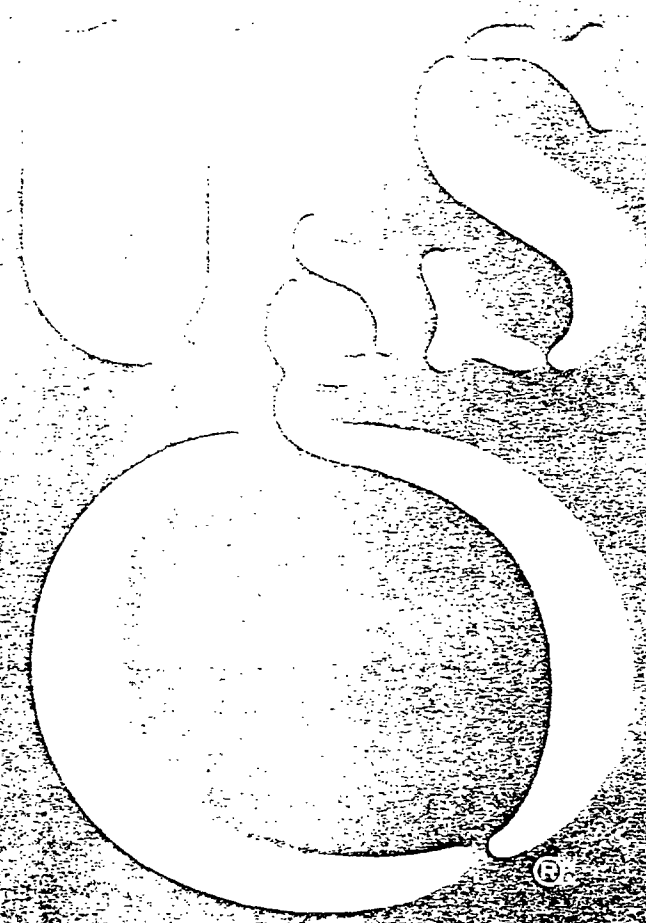


Bowman
Ex. 83

PLAINTIFF'S EXHIBIT

USG-965

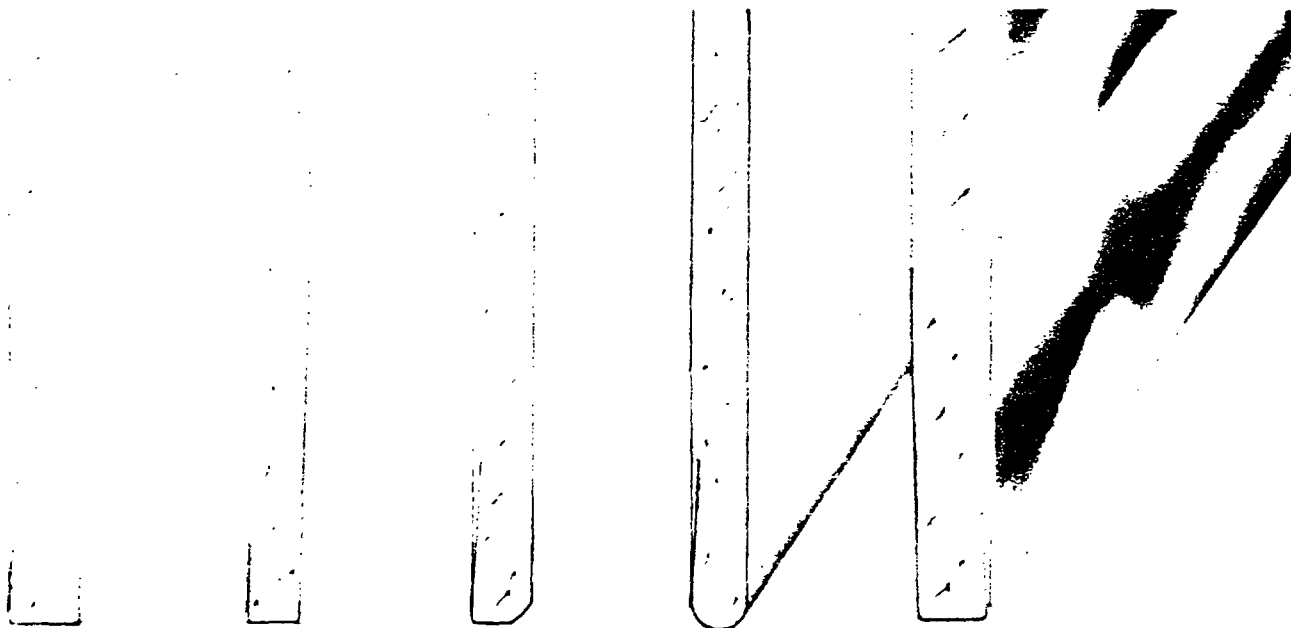


DATA BOOK

GYPSUM BOARD PRODUCTS

UNITED STATES GYPSUM

BB012 1963



$\frac{1}{2}$ " Tapered Edge
SHEETROCK

$\frac{3}{4}$ " Tapered Edge
SHEETROCK

$\frac{3}{4}$ " Beveled Edge
SHEETROCK

$\frac{3}{4}$ " Plain Panel
SHEETROCK, 16" wide

$\frac{3}{4}$ " and $\frac{1}{2}$ " Insulating
SHEETROCK

There is only one SHEETROCK, the fireproof gypsum wallboard, made by United States Gypsum in a wide variety for every building need.

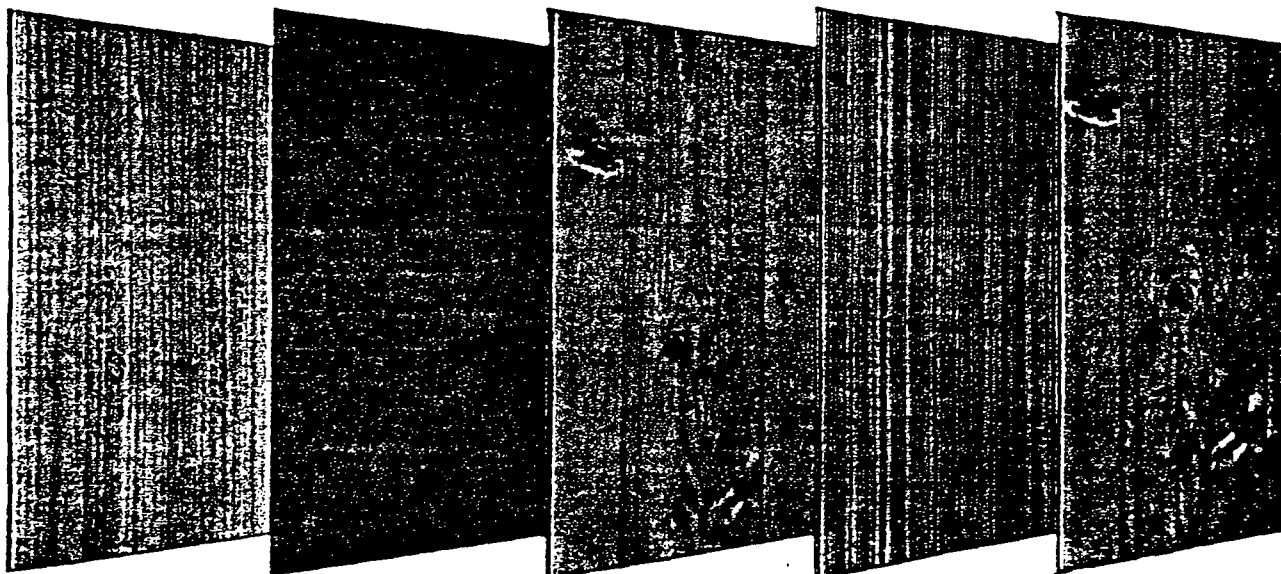
$\frac{3}{4}$ " Bleached Mahogany
SHEETROCK

$\frac{3}{4}$ " Planked Walnut
SHEETROCK

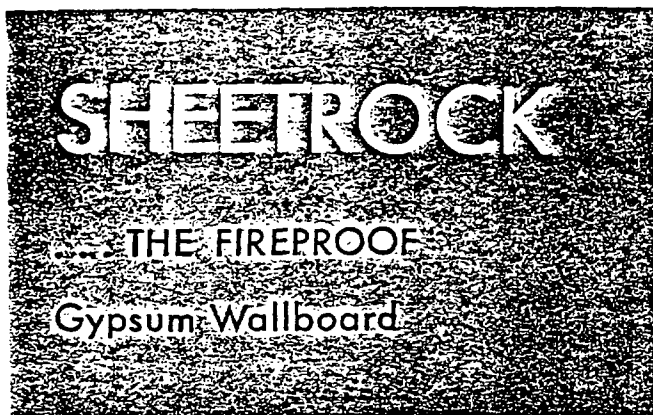
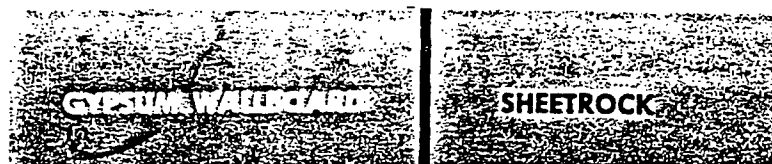
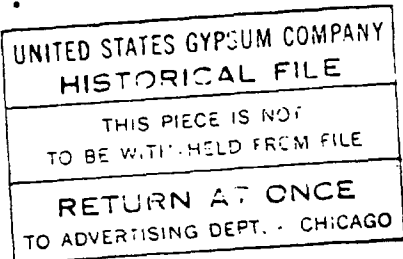
$\frac{3}{4}$ " Knotty Pine
SHEETROCK

$\frac{3}{4}$ " Striated Panel
SHEETROCK, 16" wide

$\frac{3}{4}$ " Knotty Pine Panel
SHEETROCK, 16" wide



BB012 1964



SHEETROCK is composed essentially of a gypsum core encased in a tough calendered manila finish sheet of ivory color and a strong liner paper on the back.

The wide variety of types of SHEETROCK and their particular uses are reviewed on this page. The pages immediately following contain more complete information on the characteristics, advantages and uses of these products.

1/2-inch tapered edge SHEETROCK wallboard, recommended for new construction is easy to decorate to the owner's or tenant's taste . . . the tapered edges and smooth ends permit joint treatment with PERF-A-TAPE reinforcement to form smooth wall and ceiling surfaces.

3/8-inch tapered edge SHEETROCK with smooth ends, is the standard gypsum wallboard for remodeling and alteration jobs where the greater strength and rigidity of 1/2-inch board are not required, and where cost is a factor. Two layers of 3/8-inch SHEETROCK are used in new construction to form a laminated wall.

3/8-inch Woodgrained SHEETROCK provides all the SHEETROCK wallboard advantages, plus the economy of pre-decoration. Special paper, printed from photographic reproductions of carefully selected knotty pine, planked walnut and bleached mahogany, is scientifically laminated to the face of regular SHEETROCK wallboard. Superior to many actual wood panels in appearance, it may be had at a fraction of the cost. It is made with beveled edges in bleached mahogany and with square edges in knotty pine and planked walnut.

3/8-inch and 1/2-inch Insulating SHEETROCK, for the interior of exterior walls, is made by attaching a sheet of bright aluminum foil to the back of SHEETROCK. It provides effective winter and summer insulation plus one of the most efficient of all vapor barriers.

1/4-inch SHEETROCK wallboard with smooth ends easily and quickly re-surfaces existing walls and ceilings. The joints between panels of 1/4-inch SHEETROCK can be reinforced and concealed with PERF-A-TAPE Joint System. SHEETROCK in this thickness is an ideal, all-purpose, low cost, utility wallboard.

3/8-inch beveled edge SHEETROCK wallboards are precision beveled at the mill. When two panels are erected side by side an attractive "V" joint results. When using beveled edge SHEETROCK for paneled walls, these joints form a pleasing pattern. The board should be erected according to a predetermined design. Since all joints must fall on framing members, the framing members must be spaced to the width of the panels.

3/8-inch Panel SHEETROCK produced in 16" widths, with long edges rounded, is excellent for surfacing walls in new construction and remodeling. In three finishes: Plain, Knotty Pine and Striated.

5/8-inch SHEETROCK Firecode 60 and 1/2-inch SHEETROCK Firecode 45 are tapered edge gypsum wallboards which combine all the advantages of regular SHEETROCK with increased resistance to fire exposure, —the result of a specially formulated core containing special mineral materials.

SHEETROCK Firecode 60 and SHEETROCK Firecode 45 afford 60 minute and 45 minute fire resistance ratings, respectively, when used in partition and in floor and ceiling constructions, according to Underwriters' Laboratories tests.

SHEETROCK 1 1/2-inch LAMINATED PARTITION UNITS consist of 3 layers of 1/2" SHEETROCK wallboard adhesively bonded together at the factory. The individual layers when laminated form a 1/2" off-set tongue and groove edge; the beveled edges of the face layer form a pleasing feature joint. Available in 24" width and 8', 9' and 10' lengths.

SIZES, NAILING AND FINISHING

SHEETROCK Products	Thickness	Surface Finish	Profile	Width	Length	Weight Approx. or field of area - weight given etc.	Spacing of joints (feet)	Nails (type and size)	Maximum nail spacing
Plain	1/2"	Ivory	Tapered	4'	6'7'8'9' 10'12'	2055	16" or 24" o.c.	5d	8" on walls 7" on ceilings
Plain	3/8"	Ivory	Tapered	4'	6'7'8'9' 10'12'	1525	16" o.c.	4d	Same as above
Plain	3/8"	Ivory	Beveled	4'	6'7'8'9' 10'12'	1525	16" o.c.	4d	Same as above
Plain	1/4"	Ivory	Square	4'	6'7'8'9' 10'12'	1095	16" o.c.	4d 6d over existing plaster	Same as above
									Same as above
Insulating	NOTE: 1/2" and 3/8" are available with insulating foil back in sizes shown at additional cost.								
Grained	3/8"	Knotty Pine	Square	4'	8' and 10'	1525	16" o.c.	4d colored or 4d finish	Same as above
	3/8"	Planked Walnut	Square	4'					
	3/8"	Bleached Mahogany	Beveled	4'					
Firecode	1/2"	Ivory	Tapered	4'	8'9'10'12'	2155	16" o.c.	5d cement coated flat head, diamond point, 1 5/8" long.	7" on walls 6" on ceilings
Firecode	3/8"	Ivory	Tapered	4'	8'9'10'12'	2610	16" o.c.	6d cement coated flat head, diamond point, 1 7/8" long.	
Panel	3/8"	Striated	Round	16"	8'9'10'	1525	Laminated to base layer of 3/8" SHEETROCK or to existing plastered walls.		Nailing not required
		Knotty Pine	Round	16"	8'9'10'	1525			
		Plain	Round	16"	8'9'10'	1525			

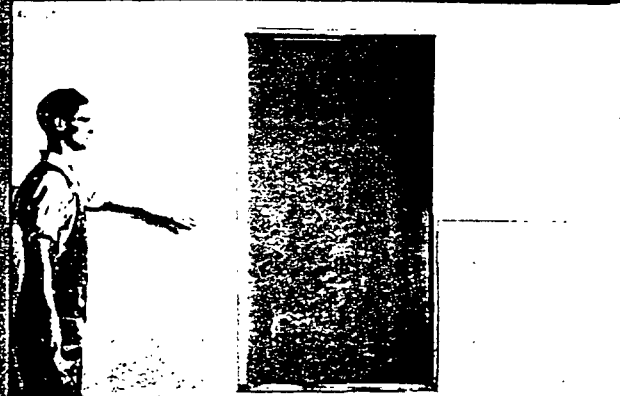
BB01

DECORATION

6	PERF-A-TAPE Joint System PERF-A-BEAD corner reinforcement	PERF-A-TRIM (for doors, windows and ceiling angles)	375 Lin. Ft. Tape App. 40# Cement	1. SHEETROCK Sealer (Smooth Finish)	1. TEXOLITE DURAVAL Imperial or Standard. Semi-gloss or full gloss enamel.
4½			Same as above	2. TEXTONE (Textured Finish)	2. TEXOLITE DURAVAL, Imperial or Standard
4½	No treatment required PERF-A-BEAD corner reinforcement	USG METAL TRIM	PERF-A-BEAD & PERF-A-TAPE Cement, as needed	3. SHEETROCK Sealer	3. Wallpaper
4d-4½	PERF-A-TAPE Joint System		375 Lin. Ft. Tape App. 40# Cement	IMPORTANT . . . SHEETROCK Sealer must be used to permit later removal of wallpaper.	
	SHEETROCK Filler		10 lbs.		
6d-6	PERF-A-BEAD Corner reinforcement		PERF-A-BEAD & PERF-A-TAPE Cement as needed		
4½	No treatment required	USG METAL TRIM (for doors, windows and ceiling angles)	None	Note: Woodgrained is prefinished at the factory. If further finish is desired, a coat of varnish or wax may be applied. Walls subjected to frequent washing are offered greater protection when treated with a coat of varnish AND a coat of wax.	
6	PERF-A-TAPE Joint System PERF-A-BEAD corner reinforcement	PERF-A-TRIM (for doors, windows and ceiling angles)	375 Lin. Ft. Tape App. 40# Cement. PERF-A-BEAD & PERF-A-TAPE Cement, as needed	Same as for regular SHEETROCK above.	
None	No joint treatment required	USG METAL TRIM (for windows, doors, and ceiling angles)	60# per 1000 square feet	Predecorated	
	PERF-A-BEAD corner reinforcement			Predecorated	
				TEXOLITE DURAVAL, Imperial or Standard SHEETROCK Sealer prior to wallpaper.	

Single Layer SHEETROCK Wallboard Application

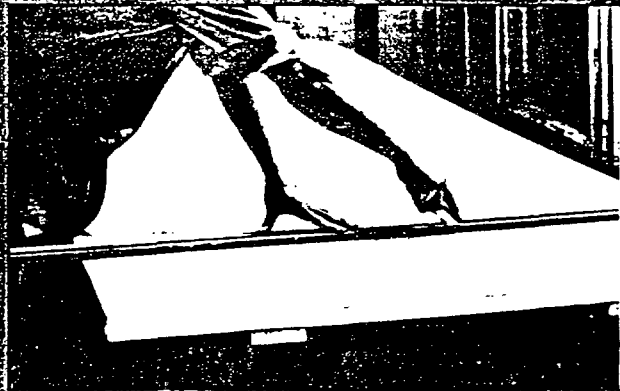
Horizontal application on walls and ceilings is usually recommended for these reasons: reduce joint footage up to 25%; strongest dimension of board runs across framing members; bridges irregularities of framing members; better eliminates need for headers; better bracing—ties more framing members together; most joints are at convenient heights on walls for joint finishing.



HORIZONTAL APPLICATION—If speed of erection because fewer joints are required. For example on an 8 ft. x 12 ft. wall containing a window 36" wide, only 9" of joint treatment is needed (4 1/2" each side of window).



VERTICAL APPLICATION—Vertical application is recommended for use on walls over eight feet six inches in height. It should also be used where the PERI-STAPE joint system is not to be used, and on all walls 4" wide or less.



SCORING BY SCORING—Straight line cuts across the full width or length of the board can be easily and quickly made by scoring the face paper using a sharp knife with pointed end. Make air-out for electrical outlets etc. with a keyhole saw.



BREAKING CORE OF BOARD—After scoring SHEETROCK surface paper, the next step is to break the core at the cut surface by snapping. This is easily done as illustrated above. After breaking the core, cut back paper from under side of board at crease.



APPLY CEILING FIRST—Usually two men work on a ceiling as shown nailing from center of board toward ends and spacing nails 5 to 7 inches apart. However one man can install a ceiling by using a T-brace to hold the SHEETROCK Wallboard in position while nailing.

GYPSUM WALLBOARD

SHEETROCK

Modern, Fire-Resistant Walls and Ceiling Surfaces



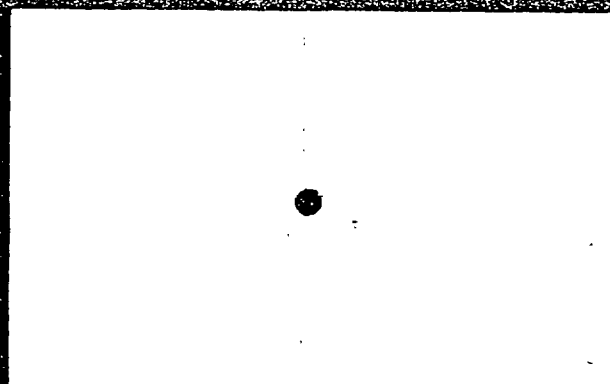
6. HORIZONTAL SIDEWALL—Start at top. End joints should be over openings. Where possible, span entire wall and headers needed behind PERF-A-TAPE joints where spans between supports is less than 24". Fill any space at base of wall with scrap pieces.



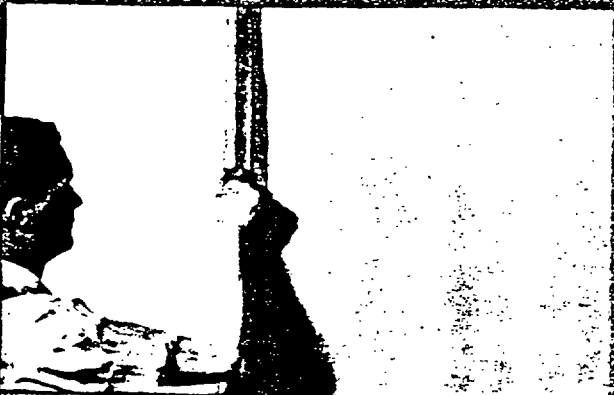
7. ARCHKERRING AND APPLICATION—Score the back paper at intervals of 1/2" to 1" depending on radius of curved surface. Nail the scored piece of SHEETROCK wallboard to the curved contour as shown, and sandpaper the edges flush with wall surface.



8. BOARD ATTACHMENT—Drive all nails home at right angles to the board with crown-headed hammer. Head of nail driven at any other angle will cut through face paper, resulting in loose nailing. During nailing, board should be pressed firmly against the stud. Loose nailing causes nail pops. Never use a nail set.



9. NAIL DIMING—The last blow, driving the nail home, should leave a slight dimple to be filled later with PERF-A-BEAD cement to conceal the nail. However, along edges of recessed edge board, nails should be driven flush to the surface in the channel formed by the recessed edge SHEETROCK wallboard.



10. CORNER REINFORCEMENT—PERF-A-BEAD, easily applied metal corner reinforcement for SHEETROCK wallboard. Formed of electro-galvanized steel with PERF-A-TAPE wings, PERF-A-BEAD provides lasting corner protection.



11. CURVED SURFACE—SHEETROCK Wallboard is flexible enough to be bent with safety around most structural curves. When 1/2-inch SHEETROCK is too sturdy to be bent to fit the required curve, two layers of 1/4-inch SHEETROCK may be used.

BB012 1969

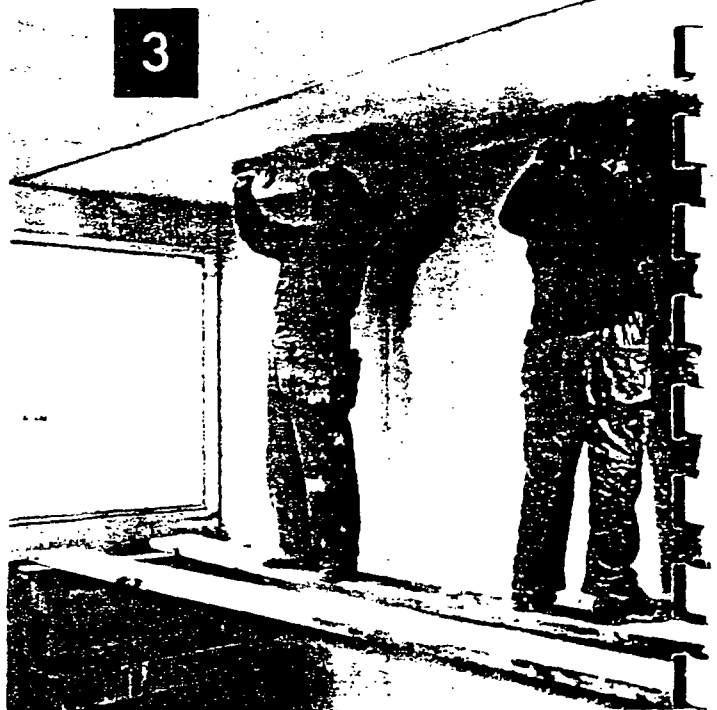
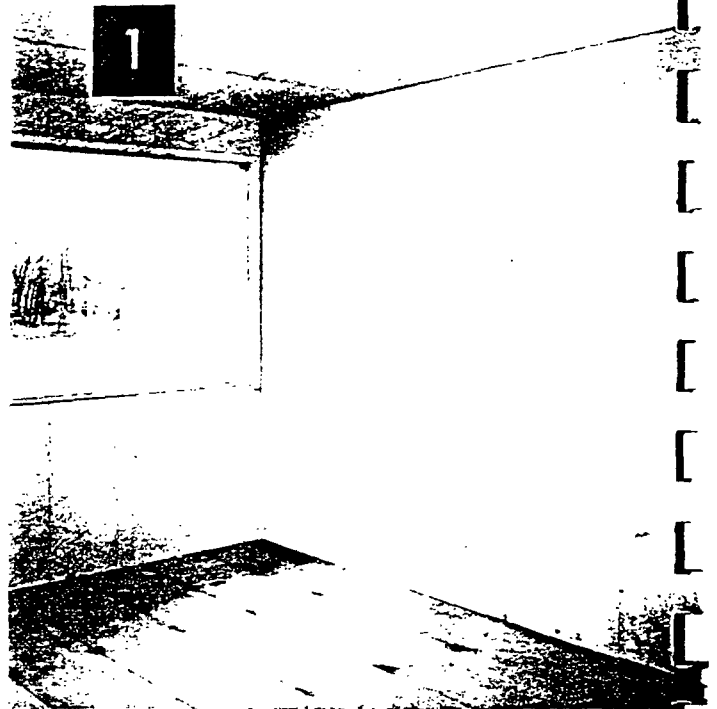
Laminated SHEETROCK Wallboard

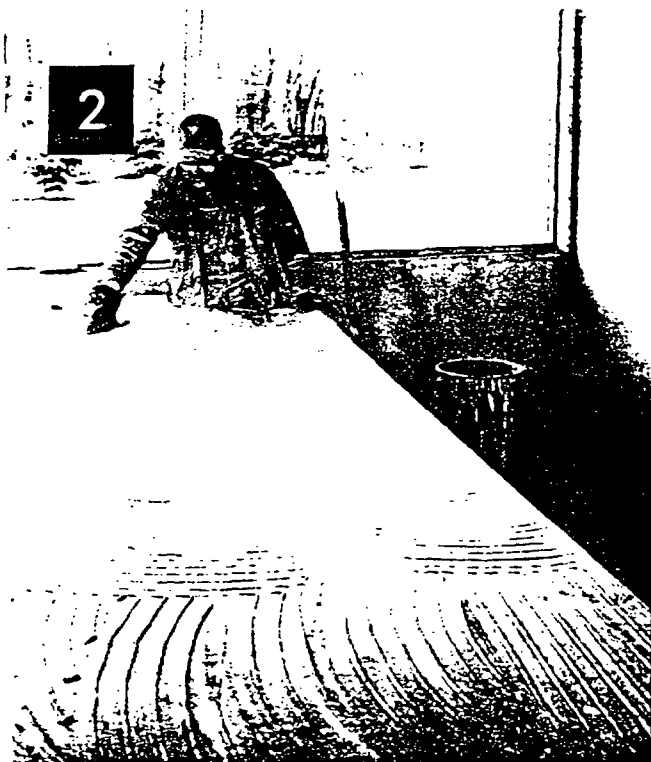
A Double Wall System

Built by a laminating system, the Double Wall of SHEETROCK Wallboard forms ultrafine walls and ceilings. It was developed after years of research and experience by U.S.G.—America's largest and foremost manufacturer of gypsum wallboards and joint-finishing materials.

Two thicknesses of $\frac{3}{4}$ " SHEETROCK Wallboard are job-laminated to produce these advantages:

- Greater strength, more resistance to abuse
- Increased resistance to cracking
- Easy decoration and maintenance
- Eliminates discoloration over nail heads
- Eliminates nail "pops"
- Greatly reduced sound transmission
- Increased fire protection





Application of First Layer of SHEETROCK Wallboard

Step by Step Procedure

These pictures provide brief directions for the application of both the first and face layers of the Double Wall of SHEETROCK. Application is shown for rooms where neither horizontal dimension exceeds 12 ft., and where wall heights are not in excess of 8'3". Alternate application methods for rooms of greater height or size are described under "Layout Patterns" in this section.

First step in erection of the Double Wall System is the ceiling application of the first layer of board. Notice that board is applied parallel to joists, with long edge joints occurring on the joists. The first layer of SHEETROCK is then applied to sidewalls vertically with the long edges parallel to and centered on the studs. Figure 1. Use 4d cement-coated nails, spaced 8" o.c. on sidewalls and 6" o.c. on ceilings.

Second step in job-lamination of the Double Wall System is mixing and applying PERF-A-TAPE cement evenly in an irregular pattern with a notched spreader blade, Figure 2. Ridges of cement provide positive adhesion, and offset any irregularities in the surface of the first layer.

Third step in job-laminating procedure is attachment of face layer. After uniform distribution of the cement on the back side of the board, the ceiling panels of the face layer are placed at right angles to the first layer, Figure 3, and temporarily nailed with sufficient nails applied in the field and on the edges of the board to insure bond between the layers.

Sidewall panels, of room length or width, of the face layer are installed horizontally, at right angles to the first layer, and are nailed temporarily to secure them while the cement dries.

PERF-A-TAPE Joint System is recommended to reinforce and conceal the joints in the face layer.



Application of Laminated SHEETROCK Wallboard

Corner Application in the Double Wall System

Outside Corner: First layer is not nailed; face nails are countersunk after cement dries.

Inside Corner: Floating corner. Note that only one board is nailed into corner at any one time. Other board's face layer SHEETROCK is not nailed into corner.

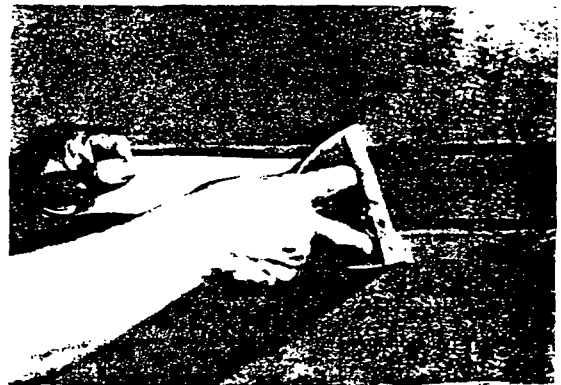
Further Technical Data

Note: 1/2" coat type	
Amount required first layer per sq. ft.	4 lbs.
Amount required second layer per sq. ft.	2 lbs.
Spacing first layer ceiling	6" o.c.
Spacing first layer side wall	16" o.c.
Spacing face layer ceiling (temporary)	12" o.c.
Spacing face layer side wall (temporary)	16" o.c.
PERF-A-TAPE Cement	1 lb. per sq. ft.
Package	25 lbs.
Mixing	approximately 2 1/2 parts water per 1 lb. cement
App. Required	50-60 lbs. per sq. ft. for face layer SHEETROCK



Countersinking face nails

After the face layer of SHEETROCK Wallboard has been in place sufficiently long for the PERF-A-TAPE Cement to dry (usually within 24 hrs.), the temporary nails that secure the face layer are countersunk at least $\frac{3}{8}$ " with a $\frac{5}{16}$ " nail set. Nail holes are then filled and are later finished with PERF-A-TAPE cement at the time joints are finished.



PERF-A-TAPE Joint System

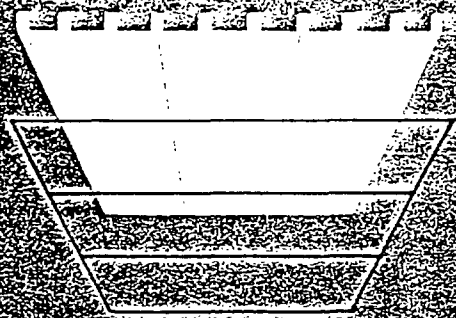
Final step of the Double Wall System is the treatment of joints and nail-head areas with the PERF-A-TAPE Joint System. This system is the result of years of research and field experience, and is the most satisfactory ever developed for finishing joints between gypsum wallboard panels. With Tapered Edge SHEETROCK Wallboard and PERF-A-TAPE Joint Reinforcement, joints are concealed, and are reinforced to provide continuity of strength over the whole wall. Details are shown on the following pages.

LAYOUT PATTERNS

Ceilings: PRELIMINARY PLANNING

Size and shape of ceiling will largely determine the method of applying SHEETROCK Wallboard on ceilings. All ceilings will fall into one of the three types illustrated. Note that in all cases the second or face layer panels are applied at right angles to the direction of base layer panels.

These Modular Layouts show proper application of first and second or face layers.

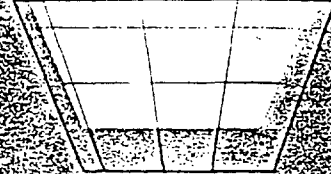


Ceilings where neither dimension exceeds 12 ft.

Full length SHEETROCK is used to span ceiling from wall to wall in both first and second layer.

First layer: Long dimension of SHEETROCK Wallboard is applied parallel to ceiling edges and staggered.

Second layer: Long dimension of SHEETROCK Wallboard is applied at right angles to the ceiling joists.

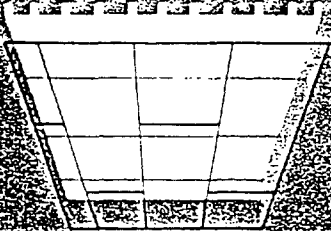


Ceilings longer than 12 ft., but not more than 12 ft. wide.

Full length SHEETROCK is used to span ceiling from wall to wall on second layer.

First layer: Long dimension of board is applied at right angles to joists. End joints are staggered and must occur between joists, not on joists.

Second layer: At right angles to first layer. Joints overlapping first layer joints at least 10 in. Full length panels span room. No end joints. Edges of the board should be centered on and temporarily nailed to the joists.

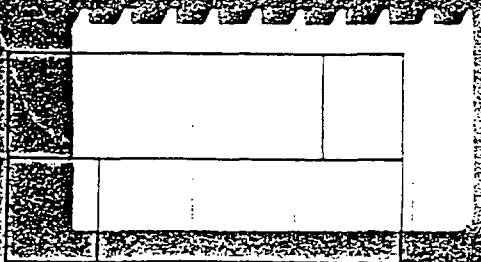


Ceilings with both dimensions greater than 12 ft.

First layer: Long dimension of the board is applied at right angles to joists. End joints are staggered and must be arranged to fall between joists rather than on them.

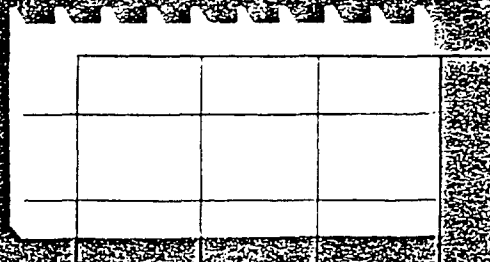
Second layer: At right angles to first layer. Joints overlapping first layer joints at least 10 in. End joints are staggered. Edges of board should be centered on and temporarily nailed to the joists.

Sidewalls: PRELIMINARY PLANNING



Walls not more than 8 ft. 3 in. in height.

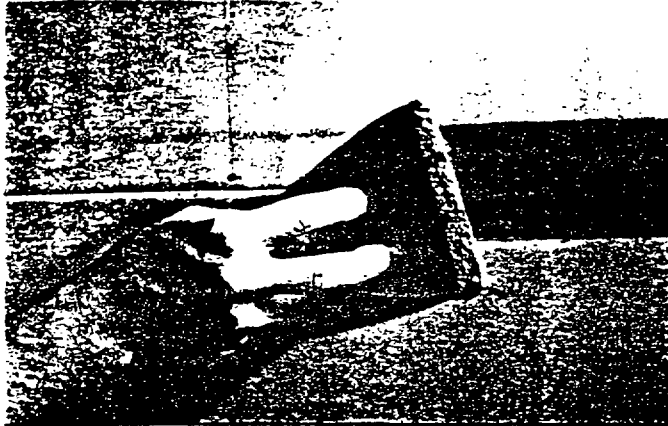
First layer is applied vertically, with edges centered on and nailed to studs. Second layer of SHEETROCK is then applied horizontally across studs. Where ceiling height is between 8 ft. and 8 ft. 3 in., the 8 to 12 in. gap at floor is filled with scrap strips and concealed by this baseboard. Where wall lengths exceed 12 ft. vertical end joints must be staggered so as to fall between (not on) framing members. Use wood cleats on face of board to hold ends in place until adhesive has set, and then remove them. Use 12 ft. panels wherever practicable to minimize end joints.



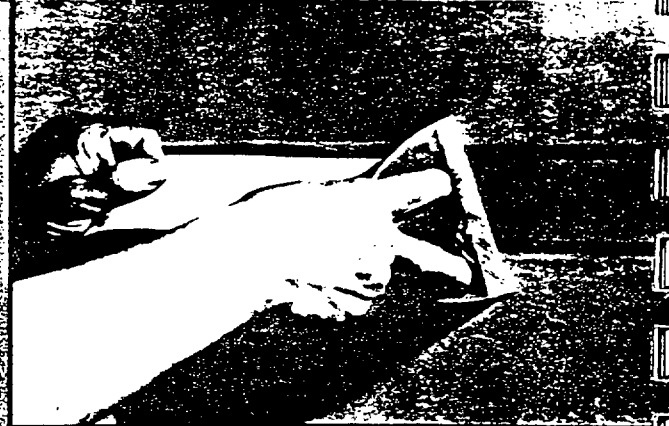
Walls greater than 8 ft. 3 in. in height.

Where walls exceed 8 ft. 3 in. in height it is usually more practical to apply first layer of SHEETROCK Wallboard horizontally, breaking all end joints between studs where 12 ft. boards will not span the wall length. The face layer is then applied vertically with full length SHEETROCK extending from floor to ceiling, thus eliminating end joints. Where joints in first and second layers are parallel, they must be offset at least 10 in. Edges of the face layer should be centered on and temporarily nailed to the studs.

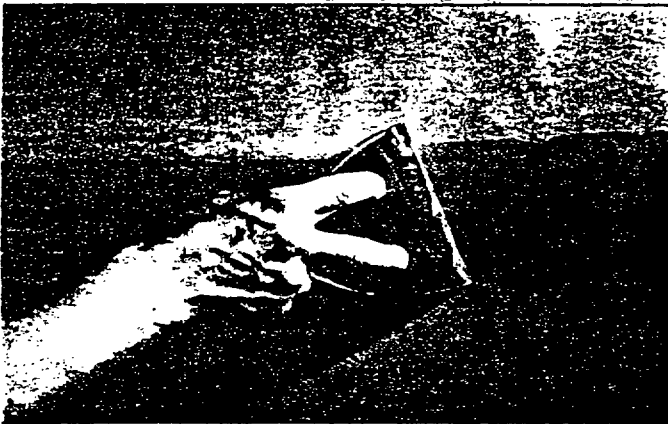
PERF-A-TAPE JOINT SYSTEM



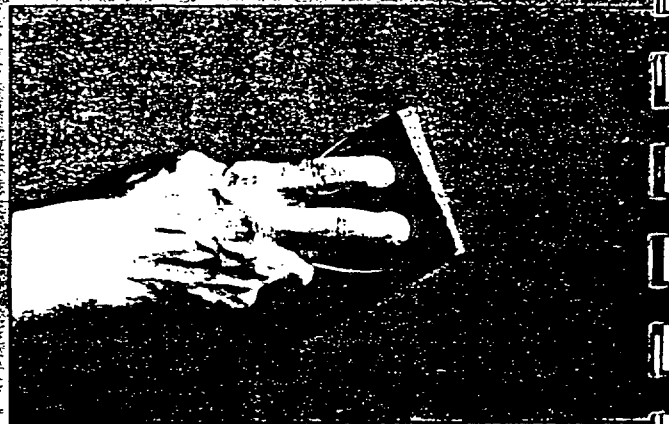
(1) BUTTERING THE JOINTS: Use a USG joint finishing knife and butter the cement into the channel of the recess, filling channel evenly and fully. Full details for mixing and applying cement are contained in package.



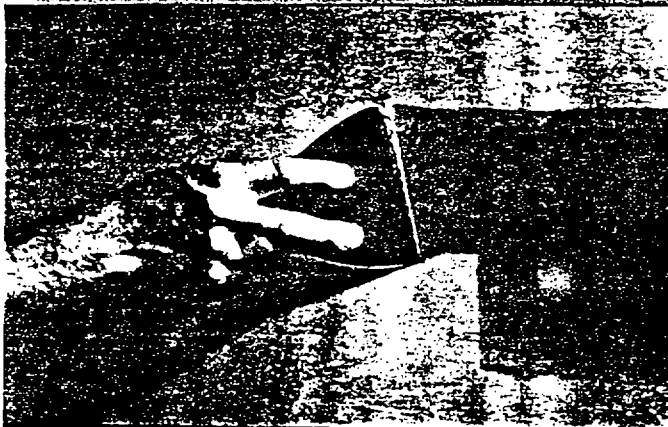
(2) EMBEDDING THE TAPE: Center PERF-A-TAPE reinforcement and force down into recess by holding knife almost vertical to the board and drawing along joint with sufficient pressure to remove excess cement.



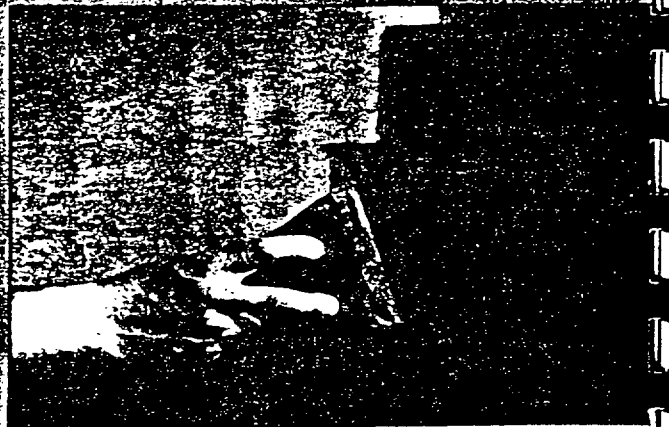
(3) COVERING THE TAPE: As soon as PERF-A-TAPE reinforcement is embedded, cover it with a thin layer of cement to fill recess flush with face of board. At this time nail heads should be spotted.



(4) SPOTTING NAIL HEADS: Apply a covering coat of PERF-A-TAPE cement over all nail heads, using sufficient pressure on the knife to finish the cement level with the wall surface.



(5) SECOND COAT: After embedding coat has dried (usually next day), smooth with sandpaper. Then cover second coat of cement, feathering edges of cement an inch or two beyond shoulders of recess.



(6) THIRD COAT: Sand lightly, then apply a third finishing coat of cement to level any defects and to compensate for second coat shrinkage. Feather out an inch or two beyond second coat. Sand lightly.

for beautiful continuous wall surfaces

The PERF-A-TAPE joint system consists of a strong, triple spark perforated strip of fiber reinforcement, and a specially formulated cement designed to meet the most exacting requirements.

Reinforcement

PERF-A-TAPE is made from a special cross-fibered paper of great strength. At both sides the PERF-A-TAPE strip is feathered to thin edges. The strip is perforated with holes to release air during the embedding process.

Cement

PERF-A-TAPE cement is a "drying" type of material that hardens as the water leaves the body of the cement. A drying type of material results in a longer working life than a "setting" type. It has these advantages: easy mixing; ample working time; good bond; minimum shrinkage; smooth working; easy sanding; resistance to edge cracking and check cracking; no discoloration of sensitive paints when surface is properly prepared.

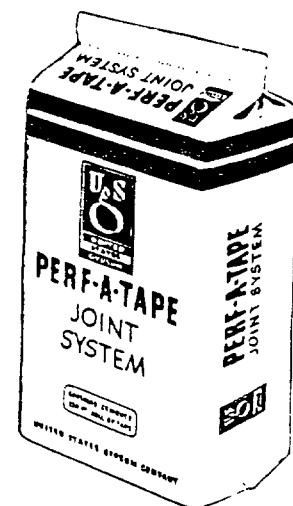
For buttering the joint, embedding the tape, and finishing, the 4" or 5" USG joint knife is recommended. It is a specially designed hollow-ground tempered steel blade with the correct amount of flexibility. Ordinary putty knives are too narrow and stiff. Other tools and equipment required are buckets for mixing cement and holding water, paddles for mixing cement, bread pan or hawk for carrying cement, hammer for driving home loose nails, sandpaper, sanding block, and a trowel.

Mixing the Cement

- Mix PERF-A-TAPE cement in a clean metal container. A 1x2 (4' long) makes a convenient stirring paddle.
- Use clean lukewarm water: approximately 3 pints to 4½ lbs. cement (60 ft. package); approximately 12 pints to 18 lbs. cement (250 ft. package); approximately 17 pints to 25 lbs. cement (25 lb. package).
- Pour all the water into pail; then pour all the cement into water.
- Stir vigorously for approximately 1½ minutes—be sure all cement is uniformly damp. At this point, the mass will appear somewhat dry and mealy. However, additional stirring is not necessary. (Do not add additional water.)
- Let mix stand for at least 30 minutes. (Overnight soaking is good practice.)
- Stir vigorously for approximately 1 minute, breaking down any lumps. Cement is now ready. Additional

250-foot roll of reinforcement, 18 lbs. cement, 1 direction sheet. For use on the average job.

60-foot roll of reinforcement, 4½ lbs. cement, 1 direction sheet. For home owner or small job use.



For customers requiring additional cement.

5000' PERF-A-TAPE Applicator Unit—designed for applicators and other large users of PERF-A-TAPE Joint System. Contains 15-25 lb. bags of PERF-A-TAPE Cement (375#) and 1 carton containing 20-250' rolls or 10-500' rolls of triple spark perforated PERF-A-TAPE (5000').

25# PERF-A-TAPE Topping Cement—A smooth textured, easy sanding cement widely used for 2nd and 3rd coats.

Decoration

SHEETROCK Wallboard provides an excellent surface for any type of decoration. Like any wall or ceiling surface, SHEETROCK must be prepared properly for the decorative finish.

Finish

1. Latex, resin emulsion or casein finishes.

2. Flat, semi-gloss or high gloss oil paints; enamel; or oil stipple finishes.

3. Calcimine finishes.

4. Wallpaper or wall fabric finishes.

Surface Preparation

A. For smooth wall surfaces: one coat of SHEETROCK Sealer.

B. For textured wall surfaces: one coat of TEXTONE or USG Texture Paint.

One coat SHEETROCK Sealer.

One coat varnish wall size.

One coat SHEETROCK Sealer.

water of room temperature may be added, if necessary, to thin. Small amounts of cement may be added to thicken it. The best consistency is a little thinner than putty, but thick enough to be handled without excessive droppings.

The beauty of natural wood at a fraction of the cost

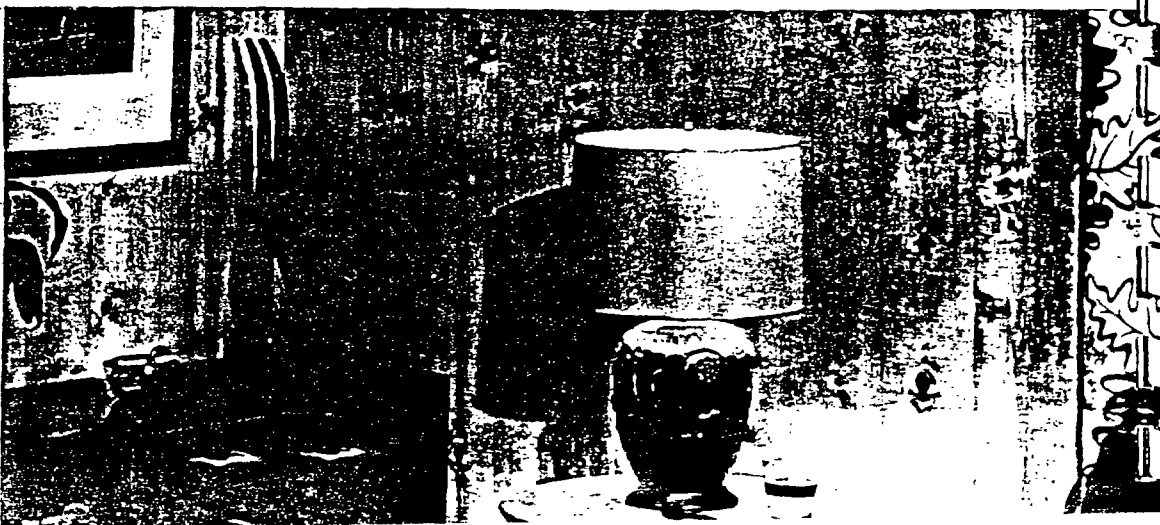
Bleached Mahogany
woodgrained SHEETROCK
provides the perfect
background for this
modern office.



Planked Walnut
woodgrained SHEETROCK
adds richness and warmth
to this den.



Groovy Pine woodgrained
SHEETROCK gives this
creation room the beauty
of natural wood.



Woodgrained

SHEETROCK

Beautiful, accurate reproductions of the appearance of real wood paneling—plus the fire protection of gypsum at a fraction of the cost.

Woodgrained SHEETROCK is a pre-finished gypsum wallboard combining the appearance of wood with the fire resistance and other advantages of gypsum. The grain, knots and coloring characteristic of bleached mahogany, knotty pine and planked walnut are accurately reproduced on the face of the SHEETROCK by photographic and printing processes. A factory-applied lacquer protects and preserves the finish. Nails are available in colors that match the surface of the board.

Finish and Cleanability

One of the most important advantages of woodgrained SHEETROCK wallboard is that it can be used without decoration. Where excessive wear is expected, or a glossy finish is desired, the panels may be waxed or varnished.

Woodgrained SHEETROCK is easily cleaned with a mild soap and water solution. If the surface is to be subjected to repeated washings it should be given one coat of clear varnish, dull or gloss, as desired.

Economical—Quickly Applied

The low cost of SHEETROCK wallboard combined with the saving in decoration cost make woodgrained SHEETROCK extremely economical. Further savings result through ease and speed of application.

Application is rapid, because woodgrained SHEETROCK is available in large size sheets which reach from floor to ceiling and span three spaces between studs placed 16 inches on centers. The wallboard panels are easily nailed and cut, further reducing erection time.

Sizes and Recommended Uses

Woodgrained SHEETROCK wallboard is made in 3/8-inch thickness, 4-foot widths, 8-foot and 10-foot lengths. Approximate shipping weight, per thousand square feet, 1525 pounds. Two pieces, face to face, per bundle.

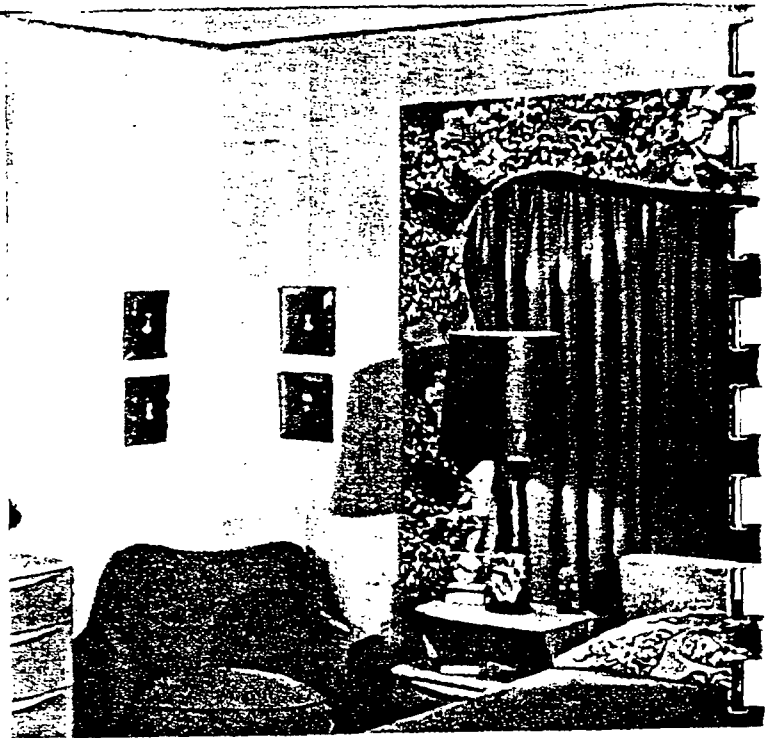
Woodgrained SHEETROCK wallboard is used in libraries, dens, hallways, finished basement and attic rooms, shops, offices, restaurants, clubs, display rooms, etc., wherever a wood paneled effect is desired.

No Panel Strips or Joint Treatment Required

The fine line joint obtained by butting square edge knotty pine or planked walnut woodgrained SHEETROCK panels together looks like a combination of the random width plank field pattern. Bleached mahogany woodgrained SHEETROCK has a beveled edge, which makes butted "V" joints a part of the decoration instead of something to be hidden. Picture mouldings, cove mouldings, chair rails, plate rails and base assemblies may be selected from the wide variety commonly used. Mouldings may be stained to harmonize or contrast with woodgrained SHEETROCK wallboard.

Panel SHEETROCK

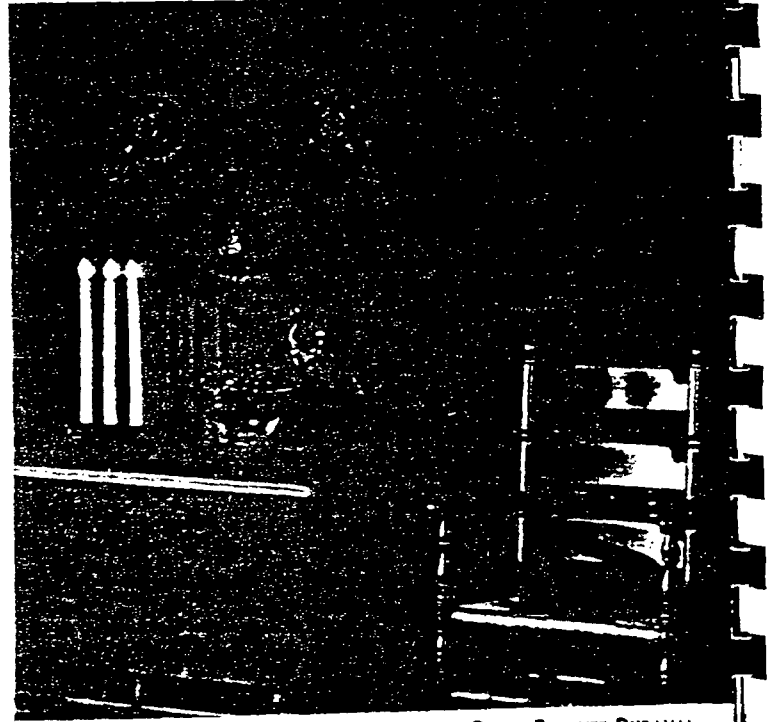
only 16" wide



Striated Panel SHEETROCK Wallboard fits any modern decor.



Pine Panel SHEETROCK offers the look of expensive wood planking.



Plain Panel SHEETROCK, painted with Brewster Green TEXOLITE DURAVAL.

Panel SHEETROCK products offer all the advantages of regular SHEETROCK wallboard, plus . . .

Light Weight—Only 16" wide, in room-height lengths, an 8 ft. panel weighs only 16 pounds.

Ease of handling—Simplifies finishing hard-to-get-at spaces in building or remodeling.

Fast and easy erection—Can be erected quicker, and with fewer tools, than hanging wallpaper. Experience and skill unnecessary.

Smart modern effects—Attractive panel joints require no special treatment.

No face nailing—Apply with adhesive; face nails unnecessary, except to hold panels to an unusually irregular base or sloping surface.

Panel SHEETROCK is made in three finishes:

Plain—Face paper is highly calendered manila paper suitable for any type of decorative treatment.

Knotty Pine—Face surface is high quality paper on which an accurate photographic reproduction of selected knotty pine is printed in color.

Striated—Face surface is a pleasing pattern of lengthwise scoring in varying widths and depths, predecorated in a neutral tone to accentuate the pattern, requiring no further decoration.

In new construction, Panel SHEETROCK is applied over a base layer of regular $\frac{3}{8}$ " SHEETROCK erected horizontally. Base layer is applied directly over wood studs or wood furring strips 16" o.c. Framing must be in true alignment before base layer is applied.

Erect base layer using 4-d cooler type nails located not less than $\frac{3}{8}$ " from edges and ends of boards and spaced 8" apart along the supports. Top wall panel is applied first and butted against ceiling. Over openings, end joints should be centered on studs. End joints must be staggered.

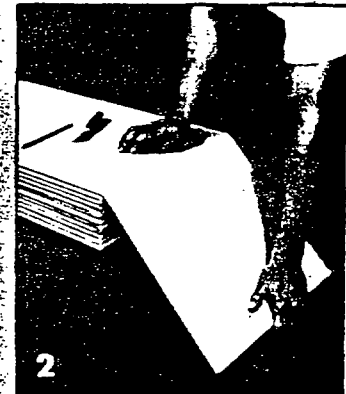
In remodeling work, the trim at ceiling, base, doors, windows, etc. must be removed. All wallpaper, calcimine and loose or scaly paint must be removed. Where surfaces are textured in a medium to coarse pattern, the high points of such textures must be taken off.

How to Apply PANEL SHEETROCK



Mixing cement

Use a clean metal container such as a 5-gallon paint pail. Pour the required amount of water into the pail—approximately 22 pints for 25 lbs. of PER-A-TAPE Cement. Stir vigorously until thoroughly mixed and relatively lump free. Additional cement or water may be added to give a smooth, flowing material. Mix only enough material for one day's usage. Estimate: 60 lbs. of PER-A-TAPE Cement per thousand sq. ft. of walls.



Cutting

Using a sharp knife, cut the face paper and edges, and snap the boards as shown, breaking the core. From the reverse side, cut the back paper and snap forward for a clean break. Extra pressure on the knife is necessary in cutting the face paper on Knotty Pine and Striated Panel SHEETROCK Wallboard.



Spreading Cement—Full Panel. Place the U.S.G. 3-Notch Spreader at the end of the top piece of Panel SHEETROCK. Fill about half full of mixed PER-A-TAPE Cement. Using the little finger for a guide on the edge, draw the spreader blade to within 2" of the other end of the Panel, leaving three sharp, firm ridges of cement.



Applying First Board

Having determined the layout and corresponding width of first panel, start the wall application by placing the first panel at a corner. Plumb the first board with a carpenter's level as shown. Press the board lightly against the surface to assure even adhesion.



5 Holding Panels Tight to Ceiling

Where it is necessary to hold the top edge of the panel tightly against the ceiling, a 4d common nail can be used as shown. It should be driven as close to the ceiling as necessary, and is later covered by trim.



6 Tightening Joints

It is important that the panels are in close contact with each other to assure tight joints. This may be assured by using a 2x4 to impact the leading edge as shown above. The leading edges should be checked with a carpenter's level every three panels to be sure they are plumb.



7 Leveling Up the Surface

Within 15 minutes after panels have been applied, surfaces of all adjoining panels except the last two applied should be leveled by impact. Impact the joints gently with the width of a 2x4. Over uneven surfaces it may be necessary to temporarily nail an edge in position with a 4d finishing nail as shown above.



8 Scribing Corners

For a true fit at a corner, it is advisable to scribe the corner on the piece to be cut as a pattern. Measure the width, top and bottom, and use the pattern for marking and cutting the corner panel required.

Caution:

Care must be taken in spreading cement to prevent wet cement from coming in contact with the face paper of the panels. Clean any wet cement from the face paper before it is allowed to harden. SHEETROCK Wallboard is not recommended where exposure to moisture is extreme or continuous.

Corner Treatment

Outside corners of Plain Panel SHEETROCK may be treated with PERF-A-TAPE corner reinforcement. Outside corners of Knotty Pine and Striated Panel SHEETROCK should be finished with wood trim, stained or varnished to harmonize with the Panel SHEETROCK finish. Inside corners of Plain Panel may be treated with the PERF-A-TAPE Joint System if desired.

Painting

For good decorating results, paint Plain Panel SHEETROCK with TEXOLITE DURVAL. In kitchens and bathrooms two coats of semi-gloss oil paint are recommended.

Papering

Before applying wallpaper, panels should be sized with varnish wall size or SHEETROCK Sealer.

Normally the wallpaper is split into widths of paper necessary to cover each panel from joint to joint. The wallpaper is then applied to Panel SHEETROCK with the joints in the wallpaper occurring directly over the joints in the Panel SHEETROCK installation. The unused narrow strip cut from the roll is then thrown away. When, due to the design of the paper, it is necessary to use the full width of wallpaper to retain the pattern, the paper should be slit for joining over the joints between the units of Panel SHEETROCK. The remaining strip is then used to start the next panel, thereby preserving the design. If the paper is not cut at the joint between the panels of SHEETROCK Wallboard, as the wallpaper dries it will contract and tend to bridge the joint, with the result that at a later date an unsightly break or wrinkle will occur in the wallpaper over the joint.

Predecorated Panels

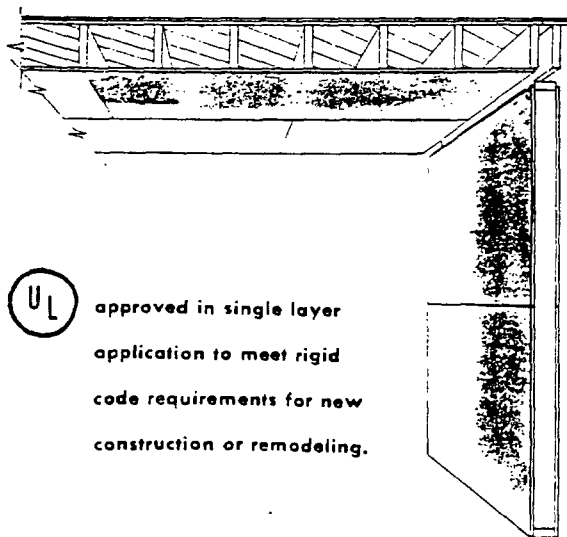
Knotty Pine and Striated Panel SHEETROCK come with a special factory finish and for ordinary use require no other treatment. Where excessive wear or repeated cleaning are expected, however, the Knotty Pine SHEETROCK panel may be waxed or given a coat of satin varnish after the application of a coat of shellac.

SHEETROCK

FIRECODE 45

Gypsum Wallboard

For partition and floor and ceiling constructions
requiring increased fire resistance ratings.



approved in single layer
application to meet rigid
code requirements for new
construction or remodeling.

For Commercial and Residential Building

SHEETROCK Firecode offers all the desirable characteristics of SHEETROCK wallboard, plus extra fireproof qualities to meet special code requirements of certain areas. It is Underwriters' Laboratories rated. Designed for use in stair halls, around heating units, between garage and living areas, and wherever building codes may require at least a 45 minute fire rating. The specially formulated core helps maintain the protective integrity of the board during exposure to fire.

Encased in heavy manila finished paper on the face side, and strong liner paper on the back, SHEETROCK Firecode has tapered edges and smooth ends to facilitate joint finishing.

Sizes: 48" wide, in lengths from 6' to 12'.

$\frac{1}{2}$ " SHEETROCK Firecode 45 is approved for partitions and floor and ceiling construction requiring a 45-minute fire rating.

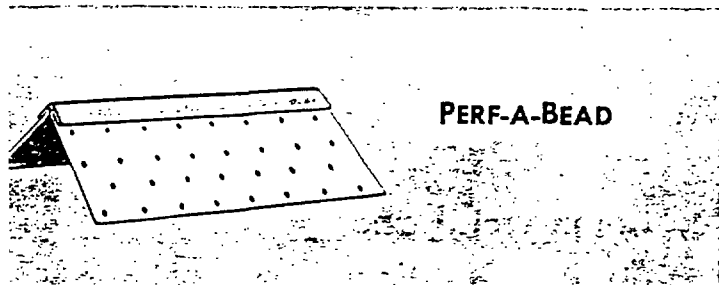
$\frac{5}{8}$ " SHEETROCK Firecode 60 is approved for partitions and floor and ceiling construction requiring a 60-minute fire rating.

The above fire resistance ratings are based on constructions as follows:

Partitions—Wood studs, in either bearing or non-bearing partitions, faced on both sides with SHEETROCK Firecode 45 or 60.

Ceilings—Wood joists faced with rough and finish floor, and SHEETROCK Firecode 45 or 60 on the under side.

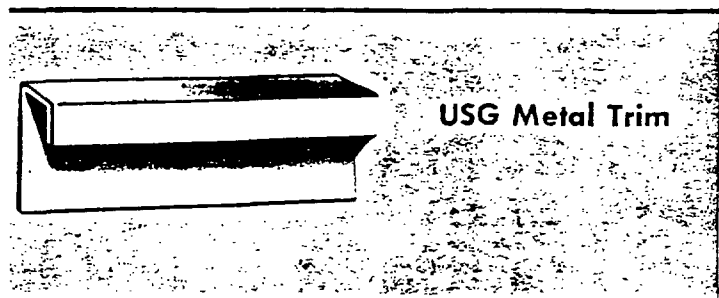
Accessories for SHEETROCK wallboard application



PERF-A-BEAD

PERF-A-BEAD Reinforcement—a metal corner formed of electro-galvanized steel with PERF-A-TAPE wings securely gripped by metal flanges. Easily applied with PERF-A-TAPE Cement and designed to provide lasting corner protection in dry wall construction. PERF-A-BEAD forms an excellent corner on any outside angle, uncased opening, pilaster, beam or soffit.

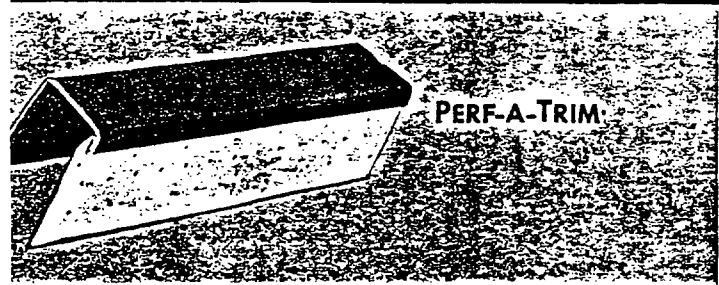
Lengths and Packaging—7' and 8' lengths. Packed 25 pieces and 125 pieces per carton.



USG Metal Trim

USG Metal Trim—a strong, smoothly finished, electro-galvanized channel for use as an edge protection and trim around door and window openings and as a moulding at ceiling angles in single layer gypsum wallboard construction. Available either plain or painted, for $\frac{3}{8}$ " gypsum wallboard only, to harmonize with predecorated wallboard, it is an economical utility trim which is especially suited for remodel work, particularly where Panel SHEETROCK is used.

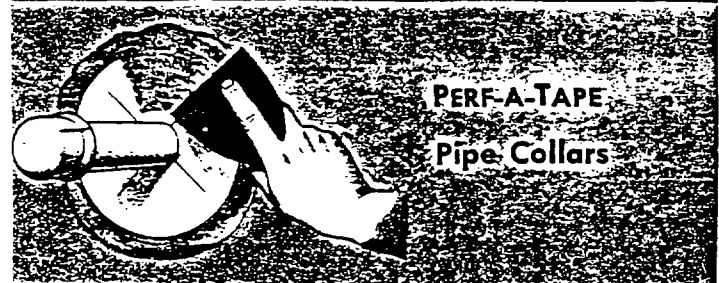
Lengths and Packaging—7' and 10' lengths. Packed 50 pieces per carton.



PERF-A-TRIM

PERF-A-TRIM—an electro-galvanized channel with PERF-A-TAPE flange attached. Designed for use as a casing around door and window openings and at ceiling angles. Suitable for single layer or double-wall gypsum wallboard construction PERF-A-TRIM is embedded with joint cement to produce a flush edge reinforcement. Bonderized for easy painting. Available for $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " thick gypsum wallboard application.

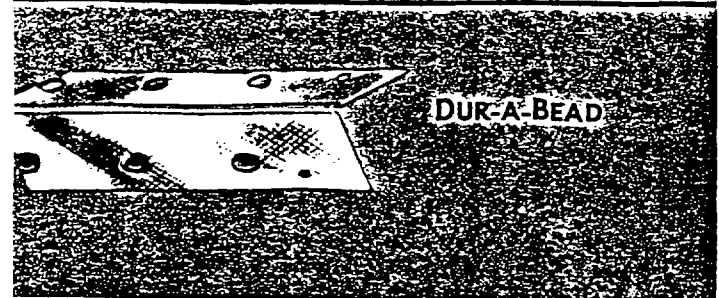
Lengths and Packaging—7' and 10' lengths. Packed 50 pieces per carton.



**PERF-A-TAPE
Pipe Collars**

PERF-A-TAPE Pipe Collars—circular "washers" of PERF-A-TAPE paper stock, designed with a center cut-out (for $\frac{1}{2}$ " or $1\frac{1}{2}$ " inside diameter pipes) and slotted to slip over pipes. Pipe Collars are quickly applied, with PERF-A-TAPE Cement, to produce a clean, flush finish around rough cutouts at pipe outlets through gypsum wallboard.

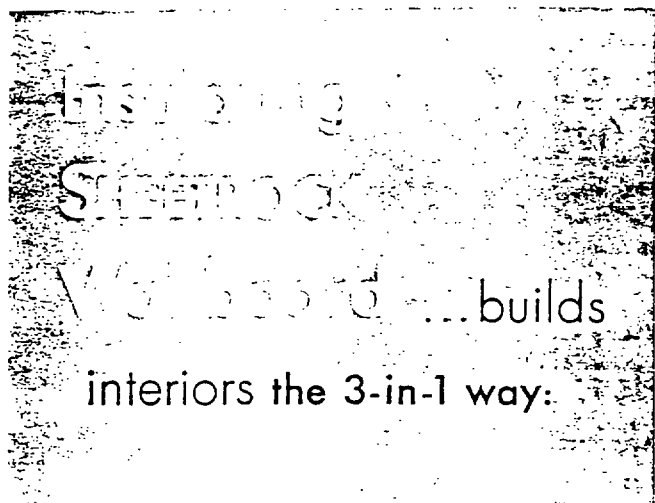
Packaging—for $\frac{1}{2}$ " pipes, 200 per box; for $1\frac{1}{2}$ " pipes, 100 per box; 6 boxes per master carton.



DUR-A-BEAD

DUR-A-BEAD—a bonderized metal corner reinforcement, formed of electro-galvanized steel, to provide lasting protection to outside angle corners in gypsum wallboard construction. Easily nailed to framing thru SHEETROCK wallboard, and concealed with PERF-A-TAPE Cement to a smooth, finished corner.

Lengths and Packaging—8' lengths only. 200 lin. ft. per carton.



1. Beautiful, Smooth Walls and Ceilings

Insulating SHEETROCK offers all the advantages of regular SHEETROCK, plus year-round insulation and vapor barrier protection—thanks to the aluminum foil laminated to one side.

When PERF-A-TAPE reinforcement and cement are used, joints are effectively concealed. Wall and ceiling surfaces can be smooth and seamless to the eye.

Without delay for drying, or as soon as the wood trim is applied, walls and ceilings of Insulating SHEETROCK are ready for the decoration chosen—paint, wallpaper, texture, stipple or any usual form of treatment.

2. Insulation Equal to ½" Fiber Insulation Board

When the foil side of Insulating SHEETROCK faces an air space of ¾ inch or more in width the insulating value is roughly equivalent to that of ½" fiber insulating board facing a similar air space. Summer or winter—heat inside or outside a house must travel through the air space within the wall. About 75% of heat travel across this area is by radiation. Insulating SHEETROCK effectively retards the flow of radiant heat through these spaces.

It is a known fact that radiant heat travels toward cooler areas; also, bright metallic surfaces such as aluminum foil efficiently reflect, and refuse to give off much heat by radiation.

Insulating SHEETROCK reflects summer heat like a

mirror reflects light—makes interiors as much as 15° cooler, and has no bulky mass to retain heat.

In winter Insulating SHEETROCK retards heat loss from the rooms . . . temperatures remain more constant and comfortable; fuel bills are reduced.

3. A Vapor Barrier that Controls Condensation

Imagine two test rooms (each with 1,000 sq. ft. of outside wall area), alike except that one room is *protected* by a vapor barrier because outside walls are surfaced with Insulating SHEETROCK wallboard; the other room has no such protection.

Identical conditions are maintained *outside* both rooms and *inside* both. Winter weather is simulated outside: 10° above zero, humidity normal—inside temperatures are held at 70°, humidity 45%.

Under such conditions, the moisture of the air inside gradually penetrates and condenses (up to 2½ gallons per day) in the outside walls of the *unprotected* room. If such conditions persist, rotted framing, peeled paint, a staggering repair bill can result!

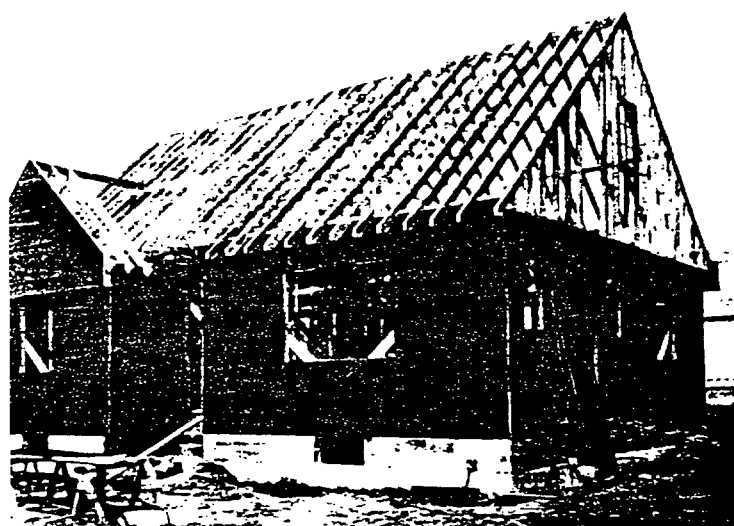
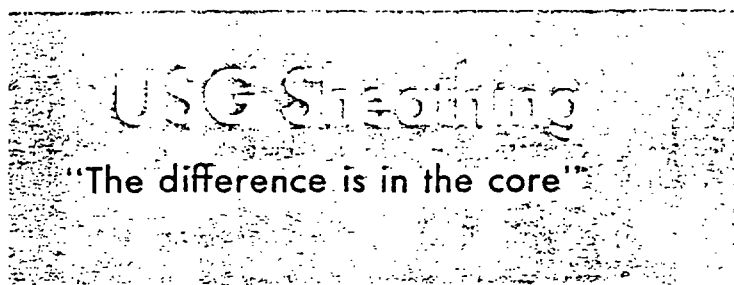
However, only about one pint will pass through outside walls of protected room because aluminum foil is extremely impervious to moisture vapor—Insulating SHEETROCK is a very efficient vapor barrier.

For New Construction . . . For Remodeling . . . A Wide Range of Sizes

Insulating SHEETROCK wallboard is recommended for interior surfacing of outside walls and top floor ceilings in new construction, and for major remodeling jobs such as completely new rooms. In such cases ½-inch thick, tapered edge Insulating SHEETROCK with the PERF-A-TAPE Joint System will give outstanding performance.

For less extensive remodeling (interior resurfacing of existing outside walls and top floor ceilings), ¾-inch thick furring strips can be installed, then Insulating SHEETROCK applied. These furring strips provide the minimum air space required to attain full insulating value from the aluminum foil.

Insulating SHEETROCK wallboard is available with tapered edge in ½" thickness; with tapered, beveled, and square edges in ¾" thickness. Standard width is 4', with lengths ranging from 6 to 12 feet.



Advantages

More economical—unit cost is low. Full surface coverage is provided (no face loss).

Less waste—scores and snaps to any dimension. Cutting waste is 5% or less.

Less labor—big 2' x 8' x 1/2" panels erect faster than smaller types of sheathing. Fewer nails required.

Fireproof—the gypsum core will not burn or support combustion.

Water-repellent—the gypsum core is asphalted. In addition, the tough cover paper is given a moisture repellent treatment for double protection.

Other outstanding features

USG Sheathing is durable and provides great bracing and structural strength. Tongue-and-groove edges tightly interlock to minimize wind infiltration. Piled on the job, it *weathers all weather*—no necessity for shed storage.

The gypsum core is incombustible, and will not communicate high temperatures until completely calcined—a slow process. USG Sheathing is nailed directly to exterior wall studding to form a tight enclosure for the building—free from knots and open cracks common to ordinary sheathing. USG Sheathing braces the framework against the harmful effects of normal structural movements. Building paper is eliminated except where building regulations require it to be used over all types of sheathing. Any exterior finish may be used over USG Sheathing, such as: wood siding, brick veneer, or stucco on metal lath. Wood shingles may be applied over wood furring strips or asbestos cement shingles applied with the USG SHADOW-LOCK Attachment System.

Application

Apply USG Sheathing with the long dimension across the supports and with the groove edge down, interlocking the tongue and groove edges. Ends of sheets should abut over centers of supports, and all end joints should be staggered. Fit snugly around all window and door openings. Sheathing should be secured to studs with nails spaced approximately 4" on centers, 7 nails per 24" sheathing width per support. Where exterior finish is secured to the frame with nails driven through the sheathing and into the studs, nails should be spaced approximately 8" on centers, 4 nails per 24" sheathing width per stud.

Nails should be galvanized, 5/16" head diameter, 1 3/4" roofing nails, with No. 11 gauge barbed shanks. Starter nails should be not less than 3/8" from edges or ends of sheathing.

Packaging

USG Sheathing is packaged face to face—two pieces per bundle. End bundling protects ends and face side of board and reduces cost of handling.

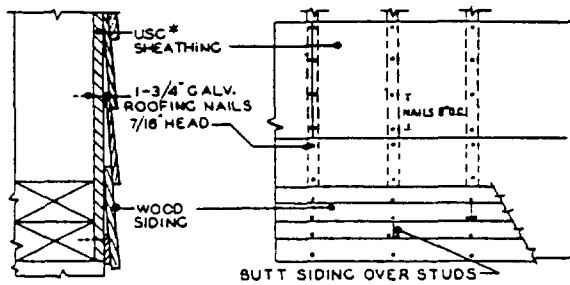
Better bracing—Hydraulic jack in comparison test shows deflection of wood sheathed panel as compared with USG Sheathing.



BB012 1984

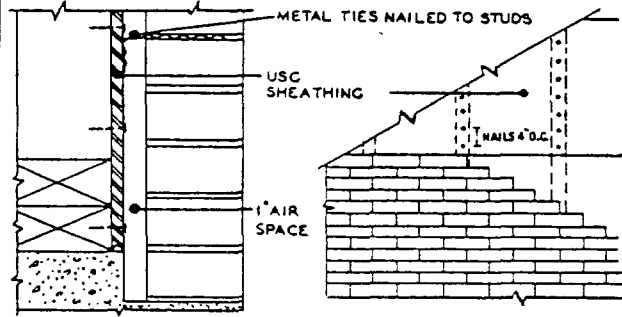
Application of siding finishes

WOOD SIDING

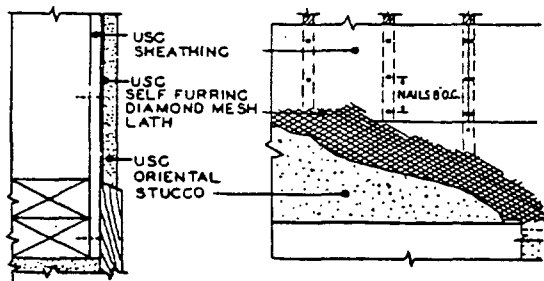


* T. M. Reg. U.S. Pat. Off.

BRICK VENEER

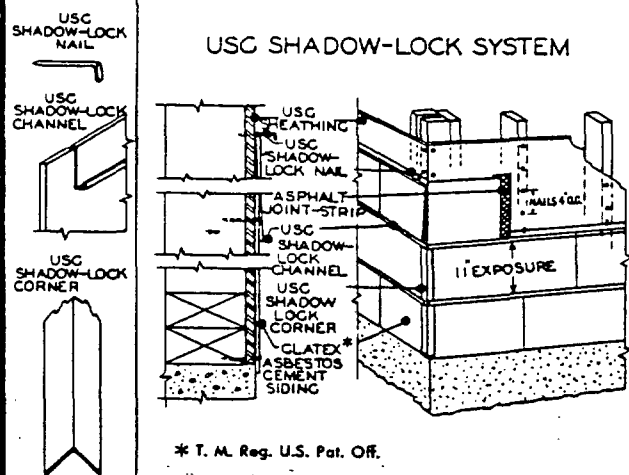


ORIENTAL * STUCCO



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

USG SHADOW-LOCK SYSTEM



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

The SHADOW-LOCK Attachment System is the recommended method for attaching Asbestos cement siding directly to USG Sheathing with precision-made aluminum channels and corner pieces. This method of attachment creates a deeper and more beautiful shadow line than is obtained through the usual application. The top leg of the channel is placed over the top edge of the preceding course of siding. Channels are secured by the use of the USG Hook-Head nail driven closely over the top of the channel, through the sheathing and into the studs at each crossing thereof. The hook head should extend downward over the vertical leg of the channel so as to secure the channel and shingles to the framing. Nails are not to be driven closer than 1 1/2" to the corners.

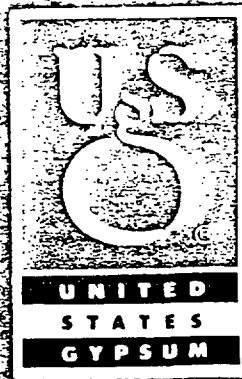
End joints of the channels should be staggered in adjacent courses and need not be cut back to the nearest stud. Once the channel is secured in place the

shingles are placed into the channel, placing joint strips behind all vertical shingle joints.

Metal corners are installed as the work progresses, inserting the lower end of the corner piece between the shingle face and the exposed upstanding legs of the channel; the top end of the cornerpiece is inserted between the channel and the shingle face.

The attachment channels and shingles are cut to conform to the angle of the rake of the roof and the top course of shingles should be face nailed into the framing.

SHADOW-LOCK channels are 8' long and 1" wide, packaged 125 pieces (1000 lin. ft.) per carton. Estimate 112 lin. ft. per square of siding. SHADOW-LOCK corners are 11 1/2" long, packaged 50 corners per carton. One carton of corners is ample for the average one-story house.



BB012 1786