	24"	24"	24"
$\frac{3}{8}$ " Rib	4.0 lb.	Copper Alloy	24"x96"	24"	24"	24"	24"	24"
STUCCOMESH	1.8 lb.	Copper Alloy	48"x99"	16"				
STUCCOMESH	3.6 lb.	Copper Alloy	48"x99"	16"				

(1) Not recommended, except for fireproofing of steel shapes. (2) Or 4-mesh Z-Rib.

BRIDJOINT Lathing System

The BRIDJOINT Lathing System uses BRIDJOINT clips to apply ROCKLATH plaster base on walls and ceilings, and is so designed that the ends of the lath fall between and not on the framing members.

This system can be used with $\frac{3}{8}$ " Plain, Perforated or Insulating ROCKLATH plaster base.

Removal of the lath ends from the framing members increases the resistance to cracking at the most vulnerable points. Because lath ends meet between studding or joists, framing members need not be exactly 16" o.c. Lath ends are not nailed—system can be used with nailable steel joists or studs. Twenty-five per cent less nailing is required! Cornerite and nailing in the corners is not required. Total cost is only slightly above that of regular nail-on construction.

Approximately four B-1 Clips per yard are required. Multiply the lineal feet of ceiling and corner angles by 0.75 to determine number of B-2 clips.

B-1 Clips

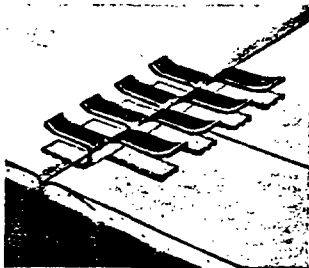
The B-1 Clip is used in the field application of ROCKLATH with the BRIDJOINT System. End joints of the lath should fall between framing members. Adjacent lath are attached to each other by the use of the B-1 Clip. This clip is also used for the BRACE-TITE Lathing System, as described on the opposite page.

B-1 Clips—packed 500 per carton.

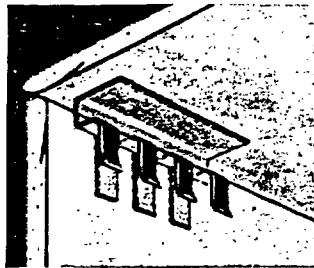
B-2 Clips

The B-2 Clip is used for internal and external angles formed by walls and ceilings. Secure the end joints of the lath at internal and external angles with the B-2 Clip, but do not nail to the framing members. For external angles, corner bead should be wired or stapled to the lath. Do not nail the corner bead to the framing members.

B-2 Clips—packed 500 per carton.



B-1 Field clip

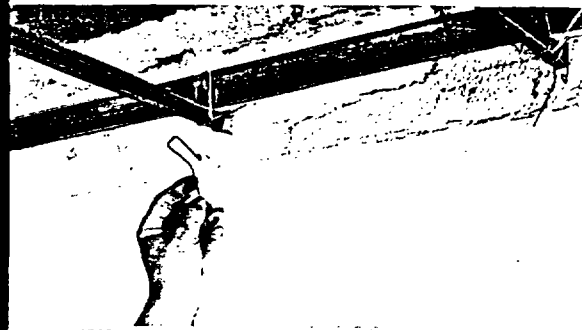


B-2 Corner clip

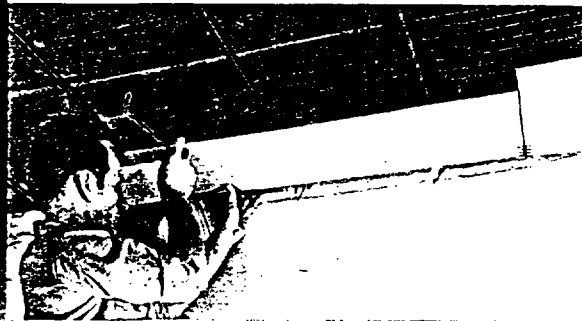
BRACE-TITE

Outstanding features

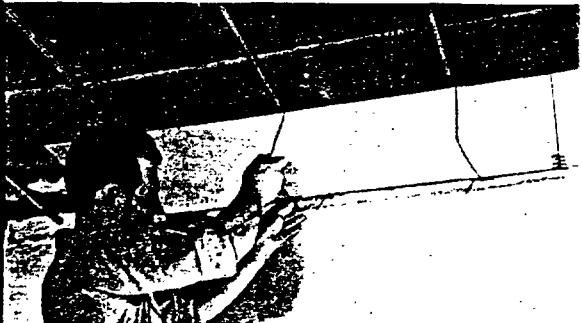
1. Rigidity similar to nail-on
2. Easy to apply
3. Speeds plastering



1. The BRACE-TITE Lathing System for mechanically suspended ROCKLATH plaster base is begun by placing a starter clip over $\frac{3}{4}$ " channel at the juncture of the $\frac{3}{4}$ " channel and the side



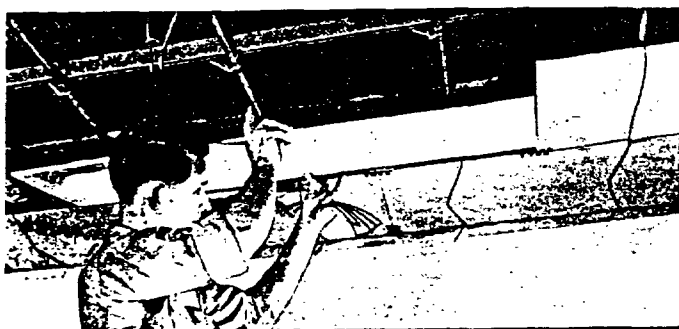
2. Placement of the lath is begun at right angles to the channel, resting the lath on top of the starter clip loop. Engage the B-TITE field clip over the channel and hook it into starter clip



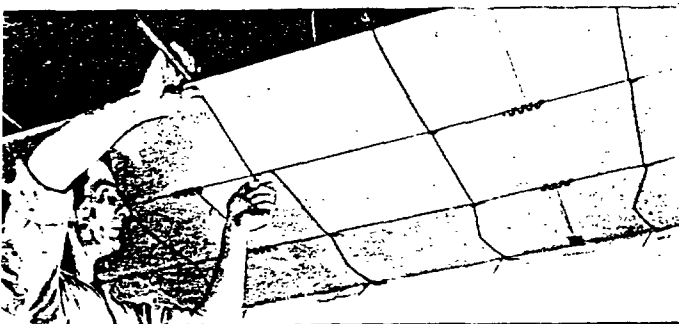
3. Loop end of field clip is hooked over channel. On first course, field clip is crimped to take up slack due to starter clip pulling out from wall. A B-1 clip is used at each end joint as shown

Lathing System for attaching ROCKLATH plaster base to suspended ceilings

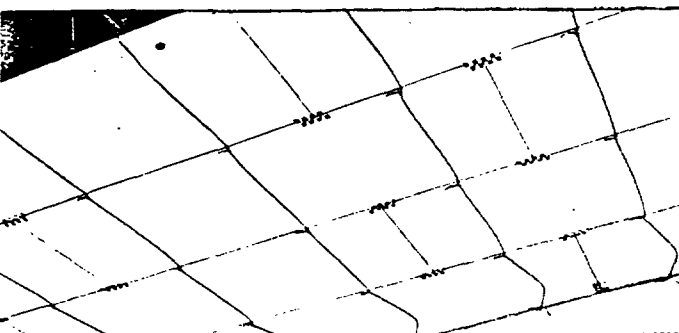
4. Uses standard materials and tools
5. Adaptable
6. Plaster reinforced
7. Economical
8. Complete—U.S.G. provides all materials



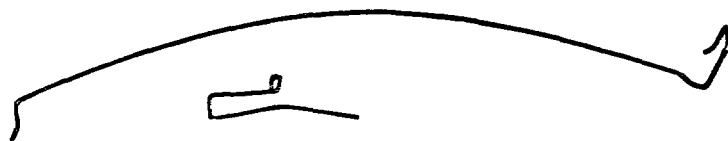
4. End joints of lath are staggered to fall between channels. B-1 clips are used on both sides of lath end joints. As courses are completed, a B-1 clip is slipped over each end joint for firm support.



5. Only first course of lath requires crimping of wire. Other courses are rapidly applied by looping field clips over channel and inserting hook into the eye of the preceding clip.



6. Cut last course of ROCKLATH plaster base to width to fit remaining space. Insert BRACE-TITE clip for this final course over previous clip, pull tight into the eye and cut off excess length.



Description

The BRACE-TITE Lathing System is a mechanical suspension of ROCKLATH plaster base from standard metal grillage ($\frac{3}{4}$ " channels spaced not over 16" o.c.).

The field clips, attached to $\frac{3}{4}$ " channels, support the ROCKLATH across the full width of the board. The spring action of the field clip pressing against the width of the board further increases its rigidity.

The BRACE-TITE System is easy to apply. The loop of the BRACE-TITE field clip is dropped over the channel, pressed up against the lath, and hooked into the eye of the preceding field clip.

Only three field clips, plus two USG BRIDJOINT B-1 Clips, are required per sheet of ROCKLATH plaster base.

Any standard $\frac{3}{4}$ " cold-rolled channel may be used on conventional 12" or 16" centers. Plain, Perforated or Insulating ROCKLATH plaster base may be used. The BRACE-TITE System may be used with any type of suspension having $\frac{3}{4}$ " channels, not over 16" o.c.

The embedded wire clip reinforces the plaster and increases crack resistance. As the BRACE-TITE System requires only $\frac{1}{2}$ " of plaster in two coats, its use results in economy of application.

Materials

Channels—USG $\frac{3}{4}$ " Cold Rolled Channels, Painted.

Lath— $\frac{3}{8}$ " x 16" x 48" ROCKLATH Plaster Base.

Clips—BRACE-TITE Field and Starter Clips, USG B-1 BRIDJOINT Field Clips.

Cornerite—USG Painted Cornerite.

Estimating Quantities

16" spacing of $\frac{3}{4}$ " channels.

BRACE-TITE Starter Clips: one required for each channel abutting a vertical plane and at any interruption of this channel (such as at light troffers). None required at opposite end of channels.

BRACE-TITE Field Clips—5 to 6 per square yard.

USG B-1 BRIDJOINT Clips—4 per square yard.

12" spacing of $\frac{3}{4}$ " channels.

BRACE-TITE Starter Clips—Same as for 16" spacing.

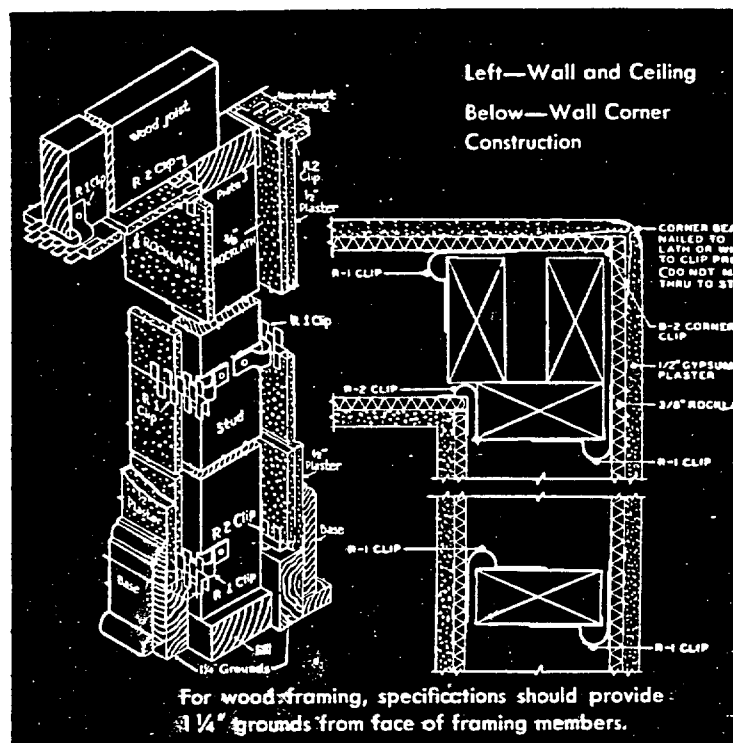
BRACE-TITE Field Clips—7 to 8 clips per yard.

USG B-1 BRIDJOINT Clips—Same as for 16" spacing.

Packaging

BRACE-TITE field clips, 300 per carton, starter clips, 50 per carton, and B-1 clips, 500 per carton.

This system is a method of attachment for ROCKLATH plaster base, floating it free from the framing, or basic wall or ceiling construction, by means of resilient spring clips.



Floating the plastered wall free of the basic construction gives this system several outstanding qualities as compared with normal construction.

Excellent Resistance to Sound Transmission

The National Bureau of Standards assigns a Sound Transmission Loss rating of 47 decibels to wood stud partitions with Resilient Clips and ROCKLATH plaster base plastered both sides. This system has received this high rating because it simply and effectively separates the structural part of the wall, stud or masonry, from the lath and plaster by means of the steel springs which permit the lath and plaster to vibrate independently, thus decreasing the energy transmitted to the structural part of the wall. This rating is 6 decibels higher than that assigned to nail-on construction using ROCKLATH. The resilient system using ROCKLATH plaster base meets F.H.A. requirements for party walls in multiple family dwellings.

Maximum Crack Resistance

Plaster cracking, due to normal frame movement, is greatly reduced with the resilient plaster system using ROCKLATH plaster base. When minor frame movement occurs, it is absorbed by the resilience of the springs in the clip. Flexibility of this system replaces rigidity of ordinary plastered walls without sacrificing strength.

Economy in Redecoration

ROCKLATH Resilient Clips hold the plaster wall $\frac{3}{8}$ " away from the framework, permitting air circulation and almost complete equalization of temperatures. Unequal temperatures are the cause of most of the characteristic streaking of plastered walls which occurs where the plaster base is directly connected with the framing members. The use of ROCKLATH Resilient Clips practically eliminates streaking from that cause.

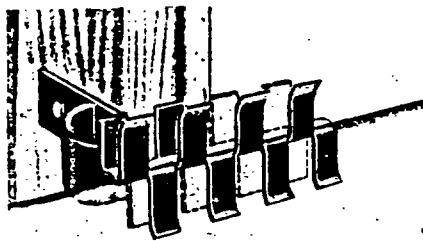
Flexible

This system using ROCKLATH Resilient Clips with $\frac{3}{8}$ " ROCKLATH can be applied to wood, steel or masonry. Plain, Insulating or Perforated ROCKLATH Plaster base can be used on walls. Only plain or Insulating ROCKLATH, with three-coat plastering, is recommended for ceilings supported by Resilient Clips. *Allow scratch coat to set and dry before application of brown coat.*

Estimating Quantities

A total of 6 clips per square yard is required. This includes the R-1 field clips, and the R-2 clips required to secure internal corners. The quantity of each is estimated as in the following example:

500 square yards x 6 clips per yard	=	3,000 clips
Estimated number R-2 clips	=	800 clips
Difference equals number R-1 clips	=	2,200 clips

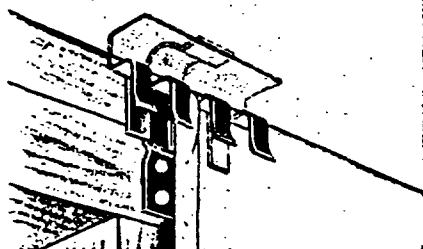


R-1

Field Clip

Resilient Clip, R-1, is used for the attachment of ROCKLATH Plaster base to wood framing members, floating the lath free of the framing members by means of the resilient spring in the clip. The clip is nailed to the framing members and the ROCKLATH is supported by the steel prongs of the clip. The R-1 Clip is used only in the field of the area to be covered.

Packaging—R-1 Clips—250 per carton.

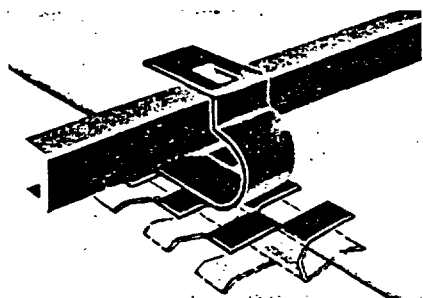


R-2

Corner Clip

Resilient Clip, R-2, is used for the attachment of ROCKLATH Plaster base to wood framing members at all internal corners. It provides the same spring suspension in corner sections as the R-1 Clip provides in the field. The R-1 Clip is also used as the starting clip at the base of the wall.

Packaging—R-2 Clips—250 per carton.

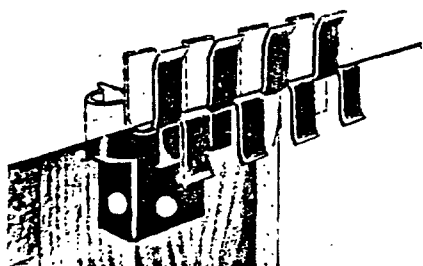


R-3

Ceiling Channel Clip

Resilient Clip, R-3, is used for the attachment of ROCKLATH Plaster base to $\frac{3}{4}$ -inch cold-rolled channels in ceiling construction. The clip is hooked over the channel and the ROCKLATH engaged in the prongs of the clip. This construction provides a ceiling floated from the metal grillage of suspended ceilings.

Packaging—R-3 Clips—250 per carton.

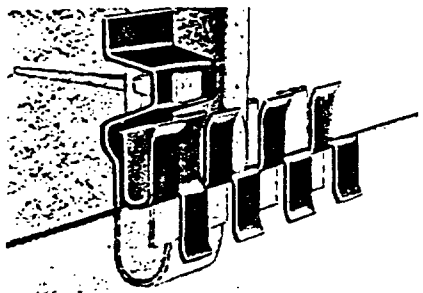


R-4

Wood Furring Clip

Resilient Clip, R-4, is used with the Resilient System for attaching the ROCKLATH to wood furring strips. This clip can be nailed to the face edge of the framing member, permitting its use where obstacles in construction prohibit the use of R-1 described above.

Packaging—R-4 Clips—250 per carton.



R-5

Masonry Furring Clip

Resilient Clip, R-5, is used to mechanically float a ROCKLATH Plaster base wall or ceiling from masonry or solid concrete construction. With this system the clip provides sound transmission resistance advantages, and also furs the plastered wall from the masonry.

Packaging—R-5 Clips—200 per carton.

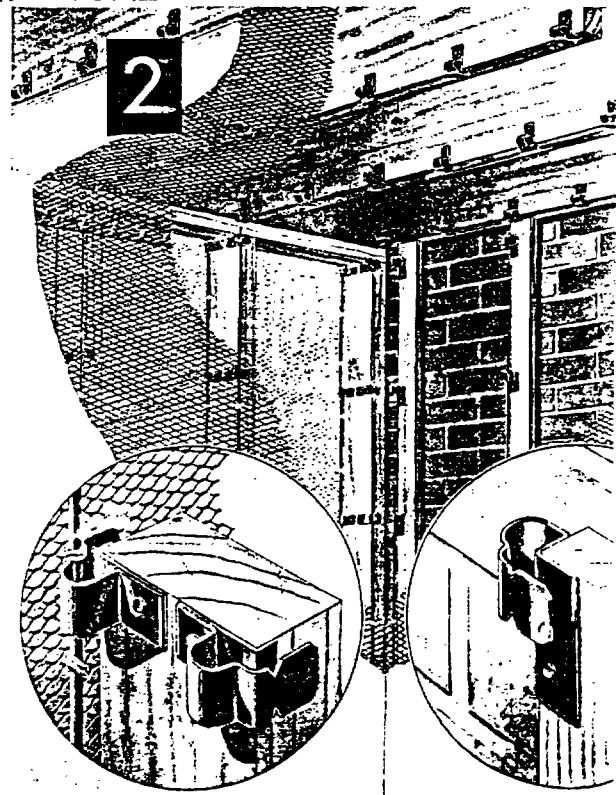
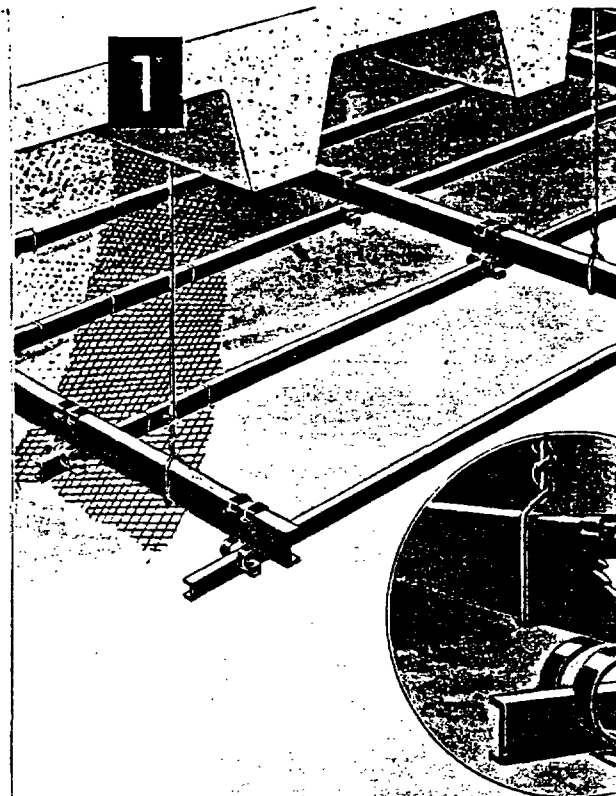
A practical floating construction for plastered walls and ceilings that securely, yet resiliently, fastens metal lath to the supporting frame with spring clips.

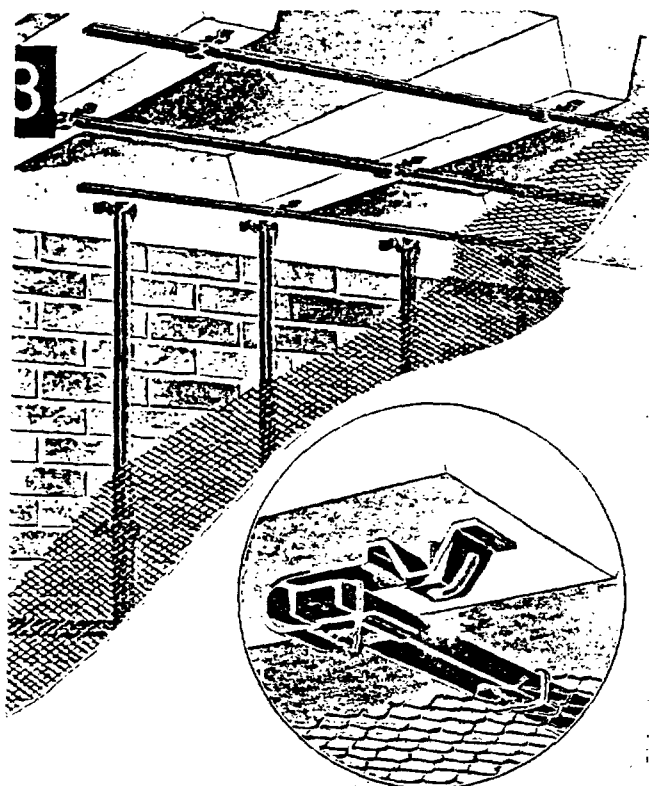
ADVANTAGES

1. Reduces transmission of sound.
2. Affords greatly increased protection against cracks due to structural movement or excessive vibration.
3. "Photographing" of joists, etc., is almost entirely eliminated because the plaster does not come in direct contact with these supports.
4. The system can be applied to practically all types of residential and commercial construction.
5. Only five simple types of clips meet all erection requirements . . . the system goes up quickly and easily. Standard metal lath construction follows.

PACKAGING—500 clips to a carton, except No. 400: 1000 per carton.

WEIGHT per thousand clips—No. 100—56 lbs.
 No. 200—44 lbs.
 No. 300—46 lbs.
 No. 400—35 lbs.
 No. 500—78 lbs.





1 Suspended Ceiling

Application of No. 100 Clip for suspended ceiling construction. The clip provides resilient attachment of the furring channel to the runner channel and eliminates need for wire-tying channels together. Easy to erect.

2 Wood Frame Construction

Application of No. 200 Clip on wood studs and joists, and No. 300 Clip on wood furring for masonry walls. The clips provide resilient attachment of metal lath. $\frac{1}{4}$ " pencil rods wire-tied to clips; metal lath tied to rods.

3 Masonry Surfaces

Application of No. 500 Clip on ceiling under concrete joists, and on masonry surfaces. This construction provides furring, and resilient attachment of the metal lath. $\frac{3}{4}$ " channel wire-tied to clip; metal lath tied to channels.

No. 100—for suspended ceilings

Furring channels 12" spacing: quantity—225 clips per 100 sq. yards.

Furring channels 16" spacing: quantity—169 clips per 100 sq. yards.

(Runner channels at 4' spacing)

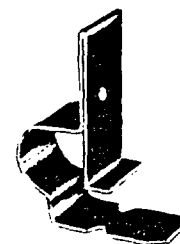


No. 200—for wood studs or joists

Walls (clip spacing 16" along studs): quantity—500 clips per 100 sq. yards.

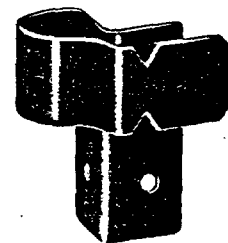
Ceilings (clip spacing 12" along joists): quantity—675 clips per 100 sq. yards.

(Studs or joists at 16" spacing)



No. 300—for wood furring strips

Walls (clips 16" along furring): quantity—500 clips per 100 sq. yards. Do not use No. 300 clip on ceilings. Use No. 200.



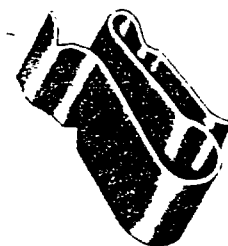
No. 400—for use on TRUSSTEEL Studs

Stud spacing 12": quantity—675 clips per 100 sq. yards of surface area.

Clips spaced 16" on studs.

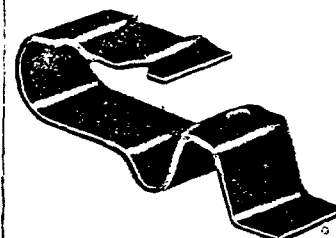
Stud spacing 16": quantity—500 clips per 100 sq. yards of surface area.

Clips spaced 12" on studs.



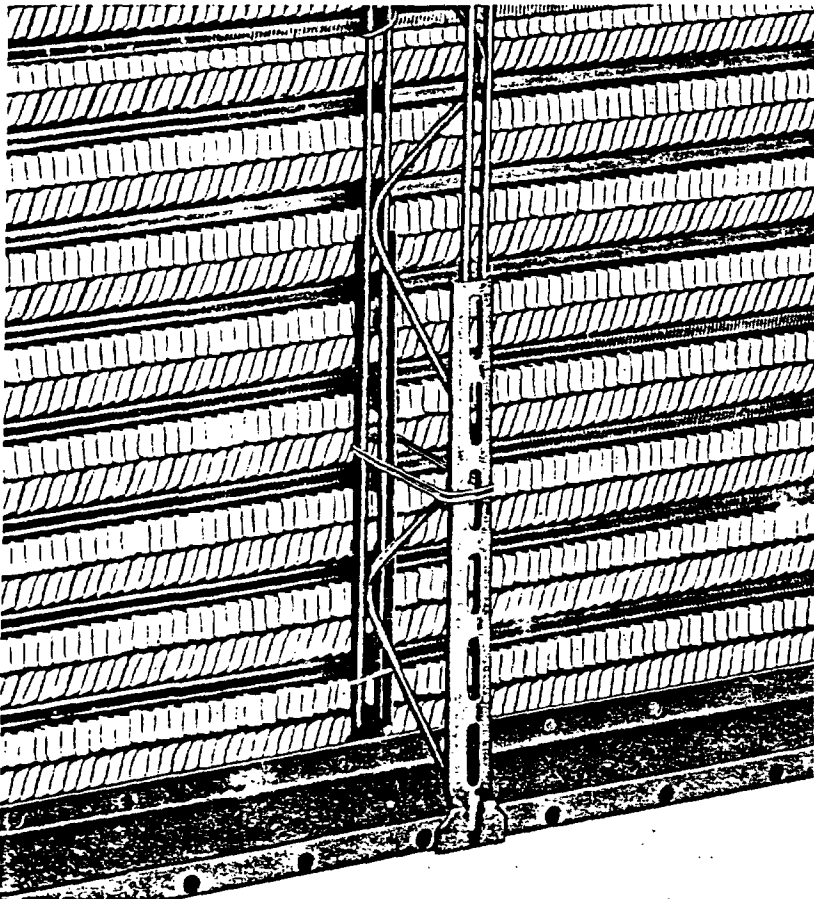
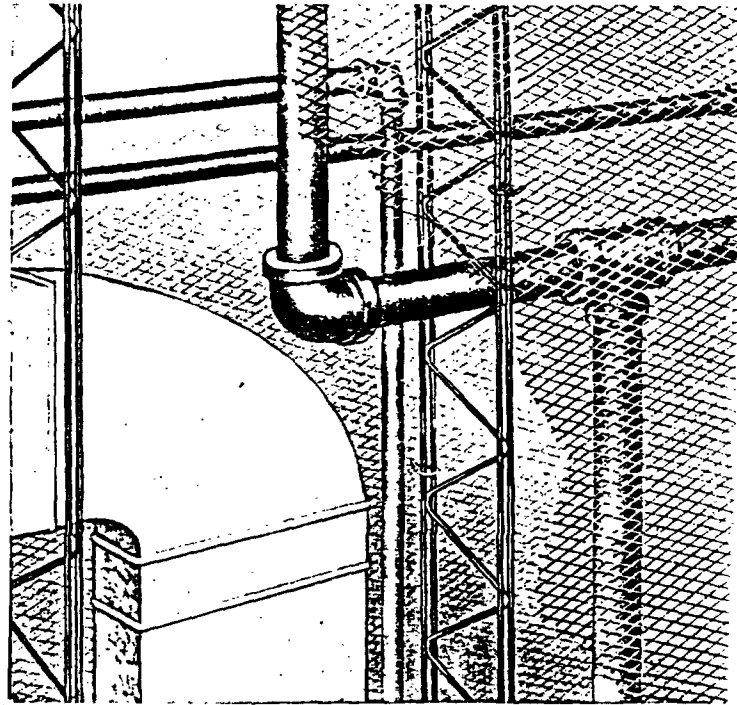
No. 500—for masonry walls and concrete ceilings

Spacing of Furring Channels	Spacing of Clips	Quantity Clips per 100 sq. yds.
12"	24"	450
16"	18"	450
19"	15"	455



The TRUSSTEEL Stud hollow metal lath and plaster partition is sturdy, durable, and easy to erect. Pipes, ducts and conduits are easily concealed. These partitions are light in weight, fireproof and economical.

Note the ease with which this system accommodates pipes and ducts.



This is a truss design stud for hollow, non-load bearing, fireproof partitions. Outer chords and diagonal strut are built of round rods.

As shown in the sketch, the component parts are (A) top and bottom runner tracks, (B) rod studs spot welded at all contact points, (C) attachment shoes for connecting the studs to the runners that permit up to 4" upward adjustment, (D) Metal Lath applied to both sides of studs with 18-gauge galvanized tie wire. For Resilient Metal Lath construction, No. 400 clip can be used instead of wire.

Advantages

TRUSSTEEL studs are built on the sound engineering principles of the truss, and make strong, rigid partitions. Partitions of this type have been specified, tested and approved for the most important jobs, under the most exacting conditions.

TRUSSTEEL studs have exclusive features that result in greater economy in the erection of hollow partitions. They can be quickly fitted around pipes and ducts of all types, and are easily spliced. The attachment shoes make each stud adjustable in height to take care of varying ceiling heights. The lather requires no special tools for quick, easy erection.

The simplicity of TRUSSTEEL Stud erection is clearly illustrated here.

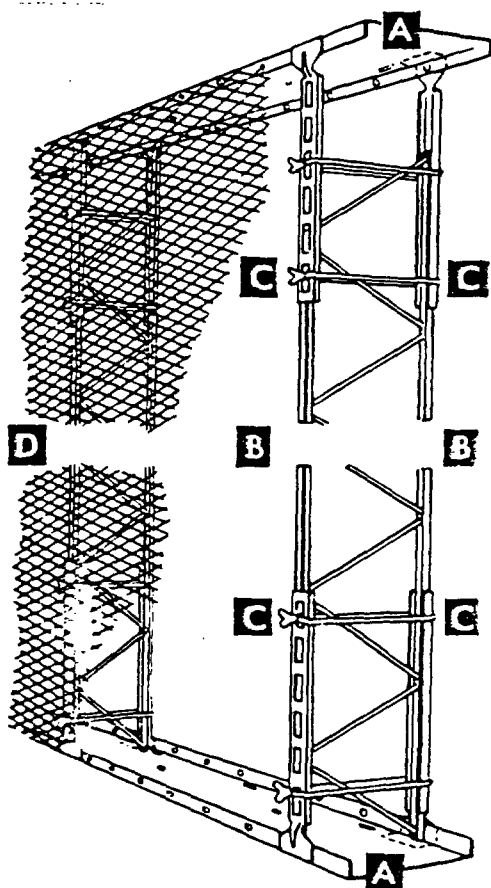
Sizes Available:

Stud Width	Stud Weight per 1,000 lin. ft.	Track Weight per 1,000 lin. ft.	Maximum Partition Height
3 1/4"	455 lbs.	354 lbs.	16 ft.
4"	470 lbs.	417 lbs.	18 ft.
6"	515 lbs.	583 lbs.	20 ft.

Stud Lengths: 7'0" to 20'0" in increments of 3". Runner Tracks: 3 1/4", 4" and 6" widths by 8'0" long.

Recommended Stud Spacing

Type of Lath	TRUSSTEEL Stud Spacing
2.5 lb. Diamond Mesh Lath	12 inches
3.4 lb. Diamond Mesh Lath	16 inches
2.75 lb. 1/8" Riblath	16 inches
3.4 lb. 1/8" Riblath	19 inches
3.4 lb. 3/8" Riblath	24 inches
4.0 lb. 3/8" Riblath	24 inches
Plain or Perforated ROCKLATH Plaster base	16 inches


Erection

Align the TRUSSTEEL Runner Tracks accurately to the partition layout. Securely fasten to the floor or ceiling at 16" intervals. Use 1/2 inch concrete stub nail for concrete slabs.

Space TRUSSTEEL Studs 12", 16" or 24" on centers, according to the weight and type of metal lath to be used, and secure each stud to the runner track with two attachment shoes at both top and bottom. Shoes may be either wired or crimped to the stud.

Partitions 12 feet or more in height should be braced horizontally with 3/4 inch channels wired permanently to the inside of the studs. This bracing should be spaced not more than 6 feet on centers vertically.

Where the TRUSSTEEL Stud Partition abuts some other construction, nail, tie-wire or toggle-bolt the Runner Track to the wall.

Corners and partition intersections are formed with four TRUSSTEEL Studs. Fasten two studs to each side of every door buck.

ROCKLATH plaster base can be applied to TRUSSTEEL Studs with special clips. Consult your U.S.G. representative.

1. **Fireproof**—Composed essentially of gypsum, the partition is fireproof. When plaster is sanded 1 to 1, 1 to 2, it receives a 1-hour fire resistance rating.
2. **Space Saving**—Only 2" thick. Replaces partitions more than twice as thick—saves up to 5% of total floor area.
3. **Strong**—An official impact test with a 60-lb. weight travelling through a four foot fall failed to produce a discernible crack after three successive blows.
4. **Economical**—Actual cost is comparable with the cost of conventional wood studs with ROCKLATH plaster base and plaster, both sides.

Complies with F.H.A. requirements for rental housing.

Description

The 2" Solid ROCKLATH and Plaster Partition is a studless, non-load bearing partition consisting of ½" Long Length V-edge ROCKLATH plaster base held vertically in floor and ceiling runners and plastered on both sides with ¾" of plaster. The lath is braced on one side with temporary wood or ¾" steel channels which are removed just before the brown coat of plaster is applied to the braced side of the lath, and after the brown coat has set on the unbraced side.

This construction is suitable for non-load bearing partitions in multi-unit homes, apartment buildings, offices, hospitals, schools and other structures. It can be used for walls up to 12 feet high. Electrical outlet boxes and conduits, plumbing fixtures and door bucks are easily installed during the erection of this partition.



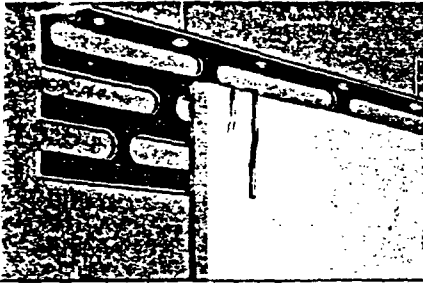
FIRST, nail down metal floor clips approximately 24 inches on center. The metal base side plates snap over shoulders of clips. Then grout gypsum plaster into base section.



SECOND, securely attach the L-shaped metal ceiling runner. Center the top flange over the center line of base. The three horizontal slots allow for minor variations in ceiling height.



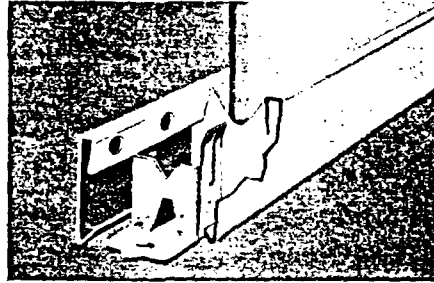
THIRD, place bottom edge of long length ROCKLATH plaster base in set grouted base section. Top edge against the vertical flange of ceiling runner. Position against V-edge of preceding



Ceiling Runner and Clip

This ceiling runner is designed for the ceiling attachment of Long Length ROCKLATH plaster base in the construction of 2" solid ROCKLATH and plaster partitions. The runner is attached to the ceiling and the ROCKLATH fastened to it by use of two hairpin clips for each piece of ROCKLATH. The three horizontal perforations allow for minor variations in ceiling height.

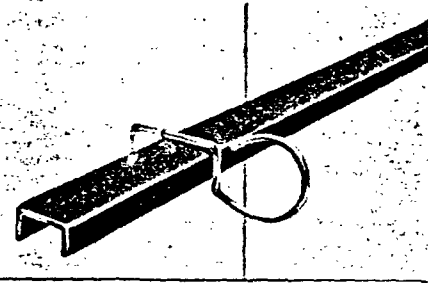
Ceiling Runner: 8 ft. lengths, 50 pieces per bundle. Hairpin Clips: 500 per ctn.



Metal Base

The metal base is designed as a floor runner for use with 2" Solid ROCKLATH and Plaster Partitions. The floor clips are nailed to the floor and the base snapped in place. The base is then grouted full with sanded plaster raked out in an inverted V to receive the Long Length ROCKLATH. Ship. wt. per 1000 ft. double base, 1430 lbs.

(An alternate wood floor runner, milled to receive the lath, can be used in place of the metal base if desired.)



Temporary Bracing Clip

This clip is designed to attach the temporary $\frac{3}{4}$ " cold rolled channel brace to the ROCKLATH Plaster base. The point of the clip is driven through the lath just below the mid-section of partitions not exceeding 9 feet in height. The clip is then turned at right angles to the lath and pulled over the channel. It is easily removed when the channel is removed; permits easy and speedy attachment of the temporary bracing.

Clips: 500 per carton.



FOURTH, secure top edge of ROCKLATH plaster to ceiling runner with hairpin clips. Clips easily thru slots in ceiling runner. Use two clips per board.



FIFTH, $\frac{3}{4}$ " channel temporary brace: one horizontal, for up to 9' height, held with USG bracing clips; vertical brace, every 6', tied to horizontal brace and anchored at floor and ceiling.



SIXTH, apply scratch coat to both sides. Following day apply brown coat to side opposite bracing. When set, remove bracing and brown braced side. Apply finish to both sides.

A non-load bearing partition of metal lath and channel construction plastered on both sides to an overall thickness of two inches.

Solid Metal Lath and Plaster Partitions are from readily available stock materials—all items required are in normal dealer stock.

The construction consists of $\frac{3}{4}$ " channel studs from floor to ceiling, metal lath, and plaster. Metal Base and Ceiling Runner, or other approved methods of floor and ceiling attachment may be used. Electrical equipment and plumbing fixtures, bucks, etc., are easily installed with the partition.

Advantages:

Fireproof—composed essentially of gypsum and the partition is incombustible. Has fire resistive rating of 1 hour when plastered with gypsum plaster sand 1:2, 1:2.

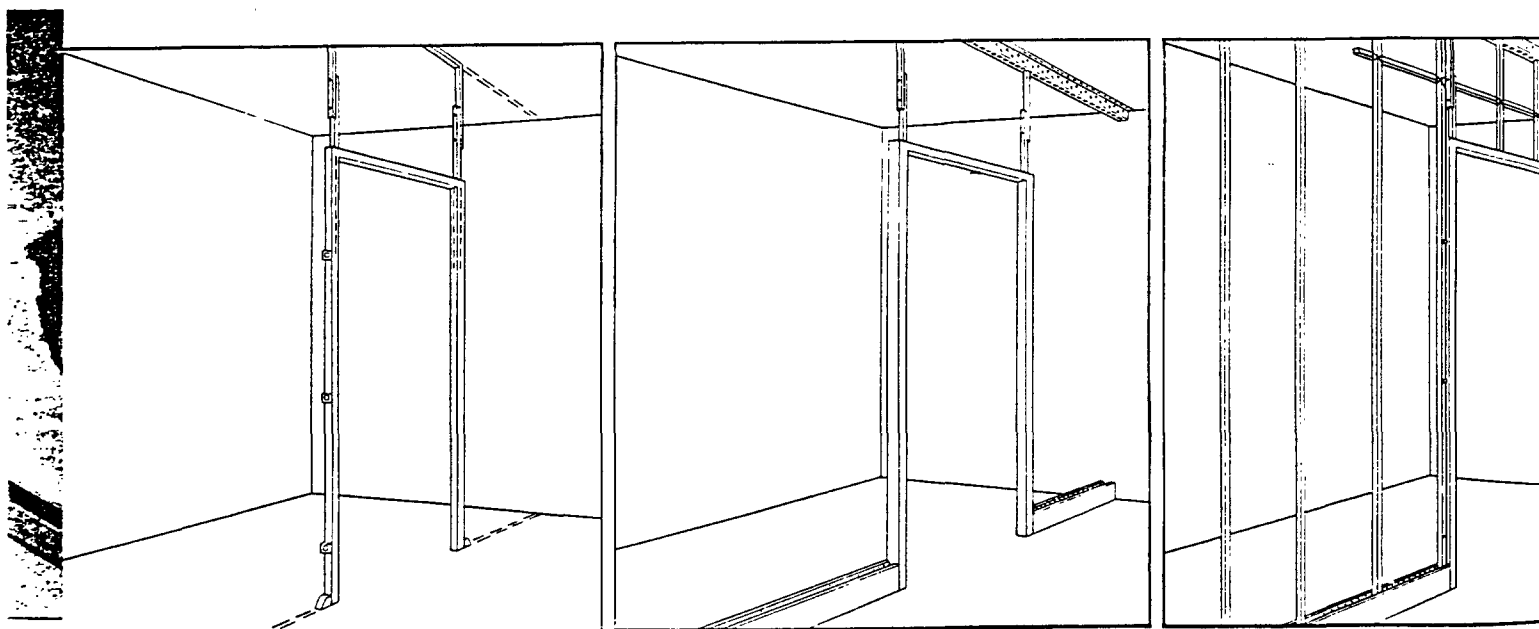
Space Saving—only 2" thick. Replaces partitions more than twice as thick. Saves up to 5% of total area.

Strong—metal lath acts as a steel reinforcement, providing exceptional strength.

Economical—cost is comparable to conventional or metal stud partitions lathed and plastered on both sides.

Light weight—only 13 to 17 lbs. per partition square foot.

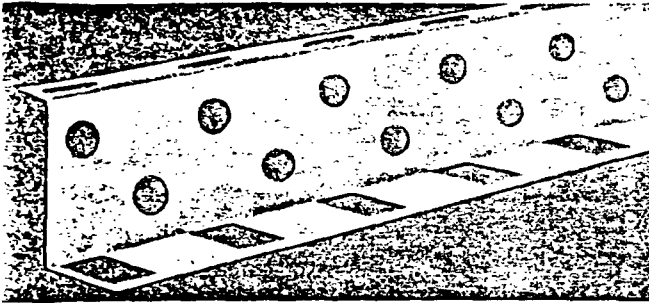
Resists Transmission of Sound—37.6 db rating



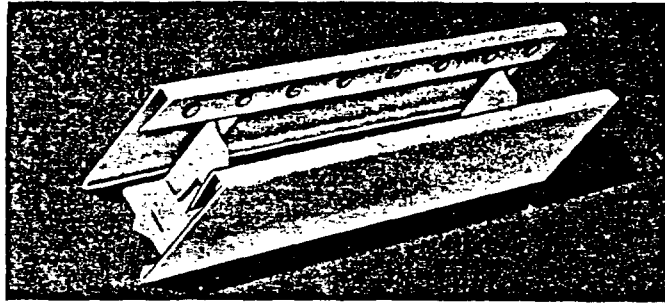
First—When layout has been determined and chalk lined, begin by erecting door bucks.

Second—Secure USG metal base or other approved floor attachment, then attach ceiling runner.

Third—Erect channel studs and insulate reinforcement over door opening.



Ceiling runner, designed for use with metal channel studs, requires no clips for attachment of metal lath. Runner can be stubbornly nailed to reinforced concrete; is slotted to receive channel ends. Available in 10' lengths. Shipping weight per 1,000 feet, 222 lbs.

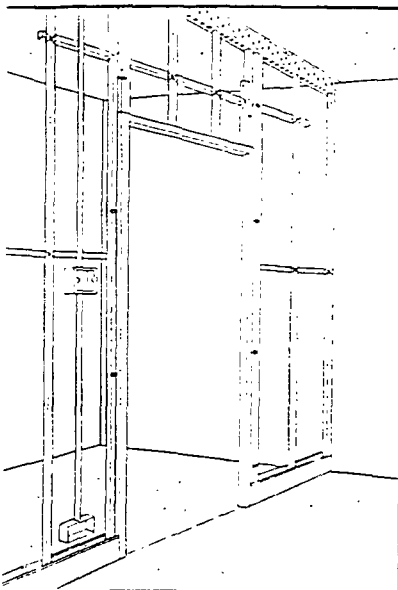


The USG Metal base was designed for use with the 2" Solid USG Metal Lath and Plaster Partitions. The floor clips are nailed to the floor and the base snapped in place. Channel studs attach directly to clips within base. Shipping weight per 1,000 feet double base, 1430 lbs.

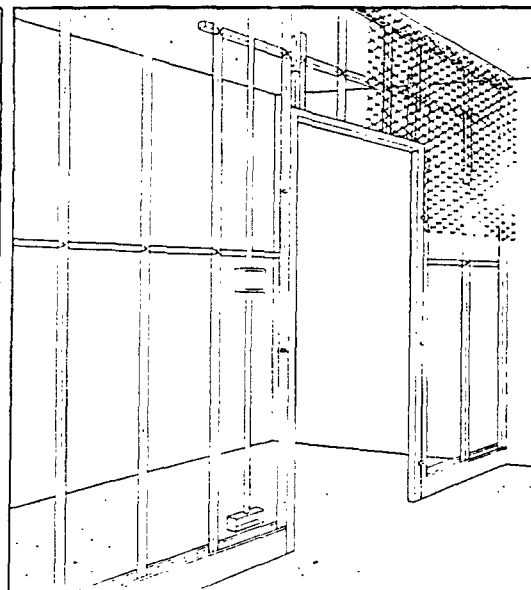
Erection Recommendations

Height of Partition	Thickness of Partition	Size of Channel Stud	Permissible Length of Partition	Spacing of Studs	Lath Recommended
Up to 12'	2"	3/4"	No limitation	16"	2.5 lb. Diamond Mesh
Up to 14'	2"	3/4"	24 ft.	16"	3.4 lb. Diamond Mesh
Up to 16'	2 1/4"	3/4"	32 ft.	16"	2.75 lb. 1/8" Riblath
Up to 18'	2 1/2"	3/4"	27 ft.	24"	3.4 lb. 1/8" Riblath
Up to 20'	2 3/4"	3/4"	30 ft.	24"	3.4 lb. 3/8" Riblath
Up to 24'	3"	1 1/2"	36 ft.	24"	4.0 lb. 3/8" Riblath
Up to 30'	3 1/2"	1 1/2"	30 ft.		

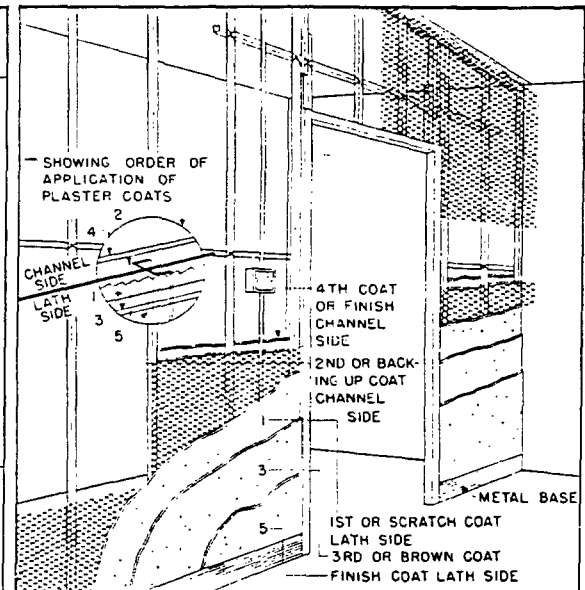
*This stud spacing permissible for partition heights not exceeding 16 feet. For greater heights, permanent horizontal stiffener channels must be secured to channel side of partition every 6 feet vertically, or spacings should be reduced 25 per cent.



Fourth—Set up temporary horizontal channel cing (remove before applying finish coat) install conduit, outlets, etc.



Fifth—Apply metal lath, starting at ceiling and working toward floor.

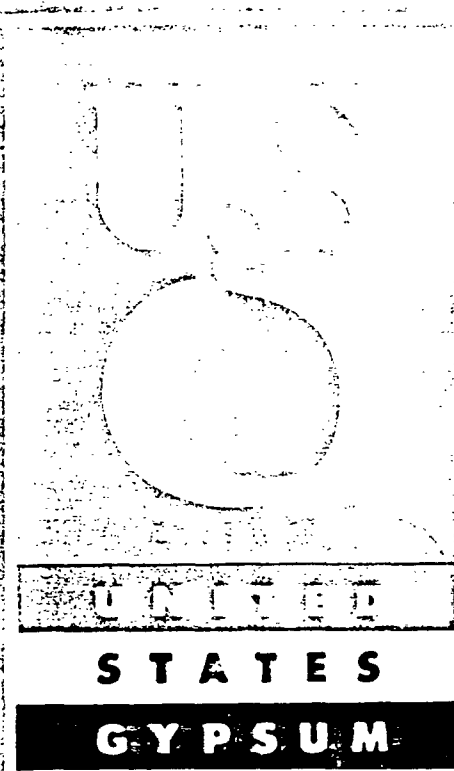


Sixth—Apply scratch coat to lath side, back-up to channel side. Then brown and finish coats to lath side, finish only to channel side.

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