

**CATALOGUE OF HOUSE  
BUILDING CONSTRUCTION SYSTEMS**

**CENTRAL MORTGAGE AND HOUSING CORPORATION**

CATALOGUE  
OF HOUSE  
BUILDING  
CONSTRUCTION  
SYSTEMS

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# PREFACE

The catalogue of building systems illustrates all the known construction methods of single family dwellings, which have been published or illustrated throughout the world. It is the first time such a comprehensive subject has been included in one book.

It was made possible by breaking the large numbers of construction systems down to basic types. This permitted a method of classification which reduced the catalogue to a workable size.

The catalogue includes sufficient data to illustrate the various systems of construction, gives country of origin and provides the source reference for a more detailed study.

To thoroughly explain and illustrate most basic examples "Case Sheets" are used. These consist of isometric drawings showing critical points of construction with explanatory technical data.

Since this is a catalogue of Small House Construction Systems, under the terms of reference, a small house is defined as a single family dwelling, a semi-detached house, a row house, or similar residential construction having not more than two floors, excluding the basement or semi-basement.

Construction System, for definitive reasons, is the manner of constructing the whole or dominant part of the house (i. e. foundation, floors, wall or roofs). For technical classification purposes the determining factor has been first, the type of external wall construction and second, the roof and floor construction.

# DESCRIPTION OF CLASSIFICATION TECHNIQUE

The catalogue is divided into two indices

The first index sets out the types of construction which are classified by structural method, or where this is not clear, by method of assembly. In judging the type of structure it has been the external wall primarily, and secondly the roof and floor which have determined how the system should be categorized. In marginal cases systems have been mentioned under more than one category. Within each category the traditional forms have been given first, the proprietary examples follow in alphabetical order. The major systems are illustrated by case sheets which form a typical cross section of construction methods. The case sheets are arranged alphabetically within each applicable classification and are found at the conclusion of each system.

The second index is an alphabetical list of manufacturers, by country - cross referenced by structural method and by reference sheet number.

The order of the classification of the first index is as follows:

## WOOD SYSTEMS

## ABBREVIATIONS

### Wood Framed House

WFH

Balloon Frame  
Platform Frame  
Frame Bents (Portal Frame)  
Post and Beam  
Special Systems

### Stressed Skin Panels

WSSP

Normal Panels  
Trailer Type

### Plank and Log

WPL

Plank Frame  
Horizontal Log  
Special Systems  
Vertical Log

## CONCRETE AND MASONRY SYSTEMS

### Concrete and Masonry Panels

CP

Concrete and Masonry Panels (cont'd) CP

Concrete Panels  
Brick Panels  
Lightweight Concrete Panels  
Hollow Panels  
Special Systems

Concrete and Masonry Units CU

Normal Units, Concrete  
Normal Units, Lightweight Concrete  
Hollow Cavity Wall Units  
Solid Brick Walls

Concrete Post and Beam CPB

Sandwich Walls (cast in situ-concrete) CS

Monolithic Construction CM

Solid Concrete  
Cavity Wall Monolithic Concrete  
Monolithic Integrally Insulated Concrete  
Mud Or Earth Walling

Structural Sandwich and Plastic Systems S

METAL SYSTEMS

Metal Stud Frames MSF

Non Panelized Systems  
Panelized Systems  
Special Systems

Metal Post and Beam Frames MPB

Metal Panels

TENSILE AND COMPRESSIONAL SYSTEMS T

Case Sheets are arranged alphabetically at the end of the applicable systems.

Each case sheet gives the following information:

On the front:

A scale isometric illustration of a corner of a typical building employing the system, and diagram showing a unit of the system, a typical unit joint and a typical view of a completed building in which the system is used.

On the right hand edge of the sheet is a visual cross reference tab referring to construction types (see first index).

On the back:

#### NAME OF SYSTEM

Traditional,  
Non-Traditional,  
Manufacturer,  
Sponsor or Builder.

(1) Where non-traditional or proprietary, name of originating manufacturer or sponsor is given first. Canadian manufacturers when they exist are given in addition to foreign.

Date and Place  
of Origin.

(2) Where traditional, this may be impossible to give.

Materials Used.

(3) Material listed is that of which the system is mainly constructed.

Description.

(4) This is intended to be complementary to the drawing, and where known, includes physical properties.

Development.

(5) Canadian development is noted first.

Comment.

(6) This note is only meant to augment the facts and is not an official observation.

References.

(7) Only major references are given. Where none are given the sponsor's information is the reference.

# REFERENCE GUIDE

	ABBREVIATION
Wood Framed House #1	WFH
Stressed Skin Panel #2	WSSP
Plank and Log Frame #3	WPL
Concrete and Masonry Panel #4	CP
Concrete and Masonry Units #5	CU
Concrete Post and Beam #6	CPB
Concrete Sandwich Construction #7	CS
Concrete Monolithic #8	CM
Structural Sandwich and Plastic Systems #9	S
Metal Stud Frames #10	MSF
Metal Post and Beam Frames #11	MPB
Metal Panel #12	MP
Tensile Systems #13	T



## LIST OF ABBREVIATIONS

B. M. S.	Building Materials and Structures, National Bureau of Standards, Washington, U. S. A.
C. M. H. C.	Central Mortgage and Housing Corporation, Ottawa, Canada.
D. B. R.	Division of Building Research, National Research Council.
F. H. A.	Federal Housing Administration, Washington, U. S. A.
H. M. S. O.	Her Majesty's Stationery Office, London, England.
H. M. A.	Home Manufacturers Association, (formerly P. H. M. I.) 117 Barr Building, Washington 6, U. S. A.
H. H. F. A.	Housing & Home Financing Agency, F. H. A. Washington, U. S. A.
M. I. T.	Massachusetts Institute of Technology, Cambridge, Massachusetts, U. S. A.
M. O. W.	Ministry of Works, London, England.
N. B. S.	National Bureau of Standards, Washington, D. C., U. S. A.
N. C. M. A.	National Concrete Masonry Association, Chicago, U. S. A.
N. H. A.	National Housing Administration, U. S. A.
P. W. B. S.	Post War Building Study (H. M. S. O.), U. K.
P. H. M. I.	Prefabricated Homes Manufacturers Institute, U. S. A.

# WOOD FRAMED HOUSE

## WOOD FRAMED HOUSE

<b>Sub-Classification</b>	<b>Balloon Frame</b> <b>Platform Frame</b> <b>Frame Bents (Portal Frame)</b> <b>Post and Beam</b> <b>Special Systems</b>
<b>Case Sheets</b>	<b>Balloon Frame</b> <b>Swedish Balloon Frame</b> <b>Braced Frame</b> <b>Platform Frame</b> <b>Brick Veneered Frame</b> <b>Intercon</b> <b>Spooner House</b> <b>Stud Frame Panel</b> <b>Swedish Stud Frame Panel</b> <b>Triple Cavity Panels (Thermobau)</b> <b>T. V. A. House Type II</b> <b>Bent Frame</b> <b>1 1/2 Storey Truss</b> <b>Pierce Bent Frame</b> <b>Volks-kabin</b> <b>Japanese House</b> <b>Core</b> <b>Ratio Structures</b> <b>Dachhaus</b>

## WOOD FRAMED HOUSE

### Balloon Frame

#### **BALLOON FRAME**

### Type of Construction

Traditional form of construction 1950.  
Two Storey close stud frame.  
Studs continuous through both storeys.

### Reference Source

Wood Frame House Construction.  
U.S. Dept. of Agriculture  
"Architectural Graphic Standards", Ramsay & Sleeper.

### **SWEDISH BALLOON FRAME**

Semi traditional form of construction introduced from the United States.

Kungliga, Bostadstyrelsen, Stockholm.

### Platform Frame

#### **BRACED FRAME (OLD)** North America

A traditional form of stud frame construction, with mortice and tenon joints and blocked in bracing.

"Architectural Graphic Standards", Ramsay & Sleeper, Published: Wiley, 1947.

#### **BRACED FRAME (MODERN)** North America

A traditional form of stud frame construction, with let-in bracing.

"Architectural Graphic Standards", Ramsay & Sleeper, Published: Wiley.

#### **PLATFORM FRAME (WESTERN)** United States

Traditional North American. The most widely used form of small house construction in North America.

"Architectural Graphic Standards", Ramsay & Sleeper, Published: Wiley.

WOOD FRAMED HOUSE (Platform Frame cont'd)

WFH

PLATFORM FRAME  
(WESTERN FRAME)  
with  
(BRICK VENEER)  
U.S.A.

Traditional North American.  
Normal platform frame with  
brick veneer added.

"Architectural Graphic  
Standards, "Ramsay &  
Sleeper, Published:  
Wiley, New York.  
Wood Frame House,  
Construction, U.S.A.  
Government.

Platform Frame

Prefabricators

ABC CONSTRUCTION  
CORPORATION (Bauer)  
5235 Winthrop Avenue,  
Indianapolis, Indiana,  
U.S.A.

Conventional stud frame  
panels. Sheathed wood frame  
units for walls. Wood frame  
units for partitions, wood  
trusses for ceiling and roof  
framing.

F.H.A. Bulletin  
9/28/55.

ADMIRAL HOMES  
INCORPORATED  
149 Water Street,  
West Newton,  
Pennsylvania, U.S.A.

Conventional prefabricated  
structure.

Admiral Homes Inc.,  
149 Water Street,  
West Newton,  
Pennsylvania, U.S.A.

ALADDIN HOMES  
163 Hunter Street,  
Peterborough, Ont.,  
Canada.  
also  
Aladdin Company,  
Bay City,  
Michigan, U.S.A.

Pre-cut conventional frame  
construction.

Aladdin Homes,  
163 Hunter Street,  
Peterborough, Ontario,  
Canada.  
also  
Aladdin Company,  
Bay City,  
Michigan, U.S.A.

ALLEGHANY HOMES  
CORPORATION  
Box 36,  
Homer, New York,  
U.S.A.

Plywood & wood frame units  
for floors, walls, partitions,  
ceiling and roof.

F.H.A. Bulletin  
8/5/49.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**AMBLER ASBESTOS**

Keasby & Mattison Co.,  
Ambler, Pennsylvania,  
U.S.A.

Wood stud frame panels 4' x 12'  
clad with asbestos board and  
sheathing, bolted together.

M.O.W. Survey of  
Prefabrication.  
"American Architect  
& Architecture",  
Sept. 1936.

**AMERICAN FABRICATORS  
INCORPORATED**

Bluff Pine, Arkansas,  
U.S.A.

Stud frame panel.

American Fabricators  
Inc.,  
Bluff Pine, Arkansas,  
U.S.A.

**AMERICAN HOUSES  
INCORPORATED**

165 West 46th Street,  
New York, N.Y.,  
U.S.A.

1,500 housing units in U.S.  
(defence) 1950.  
Wood frame panels 4' 0" wide  
and storey high. Studs at 16"  
centers. Remainder pre-cut  
Quilt insulation.

F.H.A. Bulletin  
10/5/50 (G.B.  
SE-149).  
"Architectural  
Record", June 1943.  
M.O.W. Survey of  
Prefabrication.

**ANCHORAGE HOMES  
INCORPORATED**

Westfield, Massachusetts,  
U.S.A.

630 houses per year (1947).  
Exterior walls, ceiling, floor  
and roof panels prefabricated  
in wood frame and plywood.  
Conventional.

Federal Housing  
Administration, 1946.

**A.H. ANDERSON LIMITED  
(A.75 System)**

66 Victoria Street,  
London, S.W.1,  
England.

Wood stud panel system of  
varying sizes mainly used  
for Public & Commercial  
Building.

A.H. Anderson Ltd.,  
66 Victoria Street,  
London, S.W.1,  
England.

**ATKINSON LUMBER &  
MANUFACTURING  
COMPANY**

Midwest Station,  
Oklahoma City,  
Oklahoma, U.S.A.

Plywood & wood frame units  
for walls & floors. Open frame  
partitions. Pre-cut rafters or  
shop assembled roof trusses.  
Finish is field applied.

F.H.A. Bulletin  
3/6/50.  
G.B. Oklahoma City.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**AUTOREX BUILDING SYSTEM**

(Bau-Export)  
615 West Pender Street,  
Vancouver 2, B. C.,  
Canada.

1954.  
German system tentatively  
imported to Canada.  
4' x 8' wood stud frame  
panel.  
Purlined roof. Trusses at  
4' centers.

Autorex Building  
System,  
(Bau-Export)  
615 West Pender  
Street,  
Vancouver 2, B. C.,  
Canada.

**BAKER LUMBER &  
SUPPLY COMPANY**  
P. O. Box 1536,  
Port Neches,  
Texas, U. S. A.

Normal.  
Panel under 4' wide.

Baker Lumber &  
Supply Company,  
P. O. Box 1536,  
Port Neches,  
Texas, U. S. A.

**BARDEN & ROBESON  
CORPORATION**, The  
Middleport, New York,  
U. S. A.

Plywood & wood frame units  
for walls, partitions, floor,  
ceiling & roof.

F. H. A. Bulletin  
10/27/49.  
S. B. Buffalo Dist.  
of Col.

**B-D HOMES COMPANY**  
Martin City,  
Missouri, U. S. A.

Conventional wood frame  
construction. Sectionalized.

F. H. A. Bulletin  
1/19/51.

**BEST HOMES  
INCORPORATED**  
628 West Lake Street,  
Peoria, Illinois,  
U. S. A.

Conventional stud frame.

F. H. A. Technical  
Circular 11.  
"American Builder &  
Building Age,"  
November 1951.

**BETONA PRE-CUT  
BUILDING**  
Betona, Box 89,  
Zaandam, Holland.

Pre-cut wood frame.  
Whole house assembly.

"Acceptable Building  
Materials",  
C. M. H. C. 1953.

**BETTER LIVING  
INCORPORATED**  
(Solar House)  
2 North Indiana St.,  
Oklahoma, U. S. A.

Conventional stud panel for  
roofs, floors and walls.

Better Living Inc.,  
2 North Indiana St.,  
Oklahoma, U. S. A.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**BOSCHULT ENGINEERED**

**HOMES**

340 22nd Street,  
Fremont, Nebraska,  
U.S.A.

Wood frame units with plywood sheathing and interior finish. Plywood web trusses with pre-cut ceiling & roof purlins.

F.H.A. Bulletin  
1/16/55.  
G.B. SE-190.

**BOSSERT HOUSE**

Louis Bossert & Son,  
Brooklyn, New York,  
U.S.A.

\*1911.  
Wood stud frame 3' 0" x 8' 6" for wall and roof. Floors conventional. Wall-board and shingles.

"American Arch. & Architecture",  
Sept. 1936.

**BRAD INDUSTRIES  
BUILDING SYSTEM**

(Riley Newsum)  
806 Dominion Square  
Building, Montreal,  
Quebec, Canada.

\*Wood framed panel (2" x 4" studs at 16" o.c.)  
Panels are of varying sizes.  
3' 4" module.

"Acceptable Building  
Materials",  
C.M.H.C. 1955.

**BREUER, MARCEL  
HOUSE**

Marcel, Breuer and  
Walter Gropius,  
New York, New York,  
U.S.A.

1941.  
250 houses at New Kensington, Philadelphia.  
Timber stud construction in whole wall panels.  
Framing conventional except for great length of panels which are raised at one time.

Forum: October  
1941 p. 218.  
M.O.W. Survey of  
Prefabrication.

**CARDINAL HOMES**

57 Bloor Street West,  
Toronto, Ontario,  
Canada.

also  
Halliday, Canadian  
Prefab. Incorporated,  
Quebec, Canada.

\*Essentially a conventional stud frame house with dry-wall interior finish.  
Prefabricated in wall sections.

Cardinal Homes,  
57 Bloor Street W.,  
Toronto, Ontario,  
Canada.  
also  
Halliday, Canadian  
Prefab. Incorporated,  
Quebec, Canada.

**CARLTON LUMBER  
COMPANY**

Portland, Oregon,  
U.S.A.

Wood frame units with plywood coverings for walls, partitions, floors and ceilings.  
Wood trusses for roof framing.

F.H.A. Bulletin  
8/8/52.



WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

CASTLE HOMES  
INCORPORATED  
307 Darling Building,  
Salt Lake City,  
Utah, U.S.A.

Wood frame & plywood units for  
floor, walls, partitions and  
ceilings.

F.H.A. Bulletin  
11/8/50.

CENTURY  
CONSTRUCTION  
701-294 Portage Ave.,  
Winnipeg, Manitoba,  
Canada.

4' 0" x 8' 0" panels framed in  
2" x 4" studs at 16" o.c. Roof  
Trussed.

Century Construction,  
701-294 Portage Ave.,  
Winnipeg, Manitoba,  
Canada.

CHRISTOPHER &  
UMMACK A.G.  
Niesky, 0.1,  
Germany.

Developed since 1882.  
For barracks, housing etc.  
Large quantities used.  
t. & g. jointing 1. m. frame  
panel units. Double cavity  
exterior & interior wall-board  
sheathing & wall-board.

M. O. W. Survey of  
Prefabrication.

CITY LUMBER COMPANY  
75 3rd Street,  
Bridgeport 1,  
Connecticut, U.S.A.

Panelized platform frame.

City Lumber Co.,  
75 3rd Street,  
Bridgeport 1,  
Connecticut, U.S.A.

CLARK HOMES  
River Road,  
Haney, British Columbia,  
Canada.

Pre-cut wood frame packaged  
with finished surfaces.

"Acceptable Building  
Materials",  
C.M.H.C. 1955.

CLEMENTS ASSOCIATES  
P. O. Box 4,  
Danbury, Connecticut,  
U. S. A.

Plywood & wood frame units  
for walls & floors.  
Wood trusses for roof &  
ceiling.

F.H.A. Bulletin  
9/9/54.  
SE-188.

COLONIAL HOMES  
LIMITED  
6 Malley Road,  
Scarborough, Ontario,  
Canada.

Conventional stud frame in  
whole wall sections.

"House & Home",  
December 1957.  
H. M. A. 1957.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**COLORADO SECTIONAL  
HOMES COMPANY, The**  
Littleton, Colorado,  
U. S. A.

Wood frame wall units & pre-  
cut framing for other elements.

F.H.A. Bulletin  
10/27/48.

**W.H. COLT & SON  
COMPANY LIMITED**  
Bethersden, Kent,  
England.

Wood stud 4' x 8'. Normal  
frame panel. Whole houses  
prefabricated under fittings.

W. H. Colt & Son  
Co., Ltd.,  
Bethersden, Kent,  
England.

**COOPER CORPORATION**  
H. L.  
2801 West 9th Ave.,  
Gary, Indiana,  
U. S. A.

Complete wood frame houses  
constructed at a central plant  
and transported whole to the  
site.

F.H.A. Bulletin  
1/19/54.

**COWIESON HOUSE**  
Cowiesons Limited,  
Scotland.

500 prefabricated houses in  
Scotland in inter-war period.  
Timber frame clad with steel  
fibreboard internally.  
U=0.33.

Post War Building  
Study No. 1.

**CRAWFORD  
CORPORATION**  
Baton Rouge,  
Louisiana, U. S. A.

Wood frame units for walls,  
partitions 2nd floor & ceiling.  
Framing for 1st floor & roof  
is pre-cut. Shop applied  
exterior & interior finish doors  
and windows shop applied.

F.H.A. Bulletin  
8/10/49.  
G.E. SE-123.

**CREATIVE BUILDERS**  
510 North Goodwin,  
Urbana, Ill. U.S.A.

\*Panelized wood frame  
construction. Licensed by  
Techbuilt.

Creative Builders,  
510 North Goodwin,  
Urbana, Ill. U. S. A.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

CROSS WALL &  
PANEL HOUSE  
Canterbury County  
Council,  
Highworth, R.D.C.  
Wilts, England.

\*Erick Chick Builder.  
Powell & Moya Architects.  
Numerous other English  
sources. Party walls in brick,  
exterior walls in wood frame  
panel units tied with tension  
wire. Row House Construction  
only.

"Prefabrication",  
Sept. 1954.  
"Architect's Journal",  
Nov. 22nd, 1951.

CRUDENS "SCOTIA"  
Musselburgh,  
Midlothian, Scotland.

3'6" module for internal and  
exterior partitions.  
Diagonal boarding on 2 way  
battens. Trussed roof.

Crudens "Scotia",  
Musselburgh,  
Midlothian, Scotland.

DOWNES PATTERSON  
CORPORATION  
Stonington, Connecticut,  
U.S.A.

Wood frame units for walls,  
partitions, ceiling & roof.

F.H.A. Bulletin  
7/8/48.  
G.B. SE-97.

DWELL-ETTE SOUTH-  
WEST INCORPORATED  
St. Joseph's Missouri,  
U.S.A.

Wood frame units complete  
with floors, walls and ceilings  
in large sections.  
Interior finish shop applied.  
Exterior finish field applied.

F.H.A. Bulletin  
12/7/51.

EMPIRE HOMES  
INCORPORATED  
Louisville 11,  
Kentucky, U.S.A.

Wood frame wall units plywood  
sheathing exterior face, ply-  
wood or gypsum wall-board,  
interior face. Partitions wood  
frame & plywood units or  
laminated gypsum wall-board  
units. Wood frame trusses,  
for roof, roof & ceiling.

F.H.A. Bulletin  
1/27/55.  
G.B. SE-191.

ENTERLOCKING  
Long-Bell Lumber Sales,  
Corporation,  
U.S.A.

Pre-cut lumber. A normal  
platform frame wood con-  
struction except for jointing  
method.

"American Architect  
& Architecture",  
September 1936.  
"The Evolving House,  
III, Rational Design",  
(Bemis).

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

EXPAN HOMES  
INCORPORATED  
15411 Chatfield Avenue,  
Cleveland 11, Ohio,  
U.S.A.

Conventional stud frame  
prefabricated construction.

H. M. A. Washington  
1957.  
Dept. of Commerce  
Washington.  
House & Home  
December, 1957.

FLORIDA BUILDERS  
INCORPORATED  
St. Petersburg,  
Florida, U.S.A.

Wood frame units for walls,  
roof trusses.

F. H. A. Bulletin  
7/2/48.

FORD, Ivon R.  
INCORPORATED  
McDonough, New York,  
U.S.A.

Wood frame & plywood for  
exterior walls, partitions  
1st floor ceiling & roof.

F. H. A. Bulletin  
4/11/51.  
G. B. SE-158.

GBH-WAY HOMES  
INCORPORATED  
Walnut, Illinois,  
U.S.A.

Plywood on wood frame units  
for walls, partitions, ceilings  
& roof.

F. H. A. Bulletin  
3/22/51.  
G. B. SE-157.

GENERAL HOUSES  
INCORPORATED  
Chicago Daily News  
Building,  
Chicago, Illinois,  
U.S.A.

Wood frame panel faced with  
conventional siding.

M. O. W. Survey of  
Prefabrication.

GENERAL INDUSTRIES  
COMPANY INCORPORATED  
Fort Wayne,  
Indiana, U.S.A.

Plywood & wood frame units  
for exterior walls, partitions  
ceiling & roof.

F. H. A. Bulletin  
6/20/50.  
G. B. SE-146.

HALLIDAY CO. LTD.,  
551 Maple Ave.,  
Burlington, Ont.,  
Canada.

Major prefabrication and  
pre-assembly of components  
of a traditional form of  
construction  
2" x 4" at 16" o. c.

Halliday Co. Ltd.,  
551 Maple Ave.,  
Burlington, Ont.,  
Canada.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd)    WFH

HARNISCHFEGER  
CORPORATION  
Port Washington,  
Wisconsin, U.S.A.

Wood frame units for exterior  
walls, partitions, floor, ceiling  
& roof. Covering materials.  
Plywood or wall-board.

F.H.A. Bulletin  
8/2/50.  
G.E. SE-147.  
"American Business"  
October, 1949.

HIRSH-KUPFER  
Hirsh-Kupfer and  
Messingwerke Finow,  
Hamburg, Germany.

1930.  
Timber framed panels.  
Aluminum reflective insulation.

M. O. W. Survey of  
Prefabrication.

HODGSON  
E. F. Hodgson Company  
Dover, Massachusetts,  
U.S.A.

Panel 2" x 3" studs at 12"  
centers faced with cedar siding  
externally, fibreboard,  
battened internally in 6' wide x  
storey height panels. Roof and  
floor units similar. A con-  
ventional stud frame panel.  
Production continuous since  
1892.

The Evolving House,  
III, Rational Design,  
(Bemis).

HOME BUILDING  
CORPORATION  
303 North Park,  
Sedalia, Miss.,  
U.S.A.

Plywood or hardboard on wood  
frame units for walls,  
partitions, floor, ceiling and  
roof.

F.H.A. Bulletin  
4/16/54.  
G.B. SE-180.

HOMEOLA  
CORPORATION  
9 South Clinton St.,  
Chicago 6, Illinois,  
U.S.A.

Plywood faced panels.  
Conventional. Steel frame.  
8' x 0" by 4' x 0" panels.

"Sales Management"  
November 1946.  
U.S. National Bureau  
of Standards.  
"American Builder &  
Building Age,"  
May, 1947.  
"Architectural Forum,"  
November, 1946.

HOUSEMART  
INCORPORATED  
18320 Lanken Avenue,  
Cleveland, Ohio,  
U.S.A.

Wood frame units for walls  
and partitions. Pre-cut  
framing for all other  
elements of house.

F.H.A. Bulletin  
4/17/50.  
G.B. SE-141.  
"American Builder &  
Building Age,"  
April, 1948.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

HOUSTON READY CUT  
HOUSE COMPANY  
Houston, Texas,  
U. S. A.

1917.  
Wood stud panels. Windows &  
doors included in panels. Siding  
insulation.  
4' 0" x 8' 0".  
Conventional.

M. O. W. Survey of  
Prefabrication.

IBO

Various Swedish firms, such  
as Aktiebolaget Industribostader  
(IBO), with aid from the  
municipal or national govern-  
ment.  
1920.  
Wood stud frame panel boarded  
internally and externally.  
Insulation filled, (sawdust).  
Traditional floor and roof  
construction.

The Evolving House,  
III, Rational Design,  
(Bemis.)

ILLINOIS LUMBER  
MANUFACTURING  
COMPANY  
Cairo, Illinois,  
U. S. A.

Wood frame units for walls.  
Pre-cut framing & sheathing  
sub-flooring & finish surface  
materials finished.

F. H. A. Bulletin  
5/9/50.  
G. E. SE-142.

INDEPENDENT LUMBER  
COMPANY  
19620 Nottingham Road,  
Cleveland, Ohio,  
U. S. A.

Wood frame units for walls &  
partitions plywood sheathing  
shop applied on wall units,  
wood trusses, for roof & cell-  
ing framing.

F. H. A. Bulletin  
2/9/55.  
G. B. SE-192.

INLAND HOMES  
CORPORATION  
501 South College St. ,  
Piqua, Ohio,  
U. S. A.

Wood frame units for walls &  
partitions. Fibreboard  
sheathing & double coursed  
shingles. Shop applied or  
other exterior finish field  
applied wood trusses for roof  
& ceiling framing.

F. H. A. Bulletin  
6/25/54.  
G. B. SE-182.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

INTERCON BUILDING  
SYSTEM

1809 Royal Bank  
Building,  
Toronto, Ontario,  
Canada.

1 1/2 storey whole house  
package. 4' 0" x 1' 8" horizontal  
panel. Laminated small sections.  
1 prototype at Ajax.  
Out of business.

C.M.H.C. file.

JARINO HOUSES

Roden, Holland,  
Exported to Canada.

One house built in Swift  
Current, Saskatchewan.  
4' 0" panel with 2 cavities  
filled with insulating wool.  
Siding outside.

Jarino Houses,  
Roden, Holland.

KAISER HOMES

Los Angeles, California,  
U.S.A.

Wood stud panels of con-  
ventional type. Whole house  
prefabricated.

"Architectural  
Forum", March 1947.

KELSAN HOMES  
INCORPORATED

Box 154,  
Illioopolis, Illinois,  
U.S.A.

Conventional.

Kelsan Homes Inc.,  
Box 154,  
Illioopolis, Illinois,  
U.S.A.

KEYLOCK

Robert Building  
Industries Limited  
Indio House,  
Bovey Tracey, Devon,  
U.K.

4' 0" x 8' 0" panels, 1" glass  
wool lined internally with hard  
board.

"Architects  
Journal", Aug. 30,  
1956.  
"Prefabrication"  
October 1955.

KIEWITT, G.R.

Webster Groves.,  
Missouri,  
U.S.A.

Plywood on wood frame units  
for walls & partitions.

F.H.A. Bulletin  
12/9/46.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

KNIVSTA	1920. Various Swedish firms, such as Aktiebolaget Industribostader (IBO). Wood stud frame panel, boarded internally and externally. Insulation filled (sawdust). Traditional floor and roof construction.	The Evolving House, III, Rational Design, (Bemis).
KNOX CORPORATION Thomson, Georgia, U. S. A.	Plywood & upson board on wood frame units for walls, partitions, floor, ceiling & roof.	F. H. A. Bulletin 9/23/48. G. E. SE-100. "Modern Industry" June 1951.
LAKEVIEW PANEL HOMES 374 Fraser Street, North Bay, Ontario, Canada.	Framed panel with 2" x 4" stud at 16" o.c. Vapour barrier and sheathing. C. M. H. C. accepted 1955.	"Acceptable Building Materials", C. M. H. C. Ottawa.
LEIXLIP UNIT HOUSES Barney Heron Limited, Leixlip, Kildare, Eire, Ireland.	Architect Michael Scott. 4' 1" module. Timber units of 1" pine, 4" cavity, fibreboard, inner lining.	Barney Heron Limited, Leixlip, Kildare, Eire, Ireland.
PREFABRICATED BUILDINGS CO. LTD. 630 10th Street, East, Saskatoon, Saskatchewan, Canada.	Prefabricated Buildings.	Prefabricated Buildings Co. Ltd., 630 10th Street, East, Saskatoon, Saskatchewan, Canada.
LUMBER FABRICATORS INCORPORATED 728 Fisher Building, Detroit, Michigan, U. S. A.	Wood frame units for walls and partitions.	F. H. A. Bulletin 12/14/48. G. B. SE-113.



WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**LU-RE-CO PANEL SYSTEM**

(Ramon Harrell)  
Small Homes Council,  
University of Illinois,  
U.S.A.

N.A.H.B. House of year 1957.  
Studs on 24" o.c. ranchwall  
exterior. 4' 8" panels, walls.  
Conventional.

"American Builder &  
Building Age,"  
May 1954, July 1954.  
"Lumber Merchant,"  
July 1957.

**MACO STRUCTURES**

Riverside, California,  
U.S.A.

Wood frame & plywood units  
for walls & partitions.

F.H.A. Bulletin  
3/22/51.

**MAISON DEMONTABLE**

Societe Armoricaine.  
D'Importation des Bois Du  
Nord.  
1938.  
1" wide x storey height.  
Wood frame panels.  
Insulation filled.  
t. & g. joint.

M. O. W. Survey of  
Prefabrication.

**MARYLAND MODERN  
HOUSING CORPORATION**  
Baltimore, Maryland,  
U.S.A.

Wood frame units for walls,  
partitions, roof trusses,  
plywood wall sheathing.

F.H.A. Bulletin  
6/14/48.  
G.B. SE-94.

**MAY HOMES & SUPPLIES**  
1326 North Harlan  
Avenue,  
Evansville, Indiana,  
U.S.A.

Wood frame units with shop  
applied sheathing & interior  
covering materials for walls &  
partitions, wood trusses for  
ceiling & roof framing.

F.H.A. Bulletin  
5/26/54.

**MERRIMAN PORTABLE  
HOME**  
Lethbridge Body Works,  
Lethbridge, Alberta,  
Canada.

Balloon frame construction  
on steel runners on post  
foundation raised above  
ground. Post foundation,  
construction otherwise  
normal.

Lethbridge Body Works,  
Lethbridge, Alberta,  
Canada.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

MIDWEST HOMES  
INCORPORATED  
Mansfield, Ohio,  
U. S. A.

Wood frames units for walls,  
partitions, floors. Pre-cut  
ceiling joists & roof rafters.

F. H. A. Bulletin  
3/17/52.  
G. B. SE-166.

MOBILHOME COR-  
PORATION OF AMERICA  
Bakersfield, California,  
U. S. A.

Stud framing 2" x 4" at 16" o. c.  
Whole house shipped as one  
piece.  
Shop fabricated complete  
house.

Prelim. Findings of  
of the Interagency  
Working Group on  
Emergency Housing  
& Community  
Facilities April  
1950.  
F. H. A. Bulletin  
3/15/49.

MODERN HOME  
MANUFACTURING  
CORPORATION  
Biwabik, Minnesota,  
U. S. A.

Wood frame house shop  
fabricated complete in one  
unit for transportation to  
site.

F. H. A. Bulletin  
1/23/53.

McALPINE  
Sir Robert McApline  
and Sons,  
London W. 1,  
England.

Studding clad with steel  
sheeting.  
Brick veneer added.  
Internal wall-board lining.

Sir Robert McApline  
and Sons,  
London W. 1,  
England.

NATIONAL HOMES  
CORPORATION  
By-Pass 5,  
Lafayette, Indiana,  
U. S. A.

Plywood faced wood frame  
units for walls, partitions,  
ceilings, etc.

F. H. A. Bulletin  
9/8/54  
G. B. SE-187.  
F. H. A. Technical  
Circular 11.  
Dept. of Commerce  
Washington.  
"Prefabricated  
Homes Manufacturing  
Institute."

NERDRUM HOUSES  
20 Pall Mall,  
London S. W. 1,  
England.

See Pre-Cut Solid Timber  
House.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**NEWCASTLE**

Newcastle-On-Tyne  
Corporation,  
England.

Frame panels 4' 0" wide,  
storey high.

Newcastle-On-Tyne  
Corporation,  
England.

**NEW CENTURY HOMES  
CORPORATION**

P. O. Box 825,  
Lafayette, Indiana,  
U. S. A.

Wood stud frame.

F. H. A. Technical  
Circular 11,  
Dept. of Commerce,  
Washington, D. C.

**NEW FRAME WALL  
CONSTRUCTION**

630 10th Street,  
Saskatoon, Sask.,  
Canada.

Whole house construction.  
4' 0" module used.  
Conventional. Panelized.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa.

**OPEN HOUSE  
CONSTRUCTION**

Housing & Home  
Finance Agency,  
Washington, D. C.  
U. S. A.

Conventional pre-cut stud  
walling with whole house  
open plan, ceiling joists  
(roof truss) spanning from  
external wall to external  
wall. 4' 0" module.

Housing Research  
Paper No. 29.

**PAGE & HILL HOMES  
INCORPORATED**

Shakopee, Minnesota,  
U. S. A.

Wood frame units with various  
exterior & interior covering  
materials for walls, partitions,  
floor, ceiling and roof. Also  
trusses for ceiling & roof  
framing.

F. H. A. Bulletin  
2/1/52.  
G. B. SE-163.

**PANEL BUILDING  
HOMES**

113 Ferguson Avenue,  
Hamilton, Ontario,  
Canada.

Wall panels, trussed rafters.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa.

**PEASE WOODWORK  
COMPANY**

Cincinnati, Ohio,  
U. S. A.

Plywood & wood frame units  
for walls, partitions, floor &  
ceiling.

F. H. A. Bulletin  
7/8/49.  
G. B. SE-122.  
"Business Week"  
November 1951.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**PEERLESS HOUSING  
COMPANY**

300 4th Avenue,  
New York 10, New York,  
U.S.A.

also

213 Laurier Avenue West,  
Ottawa, Ontario,  
Canada.

Some houses in Gander,  
Newfoundland.  
2" x 4" at 16" o.c.  
Traditional wood pre-cut  
housing.  
Formerly made panels.  
Pre-cut sections put together  
by builder after drawings.

Peerless Housing  
Company,  
300 4th Avenue,  
New York 10, New  
York, U.S.A.  
also  
213 Laurier Avenue  
West,  
Ottawa, Ontario,  
Canada.

**PEMBERTON LUMBER &  
MILLWORK CORPORATION**  
270 41st Street,  
Brooklyn 32, New York,  
U.S.A.

Conventional wood frame  
panels.

Pemberton Lumber &  
Millwork Corporation,  
270 41st Street,  
Brooklyn 32, New York,  
U.S.A.

**PERREN**

J. Perren,  
Bookham, Surrey,  
England.

1 bungalow at Bookham.  
Wood frame panel.

J. Perren,  
Bookham, Surrey,  
England.

**P.H.C.**

P.H.C. Housing  
Corporation,  
Jackson, Miss.,  
U.S.A.

8' 4" x 5' 0" panel with  
dual studding. 2-1" x 4" at  
1' 8" o.c. to which is  
attached plywood siding by  
means of metal clips.

**D.B.R.**  
693.002. 224.  
691.11  
**B.M.S. 90**

**POPE & COTTLE  
OR PREBILT**  
Pope & Cottle  
Company,  
now reformed as the  
**PREBILT COMPANY,**  
U.S.A.

1921.  
There are 200 houses  
manufactured monthly.  
Timber frame at 16" centres.  
Insulation board and cedar  
siding externally. Wall-  
board internally. Floors and  
roofs conventional house  
delivered in 6' sections.

**M.O.W. Survey of  
Prefabrication.**  
Architectural  
Forum, Bemis,  
February 1942 and  
April 1943.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

PRECISION BILT HOMES  
INCORPORATED  
Sky Ranch Airport,  
Route 9,  
Denver, Colorado,  
U. S. A.

Wood frame houses shop  
fabricated in large sections  
complete with floors, walls,  
ceilings & roof.

F. H. A. Bulletin  
6/19/52.

PRECISION BUILT J. R.  
BUILDING SYSTEM  
Homasote Company,  
Trenton 3, New Jersey,  
U. S. A.

Conventional with room size,  
pre-cut, platform frame.  
House erected to promote  
fibreboard, similar to  
Lu-Re-Co.

M. O. W. Survey of  
Prefabrication.  
F. H. A. Technical  
Circular 11.  
"Acceptable Building  
Materials",  
C. M. H. C. 1955,  
Ottawa.

also  
P. O. Box 20,  
Station N. ,  
Montreal, Quebec,  
Canada.

PRE-CUT SOLID  
TIMBER HOUSE  
Nerdrum Limited,  
20 Pall Mall,  
London S. W. 1,  
England.

Houses at Pointe Claire,  
Kingston, Whitby &  
Mattawa, Ontario.  
Horizontal external siding  
2 1/2" on vertical 2" x 2"  
studs at 2' 0" o. c. Trussed.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa.

PREFABRICATED  
BUILDINGS LIMITED  
J. Lorman,  
630 10th St. ,  
Saskatoon, Saskatchewan,  
Canada.

1954.  
4' 0" module 8' 0" wide panel  
storey high. Horizontal studs  
at 23" o. c. including windows.  
Plywood faced in overlapping  
horizontal sections.

J. Lorman,  
630 10th Street,  
Saskatoon,  
Saskatchewan,  
Canada.

PROGRESSIVE HOMES  
CORPORATION  
Detroit, Michigan,  
U. S. A.

Stud frame panel.

Progressive Homes  
Corporation,  
Detroit, Michigan,  
U. S. A.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

PUUTALO OY  
Mannerheimintie 9B,  
Helsinki, Finland.

\*Types 1361 & 250.  
Skelton of construction,  
beam posts.  
Infill wood frame panel,  
trussed roof.  
Delivered in panels.  
4' 0" module.  
Whole house system.

Puutalo Oy,  
Mannerheimintie 9B,  
Helsinki, Finland.

RASCH  
Bodo Rasch Architect,  
Stuttgart, Germany.

Wood stud frame panels,  
1.05 m. wide x storey high.  
Asbestos cement facing sheets  
fixed to 2 x 4 studs.  
Insulation between. Cover  
strip over bitumen joint.

M. O. W. Survey of  
Prefabrication.  
Baugilde 1931.  
p. 209.

RICHMOND HOMES  
INCORPORATED  
North West L and  
Sheridan Streets,  
Richmond, Indiana,  
U.S.A.

Wood frame wall units with  
fibreboard sheathing & various  
exterior wall finish materials  
& upson board interior covering.  
Upson board on wood frame  
partitions, trusses for ceiling  
& roof framing.

F.H.A. Bulletin  
11/30/51.  
G.B. SE-1161.

SANFORD INCORPORATED  
803 North West 7th Ave.,  
Fort Lauderdale,  
Florida, U.S.A.

Wood truss units with special  
connector plates for ceiling  
& roof framing.

F.H.A. Bulletin  
7/13/55.  
G.B. SE-194.

SCOTTWOOD FACTORY  
HOMES (HURON)  
David Ellis,  
13 Chaterhouse Street,  
London E. C. 1,  
England.

Panelized construction.

David Ellis,  
13 Chaterhouse  
Street,  
London E. C. 1,  
England.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

SECO

Uni-Seco Structures  
Limited,  
6 Woods Mews,  
Park Lane W. 1,  
England.

1940.  
Timber frame, asbestos cement  
sheathed panel 3' wide and  
storey high. Floors and roofs  
plywood box panels. Splined  
joined. Large volume of  
temporary wartime housing  
and post-war housing.

M. O. W. Survey of  
Prefabrication.  
Building, March  
1944.

SECTIONAL TIMBER  
STRUCTURES IN  
GREAT BRITAIN

Boulton & Paul  
Limited,  
Norwich, England.

2 1/2" x 2" stud frame up to  
8' wide by storey height.  
Exterior facing shiplap  
interior 1/2" wall-board.  
Windows and doors included  
in panels.

M. O. W. Survey of  
Prefabrication.

SECTIONIT

Vandyke Brothers,  
Punchbowl,  
New South Wales,  
Australia.

1943.  
Timber panel units 3' wide x  
9'. Fibreboard faced both  
sides. Precast concrete  
foundation posts.

M. O. W. Survey of  
Prefabrication.  
"Architectural  
Forum", Nov. 1943.

SEMICO INCORPORATED

Seney, Michigan,  
U.S.A.

Wood board two & three ply  
units for walls, partitions,  
floor & roof.

Prefab Homes  
Manufactured Inst.  
Dept. of Commerce,  
Washington.  
F. H. A. Bulletin  
2/24/50 SE-137.  
"Business Week"  
May 1950.

SESAM

1920.  
Various Swedish firms, such  
as Aktiebolaget Industribostader  
(IBO) with aid from the  
municipal or national govern-  
ment.  
Wood stud frame panel.  
Boarded internally and ex-  
ternally. Insulation filled (saw-  
dust). Traditional floor and  
roof construction.

The Evolving House,  
III, Rational Design,  
(Bemis).

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**SHARP HOMES  
INCORPORATED**

116 East Pasadena Ave.,  
Flint 5, Michigan,  
U.S.A.

Wood frame units for exterior walls, partitions, floor, ceiling & roof. Interior covering materials & exterior sheathing shop applied.

F.H.A. Bulletin  
8/27/51.

**SILVERTEX HOUSE**

Alexander Silvertex  
Products,  
265 Eglington Ave. East,  
Imperial Bank Building,  
Toronto, Ontario,  
Canada.

Whole house design using  
4' x 8' panel and studs at 24"  
o.c. "W" roof trusses.

Alexander Silvertex  
Products,  
265 Eglington Ave.,  
East.,  
Imperial Bank Building,  
Toronto, Ontario,  
Canada.

**SIMMS EXTENDIBLE  
HOUSE**

W.J. Simms Co. Limited,  
England.

12' 0" x 8' 0" panels. Load bearing. Timber. Plywood cladding exterior, plaster board internally. Glass silk insulation.  
Trussed roof.

"Prefabrication",  
November 1953.

**SOUTHERN MILL AND  
MANUFACTURING  
COMPANY**

Tulsa, Oklahoma,  
U.S.A.

Wood frame units for walls, partitions, ceiling & roof.

F.H.A. Bulletin  
9/3/48.  
G.B. SE-98.

**SOUTHWEST AMERICAN  
HOUSES INCORPORATED**

Box 16,  
Houston, Texas,  
U.S.A.

Wood frame units for walls, partitions & floors and wood roof trusses.

F.H.A. Bulletin  
2/26/51.  
G.B. SE-154.

**SPOONER HOUSE**

J.L. Spooner Limited,  
Hull, England.

Wood frame panels varying widths up to 11' 0".  
Clad with galvanized steel.  
Backed by fibreboard, wood floor, steel roof truss.  
U=0.25.

Post War Building  
Study No. 25.  
"Prefabricated  
Homes" by B.H. Cox,  
Paul Ekk Publisher.



WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

STADENS (STOCKHOLM  
STADS)  
Stockholm, Sweden.

1920.  
Various Swedish firms, such as Aktiebolaget Industribostader (IBO) with the aid from the municipal or national government.  
Stockholm City Council, Sweden.  
Wood stud frame panel, boarded internally and externally.  
Insulation filled (sawdust).  
Traditional floor and roof construction.

The Evolving House, III, Rational Design, (Bemis).

STEX HOUSE

Svensk Trahusexport.  
Foreningen A/B (Planex).  
An amalgam of 16 Swedish firms. Erected in England & France. Wood panel 4' 0" x 8' 0" studs at 16" o. c.  
1" insulation.  
Vertical External Boarding.  
Internal face applied in situ.

STRUCTURAL WINDOW  
WALL PANELS  
Engineered Buildings  
Limited,  
504 5th Street,  
South East,  
Calgary, Alberta,  
Canada.

Framed window, wall, load-bearing units.  
Panel incorporating windows.

"Acceptable Building Materials",  
C. M. H. C. Ottawa.

STUD FRAME PANEL

1955.  
A semi-traditional form of wood stud frame panel.

Small Homes  
Council,  
University of  
Illinois,  
Lumber Dealers  
Research Council,  
U. S. A.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

SWEDISH PREFABRICATED  
HOUSE

Forenade Trahusfab  
U. P. A.,  
Sveavagen 28-30,  
Stockholm, Sweden.

2' 0" module frame panel.  
U=0.47.  
Whole house system.

Forenade Trahusfab  
U. P. A.,  
Sveavagen 28-30,  
Stockholm, Sweden,

SWEDISH STUD FRAME  
PANEL

Amals Saguertes A/B.

TAPPAN UNIT

Robert Tappan, Architect,  
New York, N. Y.,  
U. S. A.

1932.  
Wood stud frame panel 4'  
wide x 7' high. Wall-board  
inside, shiplap and stucco  
outside. A few houses built  
on Long Island.

The Evolving House,  
III, Rational Design,  
(Bemis).  
M. O. W. Survey of  
Prefabrication.  
"Architectural Forum".  
Bemis: 1932 p. 522.

MYTON LIMITED

Newland, Hull, England,  
formerly  
TARRAN INDUSTRIES  
LIMITED.

1939-44.  
Concrete poured between ply-  
wood studs on building paper  
assembled on site.  
1' 4" module. Bitumen  
joint. See Myton (CP).

M. O. W. Survey of  
Prefabrication.  
Sponsors Literature.  
"WOOD": October  
1942.  
"Architects Journal".  
July 27, 1944.

TECHBUILT

INCORPORATED  
55 Brattle Street,  
Cambridge,  
Massachusetts, U. S. A.

Plywood & wood frame  
units for walls, floors  
ceiling & roof. Built-up  
floor girders & pre-cut  
roof beams.

F. H. A. Bulletin  
8/3/54.  
G. B. SE-185.

TEXAS HOUSING  
COMPANY

9001 Denton Drive,  
Dallas, Texas,  
U. S. A.

Wood frame units for walls,  
partitions & floors.  
Sheathing shop applied.  
Interior & exterior finish shop  
or field applied. Roof trusses  
or pre-cut joists 7 rafters for  
ceiling & roof framing.

F. H. A. Bulletin  
4/7/54.  
G. B. SE-178.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

THERMOBAU, G. M. B. H.,  
Spiegelgasse 21,  
Vienna 1, Austria,  
also  
Planex Associates,  
Montreal, Quebec,  
Canada.

Many units built in Holland,  
Scotland, Australia, Denmark,  
etc. Trussed roof.  
Frame panel of 2 types -  
Herkalith lined inside and  
out - 3 air cavities  
separated by insulated paper  
& thermofoil.  
Dowel joints.

Thermobau, B. M. B. H.,  
Spiegelgasse 21,  
Vienna 1, Austria.  
also  
Planex Associates,  
Montreal, Quebec,  
Canada.

THORNS HUTTING  
Brampton Road,  
Bexleyheath,  
Kent, England.

Wall panel.  
5 whole house units.  
6' 0" module.

"Architectural Review",  
August 1957.

THYER MANUFACTURING  
COMPANY  
8257 Wayne Street,  
Toledo, Ohio,  
U. S. A.

Wood frame units for walls &  
partitions, sheathing and  
siding shop applied.  
Wood trusses for ceiling &  
roof framing.

F. H. A. Bulletin  
6/2/53.  
G. B. SE-174.

TORBODA OR  
FRIBERGER  
E. Friberger,  
Architect,  
Wetterlundh & Ostnas,  
Engineers,  
Sweden.

1936.  
Steel post and beam frame,  
standardized panels for walls,  
floor and roof of t. & g.  
materials. Panels connected  
with bolts. One house near  
Gothenburg.

M. O. W. Survey of  
Prefabrication.  
"Architectural d'  
Aujourd'hui",  
January 1938.  
"Architects Journal",  
July 1944.

TRU-BILT CORPORATION  
P. O. Box 127,  
Buechel, Kentucky,  
U. S. A.

Conventional pre-cut platform  
frame construction.

Tru-Bilt Corporation,  
P. O. Box 127,  
Buechel, Kentucky  
U. S. A.

TURKO WALL PANEL  
6754 Levesque Blvd.,  
St. Francois de Sale,  
Quebec, Canada.

Wall, roof & floor panels.  
7' 8" x 2' 8".

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1956.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**T. V. A. DEMOUNTABLE  
DEFENCE HOUSE  
TYPE II**  
Tennessee Valley  
Authority,  
Knoxville, Tennessee,  
U. S. A.

2" x 3" timber studs, framed  
into 22" x 7' 6" house sections  
complete with finishes and  
equipment.  
Houses built 15-60 miles from  
factory. Several hundreds for  
T. V. A.

M. O. W. Survey of  
Prefabrication.  
T. V. A. Publications.

**TWO FOUR ONE FLOOR  
SYSTEM**  
Douglas Fir Plywood  
Association,  
U. S. A.

Heavy plywood floor system.

Douglas Fir Plywood  
Association,  
U. S. A.

**UNI-SECO STRUCTURES  
LIMITED**  
6 Woods Mews,  
Park Lane,  
London, England.

1945.  
Widespread use for temporary  
housing and hutting in England.  
A wood stud frame faced with  
asbestos externally.

Uni-Seco Structures  
Limited,  
6 Woods Mews,  
Park Lane,  
London, England.

**UNIT FRAME**  
U. S. A.

1938.  
Conventional wood frame panels  
6' wide by storey height. Studs  
6" x 5/8". Panels joined by  
spline and bolt.

M. O. W. Survey of  
Prefabrication.  
WOOD: Sept. 1938.

**UNIVERSAL HOMES**  
725 North Grand Avenue,  
Amarillo, Texas,  
U. S. A.

Complete wood frame houses  
constructed at Central Plant &  
transported to the site.

F. H. A. Bulletin  
3/20/52.

**V. D. L. HOUSE**  
Van der Leeuw,  
Los Angeles, California,  
U. S. A.

Richard Neutra Architect,  
Pre-1936.  
Stud frame panel faced with  
wall-board internally and lath  
and plaster externally.

American Arch. &  
Architecture,  
Sept. 1936.

WOOD FRAMED HOUSE (Platform Frame Prefabricators cont'd) WFH

**WADSWORTH HOMES  
SALES DIVISION**  
2949 Chrysler Road,  
Kansas City, Kansas,  
U. S. A.

Plywood sheathed wood frame  
units for walls, wood framed  
units for partitions, trusses  
for ceiling & roof framing.

F.H.A. Bulletin  
6/18/52.  
G.E. SE-167.

**WALLIS**  
John Wallis & Company  
Troy Mills,  
North Rickmansworth,  
England.

1920.  
Prefabricated panels of hard-  
wood with concrete infilling.  
Wood exposed. Panels con-  
nected by bolts.  
Development not known.

M.O.W. Survey of  
Prefabrication.  
M.O.H. Systems of  
House Construction  
approved up to 1920.

**WEAKLEY LUMBER  
COMPANY**  
Newark, Ohio,  
U. S. A.

Wood frame units for walls &  
partitions. Wood roof trusses.

F.H.A. Bulletin  
11/17/50.

**WERNO WALL UNITED**  
Sweden

Straw filled wood panels, load  
bearing and insulating. 4' 0" x  
up to 23' 6" high. 3" units  
level with 1/2 plaster board.  
U=0.35.  
Sound reduction 36 decibels.

"Prefabrication":  
September 1954.

**WEST COAST MILLS**  
Chehalia, Washington,  
U. S. A.

Wood frame units for walls,  
partitions & roof trusses,  
pre-cut wood framing.

H.M.A. Washington,  
1957.  
F.H.A. Bulletin:  
4/12/49 G.B. SE-119.

**WEYHAUSER SALES  
COMPANY**  
First National Bank  
Building,  
St. Paul 1, Minnesota,  
U. S. A.

Wood frame units for walls,  
floor & roof.  
All construction essentially  
conventional.

F.H.A. Bulletin  
3/17/49.  
G.B. SE-116.

**WILLISWAY SYSTEM**  
Homeola Corporation,  
9 South Clinton Street,  
Chicago, Illinois, U. S. A.

Prefabricated wood panels,  
walls, floors and roofs.

Homeola Corporation,  
9 South Clinton Street,  
Chicago, Illinois, U.S.A.

## WOOD FRAMED HOUSE

### Portal Frame Bents

#### BENT CONSTRUCTION (NORMAL)

Arch frame of dual columns  
and beams clad traditionally.

"Fabricating Houses  
from Component  
Parts",  
Norman Cherner.  
Rheinhold, 1957.

#### BENT CONSTRUCTION (TRIANGULAR)

"Roof" Houses. Example  
references is an experimental  
project.  
An unusual example of a small  
house space frame.

"Fabricating Houses  
from Component  
Parts",  
Norman Cherner.  
Rheinhold, 1957.

#### F. W. A. BENT FRAME Federal Works Agency

Bents fabricated on ground  
and raised at 3' 0" centers.  
Cladding etc. conventional.

M. O. W. Survey of  
Prefabrication.

#### ONE AND A HALF STOREY TRUSS

Trussed bent designed to  
allow typical 1 1/2 storey  
accommodation.

"House & Home",  
September 1952.  
Small Homes Council.

#### PIERCE HOUSE (PORTAL FRAME BENT) John B. Pierce Foundation, Raritan, New Jersey, U.S. A.

Double 2" x 4".  
Portal frame at 8' 0" centers.  
Plywood roof panels nailed to  
trusses.  
Splined and gasketed wall  
panel joint.

"Architectural  
Record".  
July 1950.

#### THREE HINGED ARCH CONSTRUCTION Small Homes Council, University of Illinois, Urbana, Illinois, U.S. A.

A three pin truss spanning  
the whole house width at  
8' 0" centers.

Housing Research  
Paper 33, H. H. F. A.

WOOD FRAME HOUSE (Portal Frame Bents cont'd)

WFH

TRUSSED BENTS

Small Homes Council,  
University of Illinois,  
Urbana, Illinois,  
U.S.A.

Bents at 8' 0" centers with  
supports set 6' 0" in from  
outside curtain wall and  
imbedded in concrete slab.

Housing Research  
Paper 33, H.H.F.A.

VOLKS-KABIN

Consists of continuous  
Bent frames 6' apart -  
covered with 2 x 6 planking  
on walls & roof.

Core House Corp.  
44 Brattle St. ,  
Cambridge, Mass.

Portal Frame Bents

Prefabricators

BARRETT CONSTRUCTION  
COMPANY

918 Harrison Street,  
San Francisco,  
California, U.S.A.

Laminated wood rigid frame.  
Bents and plywood frame units  
for walls, partitions, floors,  
ceiling and roof.

F.H.A. Bulletin  
8/11/54.

CALIFORNIA CABIN

Production Line  
Structures of Los  
Angeles,  
California, U.S.A.

Widespread use in California  
and Arizona.  
Module 4' 0" x 16' 0".  
Portal frame, panel, infill,  
mass production, capable of  
adaptation.

"Life" 1947.  
"Architectural  
Forum", Jan. 1947.

HOME BUILDING  
CORPORATION

303 North Park,  
Sedalia, Missouri,  
U.S.A.

Built up wood & hardboard  
bents. Wood frame laminated  
fibreboard core hardboard  
covered units for exterior  
walls. Wood frame & core  
covered with hardboard for  
partitions. Wood trusses.  
Pre-cut rafters & ceiling  
joists for ceiling & roof  
framing.

F.H.A. Bulletin  
11/19/51.

OVERSEER HOUSE  
Booth and Company,  
England.

Portal timber trusses at  
6' 0" center.  
All panels 3' 0" wide.  
Aluminum roof deck,  
prefabricated wiring and  
plumbing. U=0.17.

"Prefabrication"  
January 1954.  
"Architects Journal",  
May 13th, 1954.

PROUVE HOUSE  
P. Jeanneret and  
Jean Prouve,  
France.

Pier foundation.  
Roof supported on center  
"A" frames.  
Wall panels non-loadbearing.  
Space frame.

"Architectural  
Journal",  
June 27th, 1946.  
"Architecture  
d'Aujourd'hui  
1946.

RODELHAUS  
Dr. J.W. Ludowici,  
Jockgrim/Rheinpfalz,  
Germany.

Roof is erected first on  
bents at 10' 0" centers.  
Spanning 14' 0" width of  
house.  
Infill panels prefabricated  
or in situ as desired.  
Interior panels of 1"  
pressed fibreboard.

Dr. J.W. Ludowici,  
Jockgrim/Rheinpfalz,  
Germany.

Post and Beam

F.W.A. SKELTON  
FRAME  
Federal Works Agency,  
Washington, D. C.,  
U.S.A.

1942.  
Widespread stud frame with  
infill panels. "Carquinez"  
25 houses at Carquinez.

M. O. W. Survey of  
Prefabrication.

JAPANESE TRADITIONAL  
HOUSE  
Traditional in Japan.

A wood post and beam con-  
struction with framed roof  
truss (King post type). Wall  
infill mainly glass in small  
panels or 2 inch plaster on  
wattle. Tile roof. Post  
foundation.

"The Japanese House  
& Garden" by  
Tetsuro Yoshida  
(Publisher Fredrick  
A. Prager, New  
York).



WOOD FRAMED HOUSE (Post and Beam cont'd)

WFH

LINTEL AND SPANDREL  
GIRDER SYSTEM  
Pierce Foundation,  
Raritan, New Jersey,  
U. S. A.

Posts at 12' 0" centers  
connected by Lintel and  
Spandrel girders of plywood  
box construction.

Pierce Foundation,  
Raritan, New Jersey,  
U. S. A.

Post and Beam  
Prefabricators

Post and Beam  
Prefabbers

ASBESTOFOAM  
NORTHERN UNIT  
1548 Queensway,  
Toronto 14, Ontario,  
Canada.

Post and beam infill.  
Wood frame 4" x 4" on 4' 0"  
center.  
Styrofoam core faced with  
asbestos.  
1 house built at Frobisher  
Bay.

N. R. C.  
D. B. R. Brian  
Dickens.

CELOTEX CORPORATION  
120 South LaSalle St. ,  
Chicago, Illinois,  
U. S. A.

Post and panel wood frame,  
cemesto-board for walls,  
loadbearing partitions, roofs  
pitched or flat. May have  
cemesto-board sheathing;  
structural framework on  
exterior of the wall.

F. H. A. Bulletin  
4/28/48.  
G. B. SE-86.

CLIFF-MAY/CHRIS  
CHOATE  
815 Moraga Drive,  
Los Angeles 49,  
California, U. S. A.

Wood frame post and beam  
with wood frame units for  
walls & partitions.  
Shop applied vertical board  
& battens on exterior units.

F. H. A. Bulletin  
7/16/54.  
G. B. SE-184.

CORE HOUSE COR-  
PORATION  
E. A. Cuetara,  
44 Brattle Street,  
Cambridge,  
Massachusetts, U. S. A.  
(Successor to Techbilt Inc.)

Quarter beam type of roof  
truss.  
Wall divided into panels.  
Roof beams supported on  
posts in gable walls.

E. A. Cuetara,  
44 Brattle Street,  
Cambridge, Mass.,  
U. S. A.

WOOD FRAMED HOUSE (Post and Beam Prefabricators cont'd)

WFH

**DOANE**

Doane Agricultural  
Services Incorporated,  
St. Louis, Missouri,  
U.S.A.

Bents at 8' 0" centers  
imbedded in concrete pads.  
Bent frames are longitudinal  
in exterior walls.

Housing Research  
Paper 33, H.H.F.A.

**MARTIN HOUSE**

Glenn Martin,  
Middle River,  
Maryland, U.S.A.

Based on J.B. Pierce House  
except for 1 3/4" celotex  
sandwich panel, asbestos  
cement faced and bitumar  
impregnated. Panels 4' 0" x  
12' 0" between timber.  
Post and beam frame.

"The Evolving House  
III, Rational Design",  
(Bemis).

**MINIMAL**

Le Corbusier  
& Jeanneret,  
Architects,  
France.

1930.  
Metal frame - skyscraper.  
Curtain walls of solomit  
(baled straw). Firred inside  
and with plywood outside with  
sheet zinc. Some houses in  
France.

"The Evolving House  
III, Rational Design",  
(Bemis).

**MULTI FLEX**

8960 Scott Road,  
R.R. No. 9,  
New Vancouver,  
British Columbia,  
Canada.

4' 0" x 8' 0".  
Prefabrication panels and  
factory cut materials 4" x 4"  
pilasters between.  
Discontinued production in  
1955.

Multi Flex,  
8960 Scott Road,  
R.R. No. 9,  
New Vancouver,  
British Columbia,  
Canada.

**NATIONAL HOMES  
INCORPORATED**  
Lafayette, Indiana,  
U.S.A.

A number of sandwich panel  
constructions, essentially a  
curtain wall or post and beam  
construction. Made up into  
panels 4' 0" x 8' 0". Cores:  
paper honeycomb polystyrene,  
glass fibre, facing in asbestos  
cement.

"House & Home",  
December 1957.

WOOD FRAMED HOUSE (Post and Beam Prefabricators cont'd)

WFH

**RATIO STRUCTURES**

Ratio Structures,  
Designers,  
P. L. Weiner,  
J. L. Serf,  
Paul Schultz,  
New York,  
U. S. A.

Timber post and beam at 10' centers. Concrete foundation piers. Standardized curved roof units 3' 4" x 8' 0" plywood covered spanning 20-32'. Panels include windows and end doors. Panels of plywood faced insulation frame.

M. O. W. Survey of Prefabrication. "Forum": November 1943.

**SALZGITTER HOUSE**

Canadian Homes  
Company Limited,  
Edmonton, Alberta,  
Canada.

German system whole house frame. Non-loadbearing panels of asbestos cast, sandwiching 40 m. m. of Tronal.  $U(\text{metric}) = 0.20 \text{ Keal/m}^2/\text{hoC}$ . Steel wall and roof frame.

Canadian Homes Company Limited, Edmonton, Alberta, Canada.

**TECHBUILT**

**INCORPORATED**  
55 Brattle Street,  
Cambridge,  
Massachusetts, U. S. A.

See Acorn House under Structural Sandwich and Plastic Systems.

"House and Home" December 1957. F. H. A. Technical Circular 11, Dept. of Commerce, Washington.

**WEIR**

G. J. Weir Limited,  
Engineers,  
Glasgow, Scotland,  
also  
Great Britain.

Jas. Miller, Architect, Cardonald Housing Corporation. 1924. Timber studs at 4' 6" centres, infilled by wood frame panel faced with hardwood. Studs consist of 3-4' x 2" flitched with steel plates. One thousand five hundred built in South Scotland.  $U = 27$ . Cavity divided by paper barrier.

M. O. W. Survey of Prefabrication. H. M. S. O. Leaflet: Com. On New Methods of Construction: "Building" January 2, 1926. September 10th, (Bemis). Interdepartment Committee on House Construction Report 1944.

WOOD FRAMED HOUSE (Post and Beam Prefabricators cont'd)

WFH

**YOUTZ UNIT HOUSE**

Professor Brigham,  
University of Michigan,  
U.S. A.

Post and beam frame and interchangeable.  
Non-loadbearing panels.  
Each unit 8' 0" wide x 16' 0" long x 8' 0" high with 4 corner posts.  
Units to be bolted together.  
Wood stressed skin roof panels.  
Walls 2 1/8" thick sandwich and frame.  
Plywood and celotex.

"Architectural Record", July 1945.

Special Systems

**BAHARECKE**

A system of bamboo studding and lath and mud, plastered both sides and used in the Tropics of Central America.

Mr. Anatole A. Solow, Division of Housing & Planning, Pan American Union, Washington 6, D. C.

**TRUSSED WALLS**

\*Semi traditional.  
Whole wall units trussed to take point roof loads at approximately 8' 0" centers.

"Practical Builder", March 1949.

Special Systems

Prefabricators

**BUILD-FAST PRODUCTS**

1132 3rd Avenue,  
Prince George,  
British Columbia,  
Canada.

2' 0" x 4' 0" x 6" wood aggregate concrete block, between 2" x 6" studs.  
Sheet aluminum finish over interior face.

Build-Fast Products,  
1132 3rd Avenue,  
Prince George,  
British Columbia,  
Canada.

WOOD FRAMED HOUSE (Special Systems cont'd)

WFH

**DACHAUS (ROOF  
HOUSE)**

Dr. J. W. Ludowici,  
Jockgrim/Rheinpfalz,  
Germany.

The roof of close spaced  
rafters, pyramidal (51° slope).  
1st stage of house is contained  
within roof which is sub-  
sequently raised to make way  
for second stage underneath.

Dr. J. W. Ludowici  
Jockgrim/Rheinpfalz,  
Germany.

**LE RICOLAIS**

Robert LeRicolais,  
Engineer, France.

A 3 dimensional system using a  
tetrahedron as a basic unit.  
Similar to Lamella system.  
Used in France for farm and  
commercial buildings employing  
a flat or slightly pitched roof.

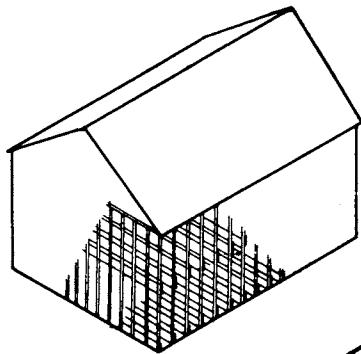
Genie Civil Page 15,  
Jan. 1, 1948.  
Small Homes Council  
Semester, Spring  
1951.

**WOHR**

Gebruder Woehr Ironworks  
Unterkochen,  
Wurtemberg, Germany.

Wood frame faced externally  
with steel sheathing, internally  
with vertical t. & g. boarding.  
Rigid insulation in cavity. 1 m.  
module. Some houses built.

M. O. W. Survey of  
Prefabrication.  
H. Spiegel,  
Der Stahlhausbau,  
Bauingenieur,  
Heft 30, 1926.

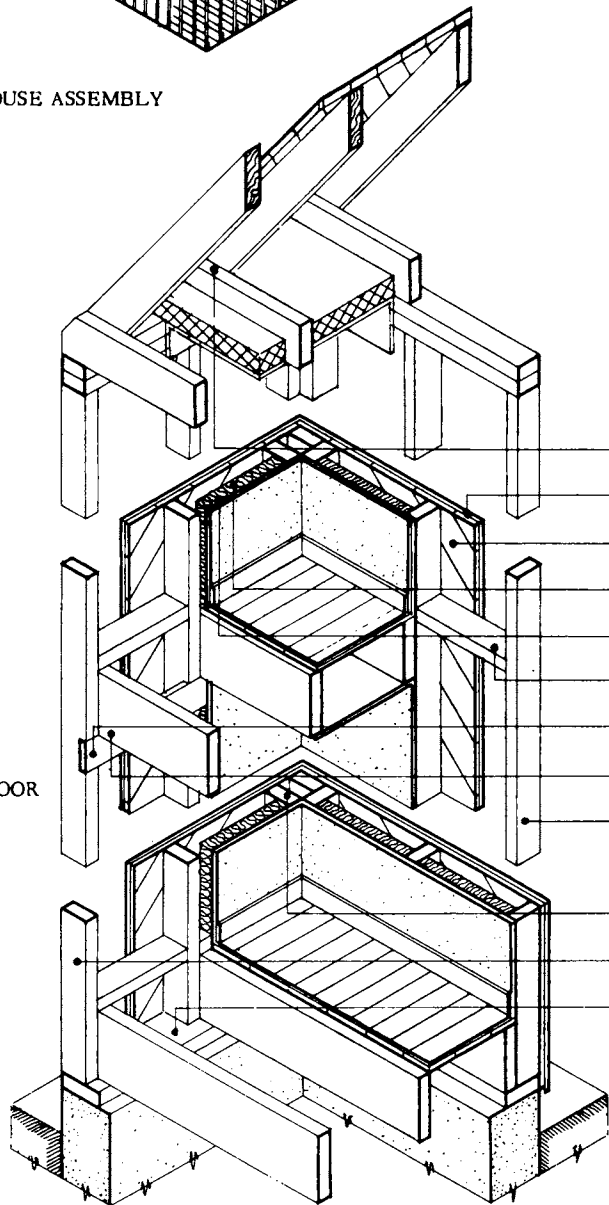


WHOLE HOUSE ASSEMBLY

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION



Roof covering and construction may vary considerably (from close spaced rafters to trusses, insulated or uninsulated).

rafters nailed to ceiling joists and toenailed to double top plate.

siding, backed with waterproof paper (breathing type)

diagonal board sheathing.

insulation.

vapour barrier.

firestops at floor levels.

1" x 6" bearer.

floor joists nailed to studs.

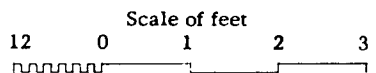
studs at 16" centres continuous in upper and lower floors.

double studs (with 2" spacer blocks) at corner.

studs toenailed to sill.

sill bolted to foundation wall.

the basement wall and foundation is shown as being typical in Canada.

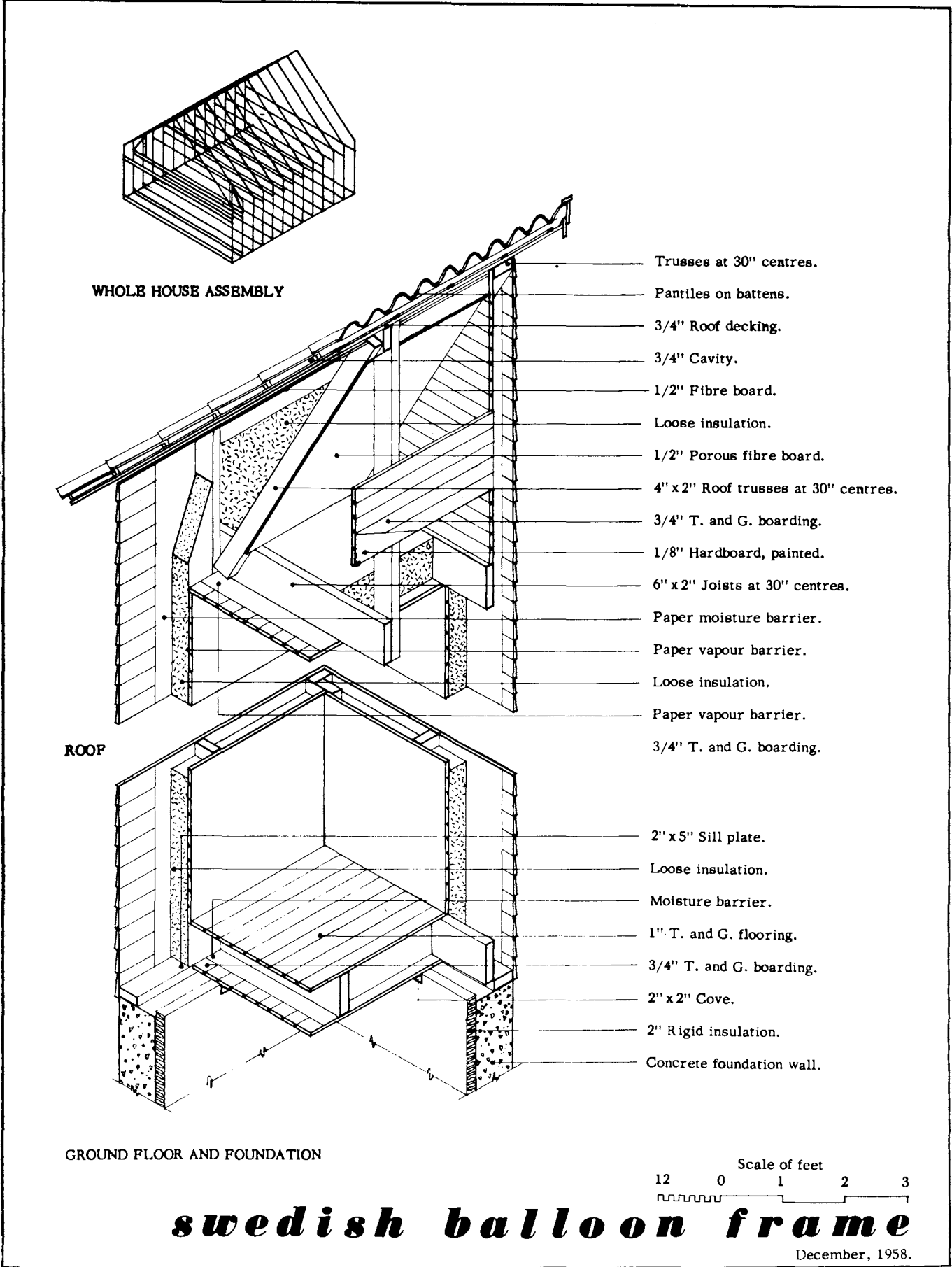


# **balloon frame**

January, 1958.

## BALLOON FRAME CONSTRUCTION

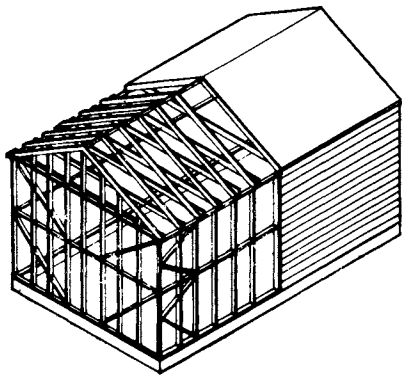
- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Traditional in North America.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Chicago about 1850.   |
| <b>Materials<br/>Used.</b>   | 3. Wood.   |
| <b>Description.</b>  | 4. Essentially a two storey construction. Exterior wall studs are continuous through both floors from sill plate to top wall plate, and are nailed to floor joists. Exterior and interior finishes may vary. (Brick, Veneer, Wood siding, etc.).<br>U=.087 (With 2" mineral wood). |
| <b>Development<br/>to Date.</b>  | 5. Widespread use in North America until the mid 1930's when it declined with the growing predominance of the single storey house.   |
| <b>Comment.</b>  | 6. Generally accepted.   |
| <b>References.</b>   | 7. "Wood-Frame House construction", Forest Products Lab. U.S. Department of Agriculture, Washington, D.C.<br>"Architectural Graphic Standards", Ramsay and Sleeper, John Wiley and Sons, New York.   |





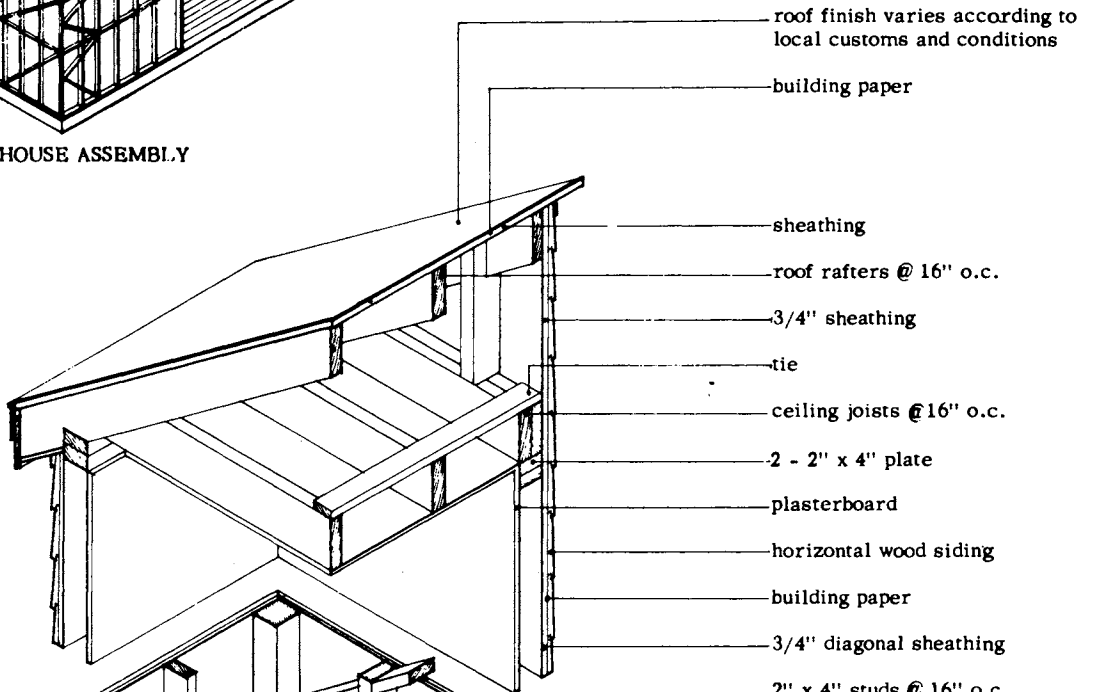
## SWEDISH BALLOON FRAME

- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Traditional (but only recently).  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. A twentieth century Scandinavian development of the American balloon frame.   |
| <b>Materials<br/>Used.</b>   | 3. Wood.   |
| <b>Description.</b>  | 4. Studs, joists and trusses are nailed together horizontally in the form of a frame, then raised as one piece. Maximum frame centres are 30". A later variation has 24" centres for wall studs and floor joists, and a roof truss at every other frame (i.e. 48" centres). Exterior finish is invariably of wood siding. Insulation can also be rigid. Houses are two storeys in height, the second storey being in the roof. |
| <b>Development<br/>to Date.</b>  | 5. Recently introduced to Sweden by the Royal Housing Commission (Kungliga Bostadsstyrelsen).  |
| <b>Comment.</b>  | 6. -   |
| <b>References.</b>   | 7. Kungliga Bostadsstyrelsen, Stockholm, Sweden.   |

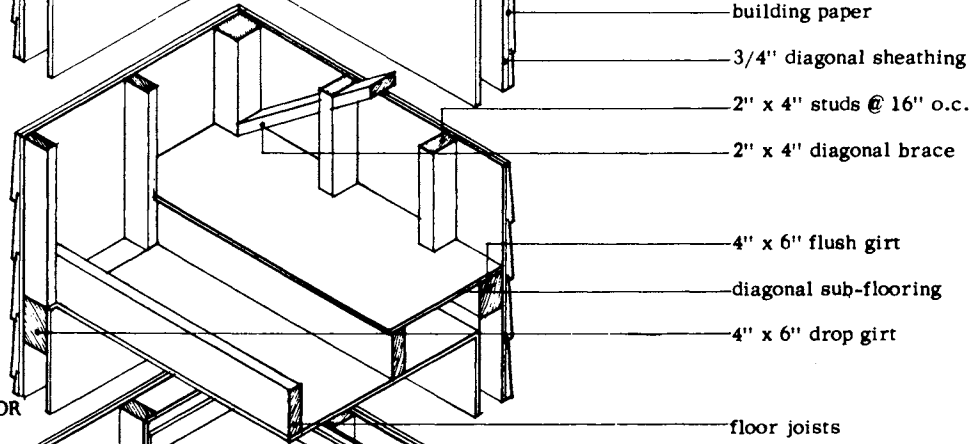


WHOLE HOUSE ASSEMBLY

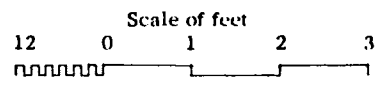
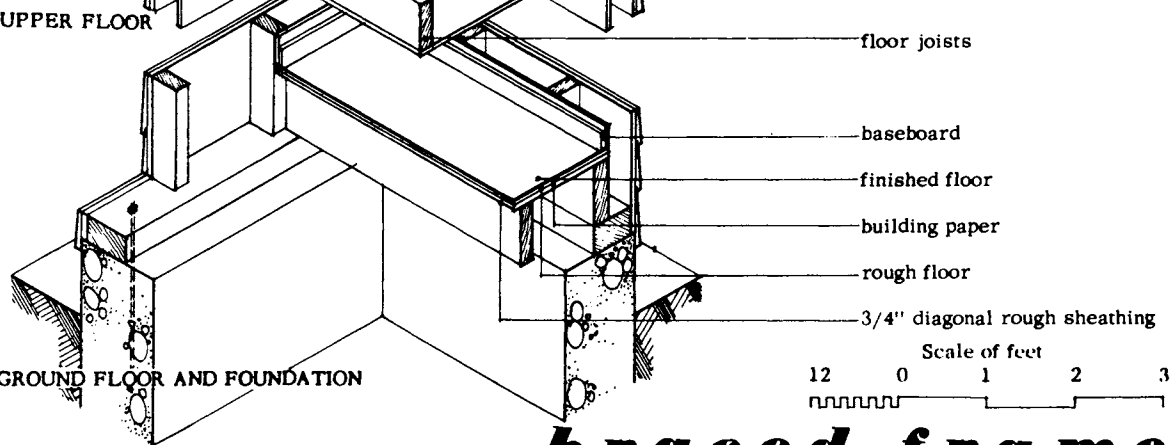
ROOF



UPPER FLOOR



GROUND FLOOR AND FOUNDATION



***braced frame***

December, 1958.

## BRACED FRAME

**Traditional,  
Non-Traditional  
Manufacturer,  
Sponsor or  
Builder.**

1. Traditional.

**Date and  
Place of  
Origin.**

2. U.S.A. 17th Century.

**Materials  
Used.**

3. Wood.

**Description.**

4. U-.087 (with 2" mineral wool).

**Development  
to Date.**

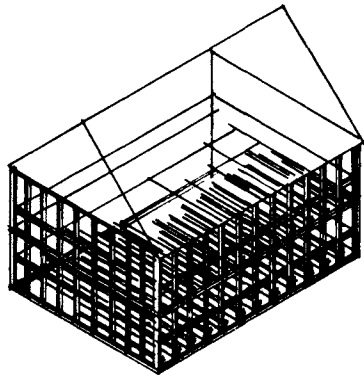
5. Traditionally used throughout North America until superseded by Balloon and Platform Frames in late 19th century.

**Comment.**

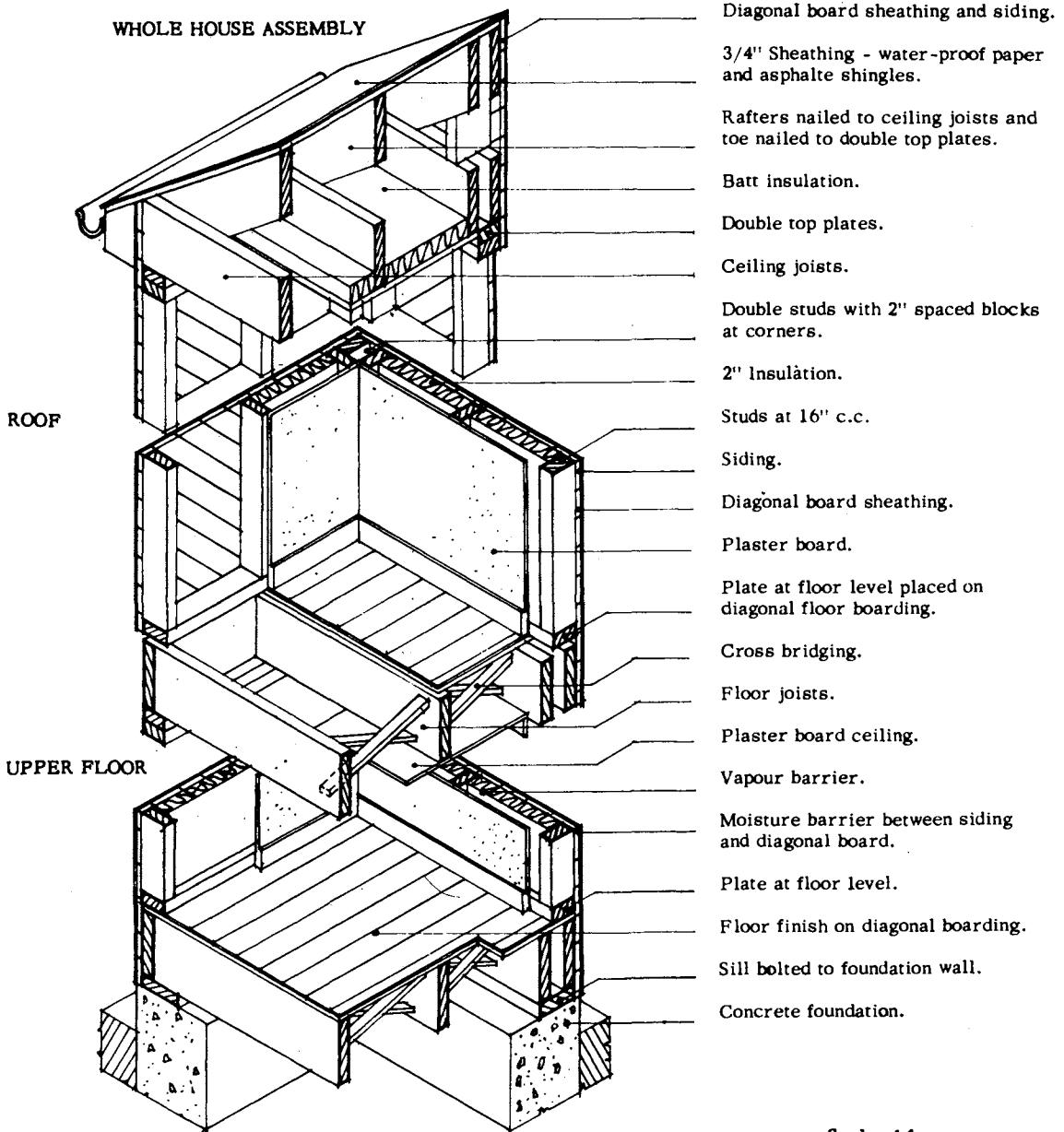
6. This system, like all wood frame systems, has been used in conjunction with a wide variety of finishing and filling materials.

**References.**

7. "Architectural Graphic Standards"  
Ramsay and Sleeper, John Wiley and Sons,  
New York.



WHOLE HOUSE ASSEMBLY



ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

Diagonal board sheathing and siding.

3/4" Sheathing - water-proof paper and asphalt shingles.

Rafters nailed to ceiling joists and toe nailed to double top plates.

Batt insulation.

Double top plates.

Ceiling joists.

Double studs with 2" spaced blocks at corners.

2" Insulation.

Studs at 16" c.c.

Siding.

Diagonal board sheathing.

Plaster board.

Plate at floor level placed on diagonal floor boarding.

Cross bridging.

Floor joists.

Plaster board ceiling.

Vapour barrier.

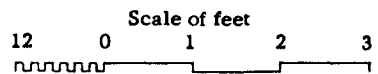
Moisture barrier between siding and diagonal board.

Plate at floor level.

Floor finish on diagonal boarding.

Sill bolted to foundation wall.

Concrete foundation.

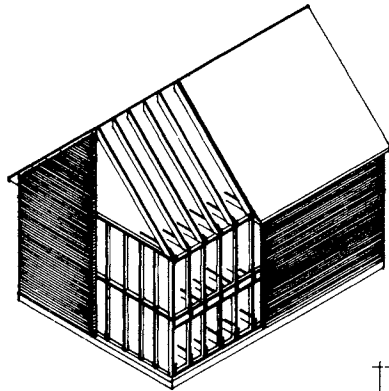


# platform frame

December, 1958.

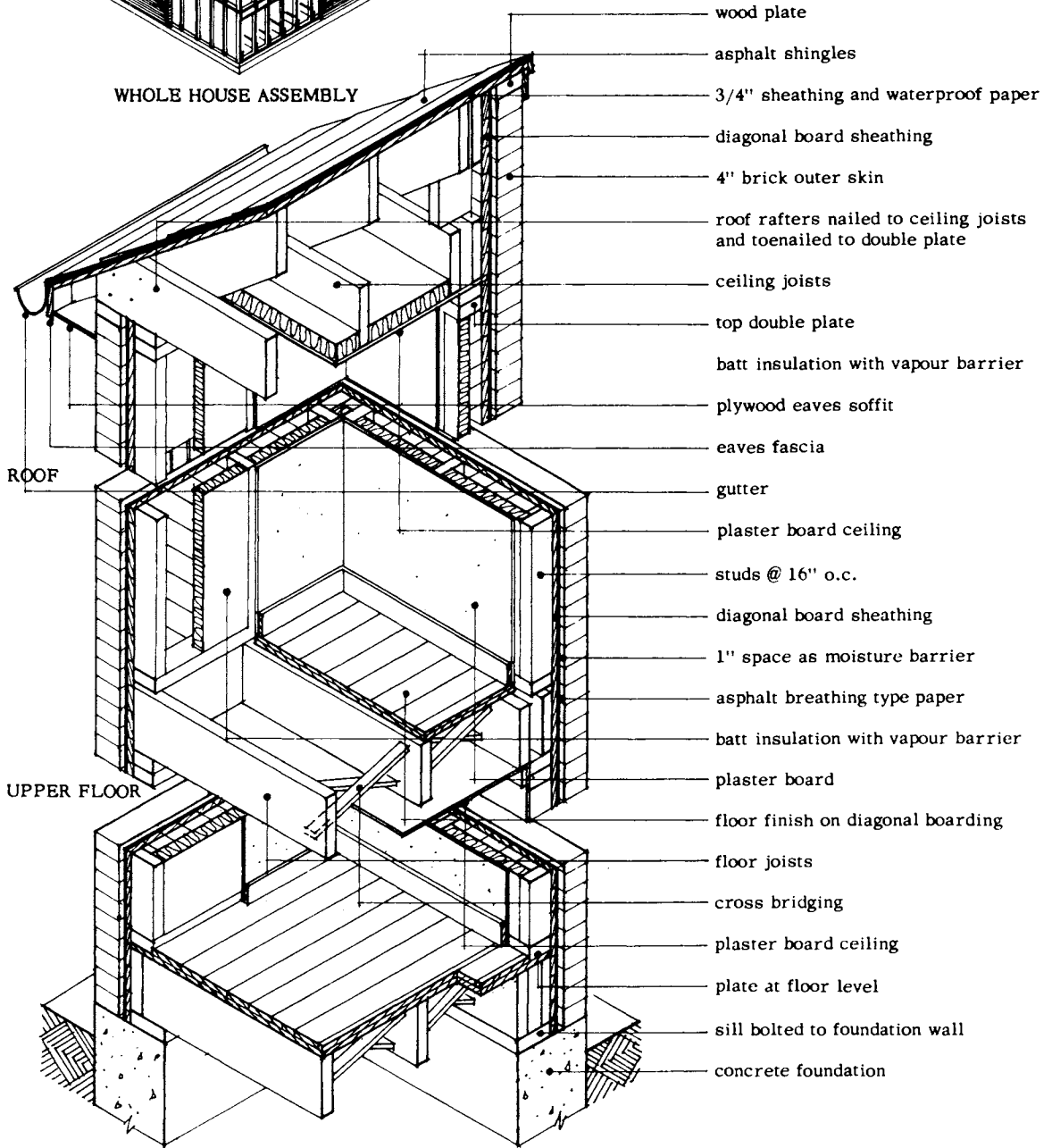
## PLATFORM FRAME (or WESTERN FRAME)

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Traditional in Northern America.
<b>Date and Place of Origin.</b>	2. North America from 19th. century.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. A system of wood framing suitable for one to three floors. Finishes and insulation vary. Exterior finish is often a brick "veneer", 1" away from timber frame and connected by iron ties at 16" centres, (see alternative sheet). U=0.10 (or according to insulation and finishes).
<b>Development to Date.</b>	5. Widespread use throughout North America.
<b>Comment.</b>	6. -
<b>References.</b>	7. Architectural Graphic Standards, Ramsey and Sleeper, John Wiley, New York. Wood-Frame House Construction, U.S. Department of Agriculture.



WHOLE HOUSE ASSEMBLY

Roof construction may vary according to customs and conditions

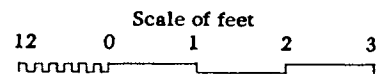


- wood plate
- asphalt shingles
- 3/4" sheathing and waterproof paper
- diagonal board sheathing
- 4" brick outer skin
- roof rafters nailed to ceiling joists and toenailed to double plate
- ceiling joists
- top double plate
- batt insulation with vapour barrier
- plywood eaves soffit
- eaves fascia
- gutter
- plaster board ceiling
- studs @ 16" o.c.
- diagonal board sheathing
- 1" space as moisture barrier
- asphalt breathing type paper
- batt insulation with vapour barrier
- plaster board
- floor finish on diagonal boarding
- floor joists
- cross bridging
- plaster board ceiling
- plate at floor level
- sill bolted to foundation wall
- concrete foundation

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

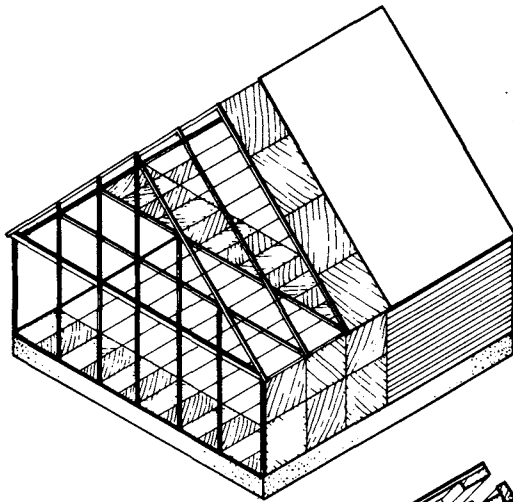


# *brick veneered frame*

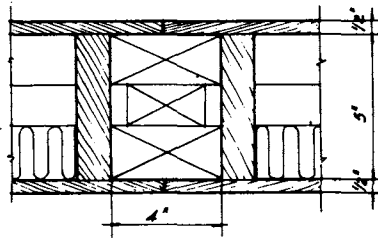
December, 1958.

## BRICK VENEERED FRAME

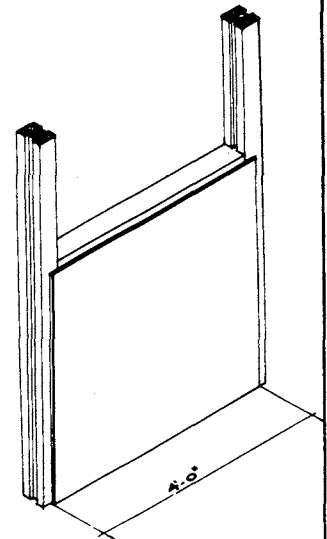
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Traditional.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. North America.   |
| <b>Materials<br/>Used.</b>   | 3. Wood, Brick.   |
| <b>Description.</b>  | 4. $U = .10$ BTU/Sq. Ft./Degree F.<br>Difference in Temperature.                          |
| <b>Development<br/>to Date.</b>  | 5. Widespread use through North America.  |
| <b>Comment.</b>  | 6. Brick veneer can be used in conjunction<br>with any other wood frame construction.     |
| <b>References.</b>   | 7. "Architectural Graphic Standards",<br>Kamsay and Sleeper,<br>John Wiley and Sons, N.Y. |



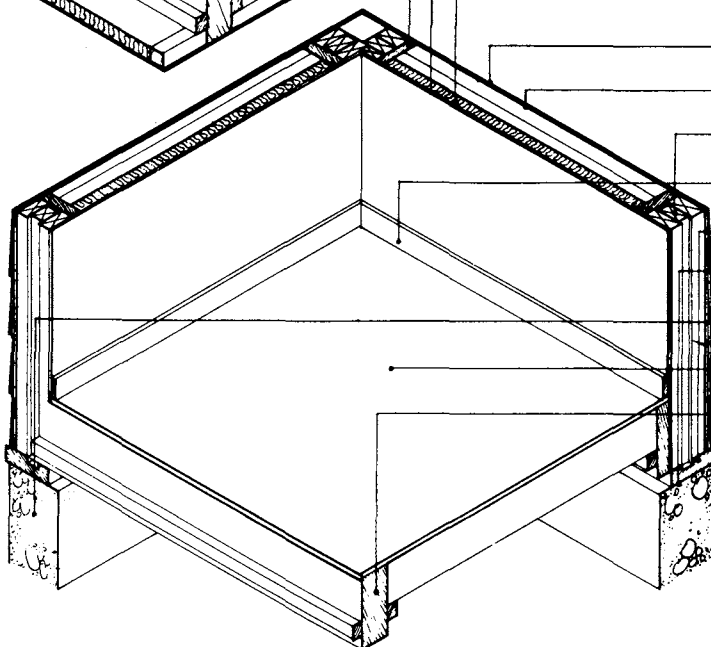
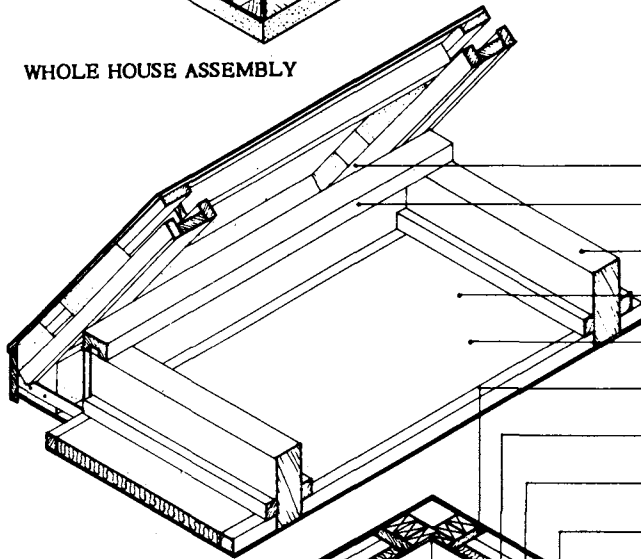
WHOLE HOUSE ASSEMBLY



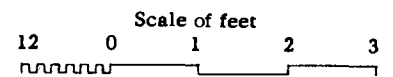
WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



- Roof rafter
- plate
- ceiling joist
- ceiling panel
- insulation
- wall panel jamb
- wall panel
- insulation
- horizontal siding
- building paper
- vert. framing members
- base board
- sill plate
- damp coursing
- foundation
- floor panel
- floor joist



GROUND FLOOR AND FOUNDATION

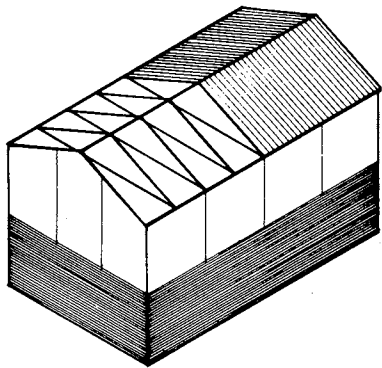
*intercon*

December, 1958.

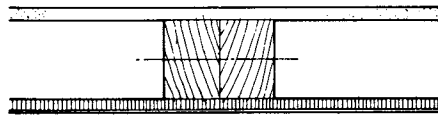


## INTERCON

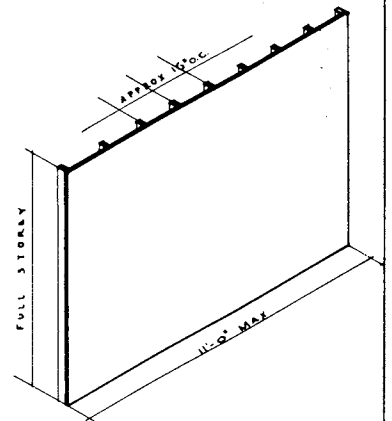
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Integrated Constructions Limited, 12 Archer Street, London, W.1, England.
<b>Date and Place of Origin.</b>	2. U.K. Recent.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. U= 0.10.
<b>Development to Date.</b>	5. -
<b>Comment.</b>	6. -
<b>References.</b>	7. C.M.H.C. File 115-2-14.



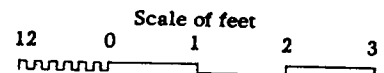
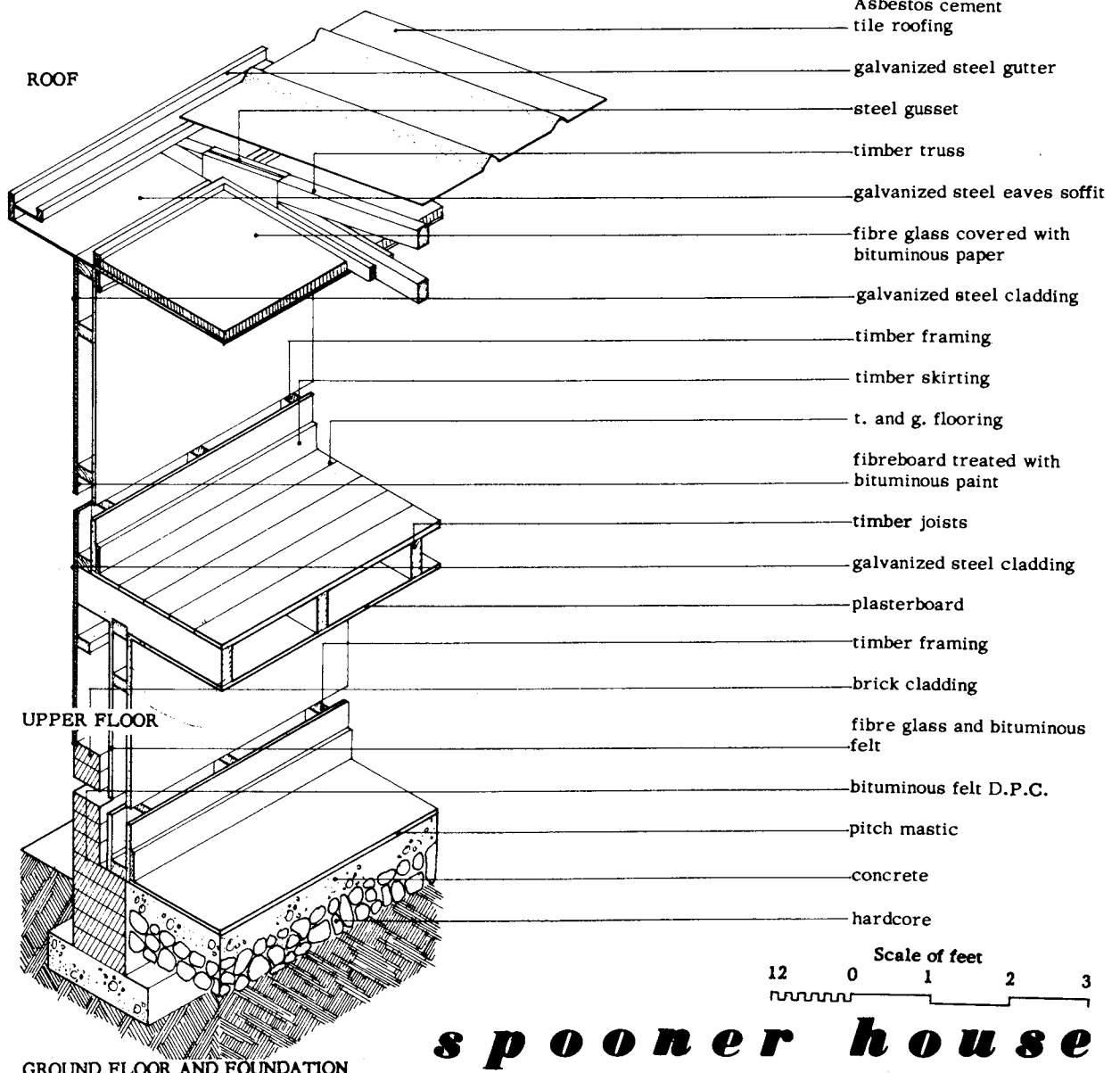
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

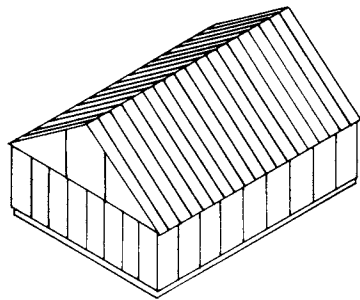


**spooner house**

December, 1958.

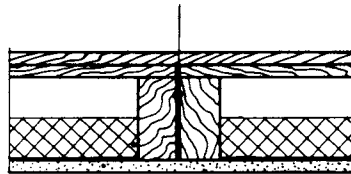
## SPOONER HOUSE

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>J.L. Spooner Limited,<br>Hull, England.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.K. 1947.   |
| <b>Materials<br/>Used.</b>   | 3. Brick, Steel, Wood.  |
| <b>Description.</b>  | 4. Ground floor external<br>walls consist of a brick<br>internal skin with wood<br>internal panels. First<br>floor external walls<br>consist of wood frame<br>panels clad in galvanized<br>steel. |
| <b>Development<br/>to Date.</b>  | 5. 1 Prototype house at<br>Holderness High Road,<br>Hull, U.K.  |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. Post War Building Study<br>Number 25 "Prefabricated<br>Homes" by B.M. Cox<br>(publisher Paul Elek).  |

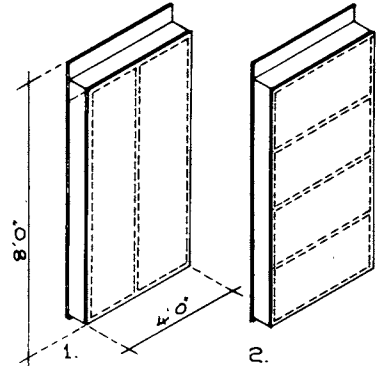


WHOLE HOUSE ASSEMBLY

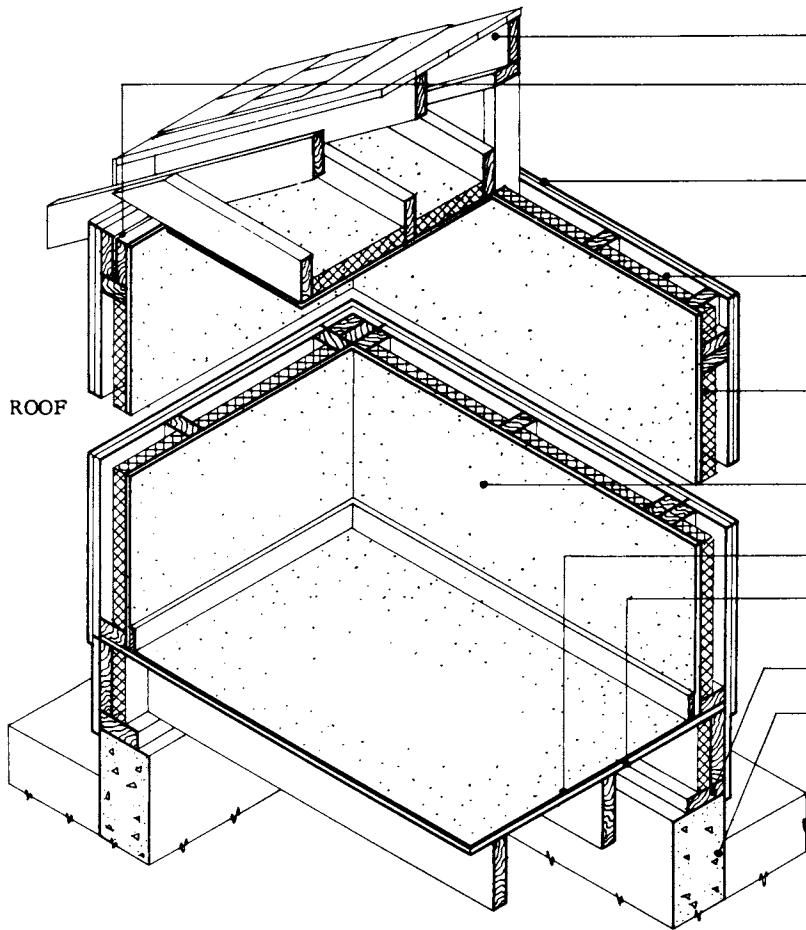
Panels usually butt jointed and nailed or bolted.



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

Roof and ceiling joists are conventional but can also be trussed or made up into panels similar to wall panels.

Roof and ceiling supported on double 2" x 6" header screwed to panel.

Siding, backed with breathing type water-proof paper. (Brick, masonry, stucco on lath and other facings are also used).

4'0" x 8'0" stud frame panel units (consisting of 2" x 4" studs and 3/4" sheathing) bearing directly onto floor and toe nailed.

16" quilt insulation is integral in prefabricated panel or stapled to interior face of studs afterwards.

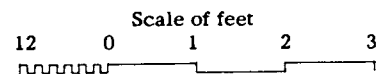
Interior finish applied after panel erection.

Floor finish.

Plywood sub floor and joists sometimes framed up into panels.

Sill bolted to foundation.

Basement wall and foundation are shown as being typical for Canadian housing.

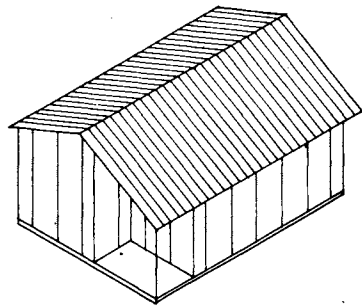


# stud frame panel

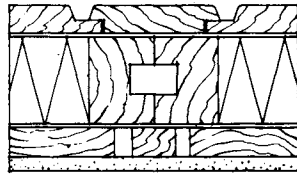
February, 1958.

## STUD FRAME PANEL

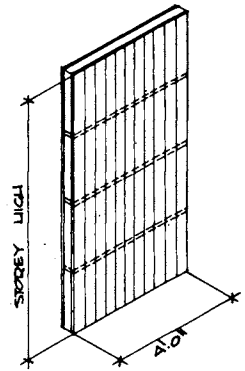
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional.</b> This, and similar systems, are used by many American pre-fabricators. This particular design has been developed by the Small Homes Council and sponsored by the Lumber Dealers Research Council, and is franchised by the latter under the name of Lu-Re-Co.
<b>Date and Place of Origin.</b>	<b>2. Stud frame panels have been</b> generally used in America since 1800. This design was developed in 1954.
<b>Materials Used.</b>	<b>3. Wood.</b>
<b>Description.</b>	<b>4. Structure is essentially the same as</b> the traditional Platform frame, but panelised for prefabrication purposes. Interior and exterior finishes are applied after erection of panels. Panels can be raised singly or in whole wall sections. Roofs and floors can also be panelised. Studs, within the panels can be horizontal (i) or vertical (ii). Exterior finishes can be siding, brick veneer, etc.
<b>Development to Date.</b>	<b>5. World wide, but especially used by</b> prefabricators in America.
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. Small Homes Council, University of</b> Illinois. Lumber Dealers Research Council. "Wood Frame House Construction" U.S. Dept. of Agriculture, Handbook No. 73.



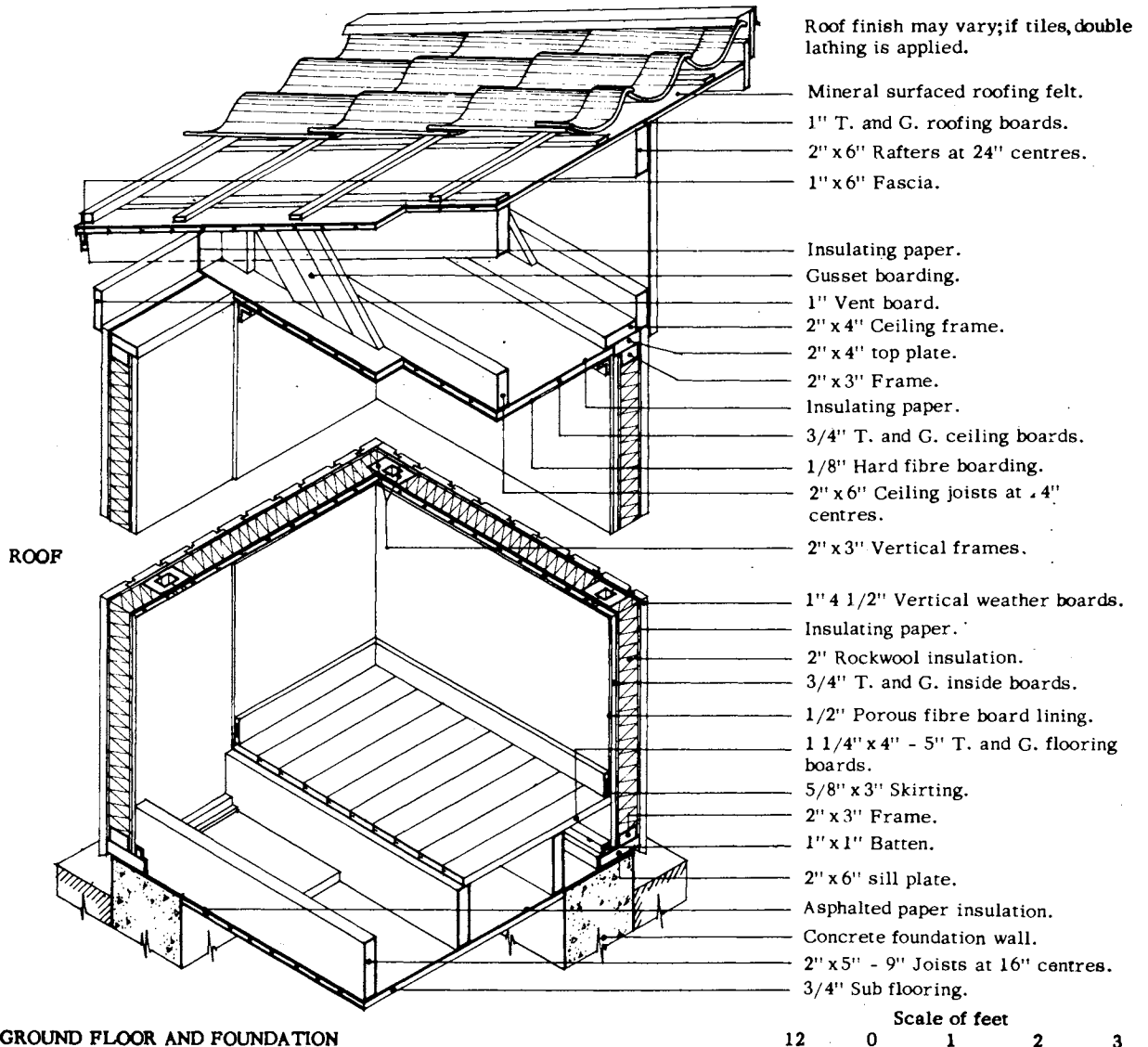
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



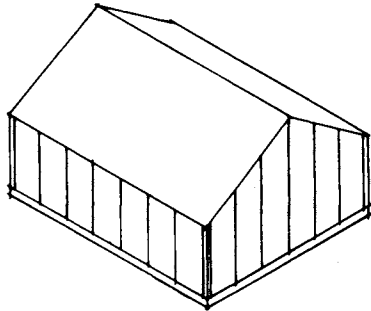
GROUND FLOOR AND FOUNDATION

# swedish stud frame panel

May, 1958.

## SWEEDISH STUD FRAME PANEL

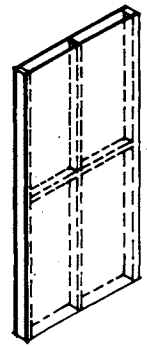
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional.</b> Similar to systems of construction used by other Swedish prefabricated house manufacturers.
<b>Date and Place of Origin.</b>	<b>2. Sweden, recent.</b>
<b>Materials Used.</b>	<b>3. Wood.</b>
<b>Description.</b>	<b>4. Panels are held together by top and sill plates.</b> U=0.063 (external wall panels).
<b>Development to Date.</b>	<b>5. Worldwide export distribution.</b>
<b>Comment.</b>	<b>6. Whole house is prefabricated including kitchen fitments, etc.</b>
<b>References.</b>	<b>7. Amals Sagverks, A/B., Amal, Sweden.</b>



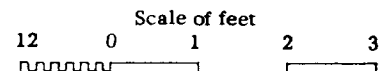
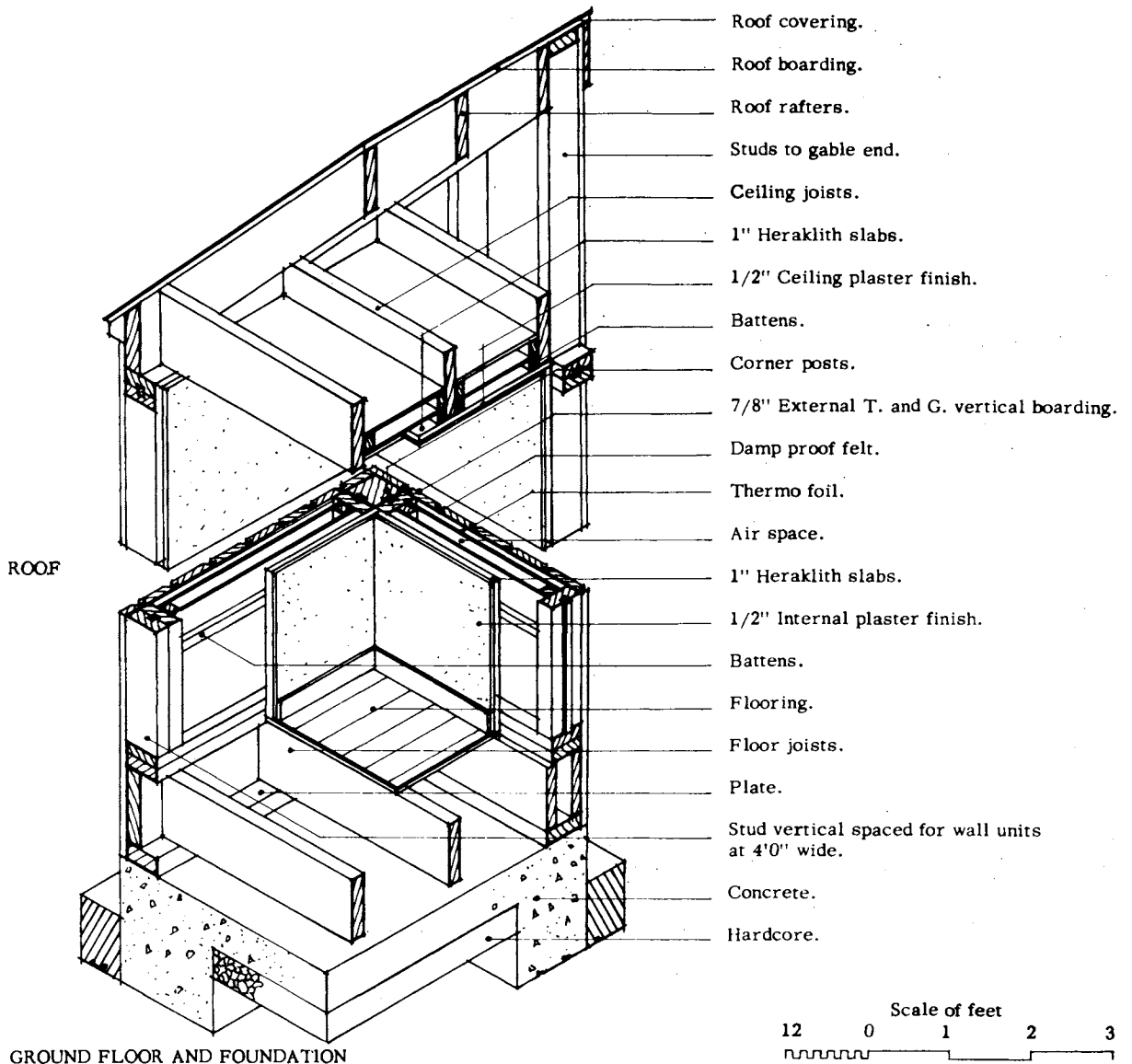
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



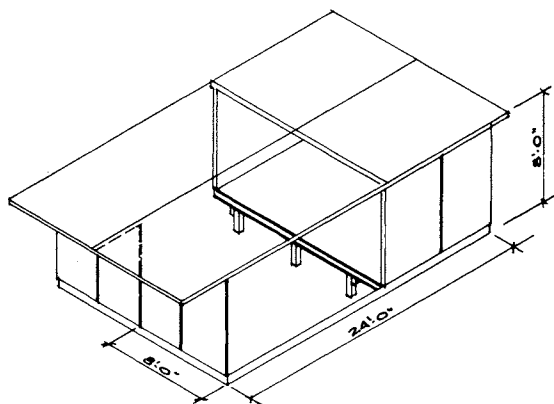
# *triple cavity panels*

December, 1958.

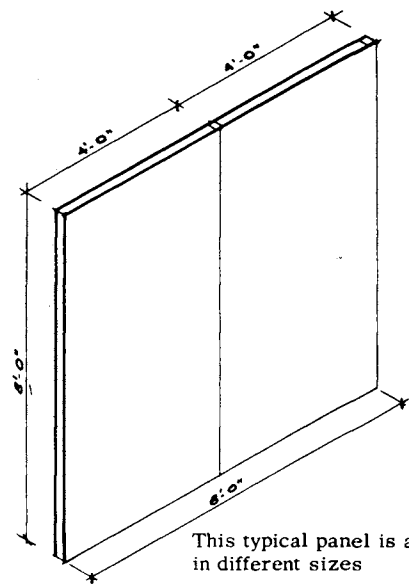


## TRIPLE CAVITY PANELS

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional, but common to a number of prefabrication companies in Central Europe.
<b>Date and Place of Origin.</b>	2. Continental Europe, 20th century.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. $U=0.08$
<b>Development to Date.</b>	5. Used frequently in Europe and tropics.
<b>Comment.</b>	6. System utilizes entrapped air and heat reflective properties of aluminum foil.
<b>References.</b>	7. Thermobau, G.M.B.H. Spiegelgasse 21 Vienna 1, Austria also Planex Associates Montreal, Quebec, Canada.

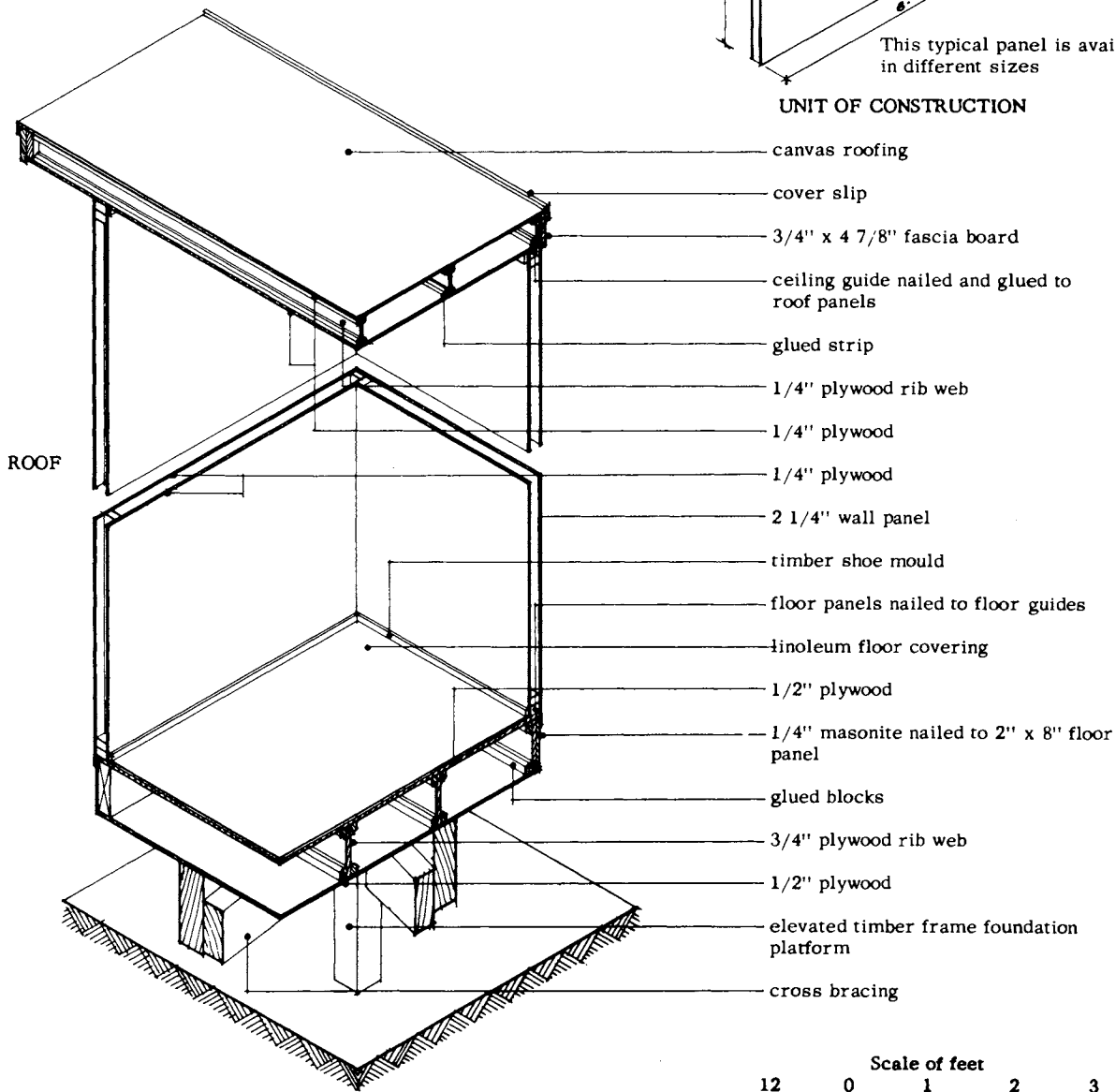


WHOLE HOUSE ASSEMBLY



This typical panel is available in different sizes

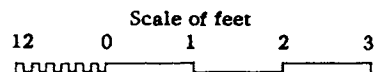
UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

- canvas roofing
- cover slip
- 3/4" x 4 7/8" fascia board
- ceiling guide nailed and glued to roof panels
- glued strip
- 1/4" plywood rib web
- 1/4" plywood
- 1/4" plywood
- 2 1/4" wall panel
- timber shoe mould
- floor panels nailed to floor guides
- linoleum floor covering
- 1/2" plywood
- 1/4" masonite nailed to 2" x 8" floor panel
- glued blocks
- 3/4" plywood rib web
- 1/2" plywood
- elevated timber frame foundation platform
- cross bracing

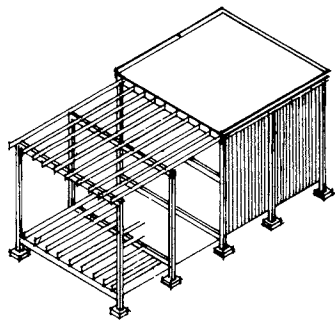


# *t.v.a. house type 2*

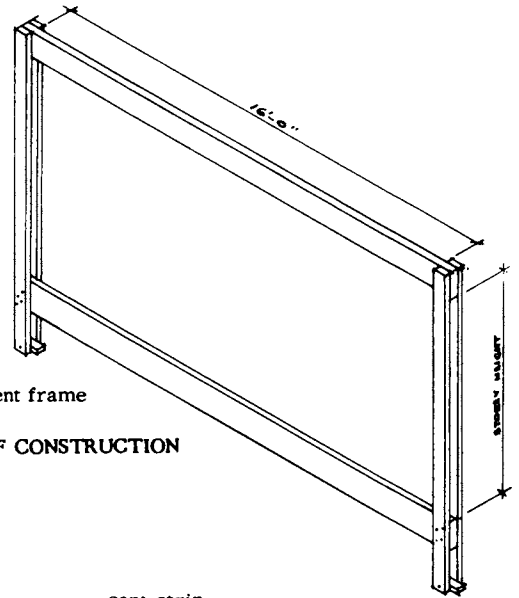
December, 1958.

## T.V.A. HOUSE TYPE II

- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Tennessee Valley Authority,<br>Knoxville, Tenn. U.S.A.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S.A. 1942.  |
| <b>Materials<br/>Used.</b>   | 3. Wood.   |
| <b>Description.</b>  | 4. House is prefabricated in two<br>sections and transported to site.  |
| <b>Development<br/>to Date.</b>  | 5. Several thousand houses for<br>T.V.A. and U.S. Corps of<br>Engineers.   |
| <b>Comment.</b>  | 6. -   |
| <b>References.</b>   | 7. M.O.W. Survey of Prefabrication,<br>H.M. Stationery Office, London Eng.<br>T.V.A. Knoxville, Tenn., U.S.A.<br>Architectural Record, 1943. |

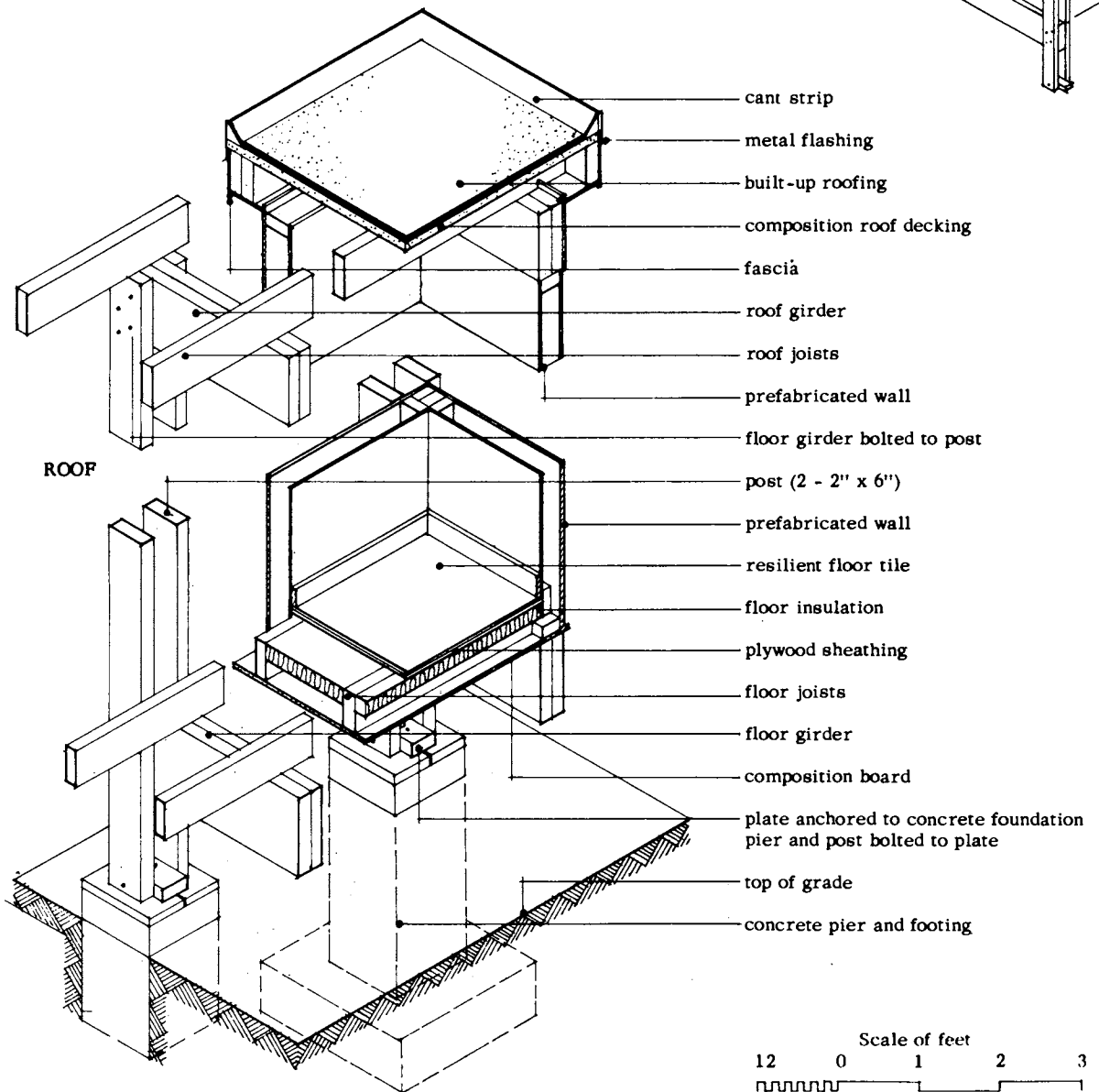


WHOLE HOUSE ASSEMBLY



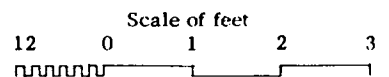
bent frame

UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

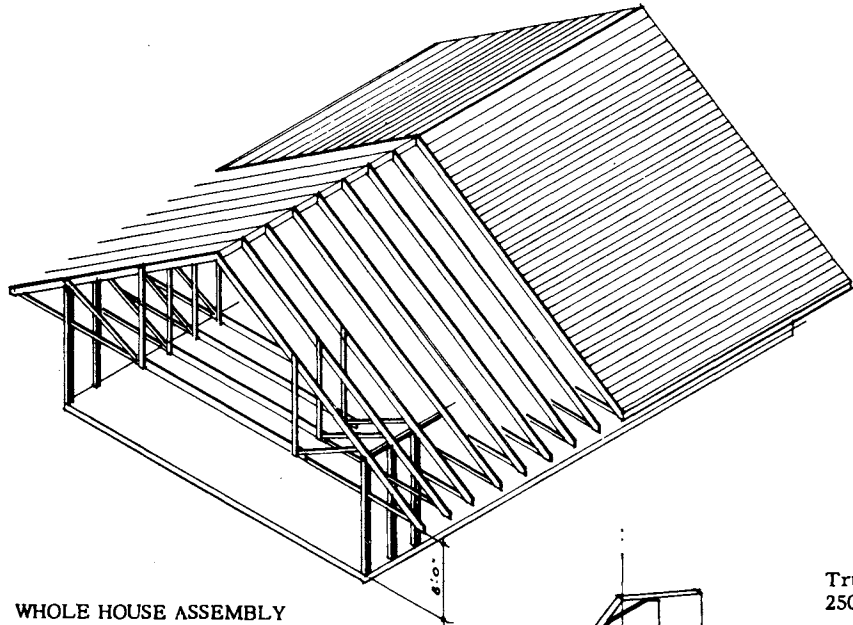


***bent frame***

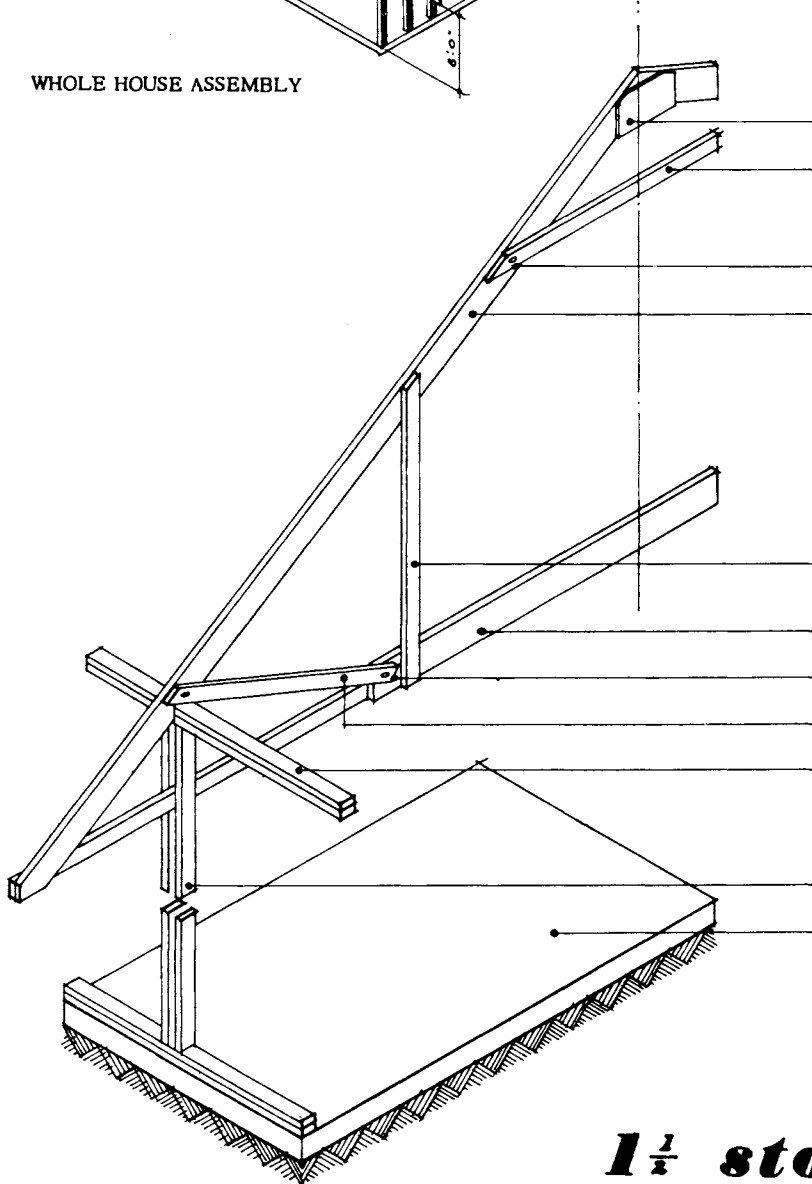
December, 1958.

## BENT FRAME

- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Semi-Traditional.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S.A.  |
| <b>Materials<br/>Used.</b>   | 3. Wood.   |
| <b>Description.</b>  | 4. Consists of a series of structural frames or ribs called bents, spaced approximately 4 ft. apart acting as post and beam. Filling in between the bents is non-bearing and skins are applied to stiffen the structure. |
| <b>Development<br/>to Date.</b>  | 5. A general system of construction not used extensively.  |
| <b>Comment.</b>  | 6. -   |
| <b>References.</b>   | 7. "Fabricating Houses From Component Parts"<br>by Norman Cherner, published by Reinhold.  |



WHOLE HOUSE ASSEMBLY



Truss is designed for a dead load of 250 lbs. per sq. ft. (wet snow load).

plywood gusset.

2" x 4" collar.

ring connector.

2" x 6" rafters.

2" x 4" hanger nailed to rafters and ceiling joists.

2" x 8" ceiling joists.

ring connector.

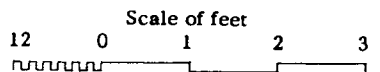
2" x 4" hanger.

2-2" x 4" wall plate.

except where ring connectors are indicated all joints are nailed.

2-2" x 4" wall columns @ 2'0" o.c.

concrete slab on grade.



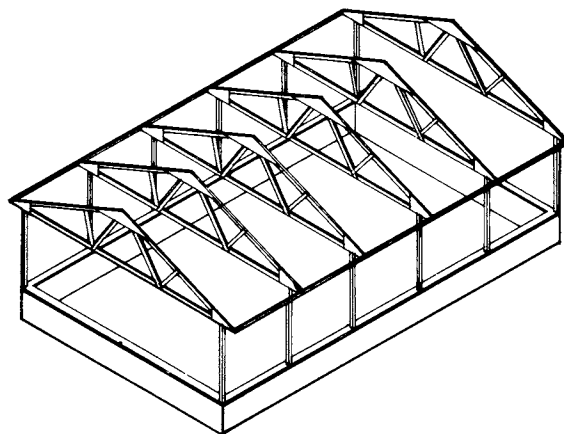
UNIT OF CONSTRUCTION

# *1 1/2 storey truss*

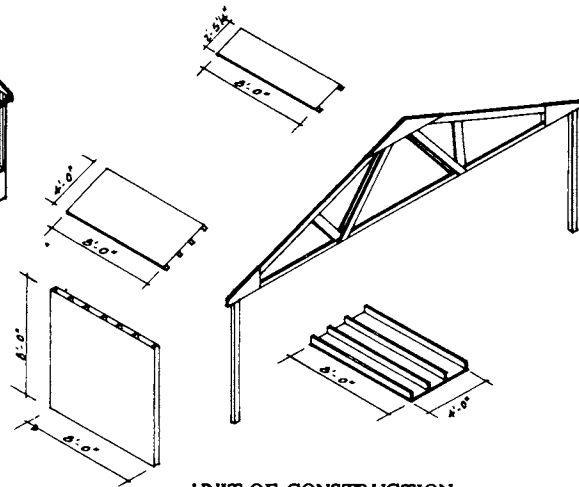
December, 1958.

## ONE AND ONE HALF STOREY TRUSS

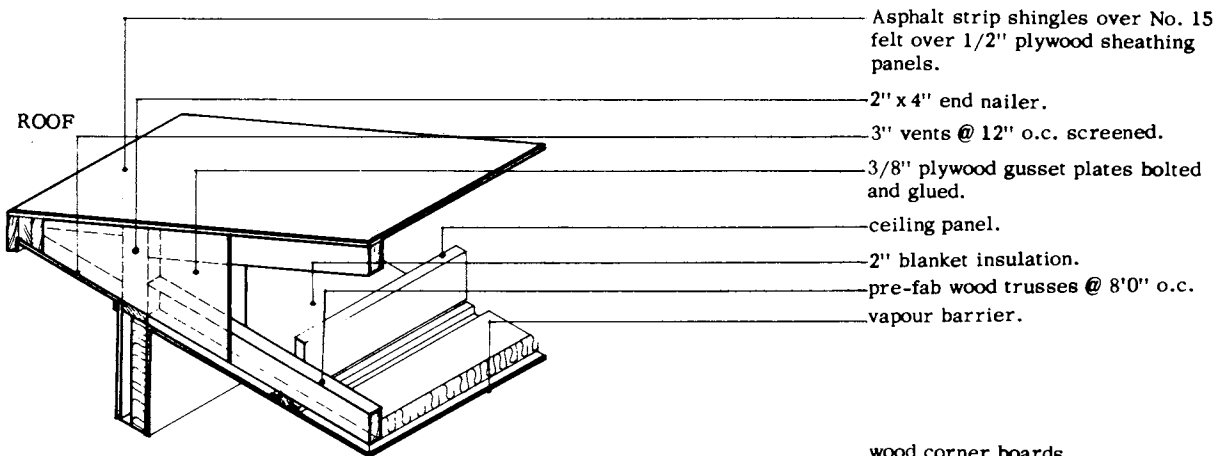
- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Design available for use by anyone.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S. 1952.  |
| <b>Materials<br/>Used.</b>   | 3. Wood.   |
| <b>Description.</b>  | 4. Design is for truss only -<br>any form of infill or finish<br>material may be used that<br>is suitable. |
| <b>Development<br/>to Date.</b>  | 5. Widely published, extent of<br>use not known.   |
| <b>Comment.</b>  | 6. -   |
| <b>References.</b>   | 7. Small Homes Council,<br>University of Illinois, U.S.,<br>"House and Home", September<br>1952, p. 110.   |



WHOLE HOUSE ASSEMBLY

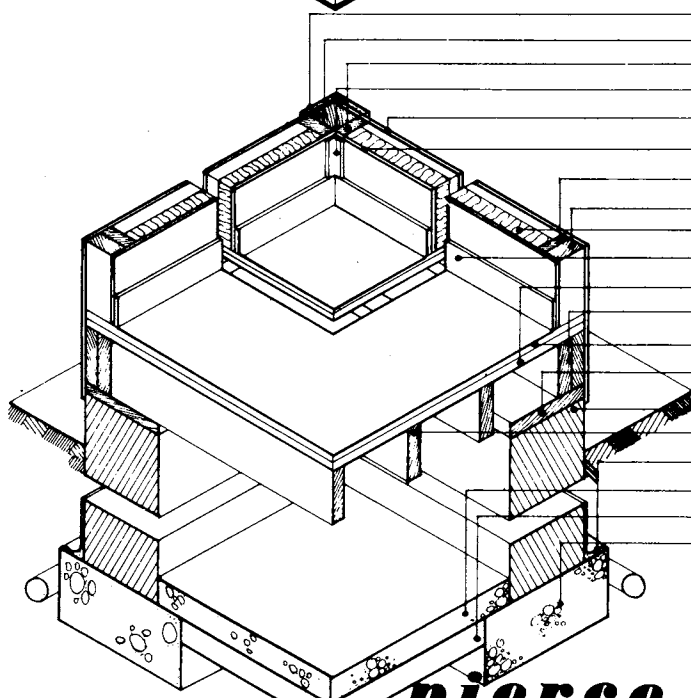


UNIT OF CONSTRUCTION



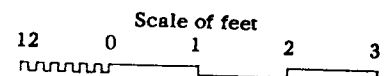
ROOF

- Asphalt strip shingles over No. 15 felt over 1/2" plywood sheathing panels.
- 2" x 4" end nailer.
- 3" vents @ 12" o.c. screened.
- 3/8" plywood gusset plates bolted and glued.
- ceiling panel.
- 2" blanket insulation.
- pre-fab wood trusses @ 8'0" o.c.
- vapour barrier.



GROUND FLOOR AND FOUNDATION

- wood corner boards.
- corner post.
- panel frame.
- 3/4" cove mold.
- 3/8" plywood.
- 1/4" plywood.
- panel frame.
- column.
- insulation.
- skirting.
- 1" rough floor.
- 2-2" x 8"s.
- 1" fin. floor.
- 2" x 8" plate.
- 8" wall.
- 2" x 8"s @ 16" o.c.
- 1/2" cem. pl. and mastic.
- 4" conc. fl.
- 4" cinders.
- footing.



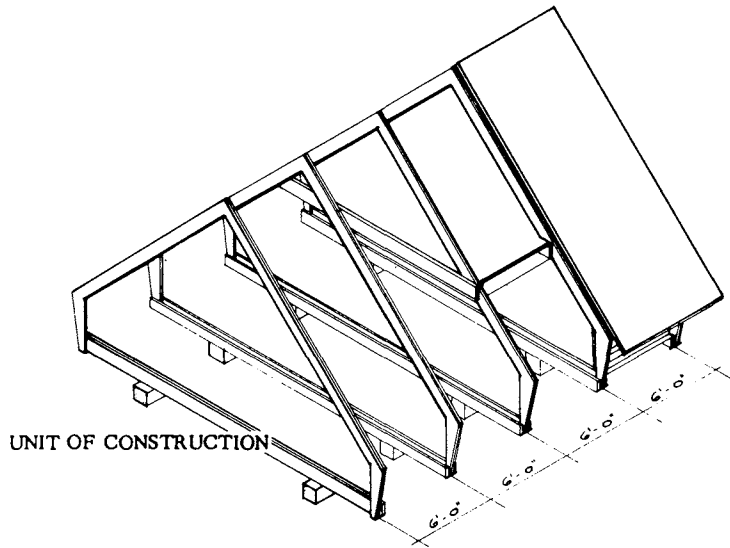
# *pierce bent frame*

December, 1958.



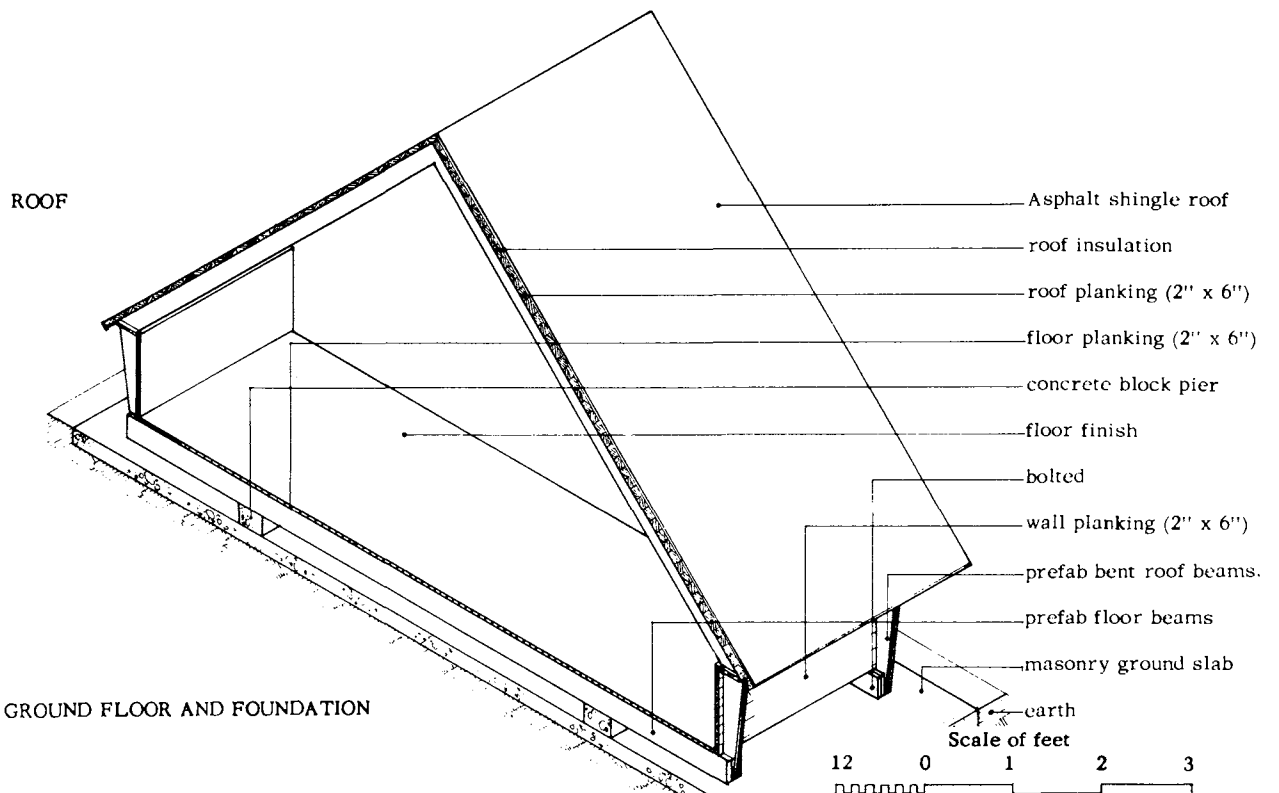
## PIERCE BENT FRAME

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Unknown. Found in many parts of the world in various forms.  |
| <b>Materials<br/>Used.</b>   | 3. Wood.  |
| <b>Description.</b>  | 4. The basic elements of the system and as shown are a bent frame at 8'0" centres with roof and wall panels spanning between. |
| <b>Development<br/>to Date.</b>  | 5. Numerous houses have been built on this principle throughout the world.  |
| <b>Comment.</b>  | 6. This type of construction is found in conjunction with varying forms of roof and wall finish and foundation construction.  |
| <b>References.</b>   | 7. "Architectural Record", July 1950, p. 135.   |



UNIT OF CONSTRUCTION

WHOLE HOUSE ASSEMBLY



ROOF

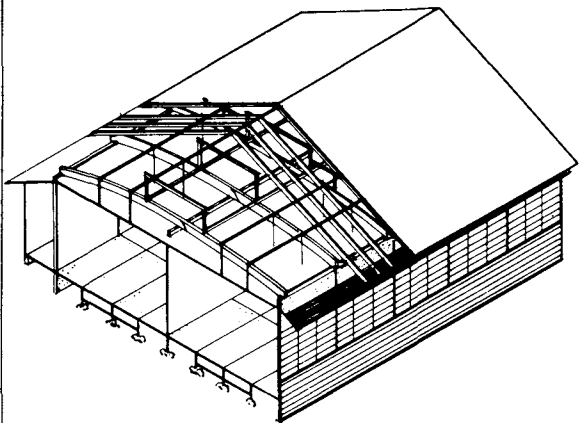
GROUND FLOOR AND FOUNDATION

***v o l k s - k a b i n***

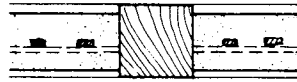
December, 1958.

## VOLKS-KABIN

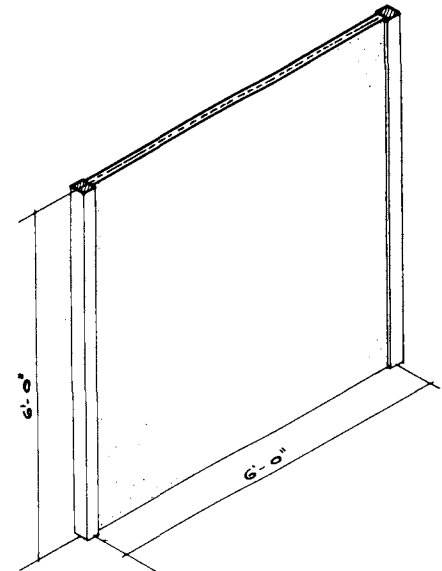
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Edward A. Cuetara, Architect, Core House Corporation, 44 Brattle Street, Cambridge, Mass.
<b>Date and Place of Origin.</b>	2. Massachusetts, 1956.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. 2" t. and g. plank and insulation as required.
<b>Development to Date.</b>	5. -
<b>Comment.</b>	6. Structural package delivered to site with erection instructions.
<b>References.</b>	7. Sponsors' literature.



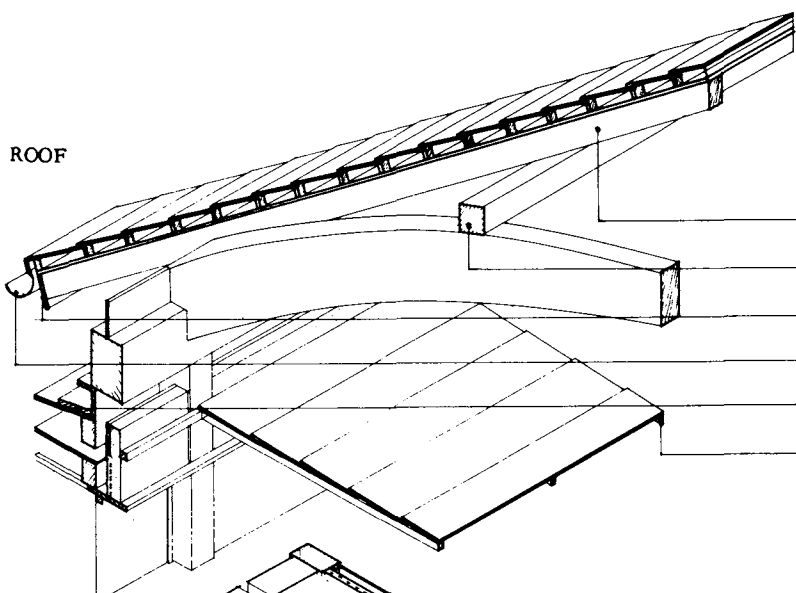
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION

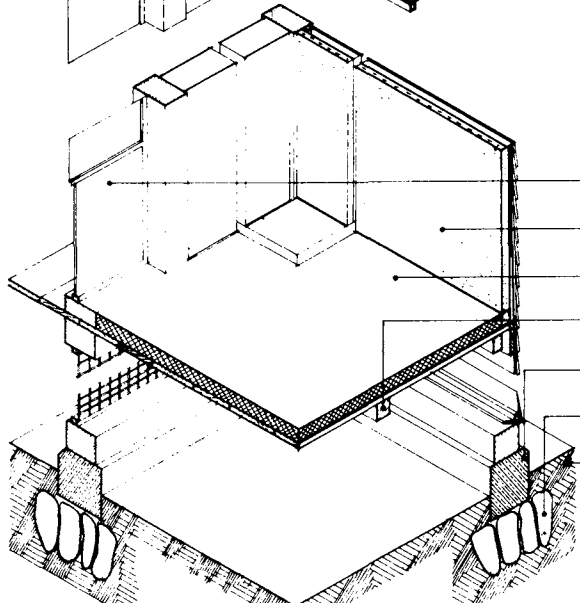


UNIT OF CONSTRUCTION



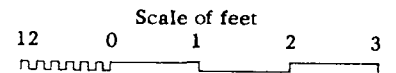
ROOF

- Roof rafter @ 1'6" o.c.
- roof rafter @ 3'0" o.c.
- eaves fascia
- gutter
- porch roof
- ceiling joists @ 1'6" o.c.



GROUND FLOOR AND FOUNDATION

- window wall
- plaster wall
- mat
- floor joists @ 3'0" o.c.
- base
- foundation
- earth fill

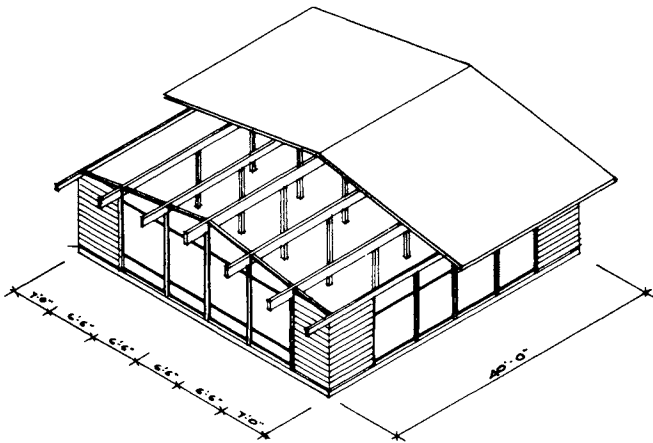


# japanese house

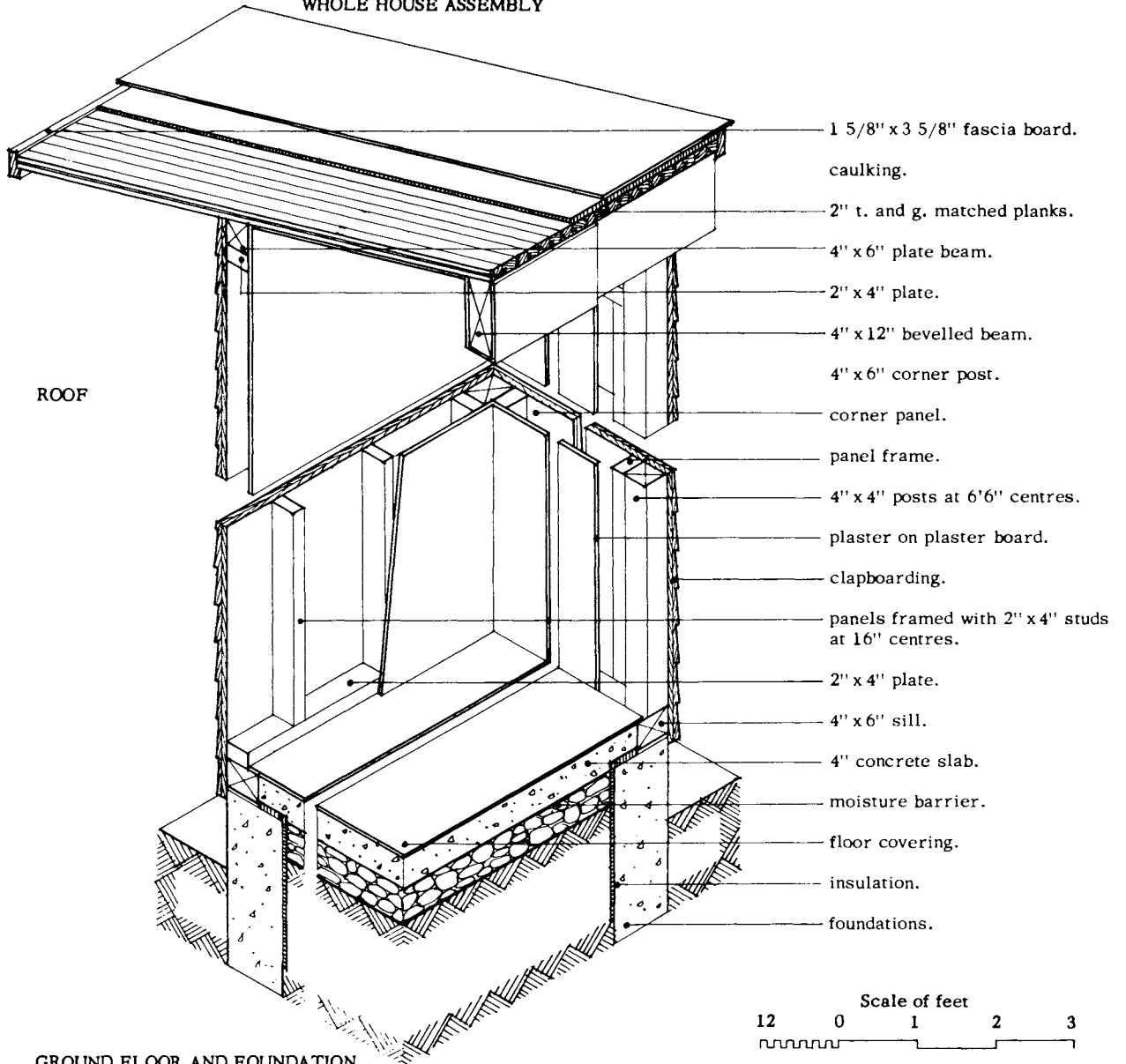
December, 1958.

## JAPANESE TRADITIONAL HOUSE

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Traditional in Japan.
<b>Date and Place of Origin.</b>	2. Japan 17th Century.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. Rafters and ceiling joists are at 1'6" centres. Floor joists at 3'0" centres. Wall posts at 6'0" centres. All joints are generally housed and without any form of nails or metal connection. Buildings are designed to allow as much through-draught as possible. Strength of construction is low due to weak jointing. Fire resistance is low.
<b>Development to Date.</b>	5. Widespread in Japan.
<b>Comment.</b>	6. Most significant feature is the universal use of the module in the spacing of structural members.
<b>References.</b>	7. The Japanese House and Garden, by Tetsuro Yoshida, (publisher Praeger, N.Y.).



WHOLE HOUSE ASSEMBLY



ROOF

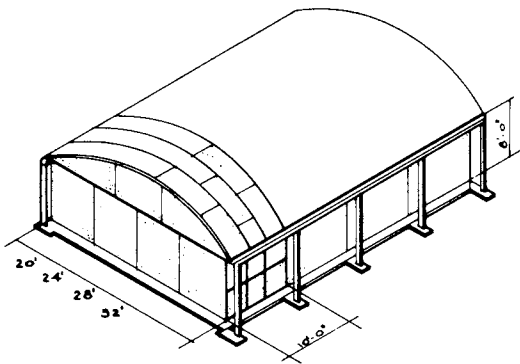
GROUND FLOOR AND FOUNDATION

- 1 5/8" x 3 5/8" fascia board.
- caulking.
- 2" t. and g. matched planks.
- 4" x 6" plate beam.
- 2" x 4" plate.
- 4" x 12" bevelled beam.
- 4" x 6" corner post.
- corner panel.
- panel frame.
- 4" x 4" posts at 6'6" centres.
- plaster on plaster board.
- clapboarding.
- panels framed with 2" x 4" studs at 16" centres.
- 2" x 4" plate.
- 4" x 6" sill.
- 4" concrete slab.
- moisture barrier.
- floor covering.
- insulation.
- foundations.

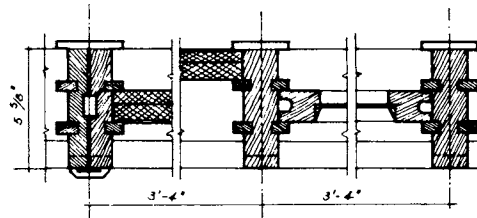
Scale of feet  
 12 0 1 2 3

## CORE HOUSE

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Core House Corporation,<br>44 Brattle Street,<br>Cambridge, Massachusetts, U.S.                                    |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Massachusetts 1956.  |
| <b>Materials<br/>Used.</b>   | 3. Wood.  |
| <b>Description.</b>  | 4. 2" + T. and G. plank walling.  |
| <b>Development<br/>to Date.</b>  | 5. -  |
| <b>Comment.</b>  | 6. House is built in two stages:<br>(1) Exterior shell with utility core.<br>(2) Remaining interior walls and finish. |
| <b>References.</b>   | 7. Sponsor.   |

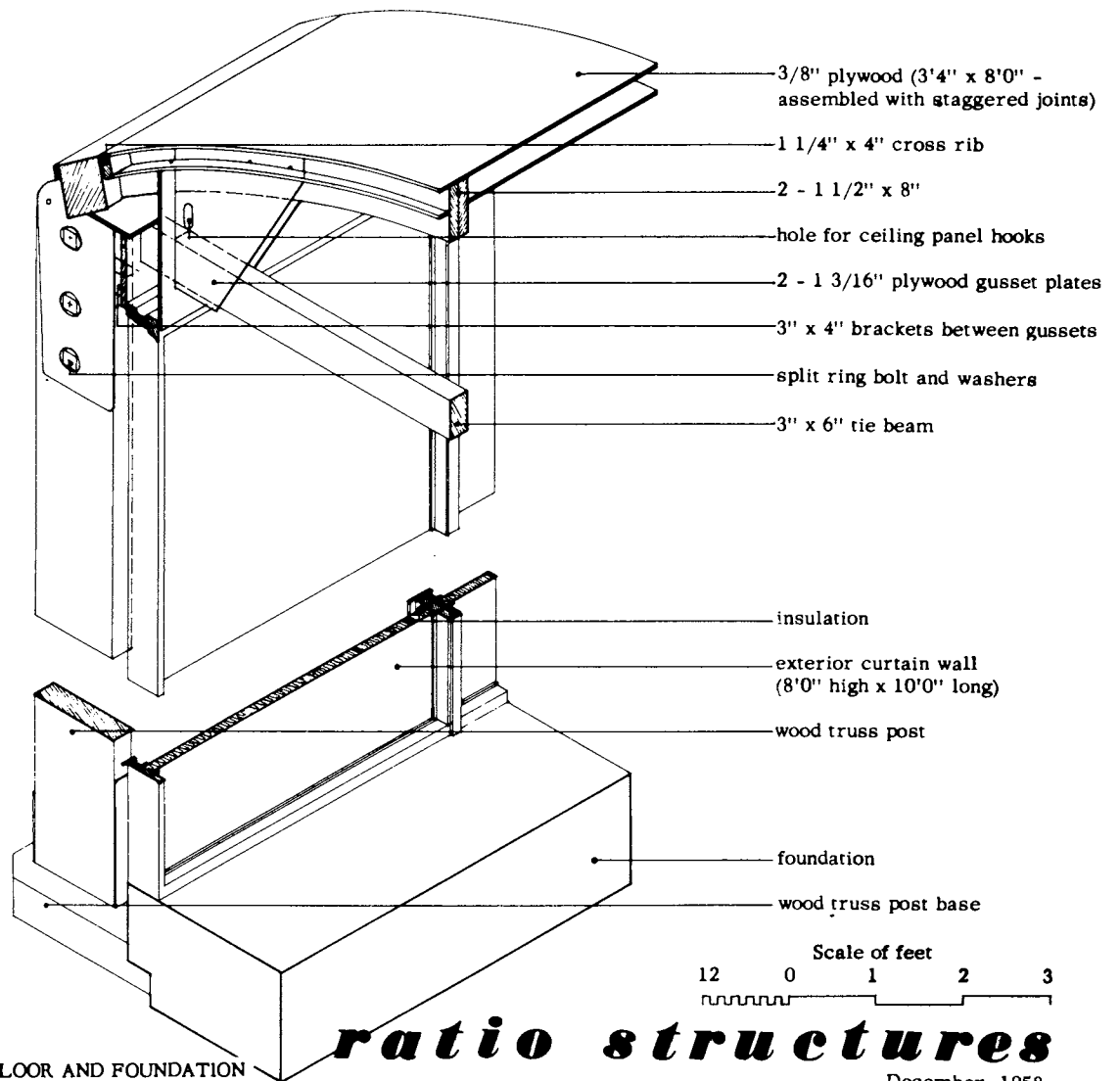


WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION

ROOF



GROUND FLOOR AND FOUNDATION

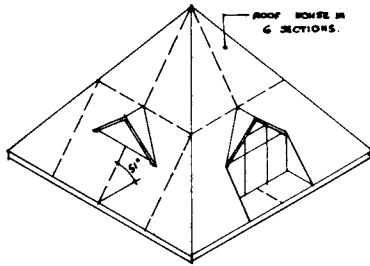
**ratio structures**

December, 1958.

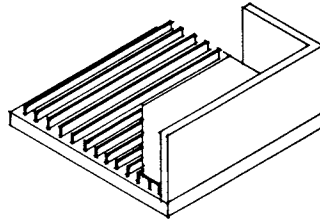


## RATIO STRUCTURES

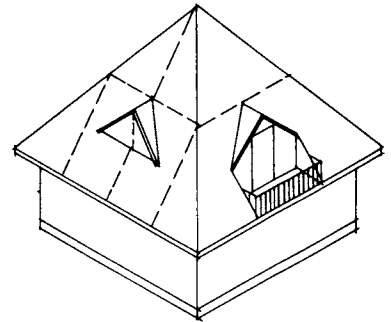
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Designer: Paul Lester Weiner, New York, N.Y.
<b>Date and Place of Origin.</b>	2. U.S. 1943.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. -
<b>Development to Date.</b>	5. 160 temporary dwellings in Sidney, N.Y. for F.H.A.
<b>Comment.</b>	6. This is a patented design which can be used by others.
<b>References.</b>	7. The Architectural Forum December, 1943.



STAGE I



STAGE II



STAGE III

Stage I - Big pre-fab units quickly assembled on foundations on the site next to the place selected for the future ground floor and cellar

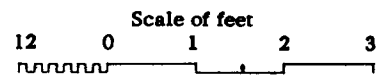
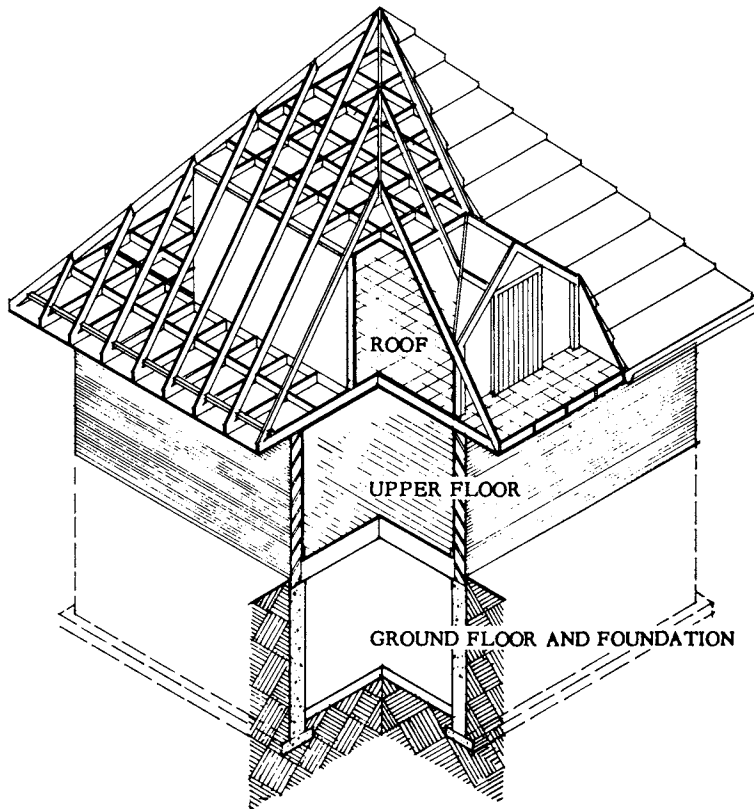
Stage II - The family lives in the roof house until funds are available to build the cellar and ground floor

Stage III - When ground floor is erected the roof house is hoisted by a truck-mounted crane and placed and secured on top of finished ground floor. Construction of roof house is of 2" x 4" and 2" x 6" nailed to form a space frame

walls and ceiling finish - gyproc lath and plaster

insulation - rockwool

floor finish - linoleum on wood floor



**dachhaus**

December, 1958.

## STRESSED SKIN PANEL

## STRESSED SKIN PANEL

WSSP

Sub-Classification

Normal Panels  
Trailer Type

Case Sheets

General Panel  
Jicwood House  
Stressed Skin Panel  
T.V.A. House Type I

WOOD STRESSED SKIN PANEL

WSSP

Normal Panel

ADMIRAL HOMES  
Admiral Homes  
Incorporated,  
West Newton,  
Pennsylvania, U.S.A.

1946.  
Stressed skin plywood panels  
for walls, partitions, ceilings  
and roof. Floor conventional.  
F.H.A. approved in general  
1946.  
500 houses in 1947.

F.H.A.

AMERICAN FABRICATORS  
INCORPORATED  
Louisville 2, Kentucky,  
U.S.A.

Stressed skin,  
3' 0" x 8' 0" plywood panels.  
Glued and nailed.  
F.H.A. approved.

American Fabricators  
Incorporated,  
Louisville 2, Kentucky,  
U.S.A.

ARCTIC HUT MK. #3  
Canadian Army

Wood stressed skin, plywood  
faced both sides.  
Recessed t. & g. with rubber  
grommet and dowel groove.  
Aluminum roof and floor  
joints.

Arctic Hut Mk. #3  
Canadian Army.

ARCTIC SHELTER

See Arctic Shelter  
under Structural Sandwich  
and Plastic Systems #9.

AS A HOUSE  
Amals Sagverks, A/B,  
Amal, Sweden,  
also  
Planex Associates,  
Descelles Boulevard,  
Montreal, Quebec,  
Canada.

4' 0" x 8' 0" standard wood  
stud panel.  
2" x 3" studs at 16" centers.  
1" t. & g. at 24" o.c.  
C.M.H.C. accepted 1953.

Amals Sagverks A/B,  
Amal, Sweden,  
also  
Planex Associates,  
Descelles Boulevard,  
Montreal, Quebec,  
Canada.

WOOD STRESSED SKIN PANEL Normal Panel (cont'd)

WSSP

BLUECHEL COMPANY J.H.  
23rd Floor Smith Tower,  
Seattle, Washington,  
U.S.A.

Stressed skin plywood and  
wood frame.  
Units for walls and  
partitions.

F.H.A. Bulletin  
3/17/50.

BRITISH POWER BOAT  
COMPANY  
Hythe, Hants,  
England.

Scottwood House.

British Power Boat  
Company,  
Hythe, Hants,  
England.

CANADIAN PREFABRICATION  
INCORPORATED  
128 Boulevard Orleans,  
Giffard, Quebec,  
Canada.  
(Willisway-Homeola  
Agency).

Pre-cut stressed skin  
panels 4'0" wide storey  
height. Standard construc-  
tion. Package house.

Canadian Prefabrication  
Incorporated,  
128 Boulevard Orleans,  
Giffard, Quebec,  
Canada.  
(Willisway-Homeola  
Agency).

CLEMENTS HOUSE  
Clements Corporation,  
Southport, Connecticut,  
U.S.A.

Metal clad plywood panels  
cements to wood studs for  
floors, walls, partitions.  
Roof conventional.

F.H.A. Preliminary  
Acceptance.

CLEMENTS MODULAR  
PANELS

See Clements Modular Panels  
under MP

DARROW COMPANY  
INCORPORATED J.R.  
Polo, Illinois,  
U.S.A.

Plywood nailed & glued on  
wood frame for walls and  
partitions.

F.H.A. Bulletin  
9/17/47.

DEPARTMENT OF  
NATIONAL DEFENCE

General purpose prefabric-  
ated hut.

Department of National  
Defence,  
Ottawa, Canada.

WOOD STRESSED SKIN PANEL Normal Panel (cont'd)

WSSP

**DRI-BUILT**

Douglas Fir Plywood  
Association,  
Washington, D.C.,  
U.S.A.

1936.  
Stressed skin panel faced  
with 1/4" plywood on 2" x  
4" vertical studs at 16"  
centers. 4' x 8'.

"Architectural Forum",  
February, 1942.  
BMS 30 (1939).  
M.O.W. Survey of  
Prefabrication.

**DOUGLAS FIR PLYWOOD  
ASSOCIATION**

Washington, D.C.  
U.S.A.

1936.  
Dri Built House.

Douglas Fir Plywood  
Association,  
Washington, D.C.,  
U.S.A.

**EASTERN WOODWORKERS  
HOUSE**

Eastern Woodworkers  
Limited,  
Brother Street,  
New Glasgow,  
Nova Scotia,  
Canada.

Stressed skin plywood  
faced panels, bolted  
laterally with 2" x 4" studs  
at 14" centers. Wall, roof  
and floor panelized 4'0"  
module.

"Acceptable Building  
Materials", C.M.H.C.  
Ottawa.

**E.J.M.A. BUILDING  
SYSTEM**

Carter & Finn,  
Architects,  
Surrey, England.  
also  
James Gibson,  
Toronto, Ontario,  
Canada.

1 house erected in  
Burlington, Ontario.  
Insulated wall panel.  
Plywood bonded to frame.  
Interesting bolted panel  
joints.

EJMA Building System,  
Carter & Finn,  
Architects,  
Surrey, England.  
also  
James Gibson,  
Toronto, Ontario,  
Canada.

**FLUSH PANEL  
CONSTRUCTION**

F.H.A. Resettlement  
Administration.

Stressed skin horizontal  
panels. Housing at Green-  
belt, Maryland.

"Architectural Review",  
1938.

**FOREST PRODUCTS  
LABORATORY**

Forest Products Laboratory,  
Madison, Wisconsin,  
U.S.A.

Stressed skin panel house.  
8'0" x 4'0" panel.  
Panel wood stressed skin  
panel faced with plywood  
in between post and beam  
construction.

"American Architect &  
Architecture",  
September, 1936.  
U.S. Dept. of Agriculture.  
"The Evolving House III,  
Rational Design", (Bemis).

WOOD STRESSED SKIN PANEL (Normal Panel cont'd)

WSSP

FORT WAYNE  
DEMOUNTABLE  
U.S.A.

1939.  
4" x 8" stressed skin plywood  
box beam panels, bolted  
together. Butt jointed in  
mastic.  
1 house per day with semi  
skilled labour.  
A slum clearance scheme.

M.O.W. Survey of  
Prefabrication.

FRANCO HOUSE  
734 North East  
55th Avenue,  
Portland 13, Oregon,  
U.S.A.

Stressed skin plywood panels  
8' 0" x storey height.

Franco House,  
734 North East  
55th Avenue,  
Portland 13, Oregon,  
U.S.A.

GENERAL PANEL  
General Panel Cor-  
poration of California,  
1101 West Victory Blvd.,  
Burbank, California,  
U.S.A.

Stressed skin plywood panel.  
Special four way panel con-  
nectors transmitting some  
stresses, for floor, walls,  
and roof. Joint stated to be  
seamless. F.H.A.  
Preliminary acceptance.

"Architectural Forum",  
January & February  
1947.  
"Business Week",  
October 1947.  
"New Pencil Points",  
April 1943.  
"Prefabrication of  
Houses", (Wiley).  
"American Builder  
& Building Age",  
December 1946.

GLENWAL BUILDING  
SYSTEM  
4 Kresge Building,  
227 West 7th Avenue,  
Calgary, Alberta,  
Canada.

Stressed skin plywood panel.  
4' 0" x 8' 0" for walls.  
4' 0" x 12' 0" or 16' 0" for  
roofs. One storey con-  
struction. Formerly Sylva-  
Wall Panels, Vancouver.

"Acceptable Building  
Materials",  
C.M.H.C. Ottawa.

GREENALL BROTHERS  
2690 Beresford Street,  
Vancouver,  
British Columbia,  
Canada.

Panel prefabricated.

H.M.A. Washington  
1957.  
Fraser's Canadian  
Trade Directory.



WOOD STRESSED SKIN PANEL (Normal Panel cont'd)

WSSP

**GUNNISON HOMES**

U. S. Steel Corporation,  
71 Broadway,  
New York, N. Y.,  
also  
New Albany, Indiana,  
U. S. A.

1947.  
Stressed skin plywood panel.  
4' 0" x 8' 0", 2" x 3" studs.  
Panels for floors, roofs and  
walls.

"House & Home",  
June 1953.  
"Iron Age", April 1952  
and January 1952.  
F. H. A. Bulletin G. B. -  
138 3/6/50.  
"Steel", April 1952.  
"Engineering News  
Record",  
February 1953.  
"Business Week",  
July 1949 and  
July 1951.  
"Tool Engineer",  
August 1952.

**HARNISCHFEGER  
CORPORATION**  
100 Spring Street,  
Fort Washington,  
Wisconsin, U. S. A.

Stressed skin plywood panel.  
2" x 3" studs at 16" centers.

"American Business",  
October 1949.

**H. M. K. STANDARD  
BUILDINGS**  
1205 American Bank  
Building,  
Portland 5, Oregon,  
U. S. A.

Standard wood stud frame  
panels.

H. M. K. Standard  
Buildings,  
1205 American Bank  
Building,  
Portland 5, Oregon,  
U. S. A.

**HOME BUILDERS  
CORPORATION**  
Box 3282 Station F.,  
Atlanta, Georgia,  
U. S. A.

Conventional wood stressed  
skin panel.

Home Builders  
Corporation,  
Box 3282 Station F.,  
Atlanta, Georgia,

**HORSLEY STRUCTURES**

6360 North East Simpson St., 1 storey stress skin panel  
Portland, Oregon,  
U. S. A.

for wall, roof and floor.  
Plywood faced.

Horsley Structures,  
6360 North East  
Simpson St.,  
Portland, Oregon,  
U. S. A.

WOOD STRESSED SKIN PANEL (Normal Panel cont'd)

WSSP

**HULLAH PANELS**

Hullah Corporation  
Limited,  
1297 Marine Drive,  
North Vancouver,  
British Columbia,  
Canada.

4' 0" x 8' 0" panel. 1/4" ply-  
wood faced, on 2" x 4" studs at  
15" centers.  
Post introduced at panel  
junction.  
Many houses in Vancouver and  
Kitimat.

Hullah Corporation  
Limited,  
1297 Marine Drive,  
North Vancouver,  
British Columbia,  
Canada.

**HUT, PREFABRICATED,  
GENERAL PURPOSE**

D.N.D.  
Ottawa, Ontario,  
Canada.

Used by army. Erectors  
unskilled. 84' 0" by 20' 0" x  
10' 0" high at eaves. 12' 0"  
module. 2" glass wool in  
walls. 3" roof. Wood and  
plywood. 1 storey. Built up  
plywood floor and roof beams.

D.N.D.  
Ottawa, Ontario,  
Canada.

**JICWOOD HOUSE**

Architect,  
Richard Sheppard,  
Jicwood House Limited,  
Weybridge, Surrey,  
England.

Plywood stressed skin ex-  
panded rubber core with  
facing 1" plywood.

"Prefabrication in  
Building", (Richard  
Sheppard).  
M.O.W. Survey of  
Prefabrication.  
"House Out of Factory".

**K.D. HOMES**

Arthur Langdon,  
Box 1251,  
Postal Station B.,  
Ottawa, Ontario,  
Canada.

Introduced from England.  
Stressed skin plywood panel.

Arthur Langdon,  
Box 1251,  
Postal Station B.,  
Ottawa, Ontario,  
Canada.

**KNOX CORPORATION**

Knox Corporation,  
Thomson, Georgia,  
U.S.A.

Stressed skin plywood panels  
with batt insulation built in.  
F.H.A. preliminary acceptance.

"Modern Industry",  
June 1951.

**MacGREGOR HOUSE**

Eastern Wood Workers  
Limited,  
Brother Street,  
New Glasgow,  
Nova Scotia,  
Canada.

Package type house. Con-  
ventional. A plywood faced,  
stud framed panel system.  
Glued and nailed.  
C.M.H.C. accepted 1954.

Eastern Wood Workers  
Limited,  
Brother Street,  
New Glasgow,  
Nova Scotia,  
Canada.

WOOD STRESSED SKIN PANEL (Normal Panel cont'd)

WSSP

**MAGIC HOMES**

Gunnison Housing Corporation,  
New Albany, Indiana,  
U.S.A.

also

U.S. Steel Corporation,  
71 Broadway,  
New York, N.Y.,  
U.S.A.

1935.

Plywood stressed skin panels with rockwool insulation, wool spline joints, load-bearing.

M.O.W. Survey of Prefabrication.

**MEDWAY BUILDING AND SUPPLIES LIMITED**  
England.

Plyskin.

Medway Building and Supplies Limited,  
England.

**MODULAR STRUCTURES**

Modular Structures Incorporated,  
Tacoma, Washington,  
U.S.A.

Considerable number of houses around Tacoma from 1947. Wood stressed skin panels. 4' 0" x 8' 0" and 32" wide panels.

"Architectural Forum",  
June 1949.

**MODULOK**

Modulok Incorporated,  
San Francisco,  
California,  
U.S.A.

also

Portland Oregon,  
U.S.A.

Hospital. 1 storey for United States Navy. Wood frame panel. 2 layers asbestos cement.

Panels loadbearing.  
Trussed roof.

"Western Construction News", October 1943.

**NATIONAL HOMES**

National Homes Corporation,  
Lafayette, Indiana,  
U.S.A.

Wood stressed skin panel construction.

National Homes Corporation,  
Lafayette, Indiana,  
U.S.A.

**NEW CENTURY HOMES INCORPORATED**

P.O. Box 825,  
Lafayette, Indiana,  
U.S.A.

Plywood glued and nailed on wood frame for walls, partitions, ceilings and roof.

F.H.A. Bulletin  
10/9/52.  
G.B. SE-170.

WOOD STRESSED SKIN PANEL (Normal Panel cont'd)

WSSP

**PALACE CORPORATION**  
U.S.A.

Folding unit of stressed  
skin construction.

"Prefabrication of  
Houses" (by Kelly).

**PANEL PREFABRICATION**  
Greenall Brothers  
Limited,  
2690 Beresford Street,  
South Burnaby,  
Vancouver,  
British Columbia,  
Canada.

Similar to Hullah Construction.  
1 storey construction wood  
stressed skin panels.  
1 to 1 1/2 storey construction.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa.

**PANELBILT SYSTEMS**  
Panelbilt Systems  
Incorporated,  
7010-196th S. W. ,  
Linwood, Washington,  
D. C. , U.S.A.

Stressed skin floor, roof and  
wall panels.

Panelbilt Systems  
(sponsor's pamphlet)  
Forest Products Lab.  
Reference.

**PLYSKIN**  
Medway Building and  
Supplies Limited,  
Kent, England.

Plywood bonded to timber  
frame. 6' 0" module.

"Prefabrication",  
November 1953.

**PREFABRICATION  
ENGINEERING  
COMPANY**

See Franco House under  
WSSP.

**SCOTT LUMBER  
COMPANY, THE**  
Wheeling,  
West Virginia,  
U.S.A.

Plywood or fibreboard glued,  
nailed on wood frame for  
walls, partitions, floors,  
ceilings and roof.

F. H. A. Bulletin  
3/15/49.

**SCOTTWOOD HOUSE**  
British Boat Company,  
Hythe, Hants,  
England.

Stressed skin frame panel.  
9' high x 24' 0" long x  
3 1/2" thick. Filled with  
wood wool batts. Plywood  
faced.  
Loadbearing brick cross wall.

P. W. B. S. No. 25,  
"Prefabrication",  
January 1955.

WOOD STRESSED SKIN PANEL (Normal Panel cont'd)

WSSP

**STEPHENSON BUILDINGS**

John G. McGaw &  
Company,  
Kingston, Ontario,  
Canada.

also

Broughton House,  
6-8 Sackville Street,  
London W. 1,  
England.

Stressed skin plywood faced  
buildings, unit 6' 0" x 8' 0"  
high. U = 0.16.  
Painted ready for use.

John G. McGaw &  
Company,  
Kingston, Ontario,  
Canada.

also

Broughton House,  
6-8 Sackville Street,  
London W. 1,  
England.

**STOUT HOUSES  
INCORPORATED**  
(Arctic Hospital Unit).

Precision built houses.  
Hutments for Arctic use.  
Interlocking joints.

Stout Houses Inc.,  
(Arctic Hospital  
Unit).

**STRESSED SKIN PANEL**

U.S.A.  
Forest Products  
Laboratory,  
Madison, Wisconsin,  
U.S.A.

Wood stressed skin plywood  
faced stud framed panels  
generally 4' 0" x 8' 0".

Forest Products  
Laboratory,  
Madison, Wisconsin,  
U.S.A.

**SYLVA WALL PANEL**

McMillan & Bloedel  
Limited,  
837 Hastings Street,  
Vancouver 1,  
British Columbia,  
Canada.

Also Steel-Fabrication  
by Richmond Furniture  
Company.  
1 storey, stressed skin panel.  
Module = 4' 0". U = .134.  
Wall, floor partition and roof  
panelized. 2 faces plywood  
on glasswood, reflection,  
insulation.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa.

**TECHBUILT  
INCORPORATED**  
44 Brattle Street,  
Cambridge,  
Massachusetts,  
U.S.A.

House erected at Weston,  
Mass. Ground floor sunk  
to basement. Level.  
4' 0" module 8' 0" major  
module.

"House & Home",  
February 1954.

WOOD STRESSED SKIN PANEL (Normal Panel con'td)

WSSP

TOWER CONSTRUCTION

St. Jerome,  
Canada.  
Director,  
George Jacobson.

Hutting for Mid-Canada  
Defence Line.  
General purpose hut totally  
prefabricated from army stock.  
Normal 2" x 4" panels at 16"  
centers.  
Plywood stressed skin panel,  
jointing details using rubber  
grommets and intermediate  
studs. Filled with fibreglass  
insulation. Harbotite exterior  
finish.

Tower Construction,  
St. Jerome,  
Canada.

VICTORY HOUSE

J. B. Pierce Foundation,  
Raritan, New Jersey,  
U. S. A.

An emergency whole-house  
unit. Circular in section.  
Bent pulp board and plywood.

"Architectural Forum",  
April 1943.

WITTNER

Leon H. Wittner,  
U. S. A.

1942.  
Stressed skin plywood con-  
struction; two identical frames  
with skins sandwiching a  
sheet of plywood. Horizontal  
members also used.

Housing Research  
Paper No. 33.

SMITH & HILL HOUSE

Smith & Hill Builders,  
Chicago, Illinois,  
U. S. A.

1,200 houses 1946.  
Wood stressed skin panel with  
tongued and grooved edge  
locking device.

"Architectural Forum",  
April 1947.

WICKES INCORPORATED

Camden,  
New Jersey,  
U. S. A.

1947.  
A whole house production.  
Significant mainly for use of  
solar heat and for layout.  
Wall panels are stressed skin  
units, glazed and louvred.  
Unique flat roof construction  
with 2 air spaces, one still,  
the other flowing.

"Architectural Forum",  
January 1947.

WOOD STRESSED SKIN PANEL

WSSP

Trailer Type

**HAUL-AWAY HOMES**

Haul-Away Homes  
Incorporated,  
Portland, Oregon,  
U.S.A.

1941.  
3 roomed house designed to  
be trucked as a whole.  
40' 0" x 10' 0".  
Whole house acts as box  
girder, to be carried on  
two trailers.

M. O. W. Survey of  
Prefabrication.

**SANFORD MODU PANEL**

Sanford Incorporated,  
Avon Lake, Ohio,  
U.S.A.

Forerunner of stressed skin  
panel construction, first  
built in Texas. Post and  
beam frame. Panels filled  
with 2" of expanded mica.  
Dowel joints. Number of  
houses built in Cleveland,  
Ohio.

Sanford Incorporated,  
Avon Lake, Ohio,  
U.S.A.

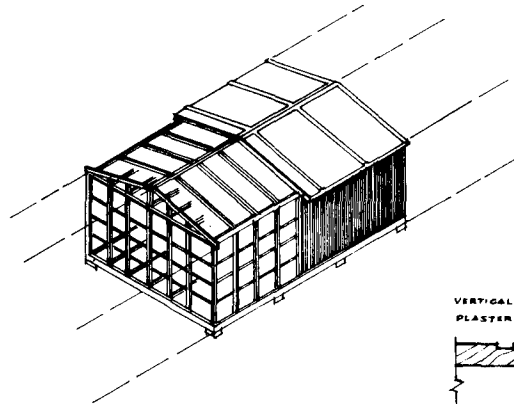
**T. V. A. TRAILER**

**TYPE I**

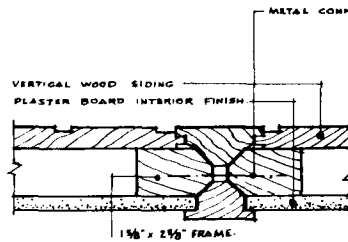
Tennessee Valley  
Authority,  
Knoxville, Tennessee,  
U.S.A.

Original contracts by  
Schultz Trailers Inc. &  
Covered Wagon Corporation,  
U.S. 1939.  
Stressed skin plywood panels  
on 2" framing complete with  
all finishes, made up into two  
sections each 22' x 7' 10" x  
8' 1" high and shipped. A  
single storey trailer house.  
Post foundation. Over 100  
built. Stressed skin panels  
for floor and roof. Normal  
stud for panels and walls.

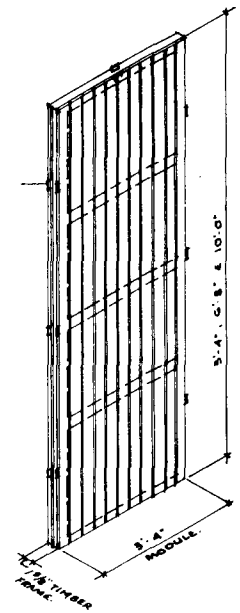
M. O. W. Survey of  
Prefabrication.  
T. V. A. Publications  
(available M. O. W.)  
record, February  
1943.



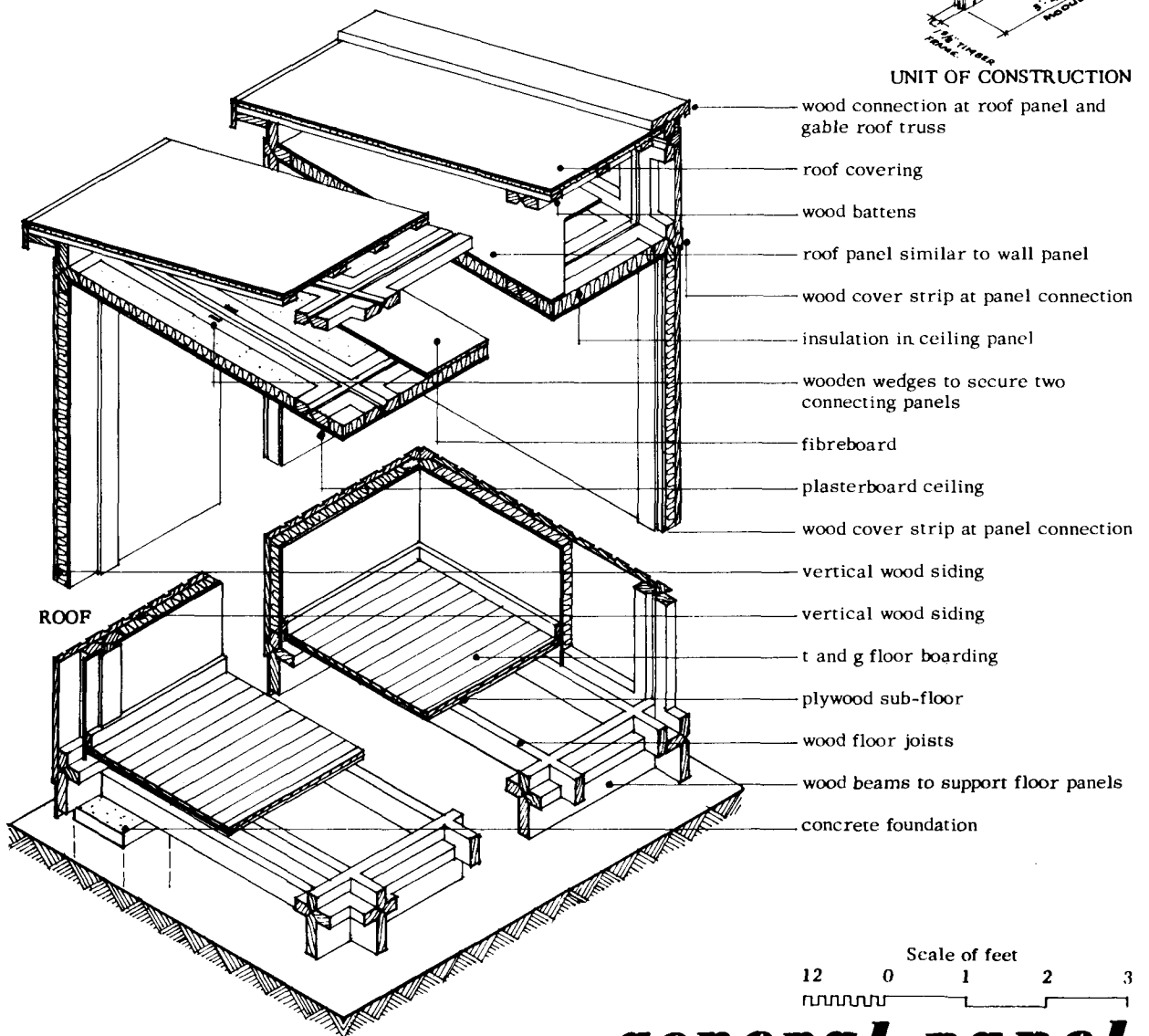
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



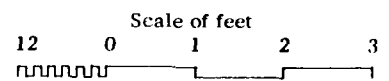
UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

- wood connection at roof panel and gable roof truss
- roof covering
- wood battens
- roof panel similar to wall panel
- wood cover strip at panel connection
- insulation in ceiling panel
- wooden wedges to secure two connecting panels
- fibreboard
- plasterboard ceiling
- wood cover strip at panel connection
- vertical wood siding
- vertical wood siding
- t and g floor boarding
- plywood sub-floor
- wood floor joists
- wood beams to support floor panels
- concrete foundation



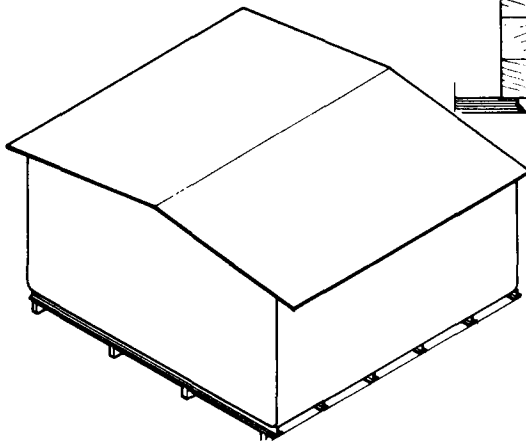
**general panel**

December, 1958.

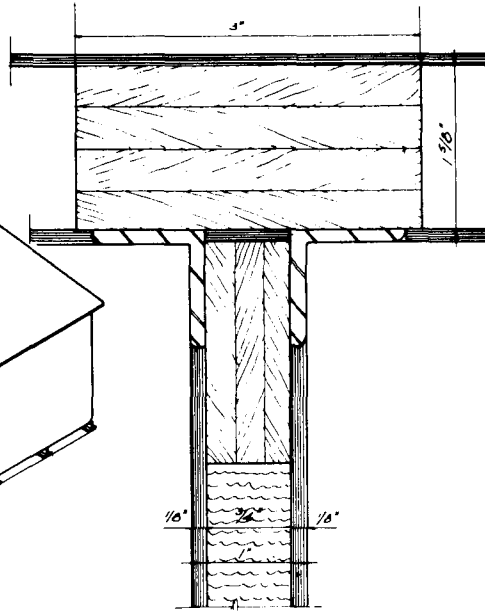


## GENERAL PANEL

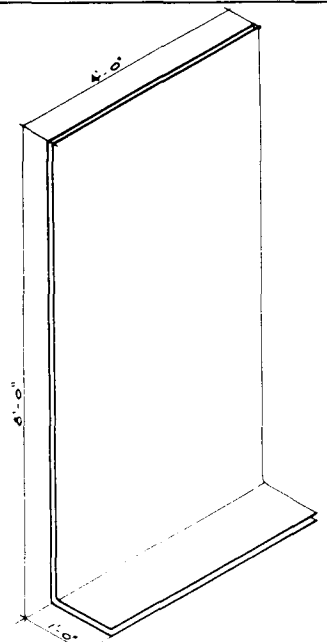
- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>General Panel Corporation,<br>Burbank, California and New York, N.Y.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S.A. 1942.  |
| <b>Materials<br/>Used.</b>   | 3. Wood  |
| <b>Description.</b>  | 4. A panelized system of construction based<br>on a 3'4" cubic module and whose main<br>proprietary feature is the universal metal<br>joint. |
| <b>Development<br/>to Date.</b>  | 5. Considerable production planned since 1947<br>but there is no present production.   |
| <b>Comment.</b>  | 6. It is claimed that the panel can be used<br>equally for walls, floors and ceilings.   |
| <b>References.</b>   | 7. New Pencil Points,<br>April, 1943.  |



WHOLE HOUSE ASSEMBLY

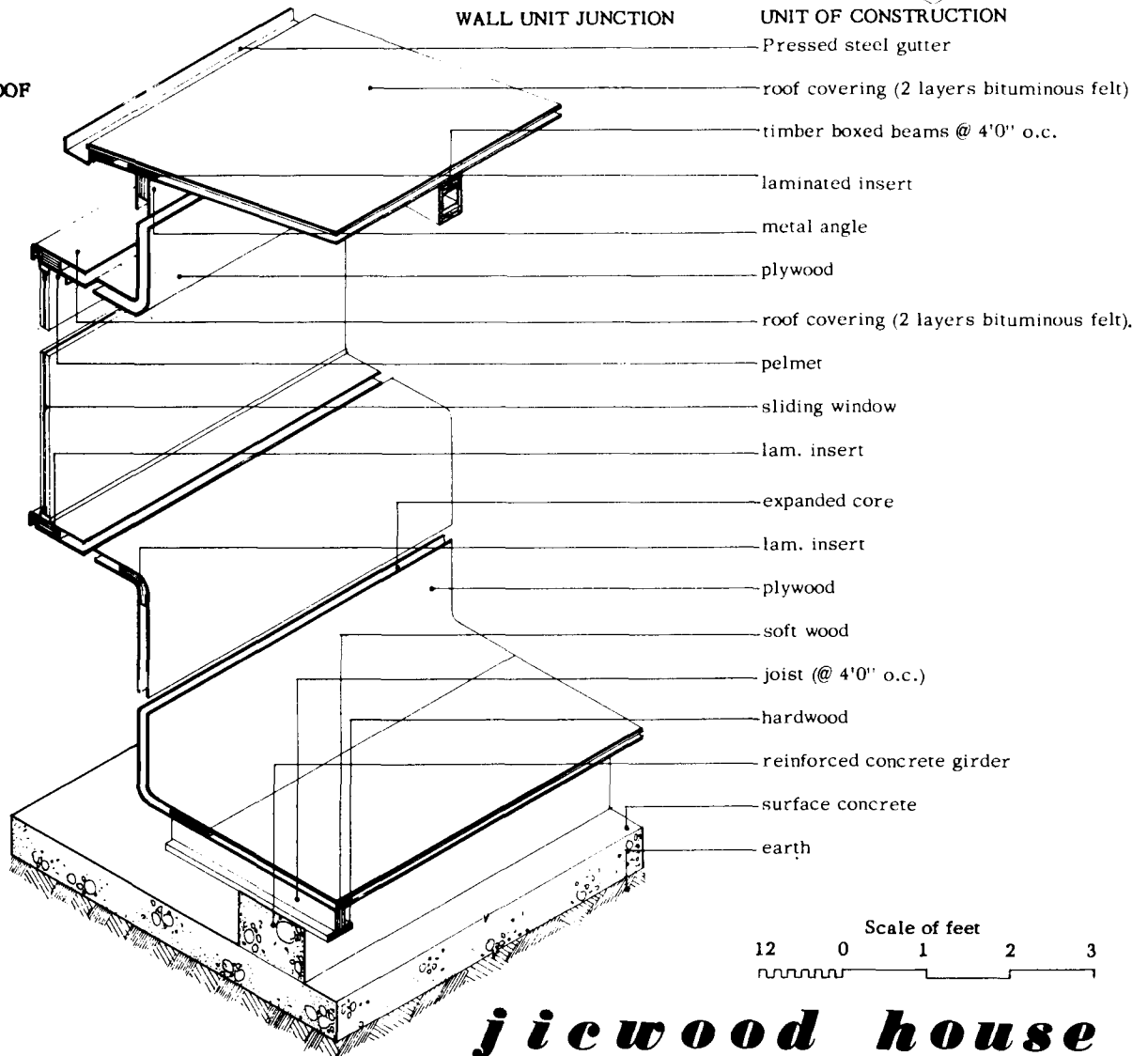


WALL UNIT JUNCTION

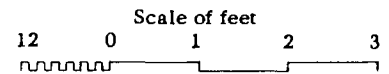


UNIT OF CONSTRUCTION

ROOF



GROUND FLOOR AND FOUNDATION

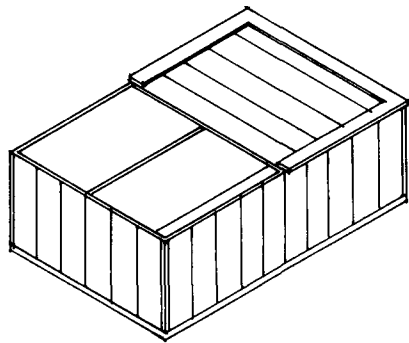


***jicwood house***

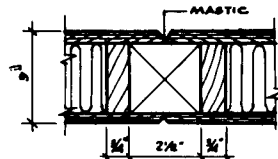
December, 1958.

## JICWOOD HOUSE

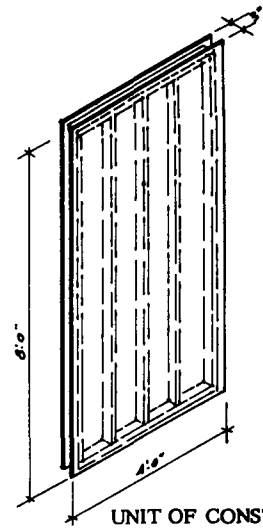
- |   |  |
|---|--|
| Traditional,<br>Non-Traditional,<br>Manufacturer,<br>Sponsor or<br>Builder. | 1. Non-Traditional.<br>Jicwood Limited,<br>Weybridge,<br>Surrey, England.  |
| Date and<br>Place of<br>Origin.   | 2. U.K.  |
| Materials<br>Used.  | 3. Wood.   |
| Description.  | 4. A bent wood stressed skin sandwich<br>panelised house, with 8'0" x 4'0"<br>maximum sections used for floors,<br>walls and roof. |
| Development<br>to Date.   | 5. No longer in operation.   |
| Comment.  | 6. -   |
| References.   | 7. "House Out of Factory",<br>John Gloog and Grey Wornum,<br>O.N.W.I.N. Limited.<br>George Allen, Publisher, 1946.                 |



WHOLE HOUSE ASSEMBLY

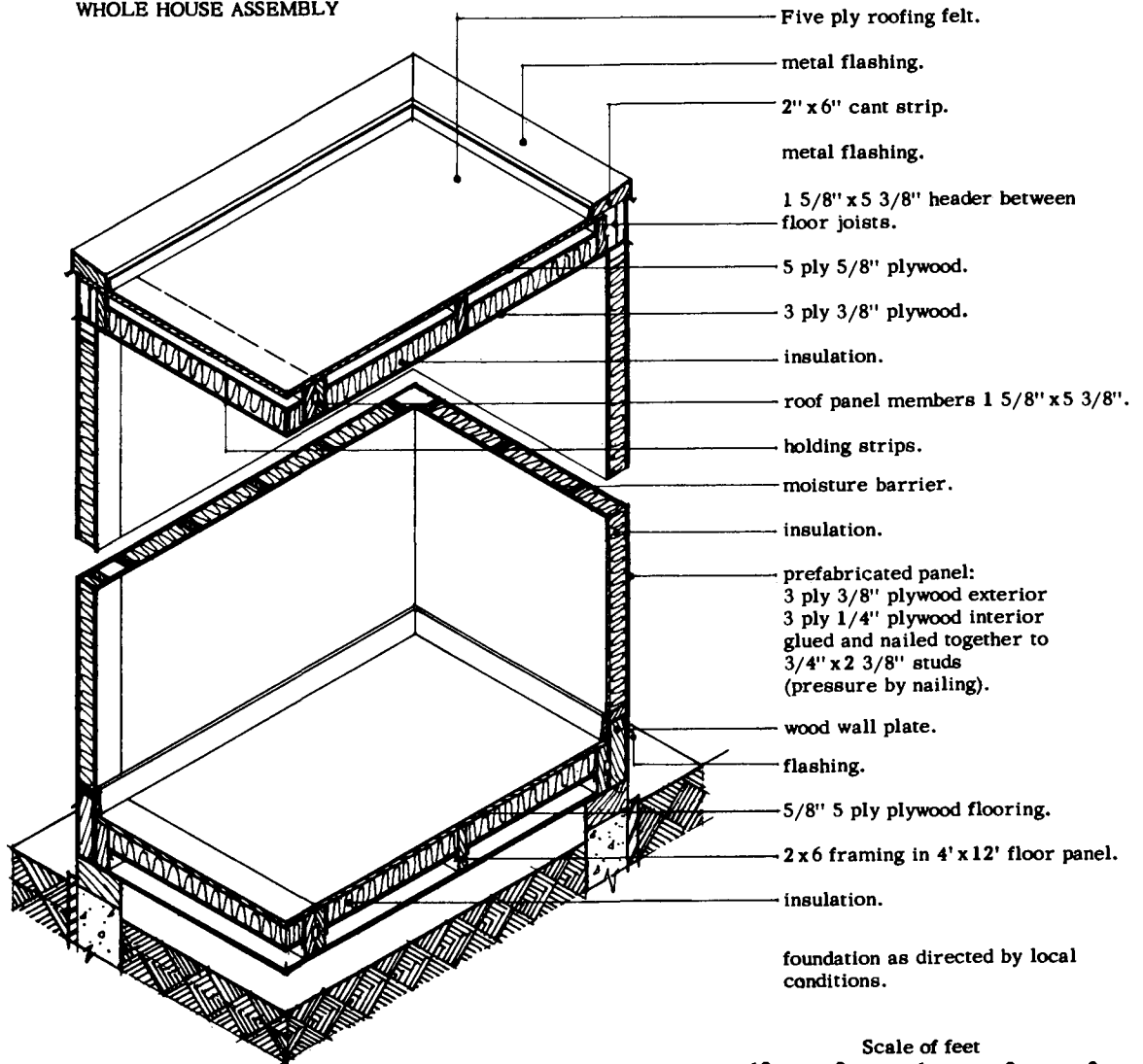


WALL UNIT JUNCTION



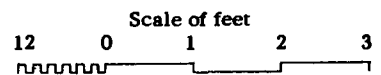
UNIT OF CONSTRUCTION

ROOF



- Five ply roofing felt.
- metal flashing.
- 2" x 6" cant strip.
- metal flashing.
- 1 5/8" x 5 3/8" header between floor joists.
- 5 ply 5/8" plywood.
- 3 ply 3/8" plywood.
- insulation.
- roof panel members 1 5/8" x 5 3/8".
- holding strips.
- moisture barrier.
- insulation.
- prefabricated panel:  
3 ply 3/8" plywood exterior  
3 ply 1/4" plywood interior  
glued and nailed together to  
3/4" x 2 3/8" studs  
(pressure by nailing).
- wood wall plate.
- flashing.
- 5/8" 5 ply plywood flooring.
- 2 x 6 framing in 4' x 12' floor panel.
- insulation.
- foundation as directed by local conditions.

GROUND FLOOR AND FOUNDATION

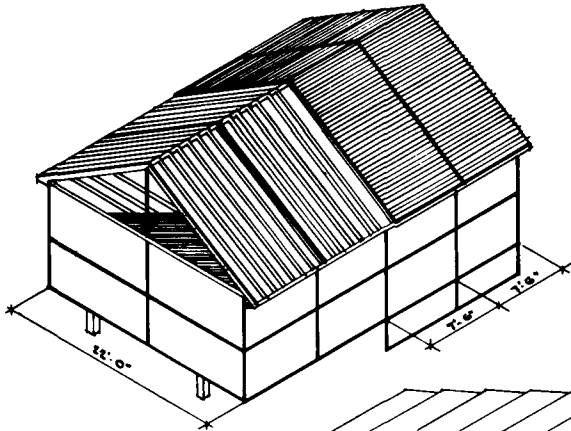


# *stressed skin panel*

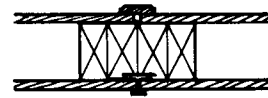
December, 1958.

## STRESSED SKIN PANEL

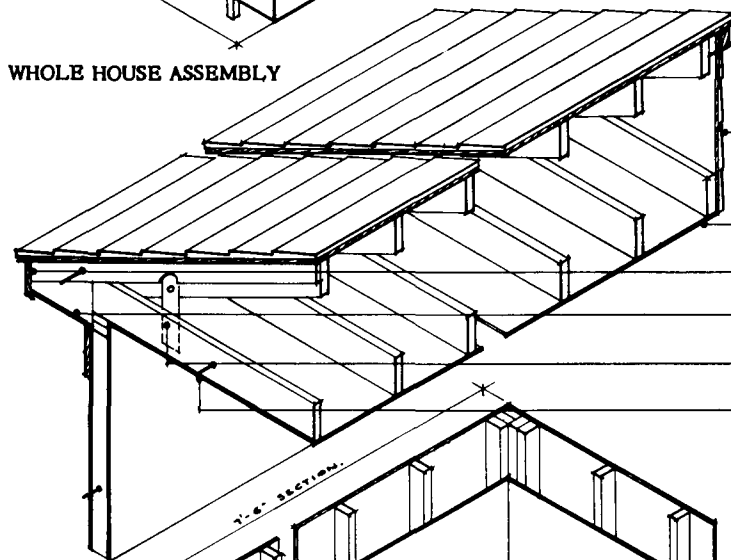
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Semi-Traditional. A method of wood construction used by many small house prefabricators especially in the U.S.
<b>Date and Place of Origin.</b>	2. Forest Products Laboratory, Madison, Wisconsin, U.S. 1935.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. U- 0.10 (with 2" rockwool).
<b>Development to Date.</b>	5. Widespread in North America since 1935.
<b>Comment.</b>	6. This type of panel is used in many proprietary house construction systems.
<b>References.</b>	7. Pamphlet "No. D1165", Forest Products Laboratory, Madison 5, Wisconsin, U.S.



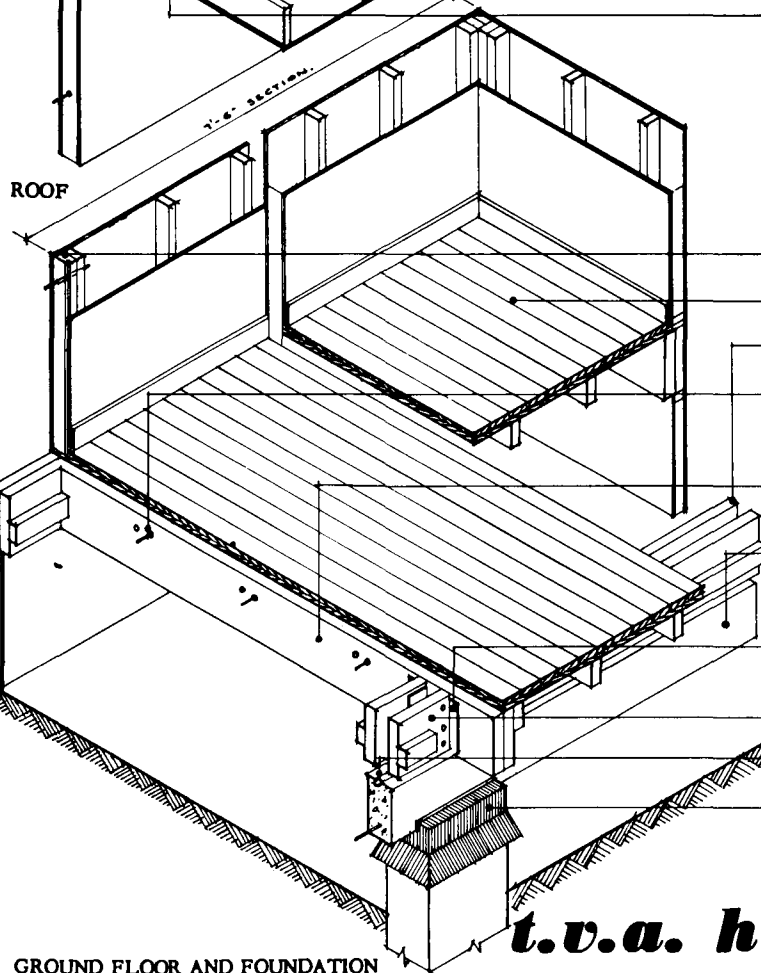
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



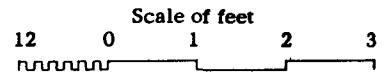
- Roof split along ridge one-half lying on the other when lowered
- gable end panel held in place by lag bolts
- ceiling joists
- finished ceiling
- fascia bd.
- eaves soffit
- roof hinged so it can be lowered
- meshing pin inserted in studs of adjoining sections for alignment



ROOF

- exterior panel joint covered with wood strip
- interior panel joint covered with metal clip
- finished flooring
- timber floor frame
- sections held together by bolts through adjoining members of roof, ceiling and floor frames
- this part of frame cantilevered from foundation posts
- 8" x 4" concrete beam
- floor joists
- floor frames bolted together using metal angles
- built in wheel assembly in floor frame
- 1" pipe rail
- masonry pier

GROUND FLOOR AND FOUNDATION



# t.v.a. house type 1

December, 1958.

## T.V.A. HOUSE TYPE I

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. Tennessee Valley Authority, Knoxville, Tenn., U.S.A.</b>
<b>Date and Place of Origin.</b>	<b>2. U.S.A., 1941.</b>
<b>Materials Used.</b>	<b>3. Wood.</b>
<b>Description.</b>	<b>4. Prefabricated in two sections and assembled on site.</b>
<b>Development to Date.</b>	<b>5. 750 to 800 houses.</b>
<b>Comment.</b>	<b>6.</b>
<b>References.</b>	<b>7. M.O.W. Survey of Prefabrication, H.M. Stationery Office, London, England. Architectural Record, February, 1947.</b>

PLANK AND LOG FRAME



## PLANK AND LOG FRAME

### Sub-Classification

Plank Frame  
Horizontal Log  
Special Systems  
Vertical Log

### Case Sheets

Superior Home  
Plank Construction  
Quebec Plank Frame  
Norwegian Plank Frame  
Vertical Plank  
Wudnhous  
Elementhus

## PLANK AND LOG FRAME

### Plank and Frame

**ADIRONDACK LOG CABINS  
INCORPORATED**  
126 East 45th Street,  
New York 17, N.Y.,  
U.S.A.

Adirondack Log  
Cabins Incorporated,  
126 East 45th Street,  
New York 17, N.Y.,  
U.S.A.

**BRAUN CEDAR CABINS**  
Braun Lumber  
Corporation,  
Detroit, Michigan,  
U.S.A.

Braun Lumber  
Corporation,  
Detroit, Michigan,  
U.S.A.

**BROWNLEE SECTIONAL  
LOG CABINS**  
Brownlee Company,  
Detroit 18, Michigan,  
U.S.A.

Vertical interlocking logs,  
sitting on floor platform and  
having connecting plate at  
top. Made up in panels 1' 0",  
2' 0" and 4' 0" wide and  
storey high.

Brownlee Company,  
Detroit 18, Michigan,  
U.S.A.

**LOXSTAVE**  
British Columbia,  
Canada.

Plank walling backed by  
wood frame.

Loxstave,  
British Columbia,  
Canada.

**PRE-CUT SOLID  
TIMBER CON-  
STRUCTION**  
Kingston Limited,  
Hull, England.

2" pre-cut t. & g. horizontal  
siding on 2" x 3" studs -  
rockwool insulation. Bolted  
vertically through siding.

Kingston Limited,  
Hull, England.

**SUPERIOR**  
Superior Buildings  
Company,  
Minnesota, U.S.A.

1931.  
Pre-cut lumber, t. & g. plank  
loadbearing siding backed by  
shallow studs which hold to-  
gether siding. Many houses  
in Northwestern United States.

"The Evolving House  
III, Rational Design",  
(Bemis).

PLANK AND LOG FRAME

WPL

Horizontal Log

AIR LOCK LOG  
CONSTRUCTION  
Canada.

Log construction.

Air Lock Construction  
Canada.

ALBERTA CEDAR HOMES  
7308 8th Avenue West,  
Calgary, Alberta,  
Canada.

Same as Pioneer Homes.  
Log construction out of  
3" x 6" (horizontal).  
Similar to Pan Abode.

"Acceptable Building  
Materials", C. M. H. C.  
Ottawa.

APEX WOOD PRODUCTS  
INCORPORATED  
602 Umatilla Street,  
Denver, Colorado,  
U.S.A.

Solid walls of wood 4" x 4"  
timbers. No finishes required.  
Pre-cut t. & g. timbers.

"Wisconsin State  
Journal",  
November 1951.  
Forest Products  
Lab. Reference.  
F.H.A. Bulletin  
6/10/57.  
G. B. SE-175.

BERGER LUMBER  
COMPANY  
Erskine, Minnesota,  
U.S.A.

Walls, partitions, floors and  
roofs, roof construction of  
individual 4 x 4 inch timber.

F.H.A. Bulletin  
1/14/49.  
G. B. SE-114.

BERGER LOG  
CONSTRUCTION  
Erskine, Minnesota,  
U.S.A.

Exterior walls horizontal pre-  
cut logs. 2 houses built in  
Winnipeg under N.H.A. loan.  
U = .163.

Berger Log Con-  
struction,  
Erskine, Minnesota,  
U.S.A.

BEST FACTORY BUILT  
HOMES INCORPORATED  
W.G.  
630 West Lake Street,  
Peoria, Illinois,  
U.S.A.

Wood frame units for walls,  
partitions, ceiling and roof  
with plywood or other wall-  
board covering or wood trusses  
for ceiling and roof framing.

F.H.A. Bulletin  
3/8/54.  
G. B. SE-177.

PLANK AND LOG FRAME (Horizontal Log cont'd)

WPL

**BOHLEN KONSTRUKTION**  
Germany.

German traditional.  
Also Scandinavian (Plankhus).  
2" or 3" t. & g. planks, load-  
bearing with corner posts.

Bohlen Konstruktion,  
Germany.

**CEDAR-LOG HOUSE**

Similar to Pan Abode.

**GROVE-BERGER LUMBER  
COMPANY**  
29 West Loucks Street,  
Sheridan, Wyoming, U.S.A.

Double t. & g. horizontal  
timber walls and partitions.

F.H.A. Bulletin  
1/11/54.  
G.B. SE-176.

**LOG CONSTRUCTION**  
Air-Lock Log  
Construction Company  
Limited,  
80 King Street West,  
Toronto, Ontario,  
Canada.

System of wall construction on  
log-cabin principle gives in-  
sufficient heat resistance.

Air-Lock Log  
Construction Company  
Limited,  
80 King Street West,  
Toronto, Ontario,  
Canada.

**LUMBER DEALERS  
RESEARCH COUNCIL**  
Ring Building,  
18th and M. Streets,  
N.W.,  
Washington, D.C.,  
U.S.A.

Wood frame units with plywood  
or fibreboard sheathing for  
walls, trusses for roof and  
ceiling framing.

F.H.A. Bulletin  
6/25/54.  
G.B. SE-183.  
"American Builder &  
Building Age",  
May 1954, July 1954.

**PALISADE CONSTRUCTION**  
U.S.A.

A system of horizontal plank  
frame construction, tongued  
and grooved.

B.M.S. 37, National  
Bureau of Standards,  
U.S. Housing  
Research Paper 33,  
H.H.F.A.

**PAN ABODE  
CONSTRUCTION**  
8585 Fraser Street,  
Vancouver 15,  
British Columbia,  
Canada.

Log construction (plank con-  
struction) for whole house roof  
holds construction down.  
In wide use in Canada.  
(Also N. Canada) 4" log - U. 16.

Pan Abode Const.,  
8585 Fraser Street,  
Vancouver 15,  
British Columbia,  
Canada.

PLANK AND LOG FRAME (Horizontal Log cont'd)

WPL

**PIONEER HOMES BUILDING  
SYSTEM**

235 Victoria Drive,  
Vancouver 6,  
British Columbia,  
Canada.

Same as Alta-Cedar Homes.  
Plank frame of 3" x 6" logs.  
Laid horizontal. Roof con-  
ventional.

"Acceptable Building  
Materials", C. M. H. C.  
Ottawa.

**PLANKHUS  
(Scandinavian)**

See also Bohlen Konstruktion.

Norwegian State  
Building Research  
Institute, Oslo.

**PLANK CONSTRUCTION  
GENERAL**

A traditional form of plank  
construction used in Europe  
and North America.

The Log Cabin Myth  
Shurtleff,  
Harvard Univ. Press,  
1937.

**QUEBEC PLANK FRAME**

Traditional using 3" planks with  
inch veneer facing - widely used  
in Quebec.

**WARD CABIN COMPANY**

Presque Isle,  
Maine,  
U.S.A.

Milled and pre-cut logs for  
walls, partitions, floors,  
ceiling and roof.

F. H. A. Bulletin  
4/16/54.  
G. B. SE-179.

Vertical Log

**BAILEY-PORTER  
CONSTRUCTION  
COMPANY INCORPORATED**  
Lafayette, Indiana, U.S.A.

Vertical plank wall con-  
struction.

F. H. A. Bulletin  
5/18/50.

**BELLAIRE LOG CABIN  
MANUFACTURING  
COMPANY**  
Bellaire, Michigan,  
U.S.A.

Pre-cut milled half-logs.  
Placed vertically for exterior  
walls.

F. H. A. Bulletin  
11/23/51.

PLANK AND LOG FRAME (Vertical Log cont'd)

WPL

**BRAUN CEDAR CABINS**

Detroit 3, Michigan,  
U. S. A.

Vertical log wall construction.

F. H. A. Bulletin  
9/26/49.

**BRITISH COLUMBIA  
COAST WOODS TRADE  
EXTENSION**

Canada.

Cedar (solid construction).

**CANADIANA HOUSE**

Pentland, McFarland,  
Baker,  
Architects,  
Toronto, Ontario,  
Canada.

Vertical tongued and grooved  
cedar boarding 3/4" insulated  
blanket.  
3/4" cedar internal panelling  
Cedar Roof Decking.  
1 house built.

Pentland, McFarland,  
Baker,  
Architects,  
Toronto, Ontario,  
Canada.

**CEDAR-REDWOOD HOMES**

2426 116th North East,  
Bellevue Avenue,  
Washington, D. C.  
U. S. A.

8" vertical tongued and  
grooved boarding.

Cedar-Redwood Homes,  
2426 116th North East,  
Bellevue Avenue,  
Washington, D. C.  
U. S. A.

**CEDAR (SOLID  
CONSTRUCTION)**

British Columbia Woods  
Trade Extension Bureau,  
Canada.

2" t. & g. vertical plank frame  
aluminum foil vapour in-  
sulation barrier.  
2" x 2" studding. 1/4" ply.  
Roof and floor similar.  
U = .133.

British Columbia  
Woods Trade  
Extension Bureau,  
Canada.

**CHAMBERS CREEK**

**LUMBER COMPANY  
INCORPORATED**  
6402 South Tacoma Way,  
Tacoma 9, Washington,  
U. S. A.

Vertical tongued and grooved.

F. H. A. Bulletin  
6/4/54.

PLANK AND LOG FRAME (Vertical Log cont'd)

WPL

**HIGHLAND CONSTRUCTION**

Mr. E. L. Poole,  
Vice-President,  
Highland Construction  
Corporation Limited,  
27 Cornelius Parkway,  
Toronto, Ontario,  
Canada.

Vertical log construction.  
Whole house.  
6" solid timber throughout.

Mr. E. L. Poole,  
Vice-President,  
Highland Construction  
Corporation Limited,  
27 Cornelius Parkway,  
Toronto, Ontario,  
Canada.

**LOXIDE**

Loxide Structures,  
Tacoma, Washington,  
U.S.A.

U.S. West Coast and Alaska,  
1947.  
Plank frame construction,  
with lapped vertical planks.

"Architectural  
Forum", June 1948.

**NATIONAL LOG CON-  
STRUCTION COMPANY  
OF MONTANA**

Thomson Falls, Montana,  
U.S.A.

Hollow round horizontal logs or  
half-round vertical studs.  
Log joists and trusses.

F.H.A. Bulletin  
5/4/48.

**NORWEGIAN PLANK  
FRAME**

Traditional in Scandinavia.  
Vertical plank framing and  
interior and exterior finish.

**SCANO**

Swedish Co-Operative  
Society,  
Scottish Sponsors,  
Scanhouse Limited,  
Sweden.

Erected in Scotland 1938.  
Vertical 2" t. & g. planking,  
wall-board interior lining.  
Floor and roof conventional.  
Considerable Swedish produc-  
tion and 200 houses in Scotland.  
Two storey construction.

"Prefabrication in  
Buildings",  
(Richard Sheppard).  
M.O.W. Survey of  
Prefabrication.  
"Architect and  
Building News",  
June 25th, 1943.  
"Architects Journal",  
February 3rd, 1944.

**SOLID CEDAR  
CONSTRUCTION**

British Columbia,  
Manufacturers Association,  
Vancouver,  
British Columbia,  
Canada.

Post and beam system with  
2" vertical wood panel infill.

PLANK AND LOG FRAME (Vertical Log cont'd)

WPL

**SOLID CEDAR**

Solid Cedar Homes Limited, subsidiary of Tarran Industries Limited, Hull, England.

1938.  
T. & G. plank vertical 2 1/4" thick panels 2' and 4' x storey high. 3/4" batten internally supporting plaster board. 600 houses in Scotland before the war.

M. O. W. Survey of Prefabrication, "National House Builder", February, 1938.

**VERTICAL PLANK WALL**

Phair Avenue, Courtice, Ontario, Canada.

Plank frame - 2" vertical planks (exterior) bolted to horizontal planks. 1 storey construction.

"Acceptable Building Materials", C. M. H. C., Ottawa, 1954.

**WUDNHOUS**

Housing Company, (A Bemis Product) U.S.A.

1935.  
2' wide x storey high panels of low grade t. & g. vertical 2" timber. Boarded externally. One building erected.

"The Evolving House III, Rational Design", (Bemis).  
M. O. W. Survey of Prefabrication. "Wood", September 1938.  
"American Architect", September 1936.

**WOOD MASONRY**

Traditional. Found occasionally in Quebec. Short lengths of logs placed in mortar to form a loadbearing wall and stuccoed and plastered.

Special Units

**ELEMENTHUS**

AB Bostadsforskning, Stockholm, Sweden.

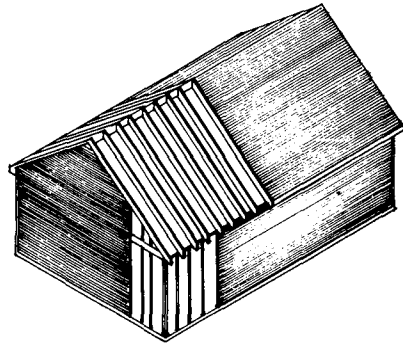
First production 1952.  
Module = 4" (10 cm).  
Floor wall and ceiling unit 8" x 8" x storey height.  
Completed prefabrication of all interior fittings.

AB Bostadsforskning, Stockholm, Sweden.

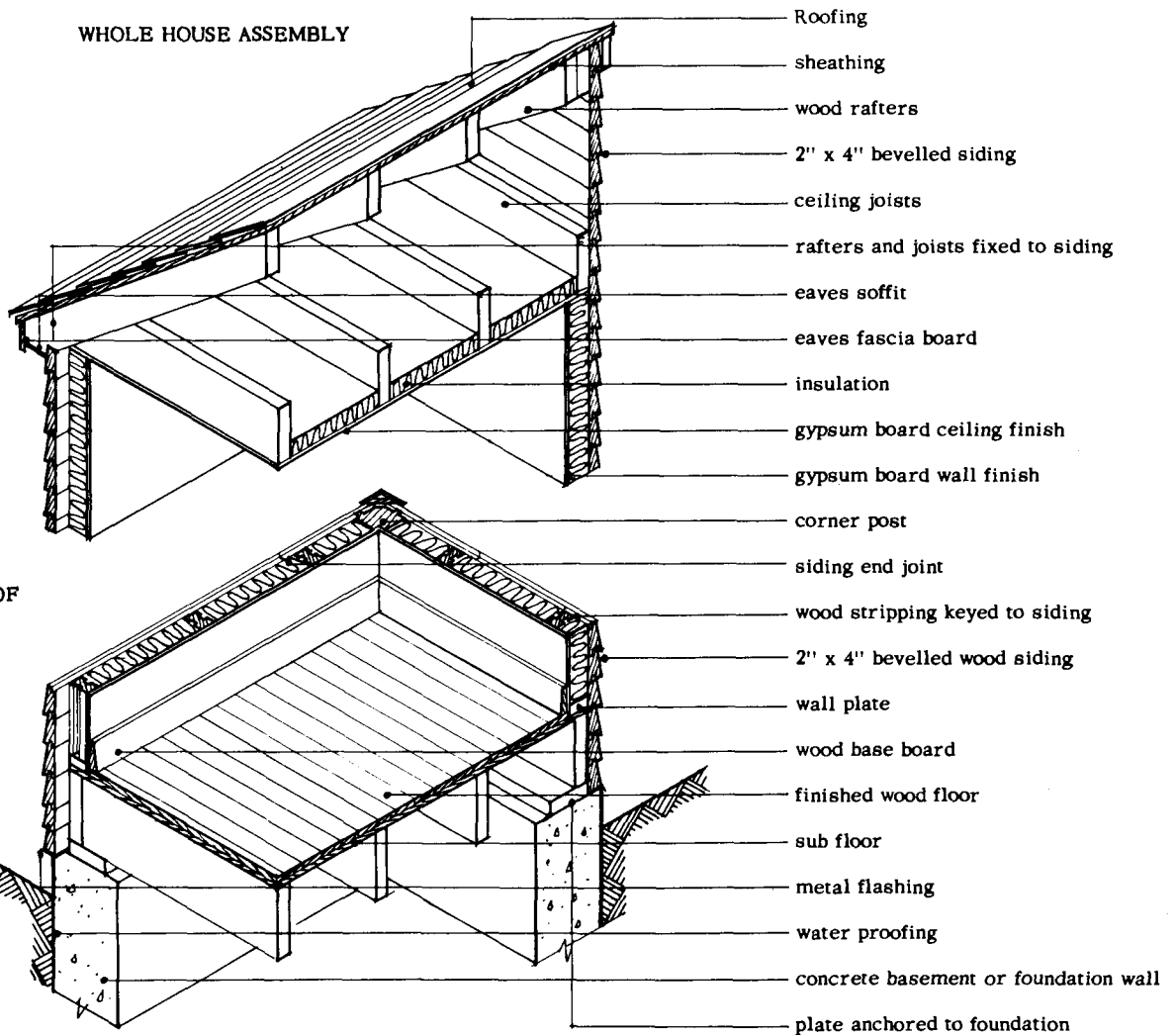
**B.F. SYSTEM**

See Elementhus. (Case Sheet)



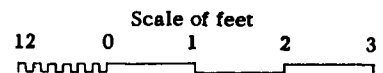


WHOLE HOUSE ASSEMBLY



ROOF

GROUND FLOOR AND FOUNDATION

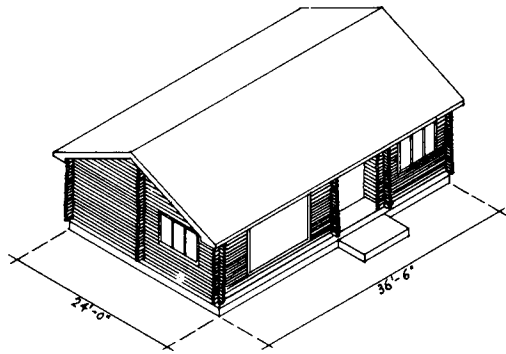


**superior home**

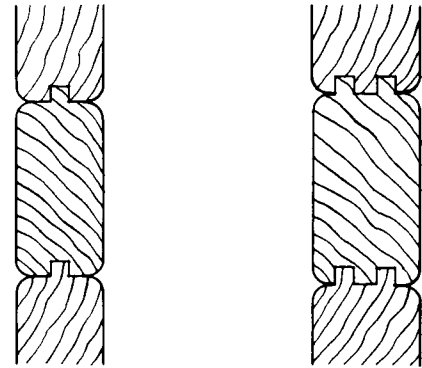
December, 1958.

## SUPERIOR HOME

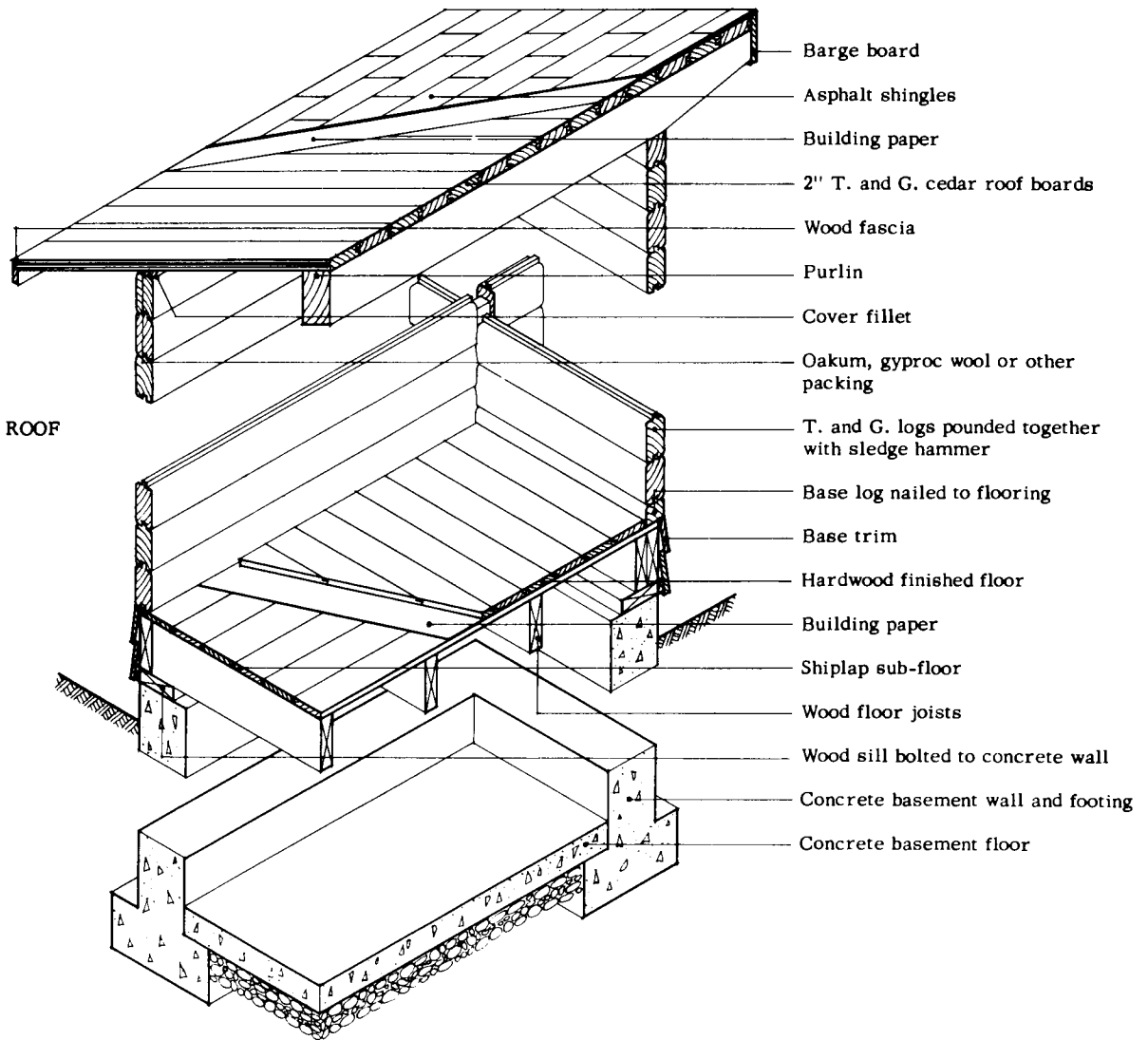
- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Superior Buildings Company,<br>Minnesota, U.S.A.                              |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S. 1931.  |
| <b>Materials<br/>Used.</b>   | 3. Wood.   |
| <b>Description.</b>  | 4. A single storey log construction.   |
| <b>Development<br/>to Date.</b>  | 5. Many houses in North Western U.S.A.   |
| <b>Comment.</b>  | 6. This form of construction is only suitable<br>for single storey construction.                     |
| <b>References.</b>   | 7. American Architect and Architecture,<br>September, 1936.<br>"The Evolving House III", A.F. Bemis. |



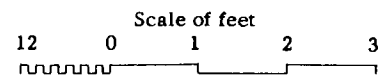
WHOLE HOUSE ASSEMBLY



3" x 6" single T. and G. logs      4" x 7" double T. and G. logs



GROUND FLOOR AND FOUNDATION

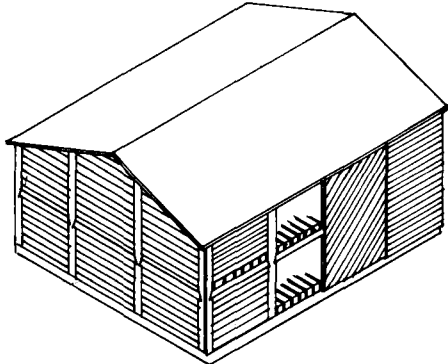


# log construction

December, 1958.

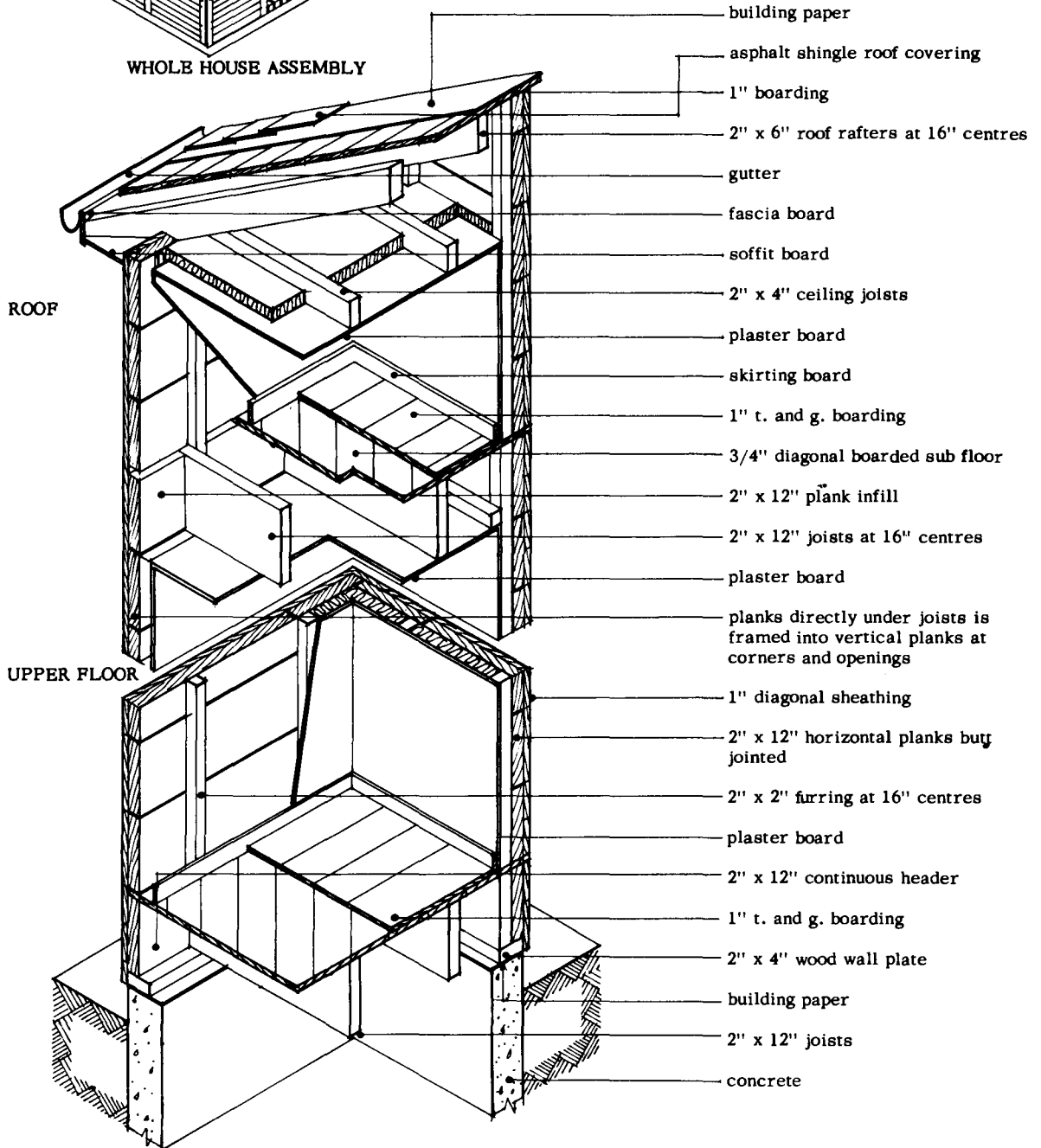
## LOG CONSTRUCTION

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Traditional.</b> Log construction of a similar form has been traditional in North America and Northern Europe for many years. There are many patented forms of this construction.
<b>Date and Place of Origin.</b>	<b>2. Scandinavia.</b>
<b>Materials Used.</b>	<b>3. Wood.</b>
<b>Description.</b>	<b>4. One storey construction. Plan size and shape of building is not limited except by maximum length of lumber which controls the unbroken length of walls.</b> U=0.16 (for 4" logs), U 0.20 (for 3" logs).
<b>Development to Date.</b>	<b>5. See (1) and (2).</b>
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. The Log Cabin Myth, Shurtleff, Harvard University Press, 1937.</b>



WHOLE HOUSE ASSEMBLY

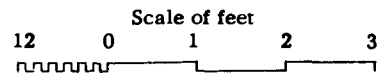
Roof finish may vary according to materials available



ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

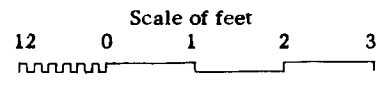
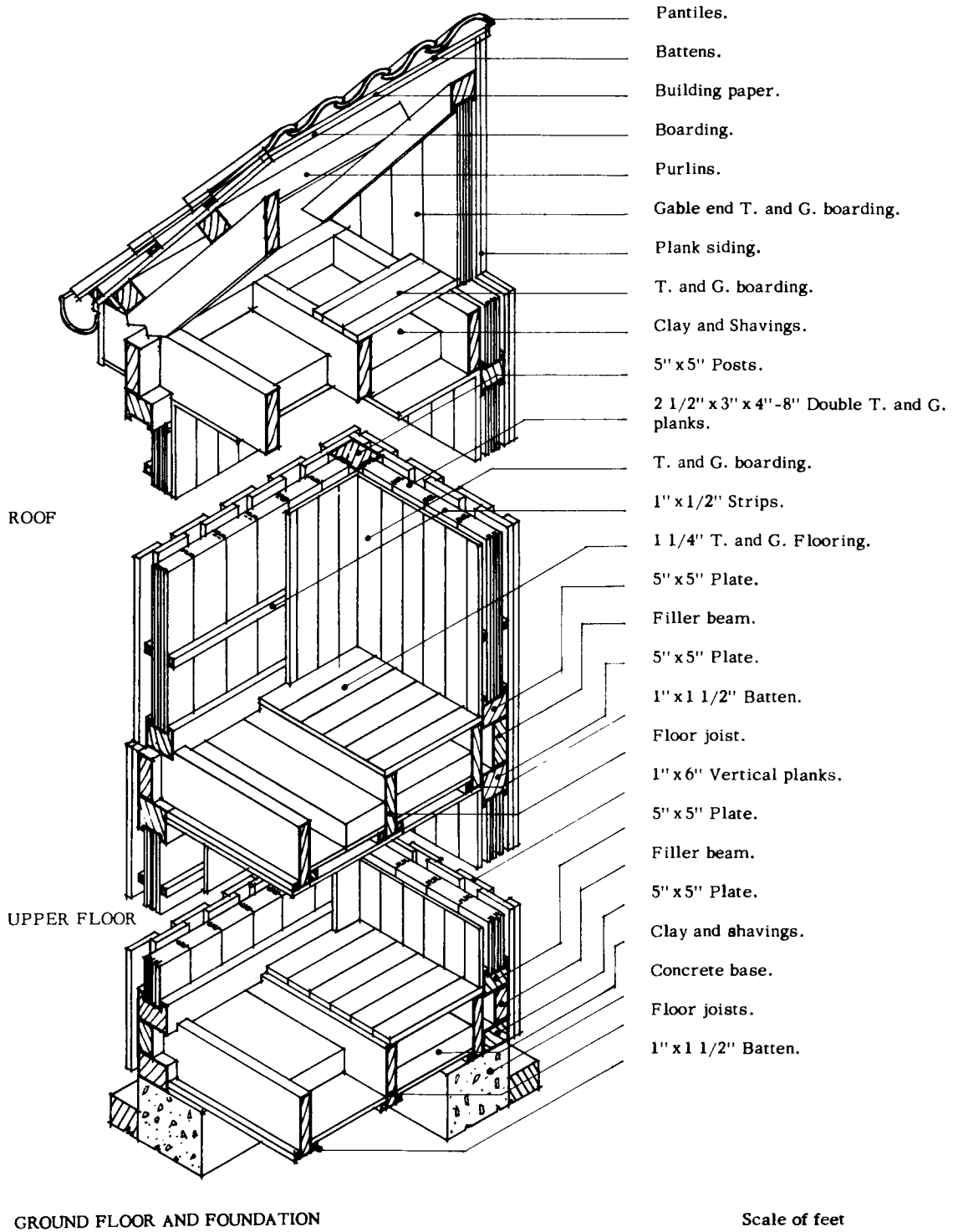


# quebec plank frame

December, 1958.

## QUEBEC PLANK FRAME CONSTRUCTION

- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Traditional.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Quebec 19th century onward.   |
| <b>Materials<br/>Used.</b>   | 3. Wood planks.  |
| <b>Description.</b>  | 4. The vertical planks are erected first and floor and roof bearing planks are framed into them. These plank frames are then infilled with planks laid on edge with mastic jointing. The construction is then faced outside with brick veneer, siding or stucco. Insulation is applied inside between battens fixed to planks, which in turn support interior finish. This form of construction can be faced on the outside with brick veneer, siding, asphalt, etc. The wood roof construction may vary in form and finish. |
| <b>Development<br/>to Date.</b>  | 5. Widespread use in Province of Quebec for many years.  |
| <b>Comment.</b>  | 6. Used mainly in two storey construction.   |
| <b>References.</b>   | 7. -   |



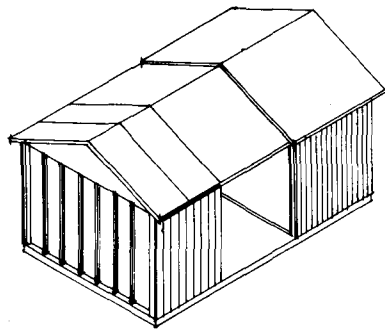
# ***norwegian plank frame***

December, 1958.

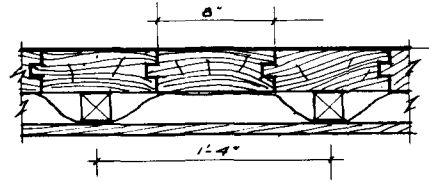
## NORWEGIAN PLANK FRAME

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Traditional in Scandinavia.
<b>Date and Place of Origin.</b>	2. Scandinavia.
<b>Materials Used.</b>	3. Wood.
<b>Description.</b>	4. Vertical plank framing and exterior finish.
<b>Development to Date.</b>	5. Widespread amongst older buildings in Scandinavia. Not presently in use.
<b>Comment.</b>	6. These details are traditionally Norwegian but are similar to those found in other parts of Scandinavia.
<b>References.</b>	7. Husbygging, Prof. J. Holmgren, Aschehougs Forlag, Oslo.

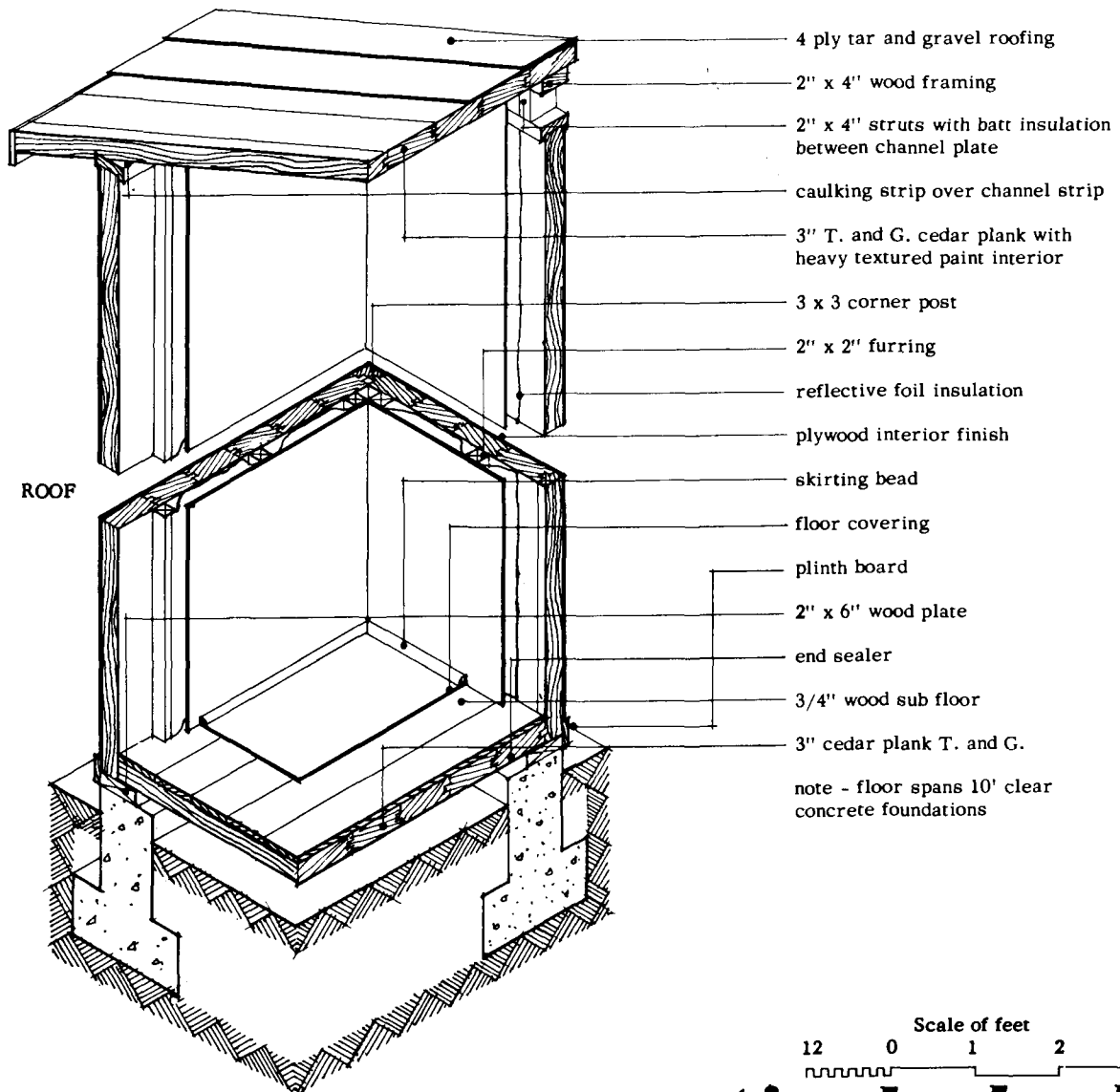




UNIT OF CONSTRUCTION



WALL UNIT JUNCTION

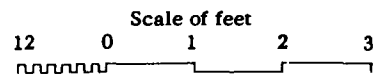


ROOF

GROUND FLOOR AND FOUNDATION

- 4 ply tar and gravel roofing
- 2" x 4" wood framing
- 2" x 4" struts with batt insulation between channel plate
- caulking strip over channel strip
- 3" T. and G. cedar plank with heavy textured paint interior
- 3 x 3 corner post
- 2" x 2" furring
- reflective foil insulation
- plywood interior finish
- skirting bead
- floor covering
- plinth board
- 2" x 6" wood plate
- end sealer
- 3/4" wood sub floor
- 3" cedar plank T. and G.

note - floor spans 10' clear concrete foundations

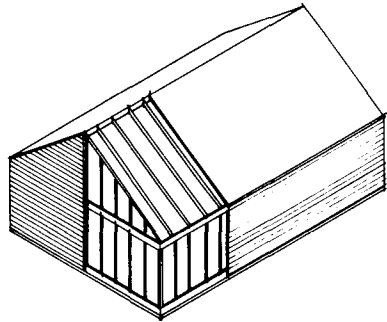


***vertical plank***

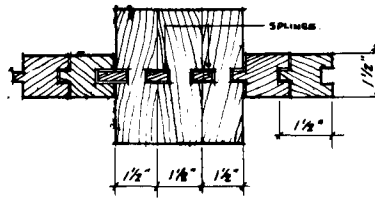
December, 1958.

## VERTICAL PLANK CONSTRUCTION

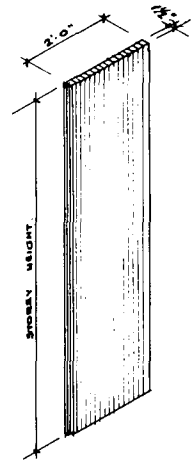
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Traditional.</b> A similar form of construction is employed by a number of lumber manufacturers in Canada and Northern United States.
<b>Date and Place of Origin.</b>	<b>2. Recent in Canada and Northern United States.</b>
<b>Materials Used.</b>	<b>3. Wood.</b>
<b>Description.</b>	<b>4. Typically a one storey construction.</b> Can be erected with or without interior finish according to degree of insulation required. For external walls: U- 0.133 for 2" cedar plus aluminum foil. U- 0.238 for 3" cedar (uninsulated).
<b>Development to Date.</b>	<b>5. Limited amount in North America.</b> Some houses in Hull, England.
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. British Columbia Lumber Manufacturers Association, 550 Burrard Street, Vancouver 1, B.C.</b>



WHOLE HOUSE ASSEMBLY

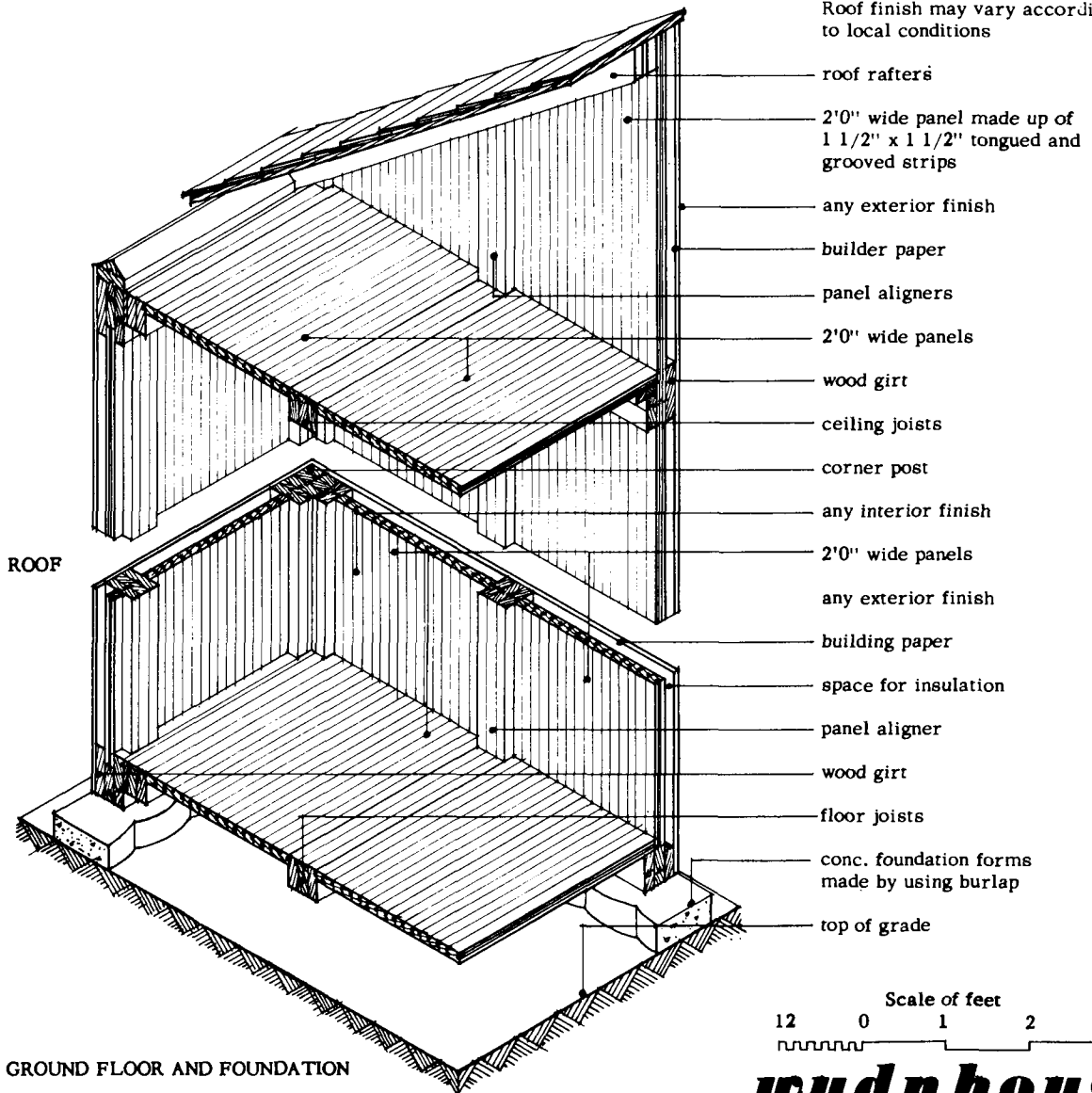


WALL UNIT JUNCTION

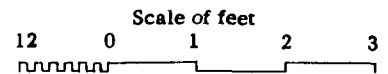


UNIT OF CONSTRUCTION

Roof finish may vary according to local conditions



GROUND FLOOR AND FOUNDATION

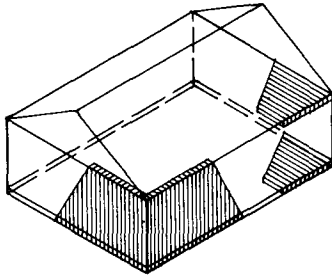


**wudn hous**

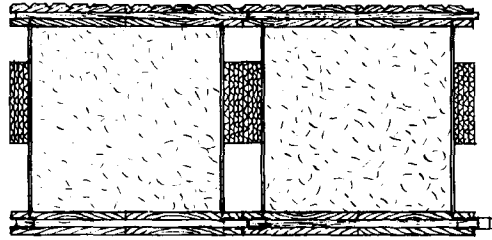
December, 1958.

## WUDNHOUS

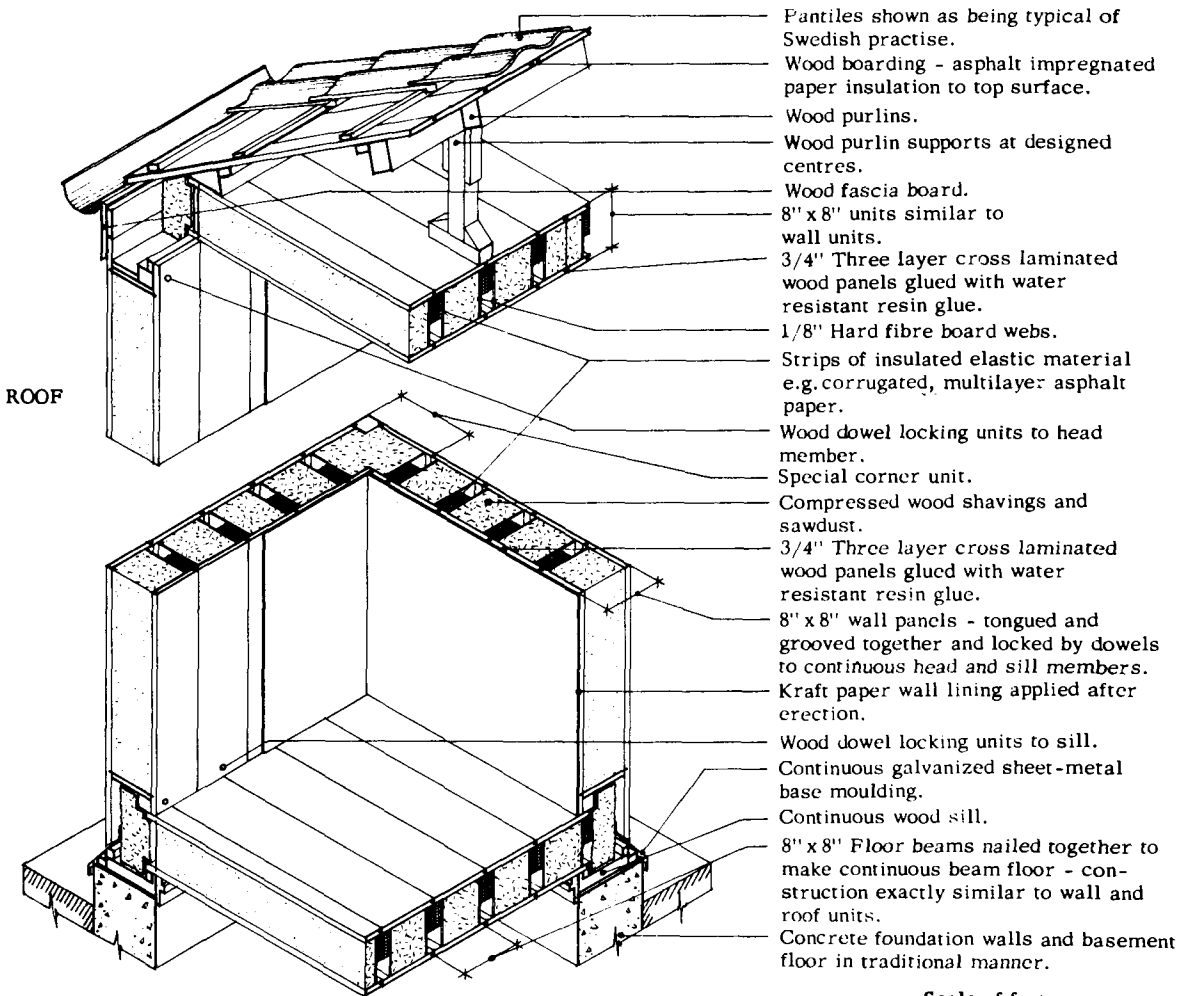
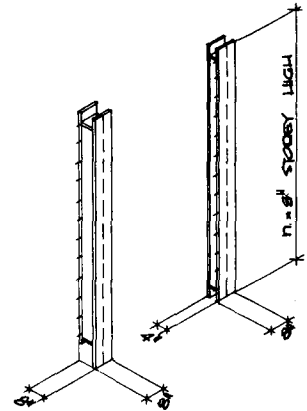
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | <b>1. Non-Traditional.<br/>Housing Co. (Bemis)<br/>Boston, U.S.A.</b>   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | <b>2. Boston U.S.A. 1935.</b>   |
| <b>Materials<br/>Used.</b>   | <b>3. Wood.</b>   |
| <b>Description.</b>  | <b>4. System is designed to utilize<br/>lumber normally unsuitable for<br/>structural purposes. Any type<br/>of roof and wall finish may be<br/>used.</b> |
| <b>Development<br/>to Date.</b>  | <b>5. One building erected, 1935.</b>   |
| <b>Comment.</b>  | <b>6. -</b>   |
| <b>References.</b>   | <b>7. "The Evolving House III"<br/>Rational Design, A.F. Bemis.</b>   |



WHOLE HOUSE ASSEMBLY



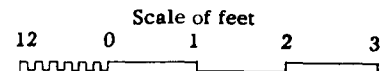
WALL UNIT JUNCTION



ROOF

GROUND FLOOR AND FOUNDATION

- Pantiles shown as being typical of Swedish practise.
- Wood boarding - asphalt impregnated paper insulation to top surface.
- Wood purlins.
- Wood purlin supports at designed centres.
- Wood fascia board.
- 8" x 8" units similar to wall units.
- 3/4" Three layer cross laminated wood panels glued with water resistant resin glue.
- 1/8" Hard fibre board webs.
- Strips of insulated elastic material e.g. corrugated, multilayer asphalt paper.
- Wood dowel locking units to head member.
- Special corner unit.
- Compressed wood shavings and sawdust.
- 3/4" Three layer cross laminated wood panels glued with water resistant resin glue.
- 8" x 8" wall panels - tongued and grooved together and locked by dowels to continuous head and sill members.
- Kraft paper wall lining applied after erection.
- Wood dowel locking units to sill.
- Continuous galvanized sheet-metal base moulding.
- Continuous wood sill.
- 8" x 8" Floor beams nailed together to make continuous beam floor - construction exactly similar to wall and roof units.
- Concrete foundation walls and basement floor in traditional manner.



**elementhus**

December, 1958.

## ELEMENTHUS

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. A/B Bostadsforskning, Sveavagen 108, Stockholm, Sweden.</b>
<b>Date and Place of Origin.</b>	<b>2. Sweden, 1953.</b>
<b>Materials Used.</b>	<b>3. Wood, fibreboard, compressed shavings.</b>
<b>Description.</b>	<b>4. Basic module: 8". Units act structurally as box beams, or columns held together with head and sill plate, and joined under pressure. Dowels tie all unit joints. U=0.072 (8" exterior wall and floor units).</b>
<b>Development to Date.</b>	<b>5. 3,000 houses in Sweden.</b>
<b>Comment.</b>	<b>6. Package as delivered includes all equipment and finishes above basement or slab.</b>
<b>References.</b>	<b>7. Sponsors information.</b>

CONCRETE AND MASONRY PANEL

## CONCRETE AND MASONRY PANEL

### Sub-Classifications

Concrete Panels  
Brick Panels  
Lightweight Concrete Panels  
Hollow Panels  
Special Systems

### Case Sheets

Myton  
Brick Panel  
Crowe House  
Modern Crete  
Smith's Building System  
Wates House



## Concrete Panel

**ARMOSTONE**  
Concrete Housing  
Corporation of  
America,  
New York, N. Y.,  
U.S.A.

1920-1927.  
Precast reinforced concrete  
units, storey high, 3' 0" wide,  
1" thick.  
1 storey only.  
Stucco externally, plaster  
internally.

M. O. W. Survey of  
Prefabrication.

**ARROW**  
Arrow Units Limited,  
Edinburgh, Scotland.

Storey high precast concrete  
lined internally with precast,  
lightweight blocks of same  
height.

Arrow Units Limited,  
Edinburgh, Scotland.

**BALFOUR-BEATTY  
COMPANY**  
London E. C. 4,  
England.

Reinforced concrete precast  
panels bolted together.

Balfour-Beatty  
Company,  
London E. C. 4,  
England.

**BILLNER**  
Vacuum Concrete  
Incorporated,  
Philadelphia,  
Pennsylvania,  
U.S.A.

Houses at Tampa, Florida  
1943.  
Prestressed concrete slabs  
2 1/2" thick.  
Whole wall cast in one piece  
on ground.

M. O. W. Survey of  
Prefabrication.

**BJORNSTAD-MARTIN  
HOUSE**  
Montreal, Quebec,  
Canada.

Row houses in Montreal.  
Vertical concrete block -  
4' 0" x 8' 0".  
Loadbearing units joined on  
tarred hemp and bolted  
together.  
Rockwool and Gyproc.

Bjornstad-Martin  
House,  
Montreal, Quebec,  
Canada.

MASONRY PANEL (Concrete Panel cont'd)

CP

**BROAD MEAD**

Broad Mead Products  
Limited,  
Maidstone, Kent,  
England.

1 bungalow built.  
Precast concrete units, steel  
frame roof, asbestos cement  
cladding.

Broad Mead Products  
Limited,  
Maidstone, Kent,  
England.

**BYRNE**

Barry Byrne,  
Architect,  
New York, N. Y.,  
U. S. A.

Precast unit. Precast concrete  
wall panels storey height, and  
joists and planks.  
Asbestos cement internal  
finish.  
Precast concrete girts.

"The Evolving House  
III, Rational Design",  
(Bemis).

**CARROLL TRI PLY  
COMPANY**

Chicago, Illinois,  
U. S. A.

Pre - 1935.  
6" reinforced cinder concrete  
walls faced in art, stone  
cast in situ horizontally and  
raised.  
Several hundred houses in  
Mid-West United States.

M. O. W. Survey of  
Prefabrication.  
"Architectural  
Forum",  
February 1943.

**CONNECTICUT**

Connecticut Precast  
Building Company,  
Greenwich, Connecticut,  
U. S. A.

1935.  
Large precast reinforced  
concrete panels 18' 0" x  
storey high.  
Hollow units with built  
in services.  
Finished product like  
American Colonial Cottage.

B. M. S. 20, 1939.  
M. O. W. Survey of  
Prefabrication.

**LES CONSTRUCTIONS  
CERAMIQUES**

France.

Ceramic gravel aggregate  
panels, can be cut, sawn.  
Cast with ready made ducts.

"Prefabrication",  
September 1954.

MASONRY PANEL (Concrete Panel cont'd)

CP

**ECONOCRETE SYSTEM**

Whaley Construction  
Company,  
Long Beach, California,  
U.S.A.

Use of large precast concrete  
slabs for small houses.

Whaley Construction  
Company,  
Long Beach,  
California,  
U.S.A.

**EKEBY**

Upsala-Ekeby,  
A.B. Erebyuk,  
Sweden.

Tile faced concrete wall  
units whole section.

Byggmast  
1957.

**HANSEN CONSTEELAIR**

See Hansen Consteelair under  
MSF.

**HENSSEN HOUSES**

Schaesberg,  
Holland.

Prefabricated concrete units  
made at site. 13" wide storey  
high outside "U" shaped units  
inner and outer units, inter-  
lock. Total wall 8".

"Prefabrication",  
February 1955.

**HOMOCRETE BUILDING  
SYSTEM**

Huron Concrete Limited,  
Seaforth, Ontario,  
Canada.

4 houses built up to November  
1950 in South Western Ontario.  
8' 0" length x various widths.  
Concrete panel.  
Water resist, coating insulation.  
U (with 1/2" insulation board)  
= 0.24.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1951.

**HURON CONCRETE  
PRODUCTS LTD.**

Seaforth, Ontario,  
Canada.

See Homocrete under CP.

Huron Concrete  
Products Ltd.,  
Seaforth, Ontario,  
Canada.

MASONRY PANEL (Concrete Panel cont'd)

CP

MYTON

Myton Limited,  
Newland, Hull,  
England.

Precast concrete external  
channel shaped wall units  
13" x storey high jointed by  
metal dowels and caulked.  
See Tarran House.

Myton Limited,  
Newland, Hull,  
England.

NABOHUS

Hanz-Acker-Holst,  
Ostermalmag 76,  
Stockholm, Sweden.

Mainly for apartment blocks.  
Loadbearing concrete units.

Hanz-Acker-Holst,  
Ostermalmag 76,  
Stockholm, Sweden.

OSTBERGA

EXPERIMENTHUS  
H.S.B. Fleminston 41,  
Stockholm, Sweden.

3' 0" module. Storey high  
loadbearing concrete block  
internally, wood frame panel  
asbestos faced externally.  
3 storey apartment con-  
struction.

H.S.B. Stockholm.

PRECAST CONCRETE  
WALL PANEL

Panel Construction Co.,  
Limited,  
1800 Fradet Street,  
Drummondville, Quebec,  
Canada.

The R.C. Loadbearing panels.  
24" x 9' 0" bolted into wood  
studs.

"Acceptable Building  
Materials",  
C.M.H.C. Ottawa,  
1955.

SIMPSON CRAFT

John T. Simpson,  
Newark, New Jersey,  
U.S.A.

1917 on.  
Precast reinforced concrete  
wall panels 40" wide x storey  
height. In situ poured studs.  
Completely reinforced concrete  
structure.  
Fifty houses in St. Johns,  
Nfld., Pennsylvania, New  
York.

M.O.W. Survey of  
Prefabrication.  
Portland Cement  
Association Report,  
(Bemis).  
Record: July 1939.  
Forum: Feb. 1943.

MASONRY PANEL (Concrete Panel cont'd)

CP

STENT HOUSE

Stent Precast Concrete Limited,  
London S. W. 1,  
England.

Precast Tee units, storey high tied by concrete units at floor levels. Steel roof trussed.

Stent Precast Concrete Limited,  
London S. W. 1,  
England.

TARRAN HOUSE

(Newland Number 16)  
169 Clough Road,  
Hull, England.  
(Myton Limited)

1944.  
Reinforced concrete units in timber frame. 1' 4" x storey height. Joints caulked. A whole house system also used for schools etc.

Reference:  
"Prefab in Buildings",  
(Richard Sheppard).  
"Concrete" Aug. 1947.

TONKIN OR AUSTRALIAN  
PRECAST CONCRETE

Slum Clearance Scheme,  
Housing Commission of  
The Government of  
Victoria, Australia.

1938.  
3" concrete wall slabs up to 42' long x storey height, cast horizontally and then lifted. No finishing or insulation. Some bungalows erected.

M. O. W. Survey of  
Prefabrication.  
"Concrete Building",  
February 1942.

UNIT

Unit Construction Co. &  
Standardized Construction  
Corporation,  
U. S. A.

1921.  
Very large reinforced concrete units cast in horizontal moulds, transported by railway. Two large scale projects Youngstown and Long Island. Long Island project under Atterbury's direction.

M. O. W. Survey of  
Prefabrication.  
"Portland Cement  
Association Report".

UNITED NATIONS  
HOUSING PROJECT

Parkway Village,  
Flushing, New Jersey,  
U. S. A.

Cast slab construction lifted by vacuum lift and crane. Coffered on underside.

"Prefabrication",  
Feb. 1954, p. 26.

WALLIS

See Wallis under WSP.

MASONRY PANEL (Concrete Panel cont'd)

CP

WILSON HOUSE  
England.

Metal framed concrete panel between corner posts of precast dense concrete. Concrete roof slab, open web floor joints.

"Architects Journal",  
Nov. 6th, 1947.

VACUUM CONCRETE  
INCORPORATED  
Philadelphia, Pennsylvania,  
U. S. A.

See Billner under CP.

Vacuum Concrete  
Incorporated,  
Philadelphia,  
Pennsylvania,  
U. S. A.

Brick Panel

BIGONTINA METHOD  
OF CONSTRUCTION  
Milan, Italy.

Non-standard - custom designed. Industrialized prefabrication of concrete wall section with all services cast in Hollow Terracotta Blocks in forms used mainly in blocks of flats.

"Building Research  
Station",  
(Translation)  
Library, Garston,  
England.

BRICK PANEL  
HOUSE  
Structural Clay  
Products Foundation

Precast reinforced brick panels 1' 0" x 8' 0" high. Structural only. Loadbearing and tied together with steel angle, roof mounted immediately on top.

"House and Home",  
December 1957.

BROUGHTON COMPANY  
Kansas City,  
Missouri,  
U. S. A.

Pre-1935.  
75 houses in Kansas City.  
Reinforced concrete studs and 1" dense concrete. Panels storey height.

M. O. W. Survey of  
Prefabrication.

MASONRY PANEL (Brick Panel cont'd)

CP

COLUMBIA VACUUM  
CONCRETE De S.A.  
Columbia.

Horizontally preformed brick walls and barrel vaulted roofs lifted into position by vacuum suction lifter and crane. Roofs and walls only 2 1/2". Cast in piles of 8 (eight).

"Prefabrication",  
February 1954.

MALTHOUSE  
W. Malthouse Limited,  
Sheffield, England.

Special brick wall units complete with windows and doors.  
Prototypes at Sheffield.

W. Malthouse Limited,  
Sheffield, England.

STRUCTURAL CLAY  
PRODUCTS FOUNDATION  
U.S.A.

See Brick Panel House under CP.

Lightweight Concrete

ALCRETE  
Mysore State,  
India.

3 3/8" "siporex" type concrete panel in aluminum frame plaster and stucco faced.

"Architectural  
Journal",  
November 1948.

COMMUNITY  
ENTERPRISES

See Prefac under CP.

CROWE HOUSE  
CONSTRUCTION  
F. Malcolm Crowe,  
Burlingame, California,  
U.S.A.

Precast aerated concrete panels in two layers sandwiching moisture membrane. Panels 1 storey in height x 4' 0" wide space 6" apart at the joints. Panels are framed in steel. Metal studs in joints. Open web floor joists in steel.

"American  
Architect &  
Architecture",  
September 1936.

MASONRY PANEL (Lightweight Concrete cont'd)

CP

GLASGOW CORPORATION  
HOUSE  
Scotland.

1944.  
Precast slab house.  
Ronald Bradbury-Architect.  
4 houses in Penilee Glasgow.  
Precast foamed slag slabs.  
Wall sections 10 ft. wide  
8' 8" high.  
1 1/4 tons 2 leaves outer walls.  
Precast hollow floor and roof  
slabs.

Glasgow Corporation  
House,  
Scotland.

HENKE BUILDING  
SYSTEM  
Franz Henke,  
Dawson Creek,  
British Columbia,  
Canada.

1956.  
Ribbed slab on grade house  
with built in ducts.  
Walls of Zonolite Panels.

Henke Building System,  
Franz Henke,  
Dawson Creek,  
British Columbia,  
Canada.

INSULITE SYSTEM  
Insulite Builders  
Limited,  
P.O. Box 119,  
Sydney, Nova Scotia,  
Canada.

Foam slag aggregate slabs  
insulated. 5" x 1' 6" x 8' 0"  
storey high, loadbearing.  
U = 0.21 Uninsulated.

"Acceptable Building  
Materials",  
C.M.H.C. Ottawa.  
1954.

MAY (PRAUNHEIM)  
Frankfurt-am-Main,  
Germany.

Solid precast pumice slabs  
up to 3m. long x 1.20m. high.

M.O.W. Survey of  
Prefabrication.

MODERN-CRETE  
BUILDING SYSTEM  
1517 West 3rd Avenue,  
Flint 4, Michigan,  
U.S.A.  
also  
Rocwall of Quebec  
Limited,  
16 Renfrew Avenue,  
Westmount, Quebec,  
Canada.

Concrete slab may be sawed  
or nailed.  
16" wide x 2" x 8' 0" high.  
U shaped reinforced and backed  
by lath and plaster on framing.  
U = 0.14.  
2,000 houses in Michigan,  
200 in Montreal.

"Acceptable Building  
Materials",  
C.M.H.C. Ottawa,  
1949.



MASONRY PANEL (Lightweight Concrete cont'd)

CP

OVERSEAS PREFABRICATED  
STRUCTURES

See Vermiculite under CP.

London, England.

PREFAC CONCRETE

WALL SLABS

Community Enterprises,  
610 St. James West,  
Montreal, Quebec,  
Canada.

Pozzalana concrete panels,  
2" or 6" x 8' 8" x 16".  
U = 0.14.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1954.

PREFACTO

Commander Burney,  
Burney Unit System,  
London, England.

1924.  
Precast concrete light-  
weight panels (U), lined  
internally. Floor units  
similar. 6 houses at  
Grayford, Kent.  
(Similar to Siporex).

M. O. W. Survey of  
Prefabrication.  
(Bemis),  
"Architectural Record",  
August, 1935.  
"American Architect",  
September, 1936.

SIPOREX

See Siporex under CU.

SMITH'S BUILDING  
SYSTEM

British Steel  
Construction,  
207 Queensway,  
Toronto 1, Ontario,  
Canada.

Foam slag concrete slabs  
6' 0" wide x 2' 0" high x  
8" faced with terracotta  
briquettes. Units made  
on site. Open web steel  
beams of floor and roof.  
U = 0.20.  
Precast concrete floor  
units.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1957.

VERMICULITE HOUSES

Overseas Prefabricated  
Structures,  
29 Bury St.,  
St. James, London  
S.W.1, England.

2" thick vermiculite  
concrete skins separated  
by cavity.  
Columns at 5' 0" centres.  
Stressed skin panel roof.

"Prefabrications",  
September 1954.

## MASONRY PANEL

### Hollow Panels

#### **ATTERBURY**

Russell Sage Foundation  
and Grosvenor Atterbury,  
U.S.A.

1921.  
Houses at Forest Hill,  
New York, N. Y., U. S. A.  
Gypsum and cinder concrete  
hollow wall units storey  
high x 6' 0" to 8' 0" wide.  
Crane handling required,  
expensive.

"The Evolving House  
III, Rational Design",  
(Bemis).  
M. O. W. Survey of  
Prefabrication.  
"Architectural  
Forum",  
February, 1943.

#### **BEANLAND NUMBER 2**

Beanland Unit Construction  
Blackpool, England.

Precast cavity walls.

#### **BLACKBORROW SYSTEM**

A. McDonald, Architect,  
167 Oxford Street,  
London, England.

2 prototype erected at  
Thurrock.  
Hollow concrete wall units  
11' 4" x 8' 5".  
Outer skin dense concrete.  
Windows etc. cast in.  
Inner skin foamed slag.  
M. O. W. approved.  
Constructed on site or in  
factory.

Cement and Concrete  
Associated,  
52 Grosvenor Gardens,  
London S.W. 1,  
England.

#### **BRYANT SYSTEM**

(Concrete Houses)  
G. Bryant & Son,  
Birmingham, England.

Reinforced concrete cavity  
walls lined internally with  
foam slag concrete.  
Prototype erected at  
Birmingham, England.

"Architectural  
Builder",  
Vol. 183, 1945.

#### **DYKE, HENRY**

Simplified Brickwork  
Company Limited,  
11 Old Jewry E. C. 2,  
England.  
(Clothed Concrete  
Const. Ltd.).

Precast brick and light-  
weight concrete cavity  
panels in 10' 0" x 3' 0" high  
x 10 1/2" thick.

M. O. W. Survey of  
Prefabrication.

MASONRY PANEL (Hollow Panels cont'd)

CP

**HAYES ECONOCRETE**

Hayes Economic Concrete Corporation,  
Thermocrete Houses Inc.,  
Hollywood, California,  
U. S. A.

1939.  
Large precast hollow concrete slabs about 20' 0" square x 2 1/2" / 5" / 2 1/2".  
A large amount of construction.

M. O. W. Survey of Prefabrication.

**LAKEOLITH**

Simon Lake and Connecticut Lakeolith Corporation,  
Connecticut,  
U. S. A.

1918.  
Precast unit. Large wall and floor sections precast in factory, 2' module, maximum size 30'. Units cast horizontally as hollow walls with expanded metal on each face with crossed ribs at 2' centres, broken laterally by wood slip. Floor construction similar. Number of houses erected.

"The Evolving House III, Rational Design", (Bemis).

**SIMPLIFIED BRICKWORK COMPANY**

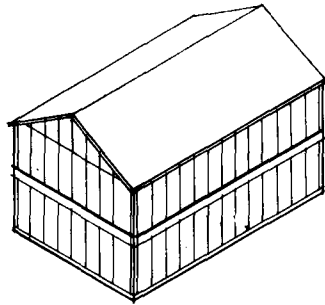
See Dyke under CP.

**WATES HOUSES**

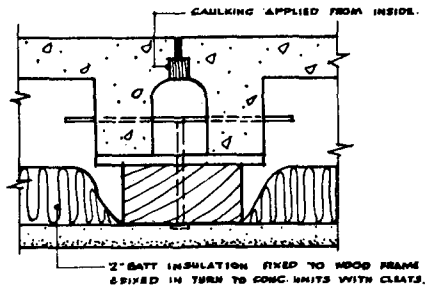
1258 London Road,  
Norbury S. W. 16,  
England.

Reinforced concrete vertical slabs 7' 6" x 2' 0".  
3' 0" or 4' 0" hollow with joints filled with concrete to form in situ frame. Double internal lining.  
Timber floor and roof structure.

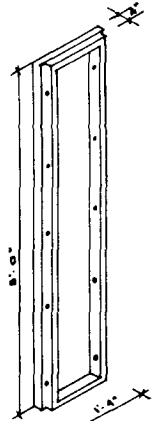
"Post War Building Study No. 23",  
H. M. S. O., London,  
England.



WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION

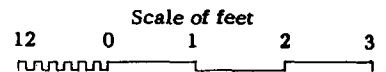
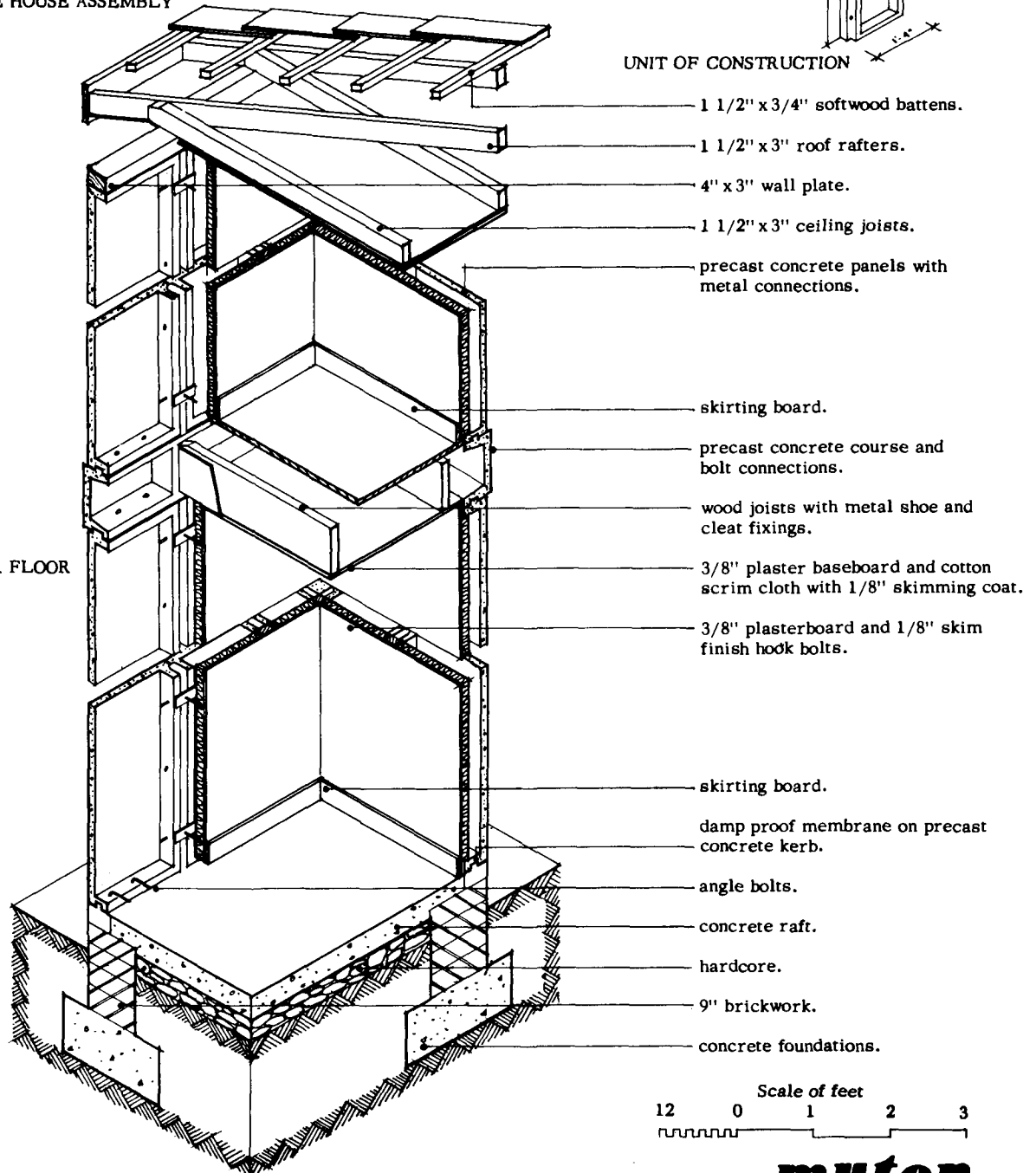


UNIT OF CONSTRUCTION

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

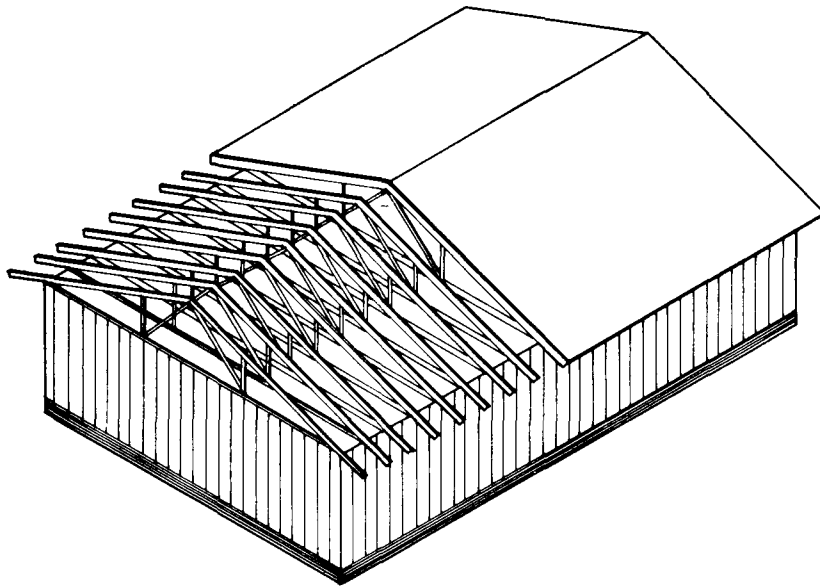


**myton**

December, 1958.

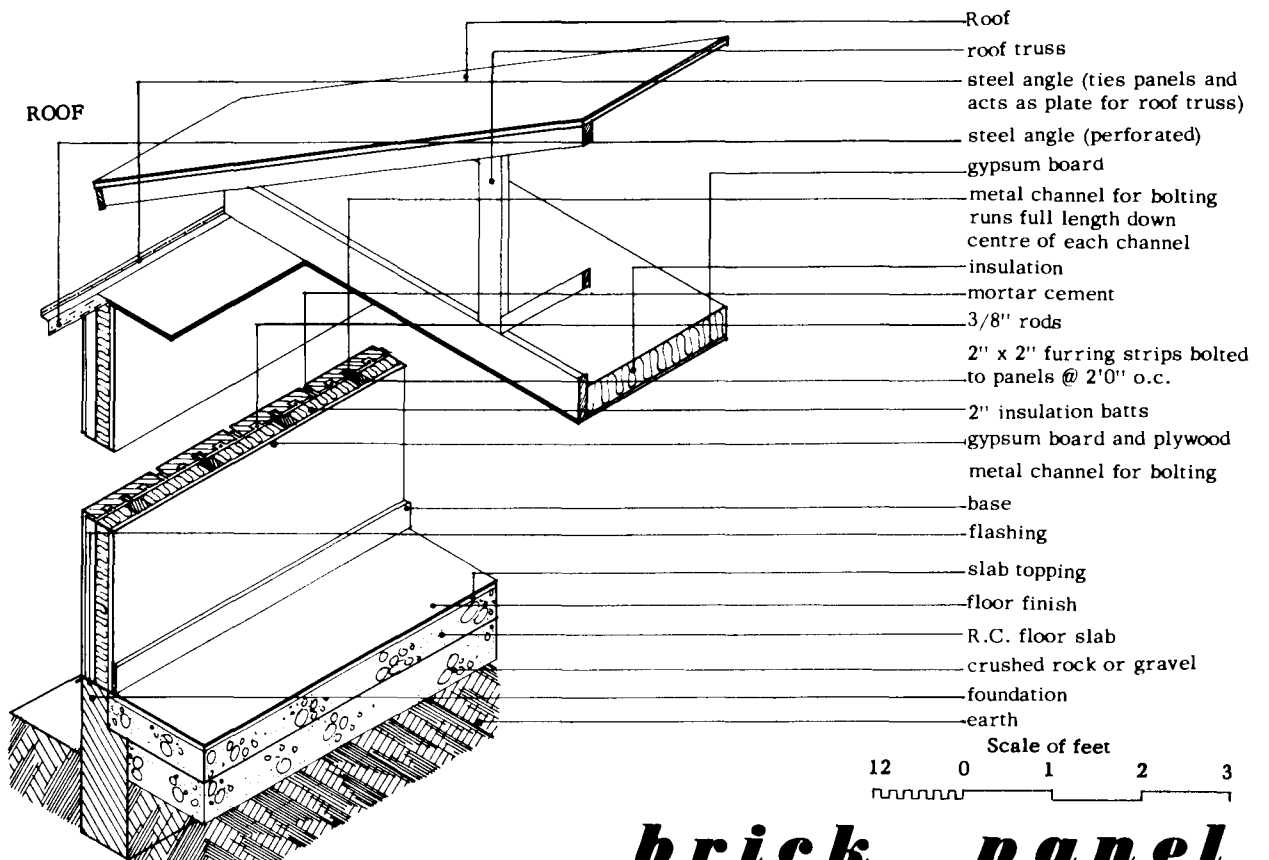
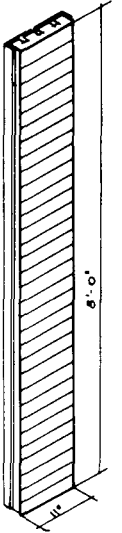
## MYTON HOUSE

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Myton Limited, Newland, Hull.<br>(formerly Tarran Limited).  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.K. 1944.   |
| <b>Materials<br/>Used.</b>   | 3. Concrete units.  |
| <b>Description.</b>  | 4. U=0.20.<br>Load bearing construction is<br>of concrete. Internal plaster-<br>board lining on timber frame,<br>bolted to concrete chimneys<br>in brick. |
| <b>Development<br/>to Date.</b>  | 5. Considerable use claimed in U.K.   |
| <b>Comment.</b>  | 6. Units can be used in conjunction<br>with any suitable floor or roofing<br>system.  |
| <b>References. *</b>   | 7. "Prefabrication In Buildings",<br>Richard Sheppard, U.K.   |



WHOLE HOUSE ASSEMBLY

UNIT OF CONSTRUCTION



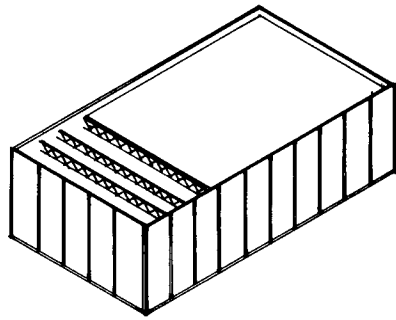
GROUND FLOOR AND FOUNDATION

# *brick panel*

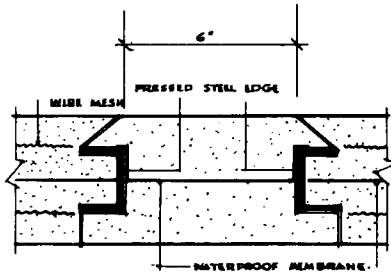
December, 1958.

## BRICK PANEL

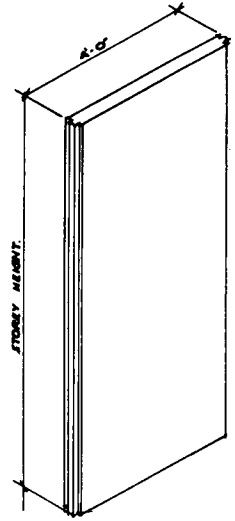
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Proprietary.<br>Structural Clay Products Foundation<br>U.S.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S. 1957.   |
| <b>Materials<br/>Used.</b>   | 3. Brick.   |
| <b>Description.</b>  | 4. Patent part of system includes only<br>brick panels which are held together<br>by perforated steel sections. |
| <b>Development<br/>to Date.</b>  | 5. -  |
| <b>Comment.</b>  | 6. Experimental to date (Dec. 1957).  |
| <b>References.</b>   | 7. "House and Home" December 1957 p. 130.   |



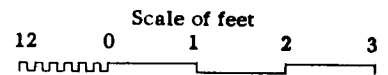
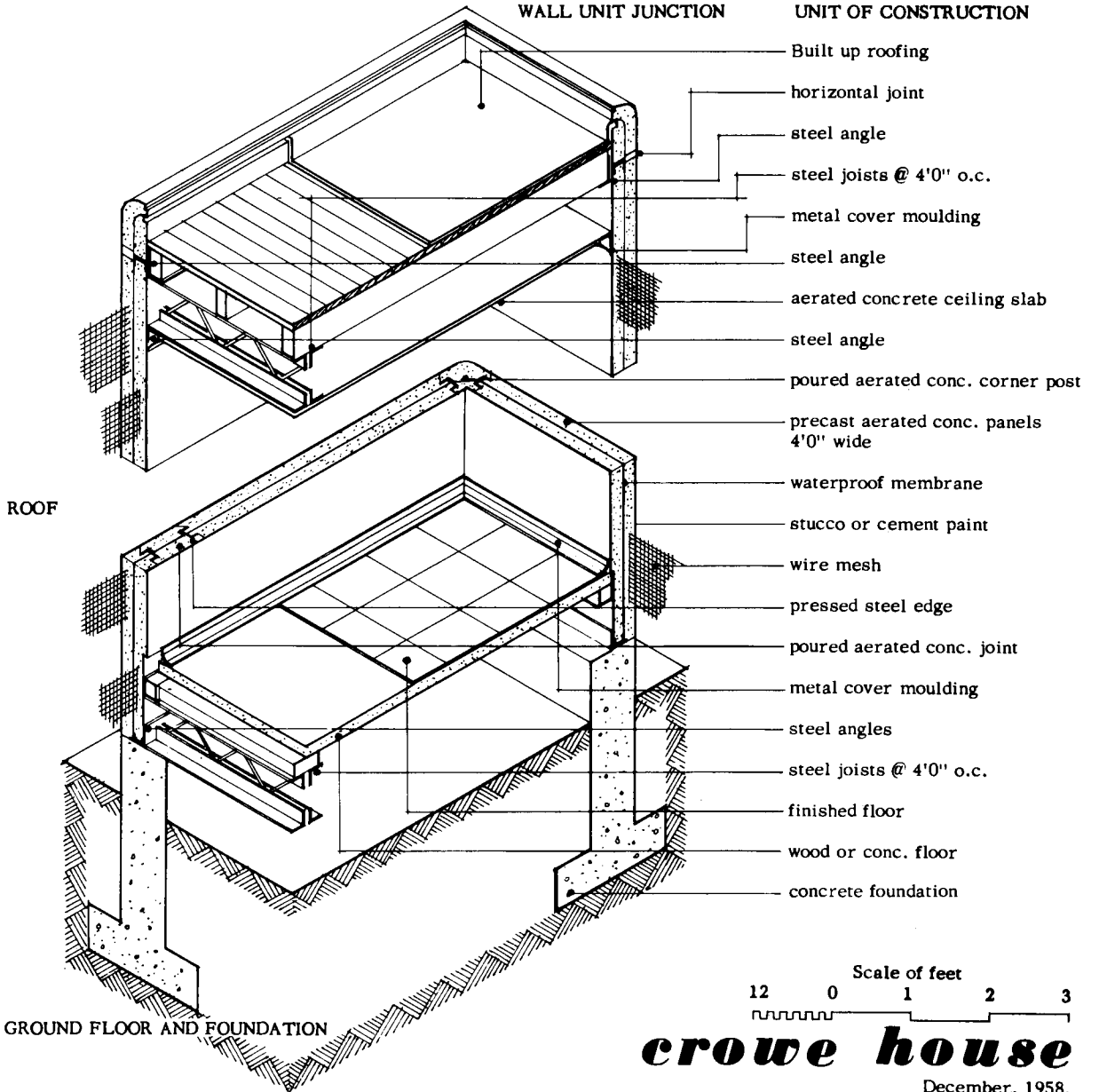
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



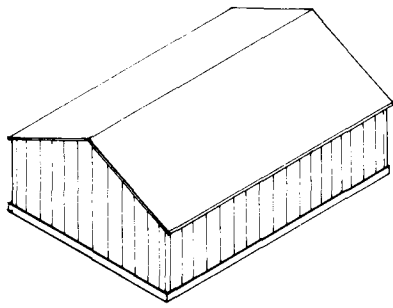
***crowe house***

December, 1958.

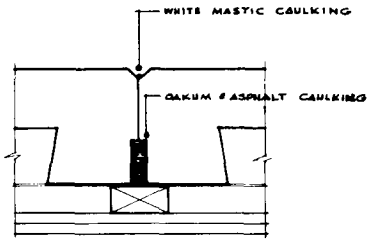


## CROWE HOUSE

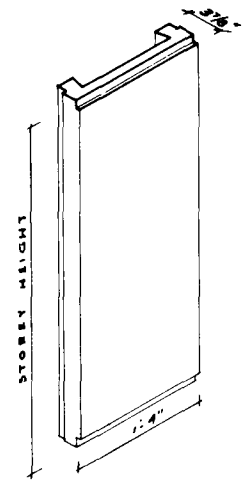
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>F. Malcolm Crowe,<br>Burlingame, California.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. California, U.S.A.<br>Pre-1936.  |
| <b>Materials<br/>Used.</b>   | 3. Steel and Aerated or Cellular concrete.  |
| <b>Description.</b>  | 4. Steel Panel-Frames are filled in two<br>layers sandwiching a waterproof<br>membrane. They are placed 6" apart<br>and concrete is poured into the joint.<br>Joint spaces used for pipes and conduits. |
| <b>Development<br/>to Date.</b>  | 5. Test assembly of wall panels only.   |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. American Architect and Architecture,<br>September 1936, p. 31.   |



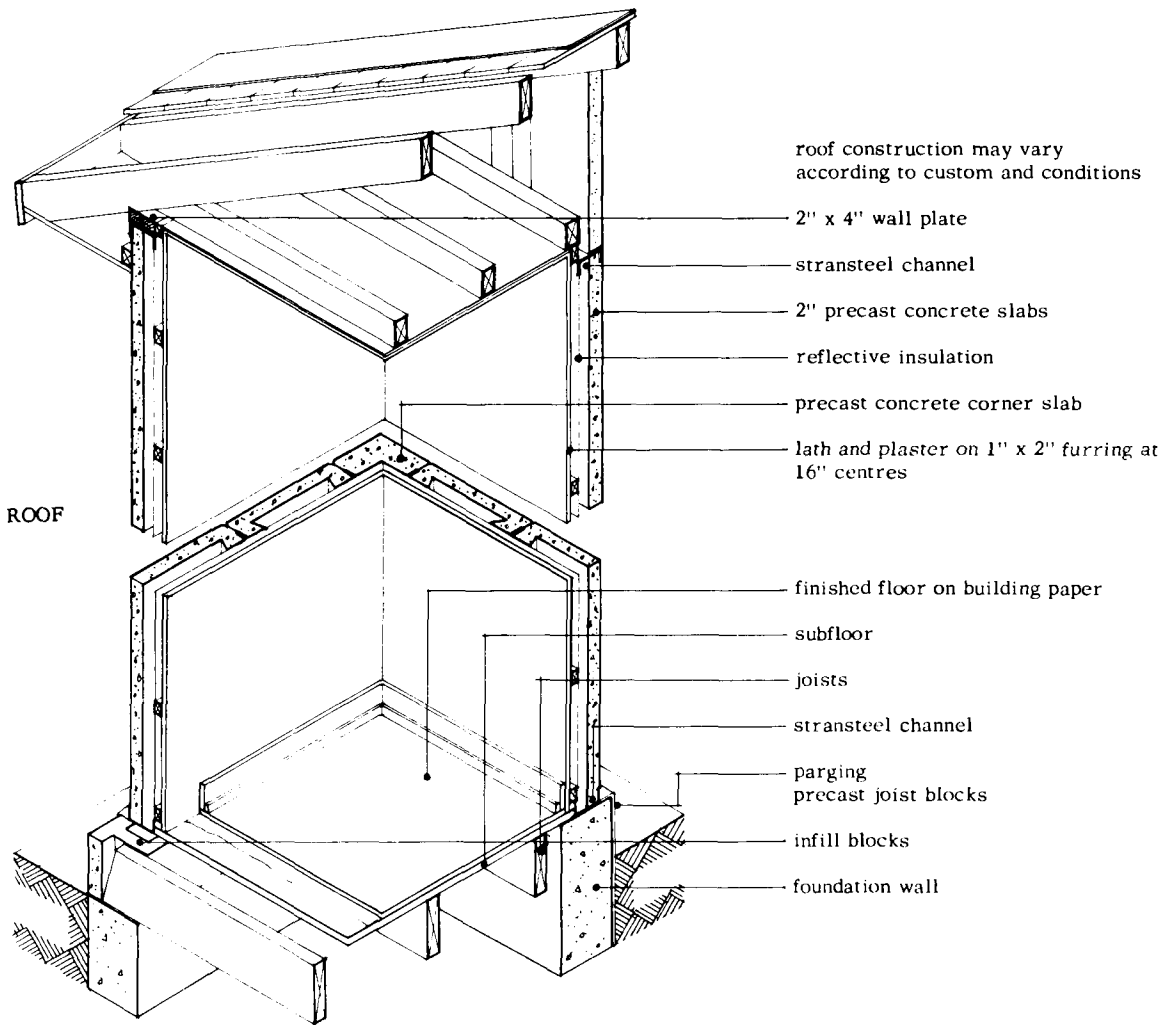
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

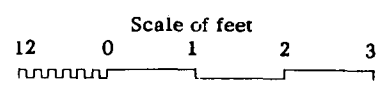


ROOF

GROUND FLOOR AND FOUNDATION

roof construction may vary according to custom and conditions

- 2" x 4" wall plate
- stransteel channel
- 2" precast concrete slabs
- reflective insulation
- precast concrete corner slab
- lath and plaster on 1" x 2" furring at 16" centres
- finished floor on building paper
- subfloor
- joists
- stransteel channel
- parging precast joist blocks
- infill blocks
- foundation wall

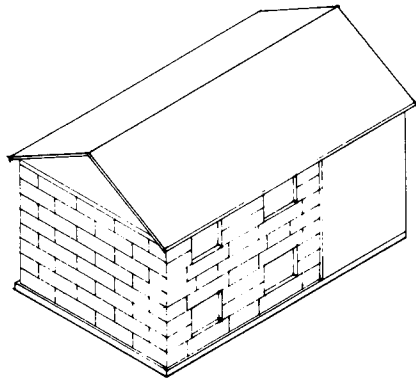


**modern crete**

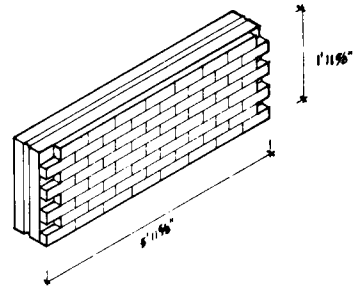
December, 1958.

## MODERN CRETE

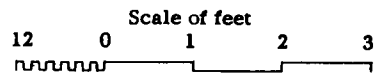
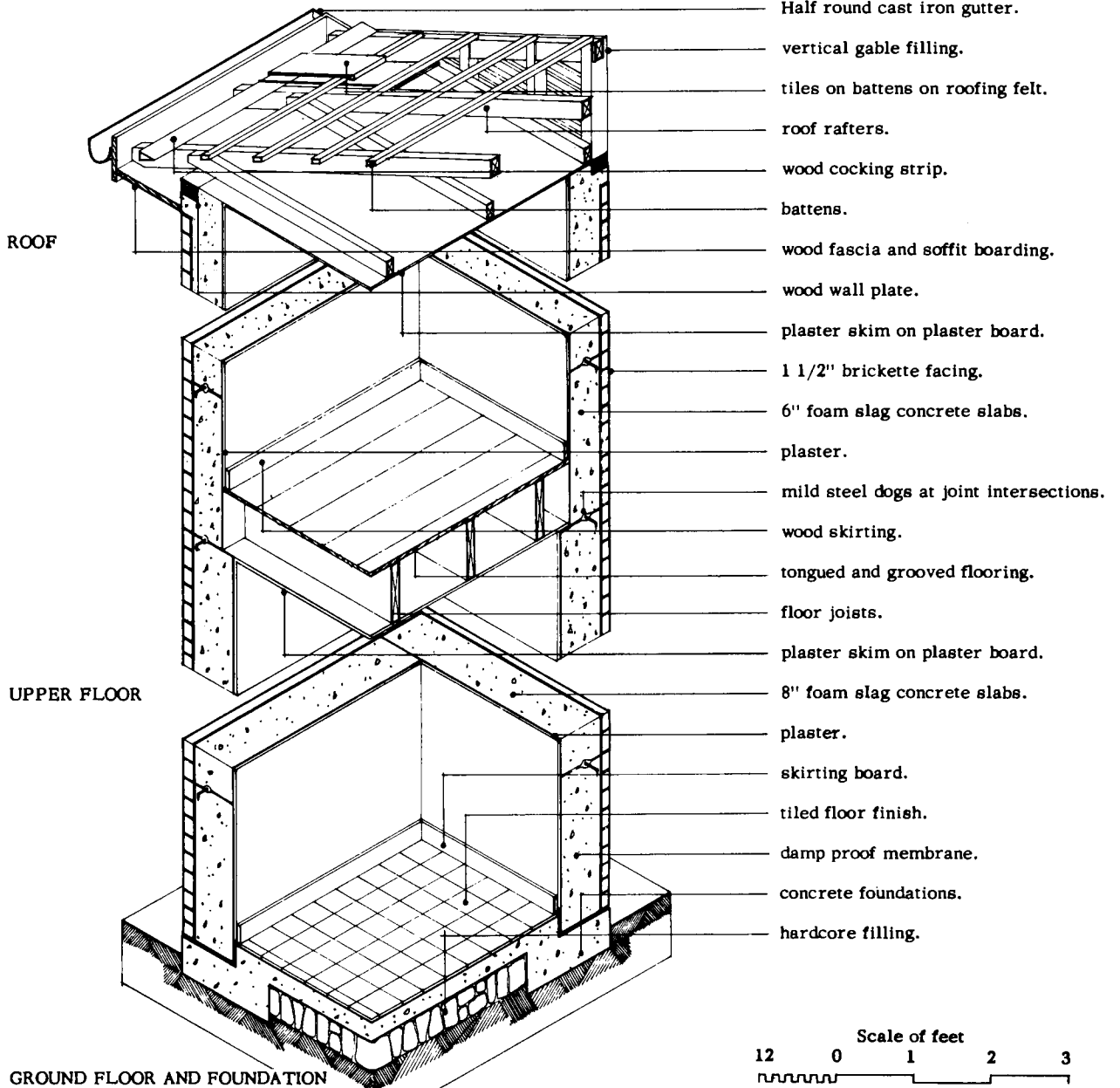
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Modern Crete Inc., 1517 W. 3rd Avenue, Flint, Michigan. Rocwall Limited, 16 Renfrew Avenue, Westmount, Quebec.
<b>Date and Place of Origin.</b>	2. Michigan, 1950.
<b>Materials Used.</b>	3. Lightweight concrete using expanded slag or shale with mesh reinforcing.
<b>Description.</b>	4. Roof, floor and foundation may vary according to custom and conditions. U=0.155 (ext. wall panel using reflective insulation as shown).
<b>Development to Date.</b>	5. 2,000 houses in Michigan, U.S.A.
<b>Comment.</b>	6. The panels are capable of being nailed or sawn.
<b>References.</b>	7. Federal Housing Authority Bulletin SE-172. "Accepted Building Materials", Central Mortgage and Housing Corporation, Ottawa, Canada.



WHOLE HOUSE ASSEMBLY



UNIT OF CONSTRUCTION

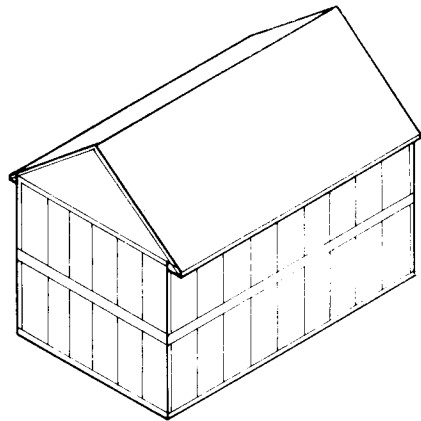


**smiths building system**

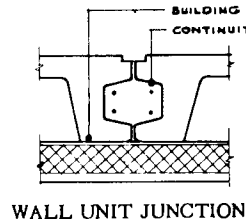
December, 1958.

## SMITH'S BUILDING SYSTEM

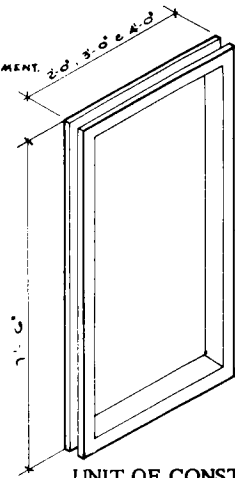
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<p>1. Non-Traditional. British Steel Construction Group of Birmingham Limited, England.</p> <p>British Steel Constructions (Canada) Limited, 125 18th Street, New Toronto, Ontario, Canada.</p>
<b>Date and Place of Origin. Materials Used.</b>	<p>2. U.K. 1939.</p> <p>3. Brick faced precast foamed slag panels.</p>
<b>Description.</b>	<p>4. U=0.20 (external wall panels plastered internally). A special Gantry Crane, straddling the house, is used to assemble panels.</p>
<b>Development to Date.</b>	<p>5. Several thousand houses in U.K. None in Canada.</p>
<b>Comment.</b>	<p>6. -</p>
<b>References.</b>	<p>7. Sponsors reference.</p>



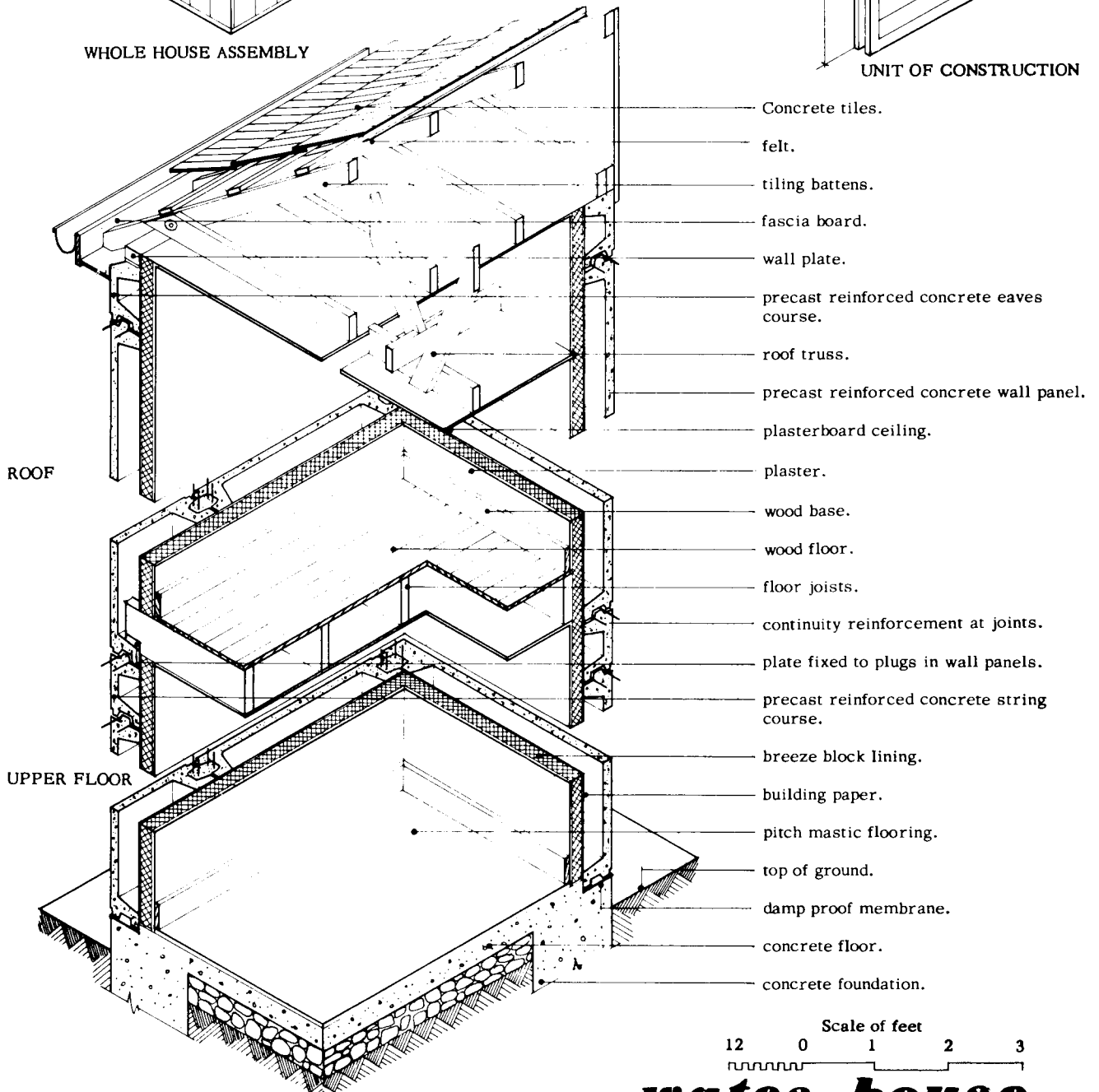
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

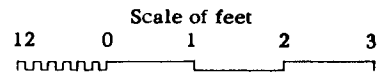


ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

- Concrete tiles.
- felt.
- tiling battens.
- fascia board.
- wall plate.
- precast reinforced concrete eaves course.
- roof truss.
- precast reinforced concrete wall panel.
- plasterboard ceiling.
- plaster.
- wood base.
- wood floor.
- floor joists.
- continuity reinforcement at joints.
- plate fixed to plugs in wall panels.
- precast reinforced concrete string course.
- breeze block lining.
- building paper.
- pitch mastic flooring.
- top of ground.
- damp proof membrane.
- concrete floor.
- concrete foundation.



**wates house**

December, 1958.

## WATES HOUSE

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. Sponsor: Wates Limited. Architect: K.W. Bland.</b>
<b>Date and Place of Origin.</b>	<b>2. Surrey, England 1945.</b>
<b>Material Used.</b>	<b>3. Concrete.</b>
<b>Description.</b>	<b>4. U= 0.3 (external walls). A temporary scaffolding is erected within external walls. Structure of wall is of precast dense reinforced concrete panels whole joints are concrete filled. Interior lining of plastered breeze blocks added in situ.</b>
<b>Development to Date.</b>	<b>5. -</b>
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. "Post War Building Study No. 25".</b>

## CONCRETE AND MASONRY UNITS



## CONCRETE AND MASONRY UNITS

### Sub-Classifications

Normal Units, Concrete  
Normal Units, Lightweight Concrete  
Hollow Cavity Wall Units  
Solid Brick Walls

### Case Sheets

Dextone System  
Bellroth  
Interlocking Block  
Durisol Blocks  
Siporex  
Ytong  
Brick Cavity Wall  
Wilson Cavity Blocks  
Solid Brick

## MASONRY UNIT

### Concrete Units, Normal

#### **BURTON**

Fort Worth, Texas,  
U.S.A.

Pre-1935.  
H-Section vertical units  
8" x 8" x 8' 6" high.  
Corners and tie beams cast  
in situ.

M. O. W. Survey of  
Prefabrication.

**CALVER (Newman  
Monoblock)**  
Perry & Company,  
Liverpool, England.

20 houses at Liverpool  
1921.  
Reinforced concrete piers  
and concrete slabs at 2' 8"  
centers.

M. O. W. Survey of  
Prefabrication.

#### **CHESHAM & COMPANY**

See Master Method under CU.

**CLUGSTON CAWOOD LTD.**  
Lincoln, England.

Prototypes near Minthead  
Somerset, hollow framed  
slag, concrete blocks  
rendered externally.

Clugston Cawood Ltd.,  
Lincoln, England.

**CONCRETE HOUSE**  
Portland Cement Assoc.,  
U.S.A.

Precast unit. Precast concrete  
hollow blocks 8" high laid up  
as masonry. Rendered inter-  
nally. Reinforced concrete  
precast joists and floor slab  
slabs. One house at Chicago  
Exhibition 1934.

"The Evolving House  
III, Rational Design",  
(Bemis).

**DEXTONE SELF-  
CENTERING WALL  
SYSTEM**  
The Dextone Company,  
New Haven, Connecticut,  
U.S.A.

Precast concrete channel  
shaped units. Interior facing  
fixed to wood nailers. Precast  
concrete floor slabs and joists.  
16", 32" and 48" unit lengths.

"American Architect  
& Architecture",  
September 1936.

MASONRY UNIT (Concrete Units, Normal cont'd)

CU

**DOX BLOCK ROOF  
AND FLOOR SYSTEM**  
Fraser, Michigan,  
U. S. A.

Structural - non insulating.  
Hollow. Concrete blocks  
tied with steel rods.

**Dox Block Roof and  
Floor System,**  
Fraser, Michigan,  
U. S. A.

**HESMONT CONCRETE  
LIMITED**  
5035 Western Avenue,  
Montreal, Quebec,  
Canada.

Units.  
Prestressed, precast concrete  
slabs and channels, wall,  
floor and roof slabs.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1954.

**K. I. S. O. BOUW  
ELEMENTEN**  
Dordrecht, Holland.

Concrete interlocking  
block. Special lintel  
blocks. Normal walls:  
4 3/4" x 10", 14 1/2".

**K. I. S. O. Bouw Elementen**  
Dordrecht, Holland.

**KNAPP SYSTEM**  
Israel.

Interlocking horizontal  
concrete slab. 3' 4" x 2' 0" x  
1" thick.  
Whitewashed, loadbearing.

"Prefabrication",  
March 1954.

**LARZELERE**

See Larzelere under CS.

**MASTER METHOD**  
Chesham & Company  
England.

1926.  
Reinforced concrete Tee units,  
1 1/2" x storey height, with  
girts at floor levels in situ.

**M. O. W. Survey of  
Prefabrication.**

**MATTHEWS, A. C.**

See Matthews, A. C. under  
CPB.

MASONRY UNIT (Concrete Units, Normal cont'd)

CU

NEEDHAM

The Needham Concrete  
House Company,  
U. S. A.

1921.  
Precast unit. Channel  
shaped, precast rein-  
forced concrete slabs  
16" wide x 6" storey  
height, erected back to  
back, interlocking to form  
hollow cavity wall. Reinforced  
concrete girts at floor levels.  
Finishes rendered. Some  
houses in Houston, Texas,  
U. S. A.

"The Evolving House  
III, Rational Design",  
(Bemis).

PERRY & COMPANY

Liverpool, England.

See Calver House under CU.

Perry & Company,  
Liverpool, England.

STENHUS

Kungl, Bostadsstyrelsen,  
Stockholm 16, Sweden.

Traditional concrete block  
construction to Sweden as  
rationalized by Government  
Housing Authority.

STEVENSON

Frontier Construction  
Company Limited,  
Fort Erie, Ontario,  
Canada.

Precast reinforced concrete  
units. 2' 6" wide x storey  
height. 15" centers. Top and  
bottom girts. Slotted edges.  
One house only.

M. O. W. Survey of  
Prefabrication.  
Portland Cement  
Association Report.

WEEKS

Charles R. Weeks,  
Contractor,  
5422 Polk Avenue,  
Houston, Texas,  
U. S. A.

Pre-1935.  
Reinforced concrete slabs  
1-2' high, 2-4' long.  
Vertical ribs. Exposed  
surfaces rubbed. No cladding.  
One building erected.

M. O. W. Survey of  
Prefabrication.

MASONRY UNIT (Concrete Units, Normal cont'd)

CU

WEBB

R. C. Webb,  
c/o H. E. Legendre,  
Old Campus,  
Baton Rouge, Louisiana,  
U. S. A.

Pre-1935.  
Precast reinforced blocks  
of T-section 24" high x  
32" long with 2 vertical  
ribs, cast monolithically.  
Lath and plaster internally.  
A few houses at Old Campus,  
1920.

"The Evolving House  
III, Rational Design",  
(Bemis).  
M. O. W. Survey of  
Prefabrication.  
Portland Cement  
Association Report.

Lightweight Normal Blocks

BELLROCK

200 Westminster Bridge  
Road,  
London S. E. 1, England.  
also  
Messrs. Muttart Enter-  
prises,  
P. O. Box 310,  
Edmonton, Alberta, Canada.  
also  
Messrs. Atlantic Gypsum  
Limited,  
1470 Peel Street,  
Montreal, Quebec, Canada.

2 layers plasterboard with  
honeycomb core.  
Waterproofed.  
Panels 2' 0" x 1' 0" to 10' 0"  
high.  
U = 0.14.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa.

DURISOL CONSTRUCTION

200 Glendale Avenue,  
Hamilton, Ontario.

Wood cement slabs of standard  
4" thickness used as curtain  
wall construction or as form-  
work in concrete sandwich  
construction.  
Plaster and Stucco U = 0.15.  
Standard 4" panel.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1953.

INTERLOCKING BLOCKS

N. V. Kiso,  
P. O. Box 74,  
Dortrecht, Holland.

Built of units 12.64" x 7.35".

Interlocking Blocks,  
N. V. Kiso,  
P. O. Box 74,  
Dortrecht, Holland.

MASONRY UNIT (Lightweight Normal Blocks cont'd)

CU

**MICROPORITE**

See Microporite under MPB.

**NORSK YTONG**

Oslo, Norway,  
(oven-injenjere  
Fjellstab).

System of lightweight concrete  
blocks, special mortar joint.  
1 m. x 15 cm. x 25 cm. thick.

Norsk Ytong,  
Oslo, Norway,  
(oven-injenjere  
Fjellstab).

**ROCKWOOD**

Rockwood Gypsum Lumber  
Corporation  
New York, N. Y.,  
U.S.A.

1925 on.  
Hollow precast gypsum units  
6" x 6" or 8" x 8" storey height,  
flooring units similar.  
Plastered internally and  
externally.  
Considerable development  
around St. Louis 1939.

M. O. W. Survey of  
Prefabrication.  
"American Architect",  
September 1936.  
"Architectural Record",  
July 1939.  
"Architectural Forum",  
December 1935.

**SIPOREX**

Internationella  
Siporex A/B  
Box 3188,  
Stockholm 2, Sweden.

also

Siporex Limited,  
6165 Sherbrooke, West,  
Montreal, Quebec,  
Canada.

1920.  
Loadbearing, insulating  
concrete, lightweight and  
autoclaved.

Siporex  
Internationella  
Siporex A/B  
Box 3188,  
Stockholm 2, Sweden.

**STOCKADE**

See Stockade under CPB.

**TEE STONE**

Joseph Winston,  
Tee Stone Corporation,  
New York, N. Y.,  
U.S.A.

Pre-1935.  
Precast concrete units (T-  
Section). 16" x 1 1/4" thick  
storey high, R. C. girts at  
head and sill. Exterior  
stucco. Similar floor unit.  
Seven houses in Long Island,  
N. Y., U.S.A.  
1920.

"The Evolving House  
III, Rational Design",  
(Bemis).  
M. O. W. Survey of  
Prefabrication.  
Portland Cement  
Association Report  
"Architectural Forum",  
February 1943.

MASONRY UNIT (Lightweight Normal Blocks cont'd)

CU

**TEXTILE BLOCKS**

Frank Lloyd Wright,  
Architect,  
Taliesin,  
Wisconsin,  
U.S.A.

Lightweight patterned,  
concrete blocks laid with  
cavity between and reinforce-  
ment in hollow joints.  
Used frequently in Wright's  
buildings.

M. O. W. Survey of  
Prefabrication.  
"Architectural Forum",  
February 1943.  
Bemis, Lloyd Wright's  
Books: H & B Rasch,  
Wie Bauen.

**YTONG**

Alberta Ytong  
Manufacturing Company,  
Limited,  
940 8th Avenue,  
Calgary, Alberta,  
Canada.  
also  
Sweden.

Precast autoclaved concrete  
blocks 12" x 8" x 2" to 14".  
Lintels up to 8' 0" long.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1956.

Cavity Walls

**ALCON TWIN WALL**

J. Fehr,  
4517 West 4th Avenue,  
Vancouver,  
British Columbia,  
Canada.

A cavity wall of concrete  
block.

Alcon Twin Wall,  
J. Fehr,  
4517 West 4th Avenue,  
Vancouver,  
British Columbia,  
Canada.

**BRICK CAVITY WALL**

England.

English traditional.  
Two skins brick work,  
separated by cavity, and  
tied.

"Building Construction  
MacKay" (Longmans,  
Green).  
"Building Con-  
struction Mitchell"  
(Batsford).

**CAVITY WALL  
CONSTRUCTION**  
Canada.

Similar to English type.

Cavity Wall  
Construction.  
Canada.

MASONRY UNIT (Cavity Walls cont'd)

CU

**CHANNELLO**

Chanello Concrete  
Construction Company,  
London, England.

Precast channel shaped  
concrete slabs for interior  
and exterior cavity wall  
skins. 2' 0" module. Floor  
slabs rest on inverted Tee  
beams.

"Evolving House  
III, Rational Design",  
(Bemis), p. 319.

**KNAPP**

Knapp America Inc.,  
Los Angeles,  
California,  
U.S.A.

Originated in South  
Africa 1931.  
Hollow wall system of  
concrete unit construction  
using wood studs at vertical  
joints at 20" centers.

M. O. W. Survey of  
Prefabrication.

**POHLMANN EMERGENCY  
HOUSING**

A. C. Pohlmann,  
Wandsbek, Hamburg,  
Germany,

Light timber frame  
outer walls:  
Concrete slab (4 cm)  
Inner wall:  
Concrete slab (2 cm)  
3 cavities separated by paper.  
Roof framing in timber plus  
concrete slabs.

Pohlmann Emergency  
Housing,  
A. C. Pohlmann,  
Wandsbek, Hamburg,  
Germany.

**ROSS PIN BLOCK**

Robert Kennedy,  
1025 13th Ave. West,  
Vancouver,  
British Columbia.

A cavity wall construction  
based on concrete units 2"  
x 6" high x 6", 8", 10", 16"  
2" cavity.  
Significant part is use of  
bent pins connecting &  
bonding inner and outer  
skins.  
None built as yet, experimental  
1958.

Ross Pin Block,  
Robert Kennedy,  
1025 13th Ave. West,  
Vancouver,  
British Columbia.



MASONRY UNIT (Cavity Walls cont'd)

CU

**SIMPLIFIED BRICKWORK**

Simplified Brickwork  
Construction Ltd.,  
London W. 1,  
England.  
(Clothed Concrete  
Const. Ltd.).

1934.  
Factory made cavity wall  
units, outer leaf brick,  
inner leaf foamed slag,  
2" cavity.  
Houses at West Molesey,  
Dublin and Blackpool.

Simplified Brickwork  
Construction Ltd.,  
London W. 1,  
England.

**WILSON CAVITY BLOCKS**

302 Drumoyne Road,  
Glasgow S.W.,  
Scotland.

Cavity wall 2 leaves  
dense concrete with  
galvanized steel ties.

Wilson Cavity Blocks,  
302 Drumoyne Road,  
Glasgow S.W.,  
Scotland.

**WRIGHT (MILLARD  
HOUSE)**

Frank Lloyd Wright,  
Pasadena, California,  
U.S.A.

1923.  
Concrete formed in situ;  
and precast unit. Precast  
concrete units reinforced  
at joints forming a cavity  
wall.  
One house built.

"Architectural Forum";  
February 1943.  
"The Evolving House  
III, Rational Design",  
(Bemis).

Brick Solid

**S. C. R. BRICK**  
U.S.A.  
also  
Canada.

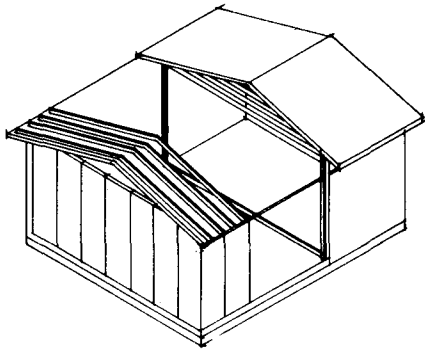
A semi traditional form  
of hollow brick construction.  
Normal brick units 2" x 5 1/2"  
x 11 1/2".

"Architectural  
Graphic Standards",  
(Wiley).  
Structural Clay  
Products Institute.

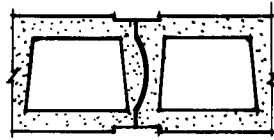
**BRICK SOLID  
WALLING**  
England.

English traditional  
construction U = 0.43 (8").

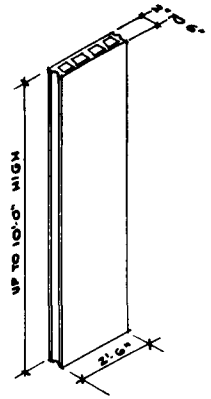
Brick Solid Walling,  
England.



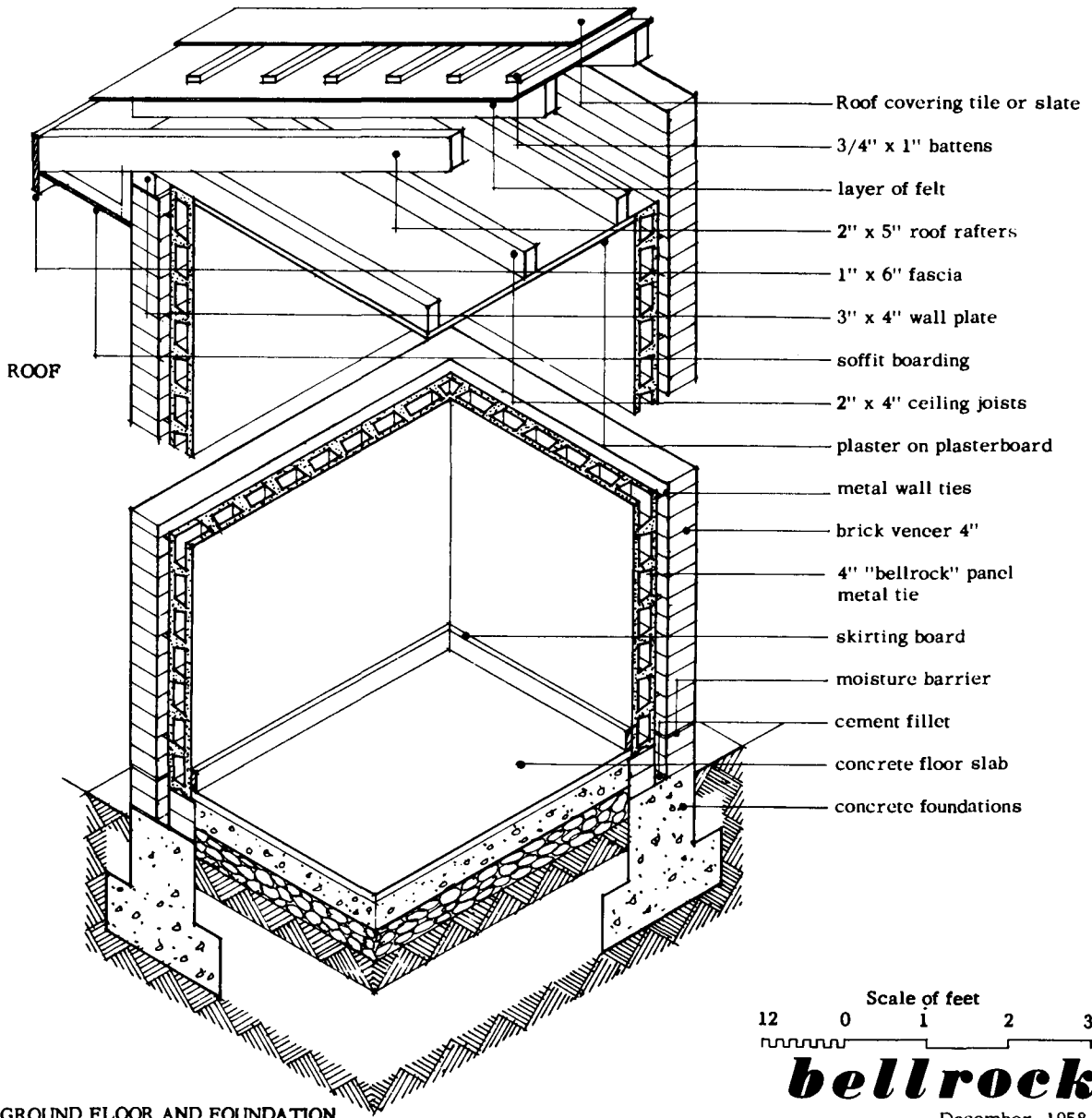
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



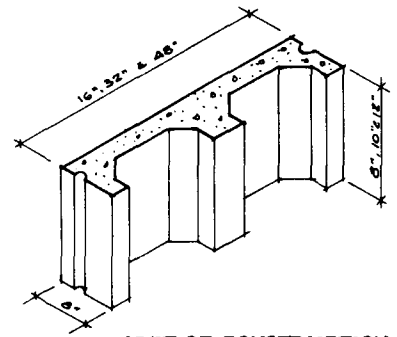
UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

## BELLROCK

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional.</b> Bellrock Gypsum industries Ltd., 200 Westminster Bridge Road, London, S.E.1., England.  Atlantic Gypsum Ltd., 1470 Peel Street, Montreal, P.Q.
<b>Date and Place of Origin.</b>	<b>2. England.</b>
<b>Materials Used.</b>	<b>3. Gypsum plaster.</b>
<b>Description.</b>	<b>4. U- 0.60 across panel only.</b>
<b>Development to Date.</b>	<b>5. Considerable use for single and multi-storey dwellings in England.</b>
<b>Comment.</b>	<b>6. Manufacturer claims Bellrock to be load bearing for one storey structures.</b>
<b>References.</b>	<b>7. Sponsors' literature.</b>



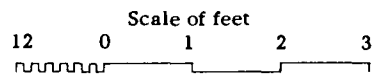
UNIT OF CONSTRUCTION

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

- Dextone precast cap
- flashing
- cant strip
- dextone lightweight precast slabs
- dextone precast conc. joists 8" 10" 12" deep
- finished ceiling
- dextone precast wall unit
- finished floor
- base board
- furring strips
- wood nailers
- 1/8" x 1 1/8" steel strap bolted to stirrups
- wall finish
- corner unit
- dextone precast wall units
- floor finish
- dextone precast lightweight slabs
- 1/8" x 1 1/8" steel strap bolted to stirrups
- top of grade
- dextone precast conc. joists 8" 10" 12" deep
- conc. foundation

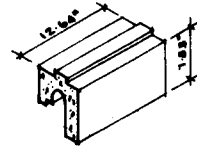


**dextone system**

December, 1958.

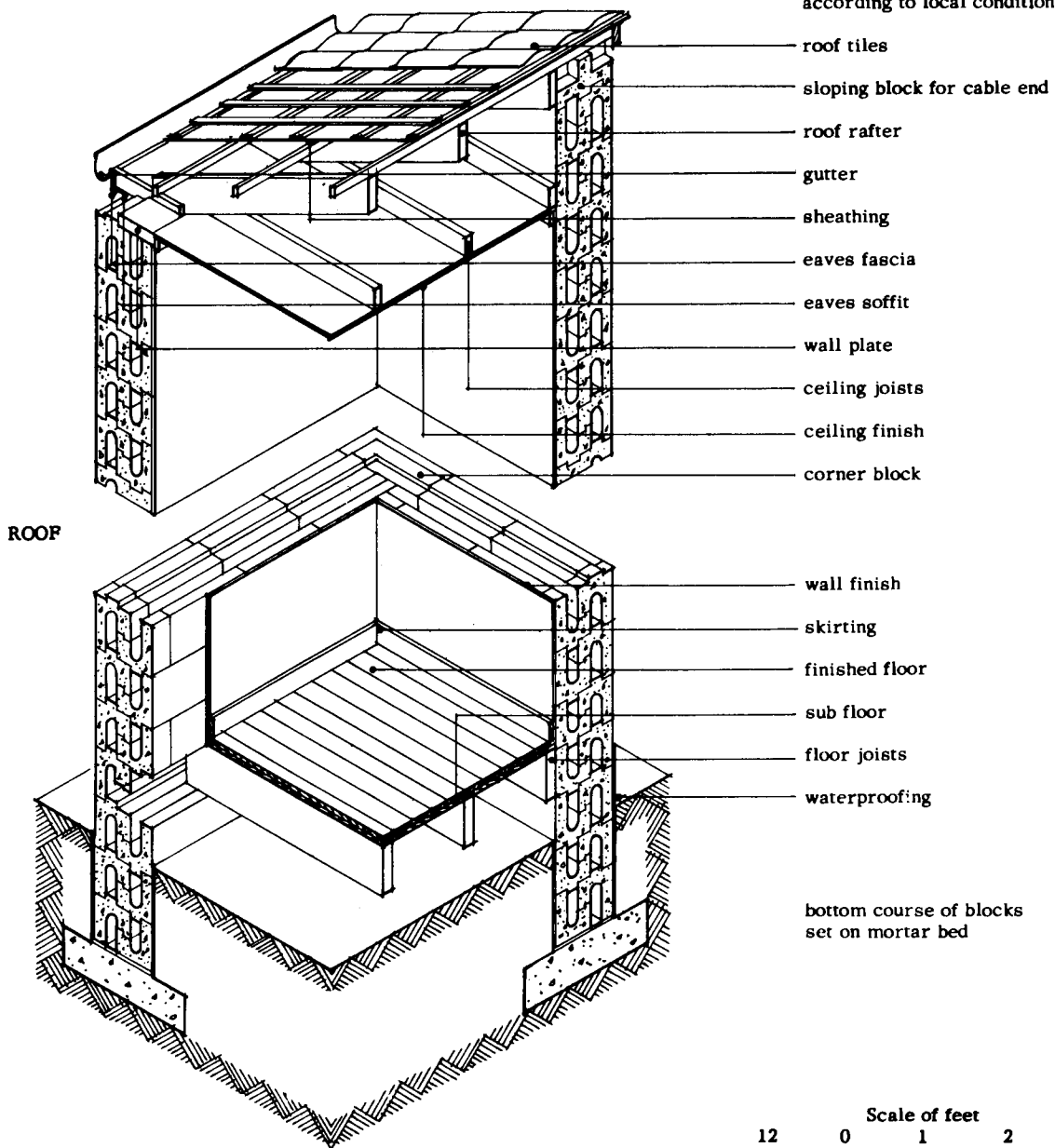
## DEXTONE SELF CENTERING WALL

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Dextone Company, New Haven, Connecticut, U.S.A.
<b>Date and Place of Origin.</b>	2. U.S. pre 1936.
<b>Materials Used.</b>	3. Concrete.
<b>Description.</b>	4. -
<b>Development to Date.</b>	5. -
<b>Comment.</b>	6. -
<b>References.</b>	7. American Architect Sept. 1936, p. 36.



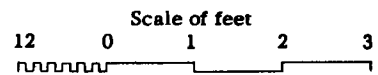
UNIT OF CONSTRUCTION

Note - Roof construction may vary according to local conditions



ROOF

GROUND FLOOR AND FOUNDATION

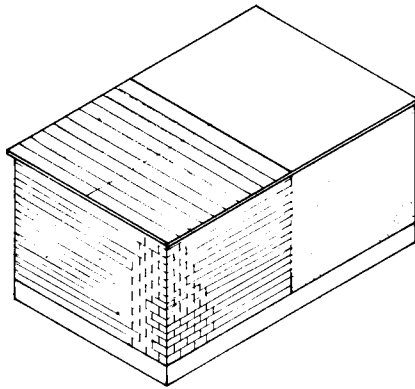


# *interlocking block*

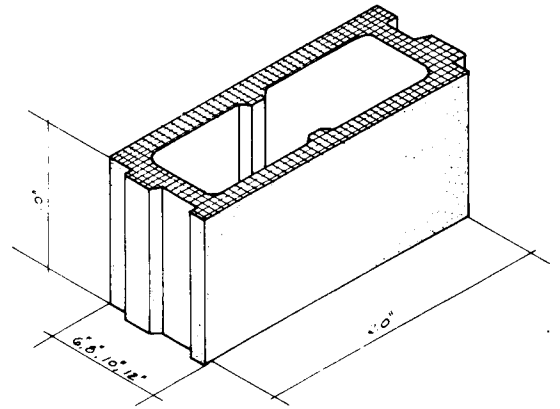
December, 1958.

## INTERLOCKING BLOCK

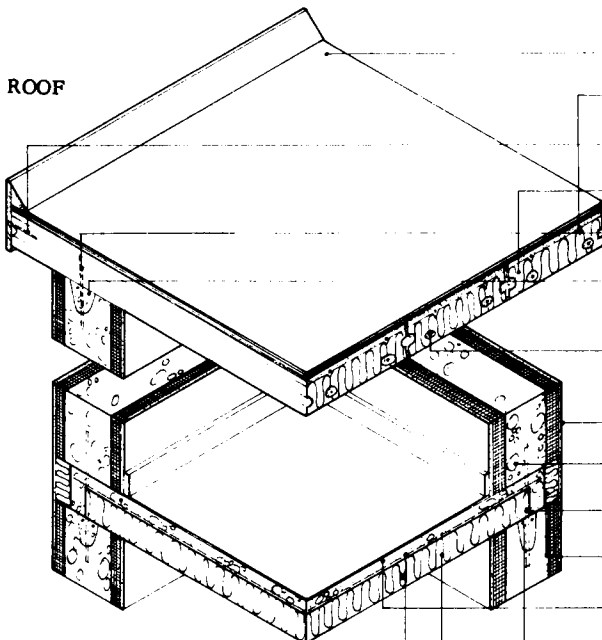
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. N.V. Kiso, P.O. Box 74, Dordrecht, Holland.
<b>Date and Place of Origin.</b>	2. Holland, 1953.
<b>Materials Used.</b>	3. Concrete.
<b>Description.</b>	4. Strength is sufficient for two-storey construction.
<b>Development to Date.</b>	5. Regular production in Holland since 1953.
<b>Comment.</b>	6. Approved and tested by Rationalised House Building Foundation, Rotterdam, Holland.
<b>References.</b>	7. Sponsor's Information.



WHOLE HOUSE ASSEMBLY

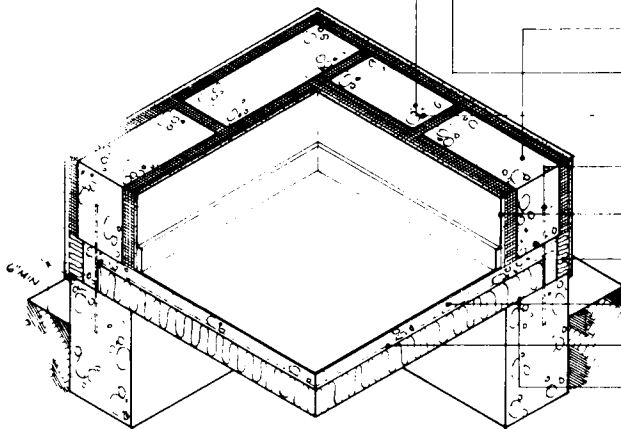


UNIT OF CONSTRUCTION



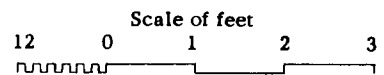
ROOF

UPPER FLOOR



GROUND FLOOR AND FOUNDATION

- Built up roofing
- 2 - 3/16" bars - handling reinf.
- 5" ardox nail @ 20' o.c.
- durisol roof deck
- 1/4" rod @ 40" o.c.
- 2 - 3/8" reinf. rods cont. around building
- hi-bond reinf. rods embedded in concrete
- stucco
- standard type block
- 3/8" rod @ 40" o.c.
- 1 1/2" insulation
- 2" conc. topping
- 2 - 3/8" reinf. rods cont. around buildings
- reinforced type block
- durisol floor plank
- 6 x 6 wire mesh 6 or 8 gauge
- 3/8" rod @ 40" o.c.
- plaster
- 1 1/2" insulation
- 2" concrete topping
- 6" x 6" wire mesh 6 or 8 gauge
- damp course



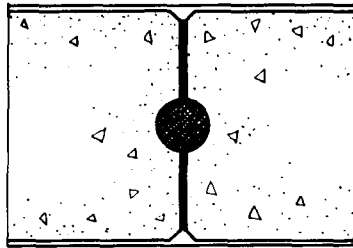
***durisol blocks***

December, 1958.

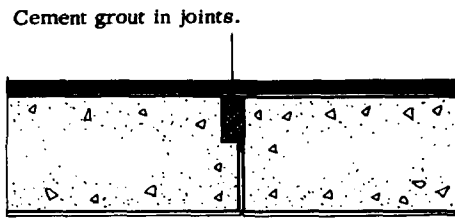


## DURISOL BLOCK FORMS

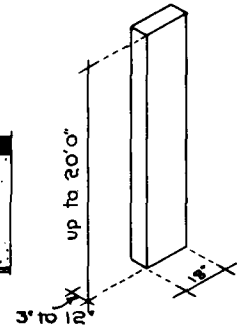
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Durisol Materials Limited, Mitchell, Ontario. Distributed in Canada by Durisol Sales Limited, 200 Glendale Avenue, Hamilton, Ontario, as of 1959. Other Durisol companies in Switzerland, England, Austria, Belgium, Canada, United States, Denmark, Spain, France, Holland, Japan and Yugoslavia.
<b>Date and Place of Origin.</b>	2. Switzerland, Zurich, prior to 1939.
<b>Materials Used.</b>	3. Mineralized Wood Shavings bonded together with standard portland cement.
<b>Description.</b>	4. The Durisol Block Form method of construction is in reality an insulated left-in-place form for a poured-in- place concrete wall and is laid up dry (no mortar in the joints) as the top and bottom surfaces of these units are machined parallel and then filled with standard concrete as the wall is laid or formed up. Interior and exterior surfaces of this insulating form provide a base for the direct application of stucco and plaster finishes. The through-the-wall U factor (insulating) of this type of construction, using 8" thickness is 0.115 and provides fire rating of 5 hrs.
<b>Comment.</b>	5. Used for all types of construction, throughout the world, since World War II, using various combinations of Durisol (mineralized wood shavings and cement).
<b>References.</b>	6. -
<b>Development to Date.</b>	7. Sponsors' literature.



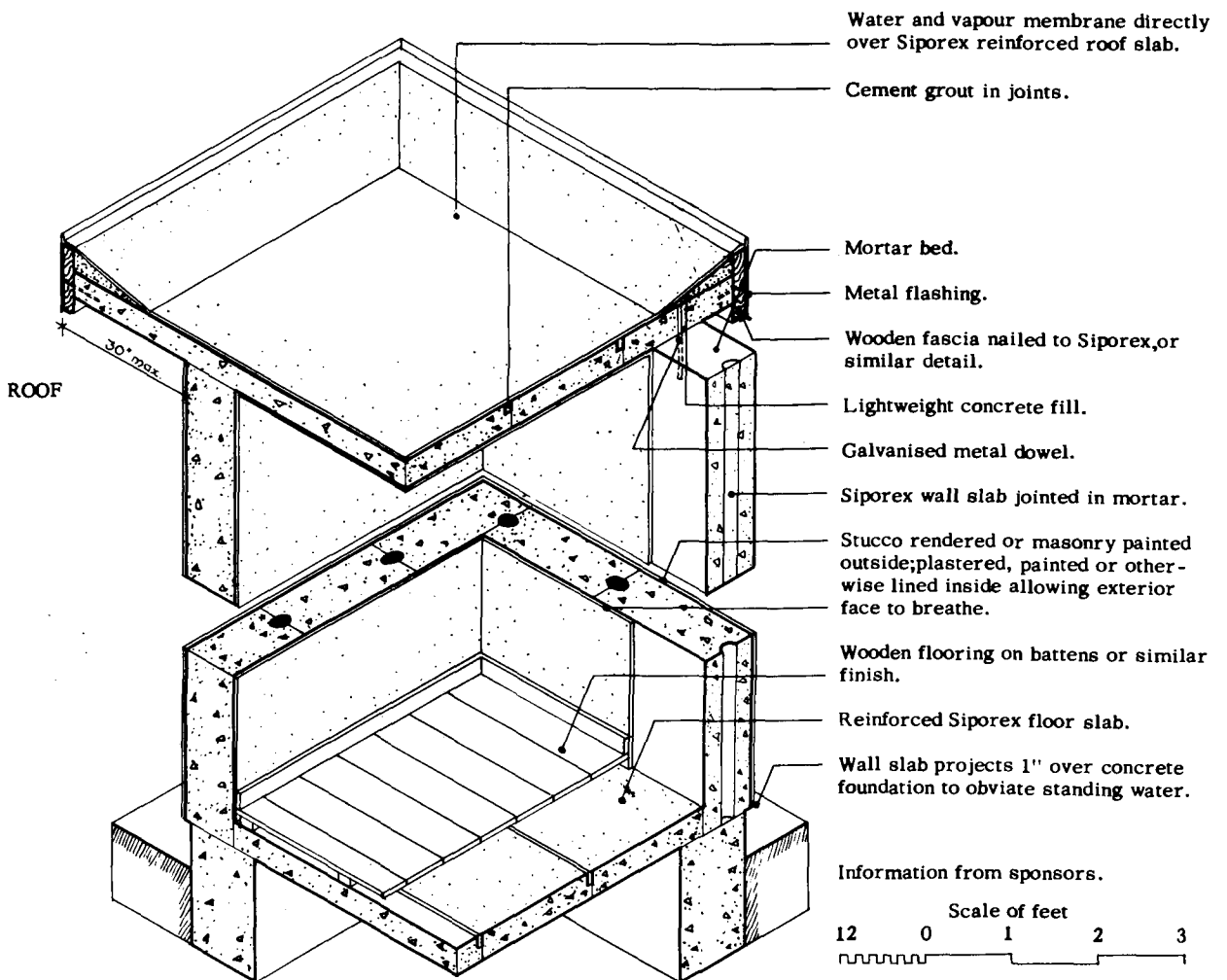
WALL UNIT JUNCTION



ROOF UNIT JUNCTION



UNIT OF CONSTRUCTION



Water and vapour membrane directly over Siporex reinforced roof slab.

Cement grout in joints.

Mortar bed.

Metal flashing.

Wooden fascia nailed to Siporex, or similar detail.

Lightweight concrete fill.

Galvanised metal dowel.

Siporex wall slab jointed in mortar.

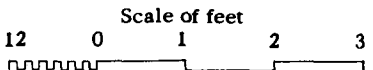
Stucco rendered or masonry painted outside; plastered, painted or otherwise lined inside allowing exterior face to breathe.

Wooden flooring on battens or similar finish.

Reinforced Siporex floor slab.

Wall slab projects 1" over concrete foundation to obviate standing water.

Information from sponsors.



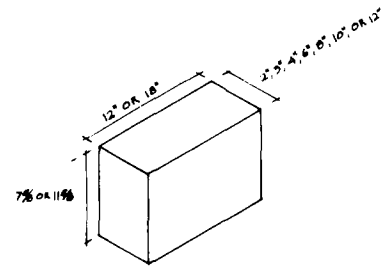
GROUND FLOOR AND FOUNDATION

**siporex**

February, 1958.

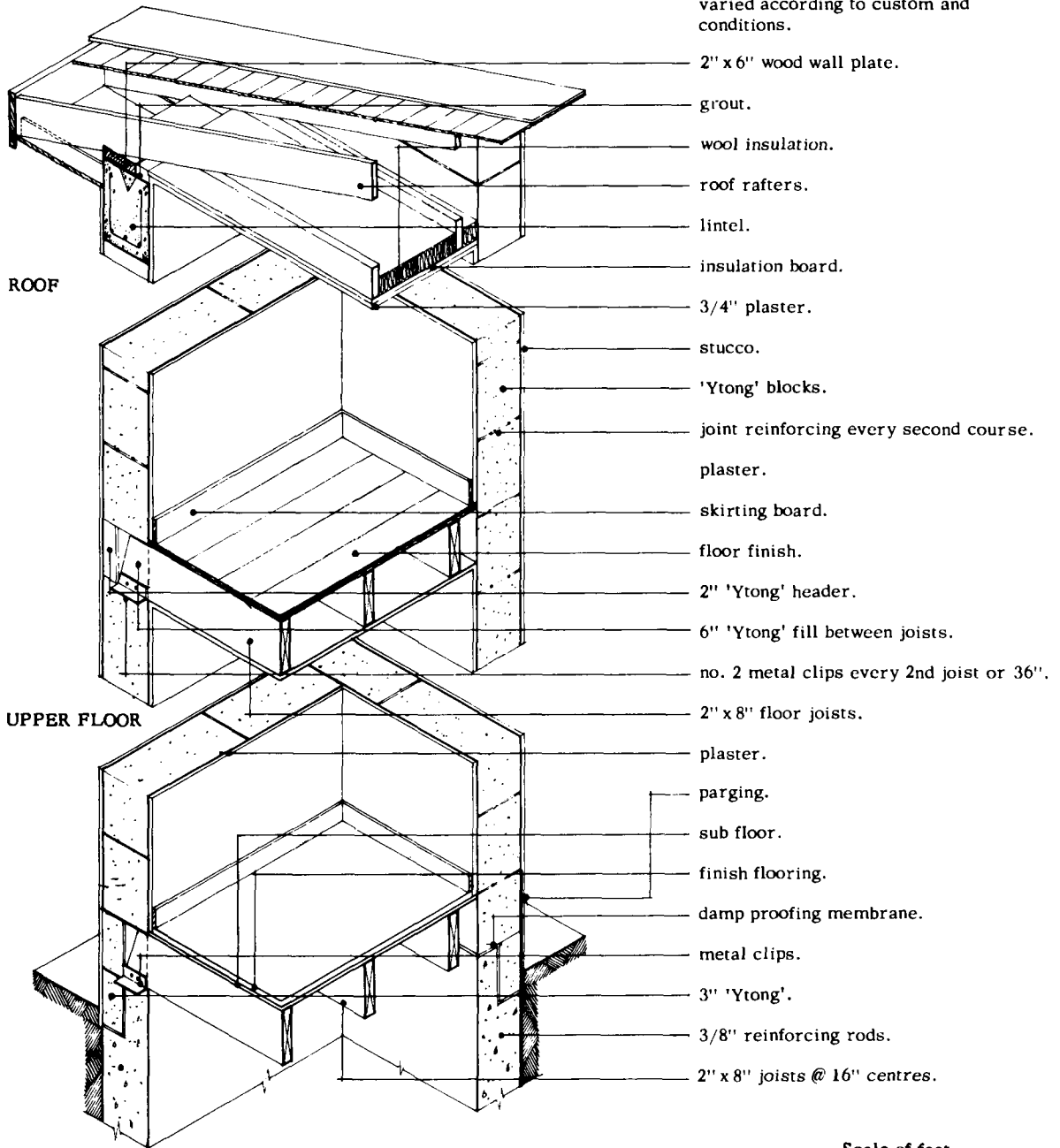
## SIPOREX

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Internationella Siporex A/B,<br>Box 3188, Stockholm 2.<br>Siporex Ltd., 5165 Sherbrooke St. W.,<br>Montreal, Quebec.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Sweden, around 1920.   |
| <b>Materials<br/>Used.</b>   | 3. Siporex - precast autoclaved<br>cellular lightweight concrete.   |
| <b>Description.</b>  | 4. Siporex is a load bearing, insulating<br>concrete precast in slabs or blocks.<br>This sheet shows only one method of<br>construction, suitable only for one<br>storey buildings.<br>$K(U)=0.81$ BTU/sq. ft./in./hr./ $1^{\circ}F$ .<br>Fire rating and noise reduction co-<br>efficient for 4" partition plastered<br>both sides - 2 hours, and 42 decibels<br>respectively.<br>Weights: roof and wall slabs - 31 lbs.<br>cu. ft.<br>Floor slabs 37 or 44 lbs. cu. ft. |
| <b>Development<br/>to Date.</b>  | 5. Widespread use in Scandinavia,<br>some houses in E. Canada.  |
| <b>Comment.</b>  | 6. The manufacturer claims that Siporex<br>is a highly surface active material and<br>therefore requires no interior vapour<br>barrier; protection against weather is<br>however necessary.   |
| <b>References.</b>   | 7. Sponsor's information.   |



**UNIT OF CONSTRUCTION**

The roof construction shown can be varied according to custom and conditions.

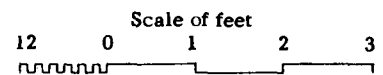


ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

- 2" x 6" wood wall plate.
- grout.
- wool insulation.
- roof rafters.
- lintel.
- insulation board.
- 3/4" plaster.
- stucco.
- 'Ytong' blocks.
- joint reinforcing every second course.
- plaster.
- skirting board.
- floor finish.
- 2" 'Ytong' header.
- 6" 'Ytong' fill between joists.
- no. 2 metal clips every 2nd joist or 36".
- 2" x 8" floor joists.
- plaster.
- parging.
- sub floor.
- finish flooring.
- damp proofing membrane.
- metal clips.
- 3" 'Ytong'.
- 3/8" reinforcing rods.
- 2" x 8" joists @ 16" centres.

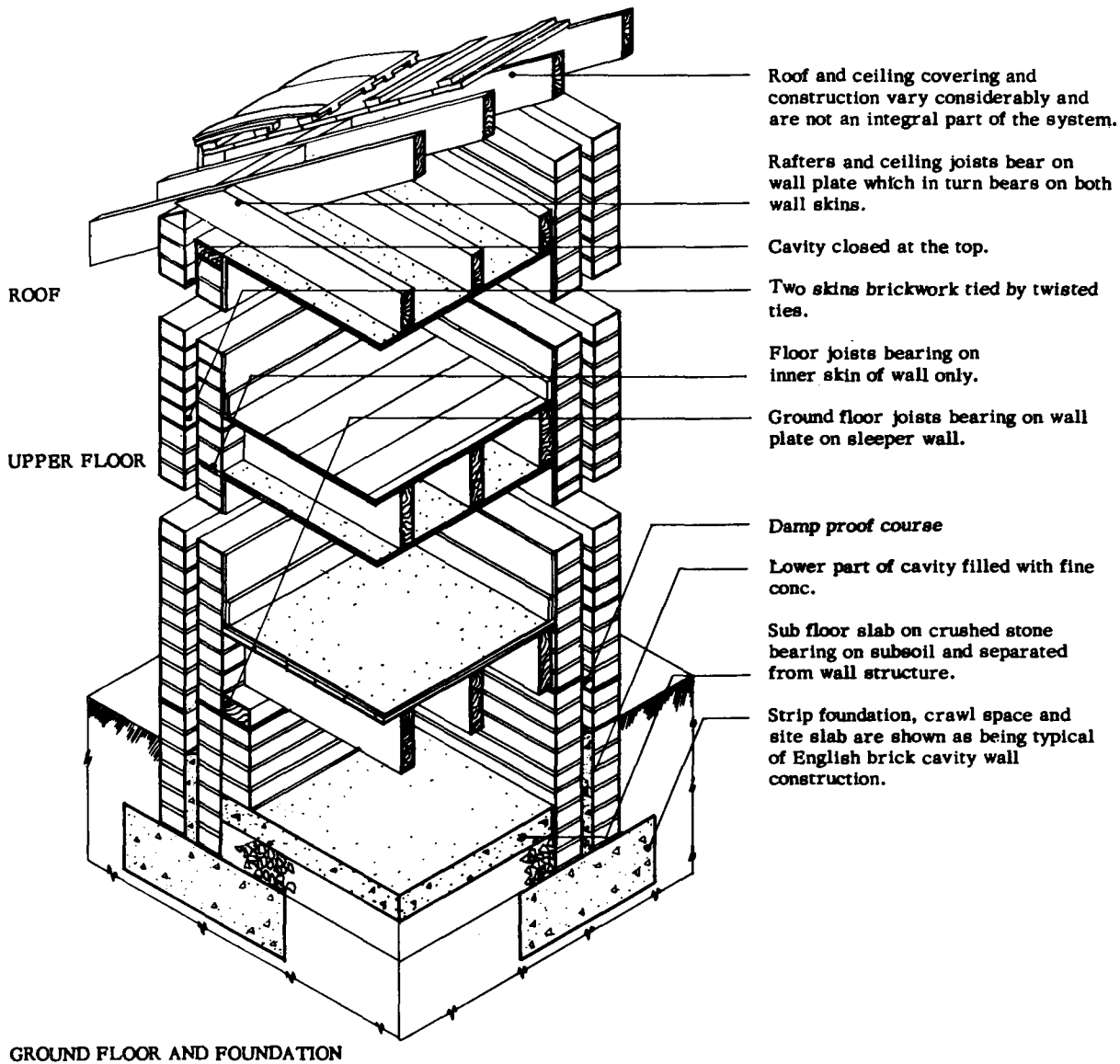


**ytong**

December, 1958.

# YTONG

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Internationella Ytong,<br>Djorwellsgaten 12, Stockholm, Sweden.<br>Alberta Ytong Manufacturing Co. Limited,<br>1026 6th Avenue, N.W. Calgary, Alberta.     |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Sweden 1930.   |
| <b>Materials<br/>Used.</b>   | 3. Lightweight cellular concrete<br>autoclaved concrete blocks.   |
| <b>Description.</b>  | 4. U= 0.12 (8" external block,<br>41 lbs. per cu. ft. stuccoed<br>and plastered).<br>Only the material itself is<br>proprietary.  |
| <b>Development<br/>to Date.</b>  | 5. Widely used in Scandinavia.<br>Also in U.K., Germany, Belgium,<br>Poland and Israel. Mainly used<br>for industrial, commercial, and<br>some housing work in Western<br>Canada. |
| <b>Comment.</b>  | 6. This sheet shows one possible way<br>of using Ytong.<br>Other ways include cavity wall and<br>monolithic concrete construction.  |
| <b>References.</b>   | 7. Sponsors reference.  |



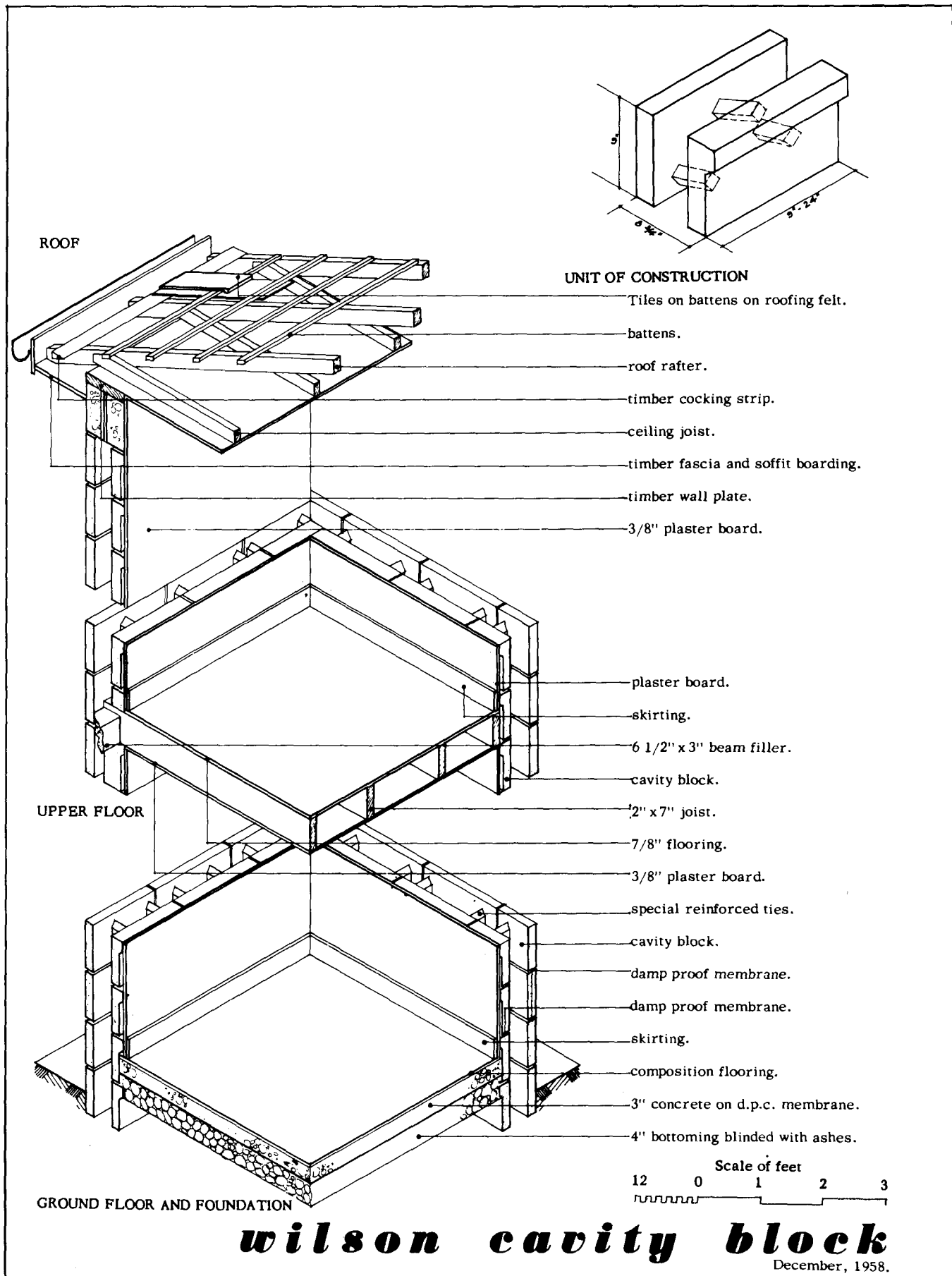
Scale of feet  
 12 0 1 2 3

**brick cavity wall**

February, 1958.

## BRICK CAVITY WALL

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Traditional in U.K.
<b>Date and Place of Origin.</b>	2. Used for many years in U.K.
<b>Materials Used.</b>	3. Brick.
<b>Description.</b>	4. Roofs are uniformly carried on both skins. Floors are carried on inner skin. Inner skin can be of other masonry material such as lightweight concrete, hollow clay block. Cavities are sometimes not ventilated and sometimes are insulation filled. U=0.34, BTU/sq. ft./hr./1 <sup>0</sup> F. for an unventilated cavity wall. Fire rating 2 1/2 hours, (for this specific example).
<b>Development to Date.</b>	5. Widespread use in U.K. especially since Second World War.
<b>Comment.</b>	6. There are many variations on this system of which this is only one.
<b>References.</b>	7. "Building Construction", Mackay, Longmans, Green; London and N.Y. "Building Construction", Mitchell, Batsford, 1947, London. Principles of Modern Building, Vol. 1, Fitzmaurice, H.M. Stationery Office, London.



**wilson cavity block**

December, 1958.



## WILSON CAVITY BLOCKS

**Traditional,  
Non-Traditional,  
Manufacturer,  
Sponsor or  
Builder.**

1. Non-Traditional.  
Wilson Terrazzo Manufacturing  
Company Limited,  
302 Drumoyne Road,  
Glasgow S.W.1, Scotland.

**Date and  
Place of  
Origin.**

2. Scotland 1946.

**Materials  
Used.**

3. Concrete.

**Description.**

4. U- 0.30 (exterior wall with plasterboard.  
Interior lining).

**Development  
to Date.**

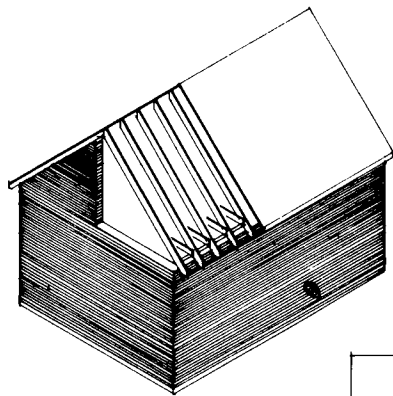
5. Over 7,000 houses erected in Scotland,  
1946 to 1952.

**Comment.**

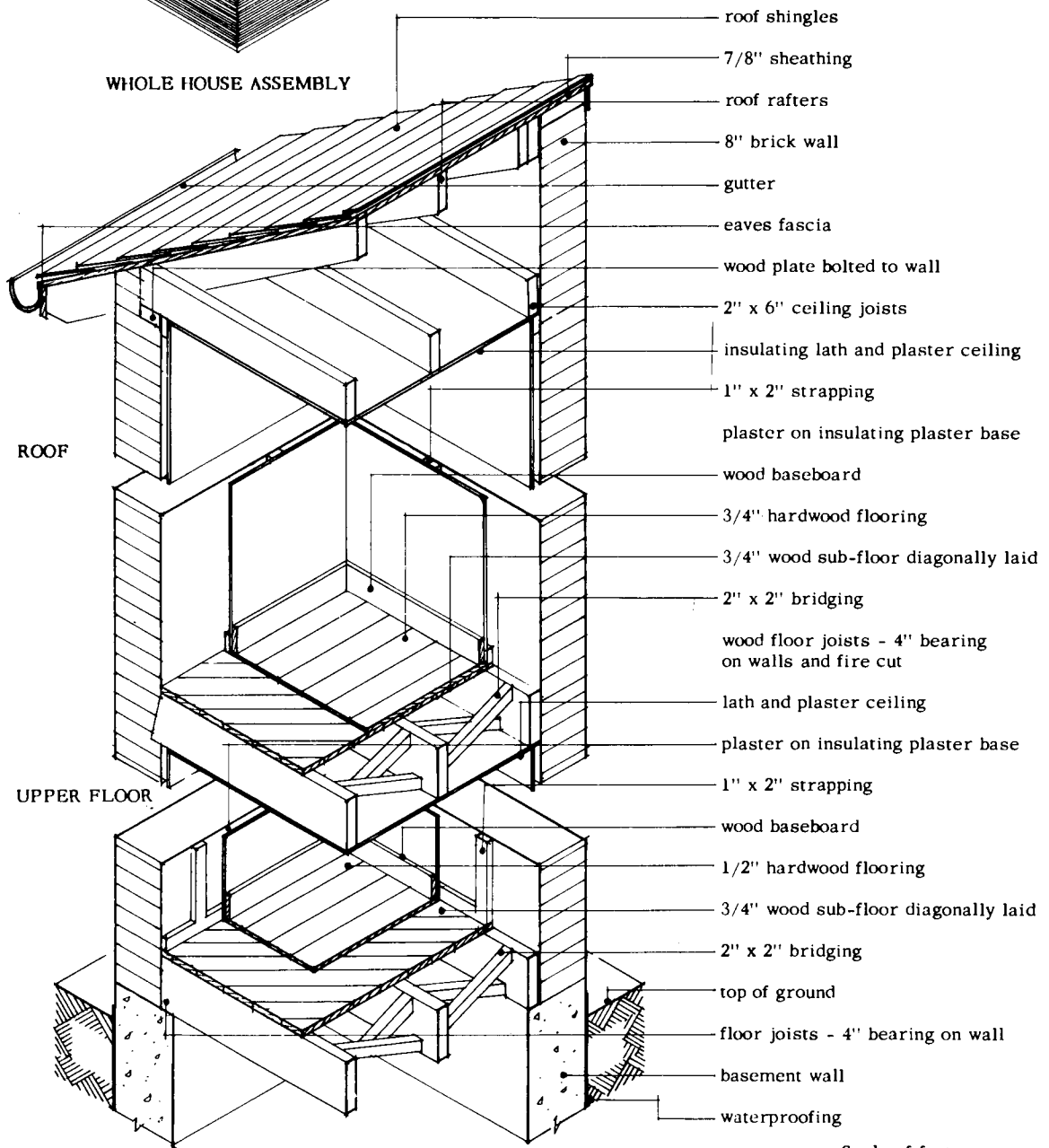
6. Unit only is proprietary. It can be used  
in conjunction with a variety of different  
forms of roof and floor construction.

**References.**

7. -



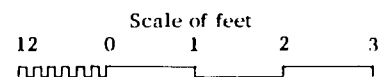
WHOLE HOUSE ASSEMBLY



ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION



**solid brick**

December, 1958.

## SOLID BRICK

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Traditional.
<b>Date and Place of Origin.</b>	2. Traditional wherever there has been brick.
<b>Materials Used.</b>	3. Brick.
<b>Description.</b>	4. 8" brickwork U=0.43.
<b>Development to Date.</b>	5. World-wide spread.
<b>Comment.</b>	6. Used with various forms of roof and floor construction.
<b>References.</b>	7. "Building Construction", Mitchell Batsford, 1947, London.  "Principles of Modern Building", Vol. 1, R. Fitzmaurice, H.M.S.O.

CONCRETE POST AND BEAM

## CONCRETE POST AND BEAM

<b>Case Sheets</b>	<b>Ayrshire House</b>
	<b>Boats Beacrete Concrete House</b>
	<b>Boot Pier and Panel House</b>
	<b>Cornish Unit</b>
	<b>Duo-Slab House I</b>
	<b>Duo-Slab House II</b>
	<b>Earley System</b>
	<b>Kreuzhaus</b>
	<b>Orlit House</b>
	<b>Rackle System</b>
	<b>Rockwood House</b>
	<b>Stockade House</b>
	<b>Swan House</b>
	<b>Winget House</b>

CONCRETE POST AND BEAM

CPB

**AIREY**

Leeds, England.

See Duo-Slab House II.

"Architectural  
Record",  
April 1947.

**ARSHIRE COUNTY COUNCIL**

(Wiltson-Fairhurst)

Scotland.

1952.

Foamed slag precast rein-  
forced concrete frames and  
panels. Columns at approx.  
10' 0" centers.

Double cavity of glass wool  
and plaster board on steel  
strapping, steel roof truss,  
concrete floor units.

"Prefabricated  
Housing",  
(B. H. Cox).  
Pamphlet H. 2F  
Central Office of  
Information.

**BANKS**

See Banks under CM.

**BEAMY-STYLE**

Housing Company,  
Boston, Massachusetts,  
U. S. A.

Concrete formed in situ.  
Concrete poured in permanent  
wood form work to which  
finishes are fixed. Plastered  
and rendered internally and  
externally. Floors of precast  
gypsum. A Bemis Design.

"The Evolving House,  
III, Rational Design",  
(Bemis).

**BOOT BEAUCRETE  
CONCRETE HOUSE**

H. Boot & Sons,  
Sheffield, England.

Pier and panel concrete  
cavity construction, pre-  
cast piers between horizontal  
concrete slabs.

Piers at 3' 0" centers.

Floor precast beams and  
slabs. External cladding,  
reinforced concrete.

Internal cladding: foamed  
slag.

"Prefabrication in  
Building",  
(Richard Sheppard).

CONCRETE POST AND BEAM

CPB

**BOOT PIER AND PANEL**

H. Boot & Sons Limited,  
Sheffield, England.

1928.  
2 storey precast concrete  
double leaf cast on site  
piers and panels, tongued  
and grooved. 8" thick  
external walls, floor wood.

Boot Pier and Panel,  
H. Boot & Sons  
Limited,  
Sheffield, England.

**CHEECOL (KEELAND  
HOUSE)**

New Concrete Processes,  
600 Hamilton Street,  
Vancouver,  
British Columbia,  
Canada.

See also Intrusion Prepakt.  
Lightweight concrete as used  
in a special panel and beam  
system used in Keeland  
House.

New Concrete  
Processes,  
600 Hamilton Street,  
Vancouver,  
British Columbia,  
Canada.

**CLOTHED CONCRETE  
CONSTRUCTION  
LIMITED**

See Dyke System.

**CONCRETE GRID FORM**

Lloyd Wright,  
U. S. A.

Concrete formed in situ;  
and precast unit. Precast  
hollow concrete units,  
concrete filled and rein-  
forced lined internally  
and metal lath and plaster  
external rendering similar.  
Floors of similar construction  
with reinforced concrete  
slabs over.

(Bemis).

**CONNECTICUT PRECAST  
HOUSE**

The Connecticut Building  
Corporation,  
Greenwich, Connecticut,  
U. S. A.

Precast hollow reinforced  
concrete wall units 6" up  
to 18' 0" x storey height.  
Roof and floor construction  
similar.

"American Architect  
& Architecture",  
September 1936.

CONCRETE POST AND BEAM

CPB

**CON-TEE**

Con-Tee Company,  
Missouri, U.S.A.

Concrete formed in situ.  
Permanent wood frame to  
poured reinforced concrete  
faced with lath and plaster  
and crossed braced.  
Conventional flooring.  
Studs 16" centers.

M. O. W. Survey of  
Prefabrication.  
"The Evolving House,  
III, Rational Design",  
(Bemis).

**CORNISH UNIT HOUSES**

Lovering Pochin  
Company Limited,  
St. Austell Cornwall,  
England.

Precast pier and panel.  
Mansard roof and aluminum  
sheeting.

Pamphlet H2F,  
Central Office of  
Information.

**CROWE HOUSE**

See Crowe House under  
CP.

**DOMKONSTRUADO**

CONSTRUCTION  
COMPANY,  
Leigh-On-Sea Essex,  
England.

1918.  
Whole structure precast.  
Posts, beam and panels.  
Continuous cavity. Vary-  
ing widths. Ministry of  
Health approved 1920.

M. O. W. Survey of  
Prefabrication.

**DONALDSON**

C. W. Donaldson  
England.

Concrete formed in situ.  
Monolithic concrete  
poured in situ on expanded  
metal. Wood forms are  
set between lathing to  
form hollow walling, and  
rough buck for windows  
and doors.  
Rendered internally and  
externally.

"The Evolving House,  
III, Rational Design",  
(Bemis).



## CONCRETE POST AND BEAM

## CPB

### DUO SLAB HOUSE I

Sir Edwin Airey,  
Eldon House,  
Leeds, England.

1922.  
Cavity walls of precast  
clinker concrete slabs  
between concrete piers,  
at 4' 0" centers.

Sir Edwin Airey,  
Eldon House,  
Leeds, England.

### DUO SLAB HOUSES II

William Airey & Sons  
Limited,  
Eldon House,  
Leeds, England.

Precast concrete studs at  
18" centers. Precast con-  
crete 2" facing slabs. A dry  
construction lined with plaster  
board, conventional roof and  
floor. U = 0.15.

M. O. W. Survey of  
Prefabrication.

### DYKE SYSTEM

Clothed Concrete  
Construction Limited,  
London W. 1, England.

Prototype at Stoke on Trent  
reinforced concrete frame  
and precast concrete panel  
cladding.  
Timber frame roof.

"House out of  
Factory".

### EARLEY SYSTEM

John J. Earley,  
Washington, D. C.  
U. S. A.

1915.  
Timber forms erected first  
into which is poured rein-  
forced concrete. Exterior  
formed in 2" concrete slabs  
backed by waterproofed paper.  
Reinforced concrete studs  
at approx. 18" centers.  
Extensively used for high  
class building in U. S. A.

"The Evolving House  
III, Rational Design",  
(Bemis).  
M. O. W. Survey of  
Prefabrication.  
"American Architect  
& Architecture",  
1936.

### GYPCRETE

John Mowlem,  
England.

Similar to Bellrock Panels.  
Plaster panel. Module 2' 0"  
width can be sawn but is not  
loadbearing.  
Must have siding added.  
Discontinued operations.

John Mowlem,  
England.

CONCRETE POST AND BEAM

CPB

HAHN

Hahn Concrete Lumber System,  
Decatur, Illinois,  
U.S.A.

Concrete formed in situ; and precast unit. Precast slabs forming permanent shuttering for poured concrete reinforced studs at 30" centers. Slabs 12" high x 30" long x 2". Exterior finish stucco, interior plaster. Flooring conventional. Structure tied at roof and floor levels by wood binders. A number of houses in Illinois, U.S.A.

"American Architect & Architecture",  
September 1936.  
"The Evolving House III, Rational Design",  
(Bemis).  
M.O.W. Survey of Prefabrication.

HARDY

T. Elson Hardy,  
London, England.

1920.  
Precast storey high posts and panels jointed for two storey work, cavity continuous through posts.

M.O.W. Survey of Prefabrication.

HARTLEY

H.C. Hartley  
Fireproof Construction Company,  
Los Angeles, California,  
U.S.A.

2 skins precast concrete slabs 9" high x 3' 0" long x 1 1/2" and posts poured between.  
Number of buildings mostly commercial.

M.O.W. Survey of Prefabrication.

HOOK-ON SLAB

E. May, Architect,  
Nairobi, Kenya.

Reinforced concrete 2 pin parabolic frame at 3' 0" centers. Reinforced concrete slabs hook on to frame. No insulation. Rapid dry construction, only for tropical use.

"Architects Journal",  
June 1946.

INSYBA

Bahnhofstrasse 72,  
Zurich 23,  
Switzerland.

2 floor house.  
Precast post at 4' 2" centers. Horizontal precast panels 4' 2", in style of platform frame.

Insyba  
Bahnhofstrasse 72,  
Zurich 23,  
Switzerland.

CONCRETE POST AND BEAM

CPB

KENT

Colonel H. Vaughan, Kent,  
England.

Several houses near London.  
Precast unit. Precast rein-  
forced columns and slabs with  
bolt couplings cast into columns.  
Rendered internally and  
externally.

"The Evolving House  
III, Rational Design",  
(Bemis).

KREUZHAUS

(CROSS)

Dr. J. W. Ludowici,  
Jockgrim, Rheinpfalz,  
Germany.

House designed mainly for use  
in areas liable to earthquakes.  
Has crosswalk of solid concrete  
in cross-like plan, and four  
corner posts or r. c. Ceiling in  
earthquake areas if r. c. slab  
otherwise conventional.  
Exterior wall panels of in-  
sulation material plus facing.

Dr. J. W. Ludowici,  
Jockgrim, Rheinpfalz,  
Germany.

KRUMHARDT

Eric Krumhardt,  
3912 Barber Avenue,  
South Burnaby,  
Vancouver,  
British Columbia,  
Canada.

4' 0" module. Concrete post  
and beam concrete infill panel.  
Insulation panel added inside.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1955.

LAKEOLITH

See Lakeolith under CP.

LOCKWOOD

Ernest H. Lockwood,  
Pasadena, California,  
U. S. A.

1930.  
Precast unit. Precast slabs  
12" x 36" wide x 1 1/2" forming  
shuttering to poured concrete  
studs. Girt beams and corner  
columns also poured in situ.  
Floor and roof construction  
and interior finishes con-  
ventional. A number of  
houses in Pasadena.

"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).

CONCRETE POST AND BEAM

CPB

**LOVERING POCHIN  
COMPANY LIMITED**  
Cornwall,  
England.

See Cornish Unit.

Lovering Pochin  
Company Limited,  
Cornwall,  
England.

**MacGIRLING HOUSE**  
Girling's Ferronconcrete  
Company,  
London W. C. 1,  
England.

Hollow precast concrete block  
walls with cast stone facing  
and clinker concrete backing.  
Panels 4' 0" x 2' 0".

Girling's Ferron-  
concrete Company,  
London W. C. 1,  
England.

**MacGREGOR HOUSE**  
J. E. M. MacGregor,  
London W. 6,  
England.

Built up reinforced concrete  
columns and brick panel  
filling. Conventional timber  
roof, prototype flats, at  
Horsham.

J. E. M. MacGregor,  
London W. 6,  
England.

**MAKECO**  
Mathews and Keenan,  
England.

1938.  
Precast concrete Tee panels.  
Concrete poured at joints.

M. O. W. Survey of  
Prefabrication.

**MATTEWS, A. C.**  
Architect,  
Australia.

1920.  
Precast Tee shaped concrete  
slabs, 24" x 12" x 1 1/2"  
concrete studs poured be-  
tween slabs at 2' 0" centers.  
A number built in Australia.

"Concrete and  
Constructional  
Engineering",  
October 1924.  
M. O. W. Survey of  
Prefabrication.

**MORELL**  
E. H. Bradley & Sons,  
Swindon, Wilts,  
England.

Reinforced concrete precast  
frame walls, floor and roof,  
concrete block cavity walls,  
externally: fluted concrete  
panels.

E. H. Bradley & Sons,  
Swindon, Wilts,  
England.

**MOWLEM**  
Mowlem, John.

See Gypcrete.

CONCRETE POST AND BEAM

CPB

NEW CONCRETE  
PROCESSES LIMITED

See Cheecol.

OLMSTED  
A. H. Olmsted,  
Rye, New York,  
U. S. A.

1930.  
Concrete formed in situ, and precast unit. Reinforced precast concrete studs at 16" centers acting as the dividers between insulating board forms in front of which is poured concrete in situ. Rendered externally, wall-board lined internally. Floor of T beam reinforced concrete poured in situ construction with ceiling lining and floor boards over. Four dwellings at Rye and a few others elsewhere.

"The Evolving House III, Rational Design", (Bemis).

ORLIT HOUSE  
Coinbuck-By-Pass,  
Coinbrook,  
Slough, Bucks,  
England.

1948.  
Precast reinforced concrete columns and beams at 12' 0" centers. Concrete slabs in two leaves. 4' 0" long. Columns erected first and then concrete cavity wall. Inner skin of foamed slag.

"Prefabrication in Building", (Richard Sheppard). "House Out of Factory", p. 50.

PARKHURST  
L. M. Parkhurst,  
U. S. A.

1935.  
Precast unit. Precast reinforced concrete studs at 18" centers, precast concrete slabs 12" x 18" long x 1" fixed internally and externally. Brickettes imbedded in outer slabs.

"The Evolving House III, Rational Design", (Bemis).

RACKLE SYSTEM  
George Rackle &  
Sons Company,  
Cleveland, Ohio,  
U. S. A.

Precast concrete internal and external wall slabs and studs with poured concrete girts and corner columns. Precast reinforced concrete floor joists and slabs.

"American Architect & Architecture", September 1936.

CONCRETE POST AND BEAM

CPB

REEMA

Reed and Mallik,  
Salisbury, Wilts,  
England.

Hollow precast concrete storey  
high, panels with reinforced  
concrete posts and beams poured  
between. Plastered and stuccoed.

"Architects Journal",  
May 1954.

ROCKBILD

350 Fifth Avenue,  
New York 1, N.Y.,  
U. S. A.

Built in Ruhr and Alaska.  
An insulating concrete made  
up into wall elements with  
hollowed edges at joints to  
form formwork in which to pour  
concrete thus forming a rein-  
forced concrete post and lintel,  
frame around panels.

Rockbild,  
350 Fifth Avenue,  
New York 1, N.Y.,  
U. S. A.

ROCKWOOD GYPSUM  
HOUSE

Rockwood Gypsum Lumber  
Corporation,  
New York, N. Y.,  
U. S. A.

Precast gypsum vertical wall  
sections approximately 6" x 6"  
with poured reinforced concrete  
posts at regular intervals in  
gypsum sections. Reinforced  
concrete Tee beam hollow terra-  
cotta formed floor slab.

"American Architect  
& Architecture",  
September 1936.

SACO PANEL

Sachau Marine  
Construction,  
Humber Bay,  
Toronto, Ontario  
Canada.

Concrete precast panels which  
are also formwork for rein-  
forced concrete post and beam  
construction. Vertical 16" x 6"  
x 8' 2" panels. Reinforced load-  
bearing concrete.  
Out of business.

Sachau Marine Con-  
struction,  
Humber Bay,  
Toronto, Ontario,  
Canada.

SAWYER

F. McM Sawyer  
Architect,  
U. S. A.

1935.  
Reinforced concrete planks  
spaced apart with r. c. spacers.  
Units 6" high x 32" long x  
1 1/4".  
6" cavity.  
Concrete poured between  
spacers and facing.

M. O. W. Survey of  
Prefabrication.  
Portland Cement  
Assoc. Report.  
"Architectural Forum",  
February 1943.

## CONCRETE POST AND BEAM

CPB

### SWAN

Frank S. Swan,  
Swan House Incorporated,  
Bell Building,  
Chicago, Illinois,  
U.S.A.

Precast concrete pier and panel, 4' centers. Monolithic floor and foundation poured in situ. Some houses in Illinois.

M. O. W. Survey of Prefabrication. Portland Cement Assoc. Report. "American Arch.", Sept. 1936. "Architectural Forum", Dec. 1935.

### T. BEAM CONSTRUCTION

457 Union Street,  
Aberdeen, Scotland,  
also  
J. A. Angel & Sons Co.,  
108 Gallery Square,  
Montreal, Quebec,  
Canada.

Precast concrete Tee sections on 10" horizontal module and 10 1/2" vertical module filled with concrete.  $U = 0.184$ . (Including air space and fibre-board). 94 houses built in Scotland up to 1952.

Pamphlet H2F  
Central Office of  
Information,  
London, England.

### TRAYLOR DEWEY GUNITE

Traylor-Dewey Contracting  
Company,  
Allentown, Pennsylvania,  
U.S.A.

Pre-1935.  
Timber frame used as permanent shuttering into which is poured reinforced concrete, r.c. studs at 3' 10" centers. Faced with cement rendering on metal (expanded). Interior plastered. A few houses in Pennsylvania.

M. O. W. Survey of Prefabrication. Portland Cement Association Report.

### UNDERDOWN HOUSE

Underdown Houses Limited,  
Norwich. England.

Concrete blocks forming form-work and cavity wall. Poured piers at 4' 0" centers. Rendered internally and externally. Wood floor.

Underdown Houses Ltd.,  
Norwich, England.

### UNDERDOWN WEYMOUTH CROWELL

Donald Underdown,  
2104 East 15th Street,  
Los Angeles, California,  
U.S.A.

Precast concrete units in situ piers, 3' module. Units 12" x 36" x 1 1/2". In situ girts at head and sill. Stuccoed and plastered. One house at Glendale, California, U.S.A.

M. O. W. Survey of Prefabrication. Portland Cement Association Report. "American Architect", September 1936. "Architectural Forum", December 1935.

CONCRETE POST AND BEAM

CPB

UNITROY HOUSES

31-33 High Holborn,  
London W. C. 1, England.

Lightweight concrete units as forms and a poured reinforced concrete post and beam system posts at 2' 10" centers.  
U = 0.15 (ground floor) 0.20 (walls) 0.13.  
2 storey construction

Unitroy Houses,  
31-33 High Holborn,  
London W. C. 1,  
England.

WALLER

The Waller Housing Corporation,  
Poole Corporation,  
England.

1920.  
Precast piers at 3' 8" centers. double panels of coke breeze concrete 8' high x 2' wide. Exterior painted, interior plastered. Housing estate at Poole, Dorset.

M. O. W. Survey of Prefabrication. Cement & Concrete Association Report M. O. H. Systems of House Construction approved up to 1920. Report in Pier & Panel file, B. R. S. Library, Garston, Herts, U. K.

WEBB

See Webb under CU.

WHITSON-FAIRHURST

See Ayshire County Council.

WINGET

Winget Limited,  
Rochester, Kent,  
England.

1924-31.  
Double clinker concrete slabs 36" x 9" high x 3" with reinforced concrete piers poured between slabs at 3' intervals. Remainder of building conventional. Three thousand five hundred built in 1930. System discontinued.

M. O. W. Survey of Prefabrication. Cement & Concrete Association Report. M. O. H. Systems of House Construction approved up to 1920. Interdepartment Com. on House Construction Report, 1944.



CONCRETE POST AND BEAM

CPB

WINTER

E. M. Winter,  
15 Jacobus Place,  
New York, N. Y.,  
U. S. A.

1935-1936.  
Steel frame, concrete precast  
wall units pan shaped. Concrete  
of blast furnace foamed slag.  
Steel posts cast in situ at 4'  
centers. None erected up to  
1936.

M. O. W. Survey of  
Prefabrication.  
Portland Cement  
Association Report.  
"Architectural Forum",  
December 1935.  
"American Architect",  
1936.

WOOLAWAY HOUSE

W. Woolaway & Sons  
Limited,  
Bernstaple, Devon,  
Taunton, England.

Precast reinforced concrete  
post and panel.  
Wood floor and roof con-  
struction.

W. Woolaway & Sons  
Limited,  
Bernstaple, Devon,  
Taunton, England.

WRIGHT

(Millard House)

See Wright (Millard House)  
under CU.

## CONCRETE POST AND BEAM

## CPB

### SHINDLER GOEHNER SYSTEM

M. B. Acheson Limited  
4 Westminster Palace  
Gardens,  
Victoria Street,  
London S. W. 1, England.

Inner loadbearing walls of  
precast concrete.  
Other walls poured into  
gypsum room size forms.

M. B. Acheson  
Limited,  
4 Westminster Palace  
Gardens,  
Victoria Street,  
London S. W. 1, England.

### SIMPSON CRAFT

John T. Simpson,  
U. S. A.

1915.  
Precast unit. Precast concrete  
studs and panels rendered in-  
ternally and externally poured  
girts. Some houses in Eastern  
United States.

"The Evolving House  
III, Rational Design",  
(Bemis).

### STEILBERG

See Steilberg under MP.

### STOCKADE

Stockade Building System  
Incorporated,  
New York, N. Y.,  
U. S. A.

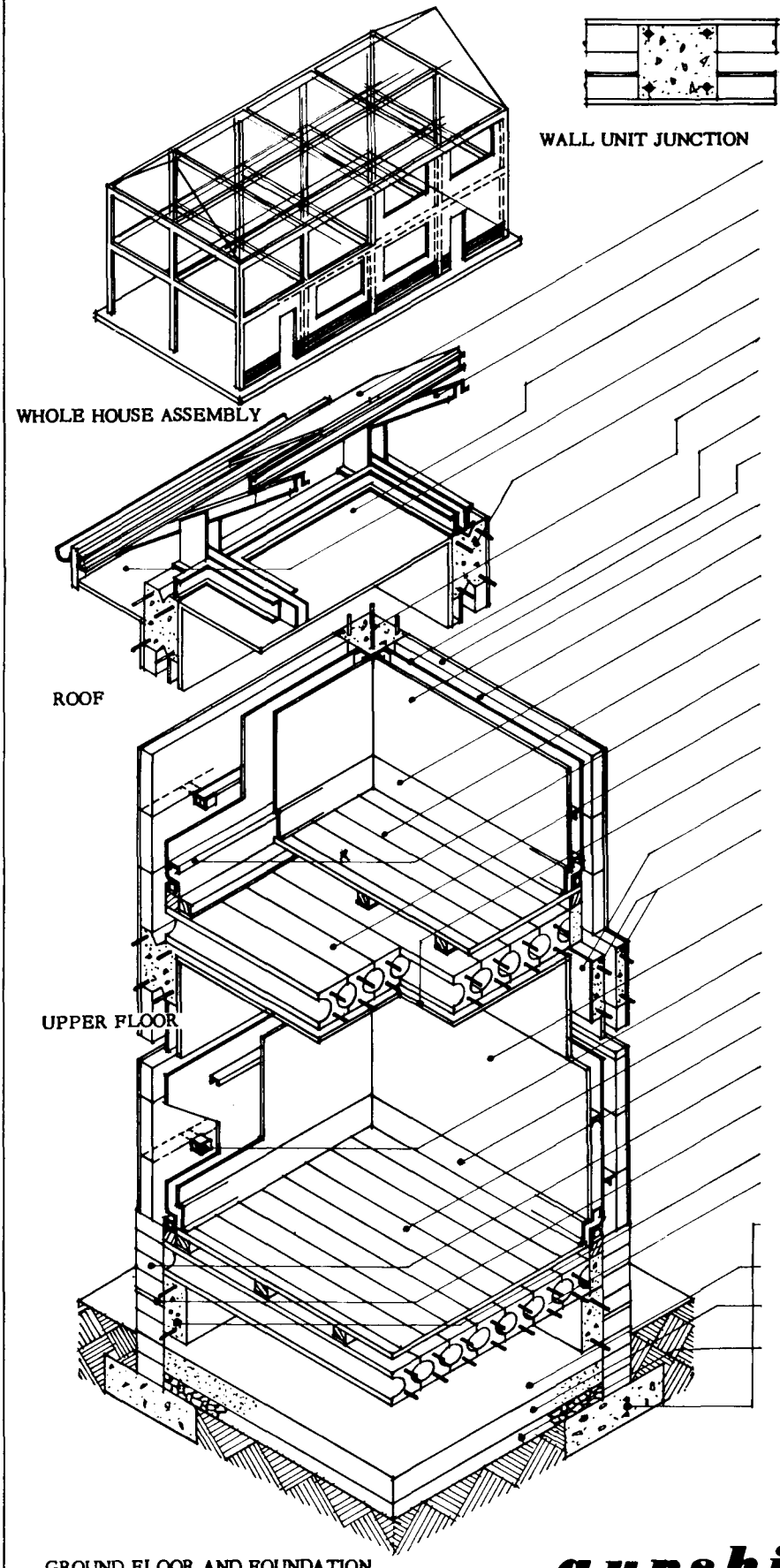
1920.  
Concrete formed in situ; and  
precast unit. 4" x 8" x 16"  
wood fibre blocks made up  
like masonry. Reinforced con-  
crete poured into holes in  
units (vertically aligned).  
Remainder of construction con-  
ventional. Many houses built  
in U. S. A. up until 1935.

"American Arch.  
& Architecture",  
September 1936.  
"The Evolving  
House III,  
Rational Design",  
(Bemis).

### STONECRETE WALLING

Precast reinforced concrete  
posts storey high.  
Precast horizontal reinforced  
concrete panels.  
Internal lining of plaster.

"Prefabricated  
Homes",  
(B. H. Cox).



WALL UNIT JUNCTION

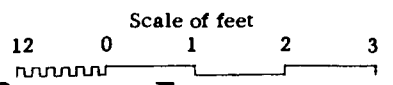
WHOLE HOUSE ASSEMBLY

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

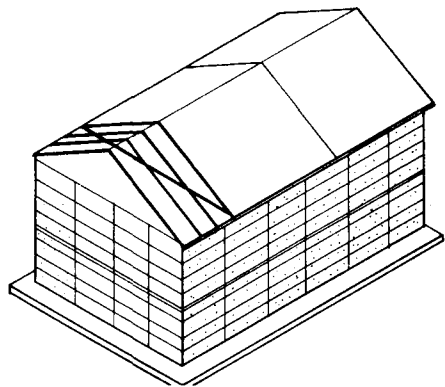
- Timber boarding covered with tiles.
- Cold rolled steel joists.
- Plasterboard ceiling panels.
- Asbestos cement Soffit.
- Reinforced concrete girts.
- Reinforced concrete post
- Glass silk insulation.
- Formed concrete slabs.
- Plaster board.
- 2" cavity.
- Steel skirting.
- Timber floor.
- Steel sub-frame.
- Reinforced concrete floor units.
- Plaster board ceiling.
- Building paper.
- Reinforced concrete beams.
- Steel sub-frame.
- Plaster Board.
- T. bar frame supported on iron brackets.
- Steel skirting.
- Timber floor.
- 4 1/2" brick.
- Damp proof course.
- Reinforced concrete beam.
- Reinforced concrete floor units.
- Base concrete.
- Bitumen.
- Ashes.
- Hard core.



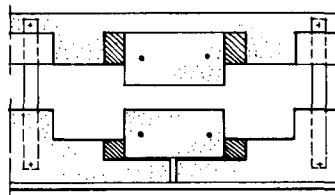
**ayrshire house**  
December, 1958.

## AYRSHIRE HOUSE

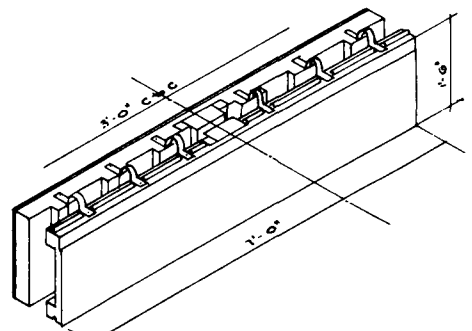
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. Sponsor: Ayrshire County Council, Scotland (first). Whitson - Fairhurst, U.K. (second).</b>
<b>Date and Place of Origin.</b>	<b>2. Ayrshire, Scotland, 1945.</b>
<b>Materials Used.</b>	<b>3. Precast concrete.</b>
<b>Description.</b>	<b>4. Precast reinforced concrete frame is erected first, then external foamed concrete panels, then interior panels of metal frame, plasterboard facing and glass insulation. U=0.14 (external wall).</b>
<b>Development to Date.</b>	<b>5. 3,300 houses in Scotland up to 1952.</b>
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. Post War Building Study No. 25, H.M. Stationery Office, London.</b>



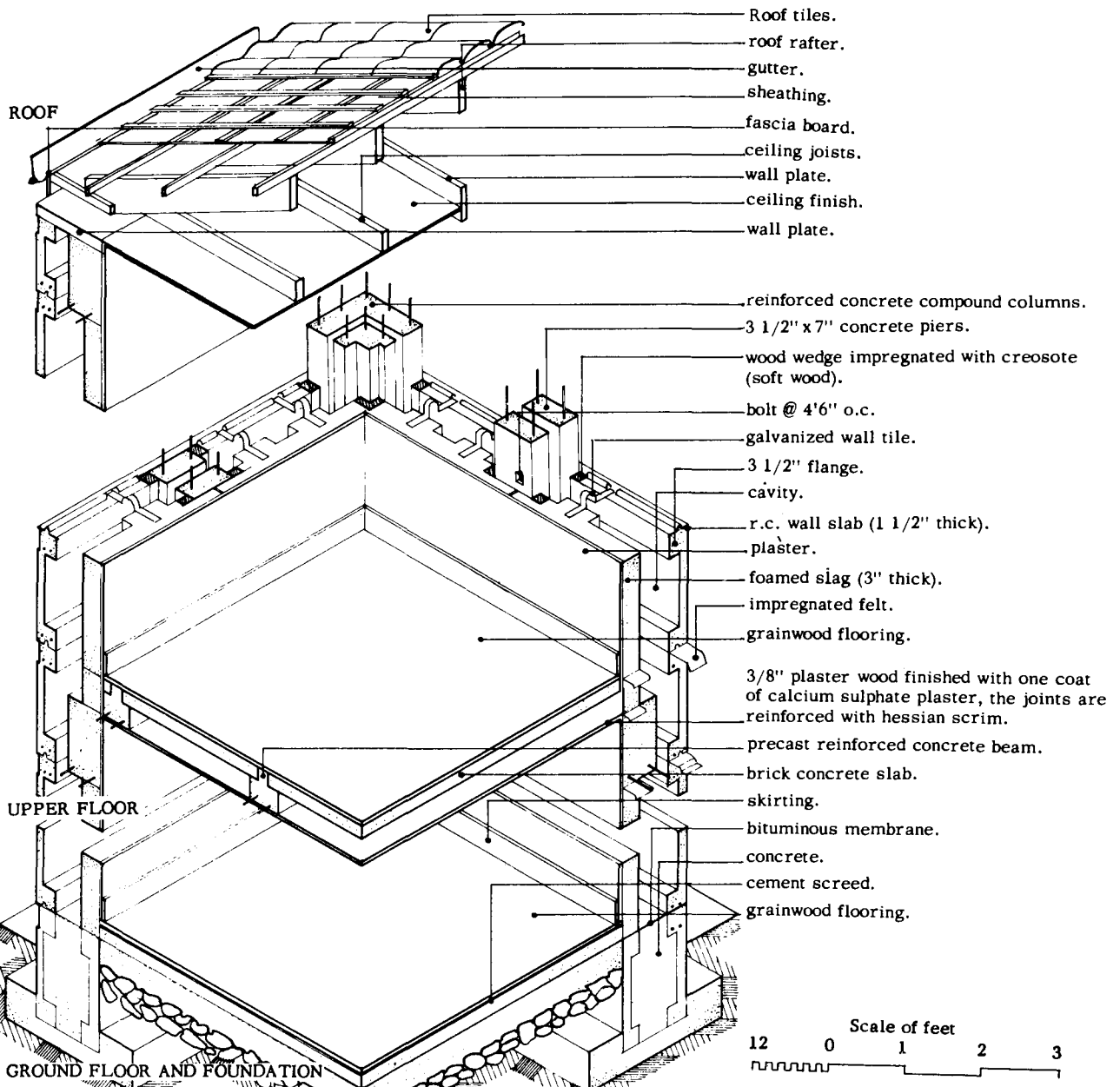
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



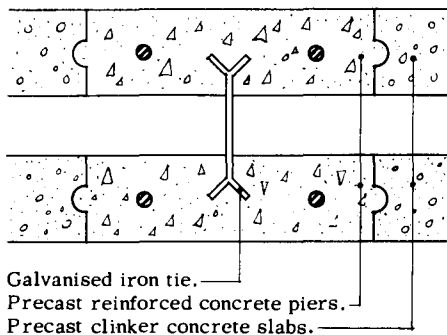
GROUND FLOOR AND FOUNDATION

**boots beaverete concrete house**

December, 1958.

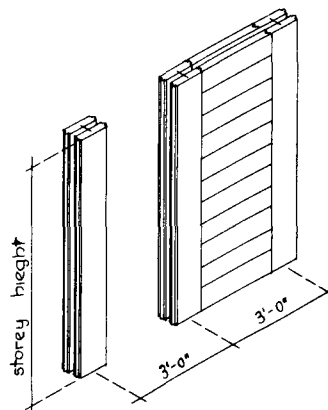
## BOOT BEAUCRETE

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.K. 1920-1940.  |
| <b>Materials<br/>Used.</b>   | 3. Precast reinforced concrete.   |
| <b>Description.</b>  | 4. Frame is erected first, then<br>infill panels. Air is to produce<br>a continuous moisture break<br>between inner and outer<br>external wall faces. |
| <b>Development<br/>to Date.</b>  | 5. 10,000 houses in U.K. in inter<br>war period.  |
| <b>Comment.</b>  | 6. System is relatively inflexible.   |
| <b>References.</b>   | 7. "Post War Building Study No. 23",<br>H.M. Stationery Office, London.   |

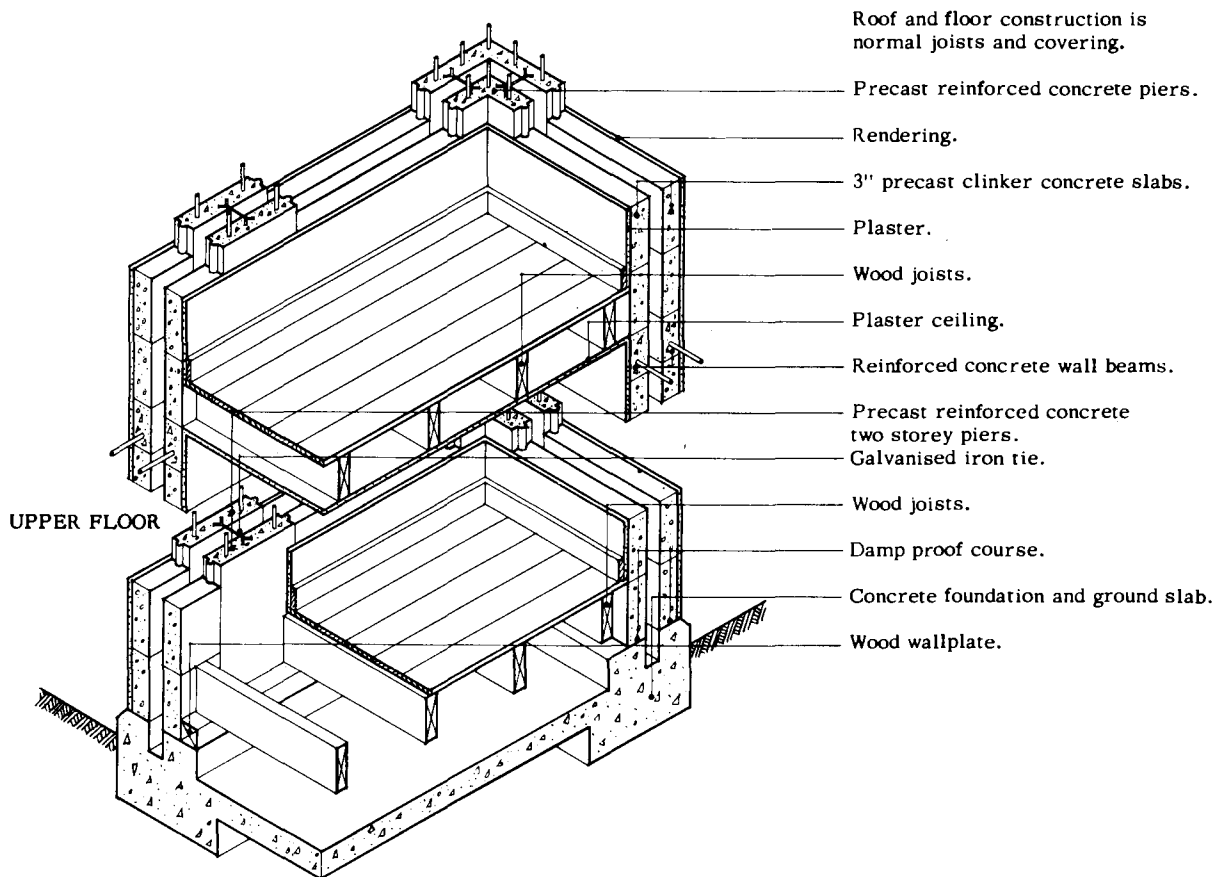


Galvanised iron tie.  
Precast reinforced concrete piers.  
Precast clinker concrete slabs.

WALL UNIT JUNCTION



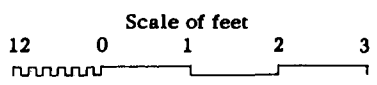
UNIT OF CONSTRUCTION



UPPER FLOOR

GROUND FLOOR AND FOUNDATION

- Roof and floor construction is normal joists and covering.
- Precast reinforced concrete piers.
- Rendering.
- 3" precast clinker concrete slabs.
- Plaster.
- Wood joists.
- Plaster ceiling.
- Reinforced concrete wall beams.
- Precast reinforced concrete two storey piers.
- Galvanised iron tie.
- Wood joists.
- Damp proof course.
- Concrete foundation and ground slab.
- Wood wallplate.



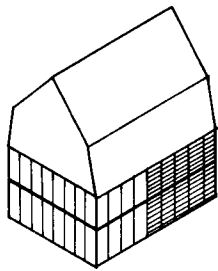
# *boot pier and panel house*

December, 1958.

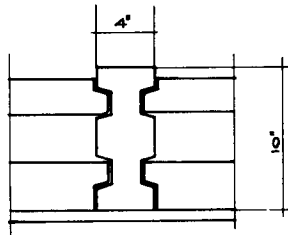
## BOOT PIER AND PANEL HOUSE

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Sponsor: Henry Boot and Sons, Ltd.
<b>Date and Place of Origin.</b>	2. U.K., 1925.
<b>Materials Used.</b>	3. Precast concrete piers, precast clinker concrete units.
<b>Description.</b>	4. Two storey construction. Piers are recessed into concrete strip foundation. Slabs are usually laid dry between piers. 2" cavity is continuous. Roof and floor construction normal conventional English wood construction. U-0.26 (External walls only).
<b>Development to Date.</b>	5. 8,000 to 9,000 houses built between 1926 and 1930 for several English municipal authorities.
<b>Comment.</b>	6. All concrete units are manufactured on the site. Piers are handled by crane.
<b>References.</b>	7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.

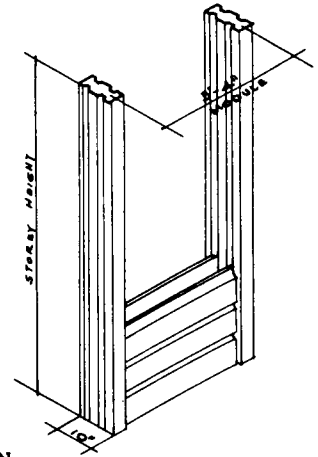




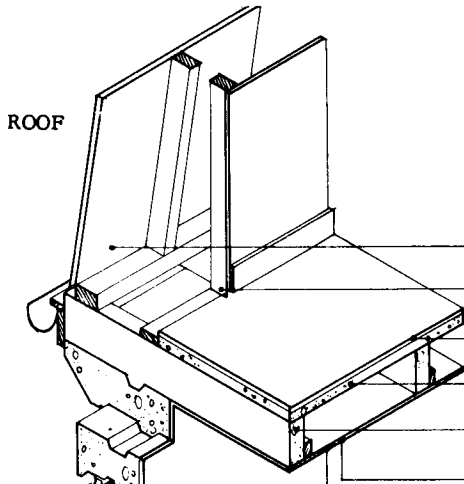
WHOLE HOUSE ASSEMBLY



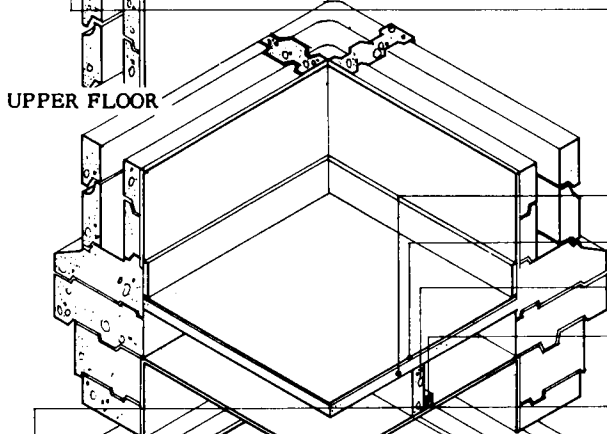
WALL UNIT JUNCTION



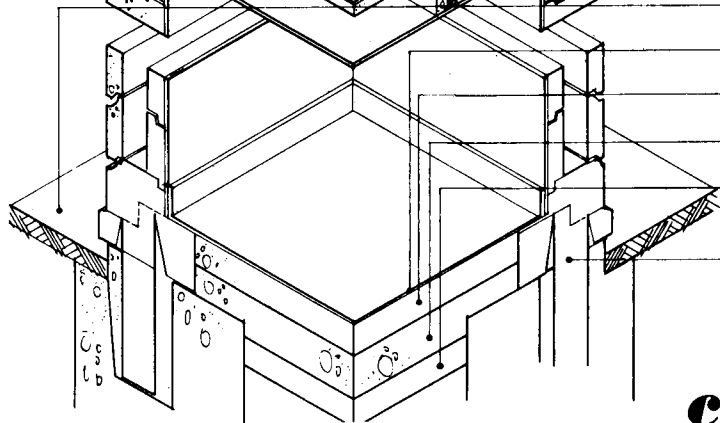
UNIT OF CONSTRUCTION



ROOF

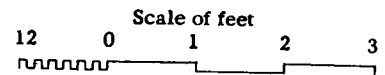


UPPER FLOOR



GROUND FLOOR AND FOUNDATION

- Roof boarding
- 3" x 2" studding to mansard framing
- 5/8" pitchmastic floor on asphalter's felt
- 1 1/2" R.C. floor
- 2" x 7" R.C. floor joists
- plasterboard ceiling
- iron dog spacer
- 1 1/2" R.C. floor
- 5/8" pitchmastic floor on asphalter's felt
- 7" x 2" R.C. joists
- 2" x 1" batten bolted to floor joists, to carry plasterboard ceiling
- ground level
- 5/8" pitchmastic floor on asphalter's felt
- 4" concrete
- hardcore
- 4" filling
- standard tenoned through basestone into concrete foundation

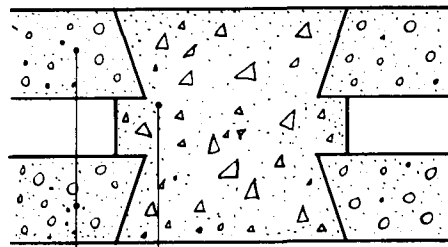


**cornish unit**

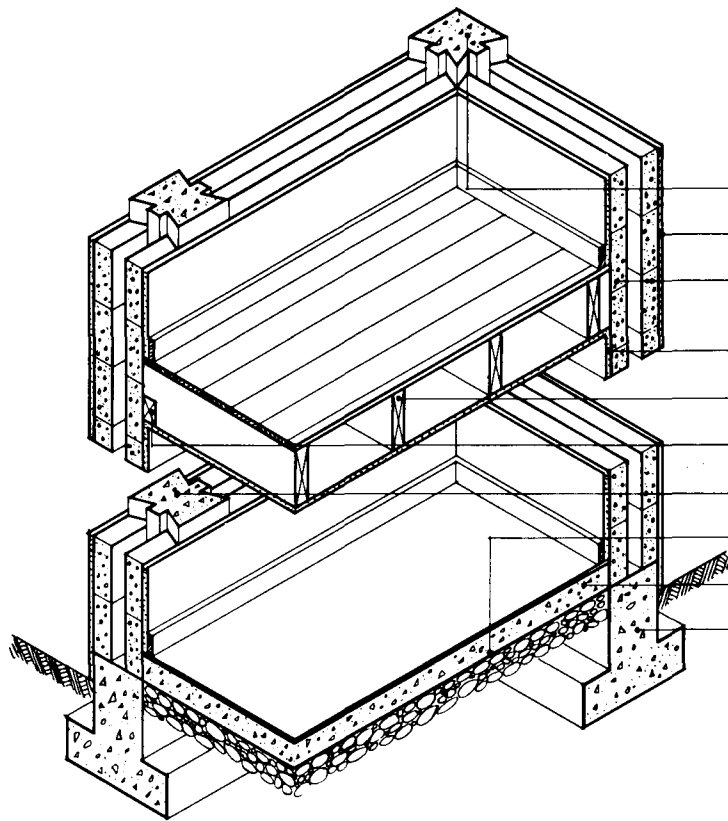
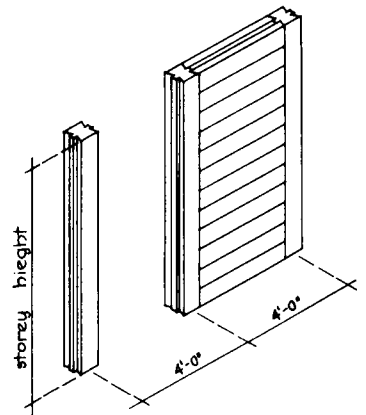
December, 1958.

## CORNISH UNIT

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | <b>1. Non-Traditional.<br/>Selleck Nicholls and Company<br/>Limited,<br/>(formerly Lovering Pochin)<br/>Heath Hill,<br/>St. Austell, Cornwall, U.K.</b> |
| <b>Date and<br/>Place of<br/>Origin.</b>   | <b>2. United Kingdom 1946.</b>  |
| <b>Materials<br/>Used.</b>   | <b>3. Precast concrete.</b>   |
| <b>Description.</b>  | <b>4. A precast concrete pier and panel<br/>system, utilizing a mansard roof<br/>construction.<br/>U-2.1 (external wall construction<br/>as shown).</b> |
| <b>Development<br/>to Date.</b>  | <b>5. 30,000 dwellings in England since 1946.</b>   |
| <b>Comment.</b>  | <b>6. Only the units are proprietary.</b>   |
| <b>References.</b>   | <b>7. -</b>   |



In situ concrete pier  
3'3" x 3" x 8" precast slabs.



Roof construction is normal timber joists and covering.

Concrete pier poured in situ.

Rendering.

3'3" x 3" x 8" precast clinker concrete slabs laid dry.

Plaster.

Wood joists.

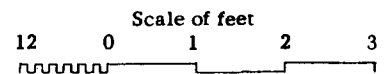
Wood wallplate bolted to inner skin.

Concrete pier poured in place.

Damp proof course.

Concrete ground floor slab.

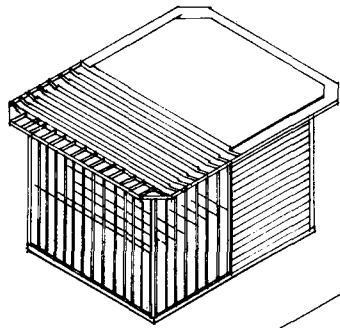
Concrete foundation.



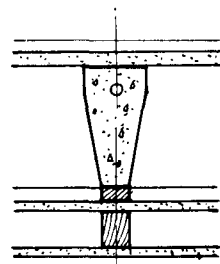
# *duo-slab house*

## AIREY DUO SLAB HOUSE

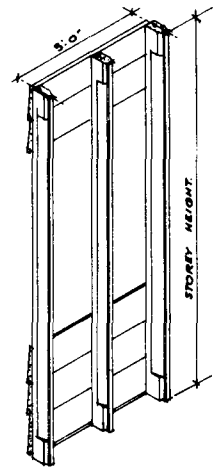
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Sponsor: Sir Edwin Airey and Sons, Eldon House, Leeds, England.
<b>Date and Place of Origin.</b>	2. Liverpool, 1922.
<b>Materials Used.</b>	3. Precast clinker concrete slabs, poured posts.
<b>Description.</b>	4. Two storey house. Slabs laid dry. Posts poured between as slabs rise. Slabs separated by 2" cavity. U=0.24 (External walls).
<b>Development to Date.</b>	5. 3,000 to 4,000 houses in the U.K. for several municipal authorities (1922-1924).
<b>Comment.</b>	6. Remainder of construction is conventional English wood construction.
<b>References.</b>	7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.



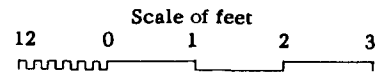
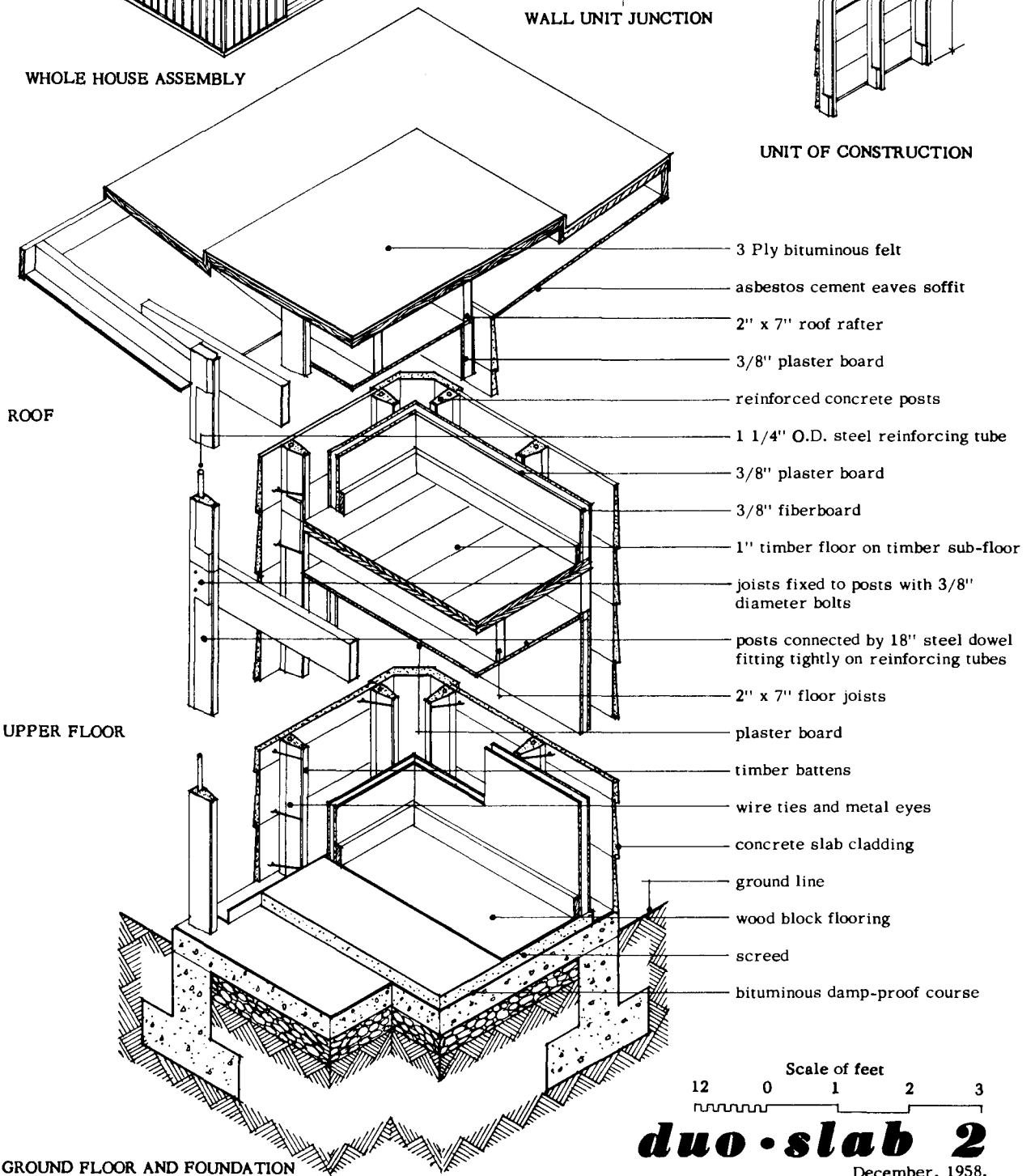
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

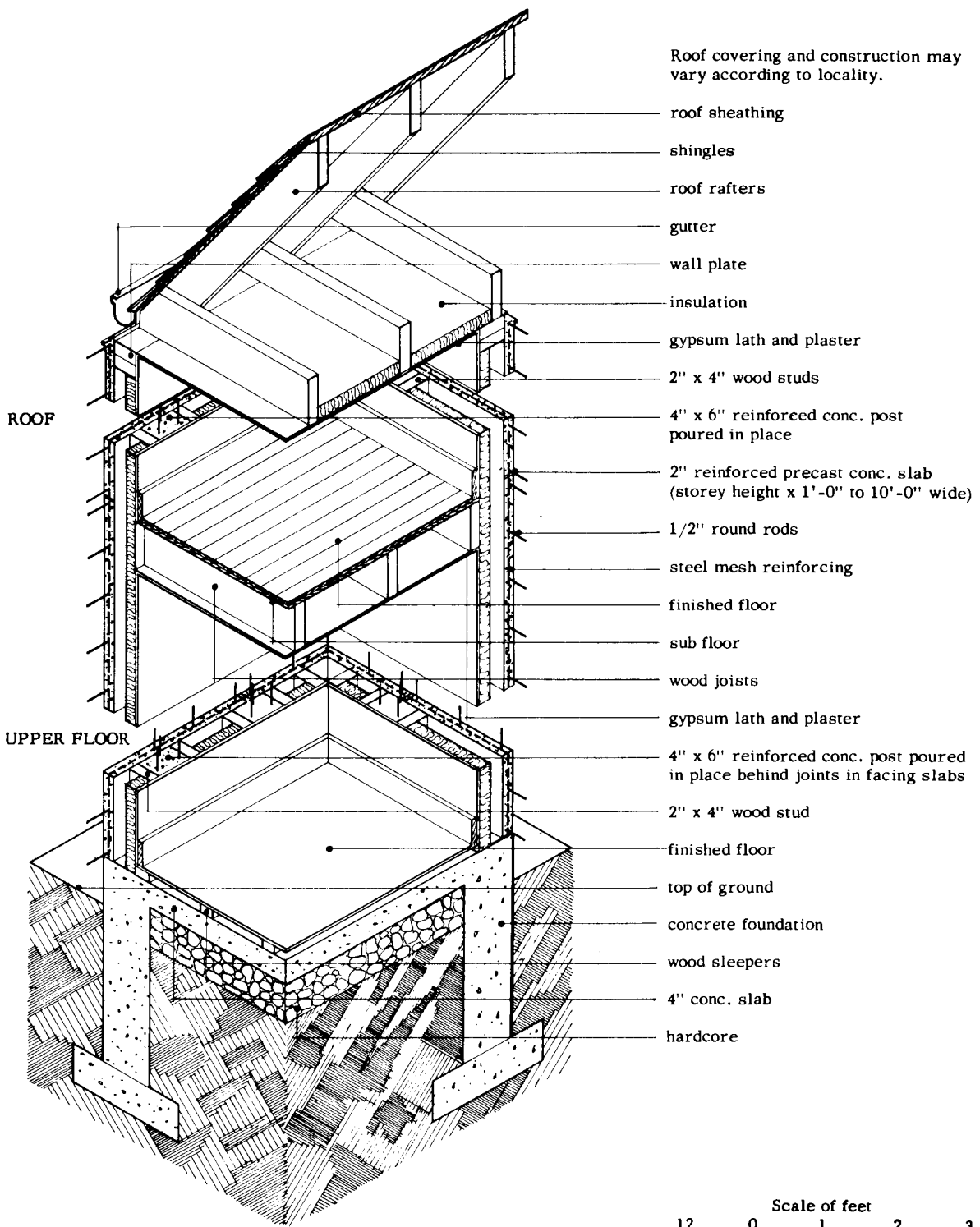


**duo · slab 2**

December, 1958.

## DUO SLAB II

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional, Builder and Sponsor: Wm. Airey and Son (Leeds), Ltd.
<b>Date and Place of Origin.</b>	2. Leeds, 1946.
<b>Materials Used.</b>	3. Precast concrete.
<b>Description.</b>	4. System simulates the wood stud frame system for the walls. Concrete studs are storey high and dowel jointed. U= 0.21 (walls), firecoating: 1/2 hour.
<b>Development to Date.</b>	5. Many modifications and improvements have been made to the system including the incorporation of Pitched and Hipped roofs. More than 25,000 houses have now been completed in almost every county of England and Wales. This system of construction has been adopted by the Netherlands Government and an extensive building programme has been carried out in Holland.
<b>Comment.</b>	6. Ministry of Works, London.
<b>References.</b>	7. "Post War Building Study No. 23" H.M. Stationery Office, London.



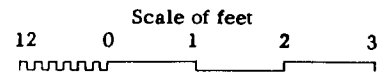
Roof covering and construction may vary according to locality.

- roof sheathing
- shingles
- roof rafters
- gutter
- wall plate
- insulation
- gypsum lath and plaster
- 2" x 4" wood studs
- 4" x 6" reinforced conc. post poured in place
- 2" reinforced precast conc. slab (storey height x 1'-0" to 10'-0" wide)
- 1/2" round rods
- steel mesh reinforcing
- finished floor
- sub floor
- wood joists
- gypsum lath and plaster
- 4" x 6" reinforced conc. post poured in place behind joints in facing slabs
- 2" x 4" wood stud
- finished floor
- top of ground
- concrete foundation
- wood sleepers
- 4" conc. slab
- hardcore

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION



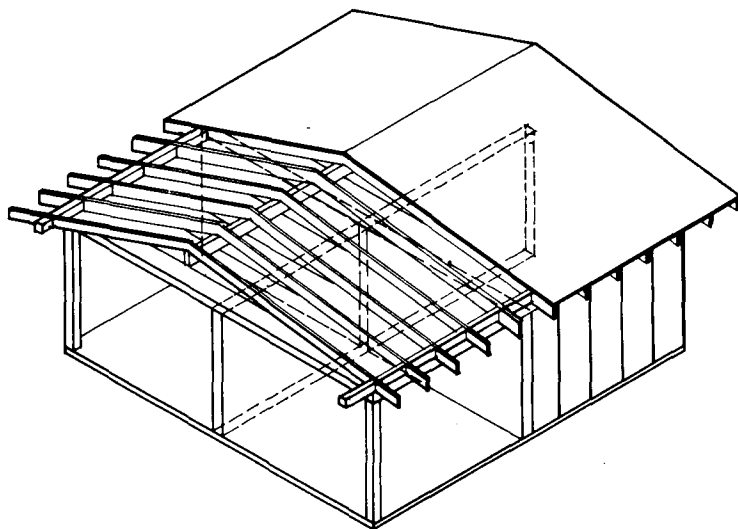
**earley system**

December, 1958.

## EARLEY SYSTEM

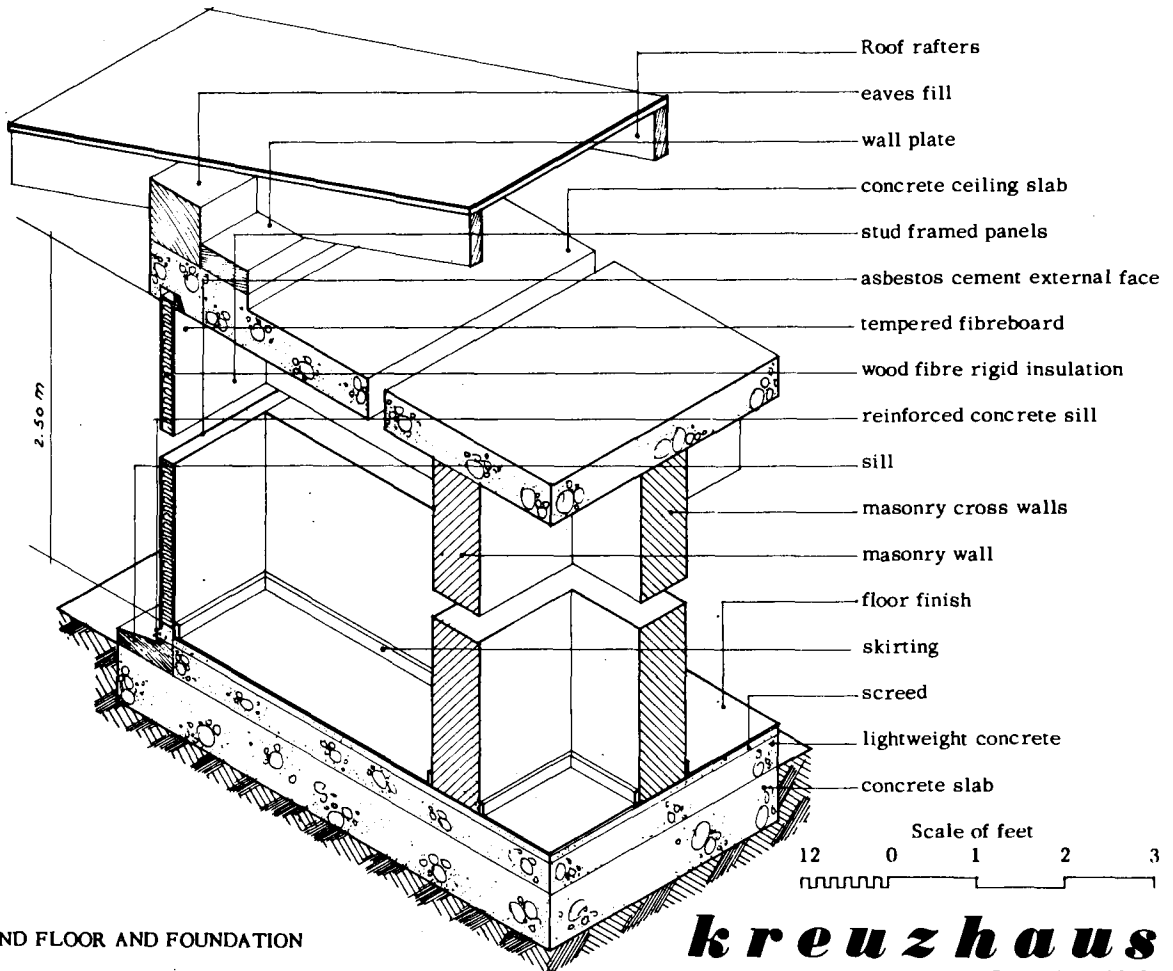
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. John J. Earley, Washington, D.C.
<b>Date and Place of Origin.</b>	2. U.S. 1915.
<b>Materials Used.</b>	3. Concrete.
<b>Description.</b>	4. Exterior slabs may be threaded for bolting to a steel frame. Concrete studs are poured immediately behind joints at 18" centres.
<b>Development to Date.</b>	5. Extensively used in U.S. around 1915.
<b>Comment.</b>	6. -
<b>References.</b>	7. American Architect and Architecture, September, 1936.





WHOLE HOUSE ASSEMBLY

ROOF

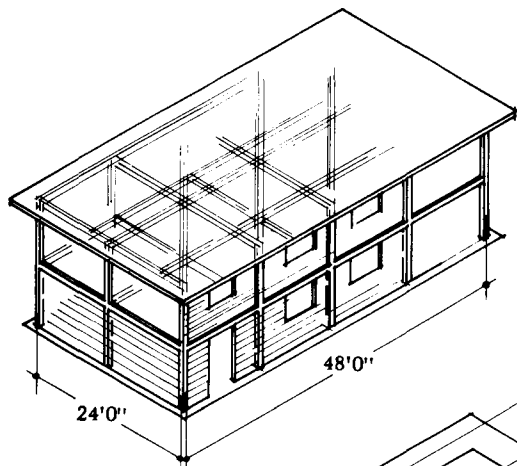


GROUND FLOOR AND FOUNDATION

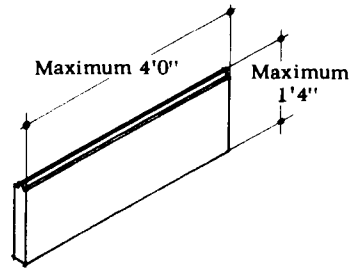
**kreuzhaus**  
December, 1958.

## KREUZHAUS

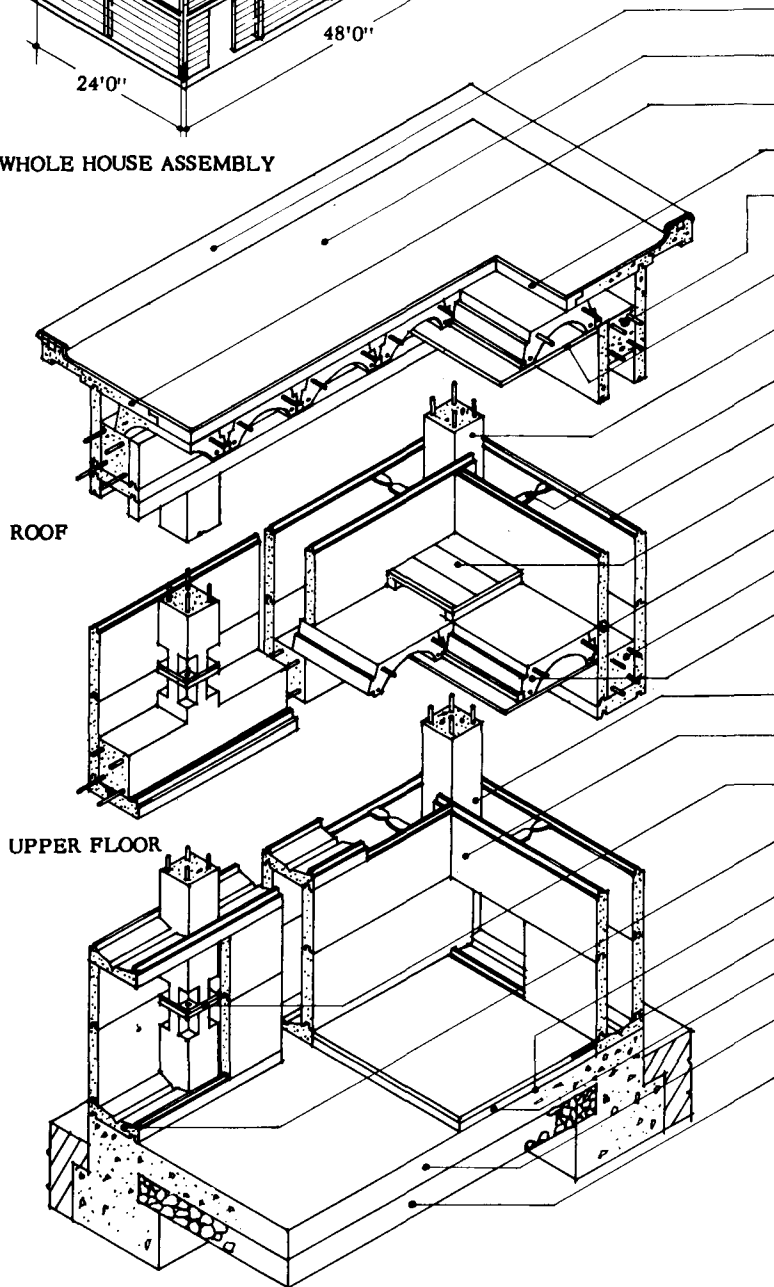
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Dr. J.W. Ludowici,<br>Jockgrim/Reinpfalz,<br>Landhaus, Germany.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Germany, 1957.   |
| <b>Materials<br/>Used.</b>   | 3. Masonry and wood.  |
| <b>Description.</b>  | 4. The essential feature of this house is the masonry cross wall and concrete slab ceiling and corner posts. Exterior walls and roof are of traditional construction. |
| <b>Development<br/>to Date.</b>  | 5. Development is as yet unknown.   |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. Sponsors literature.   |



WHOLE HOUSE ASSEMBLY



UNIT OF CONSTRUCTION



ROOF

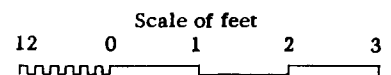
UPPER FLOOR

GROUND FLOOR AND FOUNDATION

- Metal flashing.
- Bituminous felt.
- Eaves slab.
- Foamed slag concrete.
- Reinforced concrete beam.
- Plaster ceiling.
- Reinforced concrete columns in three sections.
- Metal wall tie.
- Dense concrete slab.
- Timber flooring.
- Foamed slag concrete slab.
- Precast reinforced concrete frame.
- Reinforced concrete floor slab.
- Bonding unit.
- Reinforced concrete column.
- Skim coat plaster.
- Steel plate and column bolt connection.
- Base bonding unit.
- Thermal insulation material.
- Jointless flooring.
- Screed.
- Site concrete.
- Hardcore.

Information from Post War Building Study No. 25, Ministry of Works, London.

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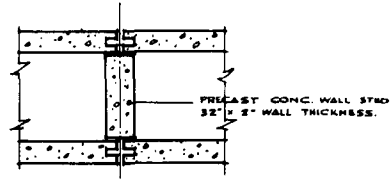


**orlit house**

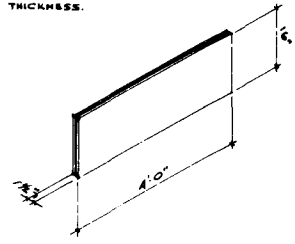
December, 1958.

## ORLIT HOUSE

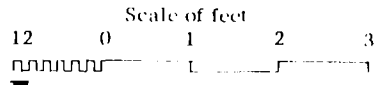
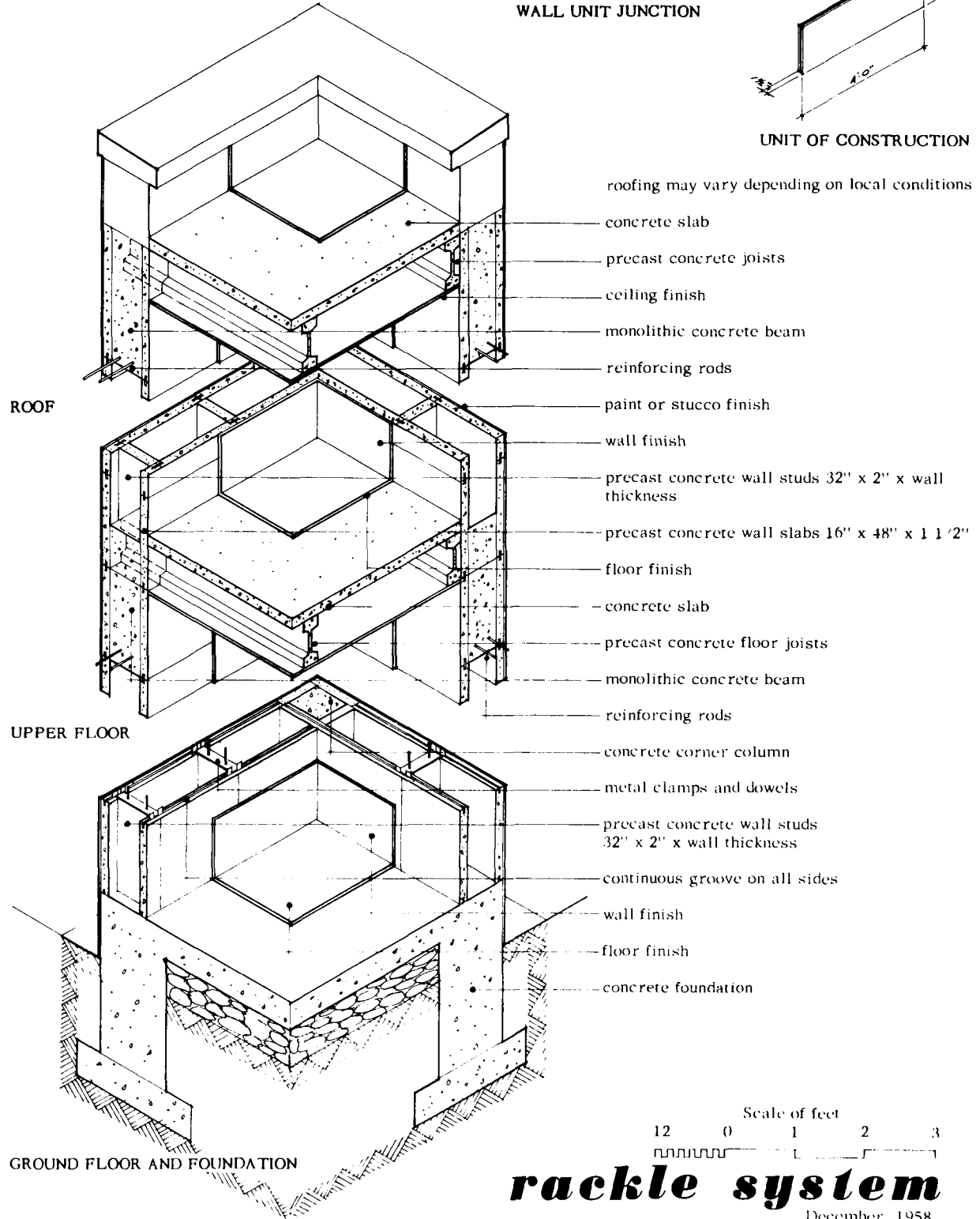
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Orlit Limited.<br>Colnbrook By Pass, Bucks, England.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.K. 1945.   |
| <b>Materials<br/>Used.</b>   | 3. Concrete and foamed slag.  |
| <b>Description.</b>  | 4. Precast reinforced concrete columns,<br>slabs, roof and floor units.<br>U= 0.27 (walls). Columns are bolted<br>together first then inner and outer<br>cladding is added. |
| <b>Development<br/>to Date.</b>  | 5. Prototype in London, 1946.   |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. Post War Building Study No. 25,<br>H.M. Stationery Office, London.   |



WALL UNIT JUNCTION



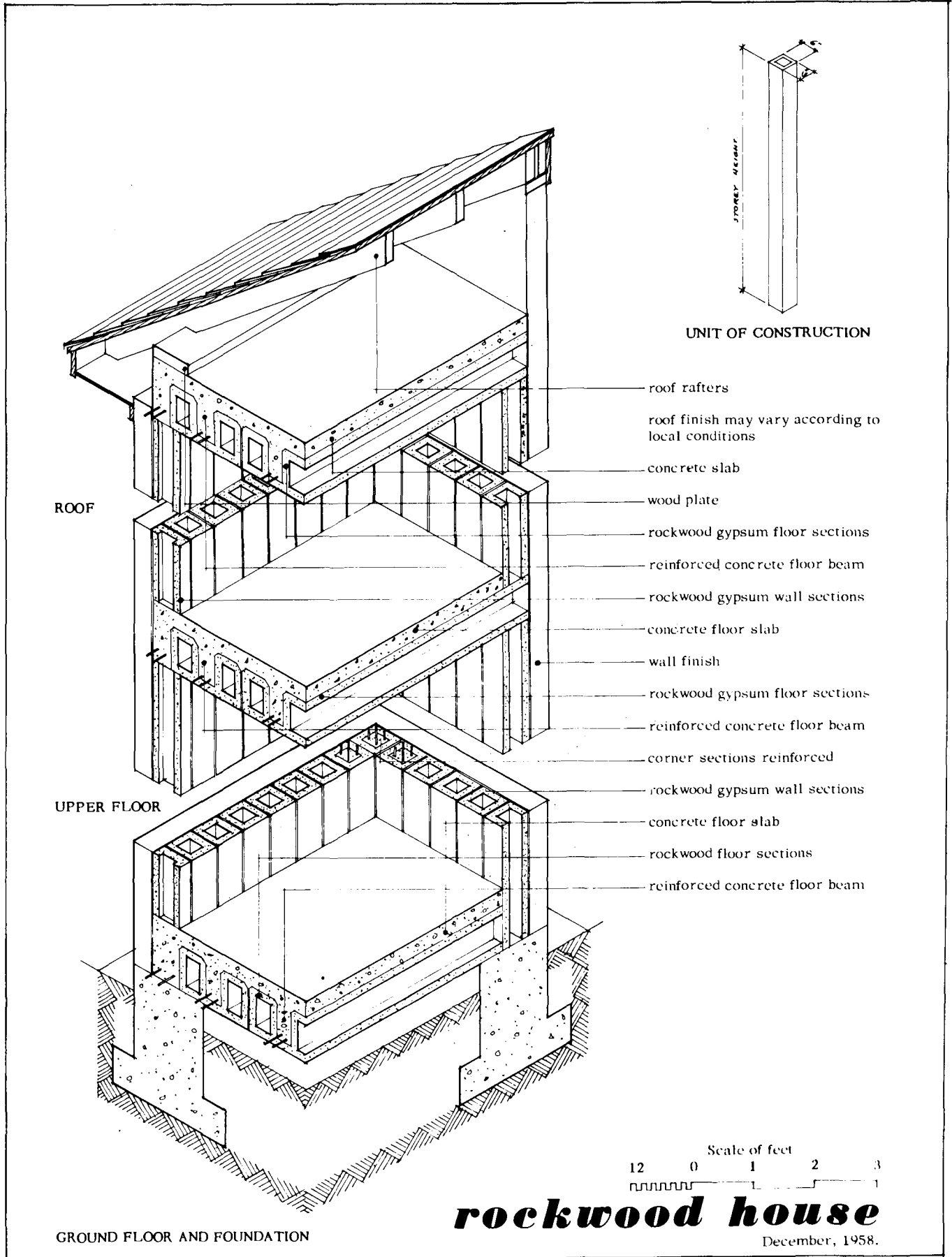
UNIT OF CONSTRUCTION



**rackle system**  
December, 1958.

## RACKLE SYSTEM

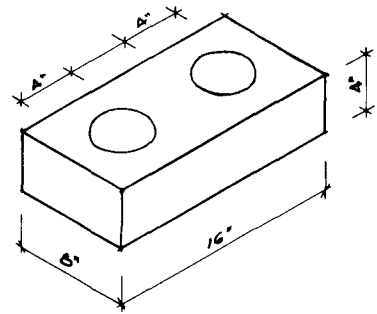
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>George Rackle and Sons Company,<br>Cleveland, Ohio.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S.A. Approximately 1936.   |
| <b>Materials<br/>Used.</b>   | 3. Precast concrete units   |
| <b>Description.</b>  | 4. Precast concrete units, joists and<br>slabs. Wall: Outer and inner rows<br>of precast slab units with precast<br>stud members set at intervals. All<br>edges are grooved. Studs have pro-<br>jecting dowel bars at one end and<br>dowel holes at the opposite end,<br>thus providing a means of doweling<br>superimposed stud sections.<br>Base: Dowels lock the studs to a<br>standard concrete foundation. |
| <b>Development<br/>to Date.</b>  | 5. No longer in operation.  |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. American Architect and Architecture,<br>September, 1936.   |



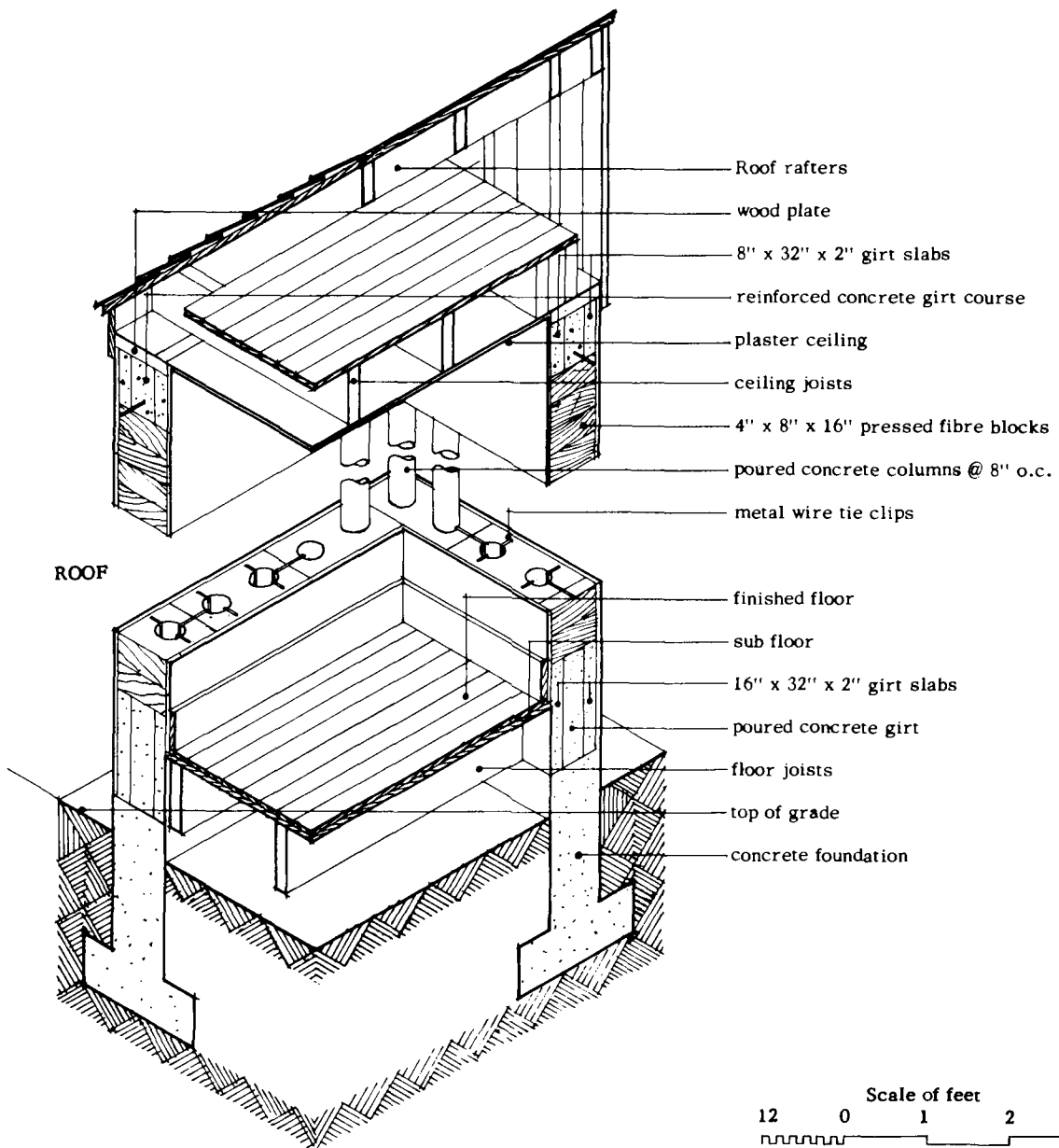
## ROCKWOOD HOUSE

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Rockwood Gypsum Lumber Corporation,<br>New York, N.Y.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S.A. Approximately 1936.   |
| <b>Materials<br/>Used.</b>   | 3. Precast hollow gypsum units with<br>reinforcing rods.  |
| <b>Description.</b>  | 4. Wall: Hollow, precast gypsum units<br>extending from floor to ceiling. Exterior<br>walls are load bearing. A tongue and<br>groove method is used for all vertical<br>joints. Where required, steel reinforcing<br>rods may be placed in vertical cells and<br>concrete poured in. Base: Precast gypsum<br>floor units with three rectangular full length<br>cells are laid directly on a foundation.<br>Reinforcing rods are laid in the cut-outs and<br>concrete is poured in and graded over the<br>units to form a rough floor slab. Any floor<br>finish may be used. |
| <b>Development<br/>to Date.</b>  | 5. No longer in operation.  |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. American Architect and Architecture<br>September, 1936.  |



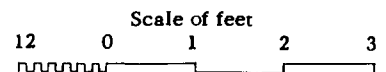


UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

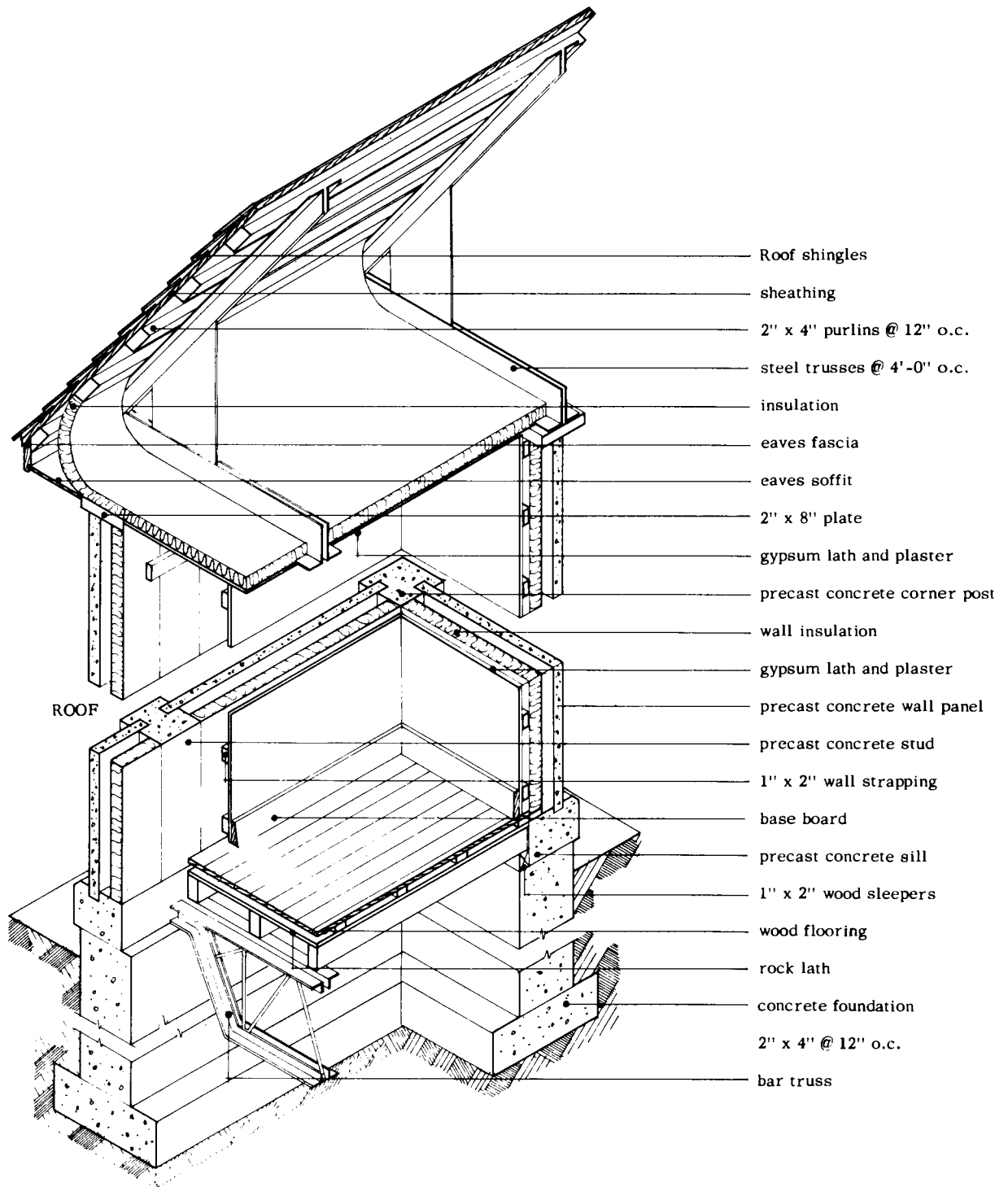


# ***stockade house***

December, 1958.

## STOCKADE HOUSE

- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Stockade Building<br>System, Inc.,<br>New York, N.Y.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S. 1920.  |
| <b>Materials<br/>Used.</b>   | 3. Wood fibre blocks and<br>concrete fill.   |
| <b>Description.</b>  | 4. A standard type of wood<br>roof and floor construction<br>is used in conjunction with<br>this type of construction.<br>Exterior is stuccoed,<br>interior plastered. |
| <b>Development<br/>to Date.</b>  | 5. Many houses built in U.S.<br>up to 1935.  |
| <b>Comment.</b>  | 6. -   |
| <b>References.</b>   | 7. American Architect and Architecture,<br>September, 1936.<br>"Evolving House III, Rational Design"<br>A.F. Bemis.  |



ROOF

GROUND FLOOR AND FOUNDATION

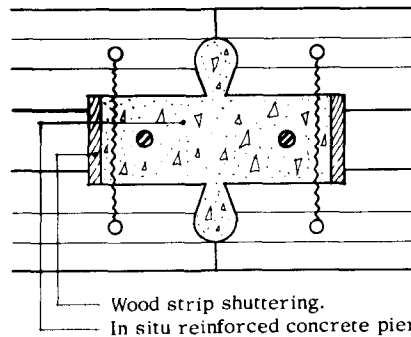
Scale of feet  
 12 0 1 2 3

**swan house**

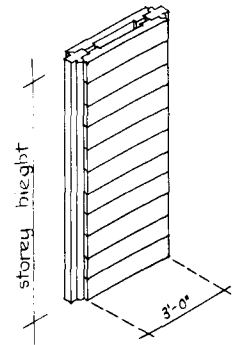
December, 1958.

## SWAN HOUSE

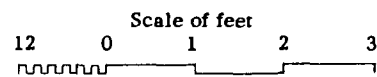
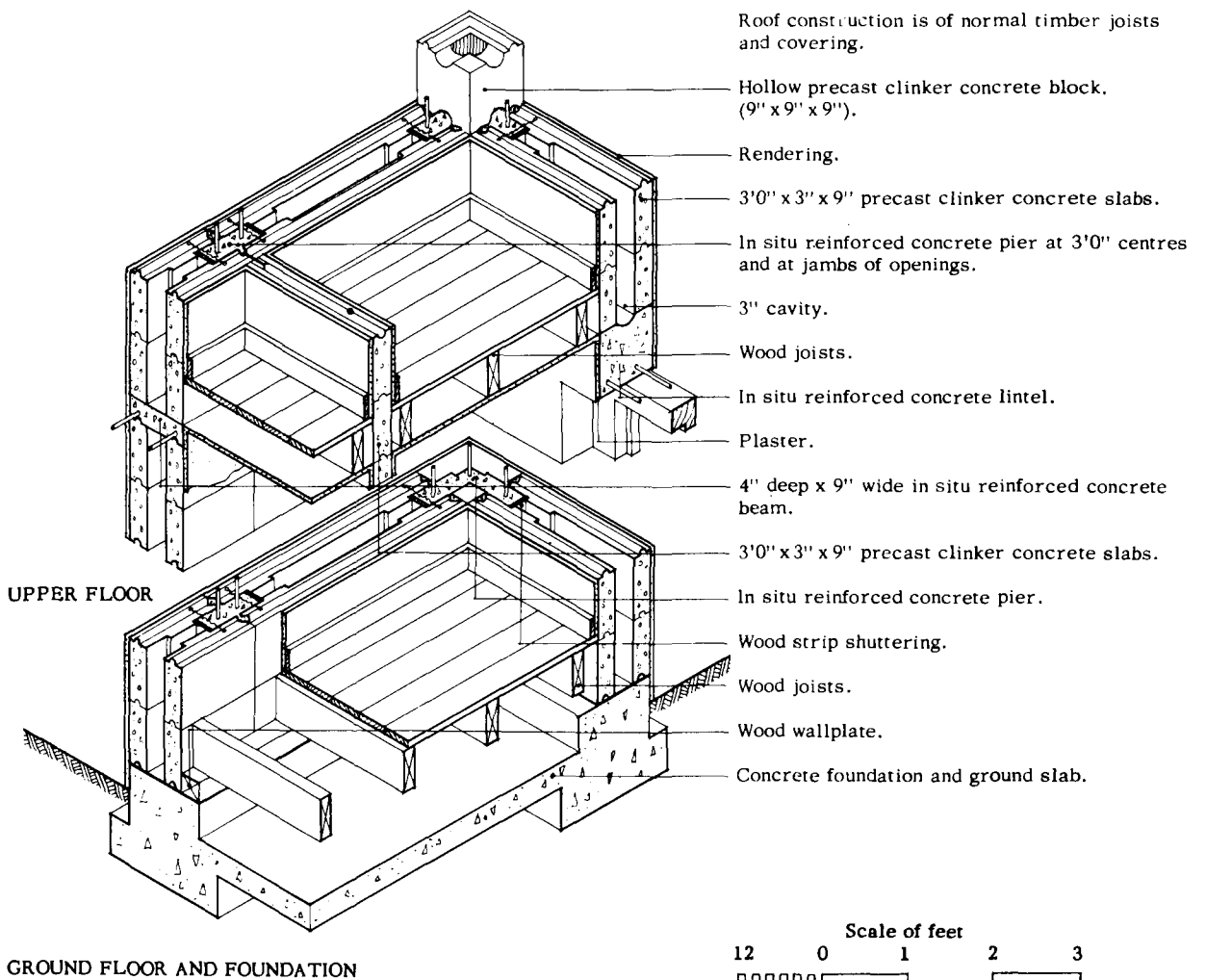
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. The Swan House, Inc., Chicago, Ill.
<b>Date and Place of Origin.</b>	2. U.S.A. Pre-1936.
<b>Materials Used.</b>	3. Concrete.
<b>Description.</b>	4. Interior finish may vary, no exterior finish is required. Foundations are conventional.
<b>Development to Date.</b>	5. -
<b>Comment.</b>	6. -
<b>References.</b>	7. American Architect and Architecture, September, 1936.



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



# winget house

December, 1958.

## WINGET HOUSE

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. Sponsor: Winget, Ltd., Rochester, Kent, England.</b>
<b>Date and Place of Origin.</b>	<b>2. U.K., 1928.</b>
<b>Materials Used.</b>	<b>3. Poured reinforced concrete frame, clinker concrete panels.</b>
<b>Description.</b>	<b>4. Clinker concrete slabs formed partial shuttering to poured-in-situ reinforced concrete post and beams. Wood shuttering used for remainder. U=0.24 (External walls).</b>
<b>Development to Date.</b>	<b>5. 3,000 to 4,000 Houses in U.K. (1928-1931), for several municipal authorities.</b>
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.</b>

# CONCRETE SANDWICH CONSTRUCTION

CS

## CONCRETE SANDWICH CONSTRUCTION

### SANDWICH WALLS-cast in situ-concrete

Case Sheets



SANDWICH POURED & PRECAST, STRUCTURAL

CS

ABERDEEN CORPORATION  
HOUSES

See Aberdeen Corporation  
Houses under CM.

ARMSTRONG-ANDERSON  
HOUSE

62 Richmond Street W.,  
Toronto 1, Ontario,  
Canada.

1947.  
2" slabs concrete as formwork  
to 4" poured concrete. 8"  
finish wall thickness.  
Conventional roof construction.  
U = 0.15.  
Steel frame.  
Houses in Thorncrest Village,  
Toronto, Ontario.  
See Durisol under CS.

Armstrong-Anderson  
House,  
62 Richmond Street W.,  
Toronto 1, Ontario,  
Canada.

BRITISH ARMY HOUSE

See British Army House under  
CM.

BRYANT HOUSE  
England.

Precast and in situ concrete  
cavity wall construction  
using steel forms within  
situ concrete as interior  
formwork.

"Prefabricated Homes",  
(B.H. Cox).  
"Architectural  
Builder", vol. 183.  
1954.

DURISOL CONSTRUCTION

See Durisol Construction  
under CU.

FIDLER HOUSE  
London County Council,  
England.

1926.  
2 leaves clinker concrete  
slab 2 1/2" thick, used as  
permanent forms for 4" in  
situ concrete core.

London County Council,  
England.

HUNKEMOLLER  
Directorate of Housing,  
Amsterdam, Holland.

Pre-1925.  
Precast hollow concrete  
reinforced units 1' 8" wide.

M.O.W. Survey of  
Prefabrication.

**SANDWICH POURED & PRECAST, STRUCTURAL**

**CS**

**LARZELERE**

Orlando, Florida,  
U.S.A.

Pre-1935.  
Vertical concrete units (planks)  
acting as permanent formwork.

M. O. W. Survey of  
Prefabrication.

**ONTARIO HYDRO**

J.R. Davies,  
27 Lorindale Ave.,  
Toronto, Ontario,  
Canada.

Sandwich construction of  
foamglass, between concrete  
slabs.

J.R. Davies,  
27 Lorindale Ave.,  
Toronto, Ontario,  
Canada.

**UNIVERSAL**

Universal Housing  
Company Limited,  
Bury Works,  
Rickmansworth, Herts,  
England.

1925-1928.  
Pressed steel frame of 3 1/2 "  
x 3" studs at 4' centers clad  
with asbestos cement channels  
1' high x 8' wide. Interior  
panels similar 4' wide, 8' high.  
Panels formed permanent  
shuttering for poured concrete,  
reinforced. One thousand  
houses erected in southern  
England mainly.

M. O. W. Survey of  
Prefabrication.  
Interdepartment  
Committee on House  
Construction Report,  
1944.

CONCRETE MONOLITHIC

## MONOLITHIC CONSTRUCTION

<b>Sub-Classifications</b>	<b>Solid Concrete</b> <b>Cavity Wall Monolithic Concrete</b> <b>Monolithic Integrally Insulated Concrete</b> <b>Mud or Earth Walling</b>
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<b>Case Sheets</b>	<b>Aychar</b> <b>Easiform House</b> <b>Monolithic Concrete</b> <b>Neff Airfoam</b>
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CONCRETE MONOLITHIC

CM

**ABERDEEN CORPORATION  
HOUSES**  
Aberdeen, Scotland.

Concrete poured. Permanent internal shuttering of insulation material.

Aberdeen Corporation Houses,  
Aberdeen, Scotland.

**AIRFOAM HOUSING**  
1190 East Broadway Street,  
Hewlett, Long Island,  
U.S.A.

A shell concrete elliptical section cast on rubber re-usable form (inflated). Not very applicable for housing. Costly.

Airfoam Housing,  
1190 East Broadway Street,  
Hewlett, Long Island,  
U.S.A.

**AUSTRALIAN PLASTER  
HOUSE**  
Bernard Evans,  
Aychar House,  
Warrigal Road,  
Moorabbin,  
Melbourne, Australia.

Reinforced plaster room has a sized form around which is constructed brick walling and roofing.

"Prefabrication",  
March 1955.

**AYCHAR**  
Aychar Pty. Limited,  
5 Warrigal Road,  
Moorabbin S/20,  
MELBOURNE, Australia.

Bernard Evans, Architect- originator. Whole rooms prefabricated in reinforced plaster, with ceiling. Rooms assembled into house. Roof supported on room units. Brick or otherwise veneered.

Aychar Pty. Limited,  
5 Warrigal Road,  
Moorabbin S/20,  
Melbourne, Australia.

**BANKS**  
J. S. Banks,  
U.S.A.

Concrete formed in situ. Monolithic concrete. Laid in two skins in situ work. Precast concrete studs bridging cavities placed in formwork.

"The Evolving House III, Rational Design",  
(Bemis).

**BOX FRAME (R. C.  
HOUSING)**  
Yorks, Rosenberg  
and Mardall,  
Architects, England.

Reinforced concrete Box Frame construction for row houses.

R. C. Housing,  
Yorks, Rosenberg  
and Mardall,  
Architects, England.

## CONCRETE MONOLITHIC

CM

### **BRITISH ARMY HOUSE**

Meresfield, Sussex,  
England.

11' 8" x 8' 0" gypsum panels manufactured on site, forming inner skin. No-fines concrete is then poured. Ring beam of dense concrete at 1st floor height.

Partitions are of no-fines sandwiched between plaster panels.

Twenty units at Meresfield.

"Prefabrication",  
February 1955.

### **CANADIAN SCHOKBETON**

Canadian Schokbeton Ltd.,  
4450 Cote Des Neiges,  
Montreal 25, Quebec,  
Canada.

Vibrated reinforced concrete poured in situ. Mainly used for multi-storey or wide span construction. Prestressed steel reinforcement.

Canadian Schokbeton  
Ltd.,  
4450 Cote Des Neiges,  
Montreal 25, Quebec,  
Canada.

### **CAST RENDERED**

W.H. Webb,  
Addlestone, Surrey,  
England.

8" no-fines concrete, Clinker concrete 1 1/2" external facing poured integrally with structural concrete.

W.H. Webb,  
Addlestone, Surrey,  
England.

### **CONCRETE CAVITY CONSTRUCTION**

Kynl Miroslav,  
Box 33, Station B,  
Hamilton, Ontario,  
Canada.

In situ poured concrete cavities construction. Continuous wall poured in 10" lifts. Insulated with non-hygroscopic insulator.

"Acceptable Building  
Materials",  
C.M.H.C. Ottawa,  
1954.

### **DURA WALL CONSTRUCTION**

J.R. Davies,  
27 Lorindale Avenue,  
Toronto, Ontario,  
Canada.

5' 4" wide x 8' 0" high panel based on 16" module.  
(Saco walls which are similar have been accepted).

J.R. Davies,  
27 Lorindale Avenue,  
Toronto, Ontario,  
Canada.

CONCRETE MONOLITHIC

CM

EASIFORM

John Laing & Son  
Limited,  
Bunns Lane,  
London N. W. 7,  
England.

In situ concrete construction  
with cavity. Using steel forms.  
Floors cast monolithically  
with walls.  $U = 0.26$  (Cavity  
Walling). Outer leaf 3 1/2"  
natural concrete. 2" cavity.  
Inner leaf 3 1/2" clinker  
concrete.  
Copper wall ties.

John Laing & Son  
Limited,  
Bunns Lane,  
London N. W. 7,  
England.

EDISON

Edison Cement  
Corporation,  
(Ingersoll System),  
U. S. A.

Concrete formed in situ.  
Whole house poured mono-  
lithically.

"The Evolving House  
III, Rational Design",  
(Bemis).

EDISON T. A.  
U. S. A.

1908.  
Whole house poured in situ.  
Concrete.

M. O. W. Survey of  
Prefabrication.  
"Architectural  
Forum", Feb. 1943.

EVANS, BERNARD  
5 Warrigal Road,  
Moorabbin, S/20,  
Australia.

See Aychar under CM.

FELLGREN

C. W. Fellgren,  
U. S. A.

Concrete formed in situ.  
Grooved studs cast into  
monolithic concrete to form  
strapping for internal  
plaster board finish. Wood  
nailing strips similarly  
incorporated in poured con-  
crete floor slabs.

"The Evolving House  
III, Rational Design",  
(Bemis).

FLAGG

Ernest Flagg,  
U. S. A.

Concrete formed in situ.  
Rubble concrete walling poured  
in situ. Conventional flooring  
and roofing 3' 9" module used for  
positioning internal partitions.

"The Evolving House  
III, Rational Design",  
(Bemis).

## CONCRETE MONOLITHIC

CM

### IBEC

Ibec Housing Corporation,  
30 Rockefeller Plaza,  
New York, N.Y.,  
U. S. A.

8" poured in situ concrete  
walls lifted by crane.  
Floor and roof slabs also  
cast in situ.  
See Tournelayer.  
Houses at Norfolk, Virginia.  
(F. H. A. Regional Office).

"Life" Oct. 10, 1949.  
"Engineering News  
Record", No. 17,  
1949.

### INGERSOLL

C. H. Ingersoll,  
U. S. A.

1918.  
Concrete formed in situ.  
Finishes rendered internally  
and externally.  
Similar to Edison system,  
115 houses in New Jersey.

"The Evolving House  
III, Rational Design",  
(Bemis).

### KNIPE

L. G. Knipe Insulated  
Concrete System  
Limited,  
California,  
U. S. A.

1925.  
Concrete formed in situ.  
Monolithic concrete poured  
against gypsum blocks  
forming T columns, rein-  
forced, rendered internally  
and externally.  
Some houses erected in  
California.

"The Evolving House  
III, Rational Design",  
(Bemis).

### KUGELHAUS

(Round)  
Dr. J. W. Ludowici,  
Jockgrim/Rheinpfalz,  
Germany.

Spherical House pre-  
fabricated as one unit of  
monolithic shell concrete,  
needs no foundation. Out-  
side stuccoed inside in-  
sulation. Wood stud frame  
partitions. Interior  
finished and furnished,  
integrally.  
Flown to site by helicopter or  
floated by the water.

Dr. J. W. Ludowici,  
Jockgrim/Rheinpfalz,  
Germany.



## CONCRETE MONOLITHIC

## CM

LAING J.  
Bunns Lane,  
London N. W. 7,  
England.

See Easiform House (No-Fines),  
under CM.

LE TOURNEAU HOUSE  
Le Tourneau Inc.,  
Toccoa, Georgia, U. S. A.  
also  
W. H. Moorhouse  
Monolithic Housing  
Corporation,  
2057 Metcalfe St.,  
Montreal, Quebec,  
Canada.

5" concrete precast shell  
laid by machine.  
1 storey only.  
U = 0.304.  
F. H. A. approved.

Le Tourneau Inc.,  
Toccoa, Georgia,  
U. S. A.  
also  
Monolithic Housing  
Corporation,  
2057 Metcalfe St.,  
Montreal, Quebec.  
Canada.

LURIE

See Lurie under MSF.

MONOLITHIC COARSE  
AGGREGATE

Exterior walls approx. 8" thick  
interior partitions 2" and 4"  
thick.

Post War Bulletin  
Study #1,  
H. M. S. Office, London.

MONOLITHIC FOAMED  
SLAG  
Foamed Slab Construction  
and General Engineering  
Company Limited,  
56 Commercial St.,  
Dartmouth, Nova Scotia,  
Canada.

10" in situ poured.

Foamed Slab Con-  
struction and General  
Engineering Company  
Limited,  
56 Commercial St.,  
Dartmouth, Nova Scotia,  
Canada.

MONOLITHIC HOLLOW  
WALL  
Monolithic Hollow Wall  
Company,  
California, U. S. A.

1925.  
Inventor (Elmer W. Marten).  
Concrete formed in situ.  
Metal core forms used for  
forming cavities within mono-  
lithic construction (reinforced),  
flooring and roofing conventional.  
Extensively used in California.

"The Evolving House  
III, Rational Design",  
(Bemis).

## CONCRETE MONOLITHIC

CM

### MORRILL

Milton Dana Morrill,  
U. S. A.

1908.  
Concrete formed in situ.  
Standard metal 24" square  
moulds. Widespread use up  
to 1931.

"The Evolving House  
III, Rational Design",  
(Bemis).

### NEFF AIRFOAM HOUSE

(Bubble)  
Wallace Neff, Architect,  
U.S.A.

Blown up rubber form  
circular.

"Architectural Forum",  
February 1943.  
"Prefabrication of  
Houses" (Kelly).

### NO-FINES

(BOSWELL HOUSE)  
M. A. Boswell and  
Company,  
London, England.

3,900 houses built in Midlands,  
England 1928.  
Same as Easiform except for  
precast concrete groins and  
precast concrete ties.  
U = 0.24.

M. A. Boswell and  
Company,  
London, England.

### NO-FINES

(CONCRETE CLINKER)  
Corolite Construction  
Company Limited,  
Manchester, England.  
and  
Edinburgh, Scotland.

Unit Construction Company,  
Wilson Lovatt & Sons Ltd.,  
Clinker Aggregate.  
9" walls rendered both sides,  
floor and roof of 3" reinforced  
concrete. U = 0.29.

"Report on Post  
War Building Study  
No. 1".

### NO-FINES (DURACRETE)

Winston Park Development  
Ltd.,  
843 Wilson Avenue,  
Downsview, Ontario,  
Canada.

No-fines poured in situ concrete  
walling.  
K = 2.9.  
C.M.H.C. accepted 1952.

"Acceptable Building  
Materials",  
C.M.H.C. Ottawa,  
1952.

### NO-FINES

(KRESZE & DEINIGER)  
Germany.

Originators of No-Fines  
concrete Highrise Buildings.

### NO-FINES (SSHA)

Scottish Special Housing  
Association,  
15-19 Palmerstone Place,  
Edinburgh, Scotland.  
also  
England.

1940 to 1942.  
8" to 1" no-fines concrete  
poured in situ wall con-  
struction up to 12 storeys.  
U = 0.44 (8" wall). 269 houses  
built in Scotland up to 1952.

Pamphlet H2F  
Central Office of  
Information,  
London, England.

## CONCRETE MONOLITHIC.

CM

### NO-FINES (WIMPEY)

G. Wimpey,  
London W. 6, England.

No-fines poured in situ concrete wall construction 2,891 houses in Scotland up to 1952.

Central Office of Information H2F,  
London, England.

### ON SITE CONCRETE

E. O'Sullivan Limited,  
St. Mary Cray, Kent,  
England.

also  
Montreal, Quebec,  
Canada.

A method of erecting concrete cavity walling with a machine in 9" lifts. Houses at Brockville, Prescott and Montreal, Canada.

E. O'Sullivan Limited,  
St. Mary Cray, Kent,  
England.  
also  
Montreal, Quebec,  
Canada.

### PORETE

Porete Manufacturing Co.,  
Newark, New Jersey,  
U.S. A.

1932.  
Concrete formed in situ. Lightweight steel frame at 12' centers imbedded in lightweight concrete (gypsum). One building constructed at Newark, New Jersey.

"The Evolving House III, Rational Design",  
(Bemis).

### PUIBETON

A.W. Van Der Poll,  
(Pollbouw, Hemmstade)  
J. Van Egteren,  
Enchede, Holland.

1957.  
2 storey construction. Monolithic structure of outer and party-walls poured in situ.  $K = 1.49 \text{ Kcal/sq. m. HoC.}$  (outside walls).

A.W. Van Der Poll,  
(Pollbouw, Hemmstade)  
J. Van Egteren,  
Enchede, Holland.

### R. B. M.

N. V. Rijnlandesche  
Betonbouw, Maatchappij,  
Delft.  
(N. V. Verenigde  
Aannerersbedrijven, v. h.  
Zwolsman, The Hague,  
Holland.

1957.  
Used for up to 5 storey houses. Outer walls are cavity walls, external cavity wall of brickwork, inner cavity wall of lightweight concrete. Party and inner walls consist of prefabricated reinforced lightweight columns with filling.

Ratiobouw,  
Bouwmethode,  
Rotterdam.

### RONDAVEL HOUSING

J. F. Will  
Kericho Tea Estate,  
Lake Victoria,  
Kenya.

Round houses 18' diameter, roofs domed.  
Metal internal screens.  
3" concrete shuttered in steel sheets formed in one day.

"Prefabrication",  
January 1955.

## CONCRETE MONOLITHIC

CM

### **SHELL CONCRETE HOUSES**

Roorkes, India.

Corrugated shell concrete  
semi-circular houses.

Central Building  
Research Institute.  
U.N. Housing Build-  
ing & Planning No. 9.

### **STRUCTOLITE**

United States Gypsum  
Company,  
U. S. A.

Concrete formed in situ. Gypsum  
concrete, monolithic construction,  
providing high insulation value.  
Floor construction similar with  
steel I-beam reinforcement.  
Number of houses in New York  
State.

"The Evolving House  
III, Rational Design",  
(Bemis).

### **TAVARES HOUSES**

Charles Tavares,  
San Diego, California,  
U. S. A.

Poured concrete (exploded  
aggregate). Method used for  
building U. S. A. Navy boats.  
All services in situ.

Charles Tavares,  
San Diego, California,  
U. S. A.

### **THERMOCON**

Higgins Homes,  
New Orleans 19,  
U. S. A.

8" thermocon  $U = 0.155$ .  
Whole house poured as one.

Higgins Homes,  
New Orleans 19,  
U. S. A.

### **UNIVERSAL HOUSING COMPANY LIMITED** England.

1925.  
Solid reinforced concrete wall  
faced with asbestos cement  
thickness 7". Pressed steel/  
stanchions 3 1/2" x 2" at 4' 0"  
centers, clinker aggregate.  
 $U = 0.29$  (walls).  
 $U = 0.43$  (ceilings).

Universal Housing  
Company Limited,  
England.

### **VAN GUILDER**

Van Guilder Double Wall  
Company,  
U. S. A.

1910.  
Concrete formed in situ. Mono-  
lithic cavity wall concrete con-  
struction. Reinforced concrete  
T-beam floors. Roof construction  
conventional. Rendered internally  
and externally. Very extensively  
used in U. S. A. and Canada.

"The Evolving House  
III, Rational Design",  
(Bemis).

## CONCRETE MONOLITHIC

CM

### WEDBERG

Axel C. Wedberg,  
U. S. A.

1925.  
Concrete formed in situ. Rigid insulation forms interlining of concrete shuttering. Houses in New York and Chicago.

"The Evolving House III, Rational Design", (Bemis).

### WOOD MASONRY

See Wood Masonry under WPL (Special).

## Mud or Earth Walls

### MUD WALLING

D. S. I. R.  
England.

Study by W. R. Jaggard for Amesbury Cottages, Wilts, 1921. Mud walling from chalk, straw and water rammed into shuttering in 1' 8" lifts. Hyrib and concrete for floors. Trussed roof. Double boarded roof with air space.

"Experimental Cottages", (Amesbury, D. S. I. R. London).

### RAMMED EARTH

Cajon

Posts and beams of timber filled with rammed earth.

Neubauer, p. 27, Housing & T. C. P. 1950 Bulletin No. 4. U. N.

### RAMMED EARTH

Pise de terre

Mud rammed between temporary shutters.

Neubauer, Housing & T. C. P. Bulletin No. 4. U. N.

### RAMMED EARTH

U. S. A.

Poured Adobe or mud walling.

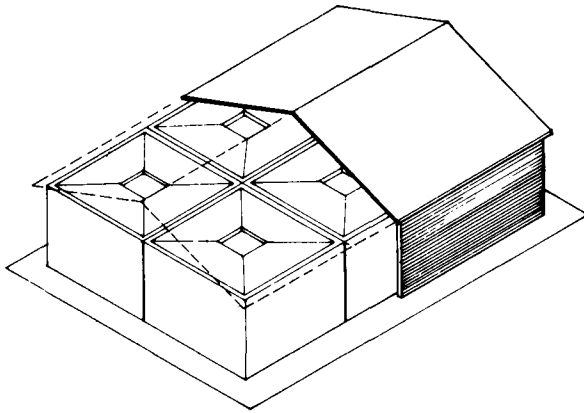
Neubauer p. 27, Housing & T. C. P. Bulletin No. 9. U. N.

### RAMMED EARTH

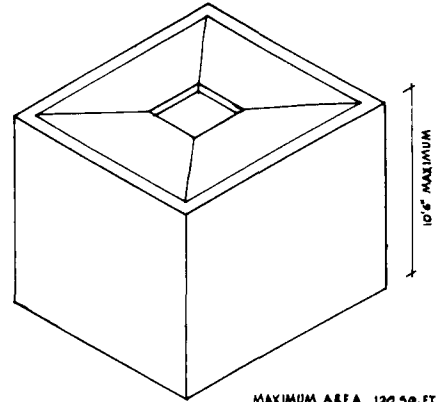
England.

English Cob.  
Stiff mud placed without shuttering.

Neubauer, Housing & T. C. P. Bulletin No. 4. U. N.

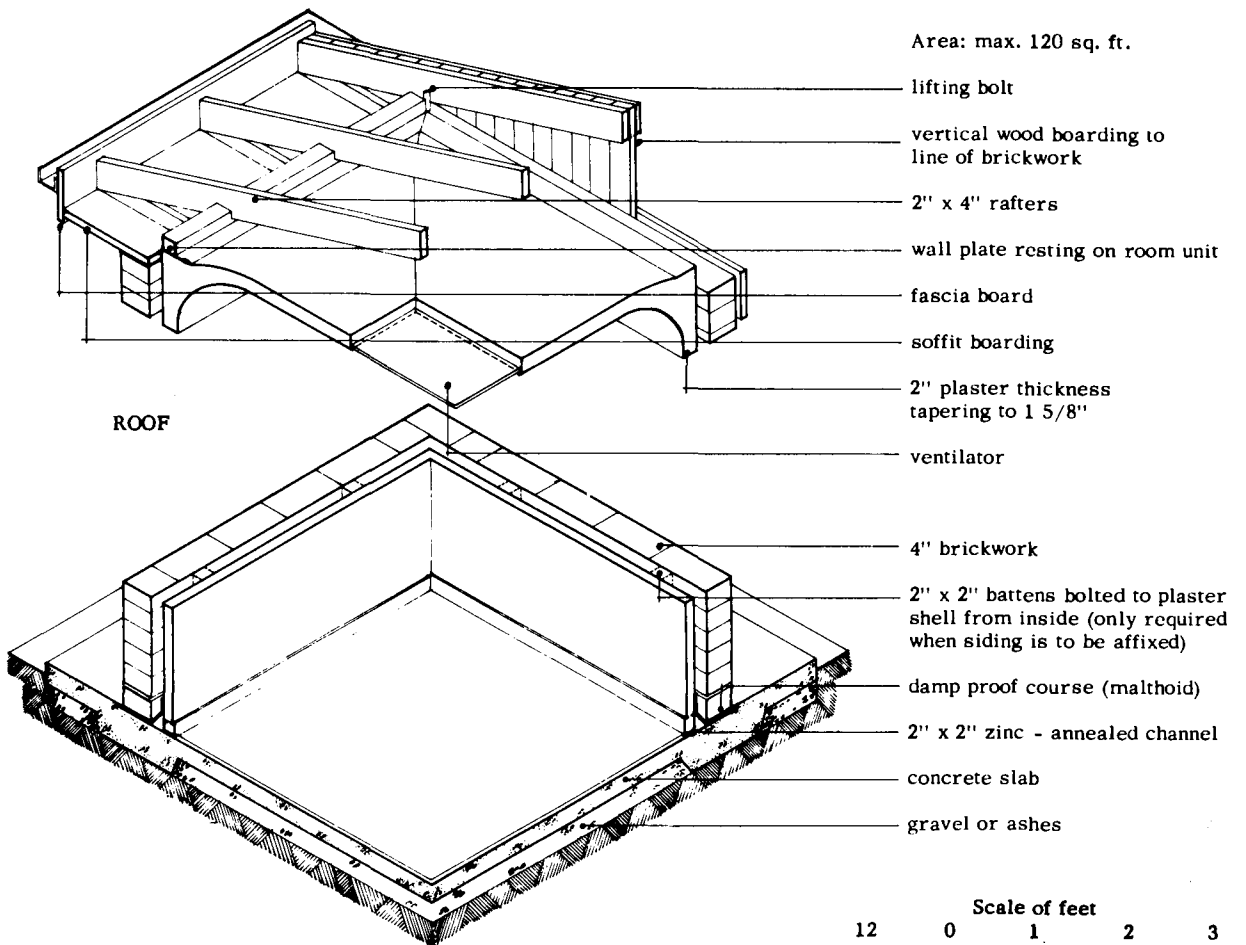


WHOLE HOUSE ASSEMBLY



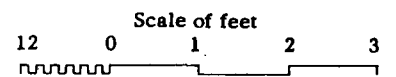
MAXIMUM AREA 120 sq. FT.

UNIT OF CONSTRUCTION



ROOF

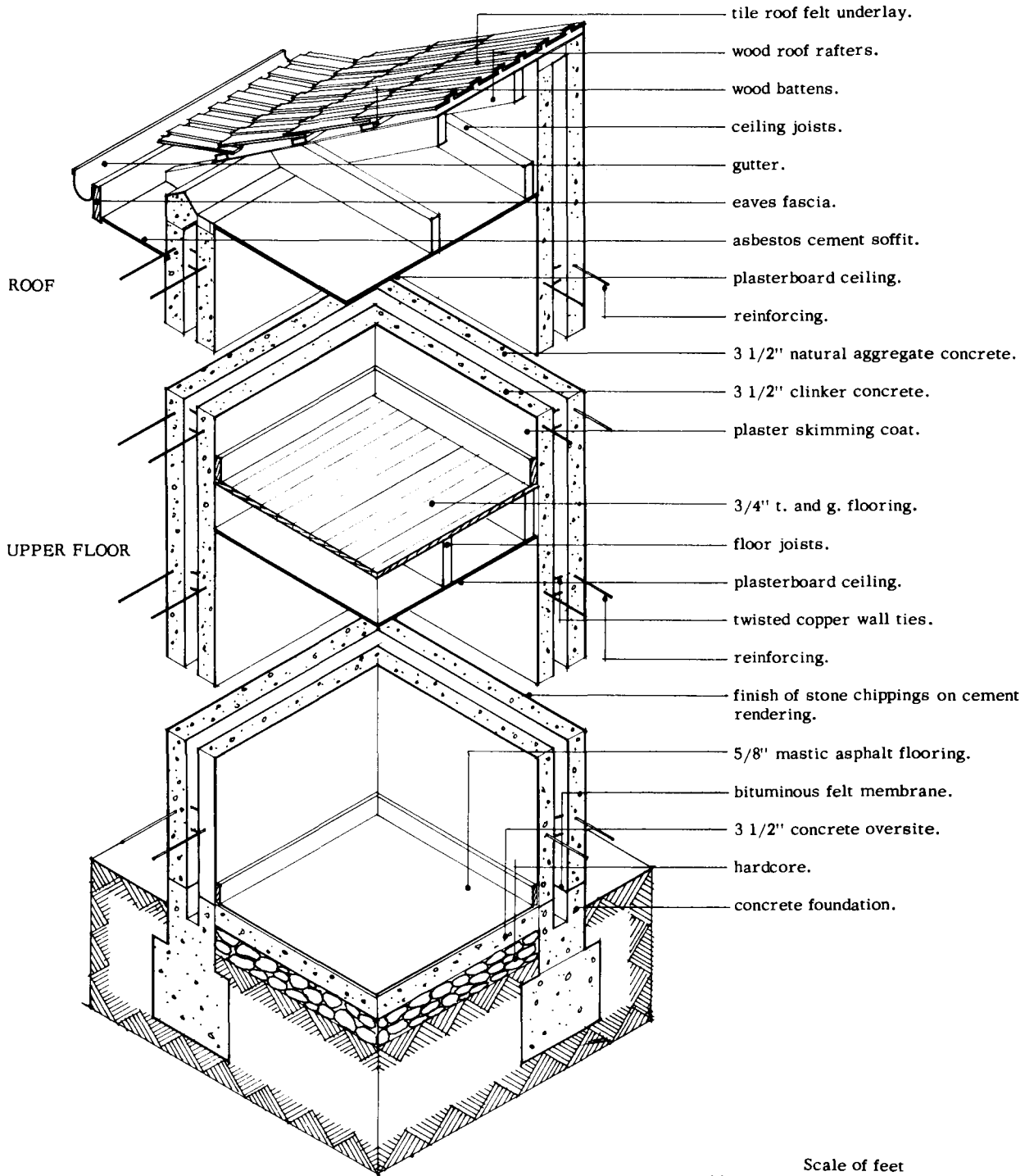
GROUND FLOOR AND FOUNDATION



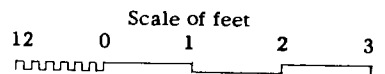
## AYCHAR PRECAST ROOMS

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Aychar Pty. Ltd.,<br>(originator: Bernard Evans)<br>5 Warrigal Road, Moorabbin,<br>Victoria, Australia.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Melbourne, Australia, 1945.  |
| <b>Materials<br/>Used.</b>   | 3. Reinforced Gypsum Plaster.<br>(2" minimum thickness).  |
| <b>Description.</b>  | 4. Room units are cast in steel<br>and concrete moulds at factory.<br>Floor is prepared before delivery<br>of room units. Units are strong<br>enough to carry roof, cladding and<br>own load, only. |
| <b>Development<br/>to Date.</b>  | 5. 25 buildings in Melbourne, Australia.  |
| <b>Comment.</b>  | 6. Suitable only for 1 storey construction.   |
| <b>References.</b>   | 7. Division of Building Research,<br>Commonwealth Scientific and<br>Industrial Research Organization,<br>Melbourne, Australia.  |

Floor and roof construction may vary according to custom and conditions.



GROUND FLOOR AND FOUNDATION



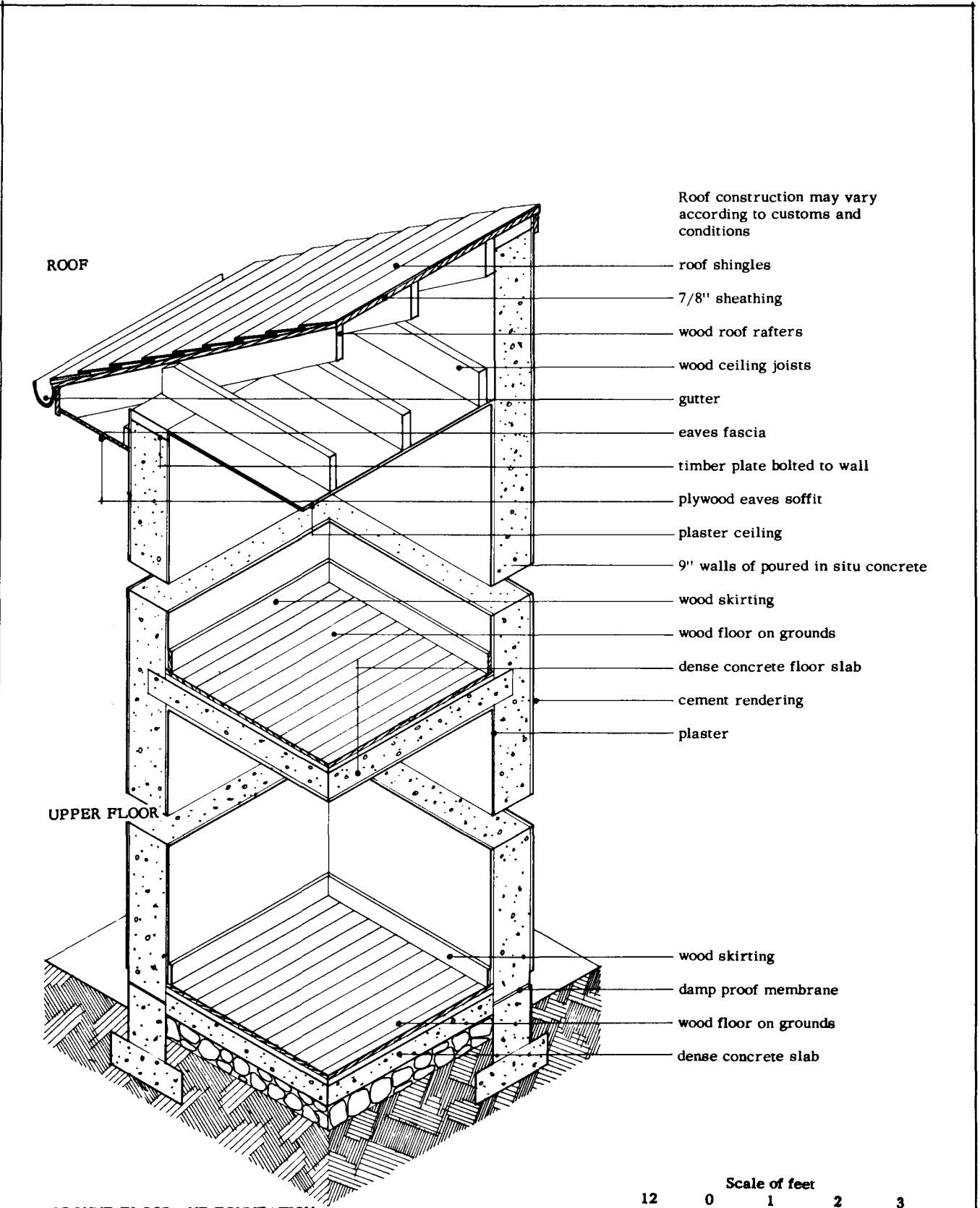
***easiform house***

December, 1958.



## EASIFORM HOUSE

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. Sponsors: J. Laing and Son Limited.</b>
<b>Date and Place of Origin.</b>	<b>2. Southern England about 1928.</b>
<b>Materials Used.</b>	<b>3. Reinforced concrete externally, clinker concrete internally.</b>
<b>Description.</b>	<b>4. U-0.29. Early Easiform houses were built with solid concrete walls, sheet shows a later form using rising shuttering in which both leaves are cast at the same time.</b>
<b>Development to Date.</b>	<b>5. -</b>
<b>Comment.</b>	<b>6. Boswell House is similar only with both walls in clinker concrete.</b>
<b>References.</b>	<b>7. "Post War Building Study No. 1", H.M. Stationery Office, London.</b>



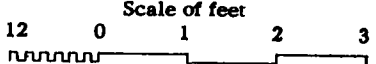
Roof construction may vary according to customs and conditions

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

- roof shingles
- 7/8" sheathing
- wood roof rafters
- wood ceiling joists
- gutter
- eaves fascia
- timber plate bolted to wall
- plywood eaves soffit
- plaster ceiling
- 9" walls of poured in situ concrete
- wood skirting
- wood floor on grounds
- dense concrete floor slab
- cement rendering
- plaster
- wood skirting
- damp proof membrane
- wood floor on grounds
- dense concrete slab

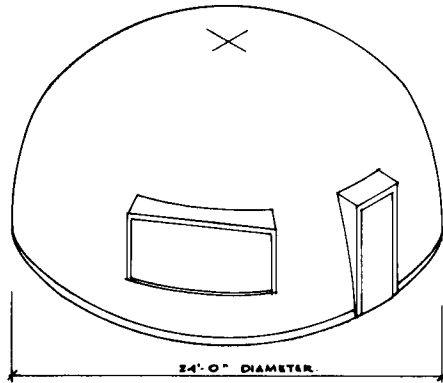


***monolithic concrete***

December, 1958.

## MONOLITHIC CONCRETE

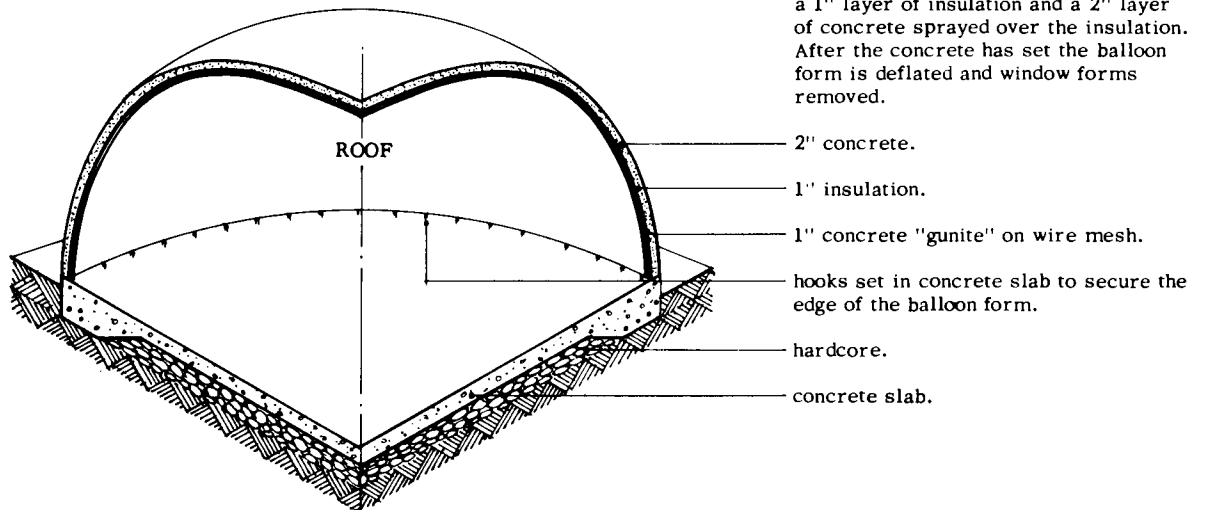
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. System used by several U.K. firms. Also used in Germany.
<b>Date and Place of Origin.</b>	2. U.K. 1920.
<b>Materials Used.</b>	3. Concrete.
<b>Description.</b>	4. Clinker concrete wall plastered both sides has $U=0.30$ . "No-fines concrete" is concrete with no fine aggregate included (i.e. sand, etc.). Clinker whinstone gravel or blast furnace, coarse aggregate is used.
<b>Development to Date.</b>	5. Large number of dwellings in U.K. and elsewhere since 1930.
<b>Comment.</b>	6. This type of construction is used in conjunction with many varying types of roof and floor construction.
<b>References.</b>	7. "Post War Building Study No. 1", H.M. Stationery Office, London.



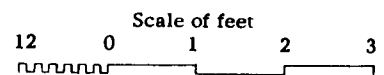
WHOLE HOUSE ASSEMBLY

Method of construction.

A 24'0" in diameter circular concrete slab is laid on the ground. The form, consisting of a large rubber bag is then placed on the slab, secured at the edge and inflated to form the shape of a hemisphere. Door and window forms are placed in position against the side of the bag. A layer of 1" concrete "gunite" is sprayed over wire mesh reinforcement followed by a 1" layer of insulation and a 2" layer of concrete sprayed over the insulation. After the concrete has set the balloon form is deflated and window forms removed.



GROUND FLOOR AND FOUNDATION



**neff airform**

December, 1958.

## NEFF AIRFORM

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Wallace Neff, Architect,<br>Hollywood, California, U.S.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S. 1942.   |
| <b>Materials<br/>Used.</b>   | 3. Concrete.  |
| <b>Description.</b>  | 4. An inflated rubber half-balloon<br>is blown up over a concrete slab<br>on grade. Windows are placed<br>against the form and a concrete<br>and insulation sandwich poured<br>producing a hemispherical shaped<br>house. |
| <b>Development<br/>to Date.</b>  | 5. First developed at Falls Church,<br>Virginia in 1942 and subsequently<br>a variation of this in various parts<br>of the world especially the tropics.  |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. "Architectural Forum",<br>February 1943.   |

# STRUCTURAL SANDWICH AND PLASTIC SYSTEMS

## **STRUCTURAL SANDWICH AND PLASTIC SYSTEMS**

**Case Sheets**    **Buell House**  
**Monsanto Plastic House**  
**Panelfab**  
**Foamed Plastic Hut**

STRUCTURAL SANDWICH AND PLASTIC SYSTEMS

S

**ACORN HOUSES**

(UNFOLDING HOUSE)  
Techbuilt Incorporated,  
55 Brattle Street,  
Cambridge,  
Massachusetts, U.S.A.

Architect Karl Koch, 1948.  
Foundation: steel on cone piers,  
2" sandwich of plywood skins on  
paper honeycomb core. Never  
achieved mass production.  
Several at Concord Mass.  
Unfolding package.  $U = 0.19$ .

"Architectural Journal",  
Jan. 5th, 1950.  
"Life Magazine",  
1948.  
"Architectural Record"  
May 1950.

**ALLANTAZ HOUSE**

Societe d'Exploitation  
d'L'Habitation Moderne,  
France.

Asbestos - cement sheeting  
joined to form a box column  
reinforced with wool rails.  
Grid 2' 0". Asbestos roofing.

"Prefabrication",  
April 1954.

**ARCTIC SHELTER**

United States Army  
U. S. A.

Aluminum structural sandwich  
with t. & g. joints and rubber  
grommets. 3" x 4' 0" x 8' 0"  
Honeycomb core in panels.

"Engineering News  
Records",  
August 1950.

**ARCTIC UNITS**

Arctic Units Limited,  
Toronto, Ontario,  
Canada.

1958.  
Northern houses, totally  
sandwich built using plywood  
skins bonded to styrofoam core.  
Inset hook joints with  
polyurethane gaskets (Canadian  
Plastics July 1958).

Arctic Units Limited,  
Toronto, Ontario,  
Canada.

**BUELL**

T.H. Buell & Company,  
Architects,  
Denver, Colorado,  
U. S. A.

Unitary. House in sections 10'  
x 19' made up in panels 3' wide  
by storey height of 1" insulation  
(rigid) secured by metal stripping  
bolted. Roof and metal joists  
and metal decking. Intended to be  
produced in same manner as car.

"The Evolving House,  
III, Rational Design",  
(Bemis).  
"American Architect  
& Architecture",  
September 1936.

**CONVAIR HOUSE**

Convair Aircraft,  
U. S. A.

1940.  
A structural aluminum faced  
honeycomb core.  
Sandwich panel.

Convair Aircraft,  
U. S. A.



**STRUCTURAL SANDWICH AND PLASTIC SYSTEMS**

**S**

**COPCO HOUSE**

Copco Steel &  
Engineering Company,  
14035 Grand River Avenue,  
Detroit 27, Michigan,  
U. S. A.

F. H. A. Technical  
Circular 11.

**DYLITE SANDWICH PANELS**

Koppers Incorporated,  
Monaca, Pennsylvania,  
U. S. A.

1958.  
Hardboard and plywood skins  
bonded to foam bead polystyrene  
("Dylite"). Panels used as  
wall, roof and partitions in  
several Detroit homes.

Kopper Incorporated,  
Monaca, Pennsylvania,  
U. S. A.

**EAST COAST AIRCRAFT**

House  
East Coast Aircraft  
Incorporated,  
Mount Vernon, N. Y.,  
U. S. A.

Igloo and cylindrical forms of  
cellulose acetate interior.  
Fibreglass exterior.  
Divisible into quadrilateral units  
to be assembled as required.  
Standard Hut size 14' 0" diameter.

East Coast Aircraft  
Incorporated,  
Mount Vernon, N. Y.,  
U. S. A.

**ELEMENTHUS**

See Elementhus under WPL.

**FIBREGLASS-STYROFOAM  
HOUSE**

Enu Manufacturing  
Company,  
Flint, Michigan,  
U. S. A.

1958.  
Structural sandwich with  
fibreglass plastic skins on  
styrofoam core, low cost 3-  
bedroom house. No other  
details.

Enu Manufacturing  
Company,  
Flint, Michigan,  
U. S. A.

**HASKELITE**

(Styrofoam)  
(Bendix House)  
Grand Rapids,  
Michigan, U. S. A.

A curtain wall sandwich  
panel. Plastic. Rigid.  
Rigid fibreglass facing  
bonded to core.  
See Styrofoam House.

Haskelite,  
Grand Rapids,  
Michigan, U. S. A.

**C. M. H. C. HOUSE**

House No. 4,  
Ajax, Ontario,  
Canada.

Experimental foam glass  
house with glued joints  
and floating slab.  
Erected by C. M. H. C. 1948.

D. B. R. Report,  
No. 30,  
N. R. C. Ottawa.

JICWOOD HOUSE

See Jicwood House under WSSP.

KERR PANEL

A.H. Kerr & Company,  
Incorporated,  
2950 Winona Avenue,  
Burbank, California,  
U.S.A.

A plastic faced panel with  
wood frame. Loadbearing  
weight 60 lbs. comp. strength,  
20,000 p.s.i.  $K = .09$ .  
Used for refrigerators as  
well as housing.

A.H. Kerr & Com-  
pany Incorporated,  
2950 Winona Avenue,  
Burbank, California,  
U.S.A.

LAMELLA

F. Hills and Sons,  
Limited,  
Norton Road,  
Stockton-on/Tees,  
England.

A system formerly developed  
in Germany in 1923. Used in  
U.S.A. for larger buildings.  
An arch frame composed of  
many short pieces of wood  
bolted together in a diamond  
shape pattern.

F. Hills and Sons,  
Limited,  
Norton Road,  
Stockton-on/Tees,  
England.

LE RICOLAIS

See Le Ricolais under WFH.

M.G.P.

Matern, Graff & Paul  
Architects,  
U.S.A.

1942.  
Sandwich loadbearing panels  
supporting timber frame  
trusses. Metal studs between  
panels. Panels of composite  
plywood insulation board.  
Some defence housing con-  
tracts in U.S.A.

"New Pencil Points",  
April 1943.  
M.O.W. Survey of  
Prefabrication.

MONSANTO PLASTIC  
HOUSE

Cambridge,  
Massachusetts, U.S.A.

Plastic structural sandwich  
wall, roof and floor units.  
Large sections.  
Experimental house.

"Architectural  
Evolution &  
Engineering  
Analysis of A Plastic  
House of the Future",  
M.I.T.

## STRUCTURAL SANDWICH AND PLASTIC SYSTEMS

S

### NAHB RESEARCH HOUSE

NAHB Through Andy Place, 1958.  
South Bend, Indiana,  
U.S.A.

Uses Koppers sandwich panels as above-walls, partitions and roof.

NAHB Through Andy Place, South Bend, Indiana, U.S.A.

### NATIONAL HOMES SANDWICH HOUSE

National Homes Company, 1957.  
Lafayette, Indiana,  
U.S.A.

Walls, roof and partition of structural sandwiches using hardboard and aluminum skins on several core materials. Concrete slab on grade floor.

"House & Home", December 1957.

### PANELFAB

Panelfab Products Inc., 2000 North East 146th St., Miami, Florida, U.S.A.

Sandwich Panels. "Panelfab".

Forest Products Laboratory.

### PAPER HOUSE

Akker & Wink, Institute of Paper Chemistry, U.S.A.

Cellular panels made from chip board treated with sulphur and made from waste paper. Wall and roof panels. Frameless structural sandwich.

"Paper Industry", May 1948.

### PLASTIC HOUSE

Salon des Arts Managers, Paris, France.

"Chemistry & Industry", 1956. "Canadian Architect", October 1956.

### PORTABLE HOUSES

(Jamesway)  
Francis Hughes & Associates Limited, 4850 Amiens Street, Montreal North, Quebec, Canada.

Laminated wood semi-circular arch roof panels of vinyl fabric 1 1/2" rockwool attached to floor panels.

Used by the United States Army. See Francis Hughes (MP).

"The Dynamic North, Book 2", U.S.A. Navy.

also

51 James Street, Ottawa, Ontario, Canada.

STRUCTURAL SANDWICH AND PLASTIC SYSTEMS

S

**FOAMED PLASTIC HUT**

(XF 57-1)  
S. Gitterman,  
Central Mortgage &  
Housing Corporation,  
Canada.

Homogeneous foamed plastic wall, roof and floor panel construction, bonded in situ, 4' 0" module.

C.M.H.C. File:  
110-3-1-2.

**STYROFOAM SANDWICH HOUSES**

Dow Chemical Company,  
Midland, Michigan,  
U.S.A.

1950.  
Plywood skins bonded to foam polystyrene "Styrofoam" core for wall and roof panels. Insulated sandwich spline joints.

Dow Chemical  
Company,  
Midland, Michigan,  
U.S.A.

**UNINORM**

Constructions  
Démontables Uninorm,  
France.

1938.  
Timber frame. 2.52m. wide by storey high, locked into one another. Some army buildings erected.

M.O.W. Survey of  
Prefabrication.  
"Arch. d'Aujourd'hui",  
February 1939.

**U.S. FOREST PRODUCTS  
LAB SANDWICH HOUSE**

Madison, Wisconsin,  
U.S.A.

1948.  
Experimental structural sandwich floor, wall, partition and roof panels. Plywood skins (alternatively kraft-veneer or aluminum skins) bonded to paper honeycomb cores. Sandwich spline joints.

U.S. Forest Products  
Lab.,  
Madison, Wisconsin,  
U.S.A.

**UTLEY-LINCOLN SYSTEM  
INCORPORATED**

Utley-Lincoln System  
Incorporated,  
723 East New Hampshire  
Avenue,  
Royal Oak, Michigan,  
U.S.A.

Metal faced paper honeycomb core structural sandwich.

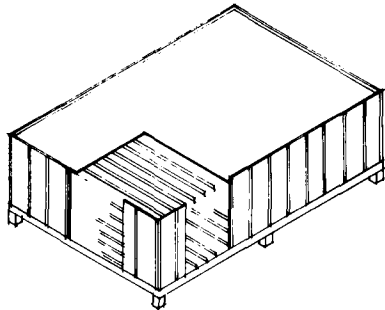
Utley-Lincoln System  
Incorporated,  
723 East New  
Hampshire Avenue,  
Royal Oak, Michigan,  
U.S.A.

**VINYLLITE**

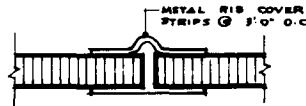
Anonymous (Panels  
designed to demonstrate  
Vinylite, a product of  
Carbine & Carbon  
Corporation),  
U.S.A.

1934.  
Plastic panel 8' high x 2' 6" x 2" bolted together. Experimental only. Joined horizontally to metal rod passing through panel. No development recorded.

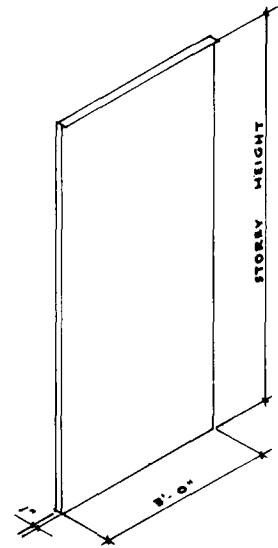
"The Evolving House  
III, Rational Design",  
(Bemis).



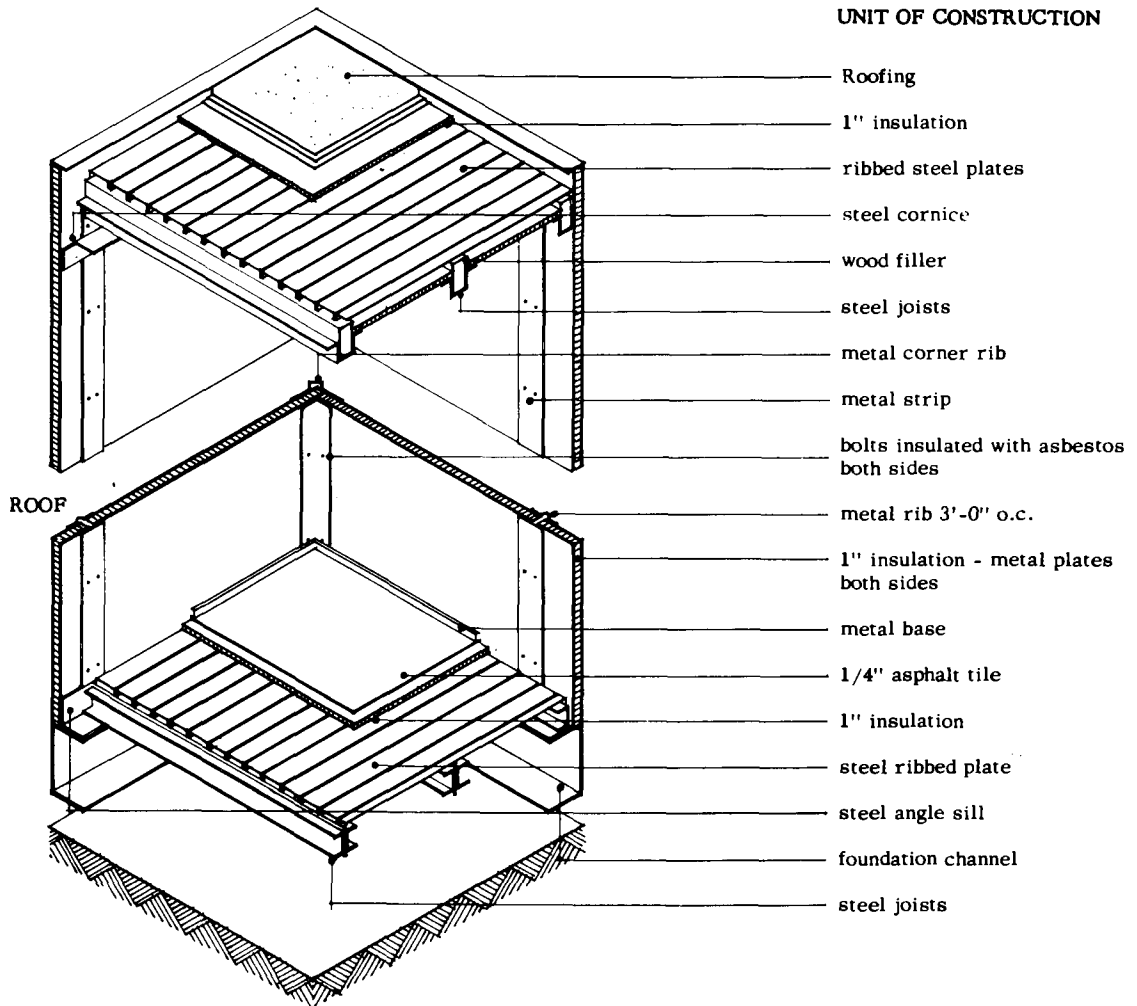
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



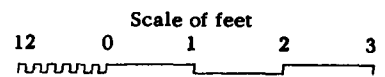
UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

- Roofing
- 1" insulation
- ribbed steel plates
- steel cornice
- wood filler
- steel joists
- metal corner rib
- metal strip
- bolts insulated with asbestos both sides
- metal rib 3'-0" o.c.
- 1" insulation - metal plates both sides
- metal base
- 1/4" asphalt tile
- 1" insulation
- steel ribbed plate
- steel angle sill
- foundation channel
- steel joists

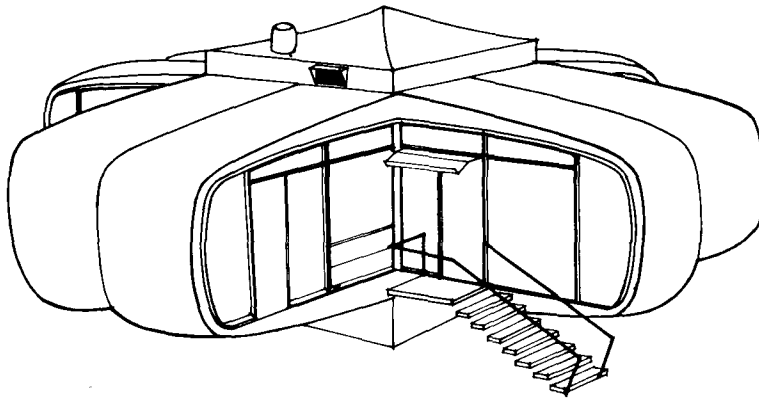


**buell house**

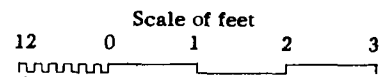
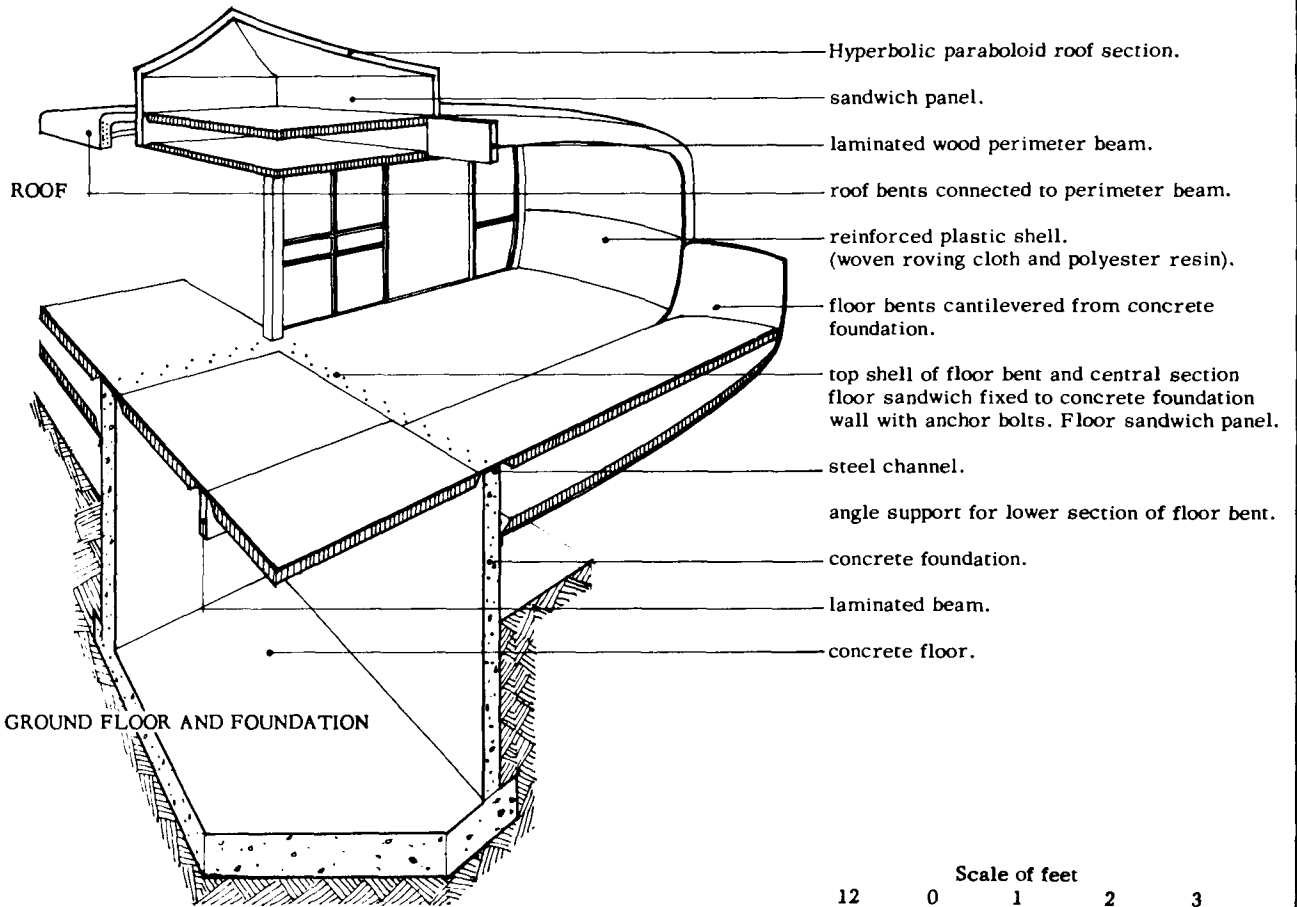
December, 1958.

## BUELL HOUSE

- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>T.H. Buell and Co.,<br>Denver, Colo.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. U.S. Pre-1936.   |
| <b>Materials<br/>Used.</b>   | 3. Metal.   |
| <b>Description.</b>  | 4. House is entirely prefabricated in<br>the style of an automobile. Sandwich<br>panels are joined by metal ribs. Whole<br>parcel is delivered in sections measuring<br>10'-0" x 19'-0" complete with fixtures.<br>Weight is 3 lbs. per cu. ft. |
| <b>Development<br/>to Date.</b>  | 5. -  |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. American Architect and Architecture,<br>September, 1936.<br>"The Evolving House, III - Rational Design.  |



WHOLE HOUSE ASSEMBLY



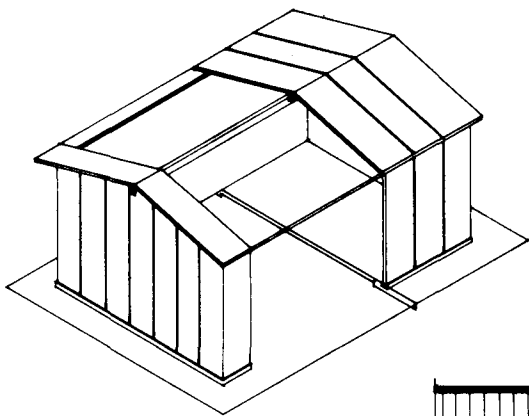
# *monsanto plastic house*

December, 1958.

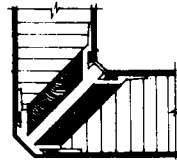
## MONSANTO PLASTIC HOUSE

- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Monsanto Chemical Company,<br>100 Monsanto Avenue,<br>Springfield, 2, Massachusetts, U.S.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Massachusetts Institute of<br>Technology, 1957 U.S.   |
| <b>Materials<br/>Used.</b>   | 3. Plastics.   |
| <b>Description.</b>  | 4. Units are made up with a<br>reinforced polyethylene glass<br>fibre skins and a core of<br>polyethylene foam and paper<br>honey combs. The wings of the<br>house act as cantilever beams<br>supported from the central core. |
| <b>Development<br/>to Date.</b>  | 5. One experimental house built at<br>Springfield, Massachusetts, and<br>subsequently moved to Hollywood,<br>California.   |
| <b>Comment.</b>  | 6. This project was exploratory<br>rather than an attempt at<br>solving the housing problem.   |
| <b>References.</b>   | 7. "Architectural Evolution and<br>Engineering Analysis of a Plastics<br>House of the Future",<br>Massachusetts Institute of Technology.   |

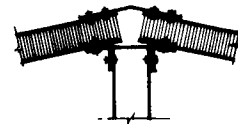




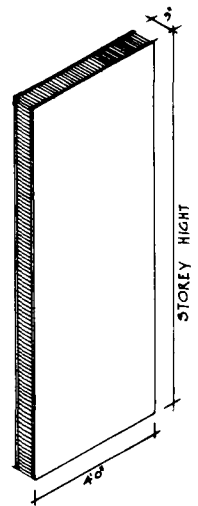
WHOLE HOUSE ASSEMBLY



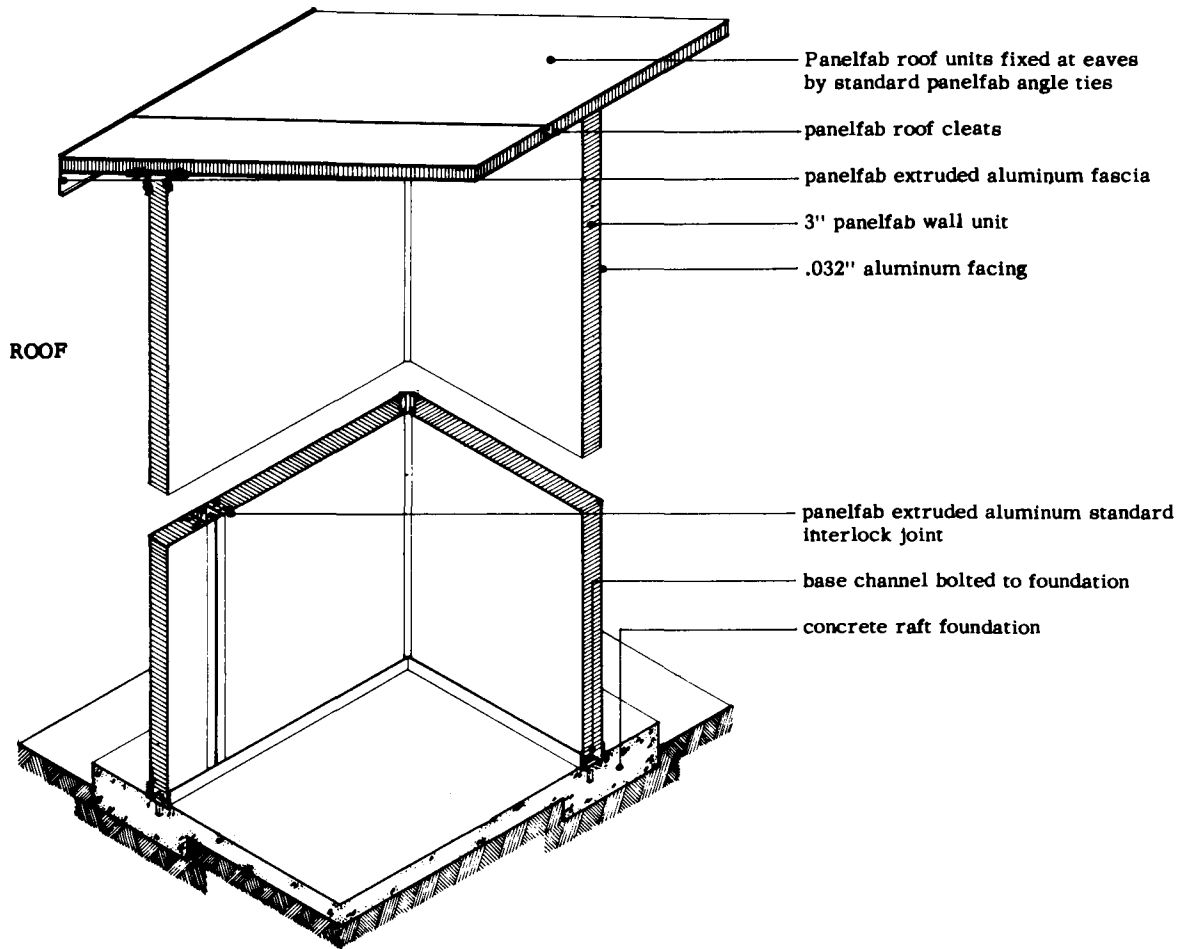
WALL UNIT JUNCTION



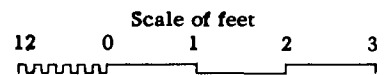
ROOF JUNCTION



UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

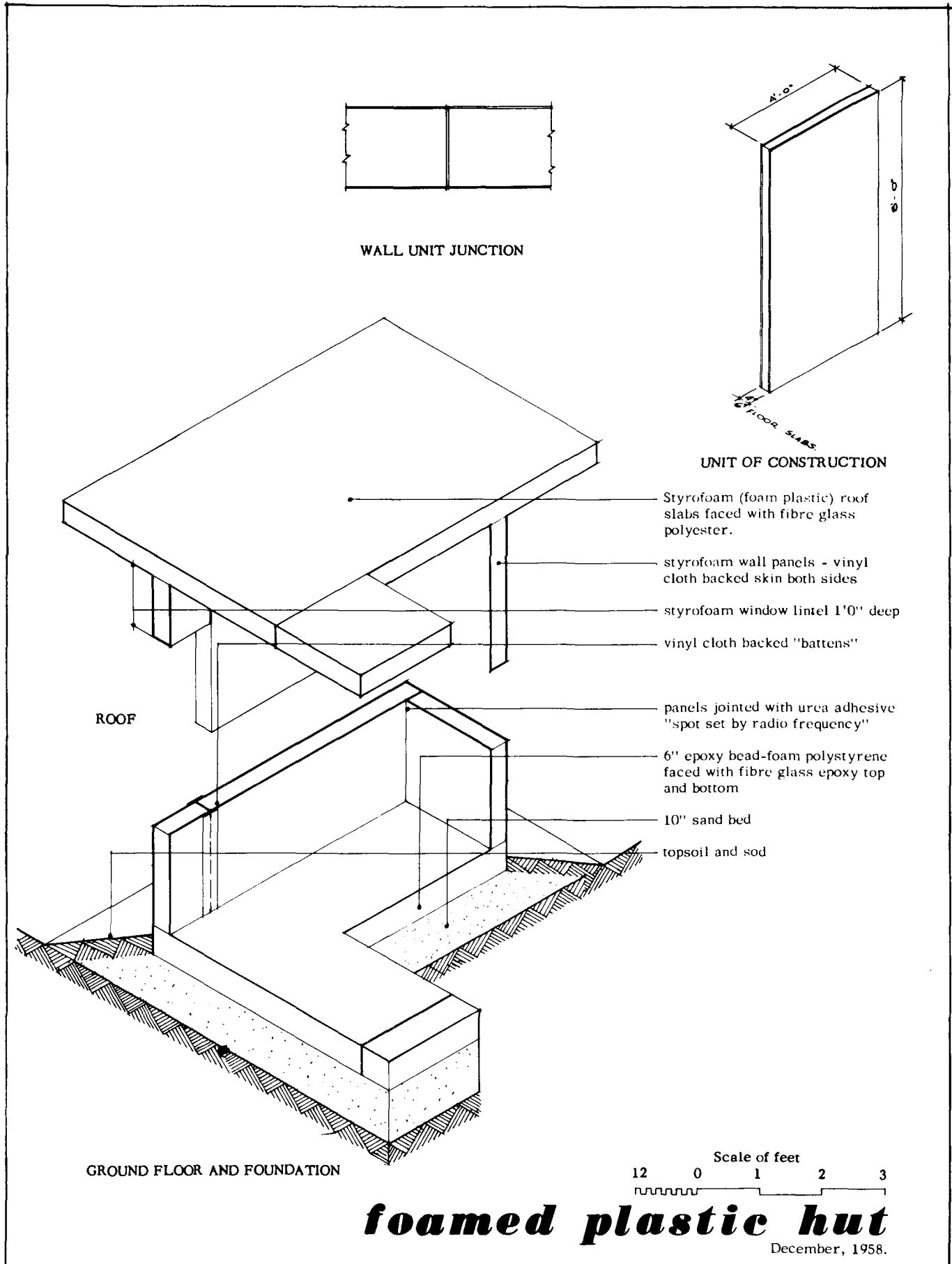


**panelfab**

December, 1958.

## PANELFAB

- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Panelfab Products Inc.,<br>2000 N.E. 146th Street,<br>North Miami, Florida.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Florida, 1955.  |
| <b>Materials<br/>Used.</b>   | 3. Phenolic impregnated Kraft<br>honeycomb core with aluminum<br>facing.   |
| <b>Description.</b>  | 4. Panel joints are designed in such a<br>way as to transmit stresses from<br>one panel to the other thereby<br>obviating any need for foaming.<br>U= 0.17 (3" external wall panel).<br>Joint has same U factor. |
| <b>Development<br/>to Date.</b>  | 5. Manufacturer alleges fair degree<br>of use.   |
| <b>Comment.</b>  | 6. This system is significant mainly<br>for the jointing detail. Panels can<br>be assembled in a variety of ways<br>and for a variety of purposes.   |
| <b>References.</b>   | 7. Sponsors' literature.   |



# *foamed plastic hut*

December, 1958.

## FOAMED PLASTIC HUT

- |  |   |
|--|---|
| <b>Traditional, Non-Traditional, Manufacturer, Sponsor or Bullder.</b> | 1. Non-Traditional.<br>Central Mortgage and Housing Corporation,<br>Ottawa, Ontario.<br><br>National Research Council,<br>Division of Building Research,<br>Ottawa, Ontario.  |
| <b>Date and Place of Origin.</b>                                       | 2. Ottawa, 1958.  |
| <b>Materials Used.</b>   | 3. Expanded Polystyrene,<br>Polyester with fibre glass<br>reinforcing.  |
| <b>Description.</b>  | 4. The floor panels 12' long x 4' wide x 6''<br>thick had plastic pipe embedded in them.<br>The panels were assembled with an epoxy<br>adhesive over the sand bed. A plastic pipe<br>coupling with wire coiled around it was<br>installed over the pipe ends and fused by<br>the application of 6 volt D.C. after the<br>assembly was completed. The wall and<br>roof panels were assembled with a urea<br>adhesive. Conventional wood window and<br>door assemblies were installed in openings<br>provided for them. |
| <b>Development to Date.</b>  | 5. One built for experimental purposes.   |
| <b>Comment.</b>  | 6. -  |
| <b>References.</b>   | 7. Central Mortgage and Housing Corporation,<br>Ottawa, Ontario.  |

## METAL STUD FRAMES

## METAL STUD FRAMES

<b>Sub-Classifications</b>	<b>Non Panelized Systems</b> <b>Panelized Systems</b> <b>Special Systems</b>
<b>Case Sheets</b>	<b>Birmingham Steel Frame</b> <b>B. I. S. F. Steel Frame A</b> <b>B. I. S. F. Steel Frame B</b> <b>Harman</b> <b>Hills Steel Frame House</b> <b>Keyhouse Unibuilt</b> <b>Lustron</b> <b>Maison Phenix</b> <b>Braithwaite Unit Frame</b> <b>U. S. Steel Home</b>

METAL STUD FRAME

MSF

AIROH HOUSE

Aluminum Company of Canada,  
1700 Sun Life Building,  
Montreal, Quebec,  
Canada.

Aluminum frame whole house structure. 1 house built in Kingston, Ontario in 1950. 60,000 built in England. Developed by British Aircraft Industry.

Aluminum Company of Canada,  
1700 Sun Life Building,  
Montreal, Quebec,  
Canada.

ALFRAME

S.M.D. Engineers Limited,  
England.

Aluminum frame, aluminum cladding for tropical use.

"Prefabrication",  
November 1953.

ALUMINAIRE

See Aluminaire under MPB.

ALUMINUM AIR BORNE  
PREFAB

Dodge Cycleweld Division,  
Chrysler Corporation,  
U.S.A.

Whole house.  
Units 20' 0" x 40' 0" x 8' 0".  
Weight 9,253 pounds.

"Light Metal Age",  
February 1950.

ALUMINUM FRAME  
STRUCTURES

Aluminum Frame Structures,  
C/OWG Conn,  
1035 Eglinton Ave.,  
West,  
Apr. 10C,  
Toronto, Ontario,  
Canada.

Whole house construction,  
aluminum frame.

"Acceptable Building Materials",  
C.M.H.C. Ottawa,  
1955.

ARCON HOUSE

Wartime Temporary House,  
England.

Steel frame and double asbestos cement outside, plasterboard inside and insulation.

"Prefabricated Homes",  
(B. H. Cox)  
Publ. Elek.

METAL STUD FRAME

MSF

ARCY CORPORATION  
Pittsburgh, Pennsylvania,  
U.S.A.

1936.  
Pressed steel units. Precast  
gypsum planks up to 6' 0"  
wide. 18" module.

M. O. W. Survey of  
Prefabrication.

ATHOLL  
The Duke of Atholl,  
Atholl Steel Houses Ltd.,  
Sir William Beardmore,  
& Company Limited,  
England.

Metal frame-skyscraper.  
Steel T studs supporting  
steel plates outside and  
wood frame plasterboard  
inside. 2 storeys.  
U = 0.33.

"The Evolving House  
III, Rational Design",  
(Bemis).

BARTNING  
Otto Bartning,  
Berlin, Germany.

Pre-1933.  
1 meter spaced framing.  
Standard panel of storey  
height. Panels 2 1/4" cork  
faced with steel.

M. O. W. Survey of  
Prefabrication.

BAR-Z-GUNITE  
Soule Steel Corporation,  
Los Angeles, California,  
U.S.A.

Pre-1935.  
Open web steel studs at  
24" center faced inside and  
out by 1 1/2" gunite on  
expanded metal.

Portland Cement  
Association Report.  
M. O. W. Survey of  
Prefabrication.

BATES  
Walter Bates Steel  
Corporation,  
U.S.A.

Metal frame-close spaced.  
Steel angle studs supporting  
stucco and plaster interior,  
exterior facings. Floors of  
concrete on corrugated steel  
sheets on open web joints.  
Roof structure similar.

"The Evolving House  
III, Rational Design"  
(Bemis).



## METAL STUD FRAME

## MSF

### **BENDER STEEL HOUSE**

Bender Body Company,  
Elyria, Ohio,  
U. S. A.

1939.  
Pressed steel studs at 2' 0"  
centers. Internally; timber  
furring, insulation.  
Storey high insulation panels  
externally.

M. O. W. Survey of  
Prefabrication.

### **BERLOY**

The Berger Manufacturing  
Company,  
a subsidiary of  
Republic Steel Corp.,  
U. S. A.

Metal frame—close spaced;  
and panel. Metal studs at  
18" centers faced in sheet  
rock. Exterior faced in  
brick veneer. Floors of  
lightweight concrete precast  
slabs — metal joists at 18"  
centers.  
Several houses built.

"American Architect  
& Architecture",  
"The Evolving House  
III, Rational Design",  
(Bemis).

### **BIRMINGHAM**

#### **CORPORATION HOUSE**

City Engineer,  
Architects,  
A. G. Sheppard Fidler,  
F. M. Jones, England.

Open web steel frame.  
Asbestos cement cladding  
later replaced by brick  
work. Interior cladding  
of wood wool and plaster-  
board.

"Prefabrication",  
February, 1954.  
"Prefabricated  
Homes", (B. H. Cox).

### **B. I. S. F. STEEL HOUSE TYPE A**

British Iron and Steel  
Federation,  
Scunthorpe, Lincs,  
England.

Steel frame with brick and  
plaster.  
Insulated between frame work.  
2" breeze concrete internally.

British Iron & Steel  
Federation,  
Scunthorpe, Lincs,  
England.

### **B. I. S. F. STEEL HOUSE TYPES B & C**

British Iron & Steel  
Federation,  
Scunthorpe, Lincs,  
England.

Steel frame with steel  
siding and internal fibreboard.

"Prefabrication of  
Building",  
(Richard Sheppard).

METAL STUD FRAME

MSF

**B. J. HOUSE**  
England.

3' 0" panels made up with steel frame, cladding. Asbestos cement interior lining plasterboard, on timber frame.

"Prefabricated Homes",  
(B. H. Cox).

**BOHLER STAHLBAU**  
Berlin, Germany.

Pre-1933.  
Steel frame at 4' 0" centers.  
Precast cinder infill block.

M. O. W. Survey of Prefabrication.

**BRISTOL ALUMINUM PREFAB**  
England.

Intention to build one house in Montreal, Quebec.  
U = less than 0.15.

Bristol Aluminum Prefab.,  
England.

**BRODERICK**  
Broderick Firesafe Homes Association, succeeded by Steel Frame House Co., a subsidiary of McClintic-Marshall Corporation,  
U. S. A.

Metal frame-close spaced. Metal stud frame at 1' 6" centers. Frame is panelized into 1' 6" x storey height panels. Brick veneer plasterboard and insulation.

"The Evolving House III, Rational Design",  
(Bemis).

**BYRNE ORGANIZATION**  
Harundale, Md.,  
U. S. A.

Pressed steel stud frame insulated externally, lined internally.  
Metal roof trussed.

"Prefabrication of Homes", (Kelly).

**COLORADO FUEL**  
McKay Fireproof Co.,  
Cleveland, Ohio,  
U. S. A.

1930.  
Metal frame-skyscraper. Metal stud frame and 4' centers faced with gypsum wall-board and stucco externally. Roof and floor framed in steel at 4' centers with wood joists and boarding.  
Several houses built in Cleveland, Ohio.

"The Evolving House III, Rational Design",  
(Bemis).

## METAL STUD FRAME

MSF

### **CORKANSTELE**

Corkanstele Inc. ,  
(Division of Cork  
Insulation Company  
Incorporated),  
U.S. A.

Pre-1936.  
Some houses on Long Island.  
Metal frame close-spaced.  
Steel frame at 2' centers.  
3" cork slabs between studs  
rendered internally and ex-  
ternally. Open web joisted  
flooring with concrete slabs  
over and ribbed lath and  
plaster ceilings.

"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).

### **CONVENTRY HOUSE**

Architect: D. E. Gibson,  
City of Coventry,  
England.

2 storey tubular frame lined  
internally with wood framed,  
wood wool panels. Lower  
exterior finish: 1 1/2" concrete.  
Upper exterior finish: asbestos  
cement.

"Prefabricated  
Homes", (B.H. Cox).

### **CRANWELL**

Cranwell Syndicate  
Limited,  
London W.1, England.

Steel frame "King" hollow  
terracotta clad. Plaster  
blocks internally, pitched  
roof.

Cranwell Syndicate  
Limited,  
London W.1, England.

### **CROWE HOUSE CONSTRUCTION**

See Crowe House under CP

### **CUSSINS**

Cussins Limited,  
Newcastle-on-Tyne,  
England.

1946.  
Steel frame (Kariscol).  
Exterior face of brick panels.  
Interior finish of insulation  
board and plaster.

"Architectural Re-  
cord", April 1947.  
"Architectural  
Forum",  
September 1947.

### **DEXION England.**

Slotted steel angle frame,  
used for tropical housing  
Burma, Greece, West Indies.

"Prefabrication",  
September 1954.

**METAL STUD FRAME**

**MSF**

**FOX METAL PRODUCTS CORPORATION**  
1620 Blake Street,  
Denver 2, Colorado,  
U. S. A.

Aluminum frame and siding.  
F. H. A. approved.

Fox Metal Products Corporation,  
1620 Blake Street,  
Denver 2, Colorado,  
U. S. A.

**GABRIEL STEEL COMPANY**  
Detroit, Michigan,  
U. S. A.

1930.  
Open web steel frame.  
Remainder conventional.

M. O. W. Survey of  
Prefabrication.

**GATESHEAD**  
Gateshead Corporation,  
Gateshead-On-Tyne,  
England.

Steel frame clad with pre-cast units.  
Prototype houses at Gateshead.

Gateshead Corporation,  
Gateshead-On-Tyne,  
England.

**GEE, WALKER AND SLATER**  
Gee, Walker and Slater Company Limited,  
London 1, England.

Steel and concrete frame with concrete slab cladding.  
Steel skeleton used for location of loadbearing reinforced concrete studs.

Gee, Walker and Slater Company Limited,  
London 1, England.

**GROPIUS HOUSE**  
Walter Gropius,  
Architect,  
Berlin, Germany.

Steel frame at 3' 6" centers  
3" pressed cork infill panels  
asbestos board lined inside.

"American Architect Architecture",  
September, 1936.

**HAESLER**  
Otto Haesler,  
Architect,  
Celle, Germany.

1930.  
Steel frame, wood wool insulation, brick veneer.  
0.85 m. module.  
95 houses at Celle.

"Baugilde 1930".  
M. O. W. Survey of  
Prefabrication.

**HANSEN CONSTEELAIR**  
Racine, Wisconsin,  
U. S. A.

1935.  
Steel frame at 24" centers.  
Concrete cast round steel frame in horizontal position, then raised. Widths up to 20' 0".  
See also Carroll Tri Ply under CP.

M. O. W. Survey of  
Prefabrication.

## METAL STUD FRAME

MSF

### DUSSELDORFER STAHLHAUS

Schenk & Liebe Harkort  
Company,  
Stahl Bau Dusseldorf,  
GmbH.,  
Dusseldorf Ober Kassel,  
Germany.

1926.  
Light welded steel frame,  
sheet shell panels.  
Whole walls lifted at a time.  
3' 4" module stud spacing.

M. O. W. Survey of  
Prefabrication.

### DYMAXION

See Dymaxion under MP.

### "E" FRAME HOUSING COMPANY

Newton,  
Massachusetts,  
U. S. A.

Metal frame-close spaced;  
and panel. A Bemis design.  
Channel studs at 2' centers,  
supporting precast slab.  
Lined internally with plaster-  
board. Roofing: metal cor-  
rugated decking and concrete  
fill. A few houses.

"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).

### FERRO-ENAMEL

Ferro-Enamel Corporation,  
Residence of Dudley-  
Clawson,  
Cleveland, Ohio,  
U. S. A.

Armco house built in Chicago  
Exhibition.  
Designed by Charles Bacon  
Rowley. Metal frame-close  
spaced. Studding at 4' centers  
of wood and steel faced with  
plasterboard internally, metal  
faced fibreboard externally and  
metal shingles.  
Open web steel trusses for  
floor, normal roof construction.

"The Evolving House  
III, Rational Design",  
(Bemis).

### FIELD

Howe & Lesscaze,  
Architects,  
New York, N. Y.,  
U. S. A.

Structural Engineer, C. O.  
Skinner. Metal frame - close  
spaced. Double metal studding  
at 2' centers. Open web floor  
trusses fixed at girts. Plaster  
faced cork insulation in-  
ternally. Concrete slab floor.  
One house erected.

"The Evolving House  
III, Rational Design",  
(Bemis).

METAL STUD FRAME

MSF

HARMAN CORPORATION  
Broad & Chestnut Streets,  
Philadelphia 10,  
Pennsylvania,  
U. S. A.

Steel frame and siding.  
F. H. A. accepted 1947.  
Whole house based on car-  
body assembly. Metal  
panels stiffened by metal  
studs at 3' 9" on centers.  
Interior lining and batt  
insulation supported on  
horizontal strapping.

"Architectural  
Forum",  
January 1947.

HARMAN HOMES  
W. H. Harman,  
Wilmington, Delaware,  
U. S. A.

Light metal frame and  
metal panels.

W. H. Harman,  
Wilmington,  
Delaware, U. S. A.

HARMAN HOMES  
Lindsay Structures  
(Canada) Limited,  
64 Quebec Avenue,  
Toronto, Ontario,  
Canada.  
also  
Wilmington 99, Delaware,  
U. S. A.

F. H. A. approved.  
Steel frame and siding.

Lindsay Structures  
(Canada) Limited,  
64 Quebec Avenue,  
Toronto, Ontario,  
Canada.  
also  
Wilmington 99,  
Delaware, U. S. A.

HARUNDALE HOMES  
Glen Burnie, Maryland,  
U. S. A.

1,200 units built. Steel  
frame. Studs at 2' 0"  
centers, nailable. Outer  
face 1" glass, fibre, paper  
wire reinforcement, stucco.  
Inner face: paper vapour  
barrier and plaster.

"Engineering News  
Record",  
June 12th, 1947.  
"Architectural  
Forum", April 1947.

HEKA  
Ways & Freytag,  
Frankfurt-am-Main,  
Germany.

Pre-1928.  
Steel stud frame at 1.2m. to  
1.5m. centers.  
Precast concrete slabs  
between. 2 housing projects.

M. O. W. Survey of  
Prefabrication.

METAL STUD FRAME

MSF

HILL

Northolt Grange,  
Middlesex, England.

Steel frame.

"Prefabrication in  
Buildings",  
(Richard Sheppard).  
"House Out of Factory",  
(John Gloag).

HITCHINS

Hitchins Steel Concrete  
Building Company,  
Hoddesdon, Herts,  
England.

Frame of composite wood  
and steel stanchions.  
Other members of flat, cold  
rolled steel sections.  
Precast concrete cladding.

Hitchins Steel Concrete  
Building Company,  
Hoddesdon, Herts,  
England.

HOWARD J AND  
COMPANY LIMITED  
United Kingdom.

"Prefabrication in  
Buildings",  
(Richard Sheppard).

INSULATED STEEL  
FRAMES

Insulated Steel Frames  
Inc.,  
Amerston, New York,  
U.S.A.

1936.  
4" x 2" x 16 g. steel channels  
in pairs at 2' 0" centers,  
faced with wall-board and  
brick veneer.

M. O. W. Survey of  
Prefabrication.

INSUL STEEL  
CONSTRUCTION

John Brogden,  
Philadelphia,  
Pennsylvania, U.S.A.

Steel studs. Metal faced  
2" celotex panels.  
Open webbed steel floor  
frame.

"American Architect  
& Architecture",  
September 1936.

J. & L. JUNIOR

Jones and Laughlin Steel  
Corporation,  
U.S.A.

1926 to 1927.  
Small I beams used very  
much in housing.

M. O. W. Survey of  
Prefabrication.

JULLIEN

Architect,  
Washington, D. C.,  
U.S.A.

1938.  
Pressed steel studs at 20"  
centers faced with enamelled  
sheets 20" x 20", stabilized  
structure.

M. O. W. Survey of  
Prefabrication.

**METAL STUD FRAME**

**MSF**

**KASTNER A/G MUCHE-PAULICK**  
Leipzig, Germany.

1927.  
Steel studs at 1m.  
Centers faced with steel sheets lined internally with concrete slabs, plastered.

M. O. W. Survey of Prefabrication.

**K. D. HOMES LIMITED**  
6 Chandos Street,  
London W. 1, England.

4' 0" modular wall panel.  
Light steel roof truss.

K. D. Homes Limited,  
6 Chandos Street,  
London W. 1, England.

**KEYHOUSE UNIBUILT HOUSE**  
Gyproc Products Limited,  
J. Sankey & Sons,  
J. Brockhouse & Company Ltd.,  
England.

Light steel braced frame sections 10' 0" x 4' 0", 1/4" asbestos cement trays, filled with wood wool, linings of plasterboard.  
Ruberoid roof.  
U = 0.16 (wall, 0.21 (roof), 0.25 (floor).  
Some war housing.

Gyproc Products Limited,  
J. Sankey & Sons,  
J. Brockhouse & Company Ltd.,  
England.

**LAFFERTY**  
R. C. Lafferty,  
New York, N. Y.,  
U. S. A.

1922.  
12' x 28' panels framed in pressed steel with 5/8" concrete skin cast over frame work. Loose fill insulation placed in cavity.

M. O. W. Survey of Prefabrication.

**LEA**  
W. C. Lea Incorporated,  
Los Angeles, California,  
U. S. A.

1932. Over 100 houses built.  
Light steel wall, roof and floor frame, studs at 24" centers framed up into large panels.

M. O. W. Survey of Prefabrication.

**LEEDS CORPORATION**  
(Bell-Livett)  
England.

Steel frame clad with reinforced concrete units, asbestos cement roof.

Leeds Corporation,  
(Bell-Livett)  
England.



## METAL STUD FRAME

## MSF

### LURIE

Metal Lath Manufacturers' Association,  
Chicago, Illinois,  
U. S. A.

1935.  
Metal frame-skyscraper;  
metal frame-close spaced.  
Structural steel frame,  
storey height at 12' centers.  
Secondary horizontal members  
at 32" centers, and vertical  
members at 16" centers to  
which metal lath is attached,  
and stuccoed and back-  
stuccoed. Interior skin of  
metal lath and plaster attached  
to primary vertical members.  
An attempt to avoid non-use  
of plaster in prefabrication  
buildings.

M. O. W. Survey of  
Prefabrication.  
"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).

### LUSTRON

Lustron Corporation,  
Columbus, Ohio,  
U. S. A.

1947.  
Steel frame enamel steel  
panels.  
Production stopped in 1950.  
F. H. A. approved and financed.

"Prefabrication of  
Houses", (Kelly).  
"Architectural  
Forum",  
June 1947 and  
May 1949.  
"Business Week",  
April & October 1948,  
October 1949.  
"Fortune", Nov. 1949.  
"Iron Age", April and  
June 1949.  
"Mill and Factory",  
September 1949.  
"Steel", Feb. 1949.

### MacFARLANE

Walter MacFarlane &  
Company,  
Glasgow, Scotland.

1926.  
Cast iron studs and plates  
at 3' 7 1/2" centers. Single  
storey, rough cast exterior  
finish.  
Historic interest.

M. O. W. Survey of  
Prefabrication.

## METAL STUD FRAME

## MSF

### MAISON METALLIQUE GRAMES

Pierre Vago,  
Architect,  
France.

1934.  
Tubular steel frame and  
panel insulation 38" x  
38".  
Single storey.  
House at Paris Exhibition.

M. O. W. Survey of  
Prefabrication.

### MAISON PHENIX 10 Rue Pergolese, Paris 16e, France.

Steel I columns at 1 m.  
centers, roof trusses at  
2 or 4 m. lined internally  
with hollow 7 cm. plaster  
masonry blocks standing  
on site slab and 4 cm. x  
40 cm. x 1 m. high. Con-  
crete slabs externally and  
tied to steel frame and  
standing on concrete sill.  
Wood purlins. Tile  
covering.

"Bulletin No. 390",  
Centre Scientifique  
& Technique du  
Batiment, Paris.

### MACOTTA CONSTRUCTION

83 Main Street South,  
Weston, Ontario,  
Canada.

also

Macotta Corporation,  
1640 East Hancock,  
Detroit, Michigan,  
U. S. A.

4" steel studs (open web)  
at 24" centers faced ex-  
ternally with procelain enamel,  
faced 1/2" concrete slabs.  
No insulation.

Macotta Construction,  
83 Main Street South,  
Weston, Ontario,  
Canada.

also

Macotta Corporation,  
1640 East Hancock,  
Detroit, Michigan,  
U. S. A.

### MCKAY ENGINEERING COMPANY

Cleveland, Ohio,  
U. S. A.

Pre-1928.  
Steel frame. Close space studs,  
usually at 4' 0" centers.  
Various forms of cladding.

M. O. W. Survey of  
Prefabrication.

## METAL STUD FRAME

### MESSERSCHMIDT SYSTEM

Mr. Jaffrey,  
Gulf Trading Company,  
67 Yonge Street,  
Toronto, Ontario,  
Canada.

#### also

Dr. Willy Messerschmidt,  
Fertigungsgesellschaft Neue  
Technik mbH.,  
Germany.

Steel frame with cross  
bracing and double panels  
of lightweight concrete  
filled with rockwool.

## MSF

Mr. Jaffrey,  
Gulf Trading Company,  
67 Yonge Street,  
Toronto, Ontario.  
Canada.

#### also

Dr. Willy  
Messerschmidt,  
Fertigungsgesellschaft  
Neue,  
Technik mbH.,  
Germany.

### MEYER OTTENS

Germany.

1931.  
Steel frame, asbestos,  
sheathing, wood wool slab,  
insulation 4' 0" module.

Baugilde 1931.  
M. O. W. Survey of  
Prefabrication.

### MOTOHOMES

American Houses  
Incorporated,  
New York, N. Y.,  
U. S. A.

Steel studs at 4' 0" centers.  
Sandwich panels of 2"  
insulation, faced with asbestos  
board.

"The Evolving House  
III, Rational Design",  
(Bemis).  
M. O. W. Survey of  
Prefabrication.

### NAUGLE HOUSE

(Dexheimer)  
C. H. Dexheimer & Sons,  
Toledo, Ohio,  
U. S. A.

1907.  
Rolled steel close stud  
frame. Plaster and stucco  
on metal lath using standard  
Trusion metal lumber.

M. O. W. Survey of  
Prefabrication.

### NOVELLE SYSTEM OF CONSTRUCTION

U. S. A.

Steel studs at 2' 0" centers  
with 3 layers of asbestos  
board. Flooring of steel  
joists at 2' 0" centers covered  
with steel panels.

"American Architect  
& Architecture",  
September 1936.

## METAL STUD FRAME

**NU-WAY BUILDINGS  
(KENWAY HOME)**  
620 Adelaide Street,  
London, Ontario,  
Canada.

Wood frame assembly part  
pre-cut part prefab. Shipped  
in whole house sections,  
conventional construction.  
Restricted to London area.  
1951.

## **MSF**

"Canadian Building  
News", 1957.  
"Canadian Builder",  
October 1953.

**PANELHOME  
CONSTRUCTION**  
Polynorm Companies,  
Bunschoten, Holland.

Steel frame (light) with  
columns at 2' 0" centers  
roof trussed. Inner and  
outer panels are clipped  
between columns of clip-  
on cover strips. Outer  
panel is of asbestos cement,  
the inner is of aluminum  
foil backed hardboard.

Polynorm Companies,  
Bunschoten, Holland.

**PHEMALOID**  
Haskelite Manufacturing  
Company,  
Chicago, Illinois,  
U.S.A.

1935.  
Pressed steel frame, resin  
bonded plywood sheeting.  
Joints caulked. Insulation  
in cavity. On site erection.  
A few built, 2' - 3' module.

M. O. W. Survey of  
Prefabrication.  
A. I. S. C.  
"American Architect",  
September 1936.  
"Architectural  
Forum",  
December 1935.  
"Architectural Record",  
February 1937.

**PHENIX HOUSE**  
Soc. des Maisons  
Phenix,  
19 Rue Francois 1,  
Paris 8, France.

1945.  
Steel frame. Concrete  
t. & g. slabs 1m. x 4dm. x  
4cm. thick. Erection in 1  
day. Several thousands  
since 1945.

"Prefabrication",  
September 1954.

## METAL STUD FRAME

MSF

### PHOENIX

Phoenix Baugesellschaft  
GmbH, Berlin,  
Germany.

Rolled steel frame precast  
concrete slabs. Module  
1.14m. Concrete slab ex-  
ternally, breeze slab in-  
ternally. Cement caulked.

M. O. W. Survey of  
Prefabrication.  
Bauingenieur 1926.  
Hsft. 30,  
Portland Cement  
Assoc.,  
Report, (Bemis).

### PHOENIX HOUSE

England.

Tubular steel frames and  
wood rails.

"Prefabricated  
Homes", (B.H. Cox).

### PIERCE HOMES

J. B. Pierce Foundation,  
Raritan, New Jersey,  
U. S. A.

1940.  
Horizontal panels to form  
beams between columns.  
Non structural panels in wood.

"Architectural Forum",  
May 1940.

### PORCELAIN STEEL

Porcelain Steel  
Buildings, Inc.,  
Columbus, Ohio,  
U. S. A.

1928.  
Porcelain enamelled steel  
sheathing on in situ pressed  
steel studs at 4' centers.  
Storey height panels.  
Insulation between steel faces.  
Much commercial work some  
domestic.

M. O. W. Survey of  
Prefabrication.  
(Bemis).  
"Architectural Record",  
August 1935.  
"American Architect",  
September 1936.

### PORTABILT

Francis Hughes &  
Associates Inc.,  
4850 Amiens Street,  
Montreal, Quebec,  
Canada.

See Portabilt under S.

### PORTAL HOUSE (M. O. W.)

Ministry of Works,  
London, England.

Ministry of Works Emergency  
Factory Made House.  
Metal frame, steel sheet on  
wood battens outside, plywood  
inside, insulated with aluminum  
foil.  $U = 0.33$ .

"Prefabrication of  
Buildings",  
(Richard Sheppard).

## METAL STUD FRAME

MSF

### POULSON

Nils Poulson,  
Hecla Iron Works,  
New York, N. Y.,  
U. S. A.

1890. One house built.  
Close spaced steel frame at  
2' 6" centers. Floors in  
domed lattice of steel flats  
with concrete slab over.  
Brick infill, copper sheeting.  
Frames built horizontally  
and lifted. First American  
close steel frame house.

M. O. W. Survey of  
Prefabrication.

### PRESWELD FRAME

Hills Patent Glazing  
Company Limited,  
Albion Road,  
West Bromwich,  
Staffordshire, England.

1943.  
Rolled steel welded lattice  
frame studs at 3' centers.  
Brick external veneer 3"  
foamed slag blocks internal,  
plastered. Two storey structure.

M. O. W. Survey of  
Prefabrication.

### RELIANCE HOUSE

Reliance Homes Inc.,  
207 Oak Street,  
Marion, Ohio,  
U. S. A.

Whole house prefabricated in  
one piece. Metal stud frame,  
insulation lined, faced with  
wall-board and aluminum. Houses  
delivered in seven sections.

"Architectural  
Forum",  
December 1949.

### REYNOLDS

Reynolds Corporation,  
New York, N. Y.,  
U. S. A.

1935.  
Studs (metal sheathed and filled  
with nailing composition) at  
1' 4" to 2' centers. A pre-  
fabricated but custom-made  
system. Brick veneer externally,  
plaster on metal lathing  
internally.

M. O. W. Survey of  
Prefabrication.  
"Architectural Forum",  
September 1935.  
"American Architect",  
November 1935.  
A. I. S. C. "Light-  
gauge flat rolled  
steel in housing".

### RILEY CONSTRUCTIONAL SYSTEMS

Cawood Wharton &  
Company Limited,  
Ossett, Yorks,  
England.

Cold, rolled steel sections.  
Aluminum cladding on glass  
quilt on wood frame.  
Plasterboard internally.

Cawood Wharton &  
Company Limited,  
Ossett, Yorks,  
England.

## METAL STUD FRAME

### ROTINOFF

Rotinoff Construction  
Limited,  
London W.1, England.

Factory made aluminum and  
cladding.  
Whole house in 6 units.

## MSF

Rotinoff Construction  
Limited,  
London W.1, England.

### RUBERY OWEN

Rubery Owen Limited,  
Darlaston, Staffs,  
England.

Pressed steel frame, clad  
with aluminum (first floor).  
Brick (ground floor).

Rubery Owen Limited,  
Darlaston, Staffs,  
England.

### SAFETY WELDING

Safety Welding Company,  
New York, N. Y.,  
U.S.A.

1930.  
Close space steel frame.  
Storey high, clad with any  
suitable material. Some  
built.

M. O. W. Survey of  
Prefabrication.  
"Iron Age", August  
20th, 31st.  
"Steel", June 11th,  
1931.

### SCULLIN

Scullin Steel Company,  
St. Louis, Missouri,  
U.S.A.

1930.  
Close spaced welded steel  
frame, corrugated steel  
sheet plates as flooring.  
Welded. Monolithic steel.  
Development unknown.

M. O. W. Survey of  
Prefabrication.  
"Iron Age", August  
1931.

### SHIPSTON HOUSE

Blackburn (Dumbarton)  
Limited,  
Castle Road,  
Dumbarton, Scotland.

81 houses up to 1958 in  
Ceylon for Admiralty &  
Italian Air Force.  
Widespread aluminum frame  
with wood studs at 18" o.c.  
3' 0" module (width of facing  
panel). Faced in horizontal  
corrugated sheets aluminum.

"Prefabrication",  
1954.

### SOULESTEEL COMPANY

See Unibilt under MSF.

## METAL STUD FRAME

MSF

**SPRAYCRETE  
CONSTRUCTION**  
Mr. H. P. Falls,  
Box 31,  
Semiahmoo P. O. ,  
White Rock,  
British Columbia,  
Canada.

Steel studding, concrete  
sprayed on wire mesh with  
cardboard fillers.  
Strapped internally.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa.  
1956.

**STEANE**  
J. & A. Steane,  
Bournemouth, Hantz,  
England.

Steel frame, concrete and  
clay tile panels, plywood  
lining.

J. & A. Steane,  
Bournemouth, Hantz,  
England.

**STEEL-BILT**  
Steel-Bilt Homes  
Incorporated,  
House designed by  
Myron T. Hill, Architect,  
Cleveland, Ohio,  
U. S. A.

1933.  
Metal frame-Skyscraper.  
Steel frame at 3' centers,  
brick veneer, lightweight  
concrete blocks internally.  
Steel framed flooring.  
One house built.

"The Evolving House  
III, Rational Design",  
(Bemis).

**STEEL FAB HOUSE**  
Richmond Furniture  
Company Limited,  
Vancouver,  
British Columbia,  
Canada.

Steel studs at 4' 0" centers.  
Exterior infill panels  
wood and rockwool, traditional  
form.

Richmond Furniture  
Company Limited,  
Vancouver,  
British Columbia,  
Canada.

**STEEL FRAME**  
Steel Frame House  
Company,  
Pittsburgh, Pennsylvania,  
U. S. A.

1925.  
Metal frame-close spaced.  
Studs at 16" - 24" centers.  
Consist of 1" x 4" holed angles  
to which is fixed stucco  
insulation and internal wall-  
board. Roofs and floors on  
metal joists. Many houses  
built.

"The Evolving House  
III, Rational Design",  
(Bemis).



## METAL STUD FRAME

## MSF

### STEEL FRAME HOUSE

Steel Frame Housing  
Company,  
subsidiary of  
McClintic Marshall  
Corporation,  
Leetsdale, Pennsylvania,  
U. S. A.

1925 to 1931 when discontinued.  
Pressed steel stud frame,  
2' centers.  
Normal cladding. Many  
houses built.

M. O. W. Survey of  
Prefabrication.  
"Iron Age",  
August 1931.  
H. Spiegel, Der  
Stahlhausbau.  
"History of  
Prefabrication",  
(Reprint from Forum).

### STEEL HOUSE

Steel Housing Corporation,  
134 La Salle Street,  
Chicago, Illinois,  
U. S. A.

Pressed steel stud at 2'  
centers. 2" rigid insulation  
panels between. 1 1/2" cavity  
filled with mineral wool.

M. O. W. Survey of  
Prefabrication.  
"American Architect",  
September 1936.  
"Architectural Forum",  
December, 1935 & 1936.

### STRAN STEEL

Stran Steel Incorporated,  
Detroit, Michigan,  
U. S. A.  
subsidiary of Great  
Lakes Steel Corporation,  
in turn a unit of National  
Steel Corporation,  
D. Dell & Rowland,  
Architects.

Pressed steel frame channel  
section facing material fixed  
by wood-metal nails.  
Framing welded on site.

"The Evolving House  
III, Rational Design",  
(Bemis).  
M. O. W. Survey of  
Prefabrication.

### STRUCTO HOUSE

Structo Incorporated,  
Kansas City, Missouri,  
U. S. A.

1935.  
Rolled steel I-Section frame  
work and steel panels ex-  
ternally welded. Rockwool  
insulation between joists and  
columns.  
A few built in Kansas City.

M. O. W. Survey of  
Prefabrication.  
"American Architect",  
September 1936.  
"Architectural Forum",  
December 1935.

### STUART & SONS

Glasgow, Scotland.

Steel frame clad with brick  
and foamed clay concrete.  
Prototypes at Glasgow.

## METAL STUD FRAME

## MSF

### SUPALITE HOUSE

Maycrete Limited,  
England.

Aluminum alloy frame on 2' 0"  
module. Timber infill panels.  
Asbestos cement cladding.  
Insulation board internally.  
Aluminum alloy trusses at  
4' 1" centers.  
Concrete Raft. Whole house  
packaged in three parts  
42' 0" x 26' 0" x 13 tons.

"Prefabrication",  
November 1953.

### TAPPAN FRAME

Robert Tappan,  
New York, N. Y.,  
U. S. A.

1927.  
Several buildings on Long  
Island. Metal frame-Skyscraper.  
Metal stud frames at 4' centers  
lined inside, lath and plaster.  
Outside lath and plaster lining  
and brick veneer Steel frame  
floor and roof construction.

"The Evolving House  
III, Rational Design",  
(Bemis).

### THERMOS

Hans Pholmann,  
Engineer,  
Hamburg, Germany.

1927-33.  
Steel frame with insulation  
panels of paperboard membranes  
in wood frame. External clad-  
ding of precast pumice, gypsum  
planks internally. Several houses.  
Average module 4'.

M. O. W. Survey of  
Prefabrication.  
Hans Spiegel, Der  
Stahlhausbau.  
H & B Rasch,  
Wie Bauen.

### TRUSTEEL CONSTRUCTION

Trusteel Construction,  
46 Yonge Street,  
Toronto, Ontario,  
Canada.

Whole house construction,  
steel frame.

"Acceptable Building  
Materials",  
C. M. H. C. Ottawa,  
1956.

### UNIT PANEL CONSTRUCTION SYSTEM HOUSE

See Unit Panel Construction  
System House under MP.

## METAL STUD FRAME

## MSF

### UNIBILT

Soule Steel Company,  
San Francisco,  
California,  
U.S.A.

1933.  
Metal stud frame up to 13'  
wide x 1, 2 or 3 storeys high.  
Floors of open web steel  
joists. Fifty buildings on the  
Pacific Coast.

M.O.W. Survey of  
Prefabrication.  
A.I.S.C. "Light-  
gauge, etc.",  
"Arch. Forum",  
February 1938.

### UNITROY SYSTEM

Unitroy London,  
England.

Light metal frame at 3' 0"  
centers, infill panel of  
asbestos faced. Reed and cork  
compound sheet 2" thick.

"Arch. Journal",  
April 1946.

### UNITY

Unity Structures Limited,  
London W.C.1,  
England.

Concrete and steel frame on  
concrete foundations.  
Cladding of concrete slabs.

Unity Structures  
Limited,  
London W.C.1,  
England.

### UNIVERSAL TYPE I

Universal Housing Co.,  
Rockmansworth, Herts,  
England.

Steel frame clad with asbestos  
on wood frame panels.

Universal Housing Co.,  
Rockmansworth, Herts,  
England.

### URBAN

P. Urban Jr.,  
Civil Engineer,  
Stuttgart, Germany.

1927.  
Tubular steel frame, lightweight  
concrete slabs 1.1m. wide.  
Exhibition houses at Stuttgart.

M.O.W. Survey of  
Prefabrication.  
H. Spiegel Der  
Stahlhausbau,  
(In German at B.R.S.).

### VAN NESS STEEL HOUSES

C.E. Van Ness,  
Akron, Ohio, U.S.A.

Metal studs faced with metal  
sheets internally and externally  
backed with insulation.  
Floor and roof construction.

"American Architect  
& Architecture",  
September 1936.

### VARIPLAN

Variplan, Cincinnati,  
Ohio, U.S.A.

Demonstration house at  
Cincinnati. Pressed steel  
framing at 44" centers. Sheet  
steel insulation backed panels.  
Studs are doubled.

M.O.W. Survey of  
Prefabrication.  
A.I.S.C. "Light-  
gauge etc."

## METAL STUD FRAME

### VULKAN

Deutsche Schiffs &  
Maschinenbau A. G.,  
Vulkan Works,  
Hamburg, Germany.

1927. Experimental houses  
built. Steel frame, steel  
sheeting. Lightweight in-  
sulation, internally plastered.

## MSF

M. O. W. Survey of  
Prefabrication.  
H. Spiegel Der  
Stahlhausbau.

### WENTINK HOUSE

Jan Kiupers,  
Nunspeet, Holland.

Many built in Australia.  
Steel frame and insulating  
panel 1 3/16" surfaced with  
3/16" asbestos. Corrugated  
asbestos cement roofing.

Jan Kiupers,  
Nunspeet, Holland.

### WINTER HOUSE

E. M. Winter,  
New York, N. Y.,  
U. S. A.

Concrete Tee units 2" thick by  
4' 0" wide x 9' 6" between steel  
studs, at 4' 0" centers cast in  
situ and backed by wall-board  
internally.

"American Architect  
& Architecture",  
September 1936.

### WOHR (2)

Gebruder Woehr  
Ironworks,  
Unterkochen,  
Wurttemberg, Germany.

1926. Some houses built.  
Rolled steel frame at 1m.  
centers. Wood panel holding  
rigid insulation between steel  
studs. Gypsum slabs internally.  
Steel panel externally.

M. O. W. Survey of  
Prefabrication.  
H. Spiegel Der  
Stahlhausbau,  
Bauingenieur,  
Heft 30, 1926.

## Panelized

### AMERICAN MOTOHOMES

American Houses Inc.,  
U. S. A.

Panel. 2 1/2" square steel  
channel studs at 4' centers.  
Infill panels 4' by storey high of  
cementitious produce (Minropak)  
steel reinforced. Floor slabs  
of same materials. Floor  
supported on open web girders,  
supported on wall studs.  
Large number built.

"The Evolving House  
III, Rational Design",  
(Bemis).

METAL STUD FRAME (Panelized cont'd)

MSF

**BRAITHWAITE UNIT  
FRAMED HOUSE**  
Braithwaite & Company  
Limited,  
England.

Steel frame, 2 storey 3' 2"  
wide, ladder-like panels, steel  
floors. Cladding: brick or  
other materials. Internal  
lining: fibreboard, etc.

Braithwaite &  
Company Limited,  
England.

**BUELL HOUSE**  
T.H. Buell & Company,  
Architects,  
Denver, Colorado,  
U.S.A.

Wall panel of 1" of insulation  
faced with metal both sides,  
3' 0" wide, joined with metal  
ribs.

"American Architect  
& Architecture".

**COMMENTRY-OISSEL**  
Societe et Forges  
de Commentry-Oissel,  
Paris, France.

1929.  
Steel angle frame made up  
into 3' 4" x storey height  
panels with gypsum infill.  
Single storey structure.  
Plastered and stuccoed.  
One house built.

M. O. W. Survey of  
Prefabrication.

**COPPER HOUSES  
INCORPORATED**  
Kennecott Copper Corp.,  
New York, N. Y.,  
U.S.A.

Roof and wall panels 2' 8" x  
storey height of sheet copper  
backed by 1/2" insulation.  
Metal stud frame carrying  
internal and external panel  
facings. Open web steel  
floor carried by stud frame.

"American Architect  
& Architecture",  
September 1936.

**CRUDENS**  
Crudens Limited,  
Musselburgh,  
Midlothian, Scotland.

Steel frame plywood panel  
8,388 houses in Scotland  
in 1952.  
Also Tropical houses.

"Arch. Journal",  
1954.  
"Pamphlet H2f",  
Central Office of  
Information,  
London, England.

METAL STUD FRAME (Panelized cont'd)

MSF

**FABRIHOME WALL  
PANELS**

Johnson Metal Products  
Company,  
Erie, Pennsylvania,  
U.S.A.

1935.  
Sheet steel vertical panels  
8' 0" x 4'0" channel studs at  
1' 4" centers horizontally,  
faced with 3/8" plywood out-  
side, gypsum board inside.  
2" rockwool, 44 houses at  
Rochester, New York.

Johnson Metal  
Products Company,  
Erie, Pennsylvania,  
U.S.A.

**FERROCON CORPORATION  
HOUSE**

Ferrocon Corporation,  
Philadelphia,  
Pennsylvania, U.S.A.

1935.  
Metal stud framed panels faced  
internally and externally with  
expanded metal to take plaster  
or stucco. Floor panels  
similar. Panels 1' 0" to 2' 0"  
x storey height, assembled on  
site into whole wall sections  
and raised. Similar to Fillod  
System.

"American Architect  
& Architecture",  
September 1936.  
M. O. W. Survey of  
Prefabrication.

**GENERAL HOUSES  
INCORPORATED**

Chicago, Illinois,  
U.S.A.

1932.  
Panels 4' 0" x storey high  
steel framed. Bolted to-  
gether on wood studs.

M. O. W. Survey of  
Prefabrication.

**HARNISCHFEGER  
(Pre-Fab)**

Harnischfeger  
Corporation,  
Milwaukee, Wisconsin,  
U.S.A.

1938.  
Steel frame panels welded,  
3' 4" x 8' 0" high. 3 vertical  
steel channel studs welded.  
Faced with insulation board.  
Wall, roof and floor panels  
are similar.  
133 houses built in 1938.

Harnischfeger  
Corporation,  
Milwaukee,  
Wisconsin, U.S.A.

**HAWKSLEY HOUSE**

A.W. Hawksley Limited,  
Gloucester, England.

Aluminum box units for  
ground floor. First floor  
in steel framed foamed  
cement panels.  
Facing in dense cement.  
M. O. W. approved 1947.

A.W. Hawksley  
Limited,  
Gloucester, England.

METAL STUD FRAME (Panelized cont'd)

MSF

PLATE GIRDER  
HOUSING COMPANY  
(A Bemis Product).

One experimental building.  
Steel framed panels 2' wide,  
bolted together through wood  
studs serving as grounds for  
external and internal faces.  
Girths at floor level.  
Floors framed in steel.

M. O. W. Survey of  
Prefabrication.  
"Architectural  
Forum",  
October 1931.

PRE-FAB HOMES  
Harnischfeger  
Corporation,  
Milwaukee, Wisconsin,  
U. S. A.

1936. 1,500 houses built up  
to 1945.  
Steel stud frame panel 20" or  
40" wide x 9' 5" high, two  
intermediate studs.  
Floor and roof panels similar.  
Insulated externally with two  
sheets wall-board 1/2" apart.

M. O. W. Survey of  
Prefabrication.  
A. I. S. C. "Light-  
gauge etc."  
"Architectural Forum",  
February 1942.  
"Architectural Record",  
July 1939.  
N. B. S. Report:  
B. M. S. 18.

ROSTONE  
Rostone Incorporated,  
Lafayette, Indiana West,  
U. S. A.

W. Scholer, Architect.  
U. S. A. 1933. Light steel  
frame. 4' module. Precast  
concrete slabs 4' wide x 18"  
high x 2" (3/4" inner leaf)  
bolted to frame.  
Two houses built.

M. O. W. Survey of  
Prefabrication.  
(Bemis).  
"Architectural Record",  
May 1933, January 1934.  
"Architectural Forum",  
June 1934.  
"American Architect",  
September 1936.  
"Chantiers No. 1",  
1934.

SPACE-O-MATIC  
U. S. Steel Homes,  
Frick Building,  
Pittsburgh, Pennsylvania,  
U. S. A.

See U. S. Steel Homes.  
This name given to various  
systems of steel frame  
panels produced since 1938.

U. S. Steel Homes,  
Frick Building,  
Pittsburgh,  
Pennsylvania, U. S. A.

METAL STUD FRAME (Panelized cont'd)

MSF

STAHLHAUSBAU OR  
OBERHUTTEN HAUS  
Deutsche Stahlhausbau -  
Gesellschaft,  
a subsidiary of the  
Vereinigte Oberschlesische  
Huttenwerke  
Aktiengesellschaft  
Upper Silesia,  
Germany.

1928.  
Metal frame-Skyscraper;  
and panel. Steel framed  
panels faced in steel sheets  
joined through wood spaces.  
Insulation filled. Storey  
height x 2m. wide panels.  
Large number erected in  
Germany. Roofing traditional.  
One storey structure.

U.S. Dept. of  
Commerce,  
"Special Circular  
No. 705", June 1,  
1928.  
M. O. W. Survey of  
Prefabrication.  
"Iron Age",  
September 1931.  
"The Evolving House  
III, Rational Design",  
(Bemis).

UNIBUILT  
Gyprock Products Limited,  
J. Brookhouse & Company,  
J. Sankey & Sons Limited,  
G. Grey Wornum &  
Richard Sheppard,  
Architects,  
England.

1943. Experimental houses  
built.  
Storey height pressed steel  
gyproc-faced steel frames 4'  
wide. Lattice trusses. Exterior  
cladding 2 1/2" wood wool slabs  
in filling asbestos cement trays  
clipped on to steel frames.  
Slabs of 12' x 2', mastic caulked.

M. O. W. Survey of  
Prefabrication.  
"Arch. Journal",  
June 1944.

UNIT PANEL  
H. Keller,  
Engineer for Bitting  
Incorporated,  
20 Exchange Place,  
New York, N. Y.,  
U.S.A.

1935.  
Rectangular tube steel frame  
3' x storey height. Bolted to-  
gether on site.

M. O. W. Survey of  
Prefabrication.  
"American Arch.",  
September 1936.  
"Arch. Forum",  
December 1935.

U.S.S. PANELBILT  
Tennessee Coal, Iron &  
Railroad Company,  
Birmingham, Alabama,  
U.S.A.

4' 0" x 8' 0" high sheet steel  
horizontal stud frame at 1' 4"  
centers with galvanized steel  
siding. 1" insulation on interior  
face, clipped to frame.  
U = 0.26.

Tennessee Coal, Iron  
& Railroad Company,  
Birmingham, Alabama,  
U.S.A.



METAL STUD FRAME (Panelized cont'd)

MSF

**U. S. STEEL HOMES**

Frick Building,  
Pittsburgh, Pennsylvania,  
U.S.A.

1938-1958.  
4' 0" x 8' 0" loadbearing steel  
frame panels, plywood exterior  
face, gypsum board interior  
face, insulation filled.  
Also called Space-O-Matic and  
Steel Style.

F. H. A. Bulletin  
SE-206.

Metal Space Frame

**BUCKWYN CONSTRUCTIONS  
LIMITED**

Twyford, Berkshire,  
England.

Widespread use in U.K.  
from 1950.  
Metal portal frame at 8' 0"  
centers. Siding insulation  
and internal finish fixed to  
horizontal rails, fixed to turn  
to portal frames.

Buckwyn Construction  
Limited,  
Twyford, Berkshire,  
England.

**NISSEN-PETREN  
LIMITED**  
England.

1926. About 20 houses in  
England. Semi circular truss  
from ground level blocked out  
with purlins.  
Walling of cavity construction.  
Two 3" clinker slabs. Other-  
wise conventional.

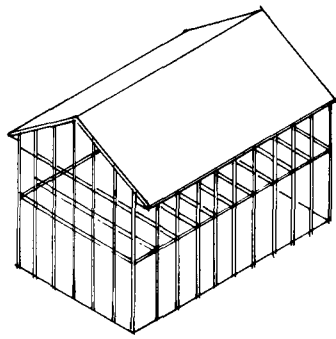
Nissen-Petren Limited,  
England.

**VOGEL & NOOT HOSZFELD**

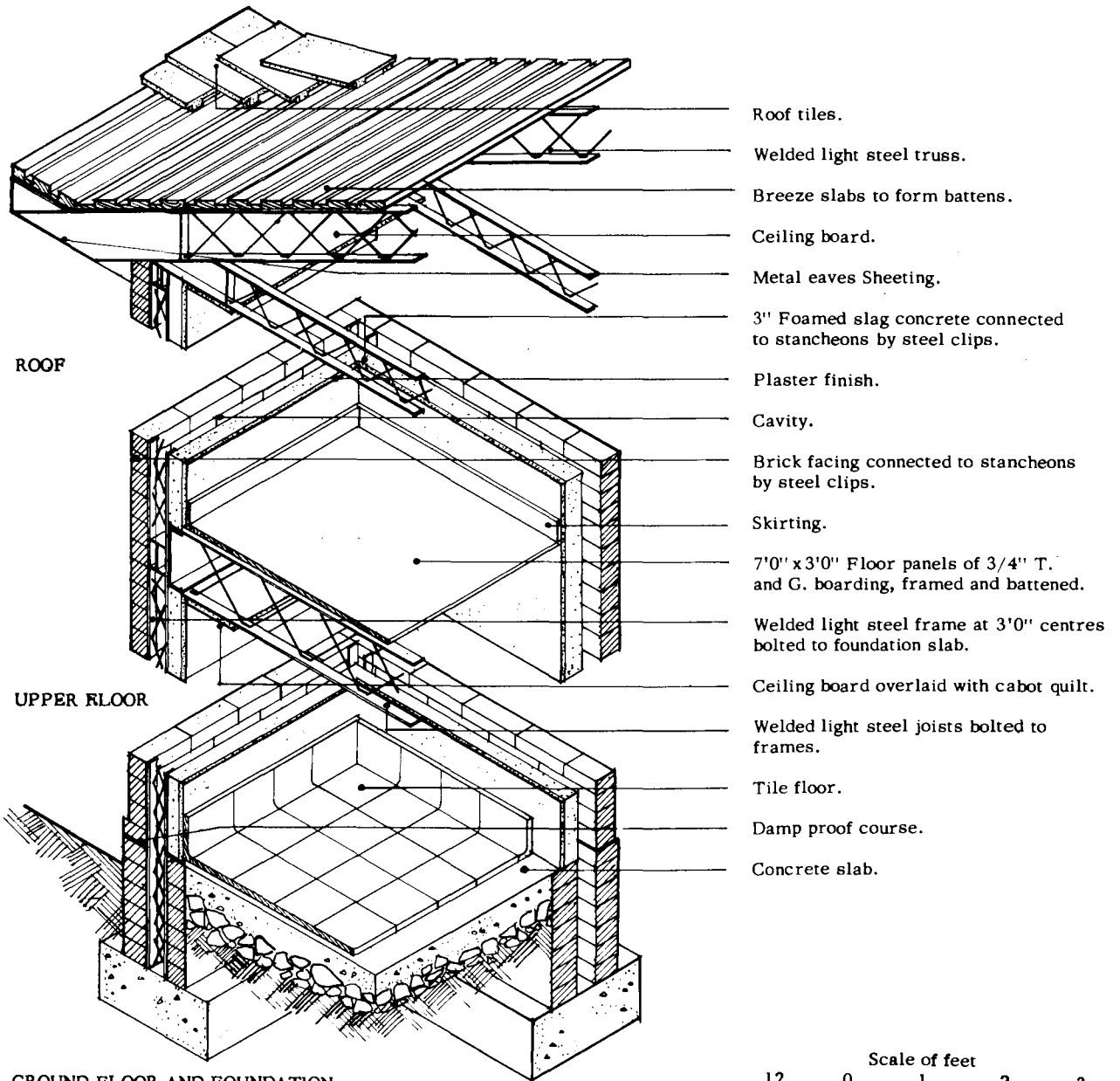
Vogel & Noot Company,  
Vienna, Austria,  
Prof. Josef Hoffmann,  
Architect,  
also  
Sesam-Stahl-Siedlungsbau  
D. R. P.  
System Hoszfeld, Austria.

1928. Houses at Vienna.  
Steel studs exposed. Heraklith  
insulation. 1.25m. module.

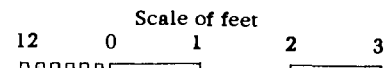
M. O. W. Survey of  
Prefabrication.  
H. Spiegel, Der  
Stahlhausbau.



WHOLE HOUSE ASSEMBLY



GROUND FLOOR AND FOUNDATION



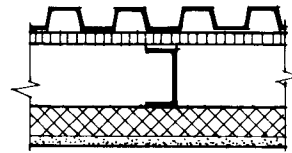
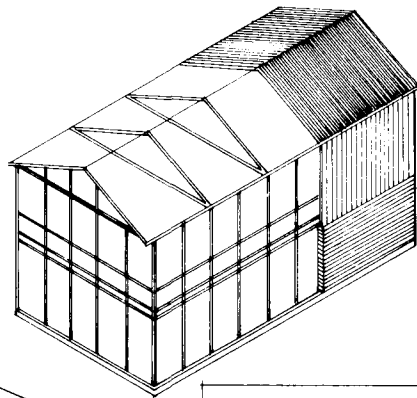
***birmingham steel frame***

December, 1958.

## BIRMINGHAM CORPORATION HOUSE

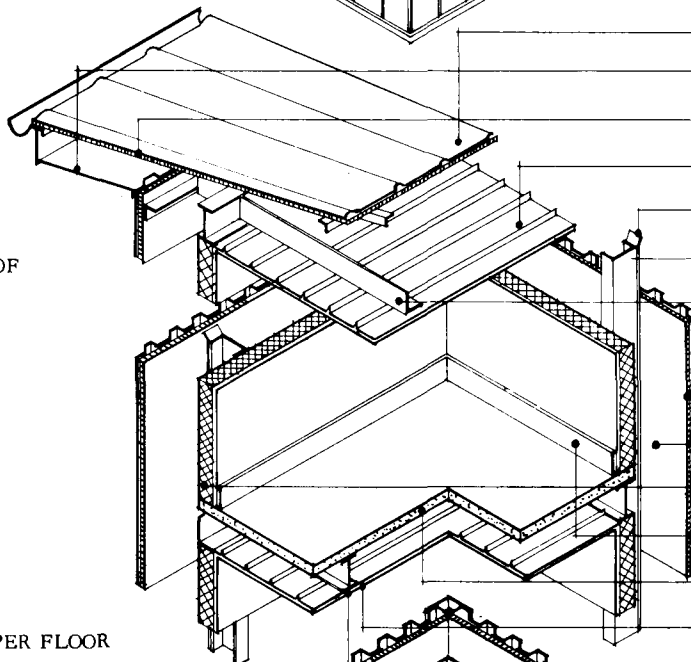
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Birmingham Corporation, England.
<b>Date and Place of Origin.</b>	2. Birmingham, 1946.
<b>Materials Used.</b>	3. Welded lattice steel frame, and brick and foamed slag.
<b>Description.</b>	4. Steel frame erected first to provide roof and floor to facilitate erection of wall panels. U= 0.24 (walls).
<b>Development to Date.</b>	5. -
<b>Comment.</b>	6. -
<b>References.</b>	7. Post War Building Study, No. 23, H.M. Stationery Office, London, England.

WHOLE HOUSE ASSEMBLY



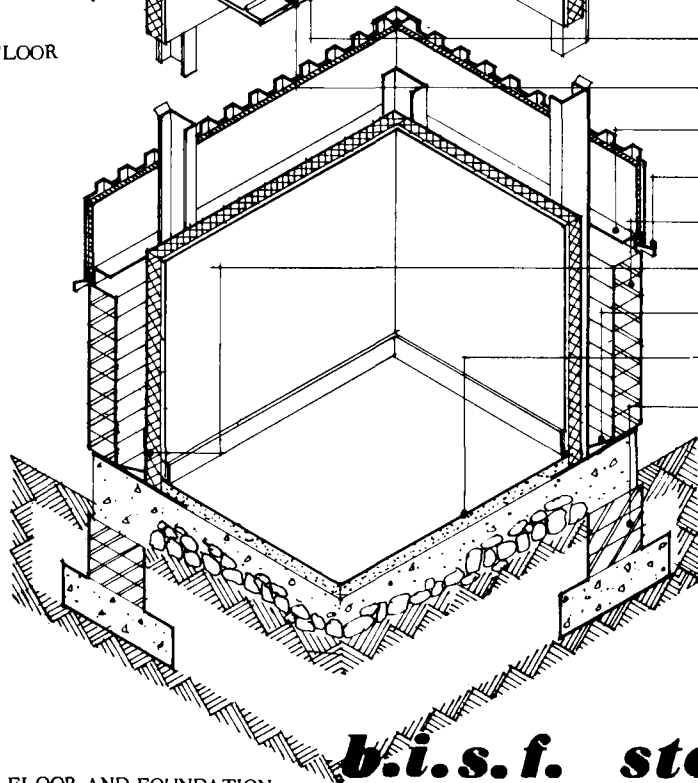
WALL UNIT JUNCTION

ROOF



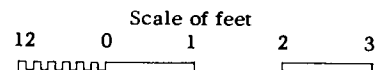
- Protected metal sheeting.
- steel eaves sheeting.
- fiber board.
- plaster on ribbed expanded metal.
- bituminous felt.
- 2" x 4" r.s. channel.
- steel roof truss.
- trough sheeting.
- fiber board.
- cavity.
- 2" breeze or foamed slag.
- steel skirting.
- 2" screed on ribbed expanded metal.
- Plaster on ribbed expanded metal.

UPPER FLOOR



- steel joist.
- steel angle.
- metal drip.
- 4 1/2" brickwork.
- vertical slate d.p.c.
- felt membrane.
- 2" screed.
- brickwork.

GROUND FLOOR AND FOUNDATION

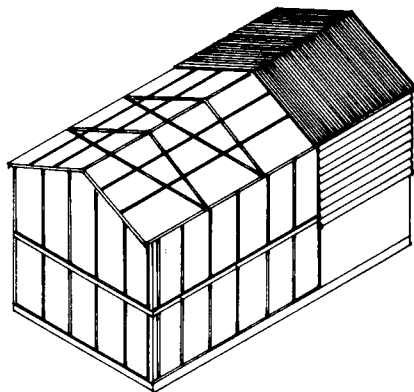


**b.i.s.f. steel frame a**

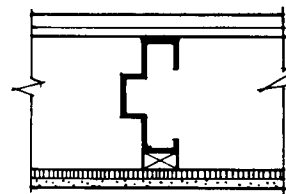
December, 1958.

## B.I.S.F. STEEL FRAME "A"

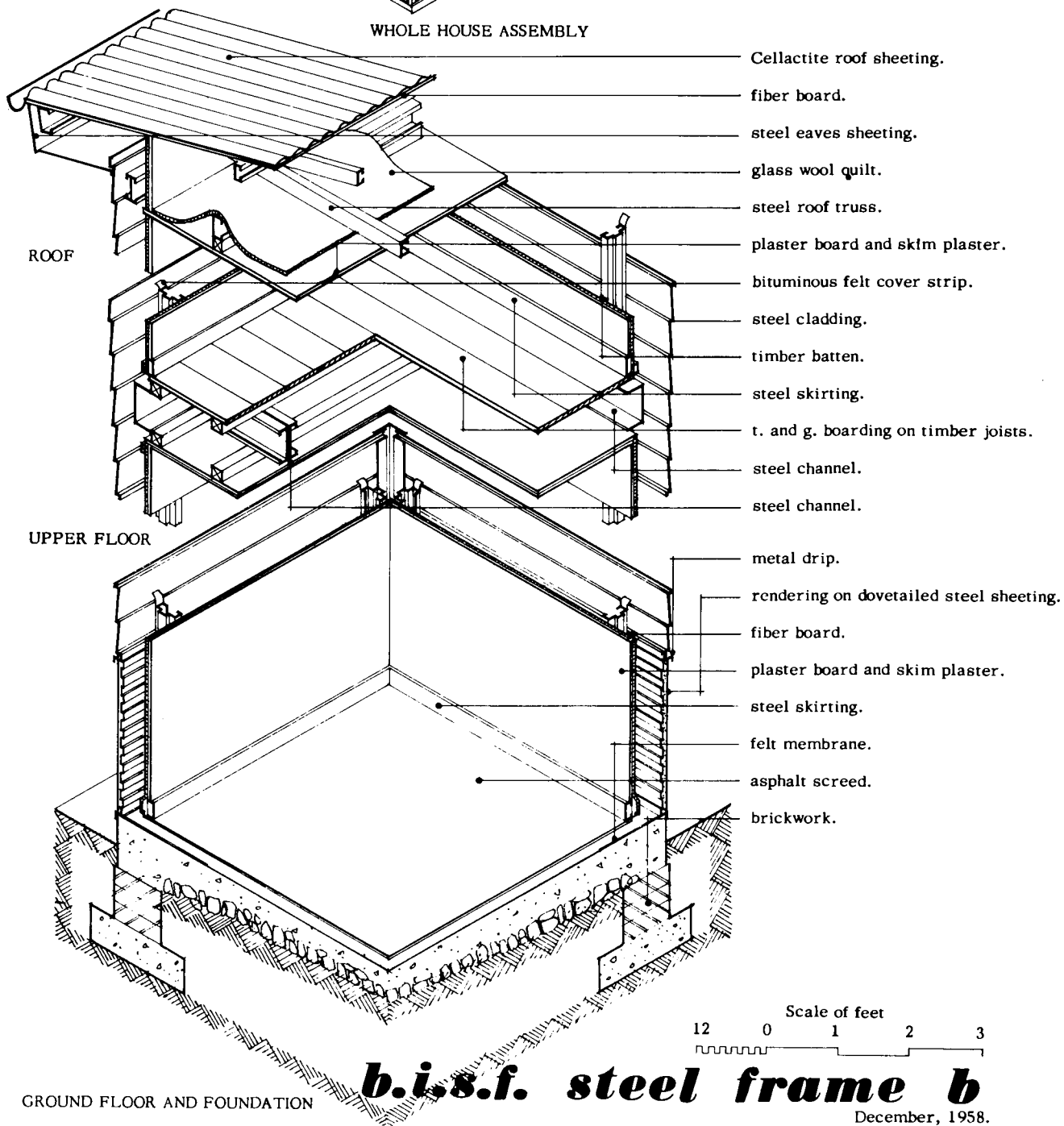
- |  |  |
|--|--|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Sponsor and Builder:<br>British Iron and Steel Federation.<br>Architect: Frederick Gibberd.   |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Northolt, Middlesex, England 1946.  |
| <b>Materials<br/>Used.</b>   | 3. Steel (hot rolled).   |
| <b>Description.</b>  | 4. U=0.23 (walls).<br>Steel Frame and Roof Trusses<br>erected on site.<br>Prefabricated cladding and insulation<br>panels added. Rolled steel floor joists<br>supported in interior by channel beam<br>on tubular posts. |
| <b>Development<br/>to Date.</b>  | 5. -   |
| <b>Comment.</b>  | 6. Ministry of Works, London.  |
| <b>References.</b>   | 7. "Post War Building Study No. 23",<br>H.M. Stationery Office, London.  |



WHOLE HOUSE ASSEMBLY

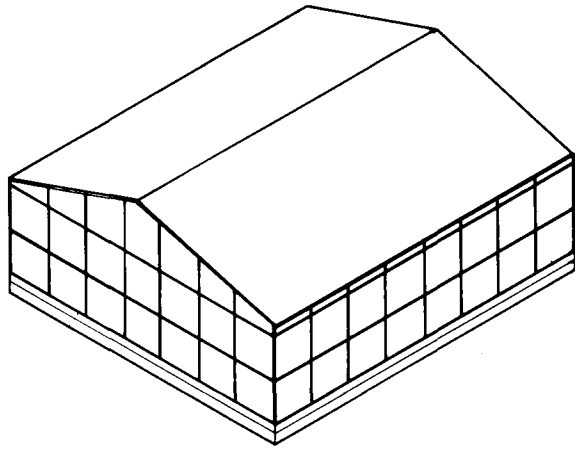


WALL UNIT JUNCTION

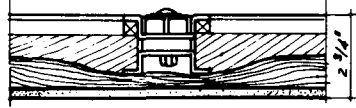


## B.I.S.F. STEEL FRAME "B"

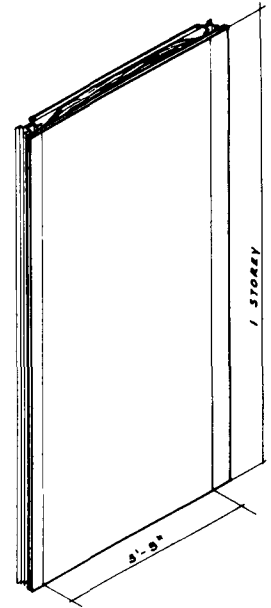
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. Sponsor and Builder: British Iron and Steel Federation.</b>
<b>Date and Place of Origin.</b>	<b>2. Northolt, Middlesex, England 1946.</b>
<b>Materials Used.</b>	<b>3. Light gauge steel strip (cold formed).</b>
<b>Description.</b>	<b>4. U-0.27 (walls). Welded steel frames and trusses are erected on site, cladding and insulation added.</b>
<b>Development to Date.</b>	<b>5. -</b>
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. "Post War Building Study No. 23", H.M. Stationery Office, London.</b>



WHOLE HOUSE ASSEMBLY

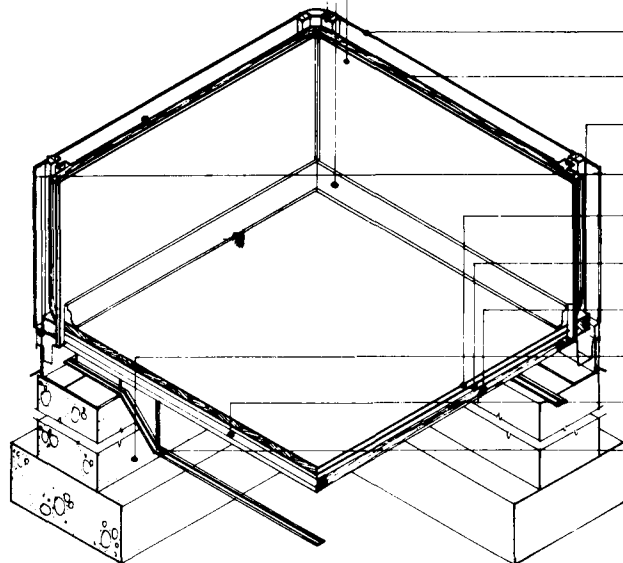
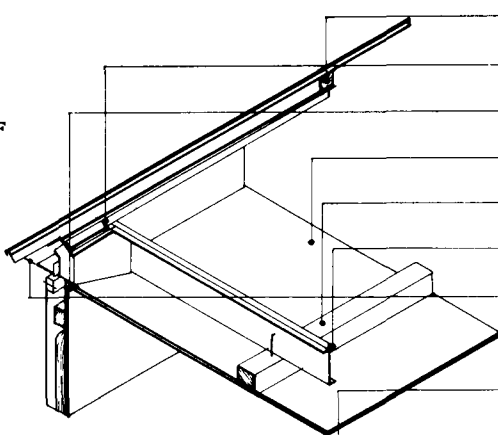


WALL UNIT JUNCTION



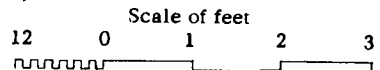
UNIT OF CONSTRUCTION

ROOF



GROUND FLOOR AND FOUNDATION

- Nailed joists
- open truss rafter
- aluminum extruded corner bead
- 3/8" plaster wall board
- 2" x 3" wood stringer
- 3" x 1 1/8" collar beam
- galv. steel perf. sheet
- extruded aluminum corner bead
- structural frame
- aluminum base mould
- 3/8" plaster wall board
- 26 ga. galv. steel
- 1" blanket insulation
- wood furring (2" x 2")
- copper dampproofing
- 13/16" hardwood floor
- 3/4" subfloor
- 2" insulation
- foundation
- nailer joists
- open truss



**h a r m a n**

December, 1958.



## HARMAN HOMES

**Traditional,  
Non-Traditional,  
Manufacturer,  
Sponsor or  
Builder.**

1. Non-Traditional.  
W.H. Harman Corporation,  
Philadelphia.

**Date and  
Place of  
Origin.**

2. U.S.A. 1947.

**Materials  
Used.**

3. Pressed Steel.

**Description.**

4. This is a reinforced metal panel system of construction deriving its source from the automobile industry. The house is prefabricated as a whole and shipped to site for assembly.

**Development  
to Date.**

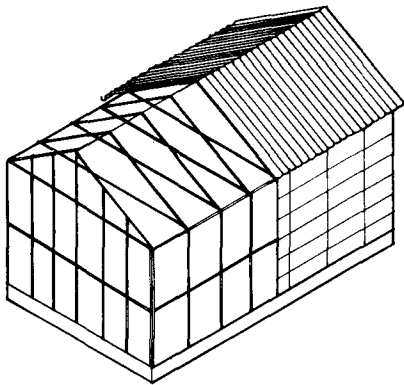
5. -

**Comment.**

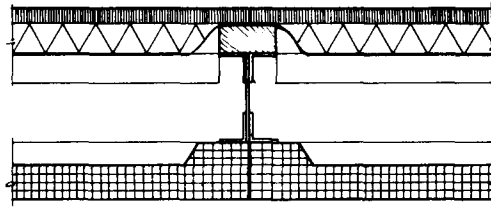
6. -

**References.**

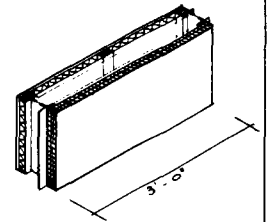
7. Architectural Forum January 1947.



WHOLE HOUSE ASSEMBLY

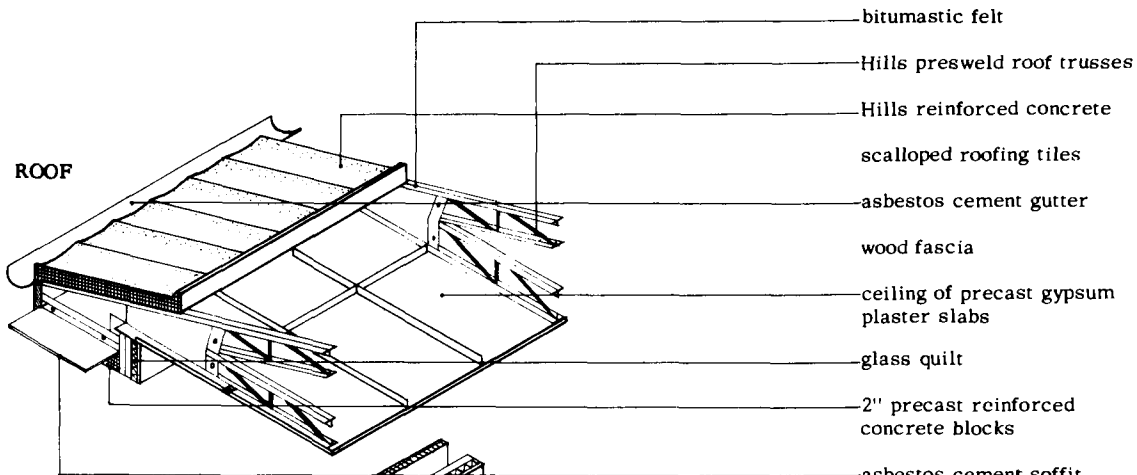


WALL UNIT JUNCTION



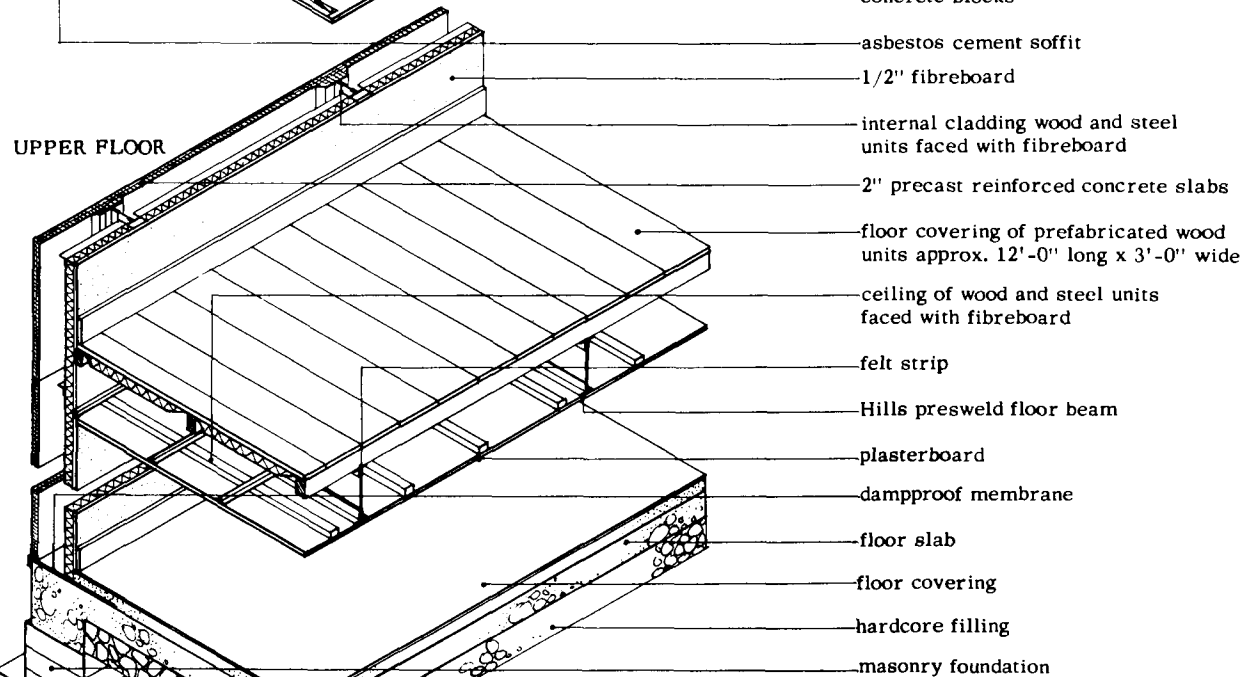
UNIT OF CONSTRUCTION

ROOF



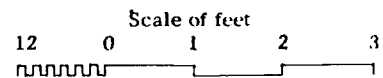
- bitumastic felt
- Hills presweld roof trusses
- Hills reinforced concrete scalloped roofing tiles
- asbestos cement gutter
- wood fascia
- ceiling of precast gypsum plaster slabs
- glass quilt
- 2" precast reinforced concrete blocks

UPPER FLOOR



- asbestos cement soffit
- 1/2" fibreboard
- internal cladding wood and steel units faced with fibreboard
- 2" precast reinforced concrete slabs
- floor covering of prefabricated wood units approx. 12'-0" long x 3'-0" wide
- ceiling of wood and steel units faced with fibreboard
- felt strip
- Hills presweld floor beam
- plasterboard
- dampproof membrane
- floor slab
- floor covering
- hardcore filling
- masonry foundation

GROUND FLOOR AND FOUNDATION

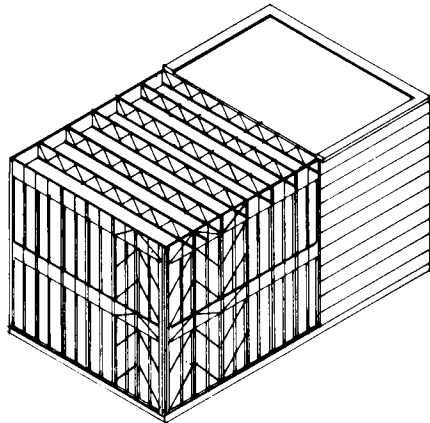


***hills concrete clad house***

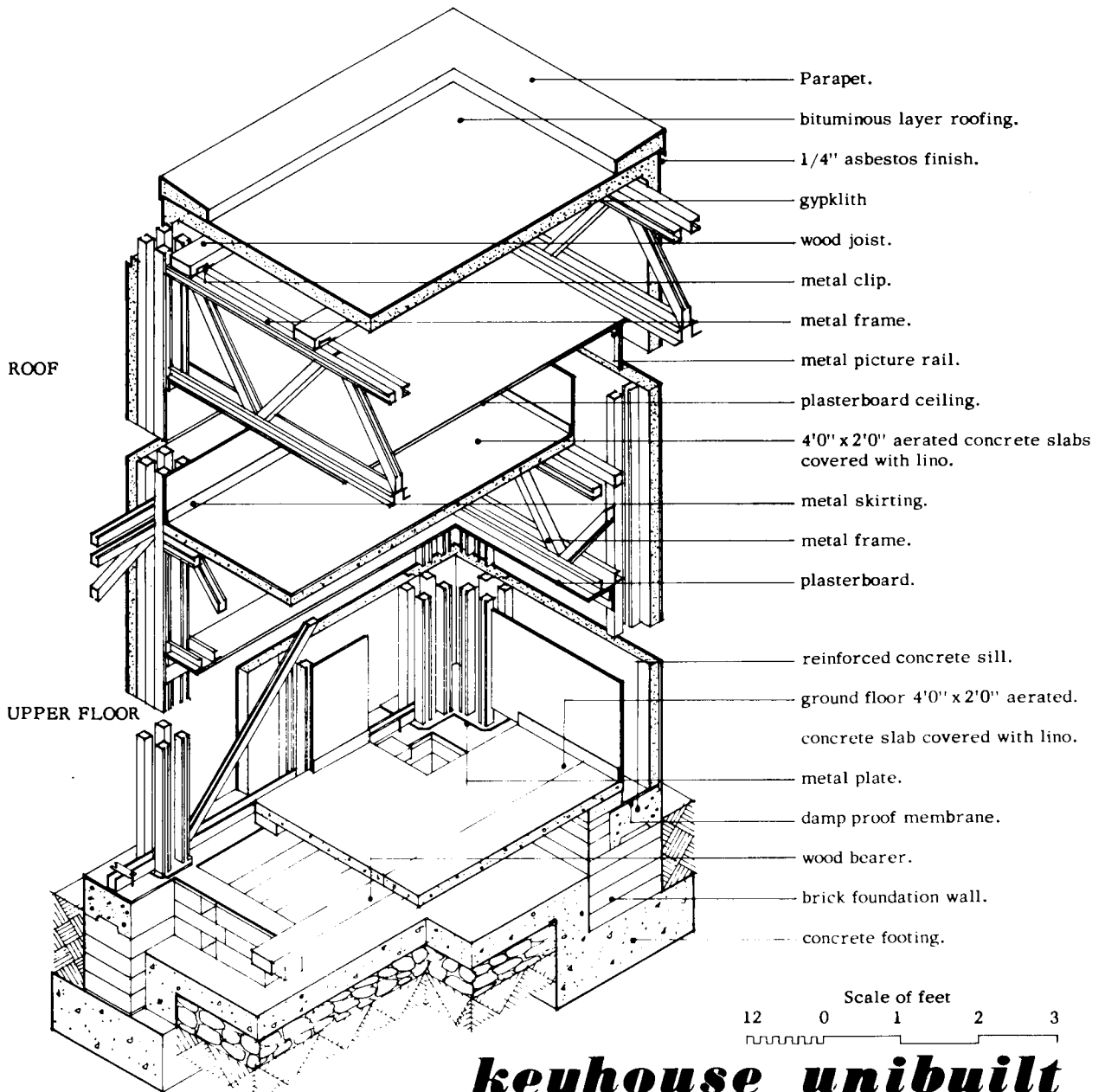
December, 1958.

## HILLS CONCRETE CLAD HOUSE

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Hills Patent Glazing Company, Ltd., Tottenham Court Road, London W. C. 1, England.
<b>Date and Place of Origin.</b>	2. London, England, 1945.
<b>Materials Used.</b>	3. Steel frame and concrete cladding.
<b>Description.</b>	4. According to insulation provided.
<b>Development to Date.</b>	5. Experimental house at Northolt, Middlesex, England.
<b>Comment.</b>	6. -
<b>References.</b>	7. "House Out of Factory" John Gloog and Grey Wornum 1946, London, England.



WHOLE HOUSE ASSEMBLY



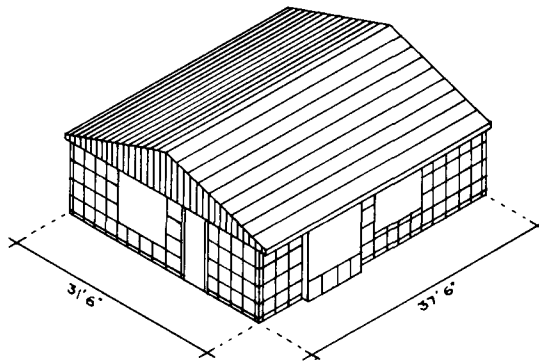
GROUND FLOOR AND FOUNDATION

**keyhouse unibuilt**

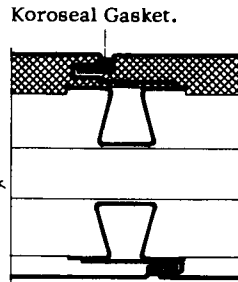
December, 1958.

## KEYHOUSE UNIBUILT

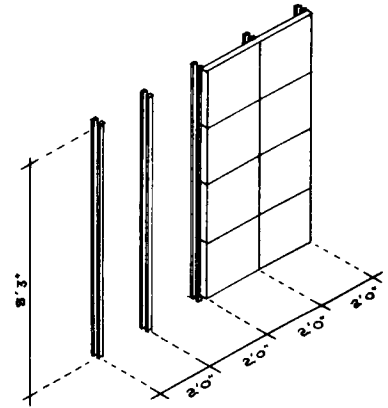
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Sponsor: Gyproc Products,<br>Brockhouse and Co. Limited,<br>J. Sankey and Sons Limited.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Coventry, England 1945.  |
| <b>Materials<br/>Used.</b>   | 3. Cold rolled strip welded<br>steel frames.  |
| <b>Description.</b>  | 4. A two storey construction.<br>Frames, facings and insulation<br>are clipped on in situ.<br>Floors supported on 20 in.<br>girders. Cladding joints mastic<br>caulked. |
| <b>Development<br/>to Date.</b>  | 5. -  |
| <b>Comment.</b>  | 6. Ministry of Works.   |
| <b>References.</b>   | 7. "Post War Building Study No. 23",<br>H.M. Stationery Office, London, England.  |



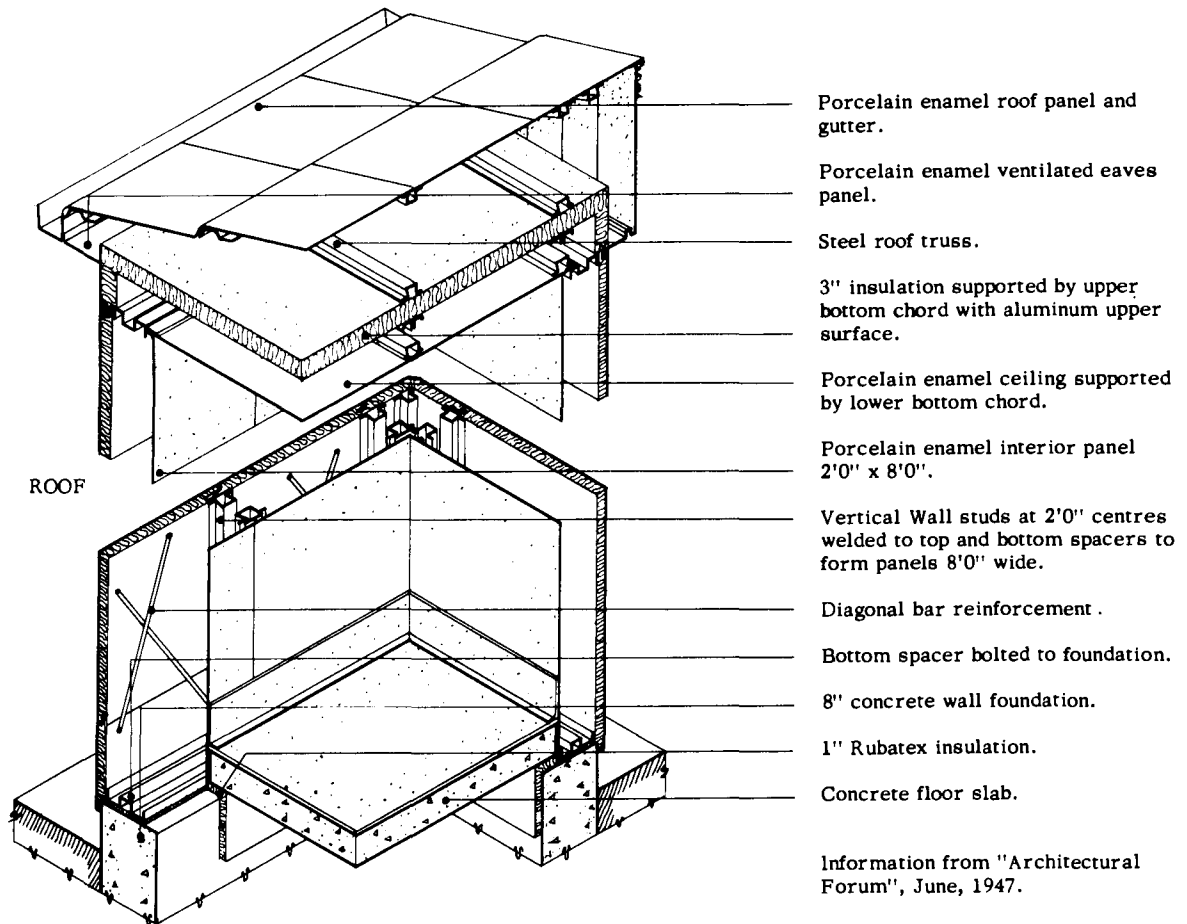
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

Porcelain enamel roof panel and gutter.

Porcelain enamel ventilated eaves panel.

Steel roof truss.

3" insulation supported by upper bottom chord with aluminum upper surface.

Porcelain enamel ceiling supported by lower bottom chord.

Porcelain enamel interior panel 2'0" x 8'0".

Vertical Wall studs at 2'0" centres welded to top and bottom spacers to form panels 8'0" wide.

Diagonal bar reinforcement.

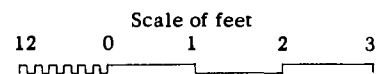
Bottom spacer bolted to foundation.

8" concrete wall foundation.

1" Rubatex insulation.

Concrete floor slab.

Information from "Architectural Forum", June, 1947.

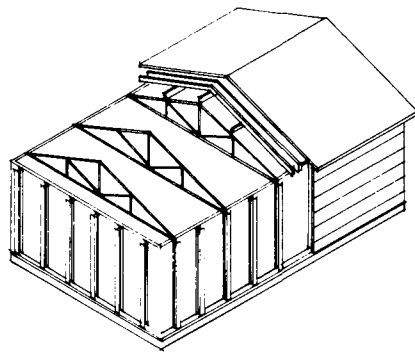


**lustron**

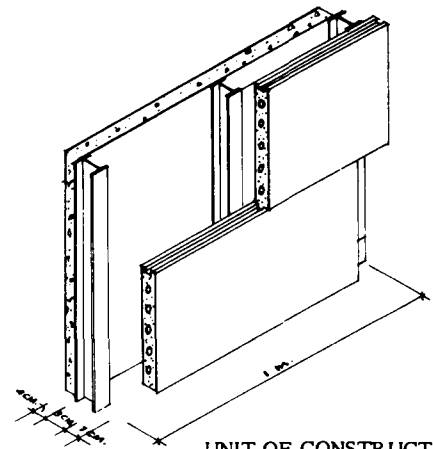
February, 1958.

## LUSTRON

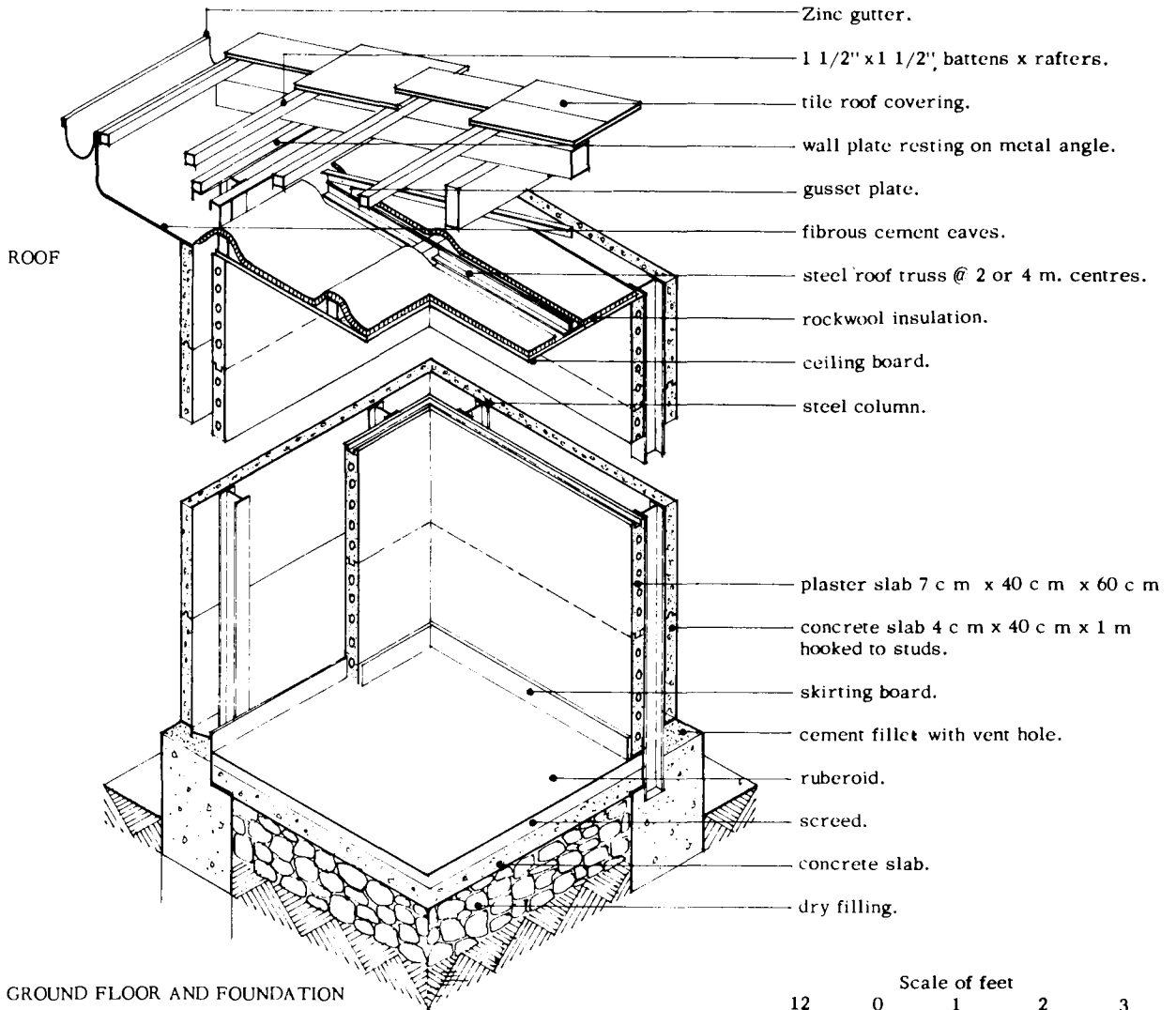
- |  |   |
|--|---|
| <b>Traditional,<br/>Non-Traditional,<br/>Manufacturer,<br/>Sponsor or<br/>Builder.</b> | 1. Non-Traditional.<br>Lustron Corporation,<br>Columbus, Ohio.<br>affiliate: Chicago Vitreous Enamel<br>Product Company.  |
| <b>Date and<br/>Place of<br/>Origin.</b>   | 2. Ohio, 1947. Production stopped 1950.   |
| <b>Materials<br/>Used.</b>   | 3. Steel and Porcelain Enamel.  |
| <b>Description.</b>  | 4. Delivered as a whole house unit<br>made in the factory, complete<br>except for foundation and floors,<br>electrical conduit and pipe. Wall<br>and roof frames and trusses are<br>delivered ready welded. |
| <b>Development<br/>to Date.</b>  | 5. 2,000 houses produced, 1947 to 1950.   |
| <b>Comment.</b>  | 6. Production was stopped in 1950 due<br>to financial difficulties.   |
| <b>References.</b>   | 7. "Prefabrication of Houses" p. 224<br>by Burnham Kelly, publ. John Wiley<br>Fortune, Nov. 1949.<br>Business Week, 25 Feb. 1950,<br>21 July 1951.  |



WHOLE HOUSE ASSEMBLY



UNIT OF CONSTRUCTION



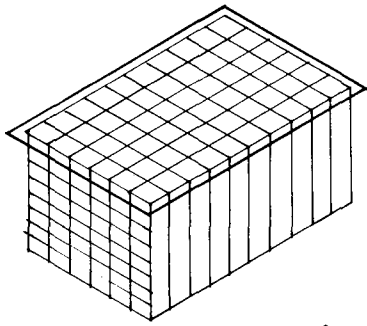
**maison phenix**

December, 1958.

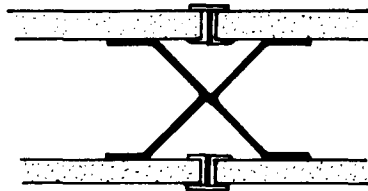


## MAISON PHENIX

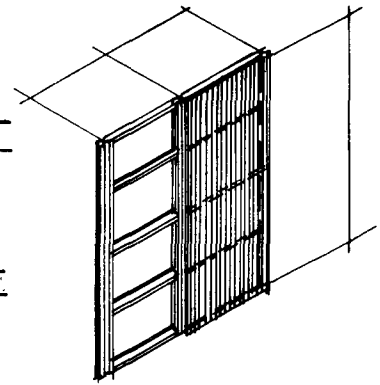
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. Soc. des Maisons Phenix, 10 Rue Pergolese, Paris (16e) France.</b>
<b>Date and Place of Origin.</b>	<b>2. France 1945.</b>
<b>Materials Used.</b>	<b>3. Steel frame, steel windows and plaster slabs.</b>
<b>Description.</b>	<b>4. -</b>
<b>Development to Date.</b>	<b>5. 5,000 houses in France.</b>
<b>Comment.</b>	<b>6. -</b>
<b>References.</b>	<b>7. Centre Scientifique et Technique du Batiment, Bulletin No. A390, Paris, France.</b>



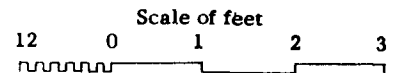
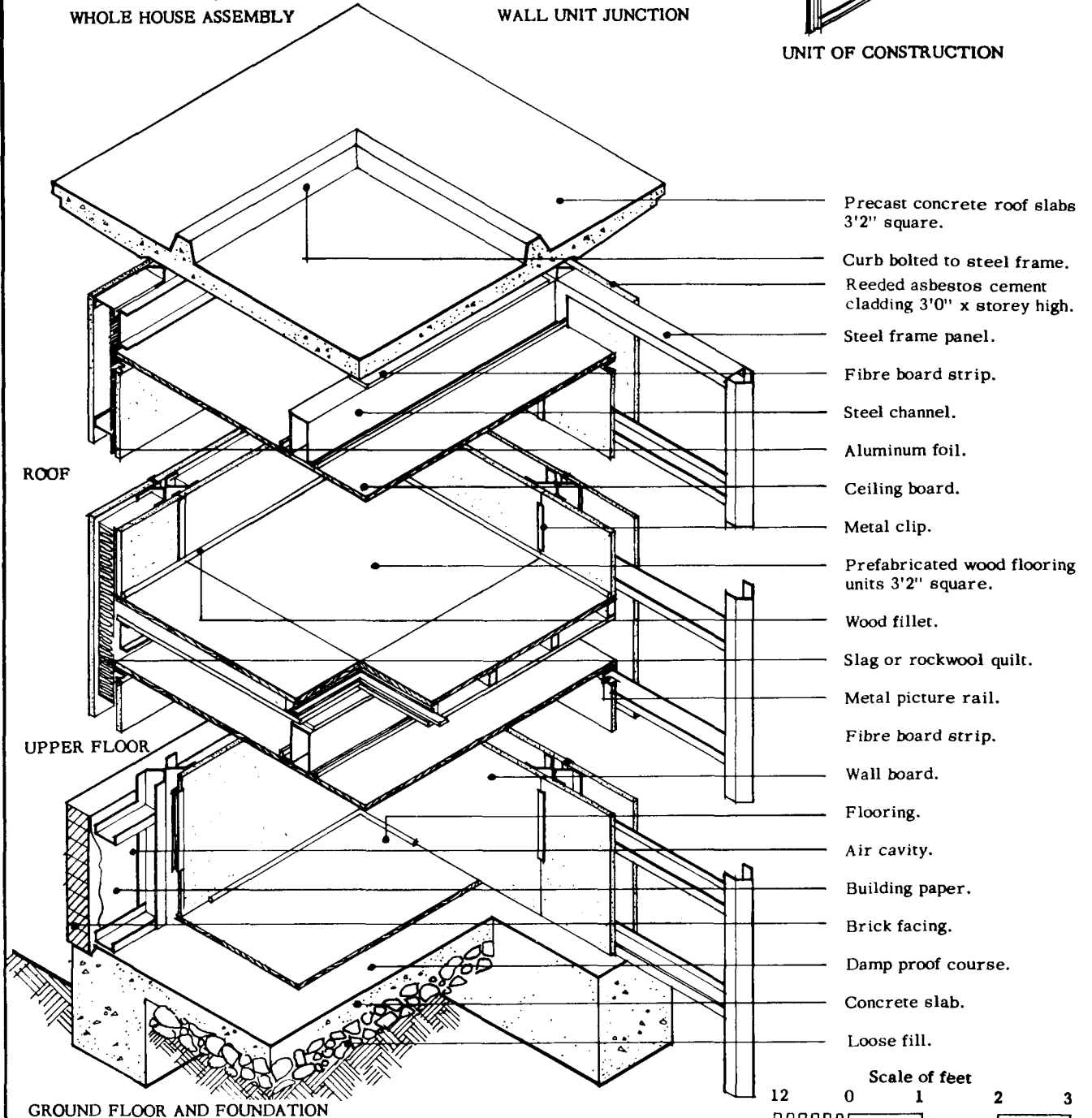
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

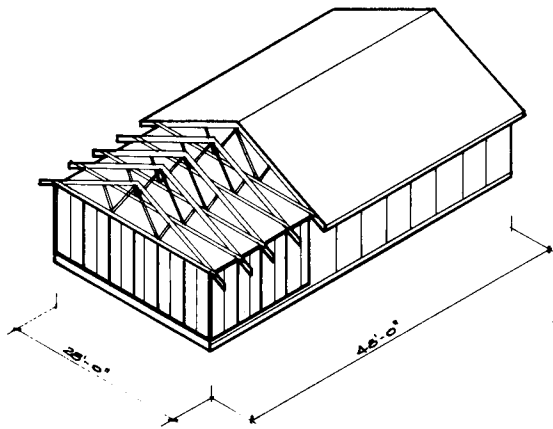


# ***braithwaite unit frame***

December, 1958.

## BRAITHWAITE UNIT FRAME

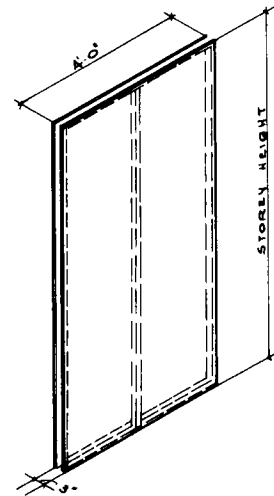
<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Braithwaite and Co., Ltd., Engineers.
<b>Date and Place of Origin.</b>	2. Burnt Oak, Middlesex, England, 1946.
<b>Materials Used.</b>	3. Cold rolled strip steel (frames only).
<b>Description.</b>	4. Two storey steel units, 3'2" or 6'4" wide erected first on concrete foundation. Facing and insulation added after. U=0.26 (external wall panels, except at joints). 1/2 hour maximum fire resistance.
<b>Development to Date.</b>	5. -
<b>Comment.</b>	6. -
<b>References.</b>	7. Post War Building Study, No. 23, H.M. Stationery Office, London, England.



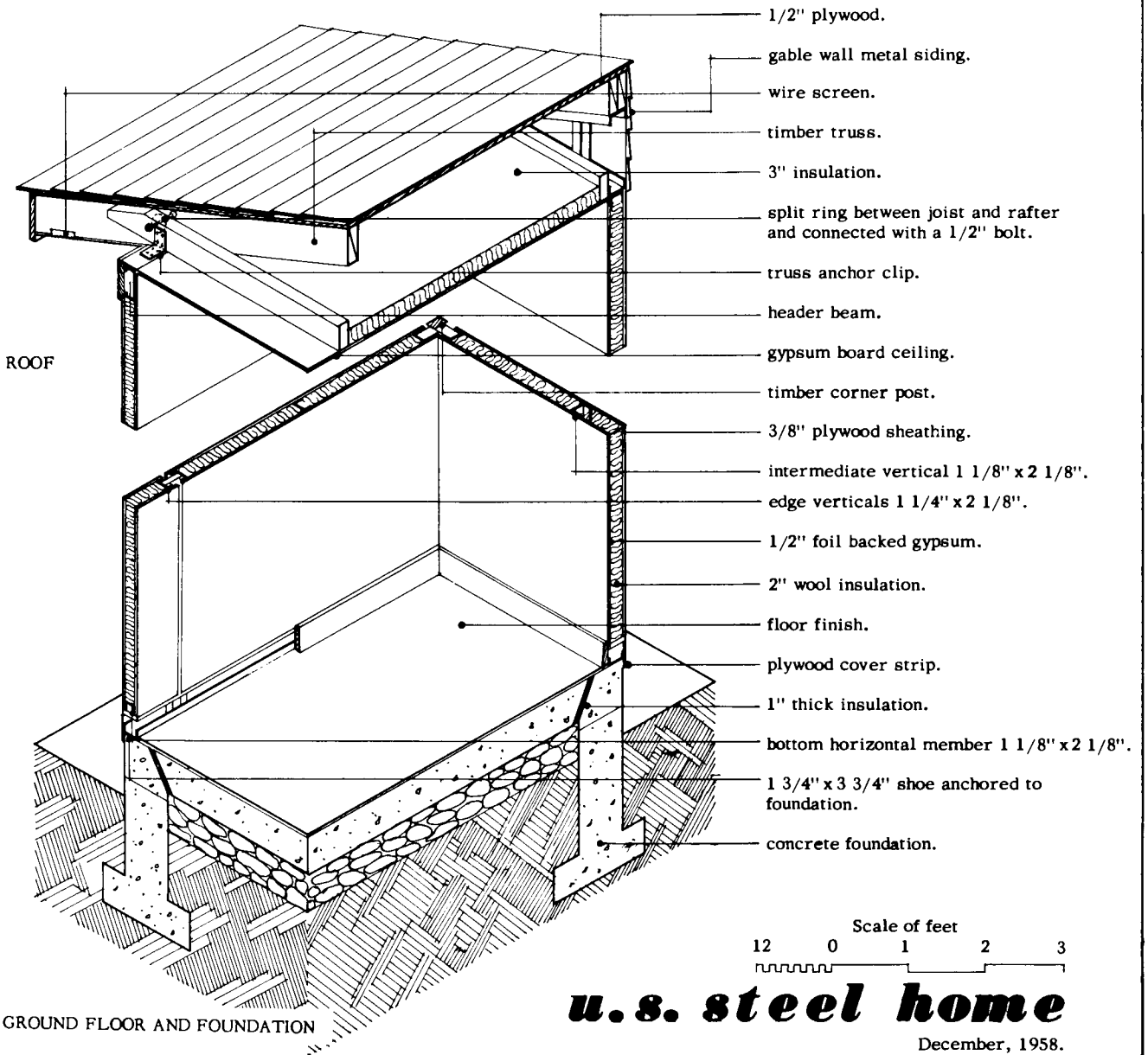
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

**u.s. steel home**

December, 1958.

## UNITED STATES STEEL HOMES

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional. U.S. Steel Homes, Frick Building, Pittsburg, Pennsylvania.</b>
<b>Date and Place of Origin.</b>	<b>2. United States 1938.</b>
<b>Materials Used.</b>	<b>3. Steel plywood and gypsum board.</b>
<b>Description.</b>	<b>4. -</b>
<b>Development to Date.</b>	<b>5. Considerable number of houses in U.S.</b>
<b>Comment.</b>	<b>6. Suitable only for one storey structures.</b>
<b>References.</b>	<b>7. F.H.A. Engineering Bulletin No. SE206.</b>

## METAL POST AND BEAM FRAMES

## **METAL POST AND BEAM FRAMES**

**MPB**

**Case Sheets    Heavy Steel Frame and Brick  
                      Howard Steel Frame**

## METAL POST AND BEAM

## MPB

### ALUMINAIRE

A Lawrence Kocher  
& Albert Frey,  
New York.

Experimental house at Grand  
Central Palace, 1931.  
Metal frame-skyscraper and  
panel. Duralumin columns  
and beams at wide centers  
supporting floor structure which  
in turn supports wall structure,  
which consists of corrugated  
aluminum on Z studs (steel).  
Insulation on both wall faces.

M. O. W. Survey of  
Prefabrication.  
"The Evolving House  
III, Rational Design!",  
(Bemis).

### ATHERTON

R.D. Atherton,  
Builder,  
Timperley Cheshire,  
England.

1920.  
24 houses in Macclesfield.  
3" x 1 1/2" steel frame, at  
4' 6" centers.  
Outer and inner skin 2" con-  
crete slab 1' 6" wide.  
Dry construction.

M. O. W. Survey of  
Prefabrication.

### BRAUNE & ROTH

B & R Stahlhausbau,  
Leipzig, Germany.

1926.  
Developed at Leipzig &  
Berlin, Germany.  
Frame of rolled steel channels  
at 2m. centers. Exterior  
sheeting 3 or 4 mm. steel sheets.

Der Stahlhausbau,  
H. Spiegel,  
M. O. W. Survey of  
Prefabrication.

### BRIGHAM SYSTEM

Department of  
Engineering Research,  
University of Michigan,  
(Prof. G.G. Brigham),  
U.S.A.

University Project for War  
Production Board.  
Prototype model erected at  
University.  
Steel space frame roof.  
Wood panels for walls.  
Demountable.

"War Production  
Board Research  
Report",  
September 1944.

COLORADO FUEL &  
IRON COMPANY  
McKay Fireproof  
Company,  
U.S.A.

Rolled steel frame 4", and at  
4' 0" centers.  
3/4" gypsum both faces.  
Windows fitted directly to  
steel frame.

M. O. W. Survey of  
Prefabrication.



METAL POST AND BEAM

MPB

CONNELL

J.N. Connell,  
Coatbridge, Scotland.

Light steel frame. Precast concrete units 6' 2" wide x storey height. Walls lined with plasterboard. Steel frame roof and asbestos cement cladding.

J.N. Connell,  
Coatbridge, Scotland.

CONSTRUCTIONS

ISOTHERMES

R. DeCourt,  
Paris, France.

Metal lath and plaster on rolled steel frame, mainly for large buildings.

M. O. W. Survey of Prefabrication.

CONSTRUCTIONS SEMI  
METALLIQUE DU  
FORGES DE STRASBORG

See Constructions Semi Metallique Du Forges De Strasborg under MP.

Constructions Semi Metallique Du Forges De Strasborg.

CRANE HOUSE

Alderman Crane,  
Designer,  
Bottingham, England.

1926.  
Metal frame at 6' 0" centers. 5" horizontal concrete pre-cast slabs between frames. U = 0.32 (external wall).

Alderman Crane,  
Designer,  
Bottingham, England.

DENIS POULTON  
HOUSE

Architect,  
England.

Heavy Steel Frame & brick. 1937. 28 houses built. Steel frame, brick outer skin, anhydrite blocks internally. Roof and floor conventional. U = 0.30.

Denis Poulton House  
Architect,  
England.

DENNIS WILD

James Wild & Company  
Housing Limited,  
England.

Rolled steel joists frame and patent cradle roof truss. Conventional brick wall. U = 0.30.

James Wild &  
Company Housing  
Limited,  
England.

## METAL POST AND BEAM

## MPB

### DORLONCO HOUSE

Dorman Long & Company  
Limited,  
England.

1920 to 1928. 10,000 homes  
built in England.  
Light steel frame.  
Exterior cladding: cement  
rendered on metal lath.  
Internally:  
2" clinker slab plastered.  
Floors in reinforced concrete.  
U = 0.30.

Dorman Long &  
Company Limited,  
England.

### FOSTER

T.J. Foster,  
New York, N.Y.,  
U.S.A.

1932.  
Open rolled steel post and beam  
frame. Outer infill panel of  
concrete on wire mesh, inner  
skin gypsum.

"Arch. Forum",  
March 1932.  
M.O.W. Survey of  
Prefabrication.

### GENERAL HOUSES INCORPORATED

Chicago, Illinois,  
U.S.A.

1935.  
Single storey framed structures,  
3' 0" x storey high panels filled  
with asbestos clad insulation.

M.O.W. Survey of  
Prefabrication.

### GOTHIC ARCH. PREFAB METAL BUILDING

(Northern Type),  
G.J. & B. Manufacturing  
Company,  
Houston, Texas,  
U.S.A.

Steel trusses at 4' 0" centers,  
20' 0" x 48' 0" x 10' 0" high.  
Corrugated steel cladding and  
corrugated plastic windows.  
Accepted for U.S. Navy.

G.J. & B. Manufactur-  
ing Company,  
Houston, Texas,  
U.S.A.

### GROPIUS

Walter Gropius,  
Architect,  
Stuttgart, Germany.

One house built in Stuttgart.  
Exposition 1930.  
Metal frame-skyscraper.  
Rolled steel frame at 3' 6"  
centers. 3" pressed cork sheet  
curtain walling covered with  
asbestos board. Interior lining  
of wall-board.

"Architectural  
Forum",  
March 1931.  
"The Evolving House  
III, Rational Design",  
(Bemis).

METAL POST AND BEAM

MPB

HOMEOLA CORPORATION

9 South Clinton Street,  
Chicago 6, Illinois,  
U.S. A.

Plywood faced panels.  
Conventional.  
Steel frame.  
8' 0" x 4' 0" panels.

"Sales Management",  
November 1946.  
Bureau of Standards,  
F.H. A.  
"American Builder  
& Building Age",  
May 1947.

HOWARD STEEL FRAME  
HOUSE

J. Howard & Company  
Limited,  
F. Gibberd, Architect,  
England.

Steel frame, asbestos  
cement externally. Wall  
divided into series of  
beams. Floor, composite  
prefabricated wood and  
steel beams. Compare with  
Pierce House.  
1 prototype at Datchet.

M. O. W. Survey of  
Prefabrication.

KOCHER & FREY

New York, N.Y.,  
U.S. A.

See Low-Cost Farmhouse  
under MPB.

LOW-COST FARMHOUSE

A. Lawrence Kocher,  
Albert Frey,  
New York, N.Y.,  
U.S. A.

1934.  
Panel. 4 1/2" diameter steel  
corner columns on concrete  
piles connected by 10" steel  
girts. Armco box type units  
floor structure.  
Curtain wall panels of in-  
sulating board steel clad  
1 1/2" thick, 3' module.  
Proposal made for US  
Committee on Farmhouse  
Design.

"The Evolving House  
III, Rational Design",  
(Bemis).

METAL POST AND BEAM

MPB

McKAY

McKay Engineering  
Company,  
Cleveland, Ohio,  
U.S.A.

1913. Some houses built near  
Cleveland.  
Metal frame—skyscraper.  
Steel channel frame at 4'  
centers tied to brick veneer  
externally and hollow tile  
skin internally. Conventional  
wood flooring on metal frame.  
Roof similar.

"The Evolving House  
III, Rational Design",  
(Bemis).

MICROPORITE

John B. Pierce  
Foundation,  
Raritan, New Jersey,  
U.S.A.

1935.  
Metal frame—skyscraper.  
Steel frame at 14' centers.  
Infilling of microporite  
(indurated calcium hydrosili-  
cate). Slabs 12' 6" x 2' 6" x  
4". Floor slabs similar but  
10" thick. Mastic jointing.  
No interior or exterior  
finish required.

"Architectural  
Record",  
August 1935.  
"The Evolving House  
III, Rational Design",  
(Bemis).

NELSON HOUSE

Nelson & Chadwick,  
Architects,  
U.S.A.

1958. Experimental, none  
built.  
12' 0" x 12' 0" x 12' 0"  
modular space unit on posts  
with translucent roof.  
Foundation on piers.  
Aluminum 4 way posts.

"Architectural  
Record",  
December 1957.

NEW GEORGIAN

A. Roberts & Company,  
London, England.

Cold rolled steel, brick  
clad, wood wool lined.

A. Roberts &  
Company,  
London, England.

PORETE

See Porete under CM.

METAL POST AND BEAM

MPB

**SORIANO HOUSE**

Raphael S. Soriano,  
Los Angeles,  
California,  
U.S.A.

1 house at Bel Air.  
Posts at 10' 0" centers.  
Steel deck spans between  
beams at 10' 0" centers.

"Architectural  
Forum",  
November 1951.

**SUSPENSION STEEL**

Suspension Steel  
Concrete Company,  
Illinois, U.S.A.

A few buildings erected  
around 1910.  
Metal frame—close spaced.  
Tubular steel frame around  
which wire is wrapped to  
which is fixed expanded metal  
lathing which is plastered.

"The Evolving House  
III, Rational Design",  
(Bemis).

**TAPPAN FRAME**

Robert Tappan,  
Architect,  
New York, N.Y.,  
U.S.A.

1927.  
Rolled steel frame at 4'  
centers. Orthodox con-  
struction for remainder.

M. O. W. Survey of  
Prefabrication.  
"American Arch.",  
November 1927 &  
March 1934.  
H. Spiegel, Der  
Stahlhausbau.  
"Iron Age",  
August 1931.  
"Architectural Forum",  
March 1943.

**TOREBODA**

See Toreboda under WFH.

**TORKRET**

Torkret GmbH,  
Berlin, Germany.

Some experimental buildings.  
Steel frame, lightweight  
concrete slabs rendered  
externally and internally.  
Frames at 6-8' centers.

M. O. W. Survey of  
Prefabrication.  
H. Spiegel, Der  
Stahlhausbau.  
"Baugilde", 1929.

## METAL POST AND BEAM

### WAGNER

Albert Wagner,  
Contractor,  
Ludwigshagen,  
Rhein, Germany.

1926.  
Steel post and beam frame,  
pumice slab infilling. Studs  
consist of two U-sections set  
back to back. Rendered both  
sides. Slabs separated by  
cavity. Considerable develop-  
ment in Germany for multi-  
storey apartment building.

### WEEK END HOUSE

Guerin & Herbulot,  
Architects,  
France.

1938.  
Timber frame panels between  
studs at 0.667m. spacing.  
Panels are storey height and  
include windows.  
Plywood lined after erection.  
Panels are stiffened by steel  
chain passing horizontally  
through panels. Boarding  
externally hardboard internally.

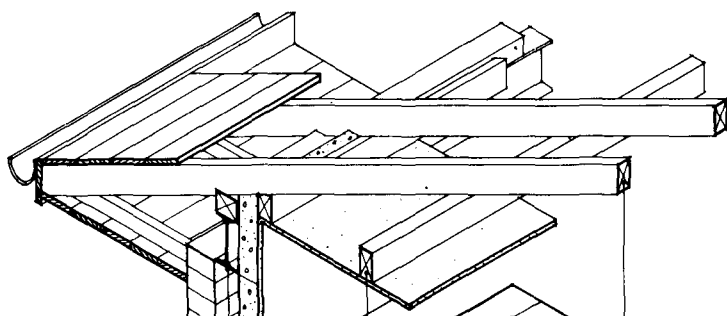
### WINTER

See Winter under CPB.

## MPB

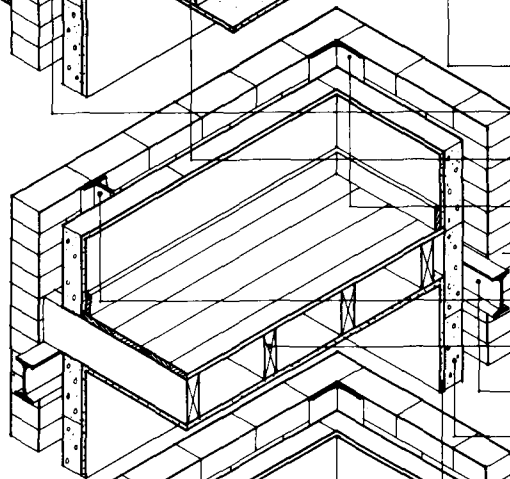
M. O. W. Survey of  
Prefabrication.  
H. Spiegel, Der  
Stahlhausbau, 1926.  
"Baugilde", 1929.

M. O. W. Survey of  
Prefabrication.  
"Arch. d'Aujourd  
'hui", February,  
1935.



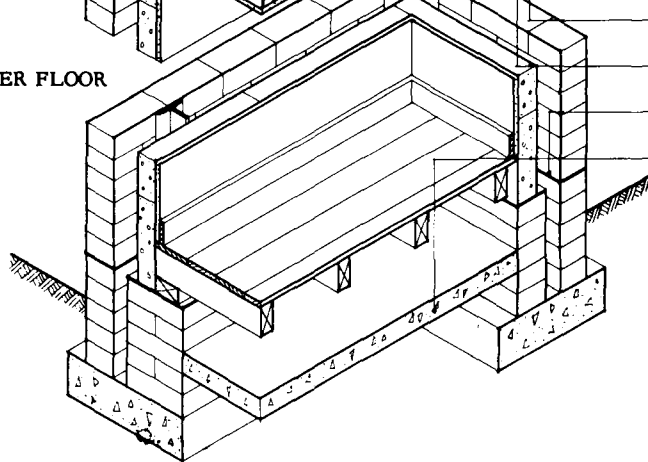
ROOF

Roof construction is normal joists with covering.



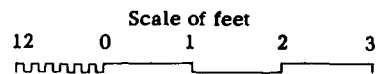
UPPER FLOOR

- Wood rafters.
- 7" x 3 1/2" x 15 lb. steel beam.
- Wood ceiling joists.
- 4" x 4" x 5/16" steel angle column.
- Brick outer skin.
- 4" x 3" x 3/8" steel tee column.
- Wood joists bearing on steel beams.
- 5" x 2 1/2" x 9 lb. steel beam.
- 3" anhydrite blocks.
- Plaster finish.
- Damp proof course.
- Concrete ground slab.



GROUND FLOOR AND FOUNDATION

Information from Post War Building Study No. 1. (Denis Poulton House).



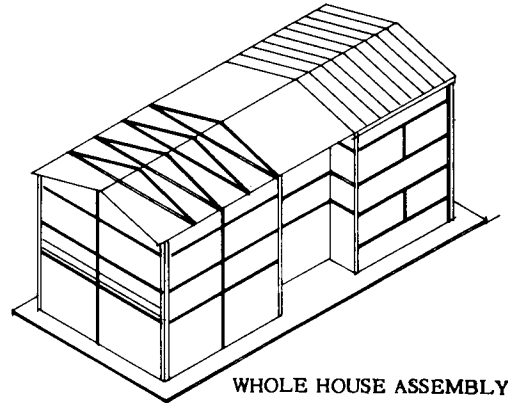
# ***heavy steel frame and brick***

December, 1958.

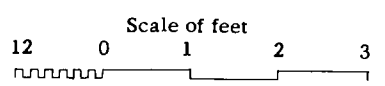
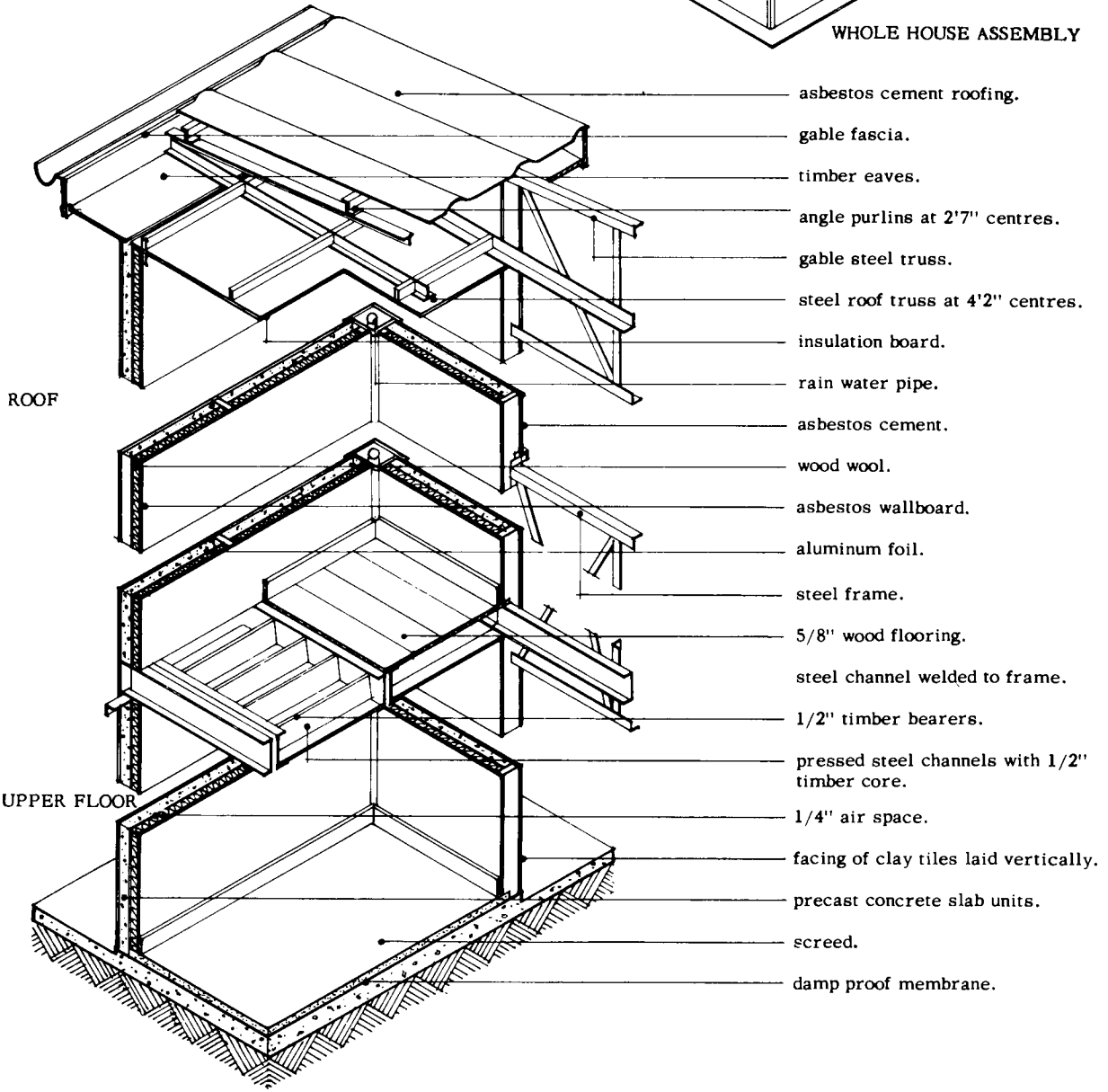
## HEAVY STEEL FRAME AND BRICK

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	<b>1. Non-Traditional.</b> This example: Denis Poulton (designer) U.K. Similar examples: Denis Wild Houses by James Wild and Co., (housing), Ltd. and Stuart and Sons, Glasgow. U.K.
<b>Date and Place of Origin.</b>	<b>2. U.K. 1936.</b>
<b>Materials Used.</b>	<b>3. Heavy Rolled Steel and Brick.</b>
<b>Description</b>	<b>4. Frame members are British standard rolled steel joists at 10'0" to 12'0" centres with light intermediate angles, all intersections being bolted. For this particular example U=0.34 (external walls).</b>
<b>Development to Date.</b>	<b>5. About 10,000 houses in U.K. from 1928 to 1937 (this and similar examples) for various municipal authorities.</b>
<b>Comment.</b>	<b>6. The Denis Wild House, of which about 9,000 were erected in the U.K. around 1928, is similar except for a heavier steel frame.</b>
<b>References.</b>	<b>7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.</b>





WHOLE HOUSE ASSEMBLY



**howard steel frame**

December, 1958.

## HOWARD STEEL FRAMED HOUSE

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Non-Traditional. Sponsor and Builder: John Howard and Company Limited.
<b>Date and Place of Origin.</b>	2. Datchet, Buckinghamshire, England.
<b>Materials Used.</b>	3. Steelframe, foamed slag.
<b>Description.</b>	4. $U=0.29$ (min. in panels). Fire rating under 1/2 hour. A post and beam type of steel frame. Columns at 8'0" to 12'0" centres. Space below and above windows acts as floor bearing beam. Cladding is generally of asbestos cement. Fixed in advance to the frame work. Internal lining is prefabricated in storey high units.
<b>Development to Date.</b>	5. -
<b>Comment.</b>	6. -
<b>References.</b>	7. "Post War Building Study No. 23", H.M. Stationery Office, London, England.

## METAL PANEL

**METAL PANEL**

**MP**

**Case Sheet**

**Armco SteeloX**

## METAL PANEL

MP

ABC HOUSE (Turin House)  
Astengo, Bianco & Ceratto,  
Originators,  
Turin, Italy.

Light-gauge metal panels  
4' 1" wide for walls, roofs  
and floors. Panels can be  
made up in any combination  
and include windows. Linings  
and facings are applied on site.

"Architectural  
Forum",  
November 1947.

ALUMINUM  
CONSTRUCTION  
INCORPORATED  
276 St. James Street,  
Montreal, Quebec,  
Canada.

Aluminum wall panels fixed  
to extend steel frame.  
Houses: "Universal",  
"International", "Laurentian".

Aluminum Construction  
Incorporated,  
276 St. James Street,  
Montreal, Quebec,  
Canada.

AMERICAN COTTAGE  
American Houses  
Incorporated,  
New York, N.Y.,  
U.S.A.

1935.  
2' 0" wide pressed sheet metal  
framed panels, plywood faced,  
mineral wool insulated.  
Storey high. Window and door  
units 3' 0" wide, floor and  
ceiling units same.

M.O.W. Survey of  
Prefabrication.

ARMCO  
American Rolling Mill  
Company through,  
Insulated Steel Inc.,  
Cleveland, Ohio,  
U.S.A.

Panel. Steel channel shaped  
panel, interlocking. Finishes  
added. Floor of box section  
units. Many buildings erected.  
16" wide x 1 or 2 storey height.  
Floor sections welded to wall  
sections. Vitreous enamel  
siding.

M.O.W. Survey of  
Prefabrication.  
"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).

ARMCO STEELOX  
Armco Drainage &  
Metal Products of  
Canada Limited,  
Guelph, Ontario,  
Canada.  
also  
Steel Buildings Inc.,  
Middleton, Ohio,  
U.S.A.  
also  
Steelox Company,  
Chicago, Illinois, U.S.A

Metal panel system, inter-  
locking joints. Insulated  
internally.

M.O.W. Survey of  
Prefabrication.  
B.M.S. 12,  
"Architectural Record",  
September 1936, &  
July 1939.  
"Architectural Forum",  
December 1935.

METAL PANEL

MP

BEHLEN  
Behlen Manufacturing  
Company,  
Columbus, Nebraska,  
U. S. A.

Corrugated steel roof and  
wall sheets used without  
framing. Proved inadequate  
under United States navy tests.

Technical Memo  
M-050.

UNIT PANEL  
CONSTRUCTION  
Bitting Incorporated,  
New York, N. Y.,  
U. S. A.

Bitting Incorporated,  
New York, N. Y.,  
U. S. A.

BLOC TECHNIS  
Louvrol Montbard,  
Aulnoye, France.

Pressed sheet metal panels  
70 cm. wide.  
House portable as one unit.  
Exhibited at Arts Menageres  
Paris, France.

"Prefabrication",  
May 1954.

BOEHLER  
Alfred Schmidt,  
Architect,  
Vienna, Austria.

Panel. Steel panels forming  
interior finish lined ex-  
ternally with insulation  
stuccoed. Floors and roof  
conventional. 2,500 houses  
built in Germany.

"The Evolving House  
III, Rational Design",  
(Bemis).

BOOTH & COMPANY  
34 St. James Street,  
London S. W. 1,  
England.  
also  
Canada.

Portabilt House.  
Unibuilt House.

Francis Hughes &  
Associates.

BRISTOL AEROPLANE  
COMPANY  
England.

Shell Aluminum structure.

"Architects Journal"  
May 1954.

BUELL HOUSE

See Buell House under MSF.

METAL PANEL

MP

**BUTLER MANUFACTURING  
COMPANY**

13th & Western Avenue,  
Kansas City, Missouri,  
U. S. A.

Aluminum wall panels,  
2' 0" wide furred on the  
inside to take insulation  
and lining. Roof of metal  
rafters. Ceiling suspended  
from rafters.

"American Building  
& Building Age",  
November 1946.  
"Architectural  
Forum",  
1947.

**CENTRAL FARM  
EQUIPMENT BUILDING**  
Marseilles, Illinois,  
U. S. A.

20' 0" x 48' 0" semi-  
circular steel corrugated  
sheet sections bolted.  
Not accepted by United  
States Navy.

Technical memo  
M-041.

**CLEMENTS MODULAR  
PANELS**

Hill-Clark-Francis  
Limited,  
57 Bloor Street West,  
Toronto, Ontario.  
Canada.

Metal faced insulated  
stressed skin panels  
connected by rods with  
metal slip in joint.  
U = 0.095.  
Panels 2' 0" x 8' 0" x  
4" thick.

Hill-Clark-Francis  
Limited,  
57 Bloor Street West,  
Toronto, Ontario.  
Canada.

**COLUMBIAN HOMES**  
Columbia Steel Tank  
Company,  
Kansas City, Missouri,  
U. S. A.

1931.  
Pressed steel U panels at  
12" centers faced internal-  
ly with insulation board.  
Exterior painted and  
sanded.

"Survey of Pre-  
fabrication", 1945.  
"American Record",  
April 1933.

**CONSTRUCTIONS  
MULTICELLULAIRES**  
Soc. des Construction  
Multicellulaires,  
Paris, France.

1938.  
Several buildings erected  
in France.  
Vertical welded steel sheet  
corrugated box units 1' 8"  
module.

M. O. W. Survey of  
Prefabrication.

## METAL PANEL

CONSTRUCTIONS SEMI  
METALLIQUE DU  
FORGES DE STRASBORG  
Soc. des Forges de  
Strasbourg, Paris,  
France.

1935.  
Rolled steel frame at approx.  
10' 0" centers. Steel panels  
0.40 meters wide x 2.84  
meters high. Lined internally  
with 15 cm. pumice block  
plastered.

M. O. W. Survey of  
Prefabrication.

FILLOD HOUSE  
France.

Interlocking steel panels  
on 3 dm. module. Insulation  
board lining ventilated  
cavity.  $U = 0.9$  inverted pitch  
roof has variant, with glass  
wool insulation for tropical  
use.

"Prefabrication",  
September 1954.

FRANCIS HUGHES &  
ASSOCIATES  
4850 Amiens Street,  
Montreal, Quebec,  
Canada.  
also  
Booth & Company,  
34 St. James Street,  
London S.W.1,  
England.

1948.  
Portabuilt House.  
Unibuilt House.  
14' 4" minimum di. 2' 6" wide.  
Standard panels with hardboard  
linings. Sheet steel panels  
bolted together to form walls  
and roof. Production limited  
mainly to housing. Tropics.

Francis Hughes &  
Associates,  
4850 Amiens Street,  
Montreal, Quebec.  
Canada.  
also  
Booth & Company,  
34 St. James Street,  
London S.W.1, England.

GENERAL HOMES INC. ,  
General Homes Inc. ,  
83 South High Street,  
Columbus, Ohio,  
U.S.A.

Aluminum alloy panels for  
walls and roof.  
F.H.A. approved.  
1/2" fibreboard faced with  
aluminum skin on both sides.

General Homes Inc. ,  
83 South High Street,  
Columbus, Ohio,  
U.S.A.

GENERAL HOUSES  
General Houses Inc. ,  
U.S.A.

Panel. Steel panels lined  
internally with wood studs  
between panels. Steel panel  
lining internally. Number of  
houses built in mid-west.

"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).



METAL PANEL

MP

GLOBE WERNICKE  
Butler Buildings Inc.,  
U. S. A.

Aluminum House,  
some built in Davenport,  
Iowa. See "Scot Bilt",  
under MP.

Butler Buildings Inc.,  
U. S. A.

HARMAN

See Harman under MSF.

HIGGINS INDUSTRIES  
INCORPORATED  
New Orleans, Louisiana,  
U. S. A.

Enamelled steel panels  
filled with concrete and  
connected by patent steel  
connectors.

Higgins Industries  
Incorporated,  
New Orleans,  
Louisiana, U. S. A.

HOBART BROTHERS  
COMPANY  
Illinois,  
U. S. A.

1938.  
18 gauge double steel welded  
wall panels 4' 0" wide x  
9' 0" x 3". 2 storey whole  
house. Welded monolithically.

M. O. W. Survey of  
Prefabrication.

JULLIEN

See Jullien under MSF.

KINGSTRAND  
Alcan Aluminum  
Company of Canada,  
804 Dominion Square  
Bldg.,  
Montreal, Quebec,  
also  
Coseley Engineering  
(Canada) Limited,  
5165 Sherbrooke St. West,  
Montreal, Quebec,  
Canada.

Trapezoidal corrugated  
aluminum panels. Frameless.  
Developed for tropics (Native  
Housing).  
Small portable package.

Alcan Aluminum  
Company of Canada,  
804 Dominion Square  
Bldg.,  
Montreal, Quebec,  
also  
Coseley Engineering  
(Canada) Limited,  
5165 Sherbrooke  
St. West,  
Montreal, Quebec,  
Canada.

METAL PANEL

MP

**KLETZIN**

Dr. Ludwig Kletzin,  
Berlin, Germany.

Steel structural wall panels  
1.22 m. x 2.75m. x 80 kg.  
1/16" steel panels and angles  
enclosing 3 layers of  
corrugated plasterboard.

M. O. W. Survey of  
Prefabrication.

**KUNZE**

G. Kunze, Junr,  
Berlin, Germany.

Pressed steel tray panel 3' 4"  
x storey high backed with in-  
sulation material. Inner lining  
of rough buck screwed to  
interior of panels. Wall 3 1/2"  
thick.

M. O. W. Survey of  
Prefabrication.

**LINDEBERG**

Harrie T. Lindeberg,  
U. S. A.

Panel. Corrugated metal  
panel 18" - 24" wide, 5" thick.  
Floor units similar (also roof).  
Precast concrete exterior clad-  
ding. Wall-board and insulation  
inside. Several houses in  
California. Similar to Robertson  
F.K. type Keystone Unit.

"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).

**LINDSAY HOUSE**

Samuel R. Lindsay  
Oakland, California,  
U. S. A.

Metal panels lined internally  
with wall-board and filled with  
insulation, bolted together.  
Floor panels similar. Roof  
and ceiling similar also.

"American Architect  
& Architecture",  
September 1936.

**MAHON**

Mahon, R. C. Corporation,  
Detroit, Michigan,  
U. S. A.

1933.  
Steel panels bolted through  
asbestos gasket.

M. O. W. Survey of  
Prefabrication.

**MAISON CALORIFUGEE  
FRANCAISE**

Societe des Forges de  
Strasborg, Paris,  
France.

3' 0" x storey high metal  
panels one storey.  
Insulated.

M. O. W. Survey of  
Prefabrication.

METAL PANEL

MP

**METAL HOMES COMPANY**

4041 Gordwin Avenue,  
Los Angeles 26,  
California,  
U. S. A.

16 g. steel panels, wood  
furring.

Metal Homes Company,  
4041 Gordwin Avenue,  
Los Angeles 26,  
California, U. S. A.

**MU STEEL**

Herman Mugler,  
Lynbrook, New York,  
U. S. A.

Panel 1' 8" x 8' 0" high in  
sheet steel.  
Lined internally with 1/2"  
insulation board.  
3 houses built in 1940.

Herman Mugler,  
Lynbrook, New York,  
U. S. A.

**NUTTALL HOUSE**

England.

Steel panels 2' 0" wide x  
8' 0" of 3" steel channel  
tied by rods. Outer face  
rendered.  
Insulation wood wool and  
aluminum faced building  
paper. Tubular steel  
trusses (roof).

"Prefabricated  
Homes",  
(B. H. Cox).

**PALMER**

Palmer Steel Buildings  
Incorporated,  
Los Angeles,  
California,  
U. S. A.

1934.  
Panel. Corrugated steel  
panels 12" wide x storey  
height. Rendered internally  
and externally. Concrete  
slab floor on open web joists.  
Roof traditional. Several  
buildings in Los Angeles.

"American Architect  
& Architecture",  
September 1936.  
"The Evolving House  
III, Rational Design",  
(Bemis).

**PLATE GIRDER**

Housing Company,  
(Bemis Industries  
Incorporated),  
Massachusetts,  
U. S. A.

1929.  
Panel. Sheet steel central web  
framed in wood, and faced  
with wall-board internally,  
and precast concrete wall  
slabs tied to panels externally.  
Panels 2" wide x storey height.  
Several houses erected in  
Massachusetts.

"The Evolving House  
III, Rational Design",  
(Bemis).

METAL PANEL

MP

**PORCELAIN STEEL**

Porcelain Steel  
Buildings Company,  
U.S.A.

1925.  
Panel. Steel-welded frame at  
4' centers. Porcelain enamel-  
led lined inside and outside.  
Insulation in cavity. Roof and  
floor construction of corrugated  
metal decking on steel joists.  
Several buildings erected.

"The Evolving House  
III, Rational Design",  
(Bemis).

**PROUVE HOUSE**

Jean Prouve,  
Paris, France.

Aluminum panels with in-  
sulation of fibreboard and  
aluminum foil. Panels are  
self supporting.

"Prefabrication",  
September 1954.

**QUALITY**

G & J Weir Limited,  
Glasgow, Scotland.

Steel panels.  
Prototypes at Cathcart,  
Glasgow, Scotland.

**QUONSET CONSTRUCTION  
SYSTEM**

S. P. Miller & Sons,  
6999 Cote des Nieges,  
Montreal, Quebec,

also  
Quebec Steel Structures,  
Canada.

Standard metal panel butting.  
One house erected in East  
Montreal before 1949.

"Acceptable Building  
Materials",  
C.M.H.C. Ottawa,  
1949.

**ROBERTSON**

H.H. Robertson  
Company Incorporated,  
Pittsburgh, Pennsylvania,  
U.S.A.

Various sponsors in U.S.A.,  
from about 1933.  
Robertson's standard keystone  
corrugated floor, wall and  
floor decking in panels 12" to  
24" x 8' high.  
Units keyed on site or welded,  
insulation packed. Plaster  
faced, wall-board and plaster  
internally.

M.O.W. Survey of  
Prefabrication.  
(Bemis), H. H.  
Robertson Catalogue  
Record; July 1937.  
MP Forum: December  
1935, October 1936,  
February 1938.  
"American Architect"  
September 1936.

METAL PANEL

MP

**SCHERRER**

Franz Scherrer &  
Company,  
Dusseldorf, Germany.

1915.  
Sheet steel loadbearing panels.  
Rolled steel frame. 2.84m.  
high x 1.58m.  
Filled with torfoleum in-  
sulation. Timber frame  
within panel to take the  
fixtures.

M. O. W. Survey of  
Prefabrication.

**SCOT-BILT PRE-  
FABRICATED SHEET  
STEEL**

Globe-Wernicke Company,  
U. S. A.

8' 0" x 16" sheet steel  
panels. Steel channel  
panels for roof and floor  
construction.  
One house 1940.  
Insulation according to that  
provided.

B. M. S. 46.

**SECTIONAL UNIT  
MODULE**

Pierre Blouke &  
C. M. Goodman,  
Architects,  
U. S. A.

1939.  
Plywood or metal space  
sections 8' x 8' or 20'.  
Caravan type construction.  
Projected only.

M. O. W. Survey of  
Prefabrication.  
"Architectural  
Record", May 1939.

**STEELCRAFT INSULATED  
WALL PANEL**

Rossmoyne, Ohio,  
U. S. A.

3" panel with fluted steel  
sheet face, filled with  
fibreglass.  
U= 0.15.  
Standard width 24".  
Non structural.

Steelcraft Insulated  
Wall Panel,  
Rossmoyne, Ohio,  
U. S. A.

**STEEL TEMPORARY  
BUNGALOW**

Ministry of Works,  
Lambeth Bridge House,  
Albert Embankment,  
London S. E. 1,  
England.

1944.  
Pressed steel panels 3' 8"  
wide x storey height. Steel  
studs at 12' centers. Fibre-  
board interior lining.  
Mass produced.

M. O. W. Survey of  
Prefabrication.  
Ministry of Works.

## METAL PANEL

MP

### STEELOX

The Steelox Company,  
Chicago, Illinois, U.S.A.  
now  
Steel Building Inc.,  
Middleton, Ohio,  
an A.R.M.C.O.,  
subsidiary,  
U.S.A.

Pressed steel galvanized  
panel (steel). Insulation  
filled. Interior wall-board  
lined. Exterior painted.  
250 built up to 1946.

M.O.W. Survey of  
Prefabrication.  
A.I.S.C. "Light-  
gauge etc."  
"Arch. Record",  
Sept. 1936, July 1939.  
"Arch. Forum",  
Dec. 1935.

### STEILBERG

Walter T. Steilberg,  
Architect,  
Berkeley, California,  
U.S.A.

Pre-1935.  
Steel box permanent shuttering  
2' wide x 4" thick x storey  
height. A number of houses  
in California.

M.O.W. Survey of  
Prefabrication.  
Portland Cement  
Association Report.

### STOUT FOLDING HOUSE

William B. Stout,  
Stout Houses Inc.,  
U.S.A.

1937.  
Welded tubular steel frame.  
Trailer. Aluminum sheathing.  
Folds up to 18 x 7'. Unfolded  
by crank mechanism to 12 x  
20'.

M.O.W. Survey of  
Prefabrication.  
"American Architect",  
February 1937.  
"Architectural Record",  
April 1936.

### TELFORD

Braithwaite & Company  
Engineers Limited,  
West Bromwich,  
Staffordshire, England.

1923.  
Panel. Panel 3' 6" wide x  
storey height bolted together  
at flanges and lined inside with  
asbestos on wood frame.  
Intermediate lining against  
steel panels provided in a  
cavity used as heating duct.

"The Evolving House,  
III, Rational Design",  
(Bemis).

### THERMOSTATIC STEEL HOUSE

Donald Brown & Company,  
Blaydon Ironworks,  
Blaydon-on-Tyne,  
England.

Steel sheet faced stud wall  
panel. 1' 0" x 8' 0" 1" slag  
wool applied inner and outer  
sheets. A steel and wood  
mixture.  $U = 0.12$  (wall).

Donald Brown &  
Company,  
Blaydon Ironworks,  
Blaydon-on-Tyne,  
England.

## METAL PANEL

MP

### THORNCLIFFE

Newton Chambers &  
Company Limited,  
England.

Loadbearing 3/8" steel  
panels rendered externally  
lined with fibreboard.  
Conventional roofing and  
flooring.  
U = 0.46.  
600 houses in England in  
1927.

Newton Chambers &  
Company Limited,  
England.

### TIPTON GREEN

Lock House No. 1,  
Tipton Green,  
Staffordshire, England.

Pre-1830, demolished in  
1926. 14" wide cast iron plates,  
bolted together supporting lath  
and plaster inside.  
Single storey, one building.

M. O. W. Survey of  
Prefabrication.  
"Iron Age",  
August 1931.

### UNIBILT HOUSE

See Portabilt House under  
MP.

### UNIT PANEL CONSTRUCTION SYSTEM HOUSE

H. H. Keller, Engineer,  
Bitting Incorporated,  
New York, N. Y.,  
U. S. A.

Metal stud braced panels  
insulated on outside.  
Metal panels for roof and  
floor.

"American Architect  
& Architecture",  
September 1936.

### UNIVERSAL

Universal Housing Corp.,  
Zanesville, Ohio,  
U. S. A.

1933.  
Pressed steel panels 1' x  
storey height bolted to-  
gether. Interior finish,  
wool board, nailed through  
steel units.  
Cavity filled with spun  
glass, enamel paint exterior.  
A few built, see Armco.

M. O. W. Survey of  
Prefabrication.  
(Bemis).  
"American Arch.",  
September 1936.  
"Architectural Forum",  
February 1934.  
"Architectural Record",

## METAL PANEL

MP

U.S.S. PANELBUILT  
OR T. C. I.  
Tennessee Coal Iron  
& Railroad Company,  
subsidiary of U. S.  
Steel Corporation,  
U. S. A.

Pressed steel wall panels  
4' wide x storey height.  
Large production since 1939.

M. O. W. Survey of  
Prefabrication.  
"Architectural Forum",  
January & February  
1938, January 1939.  
"Architectural Record",  
January & July 1939.  
N. B. S. Report 74.

VAN NESS  
C. L. Van Ness,  
Akron, Ohio,  
U. S. A.

1935.  
Light-gauge steel panel and  
frame construction. Whole  
house welded in factory and  
delivered complete. 3' module.  
Moderate production.

M. O. W. Survey of  
Prefabrication.  
"American Architect",  
September 1936.  
"Architectural Forum",  
December 1935.

WEIR PARAGON  
G. & J. Weir Limited,  
Engineers,  
Glasgow, Scotland.

1944.  
Pressed steel panels (tray  
section) 3' 6" wide x storey  
height, stiffened by vertical  
channels. Internal lining of  
plasterboard and glass quilt.  
Double cavity.  
One house at Sighthill,  
Edinburgh.

M. O. W. Survey of  
Prefabrication.  
B. R. S.  
"Architect & Building  
News", September  
1944.

WHEELING  
Wheeling Construction  
Company,  
Wheeling, West Virginia,  
U. S. A.

1933.  
Charles Bacon Rowley,  
Architect.  
Pressed steel vertically  
fluted wall panels, faced  
with enamelled steel panels  
backed with insulation.  
Interior plaster on expanded  
metal. Cavities filled with  
loose insulation.  
One house at Wheeling.

M. O. W. Survey of  
Prefabrication.  
"Architectural  
Forum",  
July 1933 &  
January 1934.  
"Enamelist",  
April 1935.  
"American Architect",  
September 1936.  
"Chantiers No. 1,"  
1934.  
N. B. S. Report,  
B. M. S. 1915.



METAL PANEL

MP

WIER

See Wier under WFH.

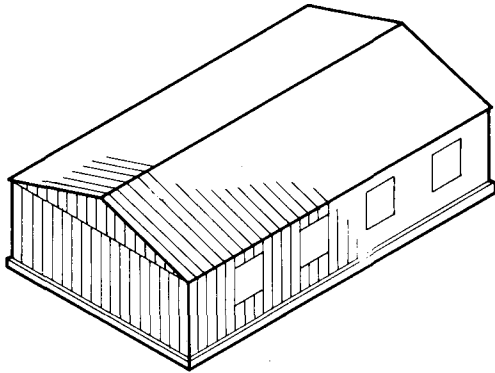
WILSON HOUSE

See Wilson House under CP.

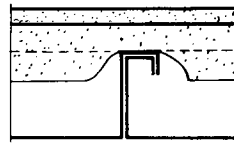
WONDER BUILDING  
COMPANY  
3780 Dickens Street,  
Montreal, Quebec,  
Canada.

Mainly warehousing 30' 0"  
x 60' 0" in diameter.  
Semi circular form,  
sectional.

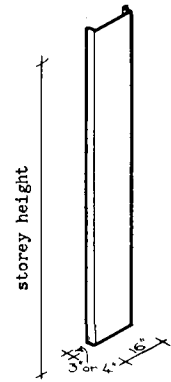
Arch. File 17,  
(A. I. A.).



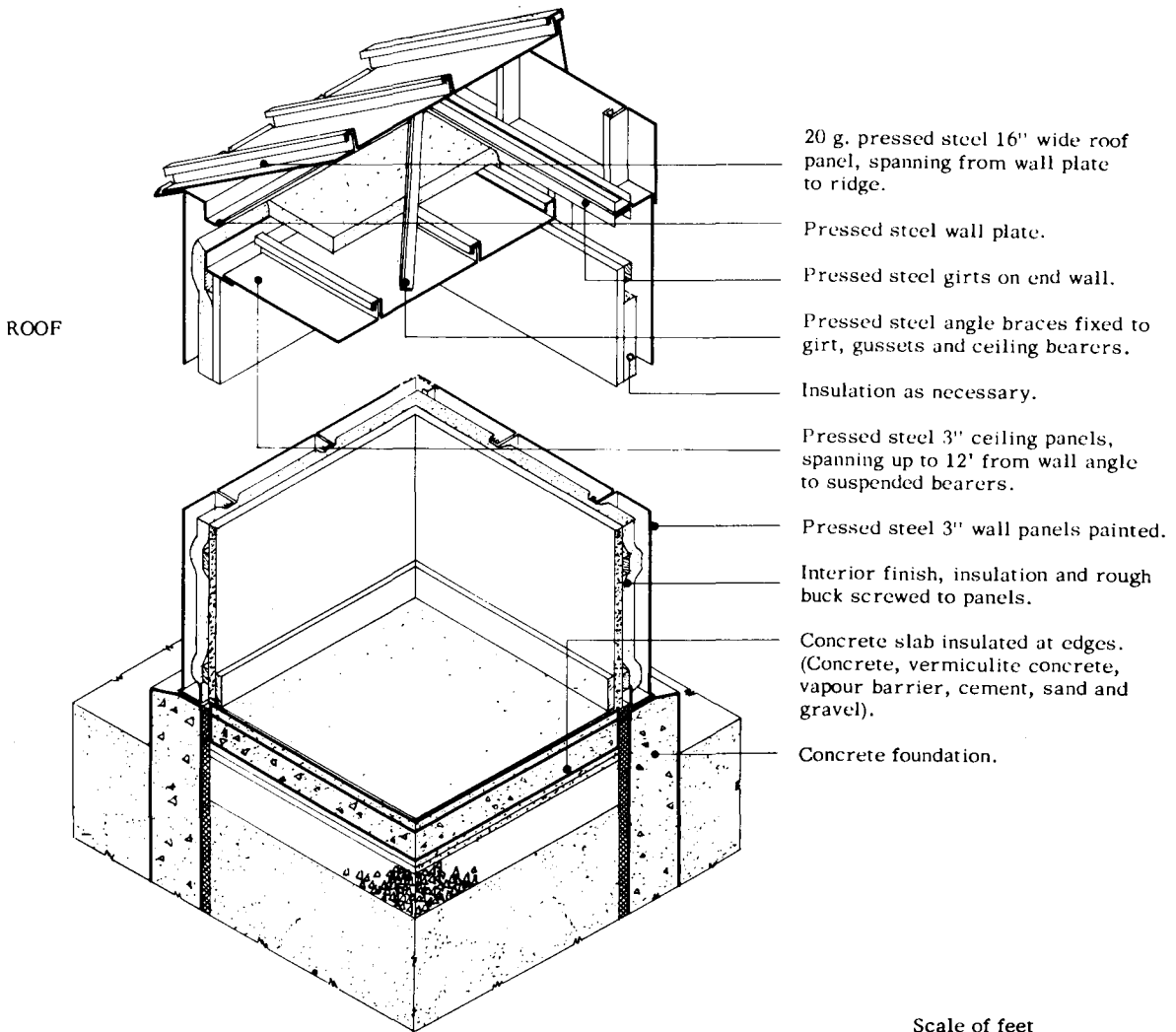
WHOLE HOUSE ASSEMBLY



UNIT JUNCTION



UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

20 g. pressed steel 16" wide roof panel, spanning from wall plate to ridge.

Pressed steel wall plate.

Pressed steel girts on end wall.

Pressed steel angle braces fixed to girt, gussets and ceiling bearers.

Insulation as necessary.

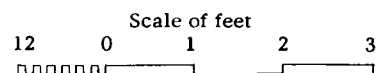
Pressed steel 3" ceiling panels, spanning up to 12' from wall angle to suspended bearers.

Pressed steel 3" wall panels painted.

Interior finish, insulation and rough buck screwed to panels.

Concrete slab insulated at edges. (Concrete, vermiculite concrete, vapour barrier, cement, sand and gravel).

Concrete foundation.



**armco steelox**

January, 1958.

## ARMCO STEELOX

<b>Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.</b>	1. Armco Drainage and Metal Products of Canada Ltd., Guelph, Ontario. Armco Drainage and Metal Products, Inc., and Armco International Corp., Middletown, Ohio.
<b>Date and Place of Origin.</b>	2. Chicago, Illinois, 1935.
<b>Materials Used.</b>	3. Pressed Steel.
<b>Description.</b>	4. One storey structure only. Structural metal wall, roof and ceiling panels 16" wide braced at ceiling level. Roof ridge supported on ceiling bracing. Painted externally. Internal wall insul- ation and finish fixed to rough back. U=0.17 (with 2" insulation and 1/2" lath and plaster).
<b>Development to Date.</b>	5. Five hundred and fifty houses in U.S. up to 1945. Considerable use in Canada.
<b>Comment.</b>	6. The system is used mainly for commercial and industrial buildings where it is important to close in a structure speedily.
<b>References.</b>	7. "Survey of Prefabrication" 1945 M.O.W. London. B.M.S. 12, Dept. of Commerce. Washington, D.C. Architectural Record, Sept. 1936, July 1939. Architectural Forum, Dec. 1935.

## TENSILE SYSTEMS

# **TENSILE SYSTEMS**

**Case Sheets**

TENSILE SYSTEMS

T

**AUTOMOUS HOUSE**

R. Buckminster Fuller.  
U.S.A.

Same structure as Geodesic  
Dome.

**DYMAXION**

R. Buckminster Fuller.  
U.S.A.

Suspension. Metal space frame  
suspended from central metal  
mast by tension wire. Walls  
constructed of double sheets  
of casein plastic enveloping  
a vacuum.  
House delivered as one unit.  
One house built.

"The Evolving House  
III, Rational Design",  
(Bemis).  
"American Building",  
1948.

**FULLER HOUSE**

Buckminster Fuller.  
U.S.A.

Whole house circular.  
Aluminum. Tension wires  
and mast.

"Arch. Journal",  
August 1946.  
"House & Home",  
November 1956.  
"Arch. Record",  
September 1956.

**GEODESIC DOME**

Buckminster Fuller,  
U.S.A.

Aluminum alloy space frame,  
20' 0" to 114' 0" plastic  
interior facing.

"Arch. Forum",  
August 1951, May  
1953 & November 1956.  
"Arch. Record",  
June 1955 & Sept. 1956.

**NEUTRA DIATOM**

Richard J. Neutra,  
Architect,  
Los Angeles, California,  
U.S.A.

Curtain wall system suspended  
from central mast curtain wall  
of 1/2" diatomaceous slabs in-  
side and out, wood strips,  
mineral wool insulation.

"Arch. &  
Architecture",  
September 1936.

**WICHITA HOUSE**

"Architectural Forum",  
August 1951.

## LIST OF MANUFACTURERS

# INDEX OF MANUFACTURERS

Classified Alphabetically and According to Country of Origin

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<b>UNITED STATES</b>				
ABC Construction Corp. (Bauer)	Indiana	A. B. C. Construction	WFH	1
Acorn Houses Inc.	Boston	Acorn Houses	S	9
Adirondack Log Cabin Inc.	New York	Adirondack Log Cabin	WPL	3
Admiral Homes Inc.	Pennsylvania	Admiral Homes	WSSP	2
Airfoam Housing	Long Island	Airfoam Housing	CM	8
Akker & Wink	U. S. A.	Paper House	S	9
Aladdin Co.	Michigan	Aladdin	WFH	1
Alleghany Homes Inc.	New York	Alleghany Homes	WFH	1
American Fabricators Inc.	Kentucky	American Fabricators	WSSP	2
American Fabricators Inc.	Arkansas	American Fabricators	WFH	1
American Homes Inc.	New York	American Homes	WFH	1
American Houses Inc.	New York	American Houses	MSF & MP	10, 12
American Rolling Mill Co.	Ohio	Armco	MP	12
Anchorage Homes Inc.	Massachusetts	Anchorage Homes	WFH	1
Apex Wood Products Inc.	Colorado	Apex	WPL	3
Arcy Corp.	Pennsylvania	Arcy Corp.	MSF	10
Atkinson Lumber & Mfg. Co.	Oklahoma	Atkinson Lumber	WFH	1
Atterbury	New York	Atterbury	CP	4
Bailey/Porter Const. Col Inc.	Indiana	Bailey/Porter Const.	WPL	3
Baker Lumber & Supply Co.	Texas	Baker Lumber & Supply	WFH	1
Barden & Robeson Corp. The	New York	Barden & Robeson	WFH	1
Barrett Construction Co.	California	Barrett Construction	WFH	1
Bates, Walter, Steel Corp.	Indiana	Bates, Walter, Steel	MSF	10
B-D Homes Co.	Missouri	B-D Homes	WFH	1
Behlen Manufacturing Co.	Nebraska	Behlen	MP	12
Bellaire Log Cabin Mfg. Co.	Michigan	Bellaire Log Cabin	WPL	3
Bemis Housing Co.	Boston	Beamy Style	MP, CM, WPL, CPB	12, 8, 3, 6
Bender Steel Body Co.	Ohio	Bender Steel	MSF	10
Berger Lumber Co.	Minnesota	Berger	WPL	3
Berger Manufacturing Co.	Ohio	Berloy	MSF	10
Best, W.G. Homes Co.	Illinois	W.G. Best Factory Built Homes	WFH, WPL	1, 3
Better Living Inc. (Solar House)	Oklahoma	Better Living Inc.	WFH	1
Bitting Inc.	New York	Bitting (Unit Panel)	MSF, MP	10, 12
Bluechel, J.H. Co.	Michigan	Bluechel	WSSP	2
Boschult Engineered Homes	Nebraska	Boschult Engineered Homes	WFH	1
Braun Lumber Co.	Detroit	Braun Cedar Cabins	WPL	3
Brogden	Pennsylvania	J. Brogden	MSF	10
Broughton Co.	Missouri	Broughton	CP	4
Brownlee Co.	Michigan	Brownlee Sect. Log Cabin	WPL	3
Buell, T.H. & Co.	Colorado	Buell	S, MSF	9, 10
Burton	Texas	Burton House	CU	5
Butler Mfg. Co.	Kansas City	Butler	MP	12
Byrne Organization	Maryland	Byrne	MSF	10



<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<b><u>UNITED STATES</u></b>				
Byrne, Barry	New York	Byrne	CP	4
Carlton Lumber Co.	Oregon	Carlton	WFH	1
Caroll Tri Ply Co.	Illinois	Caroll	CP	4
Castle Homes Inc.	Utah	Castle Homes	WFH	1
Cedar-Redwood Homes	Washington	Cedar-Redwood Homes	WPL	3
Celotex Corporation	Illinois	Celotex	WFH	1
Central Farm Equipment Bldg.	Illinois	Central Farm Equipment	MP	12
Chambers Creek Lumber Co. Inc.	Washington	Chambers Creek Lumber Co.	WPL	3
City Lumber Co.	Connecticut	City Lumber	WFH	1
Clements Associates	Connecticut	Clements	WFH	1
Clements Corp.	Connecticut	Clements House	WSSP	2
Cliff-May-Chris Choate	Los Angeles	Cliff May Homes	WFH	1
Colorado Sectional Homes Co.	Colorado	Colorado Sectional Homes	WFH	1
Columbia Steel Tank Co.	Missouri	Columbian House	MP	12
Concrete Housing Corp. of Amer.	New York	Armestone	CP	4
Connecticut Building Corp.	Connecticut	Connecticut Pre-Cut House	CPB	6
Connecticut Precast Bldg. Co.	Connecticut	Connecticut Precast Bldg.	CP	4
Con-Tee Co.	Missouri	Con-Tee	CPB	6
Convair House	New York	Convair House	S	9
Cooper H. L. Corp.	Indiana	Cooper	WFH	1
Copco Steel & Engineering Co.	Michigan	Copco	S	9
Core House Corp.	Massachusetts	Core House	WFH	1
Corkanstele Inc.	New York	Corkanstele Inc.	MSF	10
Crawford Corp.	Louisiana	Crawford	WFH	1
Creative Builders	Illinois	Creative Builders	WFH	1
Crowe, F. Malcolm	California	Crowe House	CP	4
Darrow J.R. Co. Inc.	Illinois	Darrow J.R. Co. Inc.	WSSP	2
Dexheimer C.M. & Sons	Ohio	Dexheimer	MSF	10
Dextone Co.	Connecticut	Dextone	CU	5
Dodge Cycleweld Division	Detroit	Aluminum Airborne Project	MSF	10
Douglas Fir Plywood Assoc.	Washington	Douglas Fir Plywood	WFH, WSSP	1, 2
Downes-Patterson Corp.	Connecticut	Downes-Patterson	WFH	1
Dox Block	Michigan	Dox Block	CU	5
Dwell-Ette Southwest Inc.	Missouri	Dwell-Ette Southwest	WFH	1
Dymaxion Fuller	U. S. A.	Dymaxion	T	13
Earley, John J.	Washington	Earley	CPB	6
East Coast Aircraft Inc.	New York	East Coast Aircraft	S	9
Empire Homes Inc.	Kentucky	Empire Homes	WFH	1
Expan Homes Inc.	Ohio	Expan Homes	WFH	1
Ferrocon Corp.	Pennsylvania	Ferrocon	MSF	10
Florida Builders, Inc.	Florida	Florida Builders	WFH	1
Ford, Ivon R. Inc.	New York	Ford	WFH	1
Forest Products Lab.	Wisconsin	Forest Products Lab.	S, WSSP	9, 2
Fox Metal Products Corp.	Colorado	Fox Metal Products	MSF	10
Fuller, Buckminster	U. S. A.	Geodesic Dome	T	13
G.B.H. Way Homes Inc.	Illinois	G. B. H. Way Homes	WFH	1
General Homes Inc.	Ohio	General Homes	MP	12
General Houses Inc.	Illinois	General Houses	WSF, MP, MPB	10, 12, 11
General Industries Inc.	Indiana	General Industries	WFH	1
General Panel Corp.	California	General Panel	WSSP	2
Globe-Wernicke Co. (now Butler Engineering Co.)	U. S. A.	Scot-Bilt	MP	12

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>UNITED STATES</u>				
Great Lakes Steel Corp.	Michigan	Stran-Steel	MSF	10
Grove-Berger Lumber Co.	Wyoming	Grove-Berger Lumber	WPL	3
Gunnison Homes	Indiana	Gunnison Homes	WSSP	2
Hahn Concrete Lumber	Illinois	Hahn Concrete Lumber	CPB	6
Harman Homes	Delaware	Harman Homes	MP, MSF	12, 10
Harnischfeger Corp.	Wisconsin	Harnischfeger Corp.	MSF, WSSP, WFH	10, 2,
Hartley, H. C.	California	H. C. Hartley	CPB	6
Harundale Homes	Maryland	Harundale Homes	MSF	10
Haskelite Manufacturing Co.	Chicago	Phemaloid Compound Lumber Co.	MSF	10
Higgins Industries Inco.	Louisiana	Higgins Industries	MP	12
H. M. K. Standard Buildings	Oregon	H. M. K. Standard Buildings	WSSP	2
Hobart Brothers	Illinois	Hobart Brothers	MP	12
Hodgson, E. F. Co. Inc.	Massachusetts	Hodgson Portable House	WFH	1
Homasote Co.	New Jersey	Homasote	WFH	1
Home Builders Corp.	Georgia	Home Builders	WSSP	2
Home Building Corp.	Missouri	Home Building	WFH	1
Homes Incorp.	Oregon	Haul-Away Homes	WSSP	2
Homeola Corp.	Illinois	Homeola	MPB, WFH	11, 1
Horsley Structures	Oregon	Horsley Structures	WSSP	2
Housemart Inc. The	Ohio	Housemart	WFH	1
Houston Ready-Cut House Co.	Texas	Houston Ready-Cut House	WFH	1
Housing Co.	Massachusetts	"E" Frame House	MSF	10
Ibcc Housing Corp.	New York	Ibcc Housing	CM	8
Illinois Lumber Mfg. Co.	Illinois	Illinois Lumber	WFH	1
Independent Lumber Co.	Ohio	Independent Lumber	WFH	1
Inland Homes Corp.	Ohio	Inland Homes	WFH	1
Insulated Steel Const. (Armco)	Ohio	Frameless Steel House	MP	12
Insulated Steel Bolt Structures	Amerston	Insulated Steel Bolt	MSF	10
Johnson Metal Products Co.	Pennsylvania	Fabrihome Wall Panels	MSF	10
Kaiser Community Homes	Los Angeles	Kaiser Community Homes	WFH	1
Keasby & Mattison Co.	Pennsylvania	Ambler Asbestos	WFH	1
Kelsan Homes Inc.	Illinois	Kelsan Homes	WFH	1
Kennecott Copper Corporation	New York	Copper Houses	MSF	10
Kerr Panel	California	Kerr Panel	S	9
Kiewitt, G. R.	Missouri	Kiewitt	WFH	1
Knapp, America Inc.	California	Knapp-America	CU	5
Knox Corp.	Georgia	Knox	WFH, WSSP	1, 2
Kocher & Frey	New York	Aluminaire	MPB	11
Lafferty	New York	Lafferty	MSF	10
Larzelere	Florida	Larzelere	CS	7
Lea, W. C. Inc.	California	Lea	MSF	10
Lindeberg, H. T.	New York	Lindeberg	MP	12
Lindsey, S. R.	California	Lindsey	MP	12
Lockwood, E. H.	California	Lockwood System	CPB	6
Loxide Structures	Washington	Loxide Structures	WPL	3
Lumber Dealers Research Council	Illinois	Lureco	WPL, WFH	3, 1
Lumber Fabricators Inc.	Michigan	Lumber Fabricators	WFH	1
Lustron	Ohio	Lustron	MSF	10
Maco Structures	California	Maco Structures	WFH	1
Macotta Corp.	Michigan	Macotta	MSF	10

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>UNITED STATES</u>				
Mahon, R. C. Corp.	Michigan	Mahon	MP	12
Martin, Glenn	Maryland	Martin House	WFH	1
Maryland Modern Housing Corp.	Maryland	Maryland Modern Housing	WFH	1
May Homes & Supplies	Indiana	May Homes	WFH	1
McClintic Marshall Corp.	Pennsylvania	Broderick House	MSF	10
McKay Fireproof Co.	Cleveland	Colorado Fuel & Iron	MSF	10
Midwest Houses Inc.	Ohio	Midwest Houses	WFH	1
Mobilhome Corp. of America	California	Mobilhome Corp. of America	WFH	1
Modern Crete Inc.	Michigan	Modern Crete	CP	4
Modern Homes Mfg. Corp.	Minnesota	Modern Homes	WFH	1
Modulok Inc.	Oregon	Modulok	S, WSSP	9, 2
Monsanto		Monsanto Plastic House	S	9
National Homes Corp.	Indiana	National Homes	S, WSSP, WFH	9, 2, 1
National Log Const. Co. (Montana)	Montana	National Log Const.	WPL	3
Neff Airform		Neff Airform	CM	8
Neutra Diatom	California	Neutra Diatom	WFH, T	1, 13
New Century Homes Inc.	Indiana	New Century Homes	WSSP, WFH	2, 1
North American Lumber Supply Co.		Precision Built Homes	WSSP	2
Page & Hill Homes Inc.	Minnesota	Page & Hill Homes	WFH	1
Palace Corp.	California	Palace	WSSP	2
Pease Woodwork Co. Inc.	Ohio	Pease Woodwork	WFH	1
Pemberton Lumber & Millwork	New York	Pemberton Lumber & Millwork	WFH	1
P. H. C. Housing Corp.	Missouri	P. H. C. Housing	WFH	1
Pierce Foundation	New Jersey	J. B. Pierce House	MPB, MSF, WFH	11, 10, 1
Place Homes Inc.	Indiana	NAHB Research House	S	9
Porcelain Steel Buildings	Ohio	Porcelain Steel Buildings	MP, MSF	12, 10
Pre-Bilt Const. Inc.	Massachusetts	Pre-Bilt Const.	WFH	1
Precision Bilt Homes Inc.	Colorado	Precision Bilt Homes	WFH	1
Los Angeles	California	California Cabin	WFH	1
Progressive Homes Corp.	Michigan	Progressive Homes	WFH	1
Rackle, George & Sons	Ohio	Rackle System	CPB	6
Reliance Homes Inc.	Ohio	Reliance Homes	MSF	10
Richmond Homes Inc.	Indiana	Richmond Homes	WFH	1
Rockbild, Inc.	New York	Rockbild	CPB	6
Rockwood Gypsum Lumber Corp.	New York	Rockwood Gypsum	CU, CPB	5, 6
Rostone Inc.	Indiana	Rostone	MSF	10
Sanford Inc.	Ohio	Sanford Modupanel	WSSP	2
Sanford Inc.	Florida	Sanford	WFH	1
Scott Lumber Co. The	W. Virginia	Scott Homes	WSSP	2
Semico Inc.	Michigan	Semico	WFH	1
Sharp Homes Inc.	Michigan	Sharp Homes	WFH	1
Simon Lake & Conn. Corp.	Connecticut	Lakeolith	CP	4
Small Homes Council	Illinois	1 1/2 Storey Truss	WFH	1
Smith & Hill Builders	Chicago	Smith & Hill Builders	WSSP	2
Soriano	Los Angeles	Soriano House	MPB	11
Soule Steel Corp.	California	Bar-Z-Gunite	MSF	10
Southern Mill & Mfg. Co.	Oklahoma	Southern Mill & Mfg.	WFH	1
Southwest American Houses Inc.	Texas	Southwest American Houses	WFH	1
Steelcraft	Ohio	Steelcraft	MP	12
Steel Housing Corp.	Illinois	Steel Housing	MSF	10

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<b><u>UNITED STATES</u></b>				
Steelex Co.	Illinois	Armco Steelex	MP	12
Stockade Building System Inc.	New York	Stockade Building System	CPB	6
Stout Houses Inc.	U. S. A.	Precision Built Houses	MP, WSSP	12, 2
Structo Inc.	Missouri	Structo	MSF	10
Structural Clay Products Found.		Brick Panel House	CP	4
Superior Buildings Co.		Superior House	WPL	3
Swan House Inc. The	Illinois	Swan House	CPB	6
Tavares, Carlos	California	Tavares	CM	8
Techbuilt	Boston	Techbuilt	S, WFH, WSSP	9, 1, 2
Tennessee Coal, Iron & Railroad	Alabama	U. S. S. Panelbilt	MP, MSF	12, 10
Texas Housing Co.	Texas	Texas Housing	WFH	1
Thermocon	Louisiana	Higgins Home	CM	8
Thermocrete Houses Inc.	California	Hayes Econocrete	CP	4
Thyer Manufacturing Co.	Ohio	Thyer	WFH	1
Tru-Bilt Corp.	Kentucky	Tru-Bilt	WFH	1
Underdown, Donald	California	Underdown	CPB	6
U. S. Steel Homes Inc.	Indiana	Universal Homes	MSF	10
Universal Homes	Texas	Universal Homes	WFH	1
Universal Housing Corp.	Ohio	Universal	MP	12
U. S. Army	Washington (D. C.)	Arctic Shelter	S	9
Utley Lincoln System Inc.	Michigan	Utley Lincoln System	S	9
Vacuum Concrete Inc.	Pennsylvania	Billner	CP	4
Van Ness, C. L.	Ohio	Van Ness	MP, MSF	12, 10
Volks-Kabin	Massachusetts	Volks-Kabin	WFH	1
Wadsworth Inc.	Kansas	Wadsworth Homes	WPL	3
Ward Cabin Co.	Maine	Ward Cabin	WPL	3
Weakley Lumber Co.	Ohio	Weakley Lumber	WFH	1
West Coast Mills	Washington	Farwest Homes	WFH	1
Weyhauser Sales Co.	Minnesota	Weyhauser	WFH	1
Wheeling Corrugating Co.	W. Virginia	Wheeling House	MP	12
Wichita House	Kansas	Wichita House	T	13
Wickes Inc.	New Jersey	Wickes House	WSSP	2
Willisway Const. Co.	Illinois	Willisway	WFH	1
Winter, E. M.	New York	Winter, E. M.	CPB, MSF	6, 10

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>CANADA</u>				
Air-Lock Log Const.	Toronto	Log Const.	WPL	3
Aladdin Homes Co. Ltd.	Ontario	Aladdin Homes	WFH	1
Alberta Cedar Homes	Calgary	Alberta Cedar Homes	WPL	3
Alcan	Montreal	Kingstrand	MP	12
Alexander Silvertex Products	Toronto	Silvertex House	WFH	1
Aluminum Co. of Canada	Montreal	Airoh House	MSF, MP	10, 12
Armco Drainage & Metal Prod. Ltd.	Toronto	Armco	MP	12
Asbestofoam Northern Unit	Ontario	Asbestofoam Northern Unit	WFH	1
Autorex Building System	Vancouver	Autorex Building System	WFH	1
B.C. Coast Woods Trade Extension	Vancouver	Solid Cedar Const.	WPL	3
Bjornstad-Martin House	Montreal	Bjornstad-Martin House	CP	4
Booth & Co. (U.K.)	Toronto	Booth	MP	12
Brad Industries Ltd.	Montreal	Brad	WFH	1
British Steel Const.	Toronto	Smith's Building System	CP	4
Canadian Army	Ottawa	Arctic Hut #3	WSSP	2
Canadian Prefabrication Inc.	Quebec	Canadian Prefabrication	WSSP	2
Canadian Homes Co. Ltd.	Edmonton	Salsgitter House	WFH	1
Cardinal Homes	Toronto	Cardinal Homes	WFH	1
Cedar (Solid Const.)	Vancouver	Cedar (Solid Const.)	WPL	3
Century Const.	Winnipeg	Century Const.	WFH	1
Cheecol	Vancouver	Keeland House	CPB	6
Clark Homes	Vancouver	Clark Homes	WFH	1
Colonial Homes Ltd.	Toronto	Colonial Homes	WFH	1
Conn C/O W.G.	Toronto	Aluminum Frame Structure	MSF	10
Coscle Engineering (Canada)	Montreal	Kingstrand House	MP	12
Davies, J.R.	Toronto	Dura Wall Const.	CM	8
Dept. of National Defence	Ottawa	General Purpose Prefab. Hut	WSSP	2
Durisol	Hamilton	Durisol	CU, CS	5, 7
Eastern Woodworkers Ltd.	Nova Scotia	McGregor House	WSSP	2
Falls, H. P.	Br. Columbia	Spraycrete	MSF	10
Fehr, J.	Vancouver	Alcon Twin Wall	CU	5
Foamed Slag Const. Gen. Eng.	Nova Scotia	Foamed Slag Const.	CM	8
Greenall Brothers Ltd.	Vancouver	Greenall	WSSP	2
Gulf Trading Co.	Toronto	Messerschmidt	MSF	10
Halliday Co. Ltd.	Burlington	Halliday	WFH	1
Hesmont Concrete Ltd.	Montreal	Hesmont Concrete	CU, CP	5, 4
Highland Const. Corp.	Toronto	Highland Const.	WPL	3
Hill, Clark Francis Ltd.	Toronto	Clements Modular Panel	MP	12
Hughes, Francis	Montreal	Portabilt House (Jamesway)	S	9
Huron Concrete Products Ltd.	Seaforth	Homocrete Building System	CP	4
Hullah Const. Ltd.	Vancouver	Hullah	WSSP	2
Insulite Builders Ltd.	Nova Scotia	Insulite System	CP	4
Kennedy, Robert	Vancouver	Ross Pin Block	CU	5
Lakeview Panel Homes	North Bay	Lakeview Panel Homes	WFH	1
Lindsay Structures	Toronto	Harman Homes	MSF	10
Lorman, J.	Saskatchewan	Prefabricated Buildings	WFH	1
Macotta	Weston	Macotta	MSF	10
Merriman Portable Home	Lethbridge	Merriman Portable Homes	WFH	1
Monolithic Housing Corp.	Montreal	Le Tourneau	CM	8

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>CANADA</u>				
McMillan & Bloedel Ltd.	Vancouver	Sylva Wall Panel	WSSP	2
McGew & Co.	Kingston	Stephenson Building	WSSP	2
Nu-Way Building	London	Kernway Home	MSF	10
Ontario Hydro (J. R. Davies)	Toronto	Ontario Hydro	CS	7
Pan-Abode (1951) Ltd.	Vancouver	Pan-Abode Const.	WPL	3
Panel Building Homes	Hamilton	Panel Building Homes	WFH	1
Pioneer Homes	Vancouver	Pioneer Homes	WPL	3
Prefabricated Building Ltd.	Saskatoon	Prefabricated Building	WFH	1
Prefac Concrete Wall Slabs	Montreal	Prefac Concrete Wall Slabs	CP	4
Quebec Steel Structures	Montreal	Quonset	MP	12
Siporex Ltd.	Montreal	Siporex	CU	5
Structural Window Wall Panels	Calgary	Structural Window Wall Panels	WFH	1
Tower Const.	St. Jerome	Tower Const.	WSSP	2
Thusteel Corp.	Toronto	Thusteel Corp.	MSF	10
Unibilt House	Montreal	Portabilt	MP	12
Winston Park Development Ltd.	Toronto	Winston	CM	8
Wonder Building Co. Ltd.	Montreal	Wonder Building	MP	12
Ytong Alberta Mfg. Co. Ltd.	Calgary	Ytong	CU	5
<u>AUSTRALIA</u>				
Aychar (Evans B.) Matthews, A. C.	Melbourne	Aychar Gypsum House A. C. Matthews	CM CPB	8 6
<u>AUSTRIA</u>				
Schmidt, Alfred Thermobau, G. M. B. H.	Vienna Vienna	Boehler Thermobau, C. M. B. H.	MP WFH	12 1
<u>COLUMBIA</u>				
Columbia, Vacuum Concrete De		Columbia, Vacuum Concrete De	CP	4
<u>FINLAND</u>				
Puutolo Oy	Helsinki	Puutalo Oy	WFH	1

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>INDIA</u>				
Central Building Research Inst. Alcrete	Roorkee Mysore	Shell Concrete Houses Indian Pref.	CM CP	8 4
<u>IRELAND</u>				
Barney Heron Limited	Kildare	Leixlip Unit	WFH	1
<u>KENYA</u>				
May, E. Will, J. F.	Nairobi Victoria	May Rondavel Housing	CPB CM	6 8
<u>NORWAY</u>				
Norsk Ytong	Oslo	Norsk Ytong	CU	5
<u>SWITZERLAND</u>				
Insyba	Zurich	Insyba	CPB	6
<u>ISRAEL</u>				
Knapp System		Knapp System	CU	5
<u>ITALY</u>				
ABC House (Turin House) Bigontina	Turin Milan	ABC House (Turin) Bigontina	MP CP	12 4
<u>HOLLAND</u>				
Amsterdam Housing Directorate Henssen Houses Jarino Houses K. I. S. O. Kuipers, Jan Polynorm	Amsterdam Schaesberg Roden Dordrecht Nunspeet Amersfoort	Hunkermoller Henssen Houses Jarino Houses K. I. S. O. Bouw Elementen Kuipers Panelhomes	CS CP WFH CU MSF MSF	7 4 1 5 10 10

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>HOLLAND</u>				
Puibeton	Enchede	Puibeton	CM	8
Rijnlandesche Betonbouw, Mattchappij	The Hague	R. B. M. System	CM	8
<u>GERMANY</u>				
Bartning, Otto	Berlin	Bartning, Otto	MSF	10
Bohler, Stahlbau	Berlin	Bohler, Stahlbau	MSF	10
Braune and Roth	Leipzig	Stahlhausbau	MPB	11
Christoph and Unmack A/G	Niesky, 0.1	Christoph and Unmack A/G	WFH	1
Deutsche Bergwerks & Huttenbau	(in Canada)	Salzgitter House (Edmonton)	WFH	1
Fertigungsgesellschaft Neue Technik mbH	Messer- schmidt	Fertigungsgesellschaft Neue Technik mbH	MSF	10
Hirsh-Kupfer & Messingwerke	Hamburg	Hirsh-Kupfer & Messingwerke Finow	WFH	1
Kastner - Mucbe - Paulick	Leipzig	Kastner - Mucbe - Paulick	MSF	10
Kletzin	Berlin	Kletzin	MP	12
Kreuzhaus	Rheinpfalz	Kreuzhaus	CPB	6
Kugel Haus (Round)	Rheinpfalz	Kugel Haus (Round)	CM	8
Kunze, G.	Berlin	Kunze, G.	MP	12
Ludowici, Dr. J. W.	Rheinpfalz	Ludowici Dr. J. W.	WFH	1
May (Praunheim)	Frankfurt	May (Praunheim)	CP	4
Mayer - Ottens		Mayer - Ottens	MSF	10
Pohlmann Emergency Housing	Hamburg	Pohlmann Emergency Housing	MSF, CU	10, 5
Schenke & Liebe Harkport Co.	Oberkassel	Dusseldorfer Stahlhaus	MSF	10
Ways and Freytag	Frankfurt	Heks	MSF	10
<u>FRANCE</u>				
Bloc Technis	Aulnoye	Bloc Technis	MP	12
Commentry, Societe et Forges	Paris	Commentry, Societe et Forges	MSF	10
Construction Ceramiques		Construction Ceramiques	CP	4
Fillod House		Fillod House	MP	12
Phenix (Maison Phenix)	Paris	Phenix (Maison Phenix)	MSF	10
Prouve, Jean		Jean Prouve	MP, WFH	12, 1
Soc. Armoricaine De Bois Dur Nord		Maison Demontable	WFH	1
Soc. Des Const. Multicellulaire	Paris	Soc. Des Const. Mult.	MP	12
Societe D'Exploitation de L'Habitation Modern		Allantaz House	S	9
Soc. Des Forges De Strasbourg	Paris	Maison Calorifugee Francaise	MP	12
<u>SWEDEN</u>				
Amals Sagverks	Amal	Asa House	WSSP	2
Bostadsforskning A/B	Stockholm	Elementhus	WPL	3



<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>SWEDEN</u>				
Hans-Acker & Holst	Stockholm	Hans-Acker & Holst	CP	4
Internationella Siporex A/B	Stockholm	Siporex	CU	5
Ostberga Experimenthus H. S. B.	Stockholm	H. S. B.	CP	4
Stex House	Stockholm	Stex House	WFH	1
Sv. Trahusfabexport For A/B	Stockholm	Stex	WFH	1
Swedish Balloon Frame	Stockholm	Swedish Balloon Frame	WFH	1
Swedish Stud Frame Panel	Amal	Swedish Stud Frame Panel	WFH	1
Upsala-Ekeby A/B	Ekebybruk	Ekeby	CP	4
Werno Wall Units		Werno Wall Units	WFH	1
International Ytong Co. A/B	Stockholm	Ytong	CU	5
<u>UNITED KINGDOM</u>				
Acheson M. B. Ltd.	London	Schindler Goehner	CPB	6
Airey & Son, Eldon House	Leeds	Airey House Duo Slab I & II	CPB	6
Anderson, A. H. Ltd.	London	(A. 75) System	WFH	1
Angel, J. A.	Aberdeen	T. Beam	CPB	6
Arcon	London	Arcon	MSF	10
Arrow Units Ltd.	Edinburgh	Arrow	CP	4
Atherton, R. D.	Cheshire	Atherton	MPB	11
Athol Steel Houses Ltd.		Athol Steel Houses	MSF	10
Ayshire, C. C. (Whitson-Fairhurst)	Scotland	Ayshire C. C.	CPB	6
Balfour-Beatty Co.	London	Balfour-Beatty	CP	4
Beanland Unit Const.	Blackpool	Beanland Unit Const. No. 2	CP	4
Beardmore, Sir Wm. & Co. Ltd.		Atholl House	MSF	10
Bellrock	London	Bellrock	CU	5
Birmingham Corp.	Birmingham	Birmingham	MSF	10
B. J. House	Birmingham	B. J. House	MSF	10
British Iron & Steel Federation	London	B. I. S. F. House A, B & C	MSF	10
Boot Henry & Sons Ltd.	Yorks	Boot Pier & Panel & Beaucrete	CPB	6
Booth & Co.	London	Overseer House	MP, WFH	12, 1
Boswell, M. A.	Wolverhampton	No-Fines	CM	8
Boulton & Paul Ltd.	Norwich	Boulton & Paul	WFH	1
British Army House	Surrey	British Army House	CM	8
British Power Boat Co.	Hythe Hants	Scottwood House	WSSP	2
Bristol Aeroplane Co.	Bristol	Bristol Aeroplane	MP	12
Bristol Prefab.	Bristol	Bristol Prefab.	MSF	10
Beadmead Products Ltd.	Maidstone	Beadmead	CP	4
Brown, Donald & Co.	Blaydon-On-Tyne	Thermostatic Steel House	MP	12
Buckwyn Const. Ltd.	Berks	Buckwyn	MSF	10
Cawood Wharton & Co. Ltd.	Leeds I	Riley Const. Systems	MSF	10
Chanello Concrete Const. Ltd.	London	Chanello	CU	5
Chesham & Co.		Master Method	CU	5
Clothed Concrete Const. Ltd.	London	Dyke System	CP	4
Clugston Cawood Ltd.	Lincoln	Clugston Cawood	CU	5
Colt, W. H. & Son Ltd.	Kent	Colt	WFH	1
Connell, Coatbridge	Scotland	Connell, Coatbridge	MPB	11
Corolite Const. Co.	Edinburgh	No-Fines Clinker House	CM	8

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>UNITED KINGDOM</u>				
Cornish Unit Houses	Cornwall	Cornish Unit Houses	CPB	6
Coventry Corp.		Coventry	MSF	10
Cowieson Houses	Scotland	Cowieson Houses	WHF	1
Crane	Nottingham	Crane	MPB	11
Cranwell Syndicate Ltd.	London	Cranwell Syndicate	MSF	10
Crudens Ltd.	Midlothian	Scotia House	MSF, WFH	10, 1
Cussins	Newcastle-On-Tyne	Cussins	MSF	10
Dexion	Middlesex	Dexion	MSF	10
Domkonstruado	Essex	Domkonstruado	CPB	6
Dorman, Long & Co. Ltd.		Dorman, Long	MPB	11
Gateshead Corp.		Gateshead	MSF	10
Gee, Walker & Slater	London	Gee, Walker & Slater	MSF	10
Girdlings Ferronconcrete Co.	London	MacGirdlings House	CPB	6
Glasgow Corp.		Glasgow Corp. House	CP	4
Gyproc Products Ltd.		Keyhouse Unibuilt	MSF	10
Hardy, Elson	London	Hardy	CPB	6
Hawksley A. W. Ltd.	Gloucester	Hawksley A. W.	MSF	10
Hills Patent Glazing Co.	Staffs	Presweld House	MSF	10
Hitchins Steel Concrete Bldg. Co.	Herts	Hitchins Steel Concrete	MSF	10
Howard J. & Co.		Howard	MPB, MSF	11, 10
Jicwood Ltd.	Surrey	Jicwood House	S, WSSP	9, 2
Robert Building Inventions	Devon	Keylock House	WFH	1
Kingston Ltd.	Hull	Pre-Cut Solid Timber Const.	WPL	3
Laing	London	Easiform House (No-Fines)	CM	8
Leeds Corp.		Leeds	MSF	10
Lovering Pochin Co. Ltd.	Cornwall	Cornish Unit House	CPB	6
McAlpine House	London	McAlpine	WFH	1
McDonald, A.	London	Blackborrow	CP	4
McFarlane, Walter & Co.	Glasgow	McFarlane	MSF	10
MacGregor, J. E. M.	London	MacGregor House	CPB	6
Malthouse Ltd.	Sheffield	Malthouse	CP	4
Mayercrete Ltd.		Supalite House	MSF	10
Medway Building & Supply Ltd.	Kent	Medway Building & Supply	WSSP	2
Ministry of Works	London	Portal House	MP, MSF	12, 10
Mowlen, John		Gypcrete	CPB	6
Myton Ltd. (Tarran House)	Hull	Tarran (Myton) House	CP	4
Nerdrum	London	Nerdrum	WFH	1
Newton Chambers & Co. Ltd.		Thorncliffe	MP	12
Nissen-Petren Ltd.		Nissen-Petren	MSF	10
Nuttall House		Nuttall House	MP	12
Orlit Ltd.	Surrey	Orlit House	CPB	6
Overseas Pref. Structures	London	Vermiculite Houses	CP	4
Perry & Co.	Liverpool	Calver House, Newman Monoblock	CU	5
Phoenix House		Phoenix House	MSF	10
Poulton, Denis		Denis Poulton House	MPB	11
Reed & Malik	Salisbury	Reema	CPB	6
Roberts A & Co.	London	New Georgian	MPB	11

<u>Manufacturer</u>	<u>Location</u>	<u>System</u>	<u>Type</u>	<u>No.</u>
<u>UNITED KINGDOM</u>				
Rotinoff Const. Ltd.	London	Rotinoff Const.	MSF	10
Rubery Owen	Darlaston	Rubery Owen	MSF	10
Scottish Special Housing Assoc.		Scottish Special Housing Assoc.	CM	8
Scottwood Factory Homes	London	Scottwood Factory Homes	WFH	1
Shipston Houses Ltd.		Shipston Houses	MSF	10
Simms, W.J.		Simms Extendible House	WFH	1
S. M. D. Engineers		Alframe	MSF	10
Solid Cedar Homes		Solid Cedar Homes	WPL	3
Spooners (Hull) Ltd.	Kingston-Upon-Hull	Spooner (Hull)	WFH	1
Steane, J & A	Hants	Steane, J & A	MSF	10
Stent Precast Concrete Ltd.	London	Stent House	CP	4
Stuart & Sons	Glasgow	Stuart	MSF	10
Tarran Industries	Hull	Tarran House	CP	4
T. Beam Const.	Aberdeen	T. Beam Const.	CPB	6
Thorn, J. & Sons Ltd.	Kent	Thorns Hutting	WFH	1
Uni-Seco Structures Ltd.	London	Uni-Seco Structures	WFH	1
Unit Const.		No-Fines Clinker	CM	8
Unity Structures Ltd.	London	Unity Structures	MSF	10
Universal Housing Co.	Herts	Universal Housing	CM, CS, MSF	7, 8, 10
Vermiculite House	London	Vermiculite Houses	CP	4
Wates Ltd.	London	Wates	CP	4
Webb, W.H.	Surrey	Webb, W.H.	CM	8
Weir, G.J. Ltd.	Glasgow	Quality House	WFH, MP	1, 12
Wild, James & Co.		Dennis Wild House	MPB	11
Wilson Cavity Blocks	Glasgow	Wilson Cavity Blocks	CU	5
Wimpey, G.	London	Monolithic Concrete	CM	8
Winget Ltd.		Winget Pier & Panel	CPB	6
Woolaway Const. Ltd.	Somerset	Woolaway Const.	CPB	6

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