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USG-1356

RED TOPICS

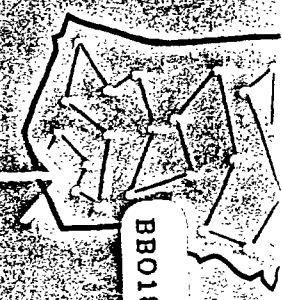
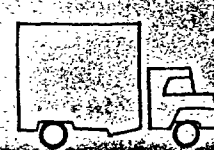
THE MAGAZINE OF LATHING AND PLASTERING

**Biggest Job Yet for
Steel Stud Partitions**

**Steady Bucks as
Crack Insurance**

**Roving Sales Show
Scores for Plaster**

ISSUE 3
1956



BB018 2185

A new bank and office building used steel stud partitions because they are

easy to join to - easy coming

BIG BANKS are specialists in making money work and return a profit. The same shrewd eye that evaluates investment possibilities for their depositors' money, calculates the risk and return possibilities on a building which is built for their own use.

Houston's Second National Bank has changed its name (to the more inclusive Bank of the Southwest) and built a grand new 24-story landmark on the Houston skyline. With the guidance of Architect Kenneth Franzheim & Associates the bank has reached more into the future than into the past for construction methods used in the new building. The methods they chose drew heavily upon the skill of the lathing and plastering trades.

The outside wall structure is unique in itself. Two-story factory-fabricated panels provide an aluminum exterior skin for a conventional framework of steel. The panels incorporate window units. A unique perforated aluminum sheet lath (especially fabricated for this job) is attached,

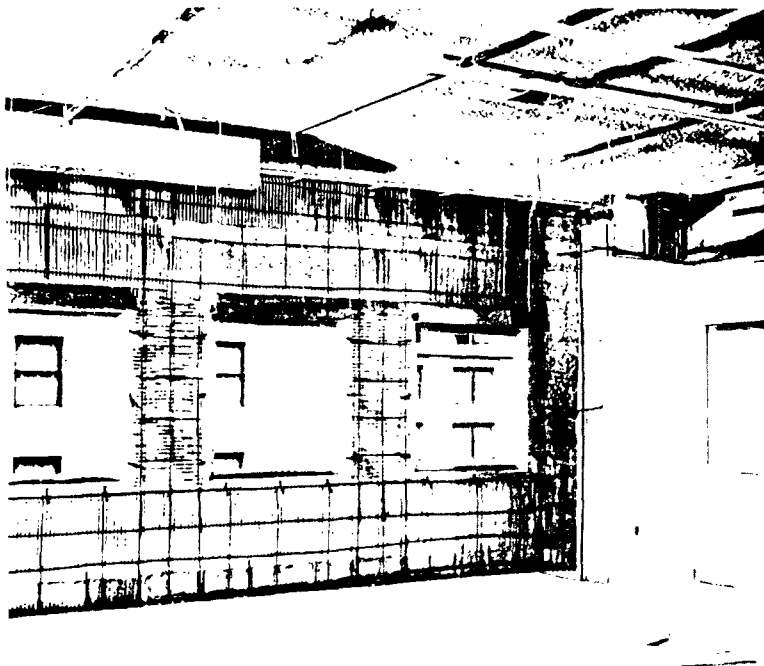
leaving 1½-inch air space between it and the exterior facing. A grid of reinforcing rods is erected inside of this and four inches of a lightweight aggregate plaster mix is machine-applied to the aluminum lath.

Diamond Mesh metal lath covers this assembly, as a base for interior plaster wall surfaces.

Interior Partitions Permanent, Easily Removable

As landlord of a major office building the bank has a large stake in long range costs, as well as immediate construction expenditure. The TRUSSTEEL stud ROCKLATH and plaster partition system serves both interests so well that it was adopted for all interior office partitions.

Its erection economy compares favorably with painted masonry block, and its structural nature brings economy to this type of building where partition changes are constantly under way to accommodate tenant needs.



THE LAST OF THREE APPLICATIONS of machine-applied lightweight plaster brings plaster thickness to four inches on exterior walls. Metal lath goes over this as a base for interior surface plaster.

WINDOWS are incorporated in a two-story aluminum panel which forms the outer skin of the building. This shows a special perforated aluminum sheet lath and a grill of reinforcing rods furred in from the face of the lath.

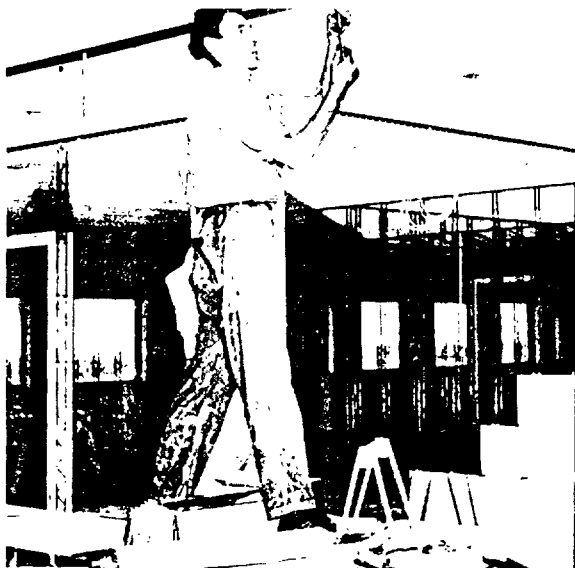
BR018 2185

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NOTICE: The following trademarks, owned and/or registered in the U.S. Patent Office by United States Gypsum Co., are used throughout this magazine to designate products manufactured by that company: ROCKLATH (plaster base), TRUSSTEEL (studs), STRUCTO-LITE (perlited plaster), RED TOP (gypsum plaster), PYROBAR (gypsum partition tile), TRUS-LOK and BRACETITE (lathing clips), AUDICOTE (acoustical plaster).

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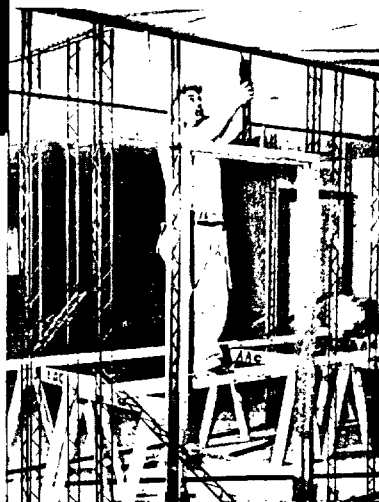


ROCKLATH plaster base is attached to the steel studs with a removable TRUS-LOK clip. At the floor and ceiling, a runner channel secures the studs. The entire ceiling of acoustical tile suspended by T-shaped splines is installed before partition work begins. Ceiling runners for the partitions are merely screwed at occasional intervals to the exposed splines which carry the tile. Where a partition runner is parallel to the ceiling splines, a lathing wire is pushed through the tile and looped over a concealed channel that is part of the grid supporting the ceiling. In either case, removing a partition leaves only imperceptible holes in the ceiling material, while installing a new one doesn't disturb the rest of the ceiling or floor.

To remove a partition it is necessary to break through only the top course of lath. The rest can be disassembled easily by removing the clips. The studs and runner track are left undamaged to be reused in another location.

Architect Mooney, job captain on this building for the Kenneth Franzheim organization, cited a combination of this versatility with a high sound transmission loss rating and the openness within the partition as a basic reason for its specification on the Bank of the Southwest job. He felt that there had also been major economies in plumbing, and electrical contracts based on ease of running lines through the open web of the TRUSSTEEL stud partition.

THE CEILING IS FINISHED before interior partitions are started. The first step is screwing runner track to exposed splines which support the suspended acoustical tile ceiling. When track runs parallel to the splines it is wire tied, through the tile to channels above. Runner track is also stub-nailed to the floor slab.



STUD ERECTION consists of setting studs in the track on 16-inch centers and fitting a shoe which holds it secure. A flange of the shoe extends under the runner track while the length of it cups around and snaps onto the stud up-rights. A single wire tie is thrown around this assembly for permanence. Notice how the stud braces the metal door frame.

TRUS-LOK CLIPS are the heart of this system, and allow ROCKLATH plaster base to be erected at unbelievable speed. End joints of lath fall between studs. In disassembling such a partition these clips are quickly released to remove the lath and plaster, leaving the entire stud structure undamaged for full salvage.



THE NEW 24-STORY HOME of the Bank of the Southwest, Houston, Texas

Kenneth Franzheim, architect
W. S. Bellows Construction Corp., builders
A. A. Greer, lathing and plastering contractor



Roving Sales Show Scores for Lath

RED TOPICS' photographers caught up with lath and plaster's roving sales show when it stopped to demonstrate the latest developments of the trade to Houston's architects and builders.

The truck-auditorium idea was adopted early this year by United States Gypsum Co. and adapted with special equipment to do a significant promotion job for the lath and plaster industry in all parts of the United States. By August 1 more than 2,700 top-flight architects and contractors had seen the demonstration.

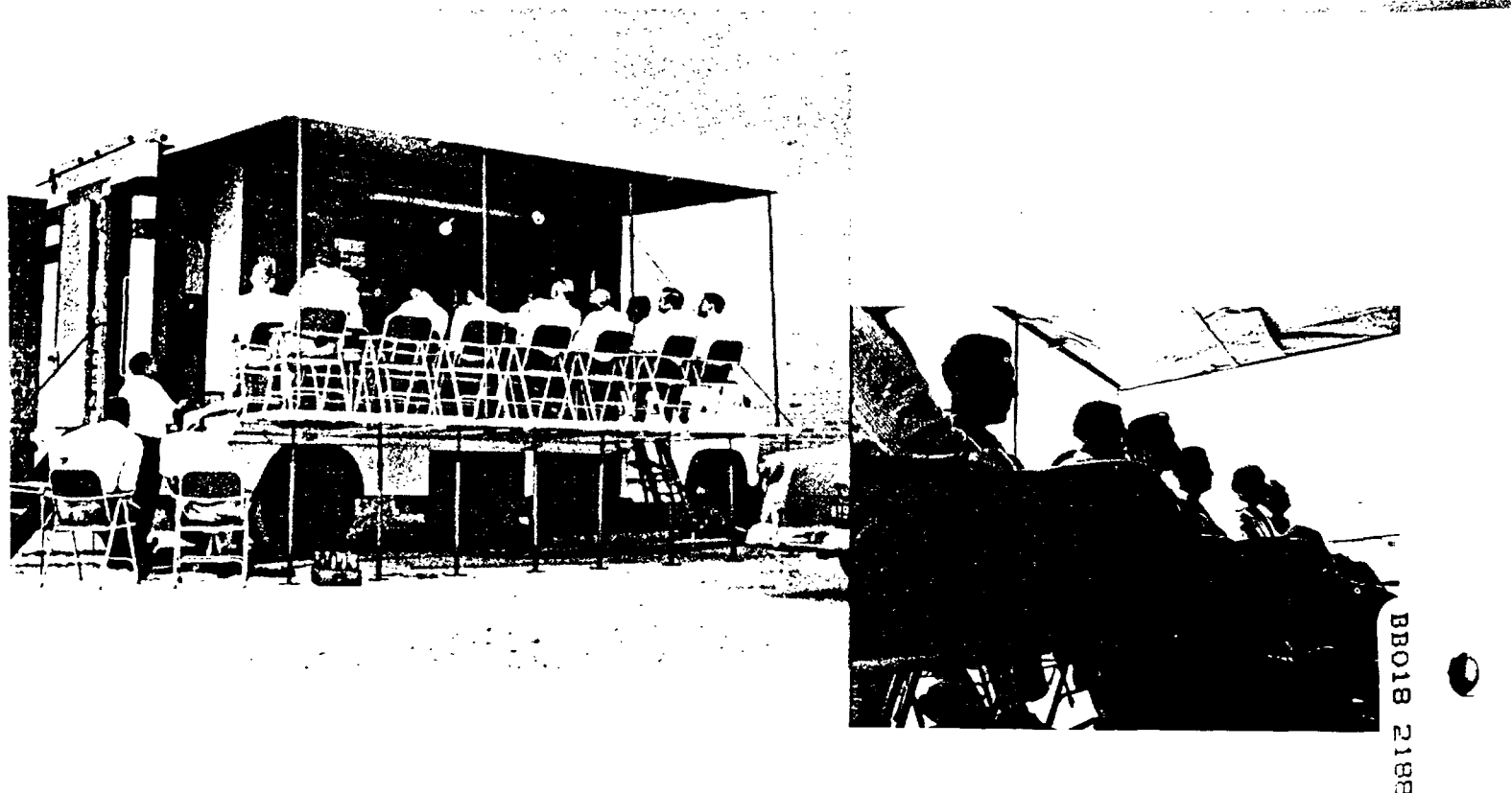
For many of them it opened entirely new concepts in the use of lath and plaster. New systems they had read about became challenging possibilities when architects saw them erected before their eyes. They witnessed the assembly of the TRUSSTEEL stud and ROCKLATH plaster base partition, the BRACE-TITE system of attaching lath to ceiling channels, and the use of furring clips and channels for outside wall

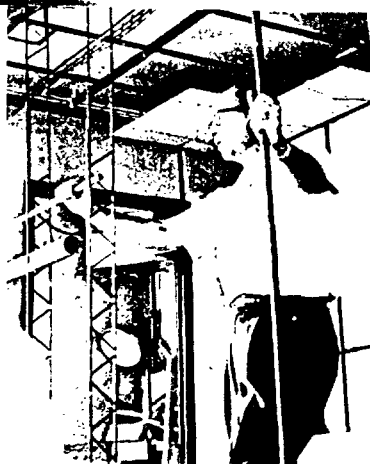
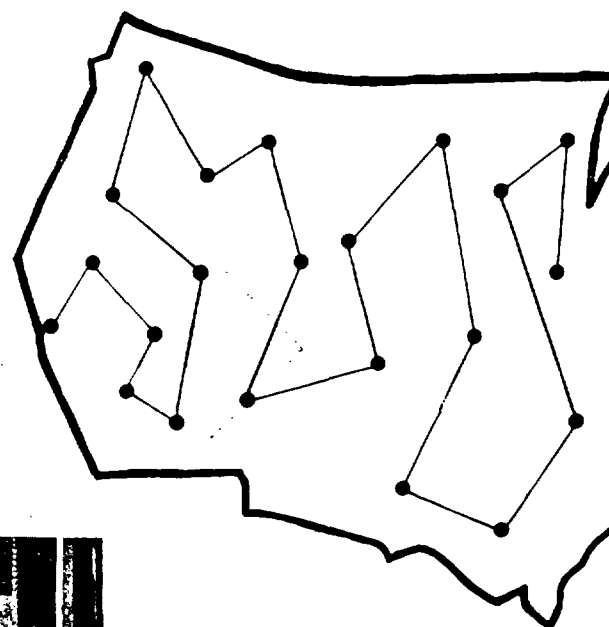
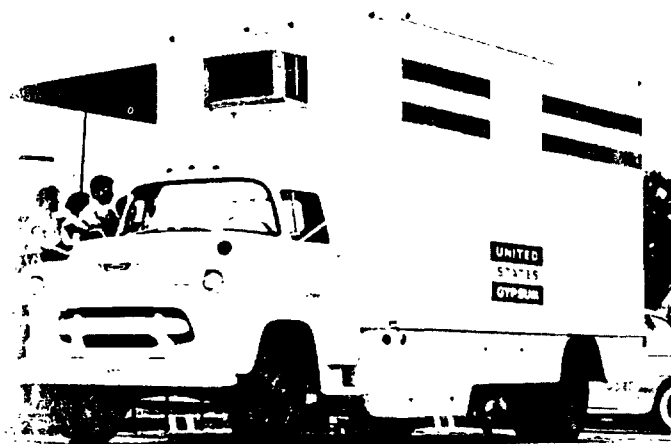
lathing. They have heard how lath and plaster partitions with steel studs and clipped-on gypsum lath can be erected at equal or less cost than painted masonry block.

As it travels from town to town the truck is parked in a convenient downtown parking lot. Prior to its arrival, invitations are issued to those who can benefit most from the systems which can be demonstrated in the truck.

In its opened condition the truck can accommodate an audience of about 20. It is air-conditioned, cooled or heated for audience comfort in any kind of weather. When the weather is good, as in Houston, the sides are left open.

Groups are sufficiently small to allow personal attention to their individual questions. The fact that they have responded in large numbers to invitations to visit the truck, and have lingered after the meetings to discuss lathing and plastering is evidence of the telling effect the display is having for the benefit of the industry.





BB012 2189

How to anchor door frames for

plaster partitions

LAST YEAR plaster manufacturers shipped 2,657,000 tons of bagged, building plaster—but not one crack was shipped. However when the plaster was converted into literally miles of walls and ceiling, an occasional crack appeared.

In no business does the old proverb, “an ounce of prevention is worth a pound of cure,” hold more truth. Practically all of these cracks could have been prevented by following five steps of good lathing and plastering.

- a) Sound structural framing;
- b) Correct installation of good plaster bases;
- c) Proper proportions of aggregate to plaster;
- d) Application of plaster in full standard thickness;
- e) Proper heat and ventilation during setting.

Metal door frames are often a source of special problems, which also have a solution in proper practice. Problems are caused by either of a combination of two factors: 1) differences in the coefficients of expansion of the metal and the plaster; 2) movement of the metal frame due to insufficient attachment or rigidity.

Regardless of the type of plaster partition, a few special precautions will eliminate practically all cracks around such frames. To give the frame the rigidity needed to resist movement, it should be grouted full of plaster. The metal frame and the partition should always be tied to one another structurally. And prior to the set, the basecoat should be cut around the edges of the openings to allow for expansion. A V-notch at the joining of plaster and frame also reduces chipping.

Application of these general principles requires a different system with each type of partition.

TILE PARTITIONS

Whether gypsum or clay tile is used, the lintel should be reinforced. This is accomplished on the job by connecting the tiles to be used over the opening with $\frac{3}{8}$ " rods through outer core holes which are then grouted with plaster. In place, the reinforced tile lintels distribute the weight evenly over the frame head. Another method to discourage movement is to lay tile into the

frame, which is also grouted as the tile are laid. A third protection is to connect each side of the frame to the partition with corrugated metal ties placed at the first joint at the top, bottom and at the mid-point. Strips of metal lath, “ears,” placed diagonally at the corner of the opening also give an additional protection.

TWO-INCH SOLID PARTITIONS

(Metal or Gypsum Lath)

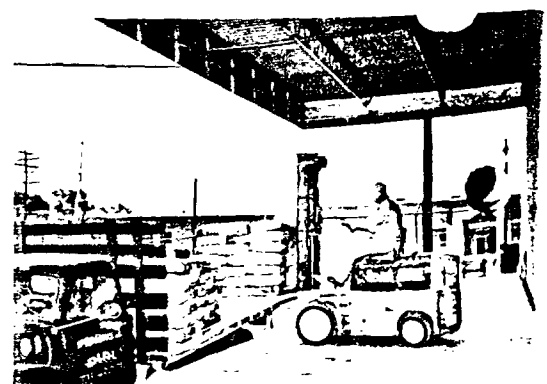
Prior to lathing, all steel bucks should be fully grouted, leaving a V-groove not over $\frac{3}{4}$ -inch in depth for the lath. The bucks may be braced separately with 1x4's or 2x4's wedged between the floor and the ceiling and the jamb faces. Wire is used to tie the jamb and brace together 12 inches from top and bottom and at the mid-point to eliminate the need for struts. If struts are used, they should not exceed $\frac{5}{8}$ inch in the direction of the plaster thickness. Too often, struts are so thick they do not allow an adequate thickness of plaster to be applied.

STEEL STUDS & LATH PARTITIONS

As with other partitions, the important thing is to keep the door or window frame solidly in place. It should be fully grouted. Floor anchor clips should not only be

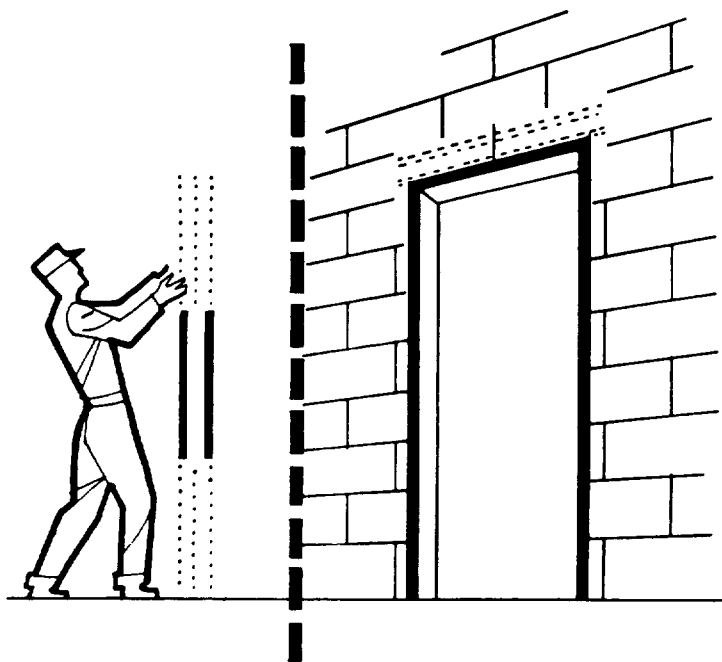
NOT ONE CRACK will be found in this truckload of plaster. If cracks do appear on the job, they will probably result from lathing practices that transmit the stress of structural movement to the plaster.

BB01B 2190





MASONRY TILE should be fitted into metal door frames, which are fully grouted as the tile is placed. This procedure ties the partition and buck together for greater structural strength, minimizing crack-causing movement.



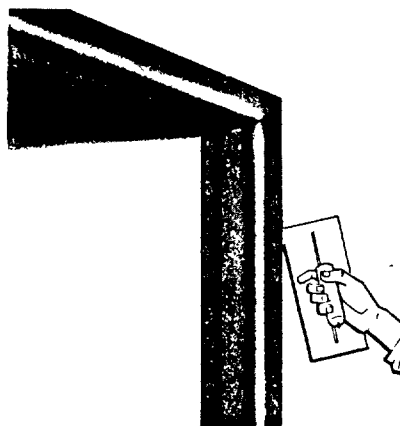
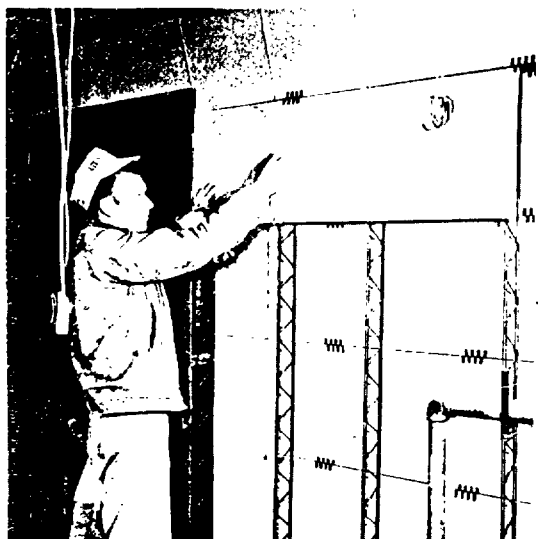
welded to the inside face of the jamb, but to the return of the flanges on each side. Four jamb anchors should be welded on each side of the frame, with the first one near the head and the second 12 inches lower. With the steel stud well secured by insert clips the possibility of distortion of the frame in relation to the partition plane is minimized. If struts are used, they should be at least 14 gauge steel, 2¼ inches wide and ¾-inch flanges. Struts should be anchored at the top of the frame and 24 inches lower. Struts are not needed with proper jamb anchors.

Where gypsum lath is used, additional protection is offered by stapling 13½ x 19½-inch "ears" of self-furring 2.5-pound metal lath at the frame corners. The self-furring mesh brings the reinforcement out near the surface of the basecoat where it is most needed.

Plaster experts agree that the occasional field problems that have occurred in the past are usually due to adapting partition assemblies to jobs where other types were specified without adding provisions for door frame construction and anchorage details. By following the methods and recommendations outlined, the plastering contractor can rest easy, knowing his men have completed a "job well done."

REINFORCEMENT of gypsum or clay tile lintels is simple insurance against cracks. A reinforced lintel is created by joining the tiles with five-foot ⅜-inch iron rods through two of the core holes, which are then grouted full with mortar. In place, the reinforced lintel should carry over onto the partition structure by at least four inches on each end to distribute the weight load. "Ears" of metal lath also should be placed diagonally at the corners of the door frame.

BROWN AND FINISH COATS of plaster should be grooved back where they meet the metal frame to reduce possibility of chipping. The base coats should be cut free of the bucks across the top of openings and at least 12 inches down each side after plaster has stiffened and before setting.



TRUSSTEEL STUD PARTITION requires the metal buck to be anchored to the steel studs by wire tying or welding. Four jamb anchors are recommended: the first near the top; the second 12" down, and the other two spaced equally along the jamb. Use of a full-length of gypsum lath over the lintel is also urged.

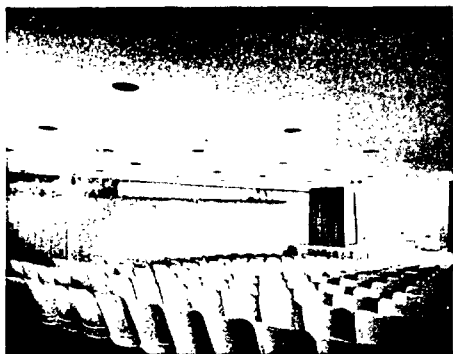
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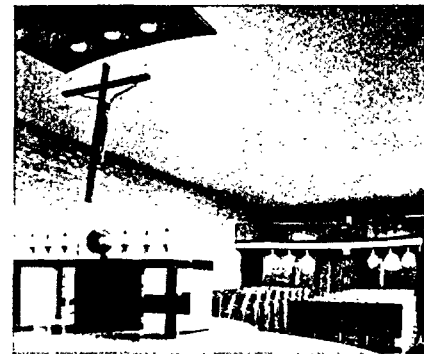
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