

Left and right. Dining room fireplace in residence of Mr. and Mrs. Jim Sanders, Tome, New Mexico.

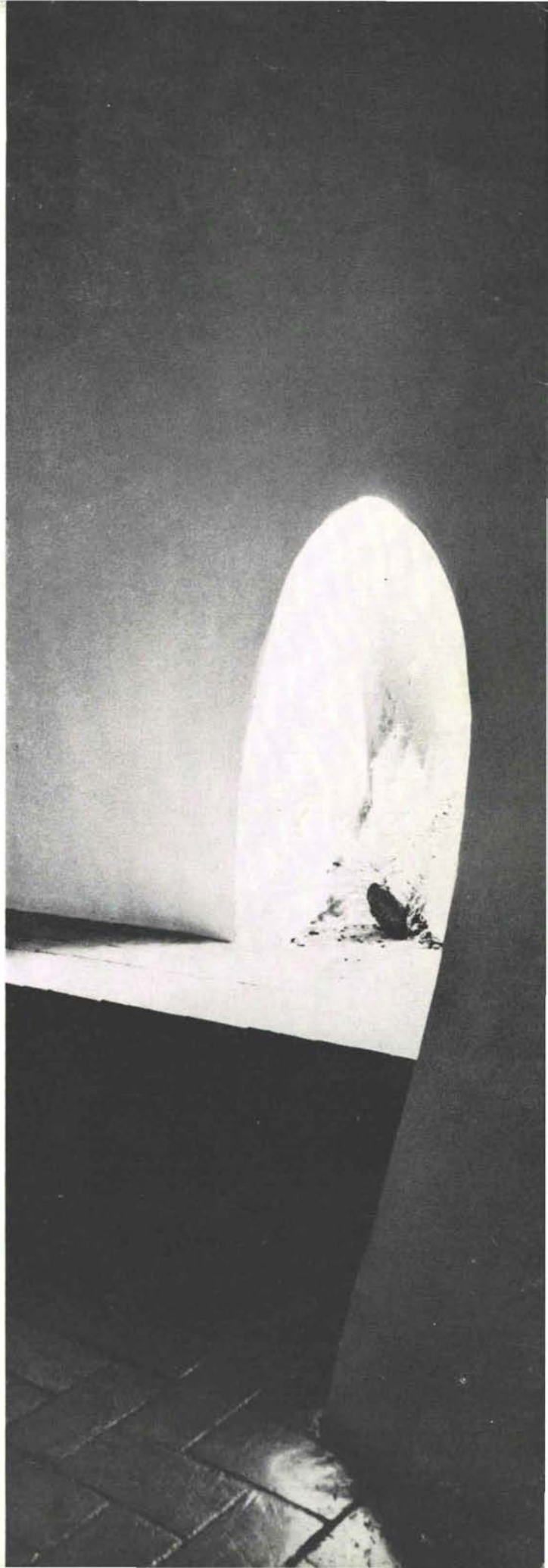
photographs by Lee Marmon

**COMMODITY, FIRMNESS, and MUD\***  
some personal observations on  
building with adobe.

**George Clayton Pearl**

Adobe is soft, imprecise, and soluble in water. It is strong in compression, weak in tension, and enormously heavy. It costs less than any other material of which a man can build a house, and it is available in abundance wherever there is a patch of the earth's surface which has not yet been covered with bituminous paving. Adobe is the most humble of all materials, yet the primeval symbols of its dignity and its responsiveness to the will of the artificer are the muddy hands of Jehovah building Adam out of wet dust.

★ *The Vitruvian trinity of "commodity, firmness, and delight" has been used as the text of many recent architectural sermons. The element of delight in particular has been preached from some of our best pulpits by grim-faced architectural priests.*



*at  
your  
service*

Blue Prints  
White Prints  
Photocopies  
Architects Supplies  
Engineers Supplies  
Pickup & Delivery

*Blue Streak  
Reproductions*

417 4th N.W.  
CH 7-9565

128 Quincy N.E.  
AL 5-8606

COMMON  
**BRICK**  
FACE  
**BRICK**

HOLLOW  
STRUCTURAL  
**TILE**  
SCR and HOLLOW  
**BRICK**

distributors for

**acme**  
**BRICK COMPANY**

samples & literature  
on request

**KINNEY BRICK  
COMPANY, INC.**

P. O. Box 86  
Ph. TRinity 7-1130  
Office at Brick & Tile Works  
5 Miles South on Second Street  
Albuquerque, New Mexico

New Mexico's  
Most Complete Line of  
Materials and Supplies

- **Supplies for  
Contractors**
- **Construction  
Materials**
- **Municipal  
Supplies**

**McCaffrey-Way**  
Materials & Supply Co., Inc.  
2107 Menaul Blvd., NE  
Diamond 4-1681

On your next job

***SPECIFY  
MONARCH  
MON-O-TILE***

We sincerely believe that it combines quality and economy for the Owner and Architect better than any other glazed wall tile available. See the manufacturers advertisement in this issue and call us for more information.

**Southwest Ceramic Dist.**

A Subsidiary of New Mexico  
Marble and Tile Co.

2500 Second SW.

CH 3-5541

By adobe I mean sun-baked rectangular blocks of earth, containing clay as an adhesive, sand as a stabilizer, and straw as a binder and curing agent. There are three marginal materials which I will mention in order to make it clear that they are not included in my use of the word adobe.

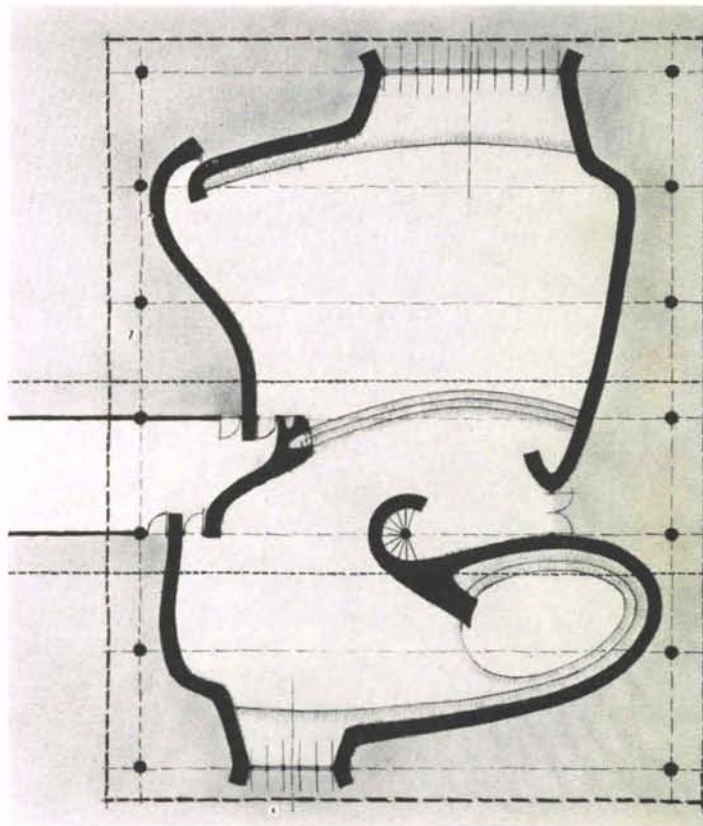
**Terrones** are trapezoidal blocks cut with a square ended shovel directly from the marsh-grass swamps along the Rio Grande. The main roots of the grass run through the center of the block, making a dense horizontal mat. Because of this mat of roots the block is spongy, very difficult to break or carve, and even when unplastered will hold together for decades of rain and wind. As far as I know, **terriones** are used only in the middle Rio Grande valley, with the most concentrated use being in the Ysleta area.

**Fired adobe** is an often used term—a curious designation since a fired block of earth is a brick and not an adobe at all. I have seen many of these adobe sized, low-fired brick. They have a good color and an appealingly peasant appearance. I would like to work with them if they were locally available, but as far as I know they are made only in Tucson, southern California, and northern Chihuahua. Since we are so remote from the source of supply, transportation costs make the material quite expensive here — it seems a lot to pay for such self-conscious humility. I think of fired adobe as being a first-rate material in Tucson but a suspect material here. How secondary the objective characteristics of a material or a form become when compared to our subjective perception of them.

**Stabilized adobe**, adobe made moisture-resistant by the admixture of a petroleum by-product, is, I believe, available locally. Walls built of this material do not have to be plastered, so it is used by people who would like adobe if it were not dissolvable in water. I do not react very kindly to the people who would like me if I were something which I am not, and I surmise that the adobe block would react in the way, had it the consciousness which I attribute to it. Apart from this, however, this stabilized block has the same appearance as the common variety, and so has characteristics which are not visually expressed. I feel the same objection to stabilized adobe as I do to reinforced concrete in tension and steel beams incased in wood.

My first adobe walls were as straight and uniform as I could build them, both vertically and horizontally. But the voice of the material said, "You are misusing me. You would like for me to be something which I am not." So I abandoned, one by one, the batter boards, the lines, and the masons levels. After all, if I preferred straightness and uniformity, I was free to work with concrete block or brick.

I had misjudged the permanence of the form of the individual block. The block's breaking in my hands under its own weight should have been a clue to its fugitive and transitional form. The practice of casting adobe in rectangular block is only one of many methods of achieving the essential goal of getting uniformly mixed and compacted earth into the form of a wall. Most pre-Spanish adobe builders in the Southwest used the turtle-back process in which basketfulls of wet mud were dumped on the top of the wall and allowed to harden before the next course was dumped on. Wood form-boards have also been much used, both for the casting in place of adobe mud and for compacting in place of moist adobe or rammed earth. But these processes are



When adobe walls are relieved of their roof-supporting duties, as in the above plan study of the La Jolla Hunt Club, La Jolla, New Mexico, they are free to take self-supporting shapes which are derived from the plasticity and massiveness of the material.

FOR  
 AUTOCLAVED  
 CONCRETE  
 BLOCKS  
 CALL OR SEE  
**WESTERN  
 EMPIRE  
 BUILDERS  
 SUPPLY**



1802 CERRILLOS RD.  
 SANTA FE, N. M.  
 YUCCA 2-2646

**LEGGETTE - BRYANT, Inc.**  
**Albuquerque**

- Acoustical Contractors and Distributors
- Zonolite Insulating Roof Decks
  - Asbestospray Fireproofing and Acoustical
  - Pella Wood Folding Doors and Partitions
  - Movawall Movable Partitions
    - Lemlar Sun Control Louvres
    - Cepco Translucent Ceilings

**DEPENDABLE AND BONDABLE**

CHapel 3-7845



FORMICA . . . the new romance  
 in laminated plastics.

Sink tops, cabinet tops, counters, bars, display areas . . . these are but a few of the many uses you have with Formica. Formica will not crack or craze, is unharmed by alcohol, fruit acids, boiling water or temperatures up to 275 degrees. Nineteen exciting new colors to choose from. Use this attractive, durable plastic laminate for all of your home building needs.

Distributed by



PHONE DIAMOND 344-2317  
 312 INDUSTRIAL NE P. O. BOX 1098  
 ALBUQUERQUE, NEW MEXICO



P. O. Box 1063—Albuquerque, N. M.—530 Bridge Blvd., SW  
 Telephone CHapel 2-3243

**MANUFACTURERS:**

**PRE-FABRICATED** wood roof trusses  
**MASTER HUNG** prehung door units

**REPRESENTING:**

**AMERICAN FABRICATORS COMPANY** for  
 glued laminated arches, beams and  
 purlins

**GLIDE A FOLD** bi fold doors  
**MODULUX** fibersin modular kitchen  
 cabinets and vanities

**NEW MEXICO'S LEADING MANUFACTURERS  
 AND REPRESENTATIVES OF  
 COMPONENTS FOR THE BUILDING  
 INDUSTRY**

REMODEL

COMMERCIAL

RESIDENTIAL



Study model of fireplace for Mr. and Mrs. Dick Kirschner, Placitas, New Mexico. The fireplace is only an incidental source of heat—we are more concerned with its visual aspects. Playing with the light from the fire give range to the plasticity of the adobe.

not much used because they are more complex and less responsive to the demands of a specific problem.

As the forms which the material sought became more plastic, I at first cast the units in the shape which the pre-conceived form demanded, much as Keresan women cast special shapes for corner fireplaces. Later I abandoned this practice in favor of sawing or chopping the standard block into the required shape before placing it in the wall. Both these processes now seem to me to be illogically indirect and sure preventatives of unified and spontaneous form.

After the blocks have been laid in the wall in a thick mortar bed, a point is reached where some moisture has been lost and that which remains is evenly distributed through both block and joint, causing the entire mass to be homogenous. At this point it becomes

apparent that the form of the block is transitional only, and need have no more effect upon the overall form than the coils of clay have upon the finished pueblo pot.

At this stage of curing the material is splendidly responsive to the blow of an axe or the stroke of an abrader. The material invites carving, with the same challenge and promise of delight as a white sheet of illustration board invites the stroke of a sable brush. And so long as one is delighted to be working in adobe rather than in some other material, a wide range of expression is possible — not expression of self, but of material and function.

The material likes compression and the curving line; it resists both precision of line and precision of stress. Thus, adobe forms are massive, unstrained, and



## Structural Steel

for New Mexico's thriving  
building industry since 1942

# Miller & Smith Mfg. Co., Inc.

500 Phoenix Ave. N.W. Station B, Box 6007

Albuquerque, New Mexico

### ON YOUR NEXT RUSH JOB, SPECIFY "BUTLER"

At right and below: the new exclusive  
Continental Airlines terminal, Phoenix,  
built in 30 days!



Architect, William A. Lockard, AIA



When **Continental Airlines** was awarded service into Phoenix's Sky Harbor International Airport in April of this year, a terminal became an urgent necessity. Plans and cost estimates were offered for approval and final working drawings completed by William A. Lockard the same month. On May 1, The Banes Company broke ground for the 40 x 60 **Butler System building**. On May 31, final interior touch up was finished, and the building accepted by a pleased airline management — ten days ahead of its deadline!

THE **BANES** COMPANY  
INC.



ALBUQUERQUE • HOBBS • FARMINGTON  
EL PASO • PHOENIX • TUCSON

bounded by lines of erratic local variation. Here is one basis for a distinction between "folk" form and "sophisticated" form. In steel and concrete we work at the limits of the material's strength — our design formulae are so oriented. In adobe and other peasant materials we work toward the center of the material's characteristics and astutely avoid the limits. We do only those things with the material which it can sustain with comfort for generations. Like mercy, the quality of adobe construction is not strained.

The compression, the plastic line, and the local variation dictate the arch. Of all structural forms the arch is the most explicit and the most serene. The arch is a stress diagram of itself. The adobe arch is not the precise geometric symbol of Rome and the Renaissance, but the arch which is specific, unique, and uncopyable. It is not only uncopyable, but it is also undecipherable in the documents of a present-day construction contract.

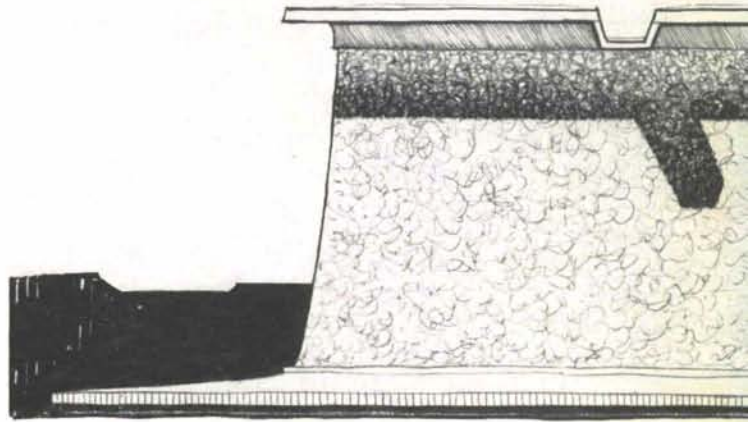
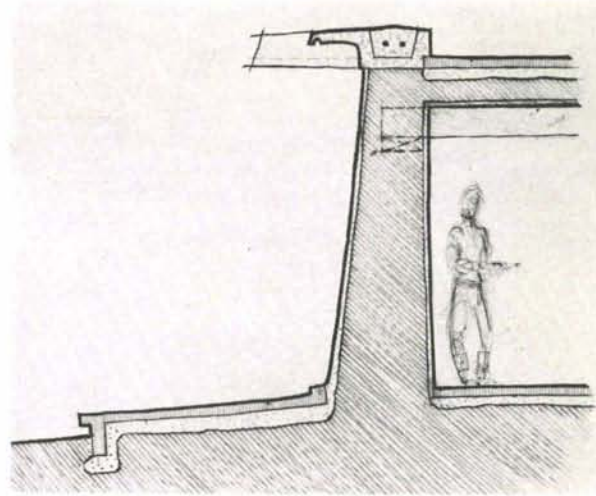
Not the arch, only, but all of the adobe forms which I have found most expressive of the material cannot be handled by our present architectural procedures. First of all, they cannot be drawn. Even if they could be adequately described by architectural drawings and specifications, their cost could not be accurately estimated. And even if they could be drawn and a price agreed upon, the most essential point would still be missed — the element of spontaneity which can come only from the craftsman's participation in the immediate situation. The *designer*, as he typically functions today, can hardly supply this immediacy because of his distance from the actual construction. It is very difficult for a designer to enter into the excitement of a form which is not going to exist until months after his drawings are completed and which will be built of materials which his hands will never touch. We often compensate ourselves for this remoteness by doing spontaneous drawings. We feel an excitement and satisfaction in the drawings and not in the form which it describes.

The craftsman who constructs the form can hardly become involved in it in any sense which is valuable either to himself or to the form. The decisions have all been made months ago by the designer. The constructor's function is entirely mechanical, and a machine cannot participate. When men are used as machines, they are misused. Men make poor machines.

Perhaps this is in part what happened to our late lamented craftsmanship. When we lost the limitations of a virile tradition, everything had to be described precisely; and the craftsman became a machine, hence a poor craftsman. To be sure, this is only part of the story. The primary reason for a decline in craftsmanship is a decline in our concern for it. But the loss of the possibility of participating in the work as a man has probably damaged craftsmanship more than have the ever-more-limited budgets.

I am not talking about self-expression. I do not believe that architecture is a proper medium for self-expression. Something very close to the opposite of self-expression is required I think, both in that part of the design which is determined by the designer and that part of the design which is more logically determined by the craftsman. A variety of overcoming of self is required of the artificer who achieves clarity of expression of function and materials, uncorrupted by self.

In much of the work which I have done in adobe I have used no drawings at all. This is in part because of this element of immediate, on-the-spot evolution which cannot be adequately predicted. Also, it is partly



Elevation and section of load-bearing adobe wall. The adobe roof fill is protected by brick paving. The wall is protected by a precast concrete coping which acts as form for reinforced concrete bond beam, and by pebble-dash stucco. The base of the wall and the earth beneath the wall are protected by a brick pedestal-walk. In some soil conditions a concrete footing beneath the massive wall would not be required.

a reaction against our usual office procedures which lend themselves readily to machine materials, processes and forms, but which balk when confronted with the handicrafts. How much, I wonder, of our insistence upon machine materials and forms and our disapproval of hand work and ornament stems from philosophy and how much stems from what is easy to handle by current contractual procedures. I have often watched with envy the sculptor, painter, and potter who derive form directly from material, using only their hands or simple tools which are understood so well that they are like extensions of the hand.

To those of my friends, and others, who will cry "escapism" and "reaction" I quickly say that I am not advocating the use of adobe in public buildings. I am not, in fact, advocating anything. I have only meant to describe the delight which I have found in becoming intimately acquainted with this oldest of all building materials, and as a part of the same experience, in rediscovering the human hand as the most sensitive of all building tools. I have lost none of my concern for the expression of our own time, but I know of nothing which has made either adobe or the human hand obsolete.—George Clayton Pearl



America's Great Name in  
**QUALITY DOORS...**

**F. H. A. TERMS**  
Small monthly payments  
if desired. Completely  
installed and serviced  
by expert workmen.



—ANNOUNCEMENT—

We are most fortunate in being selected as Distributors, in our area, of the Overhead Door Mfg. Co.

Oldest and largest overhead door manufacturers in the United States.

**OVERHEAD DOOR COMPANY**  
of Albuquerque *Division of*

**WELCH-ERWIN CORPORATION**

P. O. Box 681

Ph. 243-6638

Albuquerque, New Mexico

New Mexico's  
**PLASTIC CENTER**

FINE PLASTIC SINK, CABINET  
and COUNTER TOPS

CUSTOM DESKS, CONFERENCE TABLES,  
BARS and BACK BARS

FABRICATED BY CRAFTSMEN IN OUR  
PLASTIC TOP DEPARTMENT

**Jay Grear, Inc.**

1222 Edith NE

CH 7-0131

*Albuquerque*

**BLUEPRINT COMPANY**

*Albuquerque's Oldest Blue Print Company — Since 1928*



BLUE PRINTS • BLACK & WHITE  
PRINTS • PHOTO COPIES • CAM-  
ERA REPRODUCTIONS • MULTI-  
LITH PRINTING



Exclusive Distributor for Keuffel & Esser

A. S. KIRKPATRICK, JR., MGR.

514 FOURTH ST., N.W.

Ph. CH 3-3521

PAUL E. HEGGEM, MGR.

613 SAN MATEO, N.E.

Ph. AL 5-8753

ALBUQUERQUE, NEW MEXICO

**BUILDERS! CUT COSTS!**

PROVEN STRENGTH —  
SELECT LUMBER

AUTHORIZED

FABRICATOR

**SANFORD**  
*Gri-P-late*  
**ROOF TRUSSES**

Call or Write for Details

FRIENDLY FOLKS • FOLLO-THRU SERVICE

**BROADWAY LUMBER CO.**

425 BROADWAY NE  
ALBUQUERQUE CH 2-5221



**ALBUQUERQUE  
TESTING  
LABORATORY**

Sub-soil Investigations  
For Structural and Dam Foundations  
Two Drills and Crews now  
available for Prompt Service  
Laboratory Analysis and  
Evaluation of Construction Materials

532 Jefferson St., N.E. — P. O. Box 4101

Phones AL 5-8916  
AL 5-1322

Albuquerque  
New Mexico