

**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

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

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 ply-
wood 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 l.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 Industriebostader
(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 Industriebostader (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 McAplne
and Sons,
London W.1,
England.

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

Sir Robert McAplne
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.

also

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

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.

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 Industriebostader
(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 Eglinton 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 Eglinton 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 Industriebostader
(IBO) with the aid from the
municipal or national govern-
ment.
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.

WOOD FRAMED HOUSE (Portal Frame Bents Prefabricators cont'd)

WFH

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.

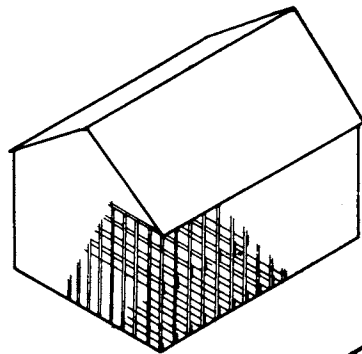
Genie Civil Page 15,
Jan. 1, 1948.
Small Homes Council
Semester, Spring
1951.

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.

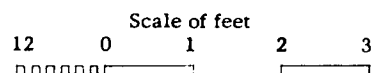
studs at 16" centres continuous in upper and lower floors.

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.



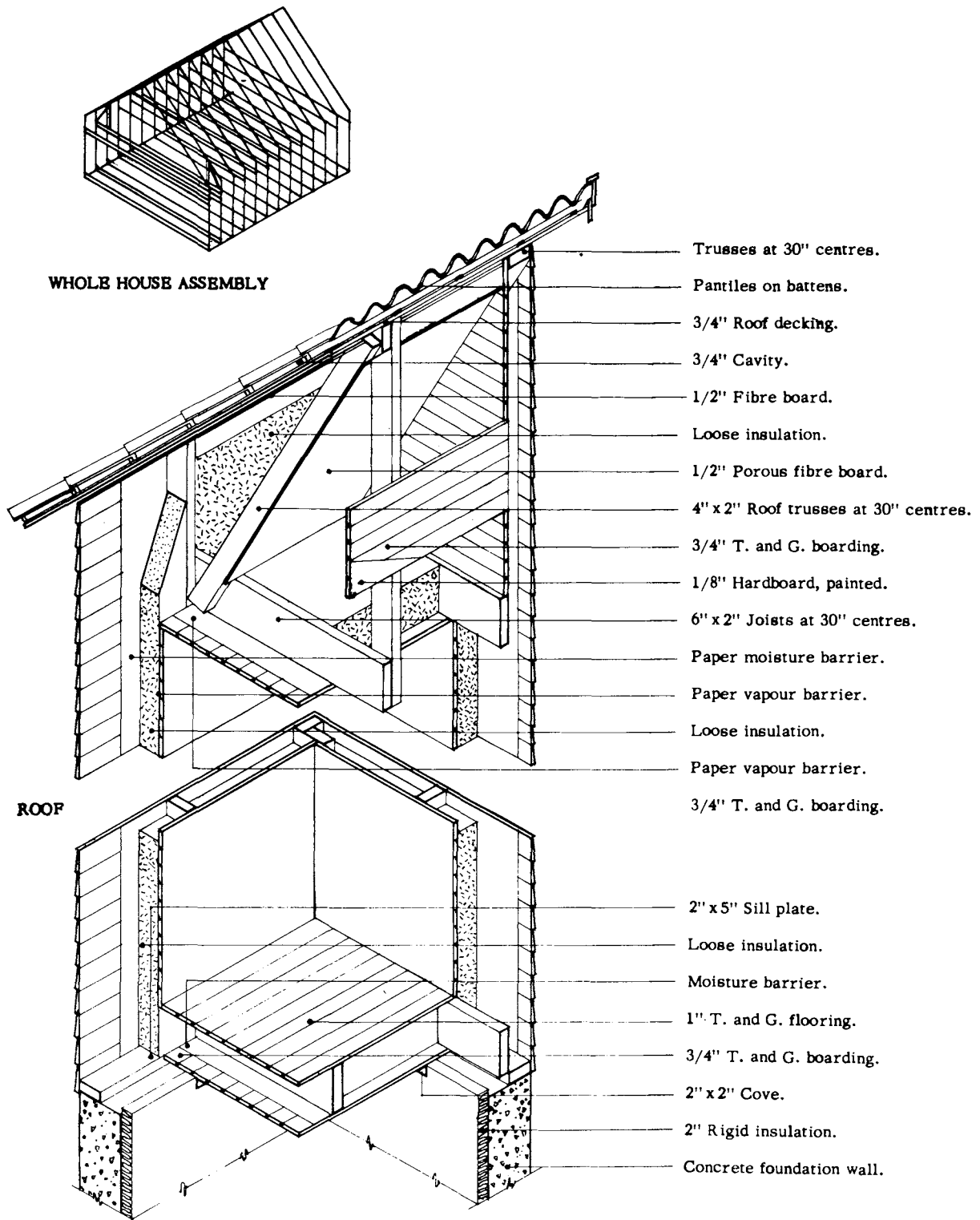
balloon frame

January, 1958.

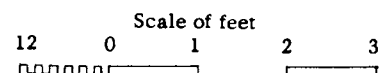
BALLOON FRAME CONSTRUCTION

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional in North America.
Date and Place of Origin.	2. Chicago about 1850.
Materials Used.	3. Wood.
Description.	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.). U=.087 (With 2" mineral wool).
Development to Date.	5. Widespread use in North America until the mid 1930's when it declined with the growing predominance of the single storey house.
Comment.	6. Generally accepted.
References.	7. "Wood-Frame House construction", Forest Products Lab. U.S. Department of Agriculture, Washington, D.C. "Architectural Graphic Standards", Ramsay and Sleeper, John Wiley and Sons, New York.

WHOLE HOUSE ASSEMBLY



GROUND FLOOR AND FOUNDATION

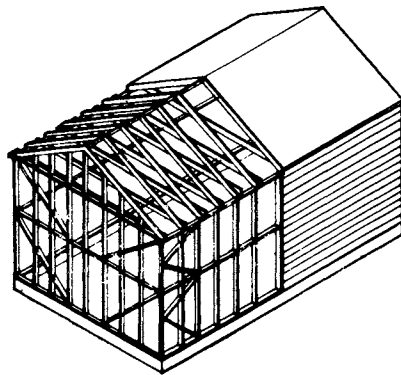


swedish balloon frame

December, 1958.

SWEDISH BALLOON FRAME

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional (but only recently).
Date and Place of Origin.	2. A twentieth century Scandinavian development of the American balloon frame.
Materials Used.	3. Wood.
Description.	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.
Development to Date.	5. Recently introduced to Sweden by the Royal Housing Commission (Kungliga Bostadsstyrelsen).
Comment.	6. -
References.	7. Kungliga Bostadsstyrelsen, Stockholm, Sweden.



WHOLE HOUSE ASSEMBLY

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

roof finish varies according to local customs and conditions

building paper

sheathing

roof rafters @ 16" o.c.

3/4" sheathing

tie

ceiling joists @ 16" o.c.

2 - 2" x 4" plate

plasterboard

horizontal wood siding

building paper

3/4" diagonal sheathing

2" x 4" studs @ 16" o.c.

2" x 4" diagonal brace

4" x 6" flush girt

diagonal sub-flooring

4" x 6" drop girt

floor joists

baseboard

finished floor

building paper

rough floor

3/4" diagonal rough sheathing

Scale of feet

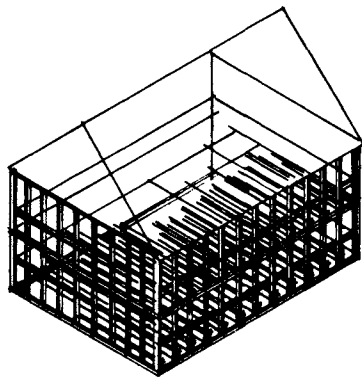
12 0 1 2 3

braced frame

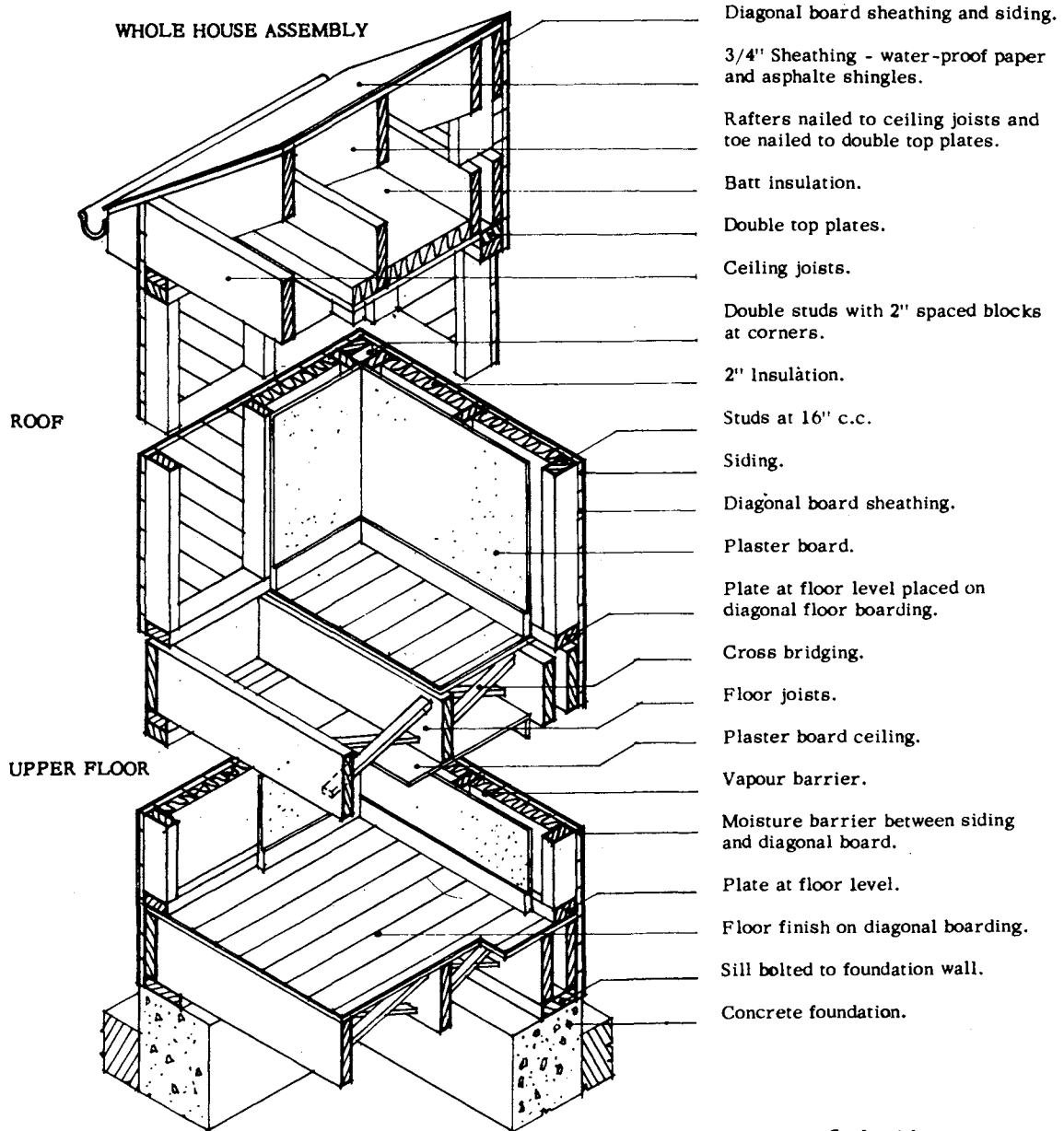
December, 1958.

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

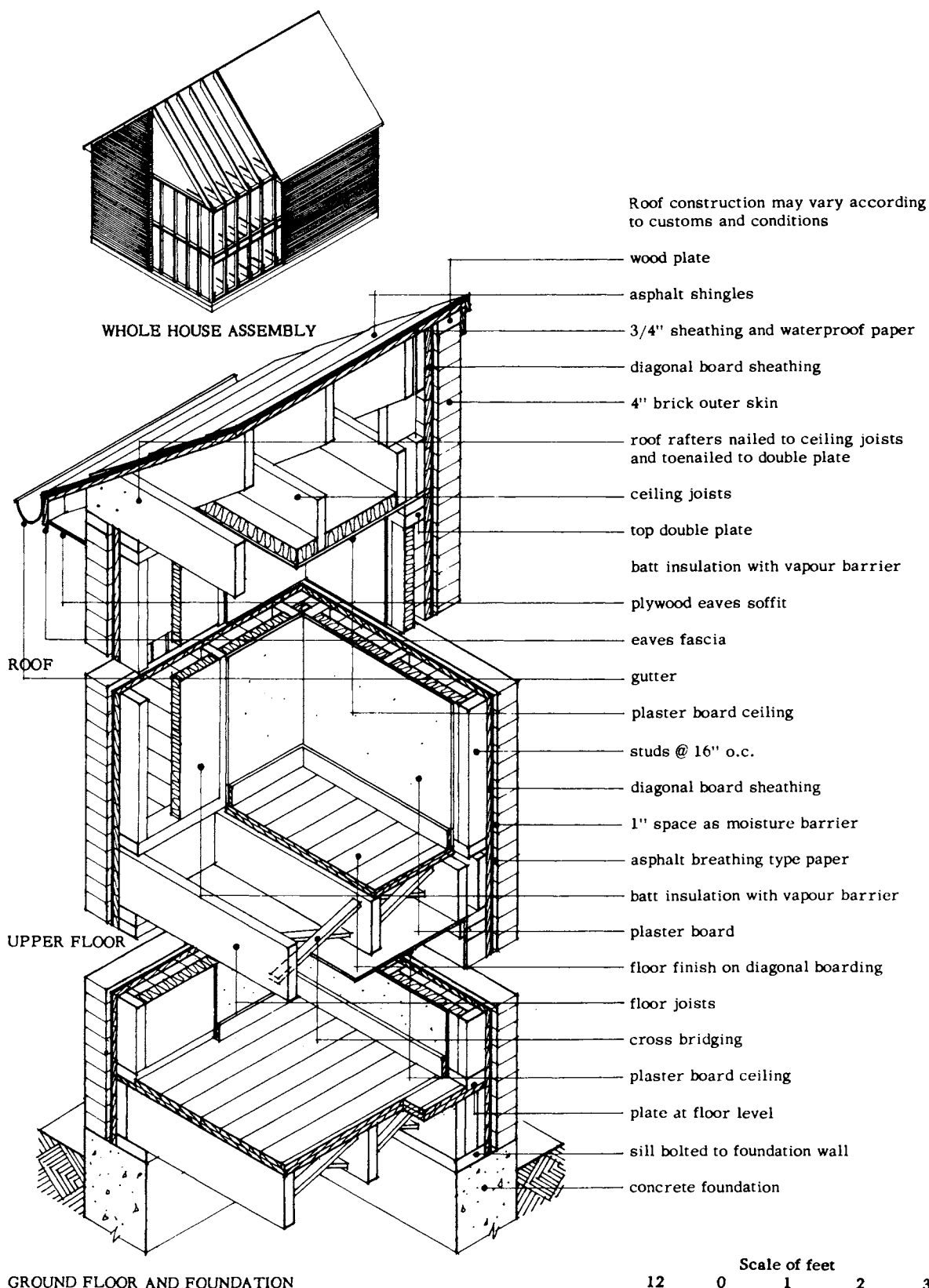
Scale of feet
12 0 1 2 3

platform frame

December, 1958.

PLATFORM FRAME (or WESTERN FRAME)

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional in Northern America.
Date and Place of Origin.	2. North America from 19th. century.
Materials Used.	3. Wood.
Description.	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).
Development to Date.	5. Widespread use throughout North America.
Comment.	6. -
References.	7. Architectural Graphic Standards, Ramsey and Sleeper, John Wiley, New York. Wood-Frame House Construction, U.S. Department of Agriculture.

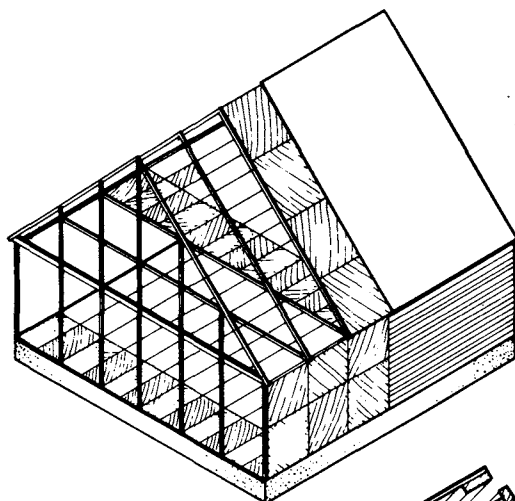


brick veneered frame

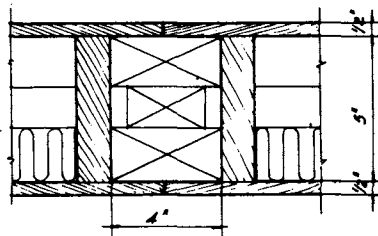
December, 1958.

BRICK VENEERED FRAME

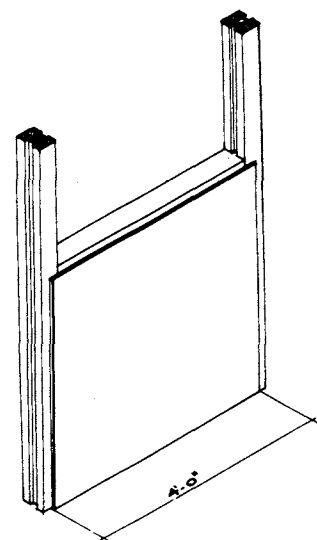
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional.
Date and Place of Origin.	2. North America.
Materials Used.	3. Wood, Brick.
Description.	4. $U = .10 \text{ BTU/Sq. Ft./Degree F.}$ Difference in Temperature.
Development to Date.	5. Widespread use through North America.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



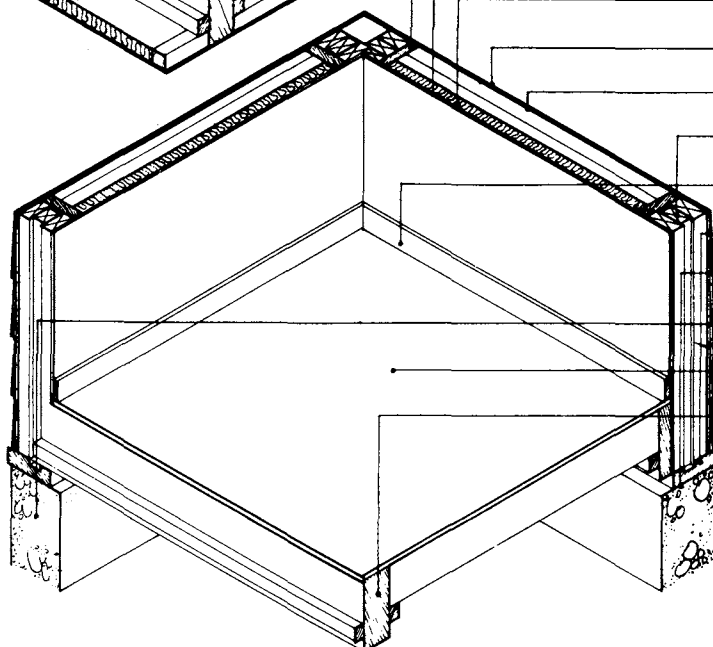
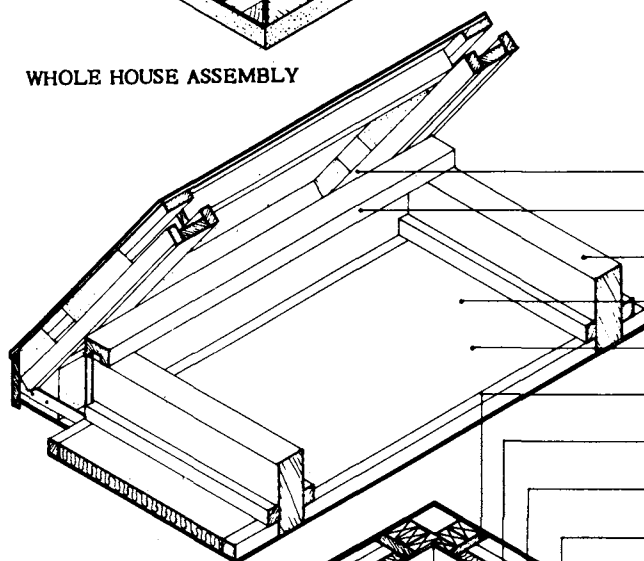
WHOLE HOUSE ASSEMBLY



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

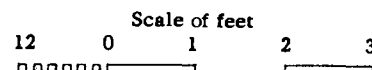
sill plate

damp coursing

foundation

floor panel

floor joist



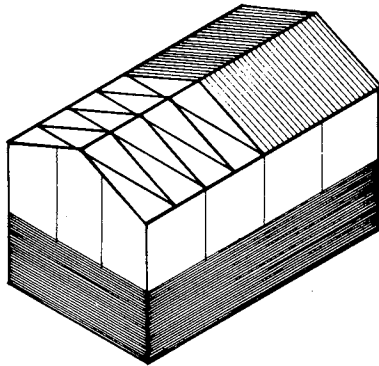
GROUND FLOOR AND FOUNDATION

i n t e r c o n

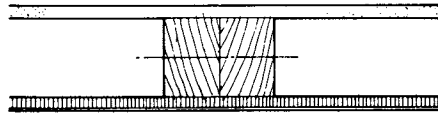
December, 1958.

INTERCON

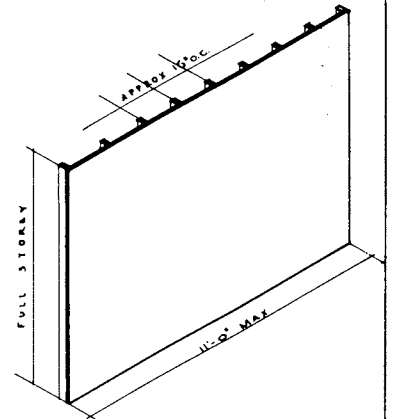
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Integrated Constructions Limited, 12 Archer Street, London, W.1, England.
Date and Place of Origin.	2. U.K. Recent.
Materials Used.	3. Wood.
Description.	4. U= 0.10.
Development to Date.	5. -
Comment.	6. -
References.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



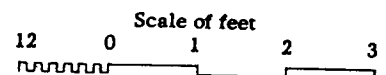
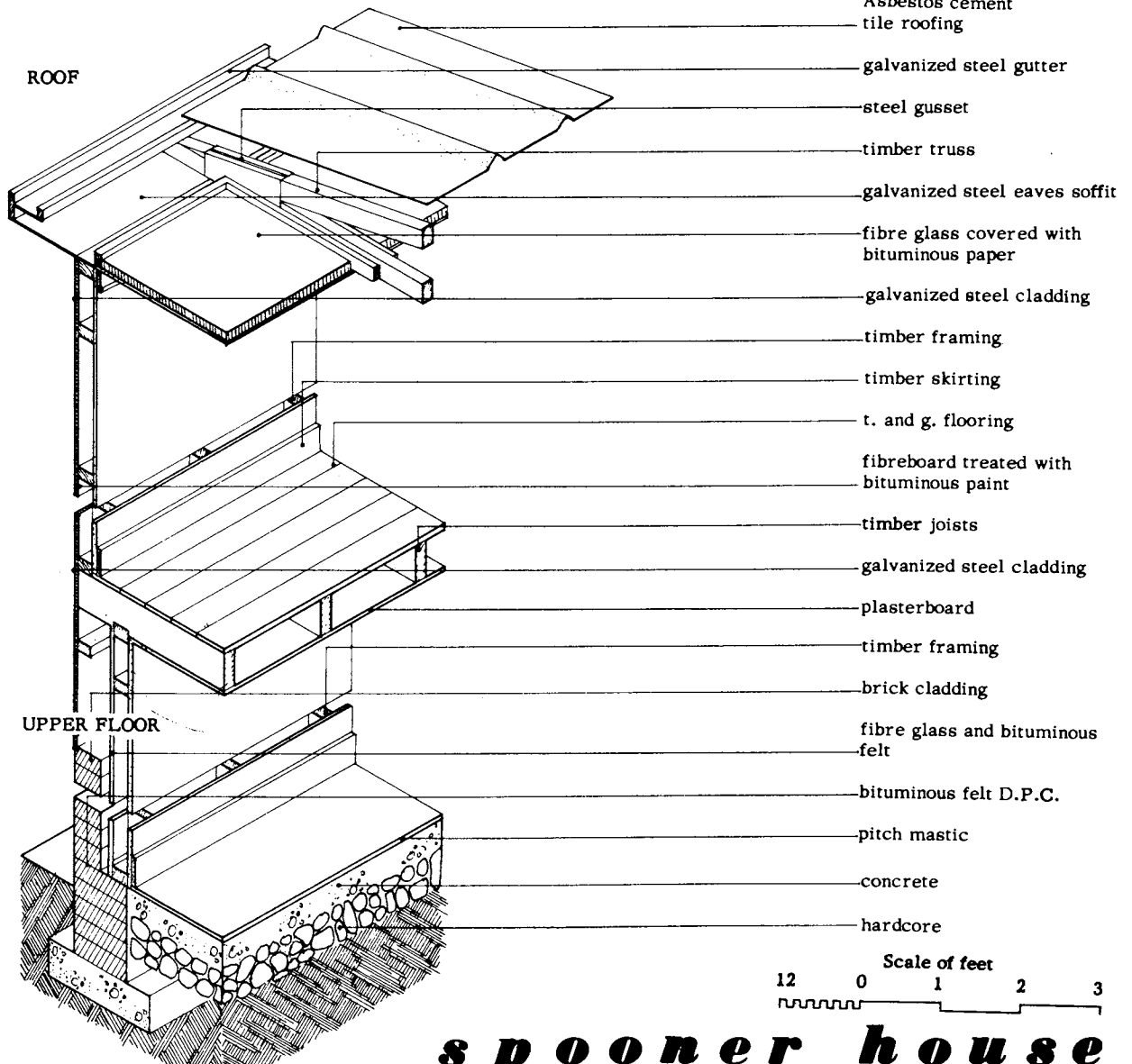
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

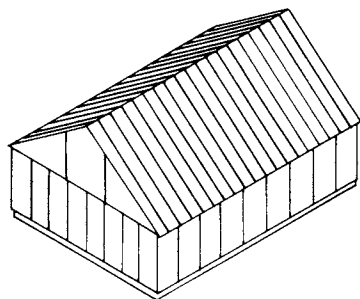


spooner house

December, 1958.

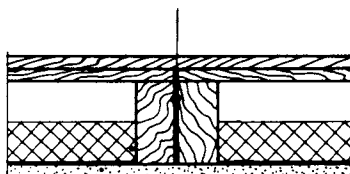
SPOONER HOUSE

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

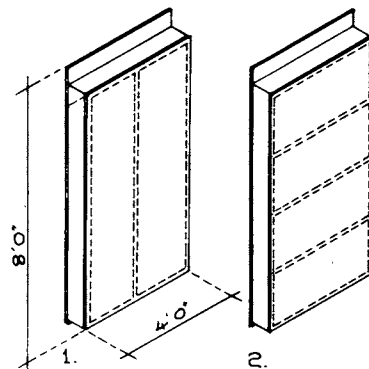


WHOLE HOUSE ASSEMBLY

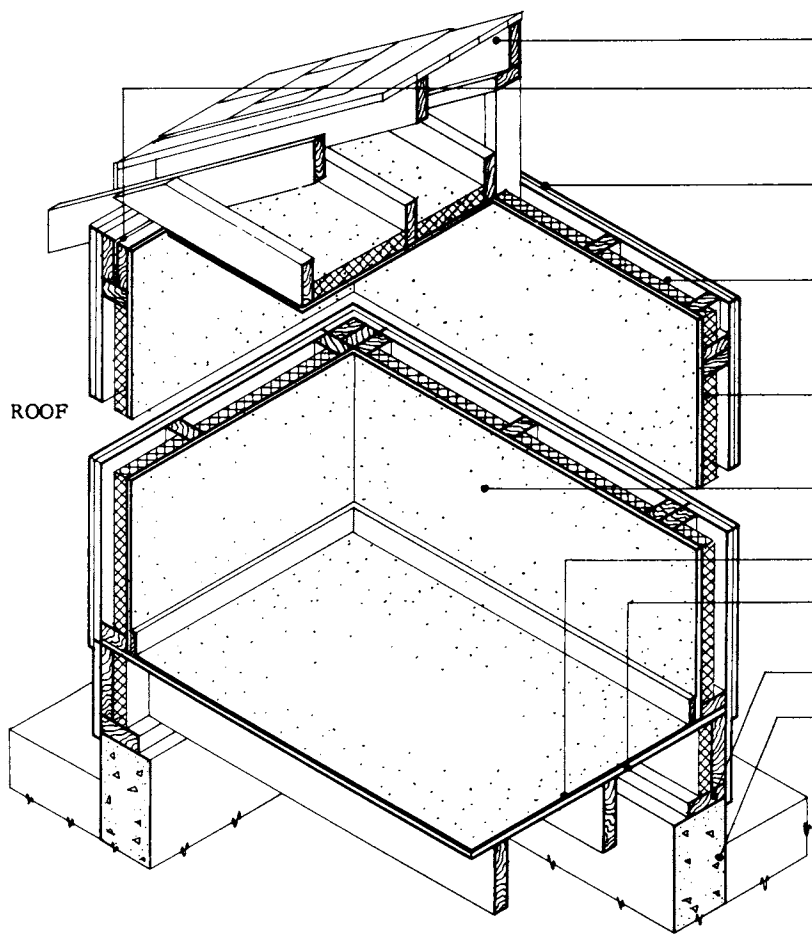
Panels usually butt jointed and nailed or bolted.



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



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.

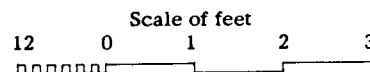
Interior finish applied after panel erection.

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.

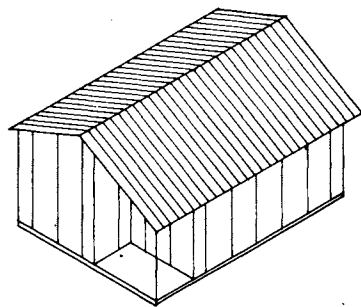


stud frame panel

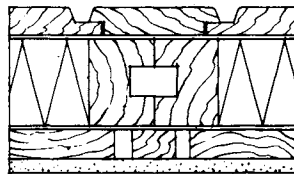
February, 1958.

STUD FRAME PANEL

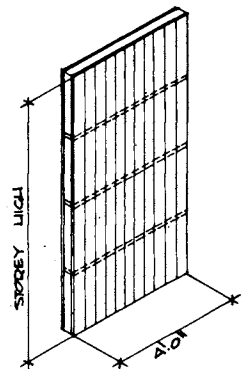
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. This, and similar systems, are used by many American pre-fabricators. This particular design has been developed by the Small Homes Council and sponsored by the Lumber Dealers Research Council, and is franchised by the latter under the name of Lu-Re-Co.
Date and Place of Origin.	2. Stud frame panels have been generally used in America since 1800. This design was developed in 1954.
Materials Used.	3. Wood.
Description.	4. Structure is essentially the same as 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.
Development to Date.	5. World wide, but especially used by prefabricators in America.
Comment.	6. -
References.	7. Small Homes Council, University of Illinois. Lumber Dealers Research Council. "Wood Frame House Construction" U.S. Dept. of Agriculture, Handbook No. 73.



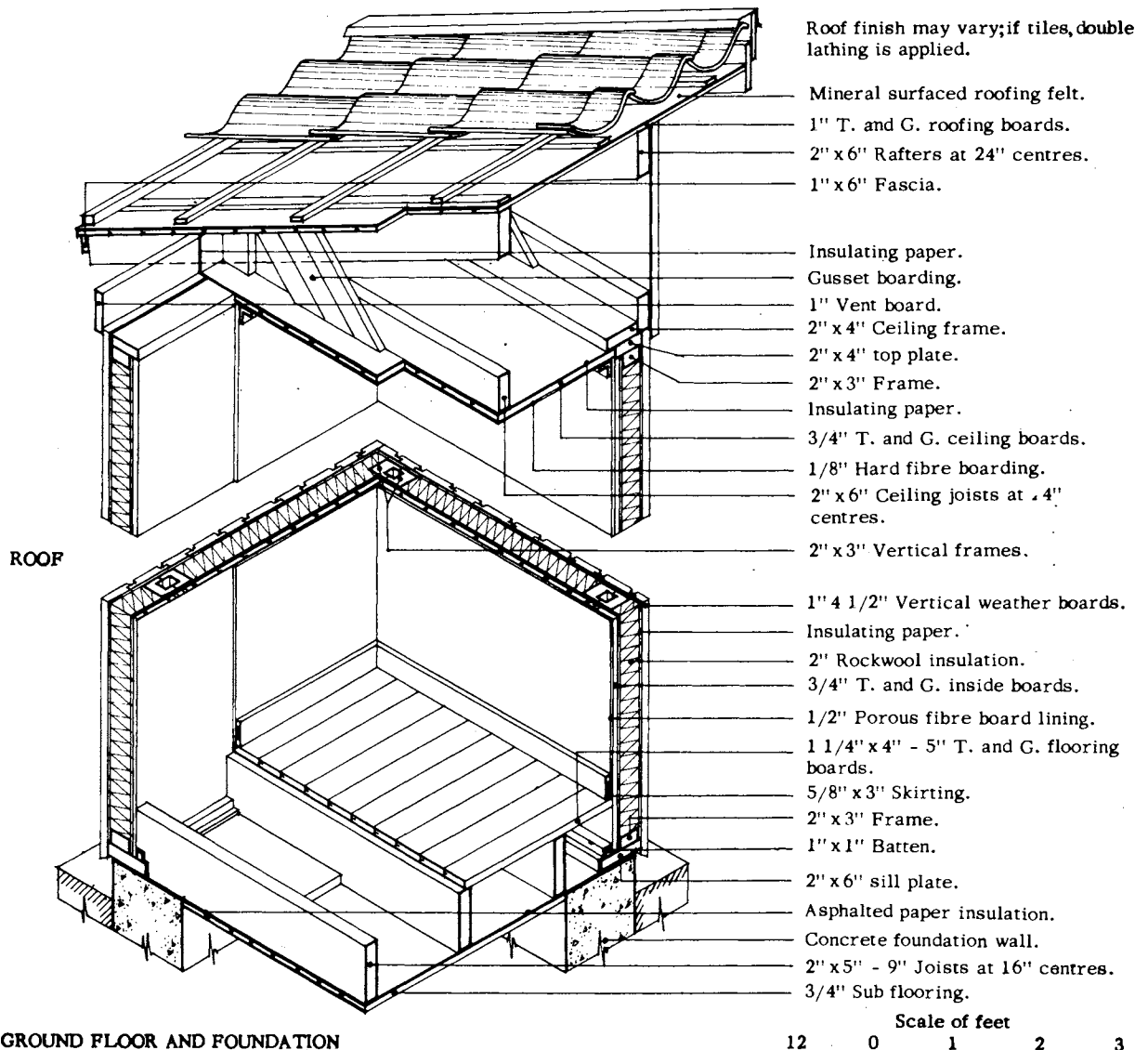
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



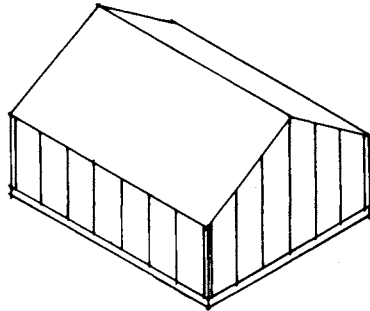
GROUND FLOOR AND FOUNDATION

swedish stud frame panel

May, 1958.

SWEEDISH STUD FRAME PANEL

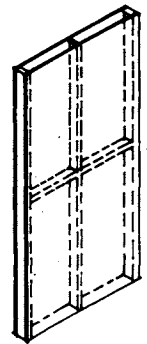
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Similar to systems of construction used by other Swedish prefabricated house manufacturers.
Date and Place of Origin.	2. Sweden, recent.
Materials Used.	3. Wood.
Description.	4. Panels are held together by top and sill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



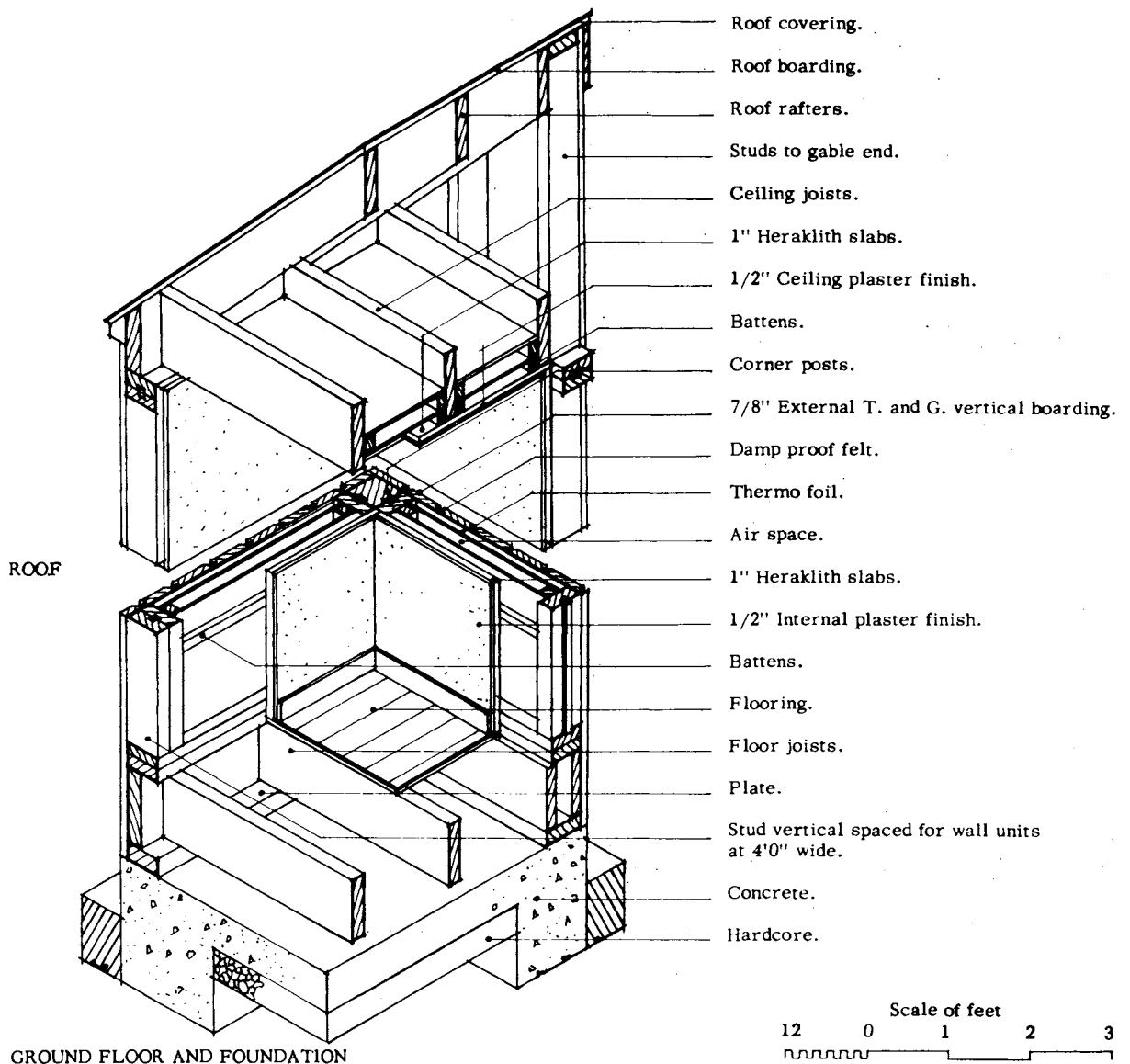
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

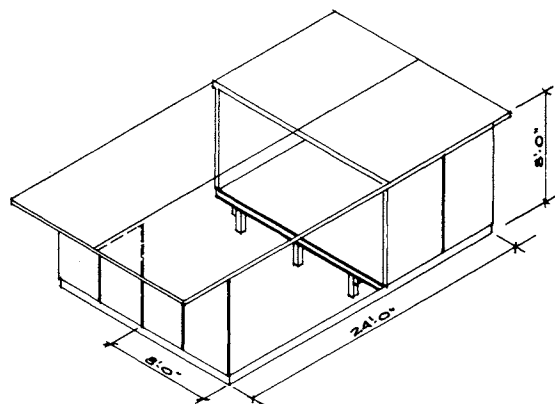


triple cavity panels

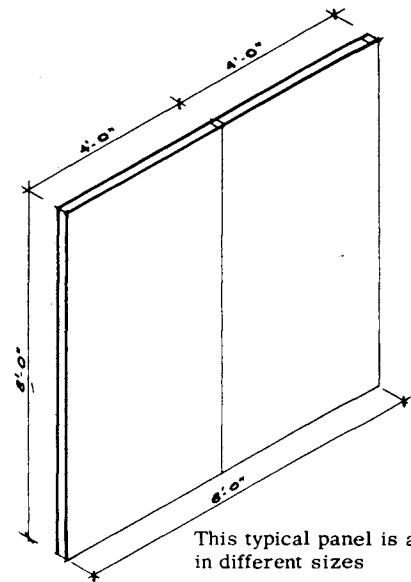
December, 1958.

TRIPLE CAVITY PANELS

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

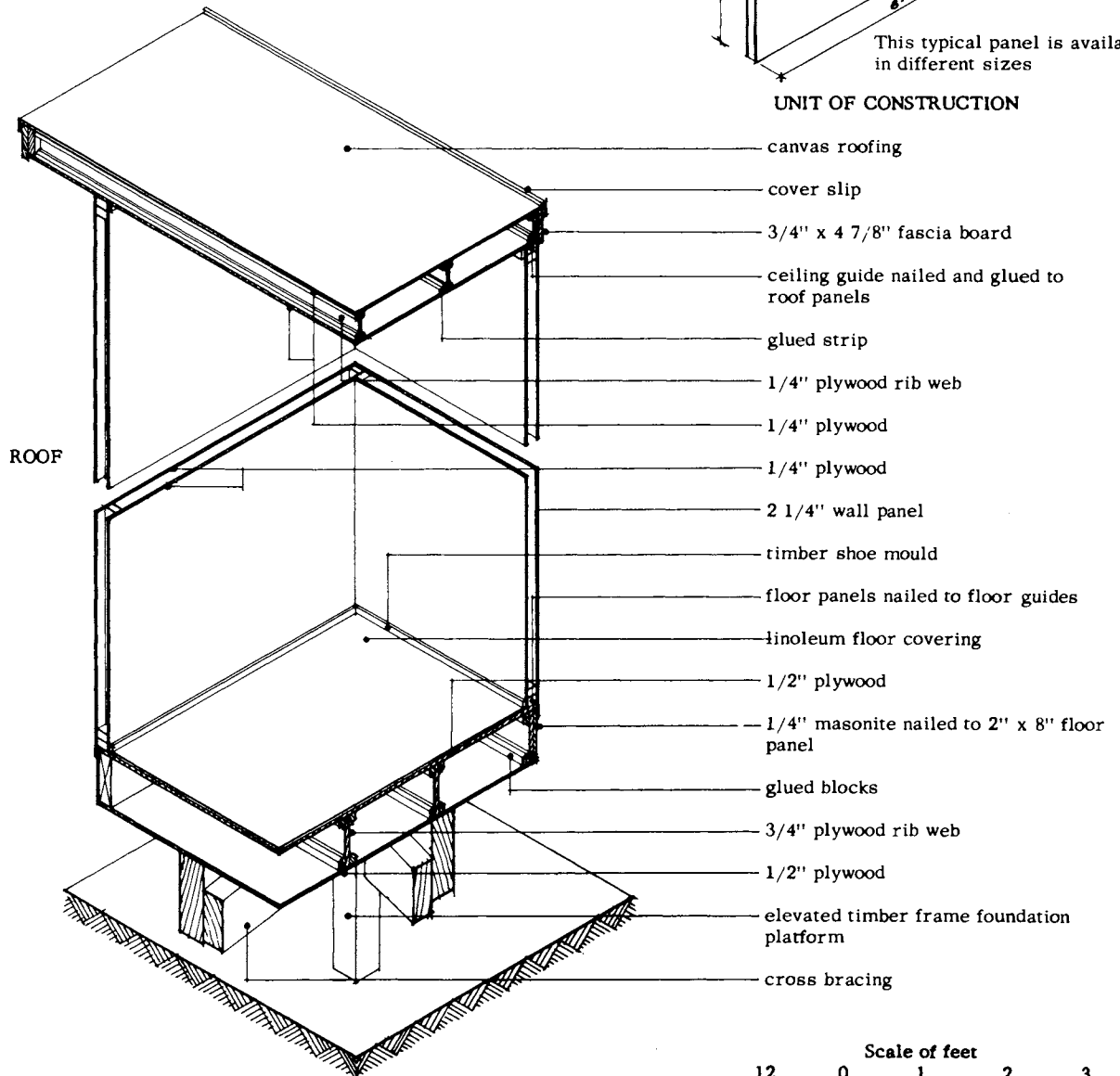


WHOLE HOUSE ASSEMBLY



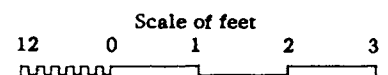
This typical panel is available in different sizes

UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

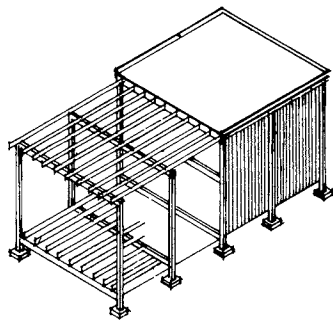


t.v.a. house type 2

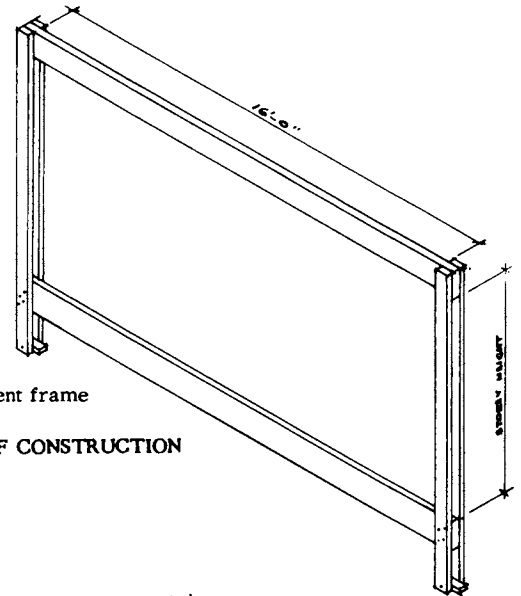
December, 1958.

T.V.A. HOUSE TYPE II

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

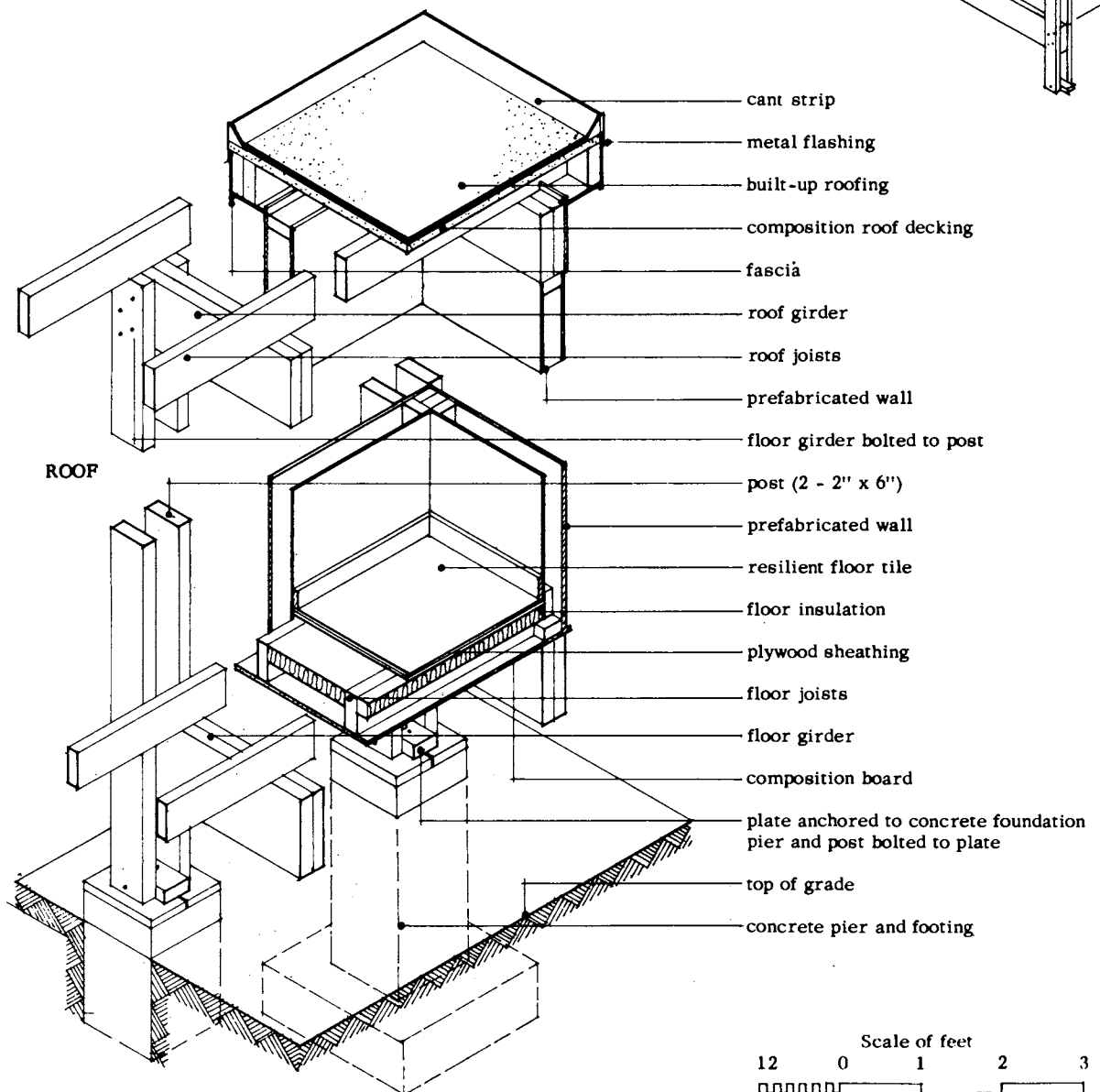


WHOLE HOUSE ASSEMBLY

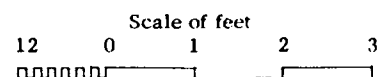


bent frame

UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

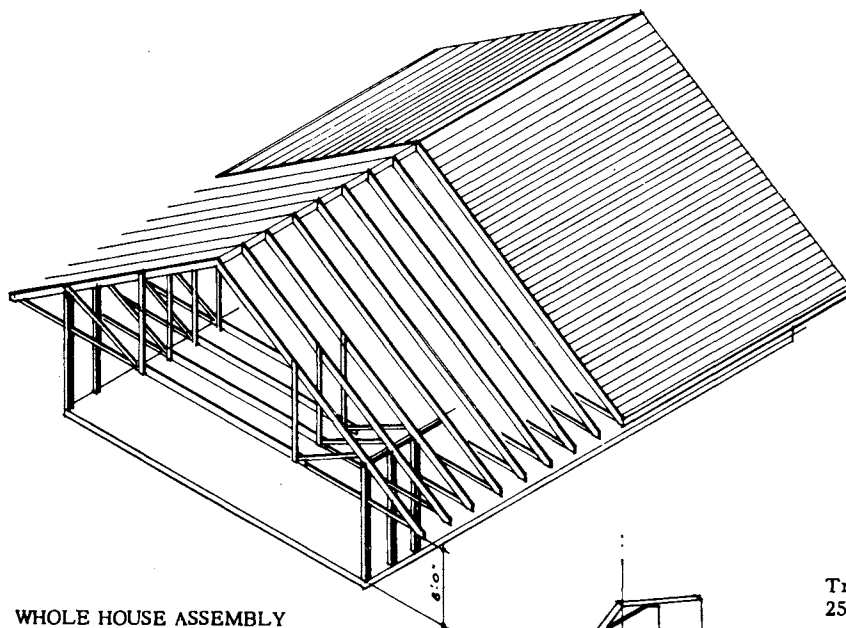


bent frame

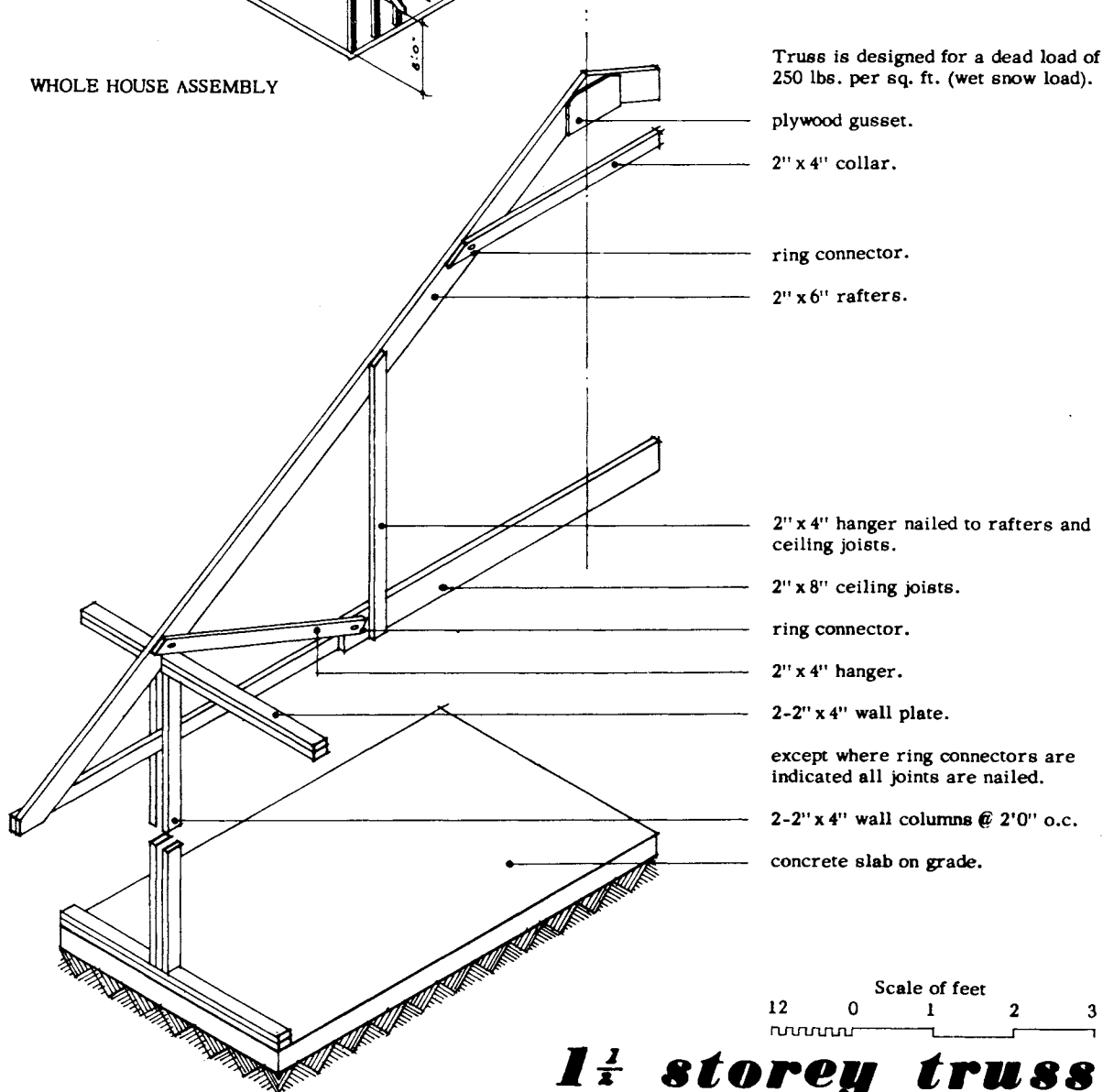
December, 1958.

BENT FRAME

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Semi-Traditional.
Date and Place of Origin.	2. U.S.A.
Materials Used.	3. Wood.
Description.	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.
Development to Date.	5. A general system of construction not used extensively.
Comment.	6. -
References.	7. "Fabricating Houses From Component Parts" 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.

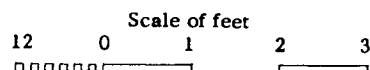
2" x 4" hanger.

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.



1½ storey truss

UNIT OF CONSTRUCTION

December, 1958.

ONE AND ONE HALF STOREY TRUSS

**Traditional,
Non-Traditional,
Manufacturer,
Sponsor or
Builder.** 1. Design available for use by anyone.

**Date and
Place of
Origin.** 2. U.S. 1952.

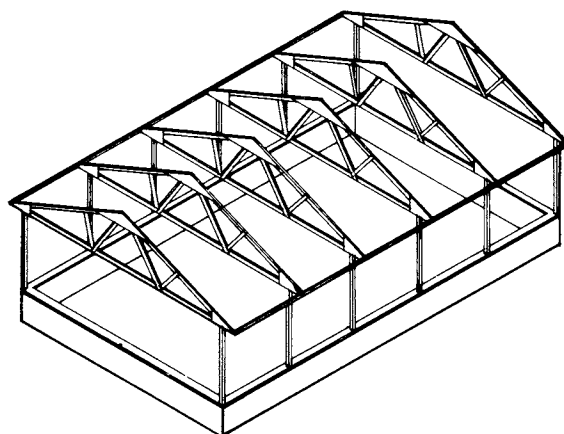
**Materials
Used.** 3. Wood.

Description. 4. Design is for truss only -
any form of infill or finish
material may be used that
is suitable.

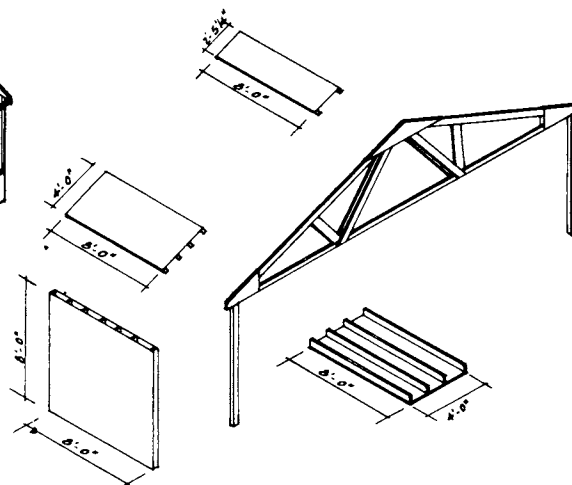
**Development
to Date.** 5. Widely published, extent of
use not known.

Comment. 6. -

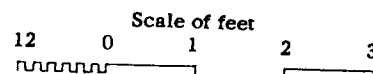
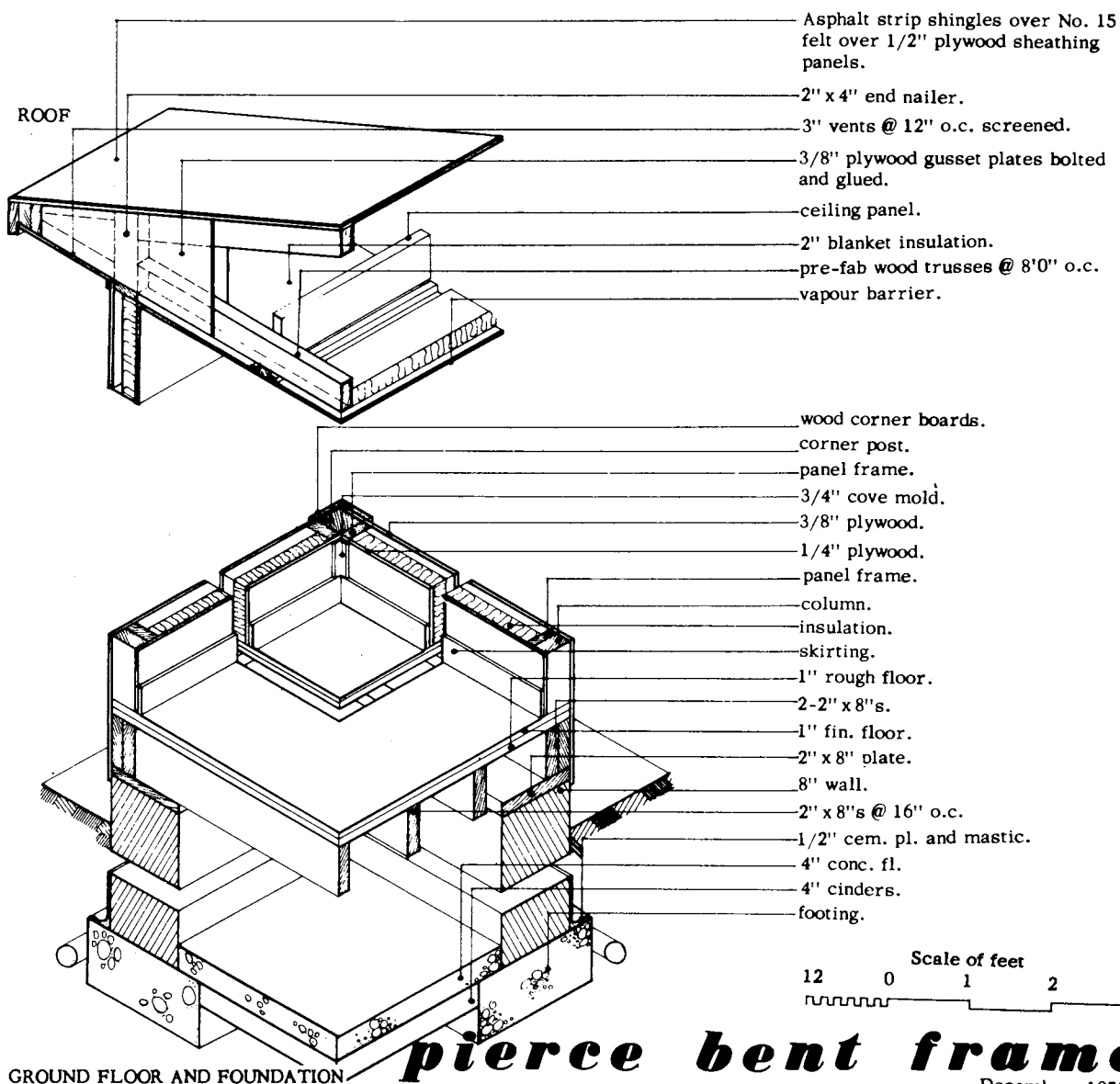
References. 7. Small Homes Council,
University of Illinois, U.S.,
"House and Home", September
1952, p. 110.



WHOLE HOUSE ASSEMBLY



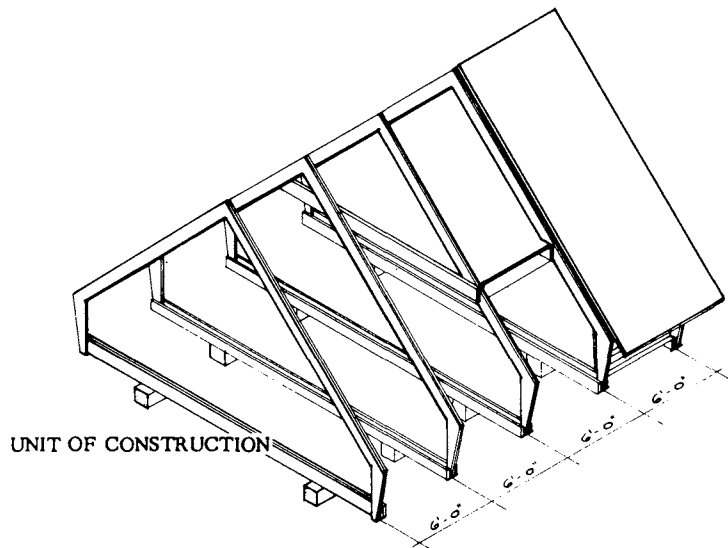
UNIT OF CONSTRUCTION



December, 1958.

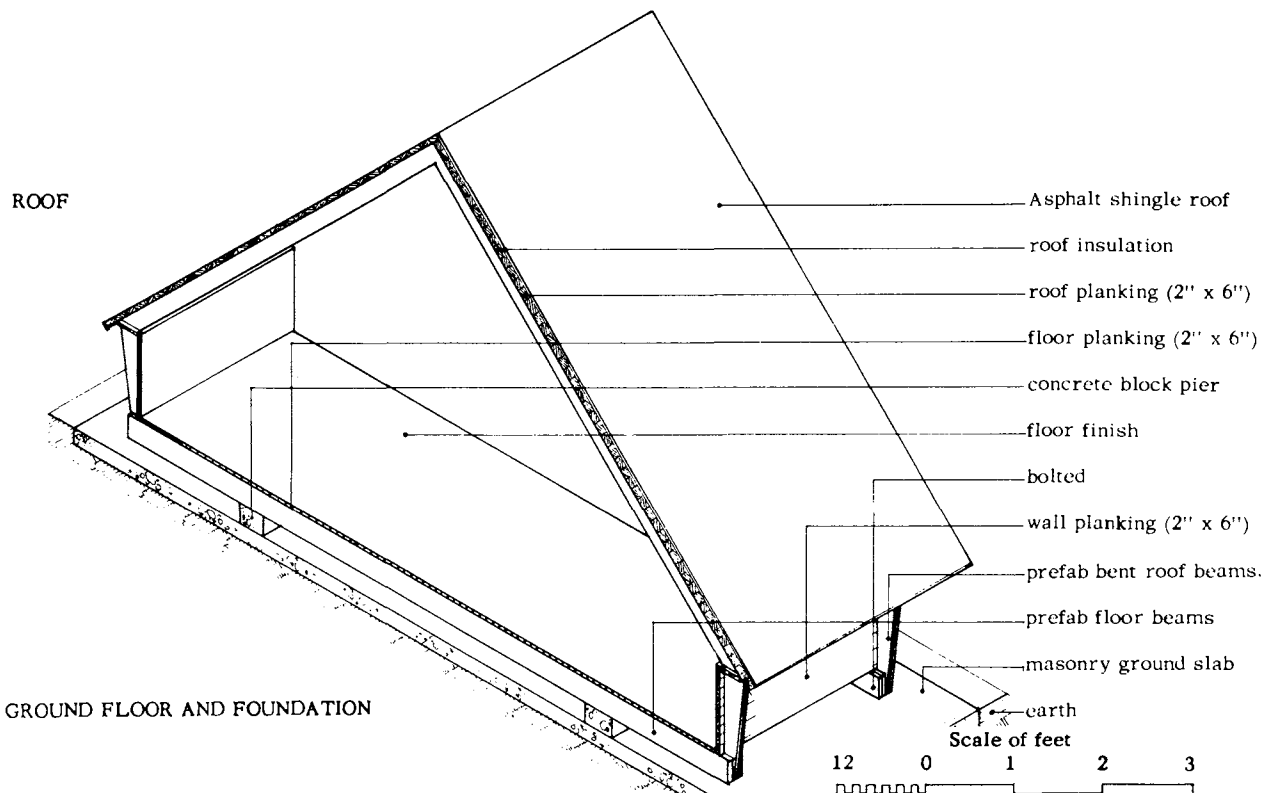
PIERCE BENT FRAME

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional.
Date and Place of Origin.	2. Unknown. Found in many parts of the world in various forms.
Materials Used.	3. Wood.
Description.	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.
Development to Date.	5. Numerous houses have been built on this principle throughout the world.
Comment.	6. This type of construction is found in conjunction with varying forms of roof and wall finish and foundation construction.
References.	7. "Architectural Record", July 1950, p. 135.



UNIT OF CONSTRUCTION

WHOLE HOUSE ASSEMBLY



ROOF

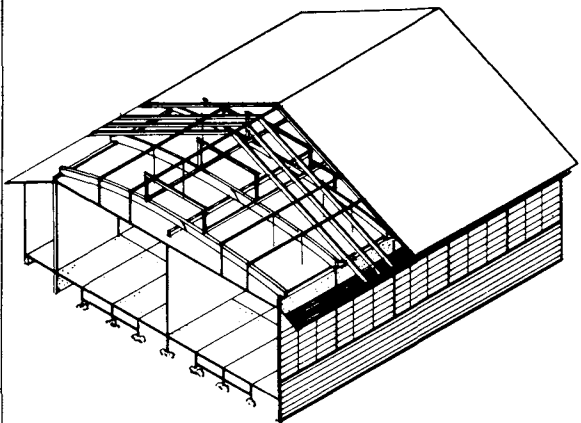
GROUND FLOOR AND FOUNDATION

volks - kabin

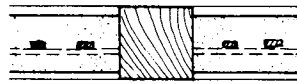
December, 1958.

VOLKS-KABIN

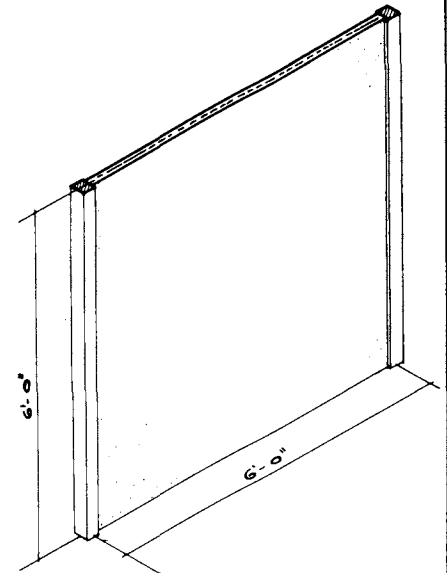
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Edward A. Cuetara, Architect, Core House Corporation, 44 Brattle Street, Cambridge, Mass.
Date and Place of Origin.	2. Massachusetts, 1956.
Materials Used.	3. Wood.
Description.	4. 2" t. and g. plank and insulation as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



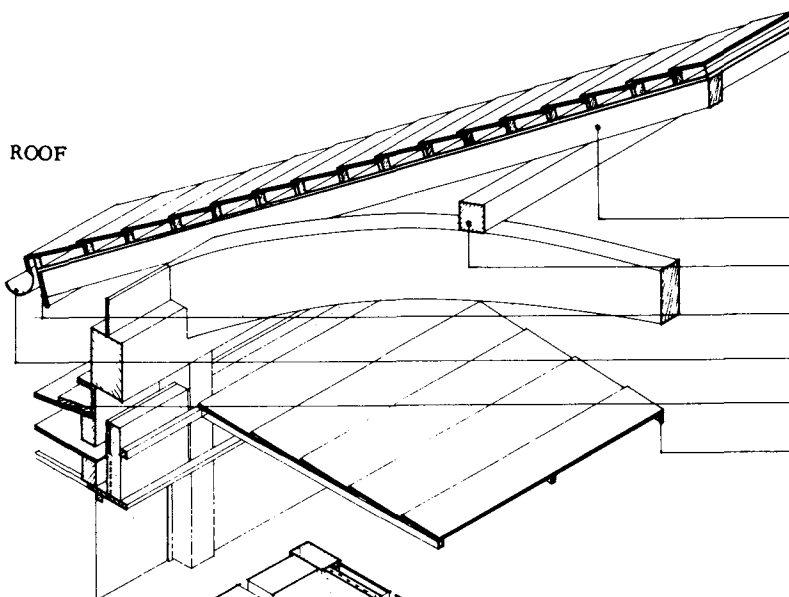
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



ROOF

Roof rafter @ 1'6" o.c.

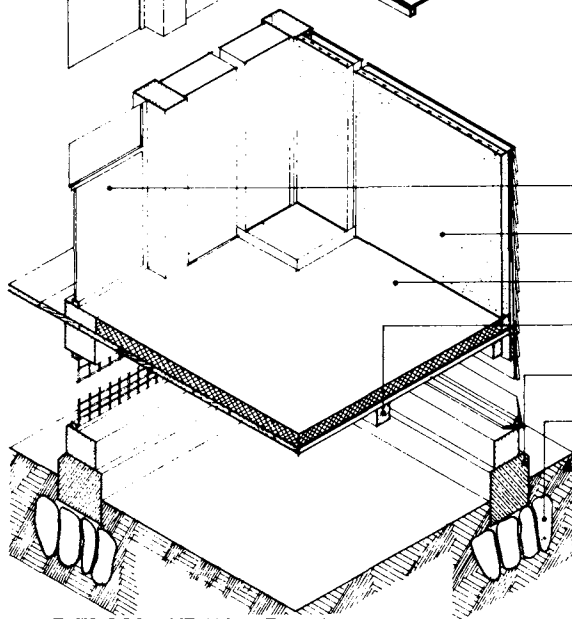
roof rafter @ 3'0" o.c.

eaves fascia

gutter

porch roof

ceiling joists @ 1'6" o.c.



GROUND FLOOR AND FOUNDATION

window wall

plaster wall

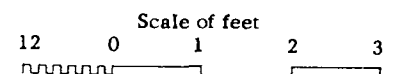
mat

floor joists @ 3'0" o.c.

base

foundation

earth fill

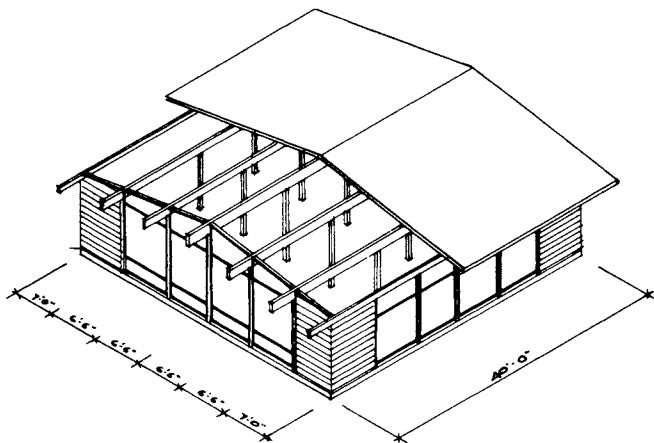


japanese house

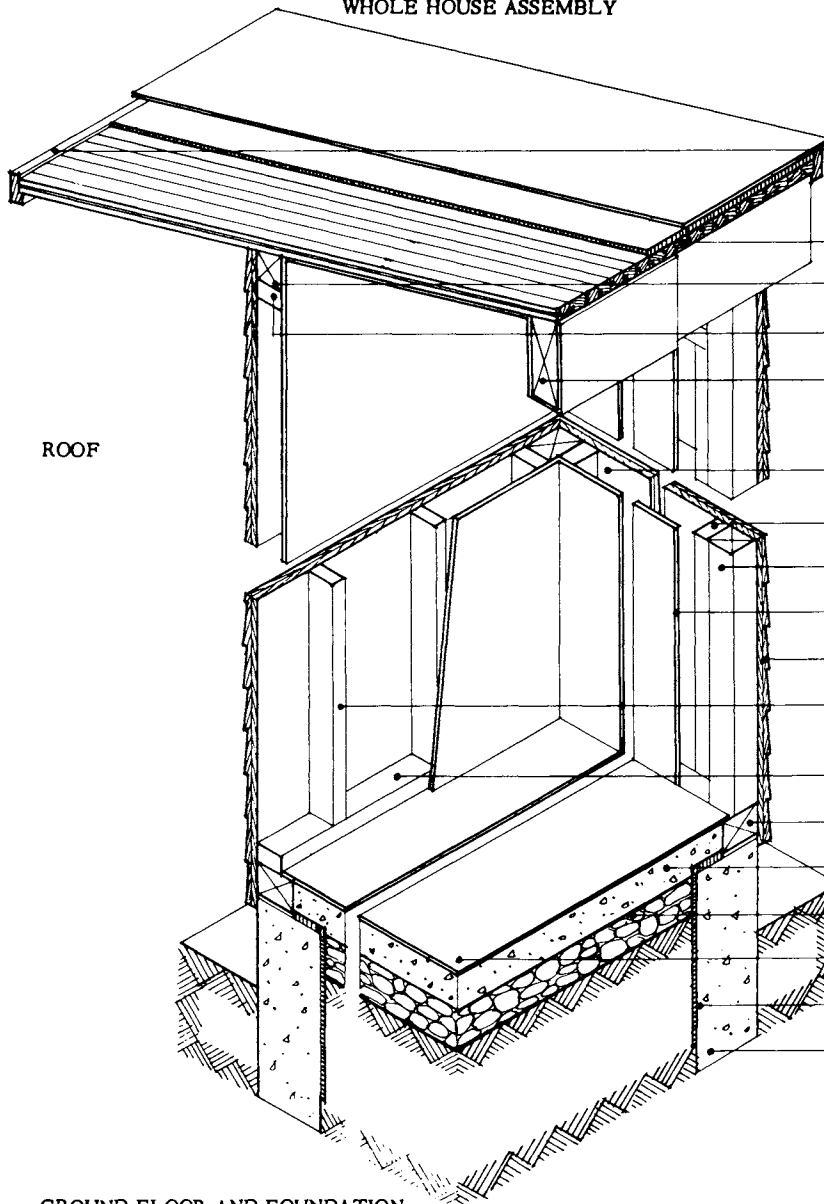
December, 1958.

JAPANESE TRADITIONAL HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional in Japan.
Date and Place of Origin.	2. Japan 17th Century.
Materials Used.	3. Wood.
Description.	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.
Development to Date.	5. Widespread in Japan.
Comment.	6. Most significant feature is the universal use of the module in the spacing of structural members.
References.	7. The Japanese House and Garden, by Tetsuro Yoshida, (publisher Praeger, N.Y.).



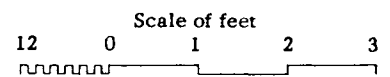
WHOLE HOUSE ASSEMBLY



ROOF

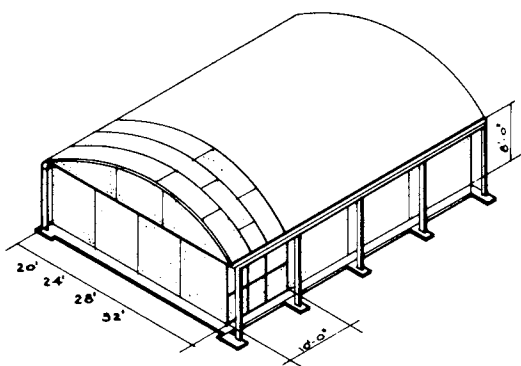
GROUND FLOOR AND FOUNDATION

- 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.

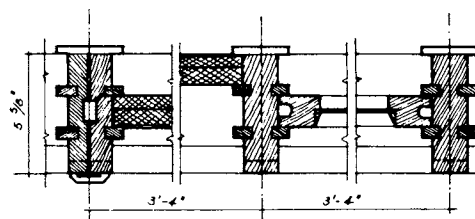


CORE HOUSE

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

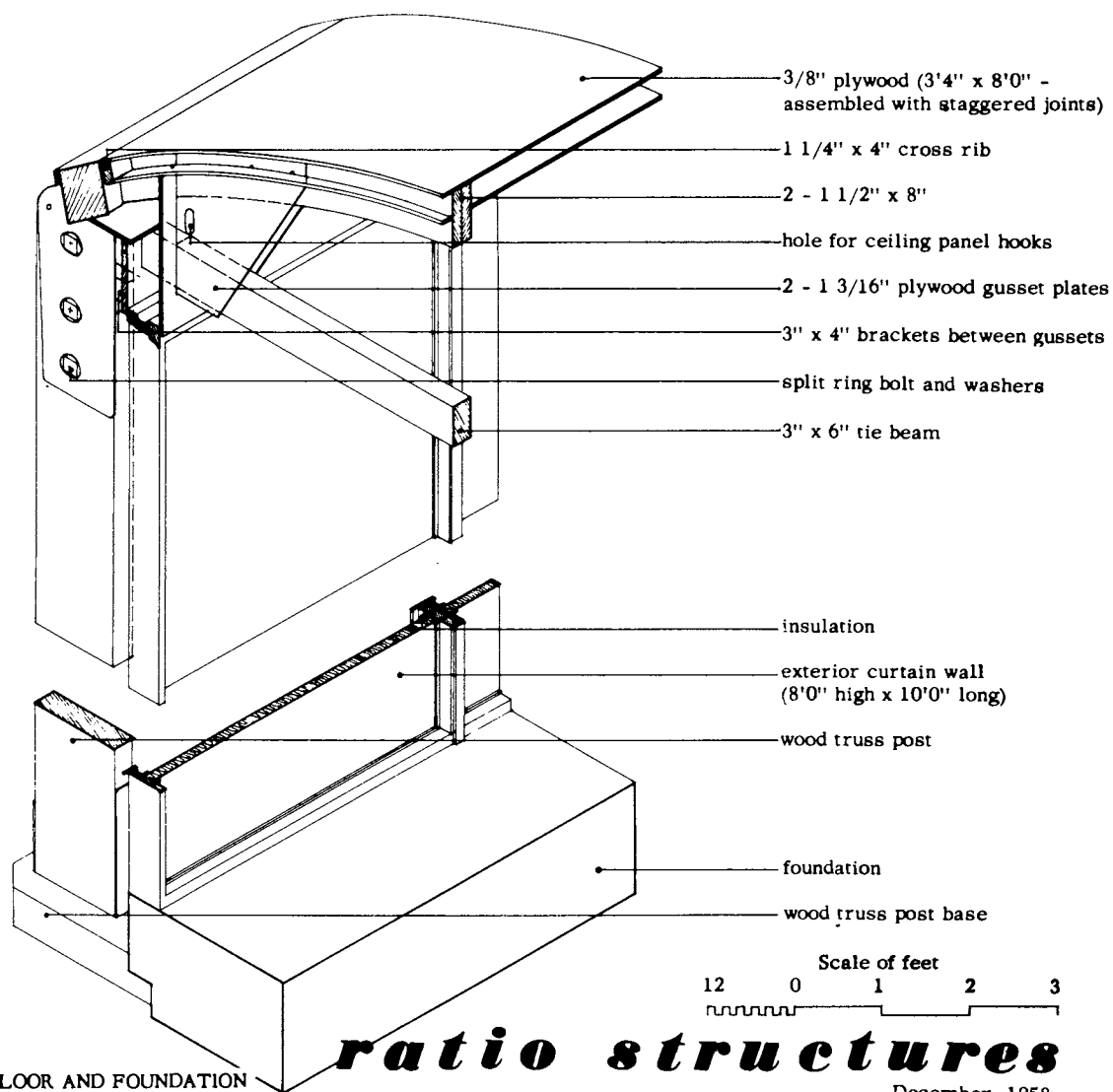


WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION

ROOF



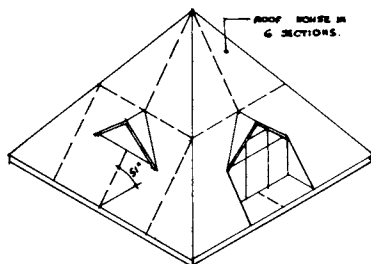
GROUND FLOOR AND FOUNDATION

ratio structures

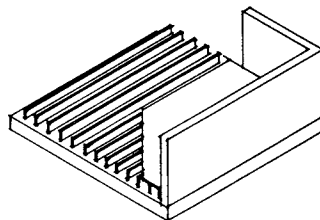
December, 1958.

RATIO STRUCTURES

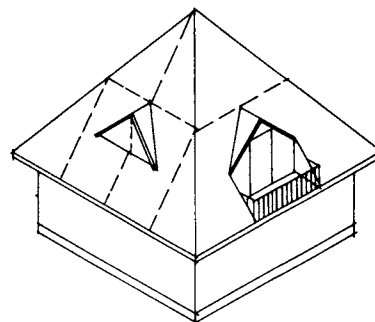
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Designer: Paul Lester Weiner, New York, N.Y.
Date and Place of Origin.	2. U.S. 1943.
Materials Used.	3. Wood.
Description.	4. -
Development to Date.	5. 160 temporary dwellings in Sidney, N.Y. for F.H.A.
Comment.	6. This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



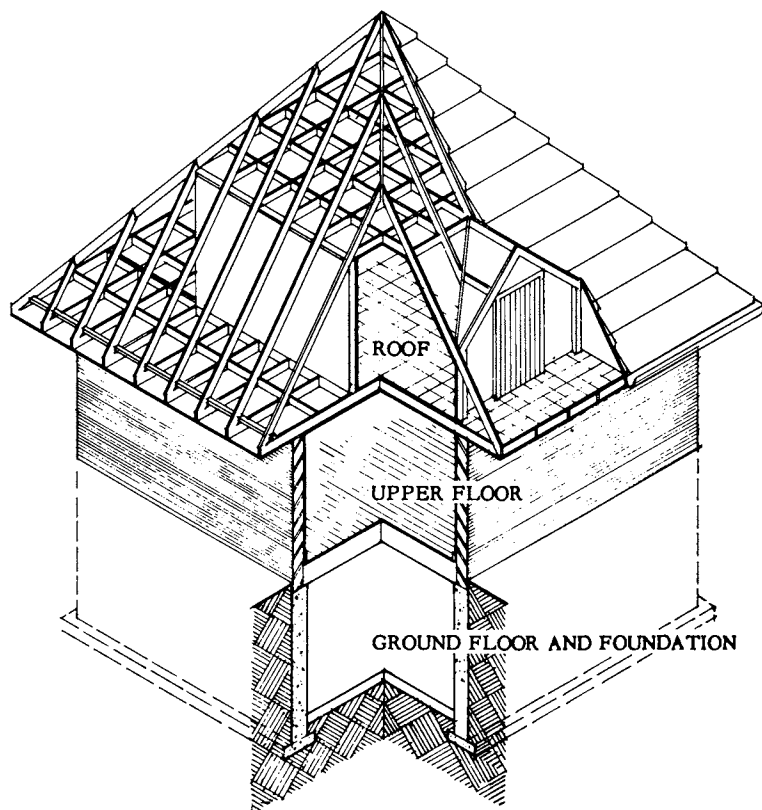
STAGE I



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

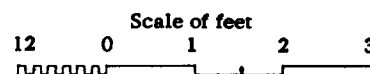
Stage II - The family lives in the roof house until funds are available to build the cellar and ground floor

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. 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

MAGICHOMES

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,
wood 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.

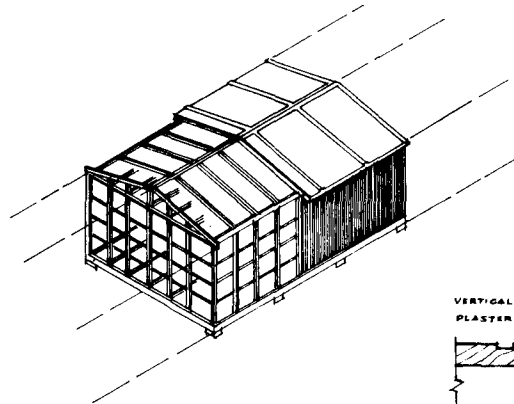
T.V.A. TRAILER

TYPE I

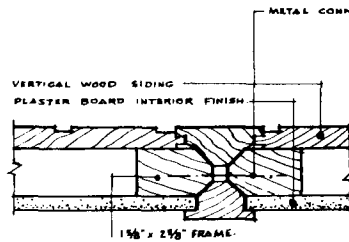
Tennessee Valley
Authority,
Knoxville, Tennessee,
U.S.A.

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.

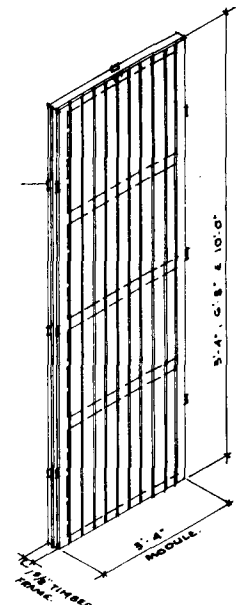
M.O.W. Survey of
Prefabrication.
T.V.A. Publications
(available M.O.W.)
record, February
1943.



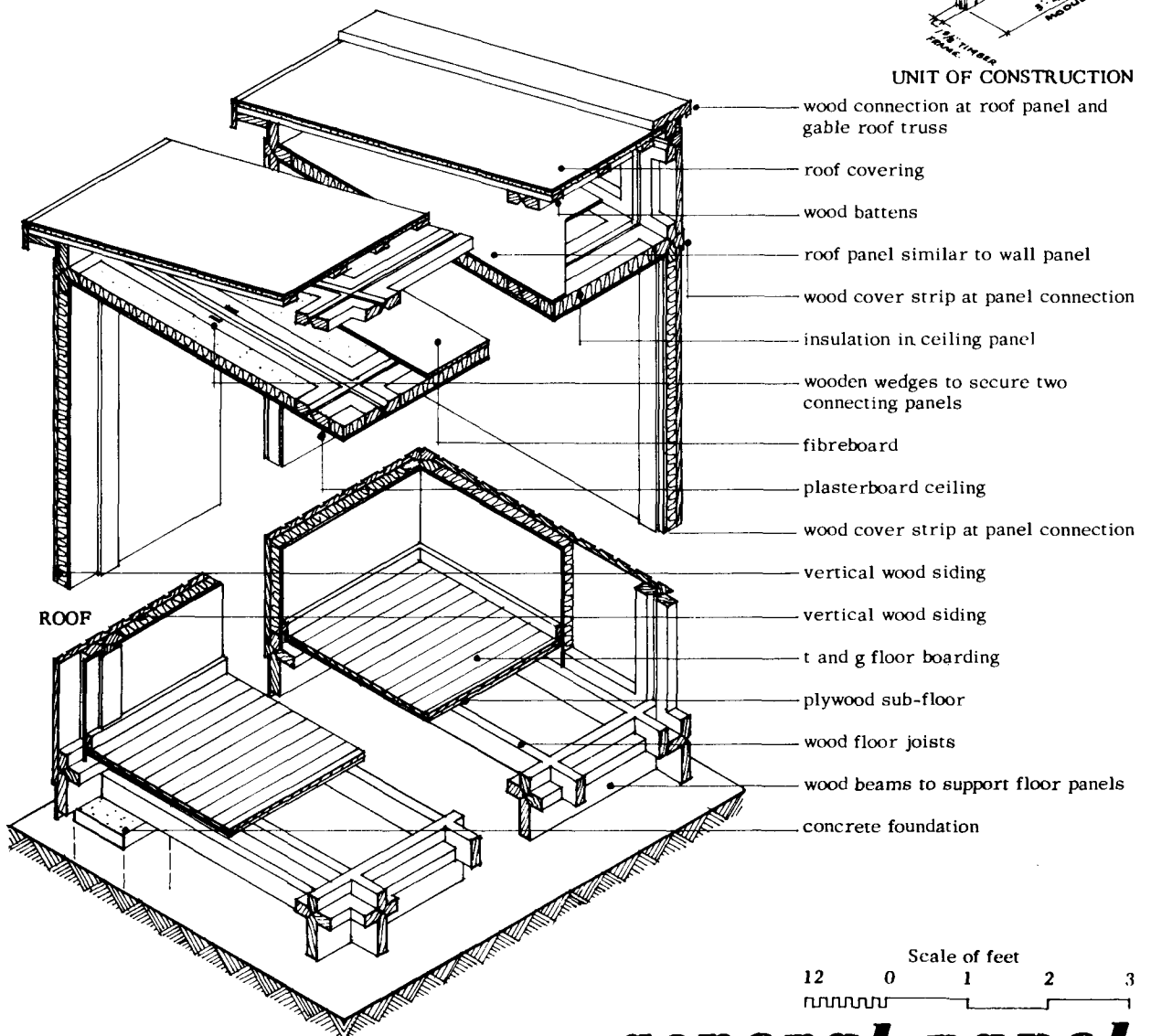
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION

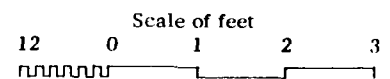


UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

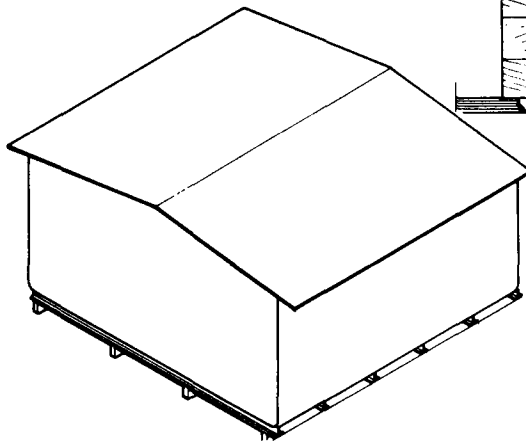


general panel

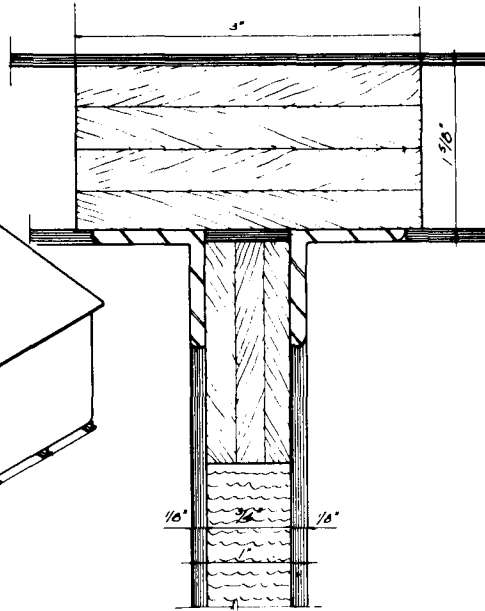
December, 1958.

GENERAL PANEL

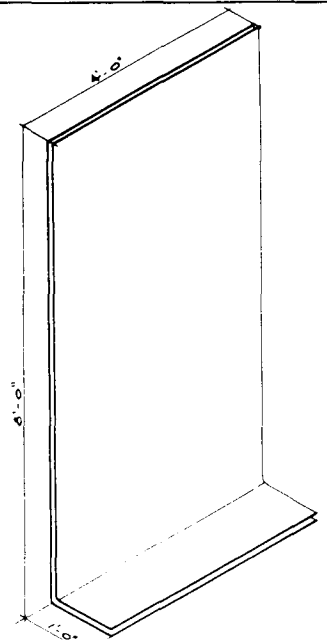
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. General Panel Corporation, Burbank, California and New York, N.Y.
Date and Place of Origin.	2. U.S.A. 1942.
Materials Used.	3. Wood
Description.	4. A panelized system of construction based on a 3'4" cubic module and whose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



WHOLE HOUSE ASSEMBLY

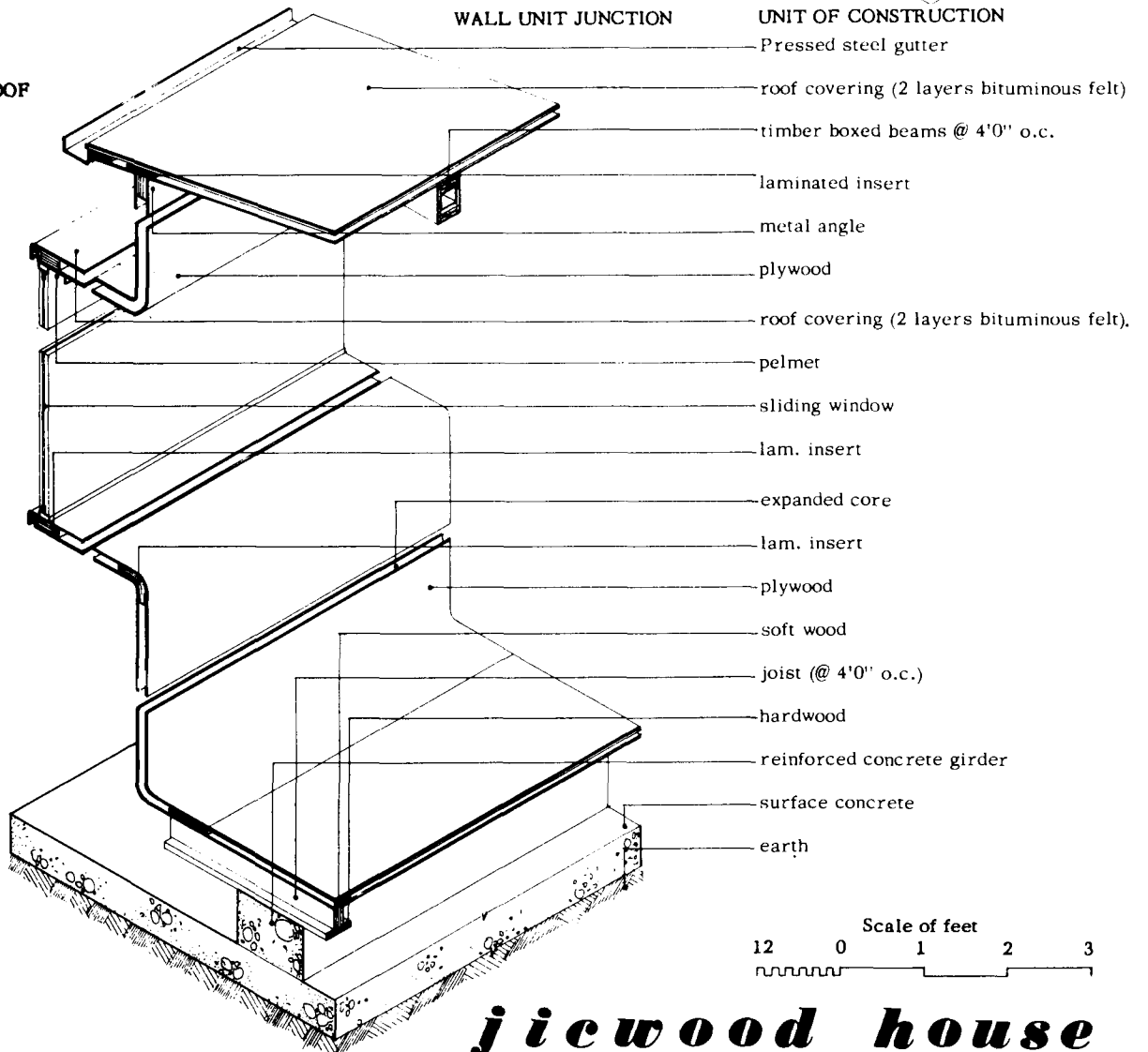


WALL UNIT JUNCTION

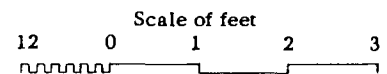


UNIT OF CONSTRUCTION

ROOF



GROUND FLOOR AND FOUNDATION

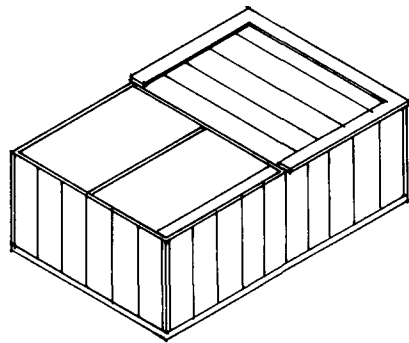


jicwood house

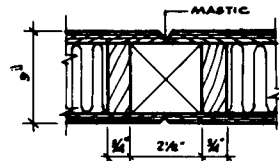
December, 1958.

JICWOOD HOUSE

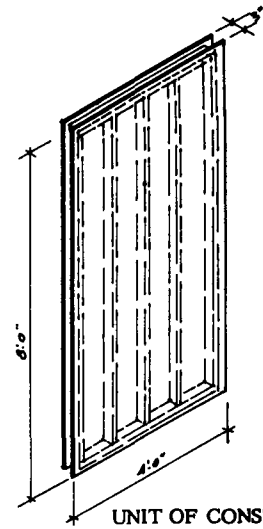
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Jicwood Limited, Weybridge, Surrey, England.
Date and Place of Origin.	2. U.K.
Materials Used.	3. Wood.
Description.	4. A bent wood stressed skin sandwich panelised house, with 8'0" x 4'0" maximum sections used for floors,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



WHOLE HOUSE ASSEMBLY

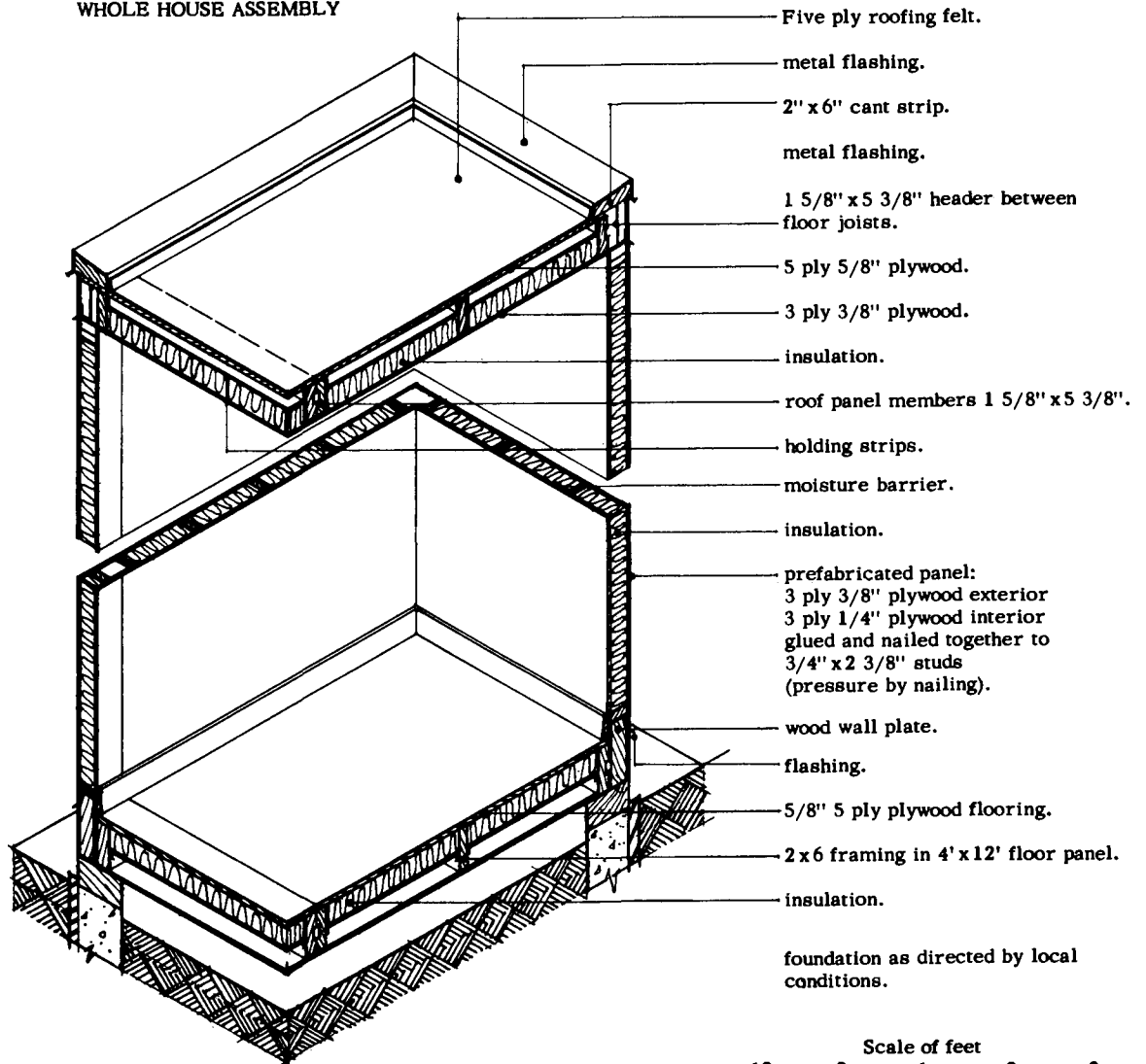


WALL UNIT JUNCTION



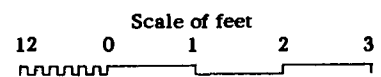
UNIT OF CONSTRUCTION

ROOF



foundation as directed by local conditions.

GROUND FLOOR AND FOUNDATION

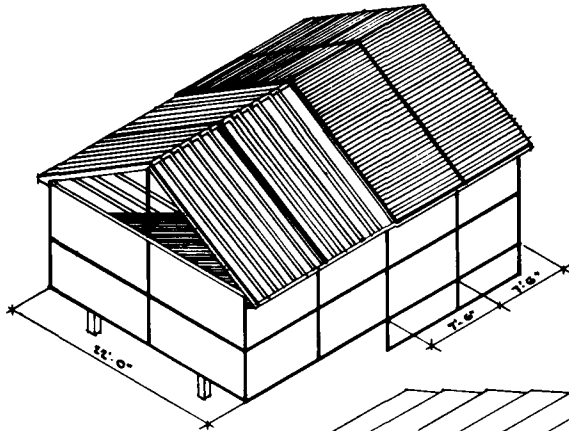


stressed skin panel

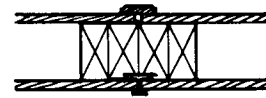
December, 1958.

STRESSED SKIN PANEL

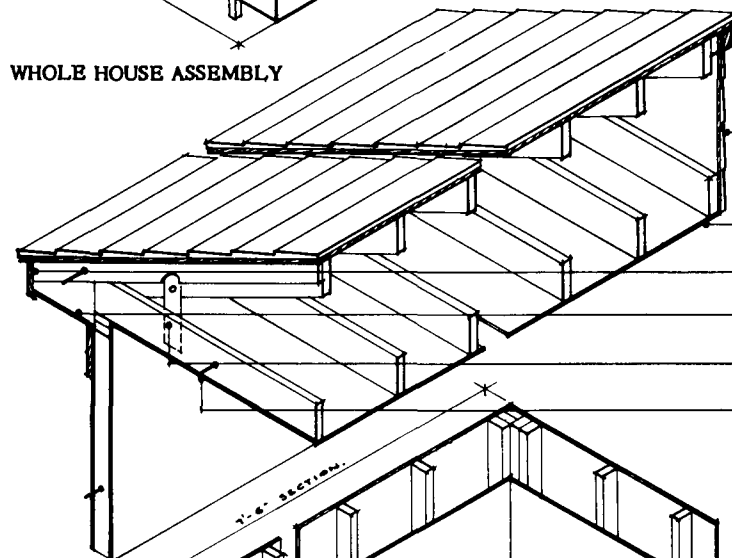
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Semi-Traditional. A method of wood construction used by many small house prefabricators especially in the U.S.
Date and Place of Origin.	2. Forest Products Laboratory, Madison, Wisconsin, U.S. 1935.
Materials Used.	3. Wood.
Description.	4. U-0.10 (with 2" rockwool).
Development to Date.	5. Widespread in North America since 1935.
Comment.	6. This type of panel is used in many proprietary house construction systems.
References.	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

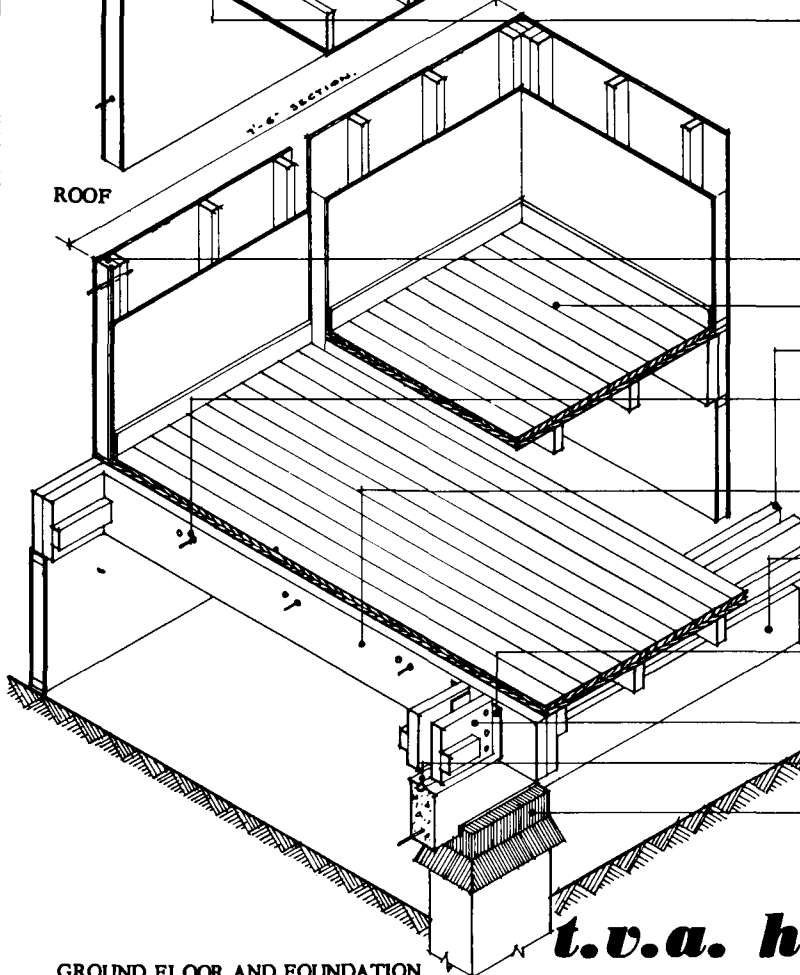
fascia bd.

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

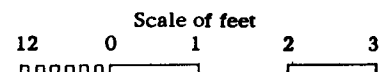
floor joists

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

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

**1. Non-Traditional.
Tennessee Valley Authority,
Knoxville, Tenn., U.S.A.**

**Date and
Place of
Origin.**

2. U.S.A., 1941.

**Materials
Used.**

3. Wood.

Description.

**4. Prefabricated in two sections and
assembled on site.**

**Development
to Date.**

5. 750 to 800 houses.

Comment.

6.

References.

**7. M.O.W. Survey of Prefabrication,
H.M. Stationery Office,
London, England.
Architectural Record, February, 1947.**

PLANK AND LOG FRAME

WPL

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

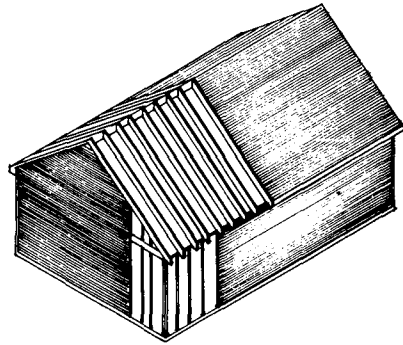
AB Bostadsforskning,
Stockholm, Sweden.

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

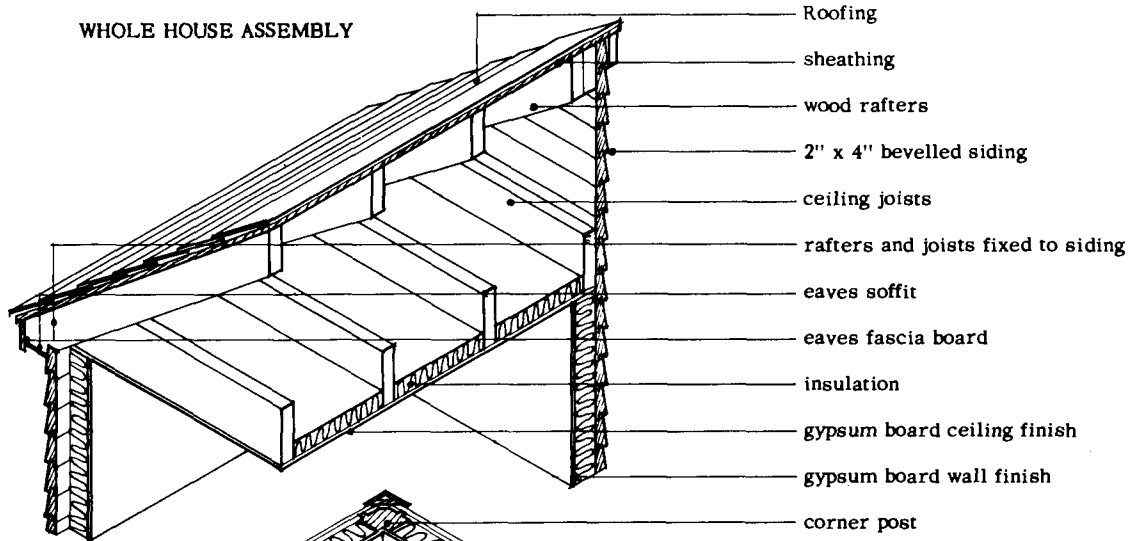
AB Bostadsforskning,
Stockholm, Sweden.

B.F. SYSTEM

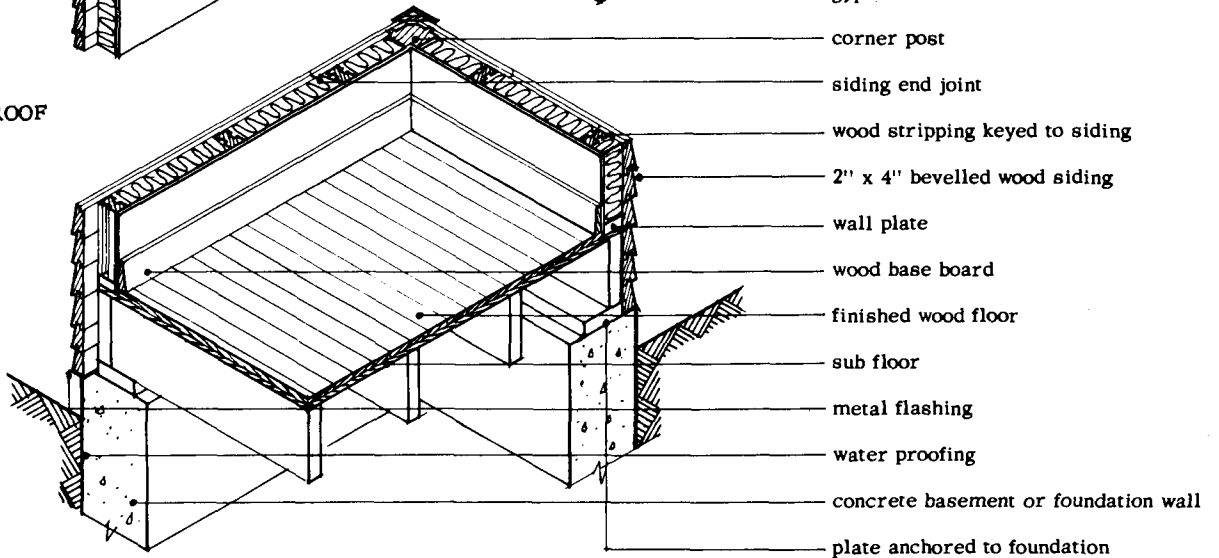
See Elementhus. (Case Sheet)



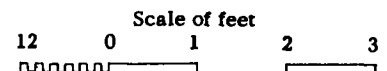
WHOLE HOUSE ASSEMBLY



ROOF



GROUND FLOOR AND FOUNDATION

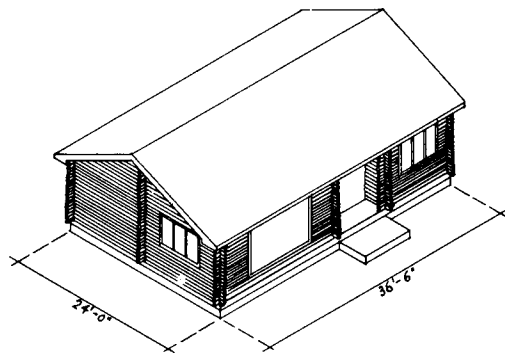


superior home

December, 1958.

SUPERIOR HOME

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



WHOLE HOUSE ASSEMBLY

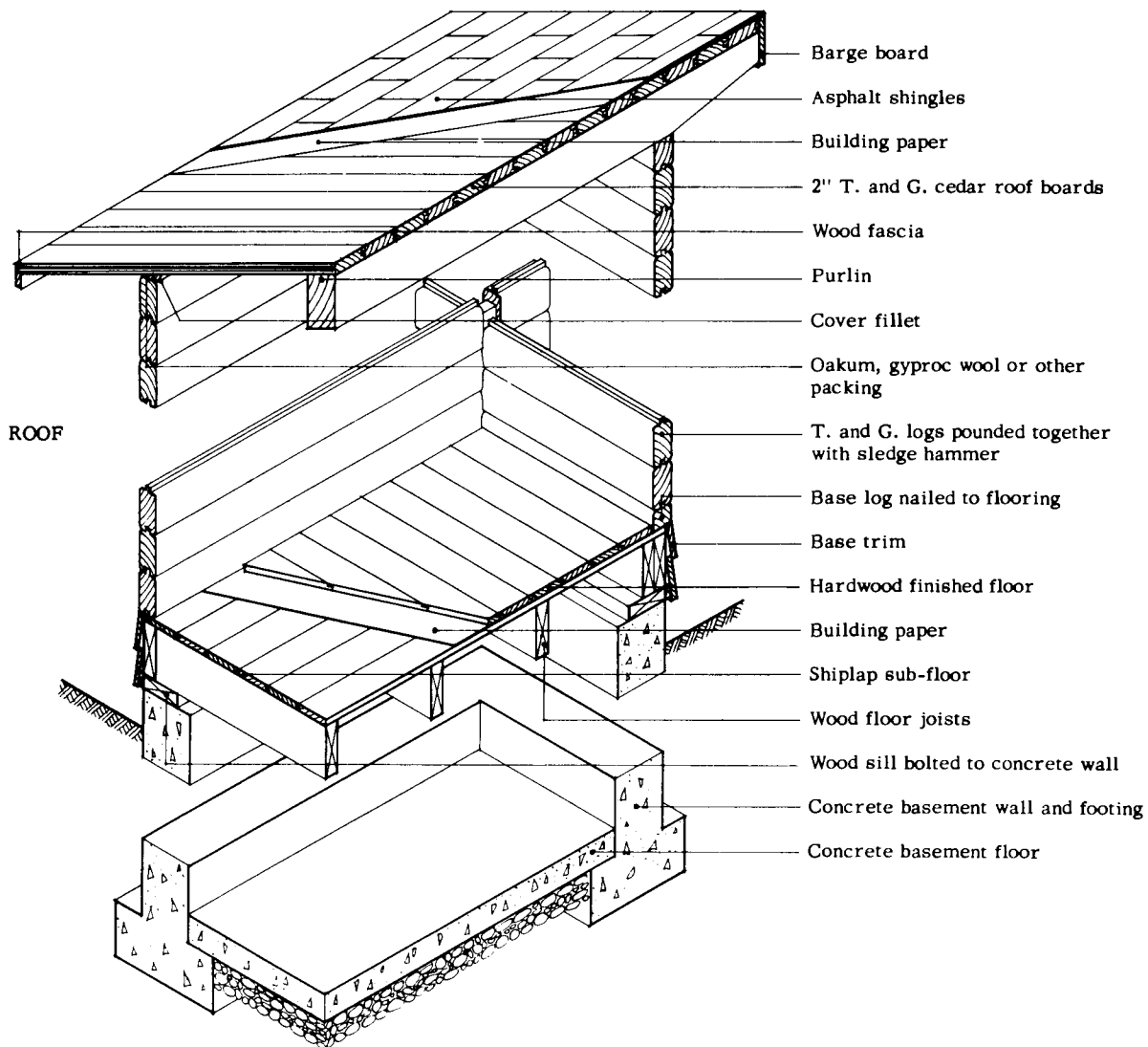


3" x 6" single T. and G. logs

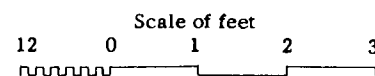


4" x 7" double T. and G. logs

WALL UNIT JUNCTION



GROUND FLOOR AND FOUNDATION

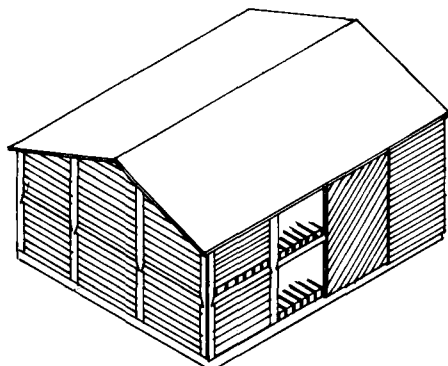


log construction

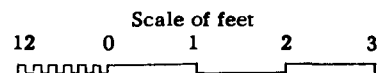
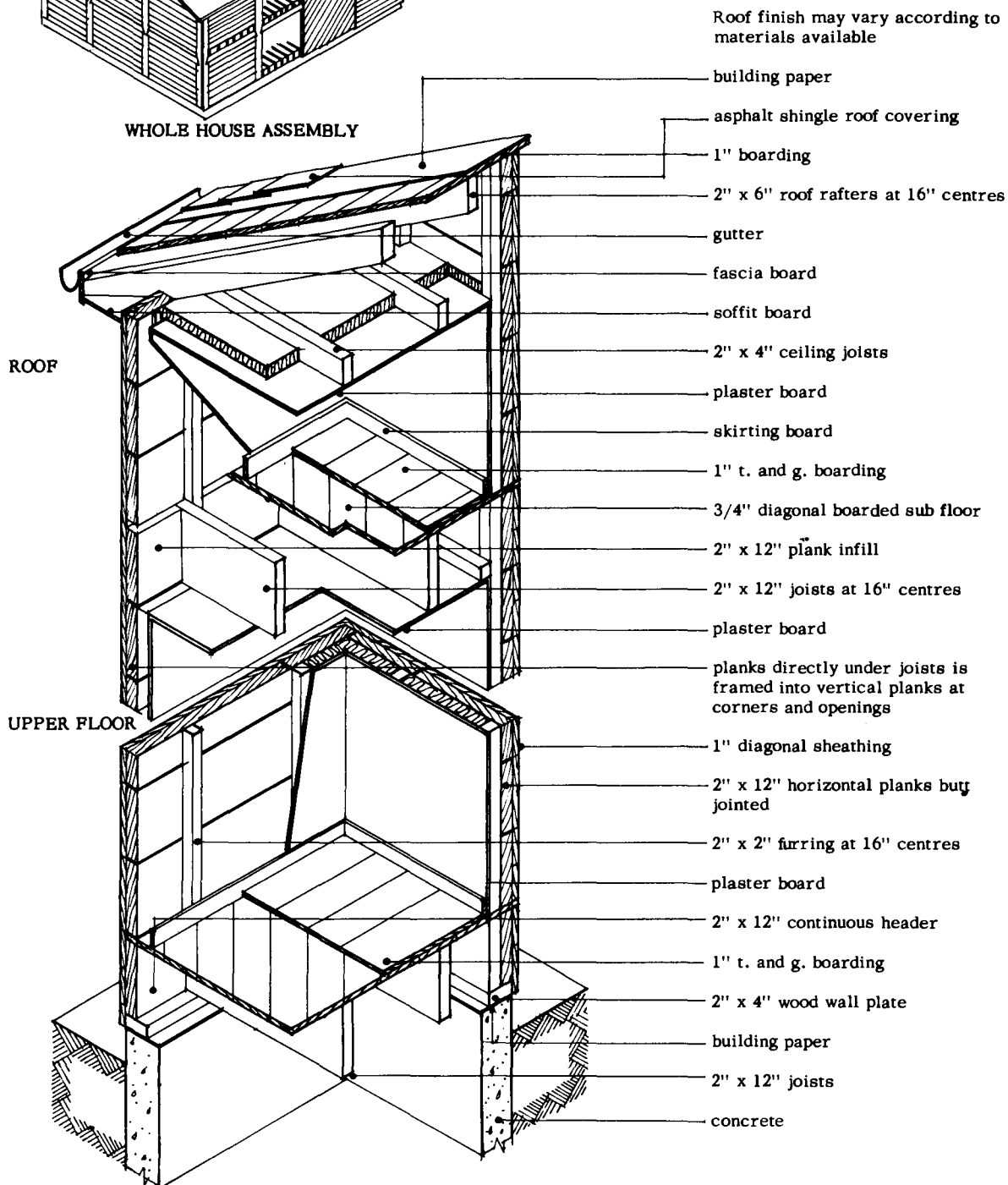
December, 1958.

LOG CONSTRUCTION

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional. 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.
Date and Place of Origin.	2. Scandinavia.
Materials Used.	3. Wood.
Description.	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. U=0.16 (for 4" logs), U 0.20 (for 3" logs).
Development to Date.	5. See (1) and (2).
Comment.	6. -
References.	7. The Log Cabin Myth, Shurtleff, Harvard University Press, 1937.



WHOLE HOUSE ASSEMBLY



GROUND FLOOR AND FOUNDATION

quebec plank frame

December, 1958.

QUEBEC PLANK FRAME CONSTRUCTION

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

1. Traditional.

**Date and
Place of
Origin.**

2. Quebec 19th century onward.

**Materials
Used.**

3. Wood planks.

Description.

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.

**Development
to Date.**

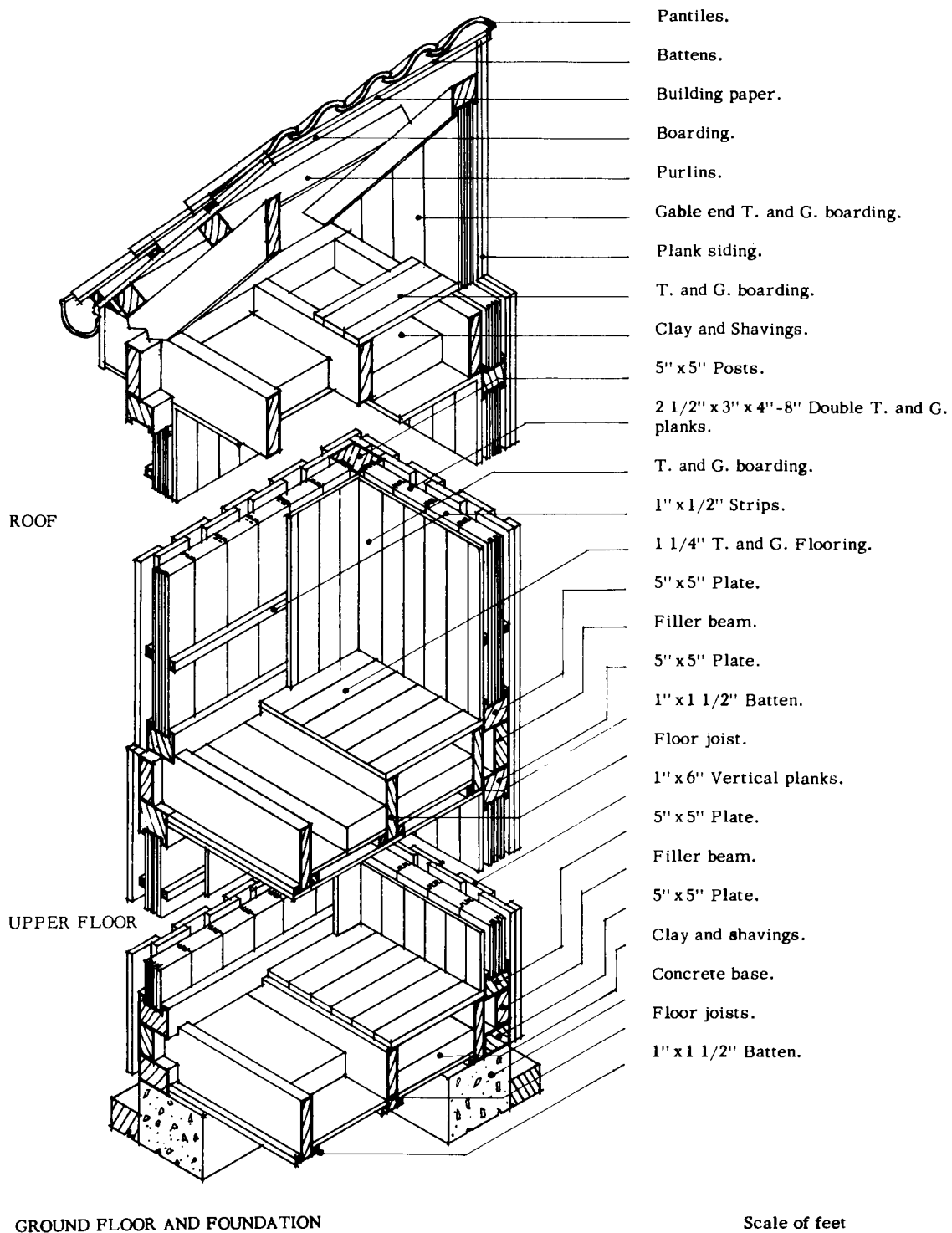
5. Widespread use in Province of Quebec for many years.

Comment.

6. Used mainly in two storey construction.

References.

7. -

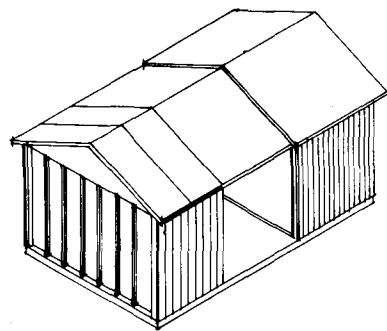


norwegian plank frame

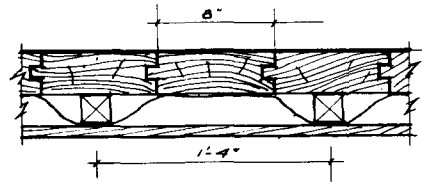
December, 1958.

NORWEGIAN PLANK FRAME

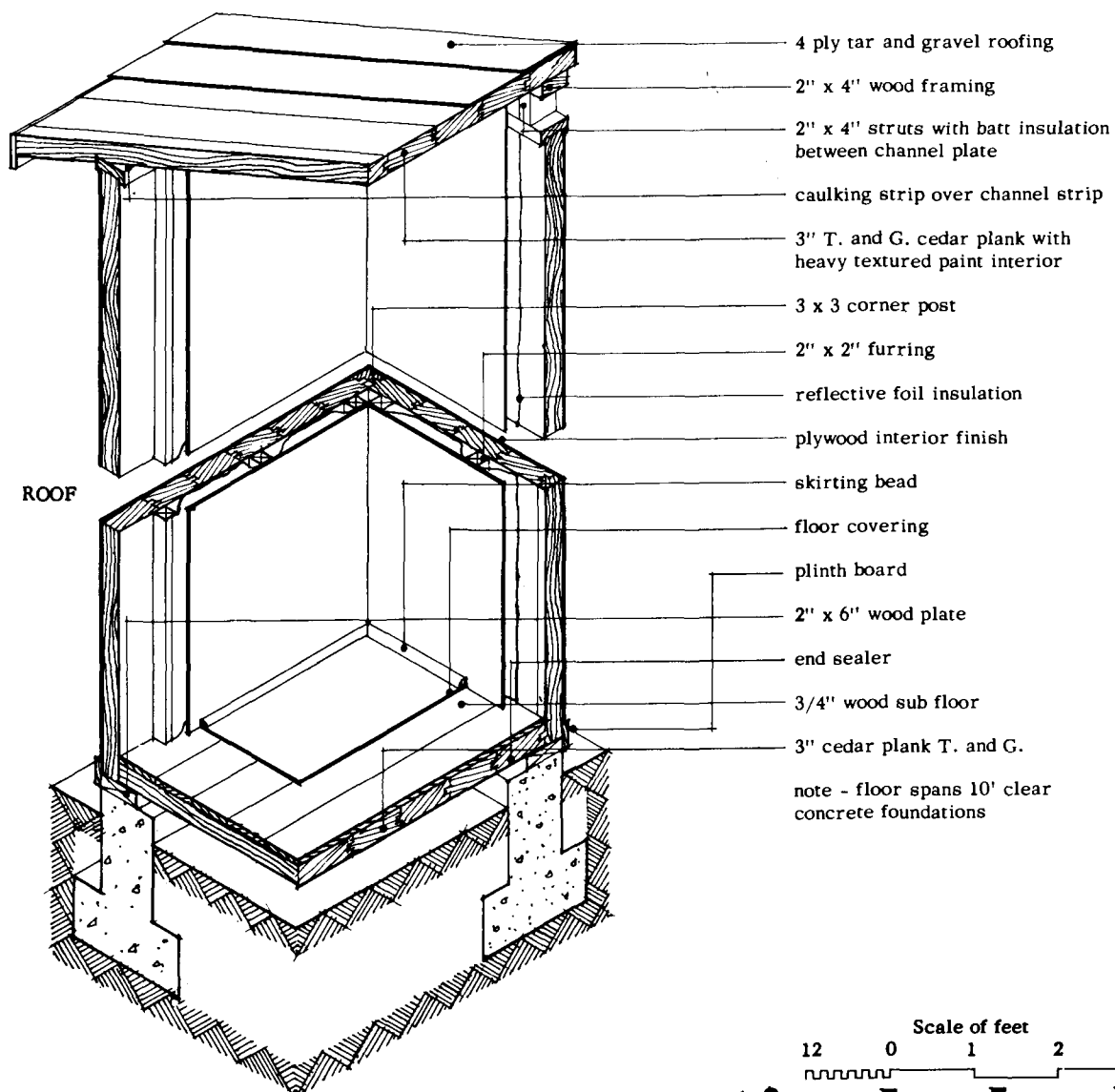
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional in Scandinavia.
Date and Place of Origin.	2. Scandinavia.
Materials Used.	3. Wood.
Description.	4. Vertical plank framing and exterior finish.
Development to Date.	5. Widespread amongst older buildings in Scandinavia. Not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



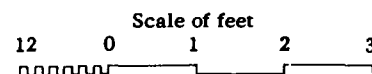
UNIT OF CONSTRUCTION



WALL UNIT JUNCTION



GROUND FLOOR AND FOUNDATION

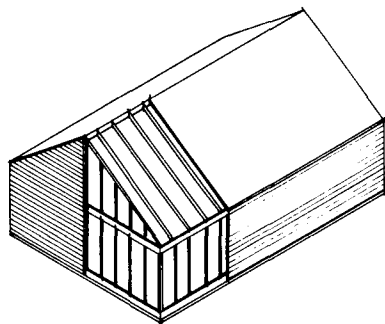


vertical plank

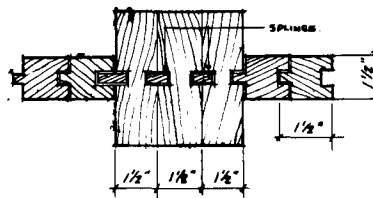
December, 1958.

VERTICAL PLANK CONSTRUCTION

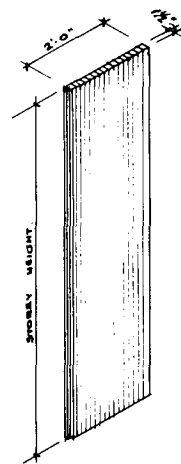
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional. A similar form of construction is employed by a number of lumber manufacturers in Canada and Northern United States.
Date and Place of Origin.	2. Recent in Canada and Northern United States.
Materials Used.	3. Wood.
Description.	4. Typically a one storey construction. 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).
Development to Date.	5. Limited amount in North America. Some houses in Hull, England.
Comment.	6. -
References.	7. British Columbia Lumber Manufacturers Association, 550 Burrard Street, Vancouver 1, B.C.



WHOLE HOUSE ASSEMBLY

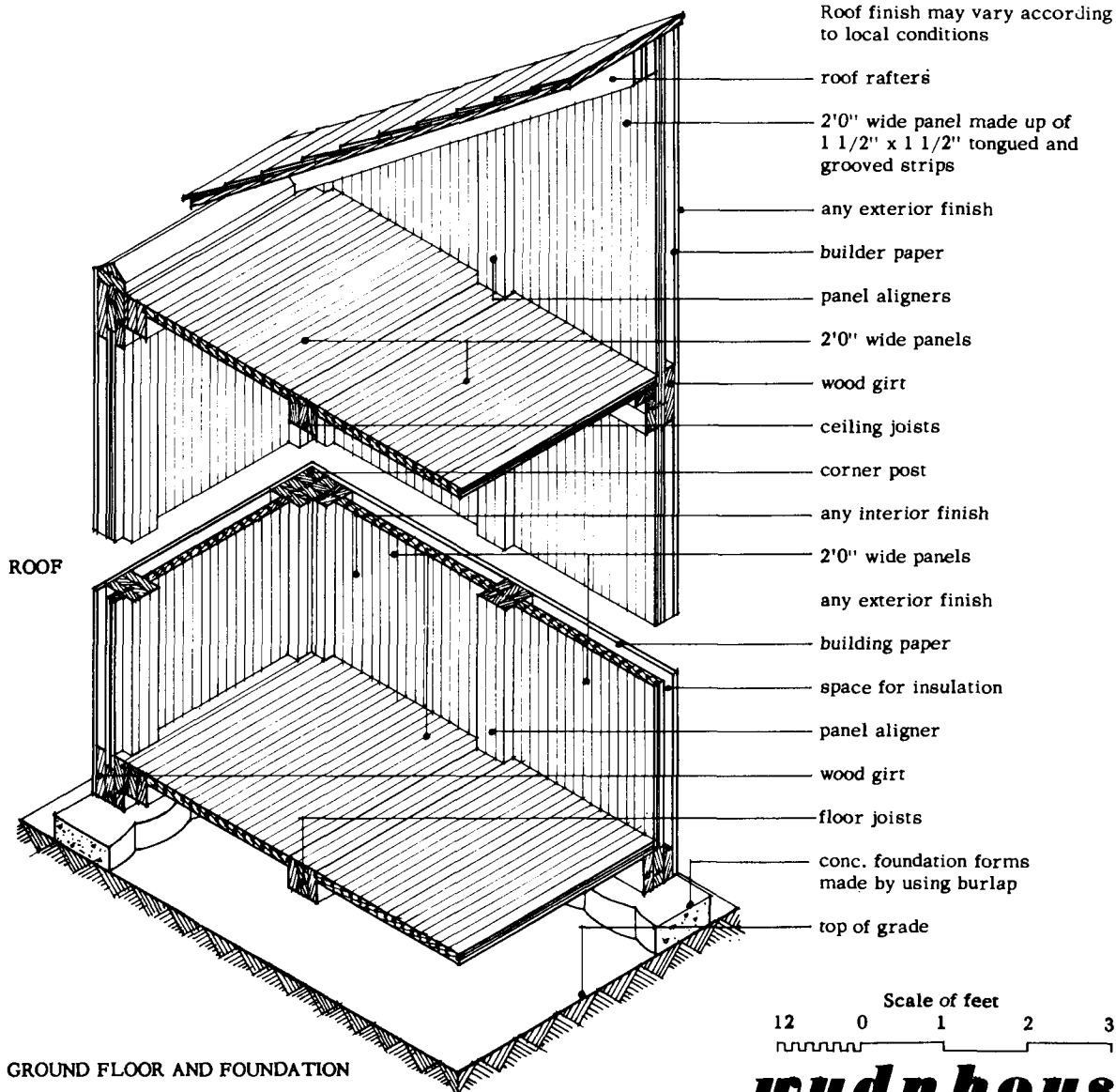


WALL UNIT JUNCTION

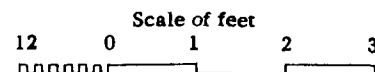


UNIT OF CONSTRUCTION

Roof finish may vary according to local conditions



GROUND FLOOR AND FOUNDATION



wudn hous

December, 1958.

WUDNHOUS

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

**1. Non-Traditional.
Housing Co. (Bemis)
Boston, U.S.A.**

**Date and
Place of
Origin.**

2. Boston U.S.A. 1935.

**Materials
Used.**

3. Wood.

Description.

**4. System is designed to utilize
lumber normally unsuitable for
structural purposes. Any type
of roof and wall finish may be
used.**

**Development
to Date.**

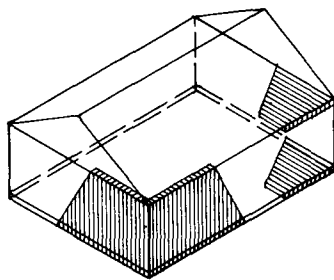
5. One building erected, 1935.

Comment.

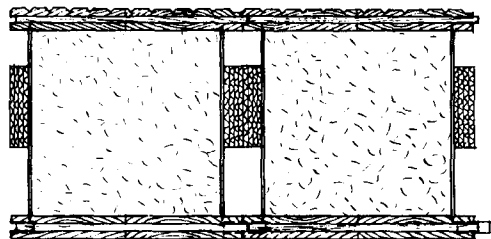
6. -

References.

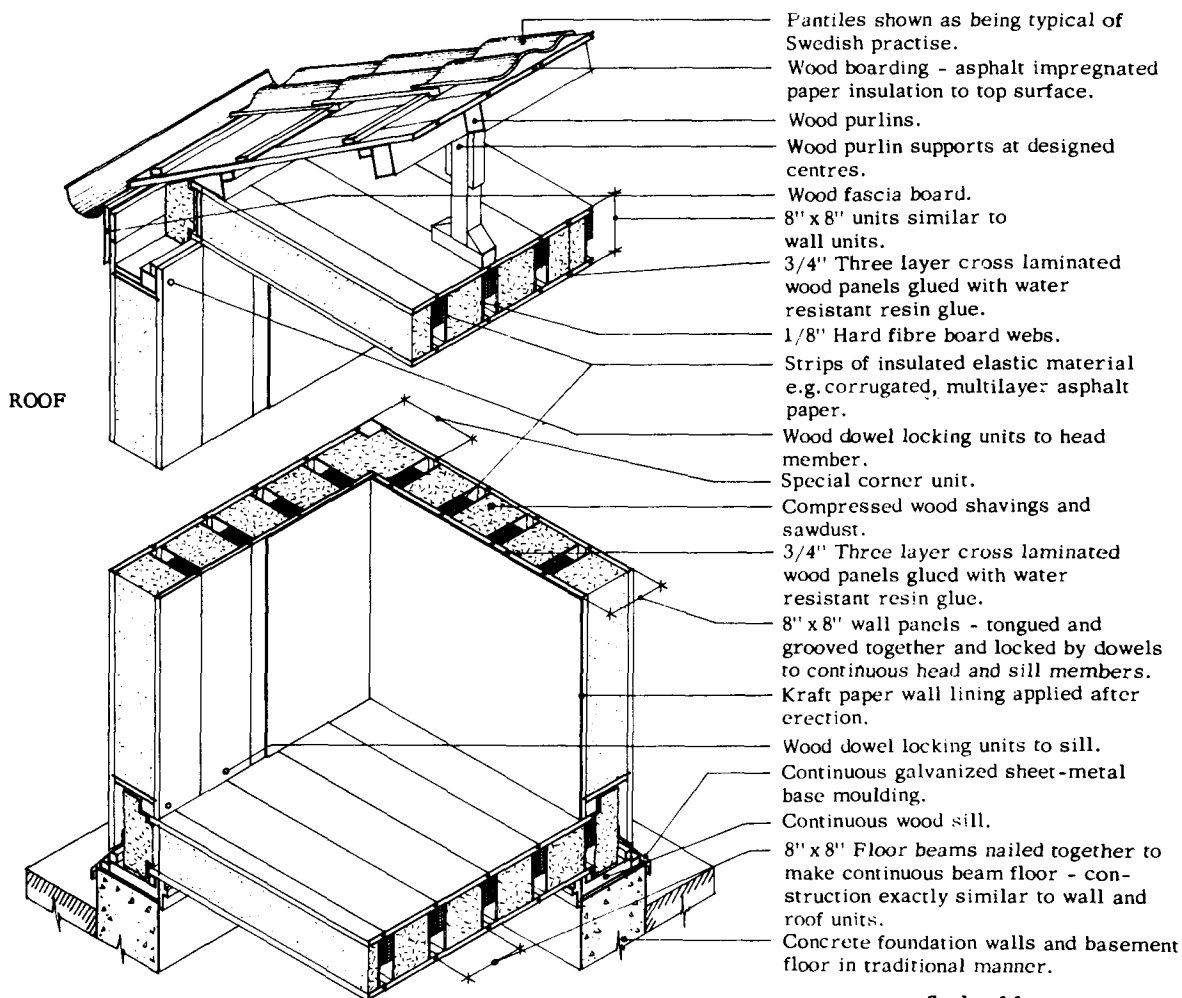
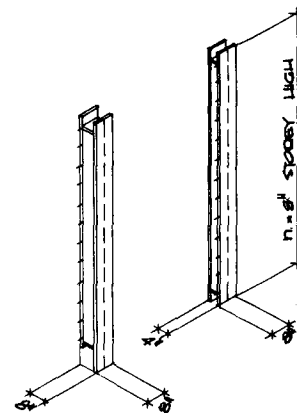
**7. "The Evolving House III"
Rational Design, A.F. Bemis.**



WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



Scale of feet
12 0 1 2 3

elementhus

December, 1958.

ELEMENTHUS

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. A/B Bostadsforskning, Sveavagen 108, Stockholm, Sweden.
Date and Place of Origin.	2. Sweden, 1953.
Materials Used.	3. Wood, fibreboard, compressed shavings.
Description.	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).
Development to Date.	5. 3,000 houses in Sweden.
Comment.	6. Package as delivered includes all equipment and finishes above basement or slab.
References.	7. Sponsors information.

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, trans-
ported 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
briques. 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

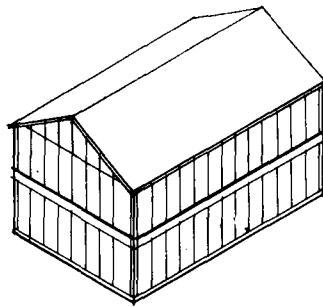
See Dyke under CP.

WATES HOUSES

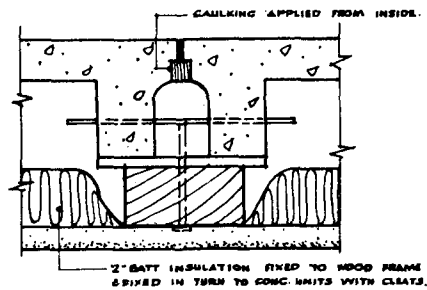
1258 London Road,
Norbury S.W. 16,
England.

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.

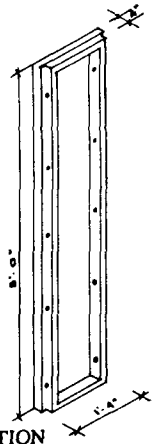
"Post War Building Study No. 23",
H.M.S.O., London,
England.



WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION

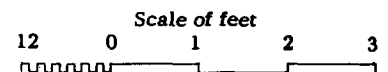
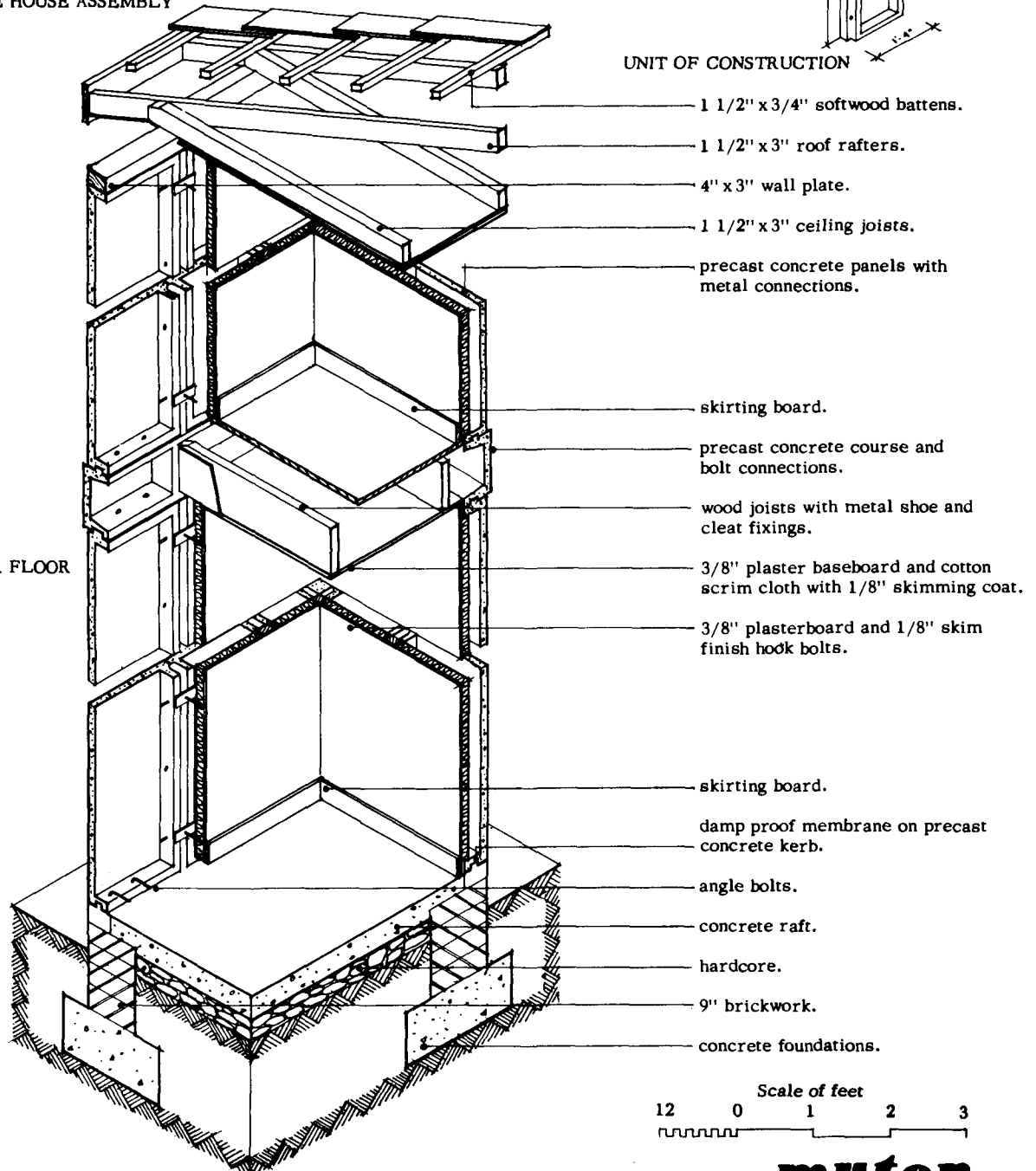


UNIT OF CONSTRUCTION

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

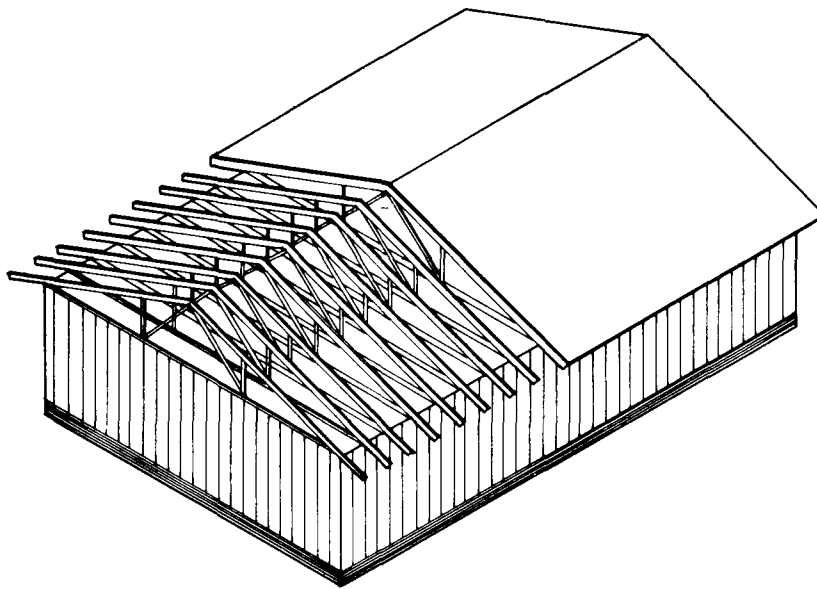


myton

December, 1958.

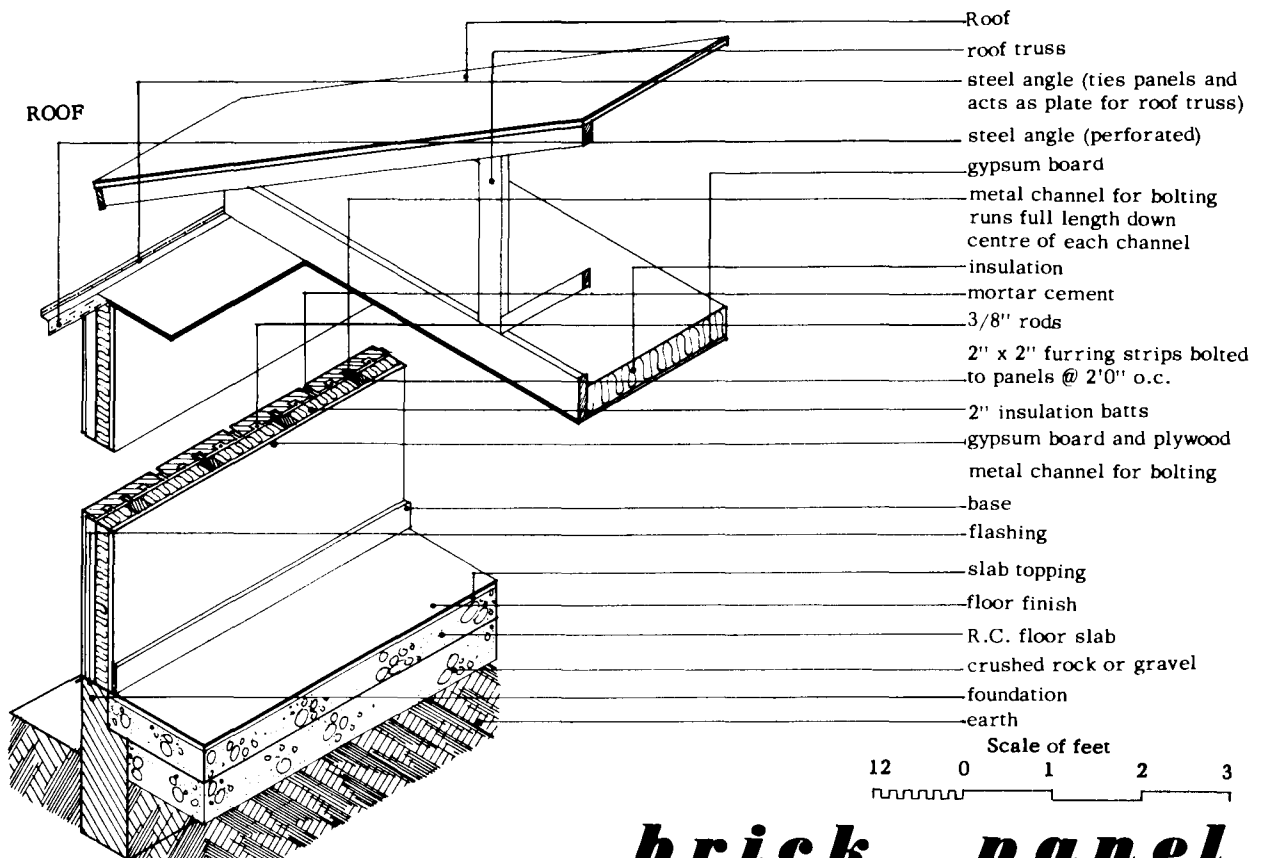
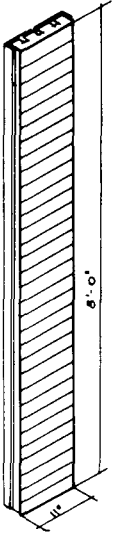
MYTON HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Myton Limited, Newland, Hull. (formerly Tarran Limited).
Date and Place of Origin.	2. U.K. 1944.
Materials Used.	3. Concrete units.
Description.	4. $U=0.20$. Load bearing construction is of concrete. Internal plaster- board lining on timber frame, bolted to concrete chimneys in brick.
Development to Date.	5. Considerable use claimed in U.K.
Comment.	6. Units can be used in conjunction with any suitable floor or roofing system.
References. •	7. "Prefabrication In Buildings", Richard Sheppard, U.K.

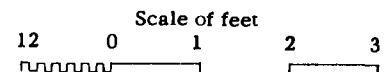


WHOLE HOUSE ASSEMBLY

UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

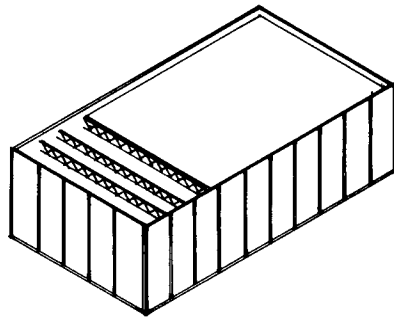


brick panel

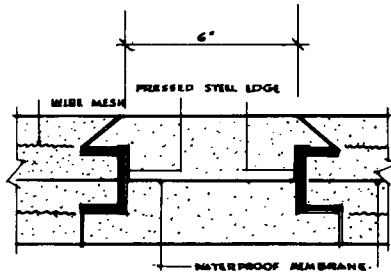
December, 1958.

BRICK PANEL

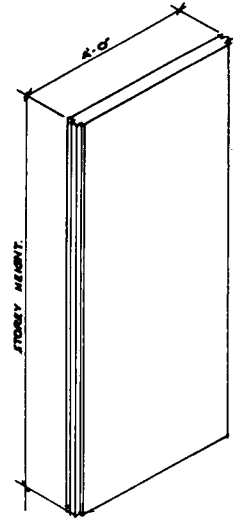
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Proprietary. Structural Clay Products Foundation U.S.
Date and Place of Origin.	2. U.S. 1957.
Materials Used.	3. Brick.
Description.	4. Patent part of system includes only brick panels which are held together by perforated steel sections.
Development to Date.	5. -
Comment.	6. Experimental to date (Dec. 1957).
References.	7. "House and Home" December 1957 p. 130.



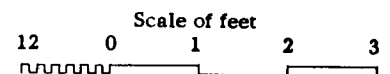
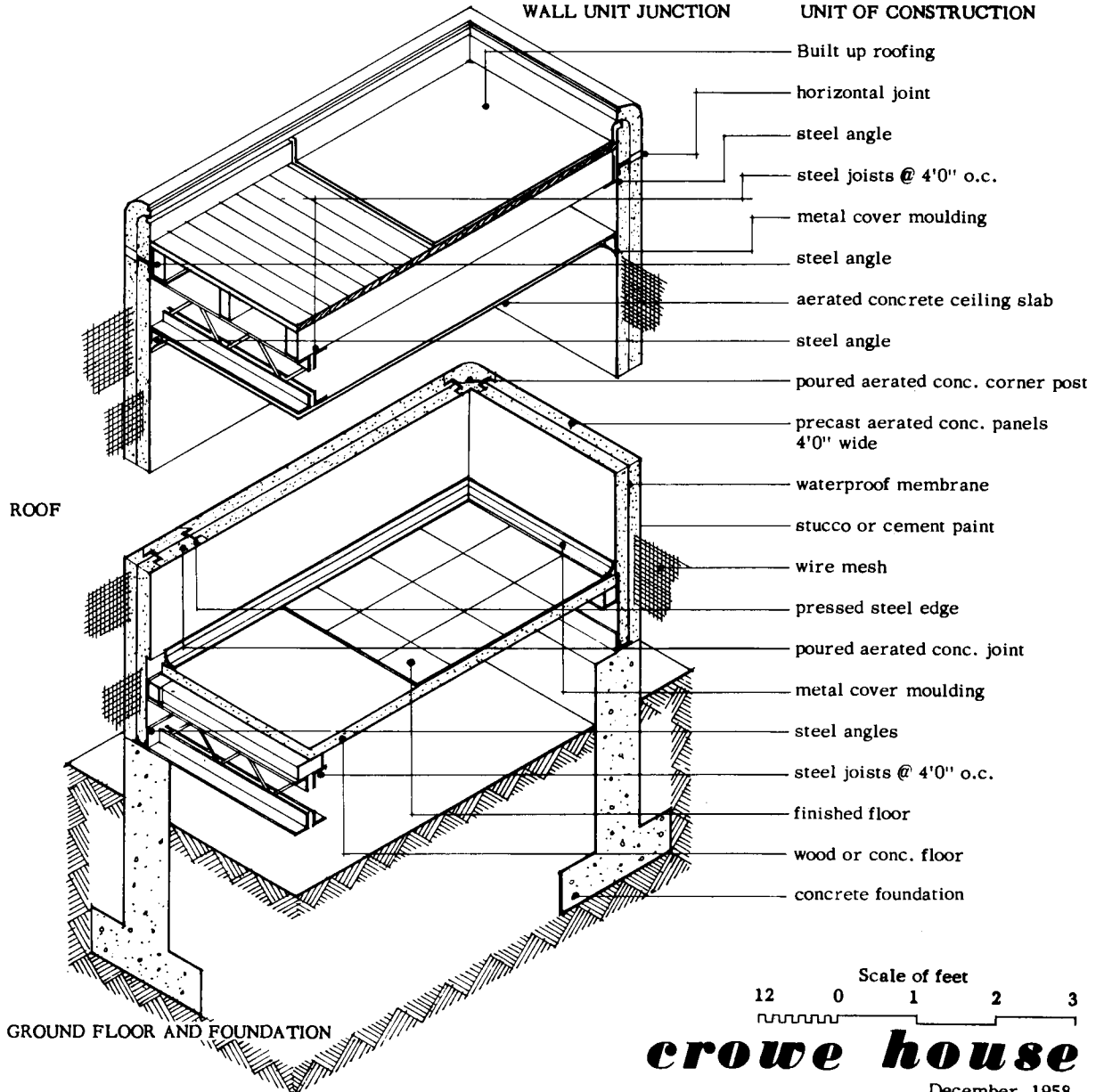
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

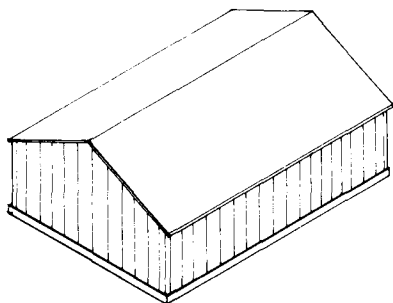


crowe house

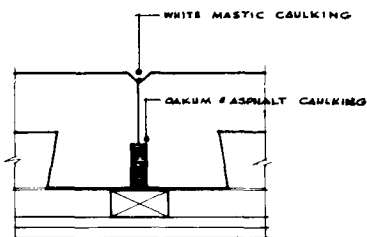
December, 1958.

CROWE HOUSE

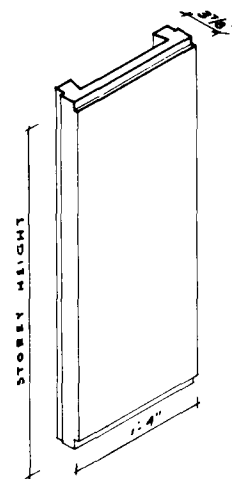
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. F. Malcolm Crowe, Burlingame, California.
Date and Place of Origin.	2. California, U.S.A. Pre-1936.
Materials Used.	3. Steel and Aerated or Cellular concrete.
Description.	4. Steel Panel-Frames are filled in two layers sandwiching a waterproof membrane. They are placed 6" apart and concrete is poured into the joint. Joint spaces used for pipes and conduits.
Development to Date.	5. Test assembly of wall panels only.
Comment.	6. -
References.	7. American Architect and Architecture, September 1936, p. 31.



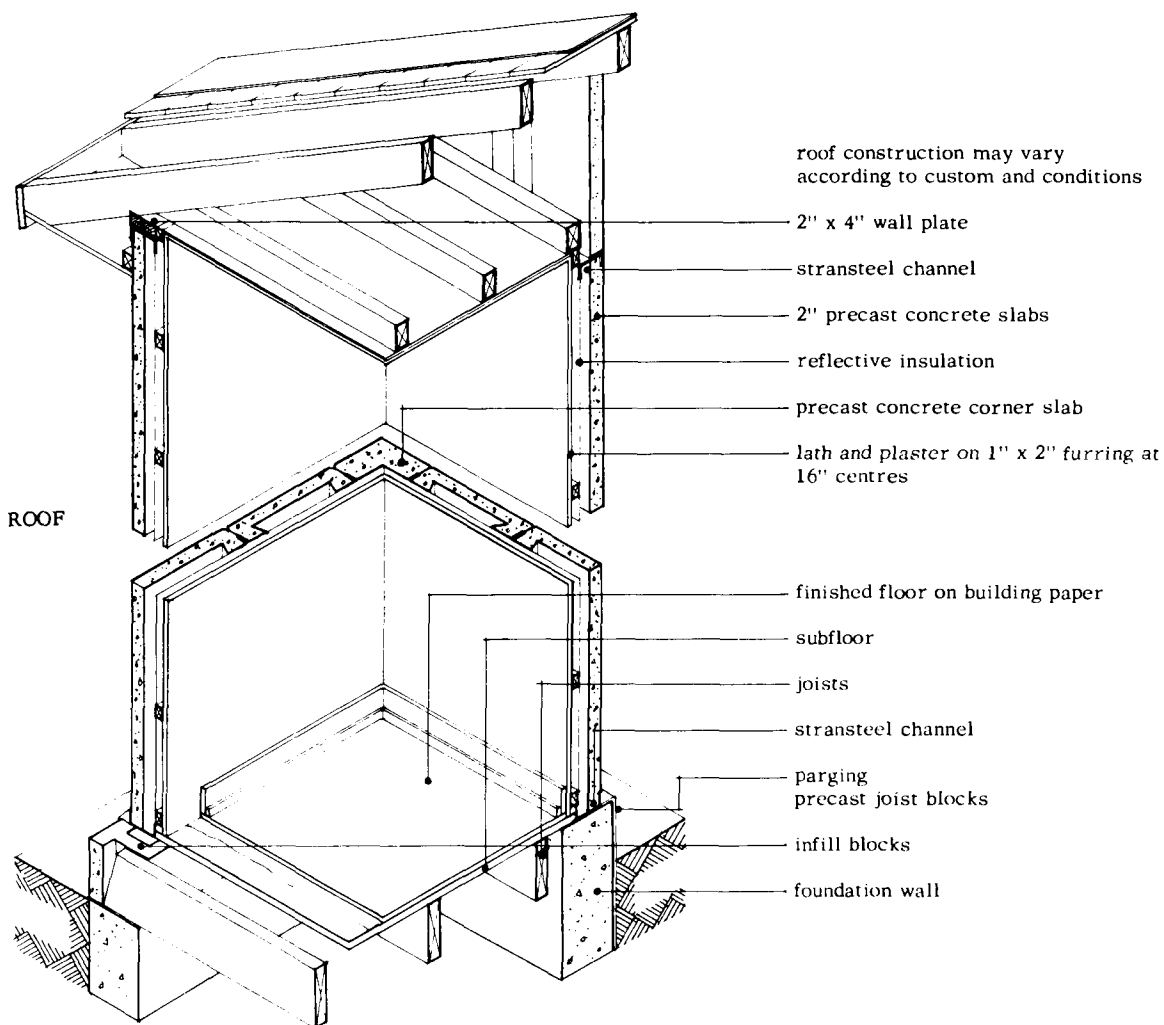
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION

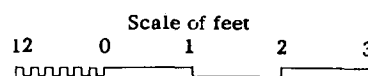


UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

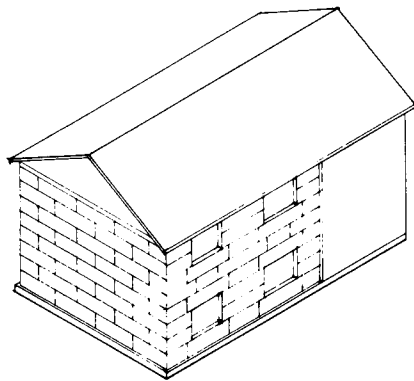


modern crete

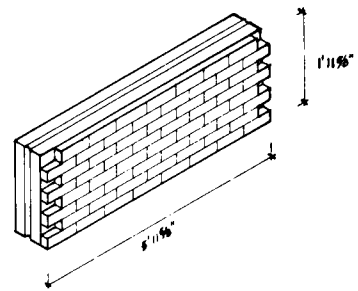
December, 1958.

MODERN CRETE

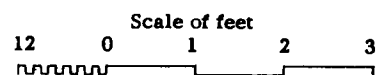
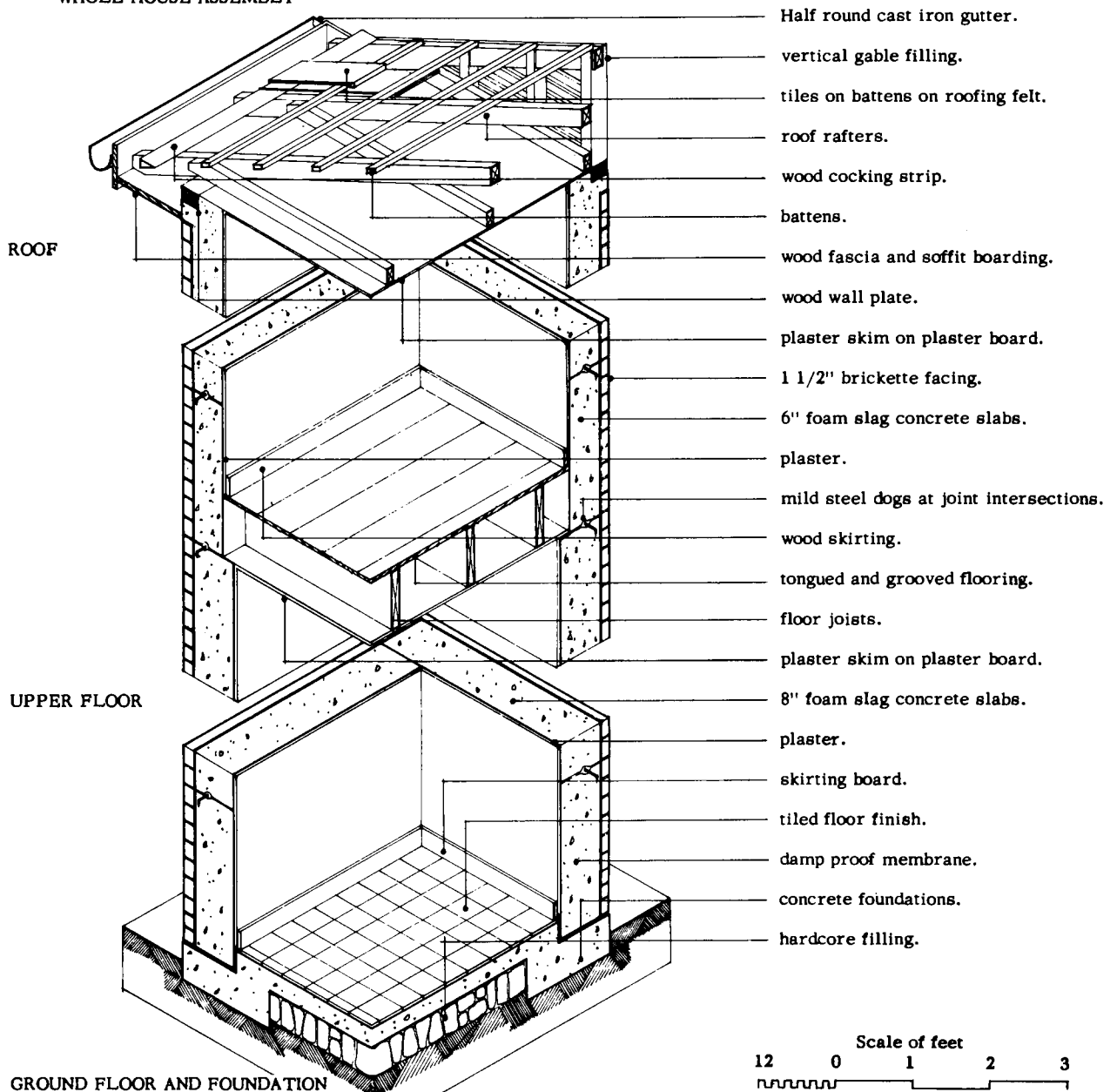
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Modern Crete Inc., 1517 W. 3rd Avenue, Flint, Michigan. Rocwall Limited, 16 Renfrew Avenue, Westmount, Quebec.
Date and Place of Origin.	2. Michigan, 1950.
Materials Used.	3. Lightweight concrete using expanded slag or shale with mesh reinforcing.
Description.	4. Roof, floor and foundation may vary according to custom and conditions. U=0.155 (ext. wall panel using reflective insulation as shown).
Development to Date.	5. 2,000 houses in Michigan, U.S.A.
Comment.	6. The panels are capable of being nailed or sawn.
References.	7. Federal Housing Authority Bulletin SE-172. "Accepted Building Materials", Central Mortgage and Housing Corporation, Ottawa, Canada.



WHOLE HOUSE ASSEMBLY



UNIT OF CONSTRUCTION

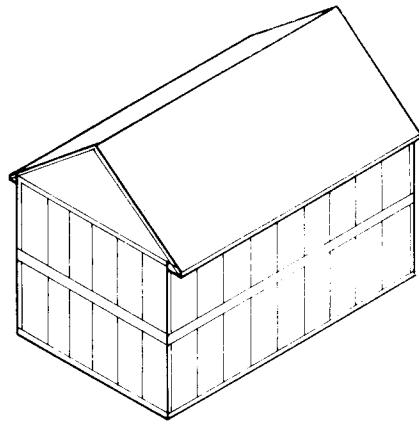


smiths building system

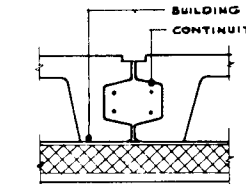
December, 1958.

SMITH'S BUILDING SYSTEM

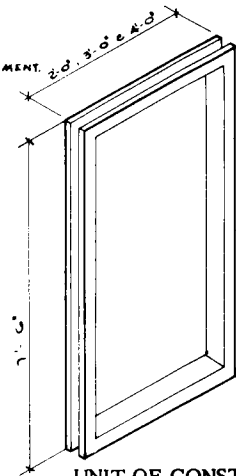
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. British Steel Construction Group of Birmingham Limited, England. British Steel Constructions (Canada) Limited, 125 18th Street, New Toronto, Ontario, Canada.
Date and Place of Origin. Materials Used.	2. U.K. 1939. 3. Brick faced precast foamed slag panels.
Description.	4. U= 0.20 (external wall panels plastered internally). A special Gantry Crane, straddling the house, is used to assemble panels.
Development to Date.	5. Several thousand houses in U.K. None in Canada.
Comment.	6. -
References.	7. Sponsors reference.



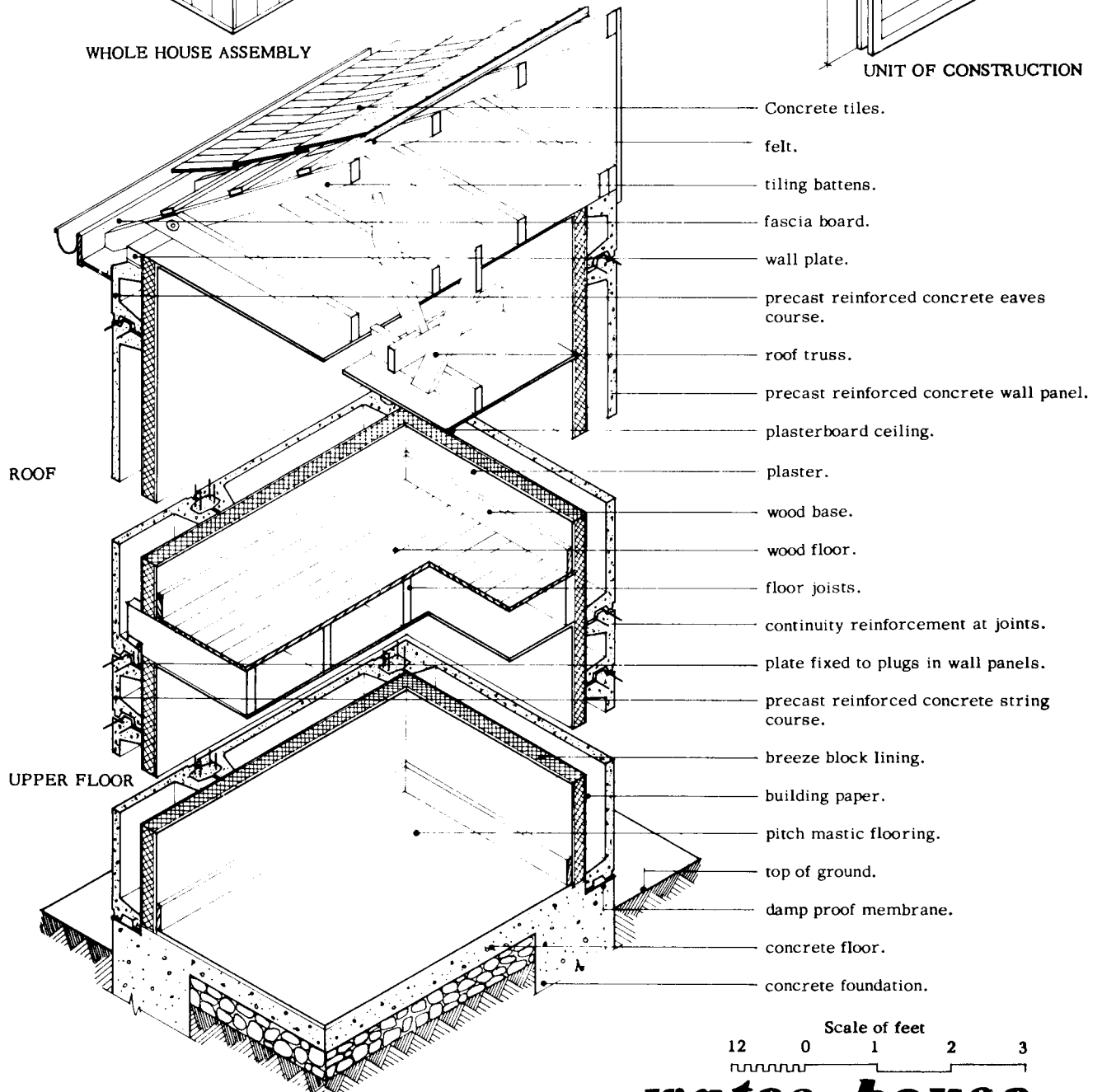
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



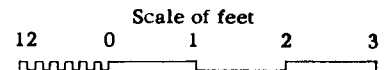
UNIT OF CONSTRUCTION



ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION



wates house

December, 1958.

WATES HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor: Wates Limited. Architect: K.W. Bland.
Date and Place of Origin.	2. Surrey, England 1945.
Material Used.	3. Concrete.
Description.	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.
Development to Date.	5. -
Comment.	6. -
References.	7. "Post War Building Study No. 25".

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 slb
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. Bostadstyrelsen,
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-injenjiere
Fjellstab).

System of lightweight concrete
blocks, special mortar joint.
1 m. x 15 cm. x 25 cm. thick.

Norsk Ytong,
Oslo, Norway,
(oven-injenjiere
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

Channello 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.

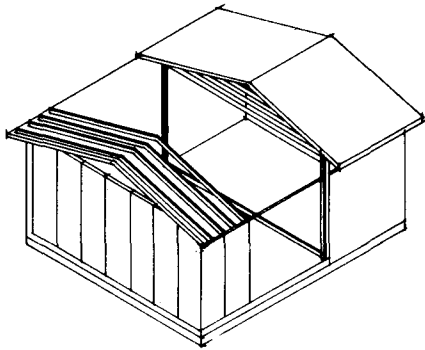
A semi traditional form
of hollow brick construction.
Normal brick units 2" x 5 1/2"
x 11 1/2".

"Architectural
Graphic Standards",
(Wiley).
Structural Clay
Products Institute.

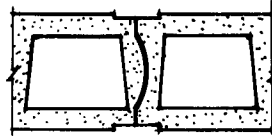
**BRICK SOLID
WALLING**
England.

English traditional
construction $U = 0.43$ (8").

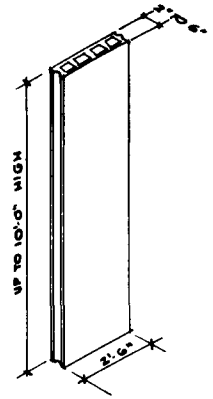
Brick Solid Walling,
England.



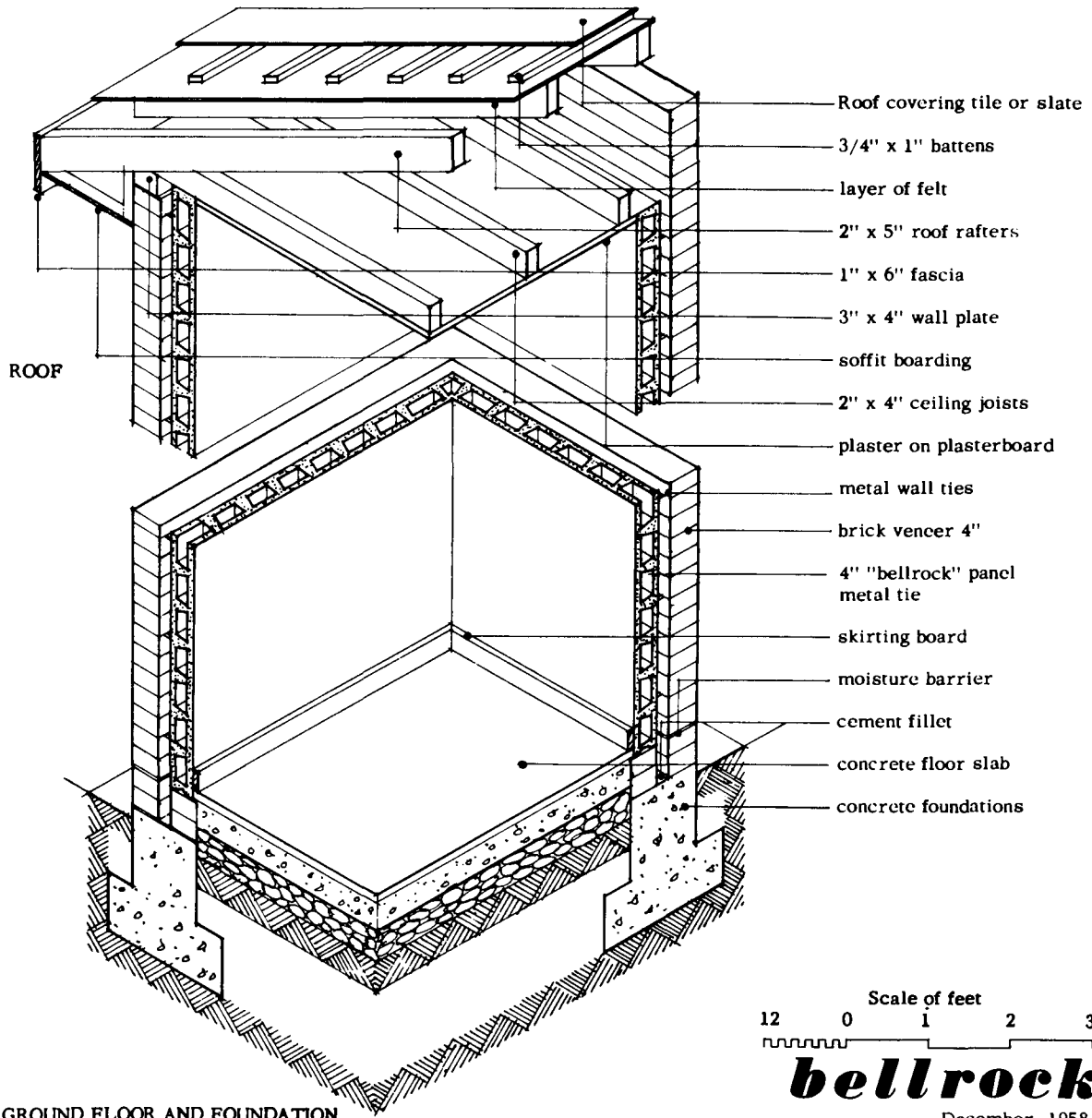
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



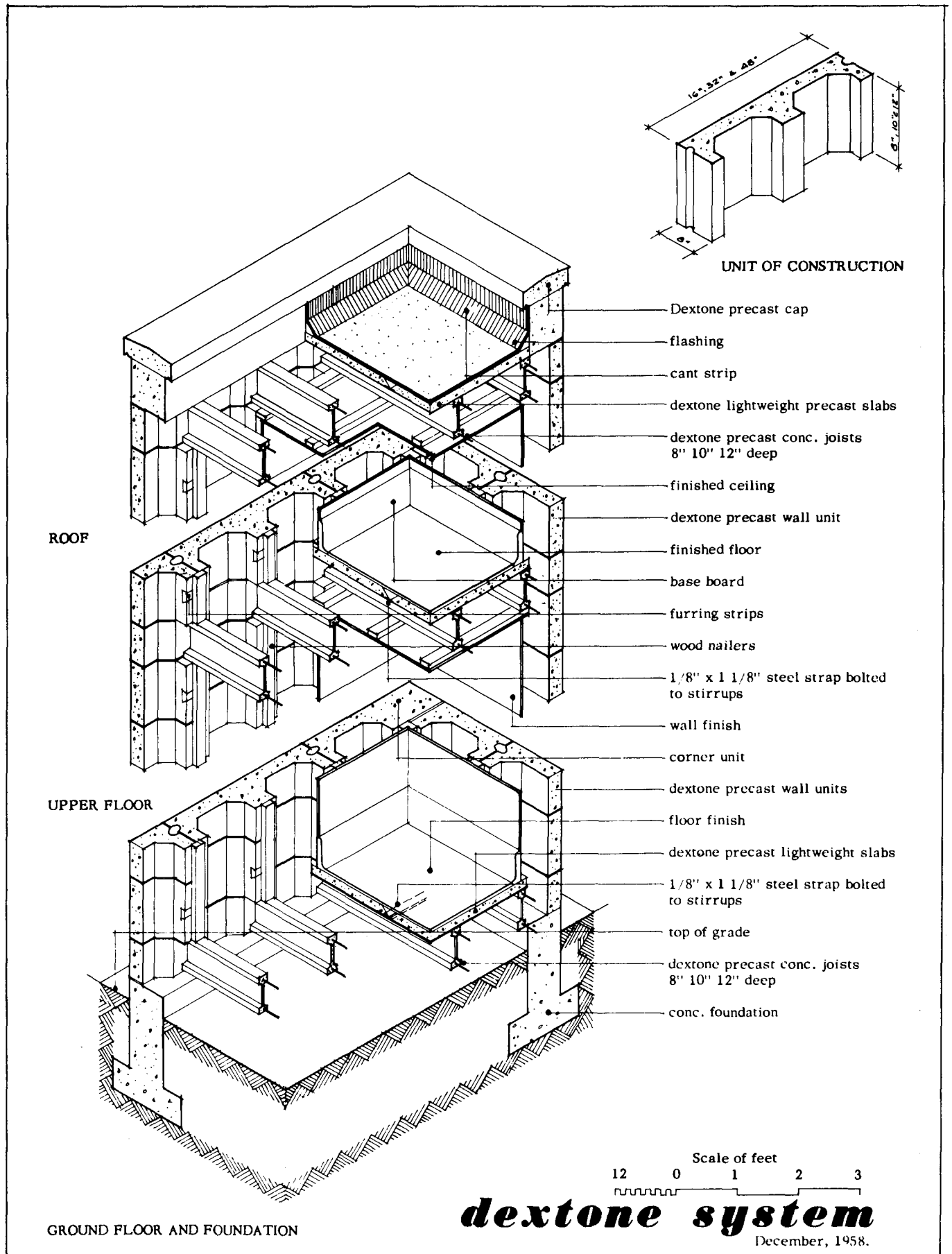
UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

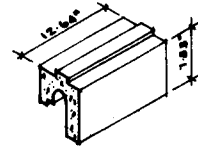
BELLROCK

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Bellrock Gypsum industries Ltd., 200 Westminster Bridge Road, London, S.E.1., England. Atlantic Gypsum Ltd., 1470 Peel Street, Montreal, P.Q.
Date and Place of Origin.	2. England.
Materials Used.	3. Gypsum plaster.
Description.	4. U- 0.60 across panel only.
Development to Date.	5. Considerable use for single and multi-storey dwellings in England.
Comment.	6. Manufacturer claims Bellrock to be load bearing for one storey structures.
References.	7. Sponsors' literature.



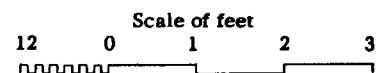
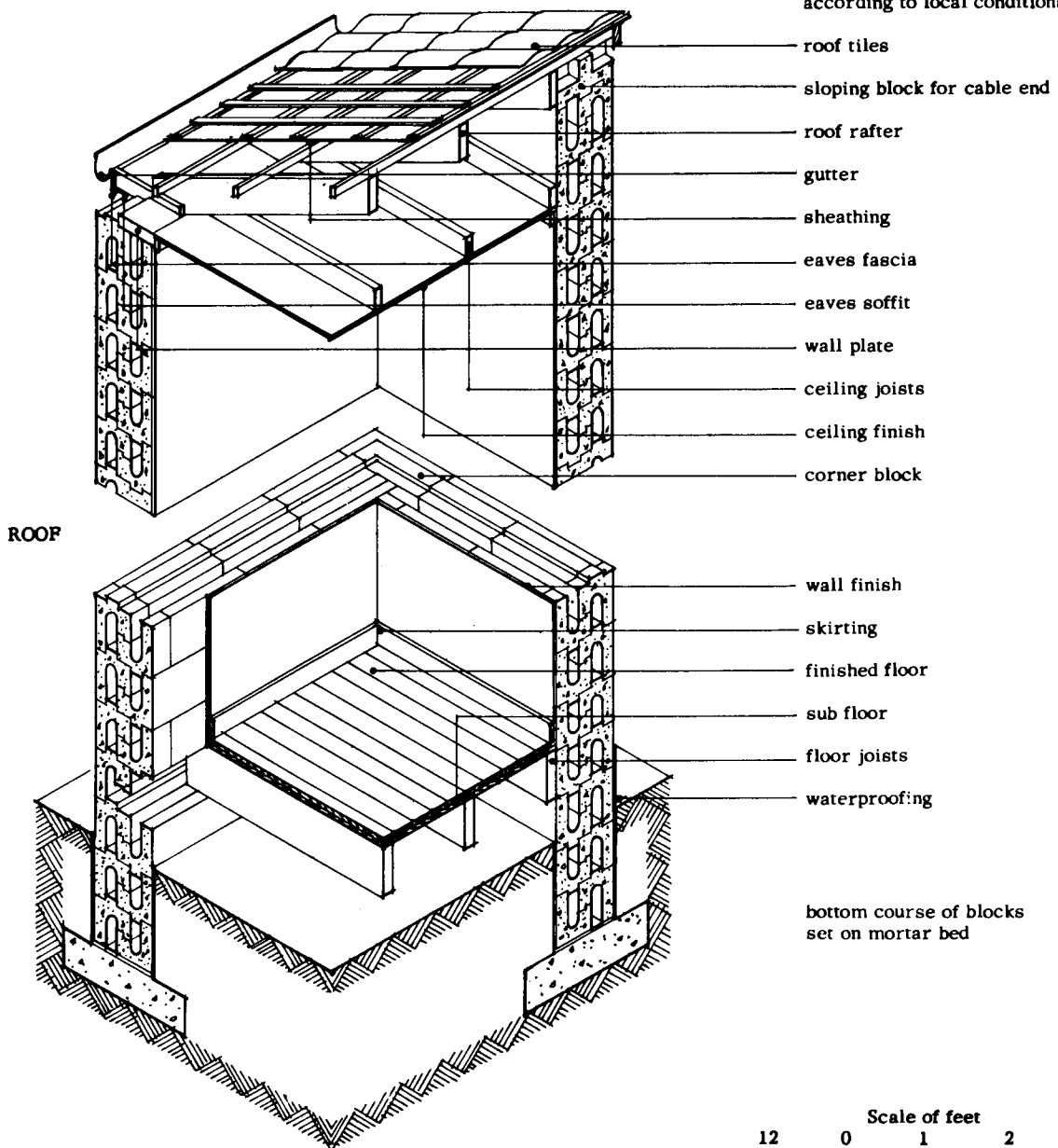
DEXTONE SELF CENTERING WALL

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Dextone Company, New Haven, Connecticut, U.S.A.
Date and Place of Origin.	2. U.S. pre 1936.
Materials Used.	3. Concrete.
Description.	4. -
Development to Date.	5. -
Comment.	6. -
References.	7. American Architect Sept. 1936, p. 36.



UNIT OF CONSTRUCTION

Note - Roof construction may vary according to local conditions

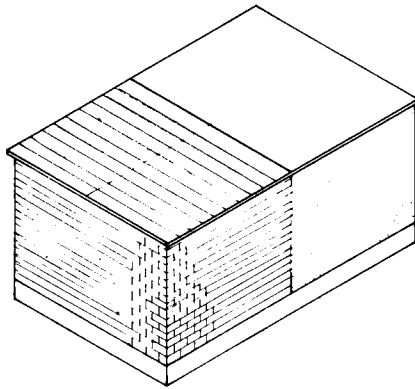


interlocking block

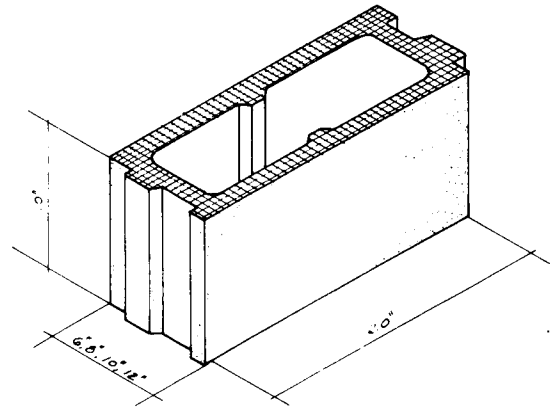
December, 1958.

INTERLOCKING BLOCK

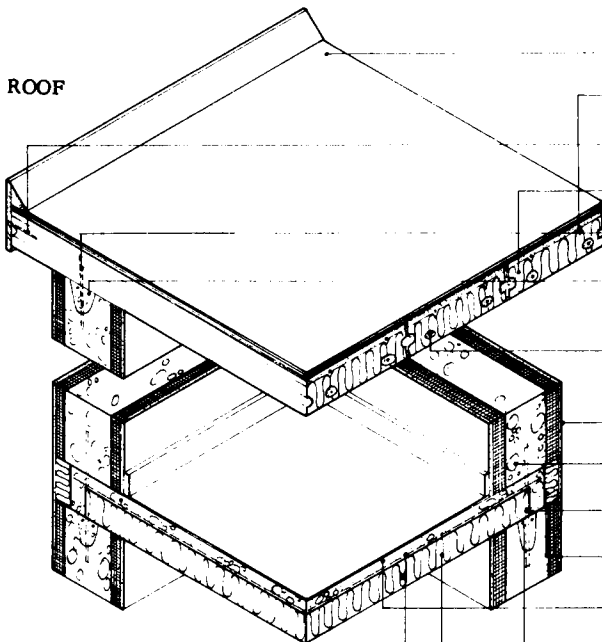
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. N.V. Kiso, P.O. Box 74, Dordrecht, Holland.
Date and Place of Origin.	2. Holland, 1953.
Materials Used.	3. Concrete.
Description.	4. Strength is sufficient for two-storey construction.
Development to Date.	5. Regular production in Holland since 1953.
Comment.	6. Approved and tested by Rationalised House Building Foundation, Rotterdam, Holland.
References.	7. Sponsor's Information.



WHOLE HOUSE ASSEMBLY

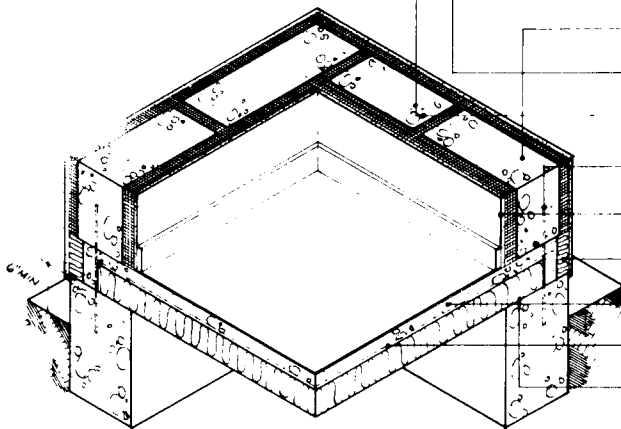


UNIT OF CONSTRUCTION



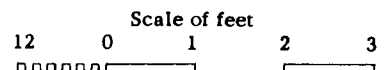
ROOF

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

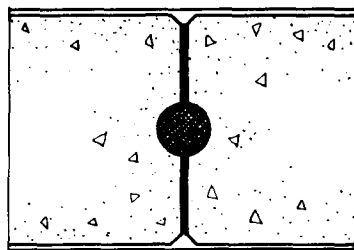


durisol blocks

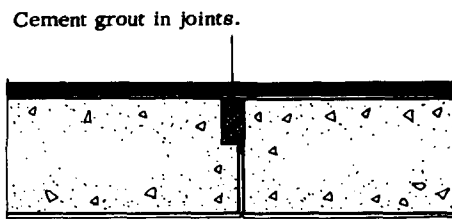
December, 1958.

DURISOL BLOCK FORMS

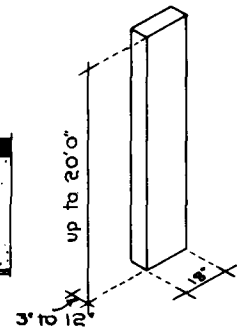
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Durisol Materials Limited, Mitchell, Ontario. Distributed in Canada by Durisol Sales Limited, 200 Glendale Avenue, Hamilton, Ontario, as of 1959. Other Durisol companies in Switzerland, England, Austria, Belgium, Canada, United States, Denmark, Spain, France, Holland, Japan and Yugoslavia.
Date and Place of Origin.	2. Switzerland, Zurich, prior to 1939.
Materials Used.	3. Mineralized Wood Shavings bonded together with standard portland cement.
Description.	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.
Comment.	5. Used for all types of construction, throughout the world, since World War II, using various combinations of Durisol (mineralized wood shavings and cement).
References.	6. -
Development to Date.	7. Sponsors' literature.



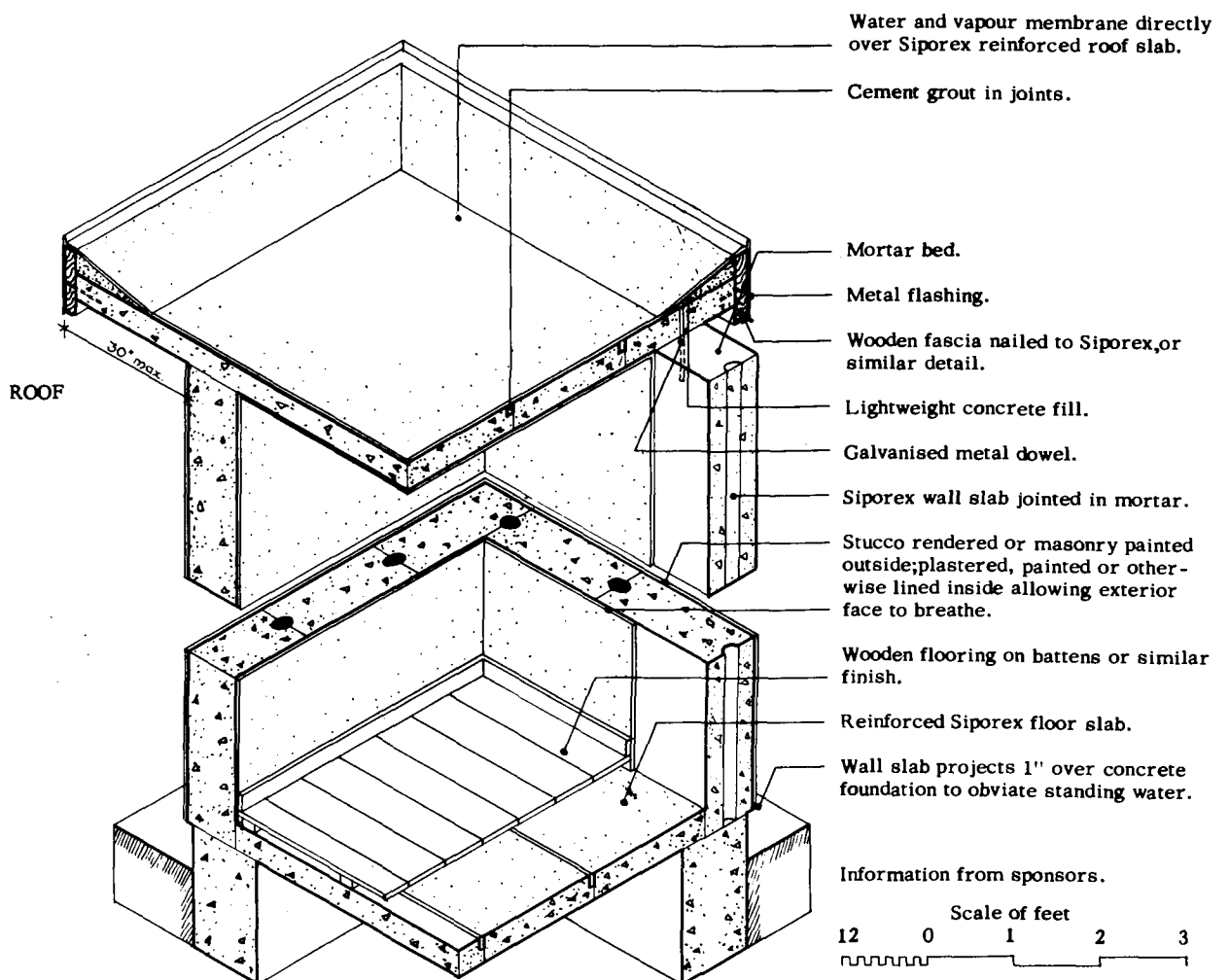
WALL UNIT JUNCTION



ROOF UNIT JUNCTION

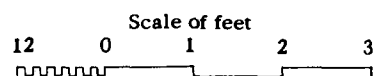


UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

Information from sponsors.

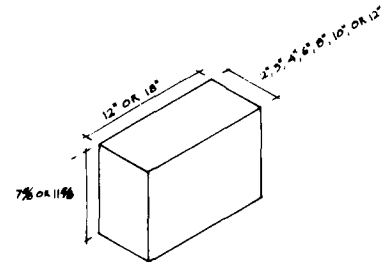


siporex

February, 1958.

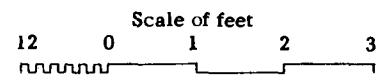
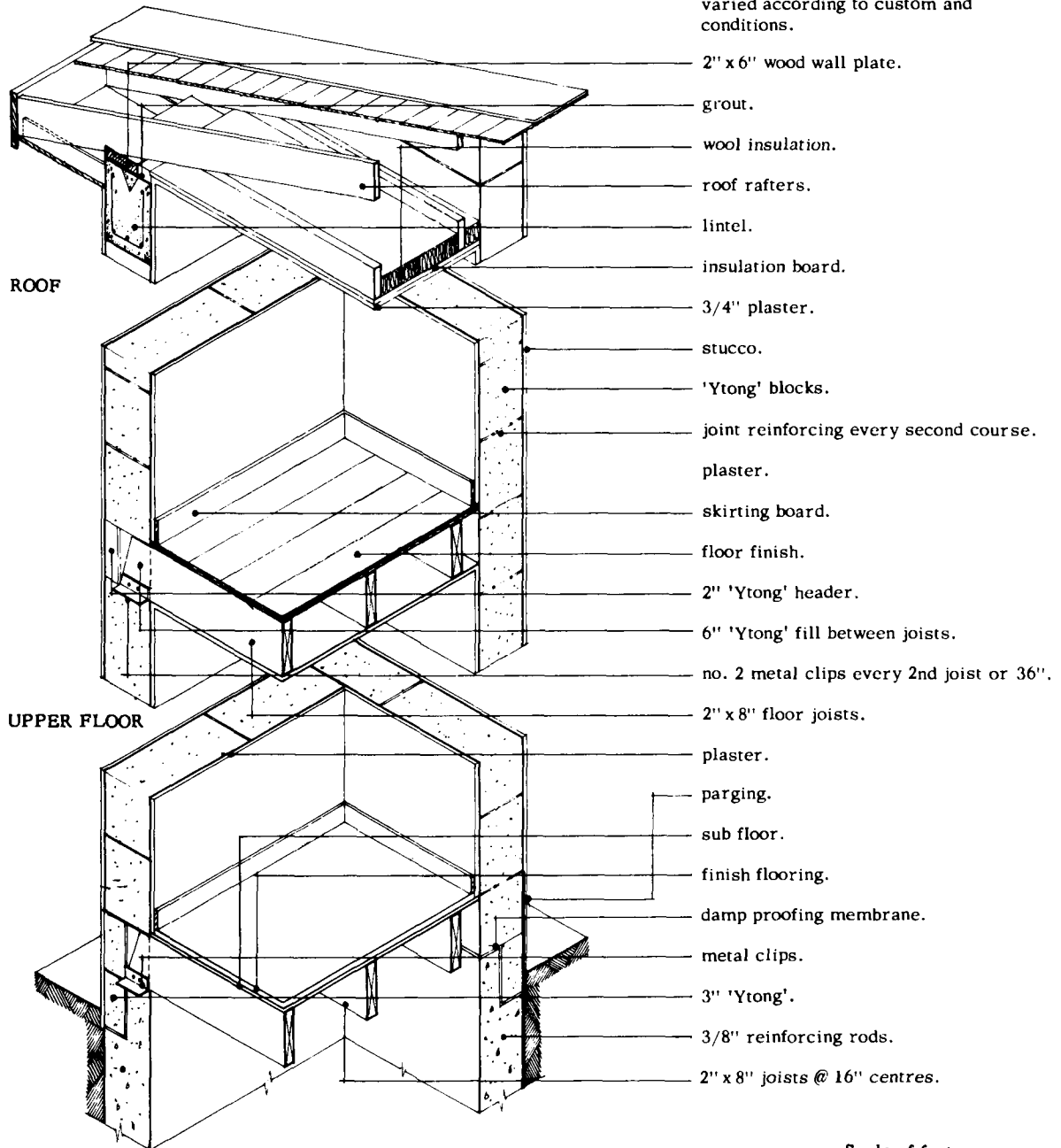
SIPOREX

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Internationella Siporex A/B, Box 3188, Stockholm 2. Siporex Ltd., 5165 Sherbrooke St. W., Montreal, Quebec.
Date and Place of Origin.	2. Sweden, around 1920.
Materials Used.	3. Siporex - precast autoclaved cellular lightweight concrete.
Description.	4. Siporex is a load bearing, insulating concrete precast in slabs or blocks. This sheet shows only one method of construction, suitable only for one storey buildings. $K(U)=0.81$ BTU/sq. ft./in./hr./1°F. Fire rating and noise reduction co- efficient for 4" partition plastered both sides - 2 hours, and 42 decibels respectively. Weights: roof and wall slabs - 31 lbs. cu. ft. Floor slabs 37 or 44 lbs. cu. ft.
Development to Date.	5. Widespread use in Scandinavia, some houses in E. Canada.
Comment.	6. The manufacturer claims that Siporex is a highly surface active material and therefore requires no interior vapour barrier; protection against weather is however necessary.
References.	7. Sponsor's information.



UNIT OF CONSTRUCTION

The roof construction shown can be varied according to custom and conditions.

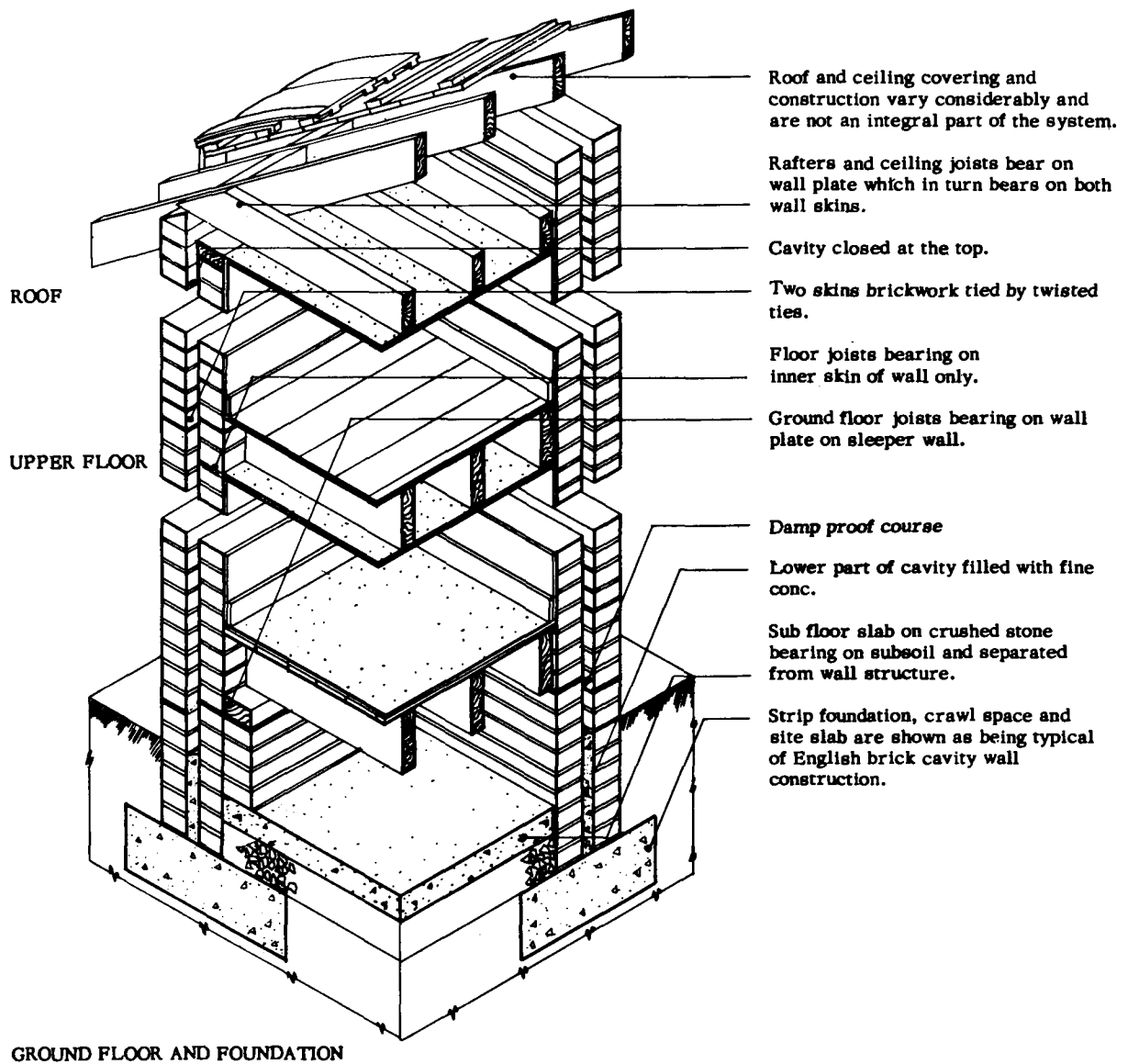


ytong

December, 1958.

YTONG

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Internationella Ytong, Djorwellsgaten 12, Stockholm, Sweden. Alberta Ytong Manufacturing Co. Limited, 1026 6th Avenue, N.W. Calgary, Alberta.
Date and Place of Origin.	2. Sweden 1930.
Materials Used.	3. Lightweight cellular concrete autoclaved concrete blocks.
Description.	4. U= 0.12 (8" external block, 41 lbs. per cu. ft. stuccoed and plastered). Only the material itself is proprietary.
Development to Date.	5. Widely used in Scandinavia. Also in U.K., Germany, Belgium, Poland and Israel. Mainly used for industrial, commercial, and some housing work in Western Canada.
Comment.	6. This sheet shows one possible way of using Ytong. Other ways include cavity wall and monolithic concrete construction.
References.	7. Sponsors reference.



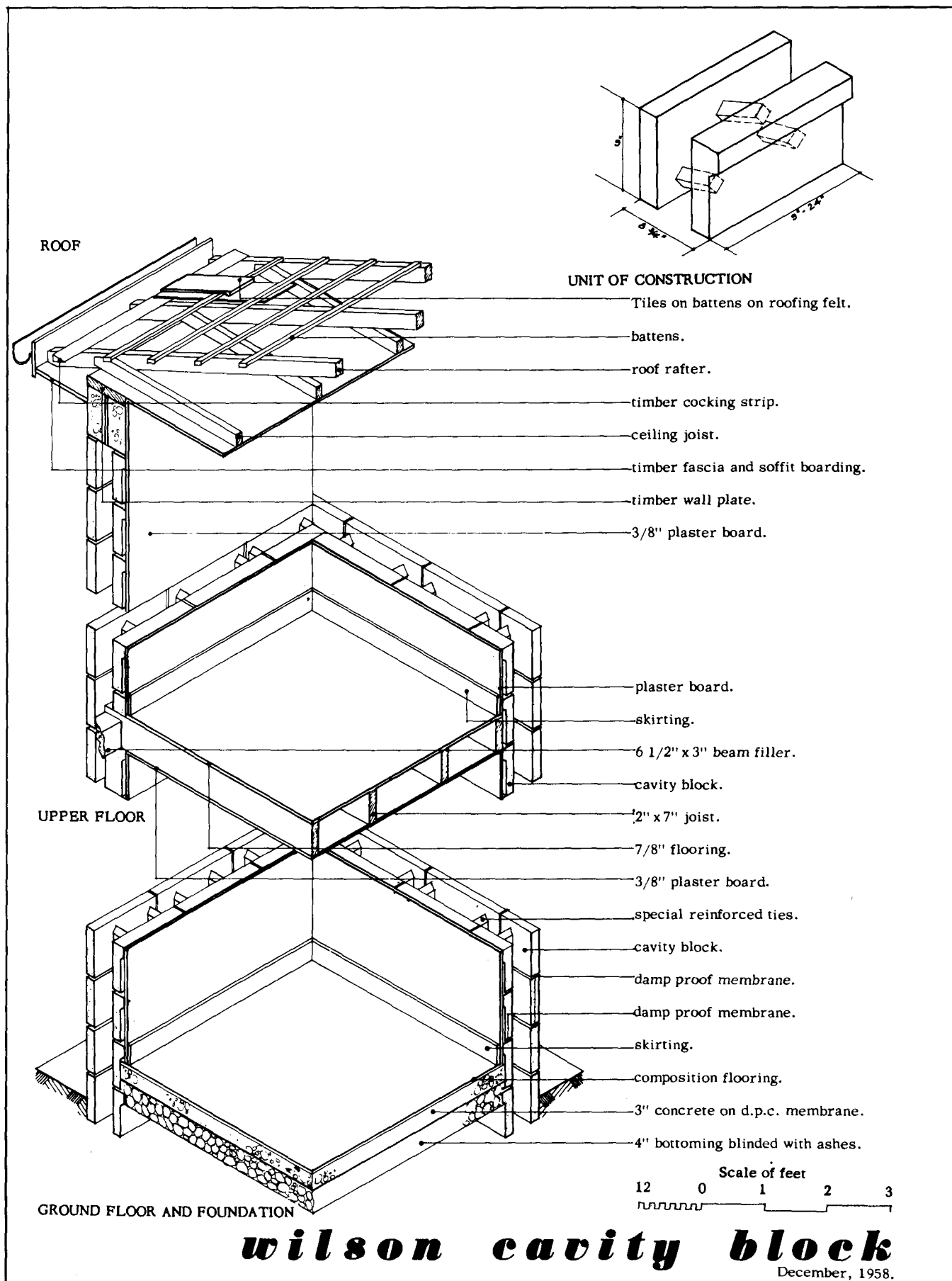
Scale of feet
12 0 1 2 3

brick cavity wall

February, 1958.

BRICK CAVITY WALL

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional in U.K.
Date and Place of Origin.	2. Used for many years in U.K.
Materials Used.	3. Brick.
Description.	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°F. for an unventilated cavity wall. Fire rating 2 1/2 hours, (for this specific example).
Development to Date.	5. Widespread use in U.K. especially since Second World War.
Comment.	6. There are many variations on this system of which this is only one.
References.	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 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.**

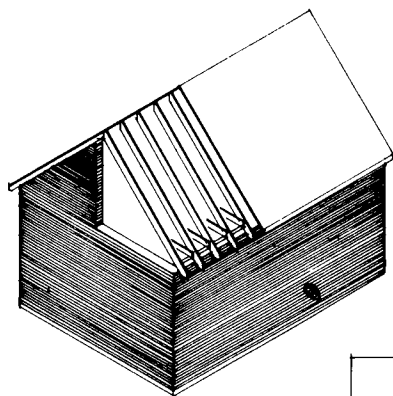
5. Over 7,000 houses erected in Scotland,
1946 to 1952.

Comment.

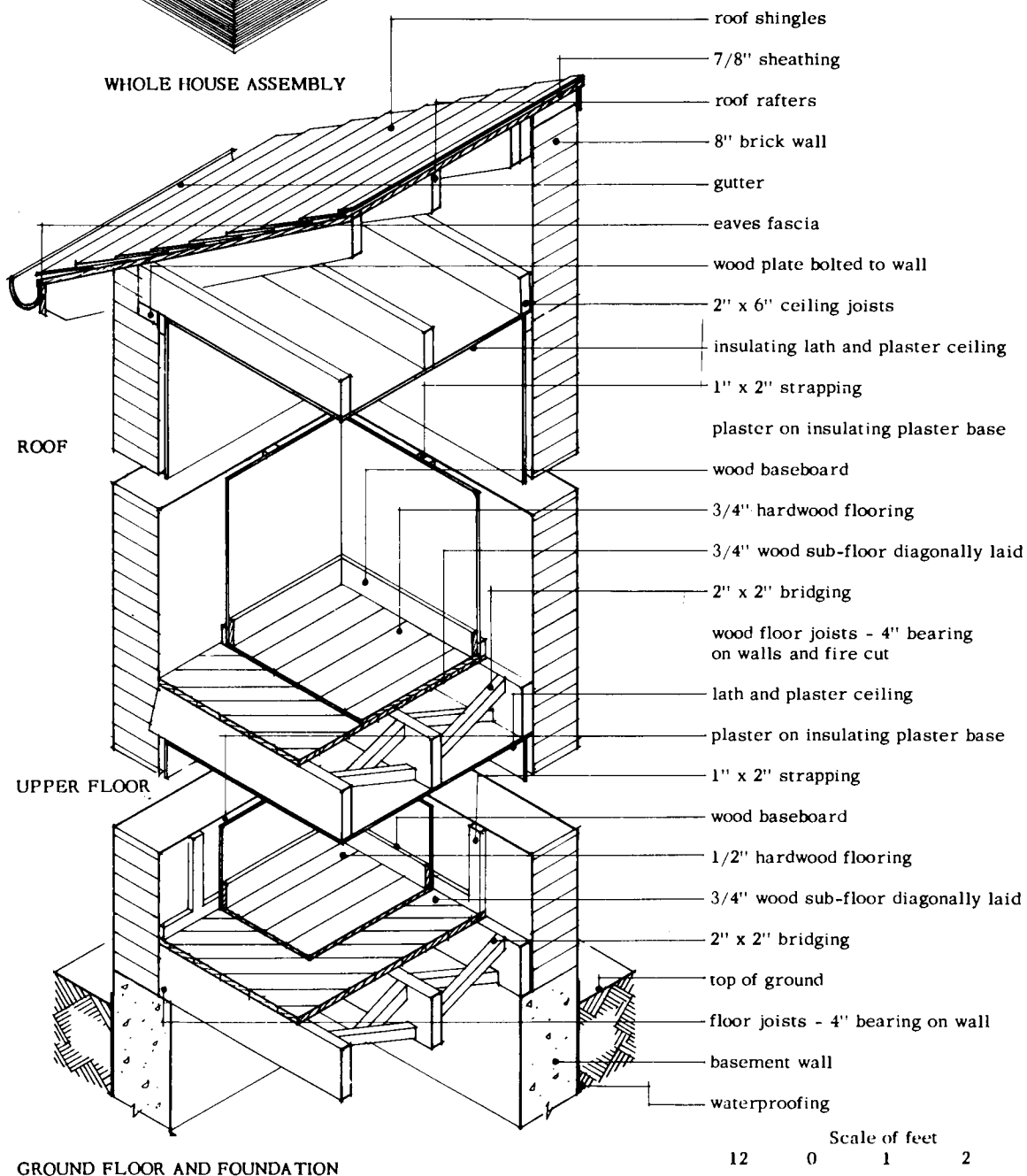
6. Unit only is proprietary. It can be used
in conjunction with a variety of different
forms of roof and floor construction.

References.

7. -



WHOLE HOUSE ASSEMBLY



Scale of feet
12 0 1 2 3

solid brick

December, 1958.

SOLID BRICK

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Traditional.
Date and Place of Origin.	2. Traditional wherever there has been brick.
Materials Used.	3. Brick.
Description.	4. 8" brickwork $U=0.43$.
Development to Date.	5. World-wide spread.
Comment.	6. Used with various forms of roof and floor construction.
References.	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

Case Sheets

Ayrshire House
Boats Beaucrete Concrete House
Boot Pier and Panel House
Cornish Unit
Duo-Slab House I
Duo-Slab House II
Earley System
Kreuzhaus
Orlit House
Rackle System
Rockwood House
Stockade House
Swan House
Winget House

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 plasterboard 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 insitu;
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 con-
crete 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 reinforced 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 insulation 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 conventional. 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 rein-
forced concrete piers poured
between slabs at 3' intervals.
Remainder of building con-
ventional. 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 Con-
struction 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.

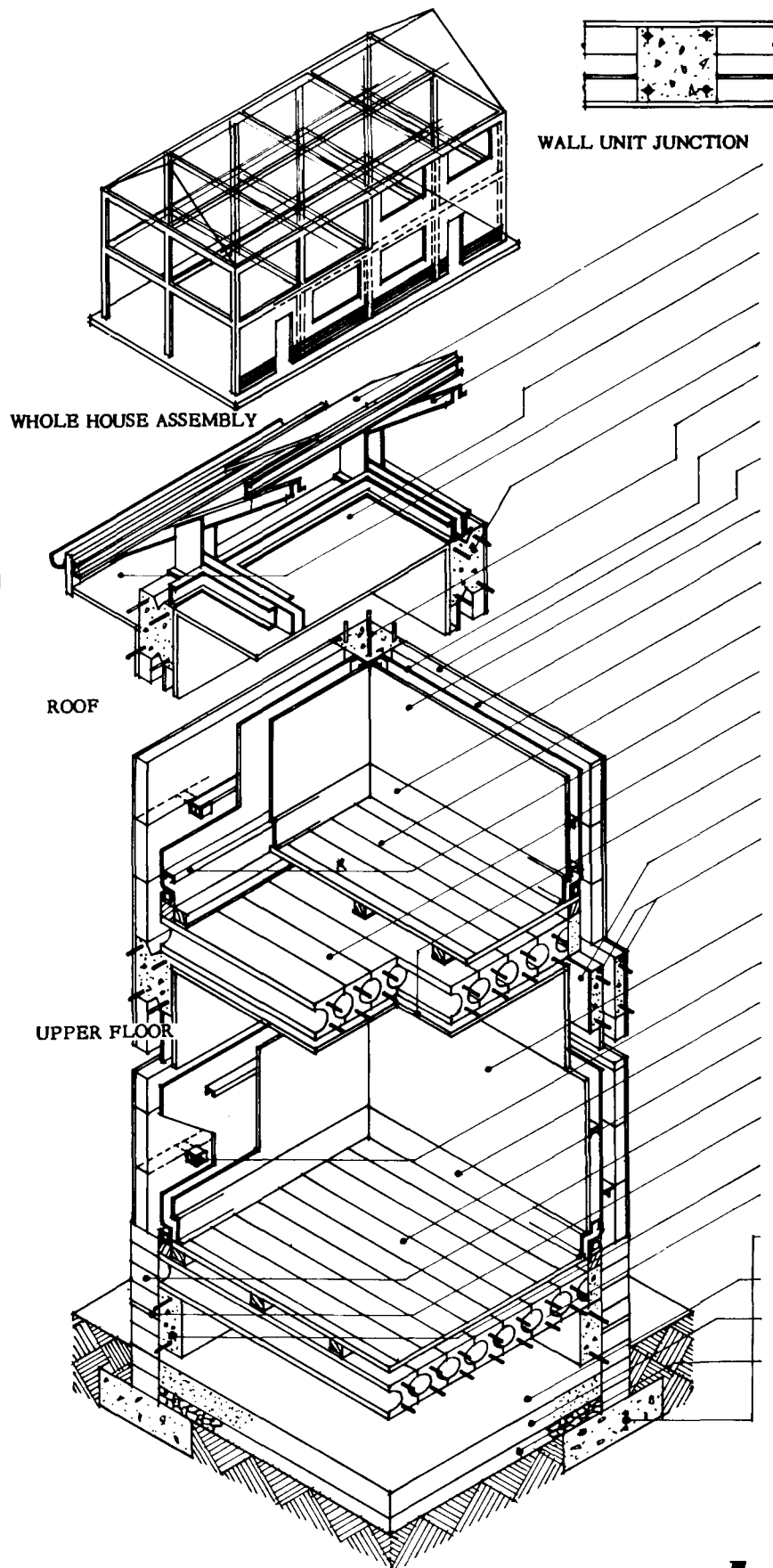
1920.
Concrete formed in situ; and
precast unit. 4" x 8" x 16"
wood fibre blocks made up
like masonry. Reinforced con-
crete poured into holes in
units (vertically aligned).
Remainder of construction con-
ventional. Many houses built
in U. S. A. up until 1935.

"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).



- 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.

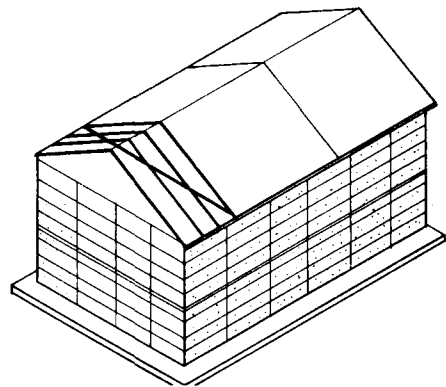
Scale of feet
12 0 1 2 3

ayrshire house

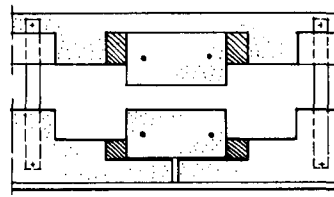
December, 1958.

AYRSHIRE HOUSE

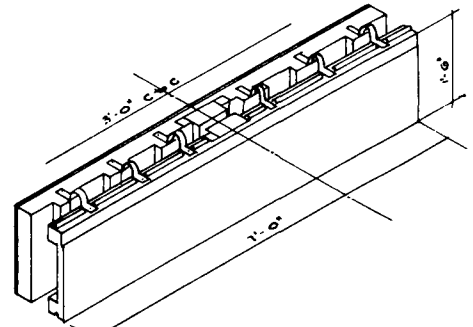
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor: Ayrshire County Council, Scotland (first). Whitson - Fairhurst, U.K. (second).
Date and Place of Origin.	2. Ayrshire, Scotland, 1945.
Materials Used.	3. Precast concrete.
Description.	4. Precast reinforced concrete 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).
Development to Date.	5. 3,300 houses in Scotland up to 1952.
Comment.	6. -
References.	7. Post War Building Study No. 25, H.M. Stationery Office, London.



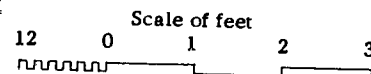
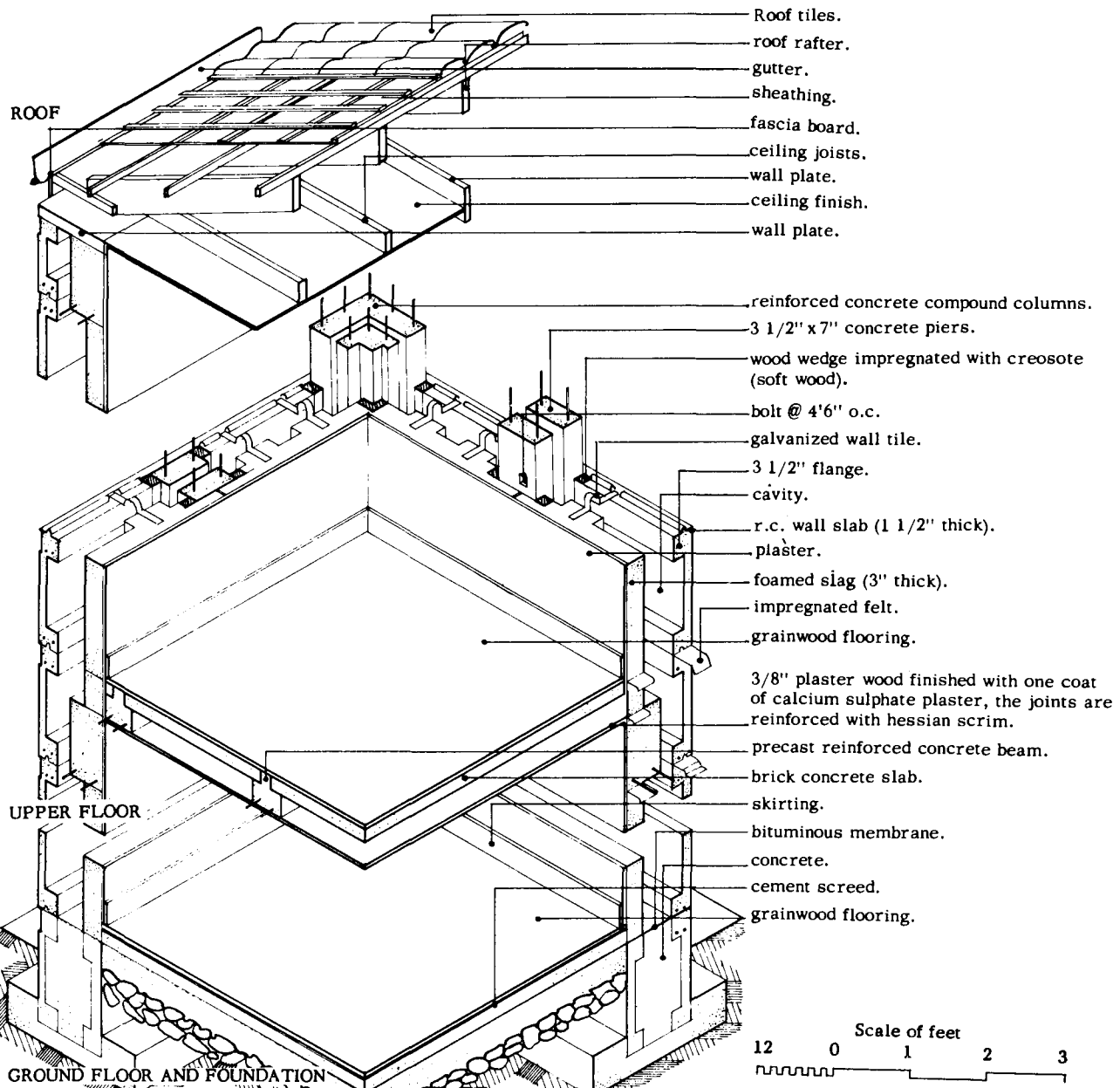
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

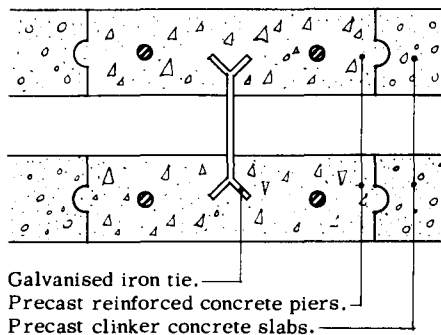


boots beaverete concrete house

December, 1958.

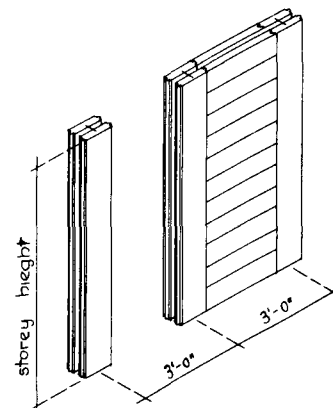
BOOT BEAUCRETE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional.
Date and Place of Origin.	2. U.K. 1920-1940.
Materials Used.	3. Precast reinforced concrete.
Description.	4. Frame is erected first, then infill panels. Air is to produce a continuous moisture break between inner and outer external wall faces.
Development to Date.	5. 10,000 houses in U.K. in inter war period.
Comment.	6. System is relatively inflexible.
References.	7. "Post War Building Study No. 23", H.M. Stationery Office, London.

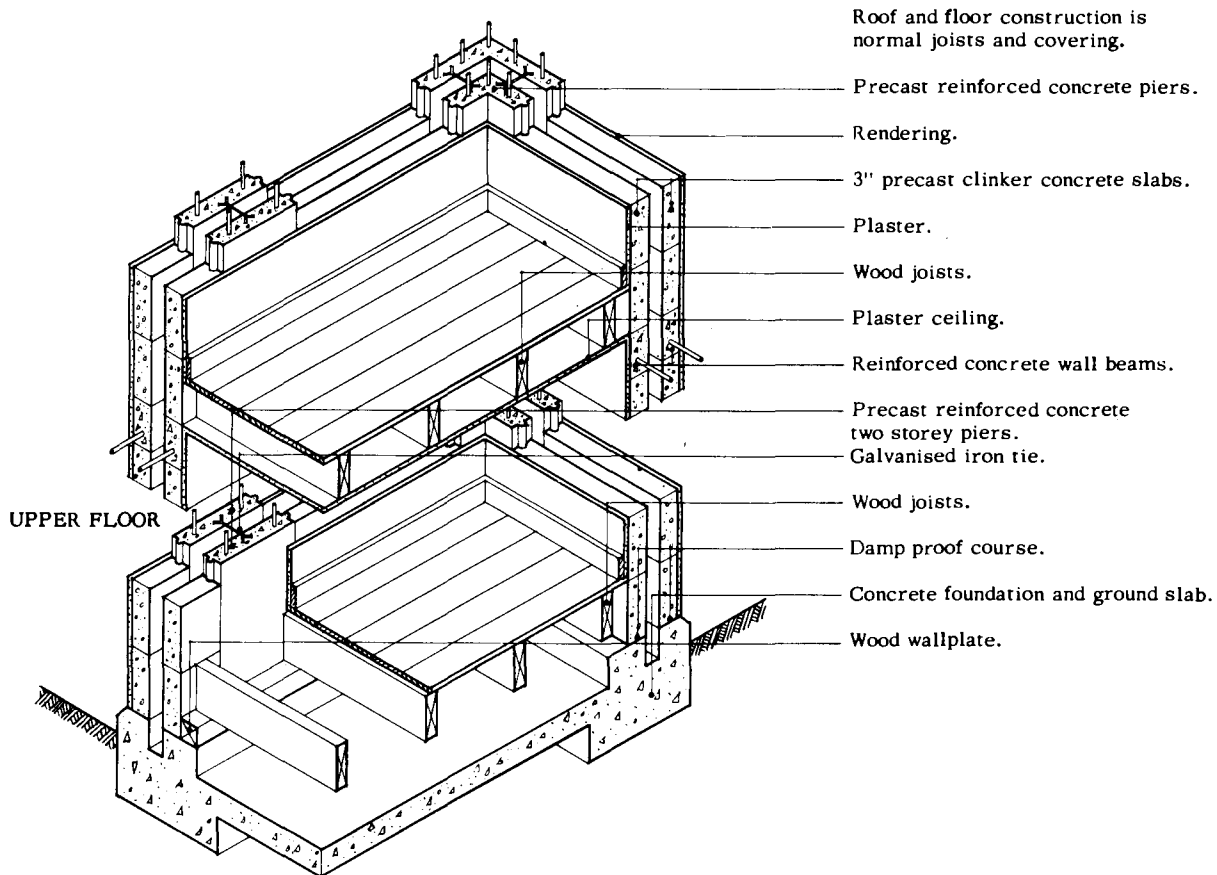


Galvanised iron tie.
Precast reinforced concrete piers.
Precast clinker concrete slabs.

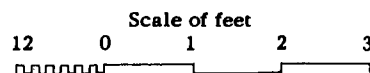
WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

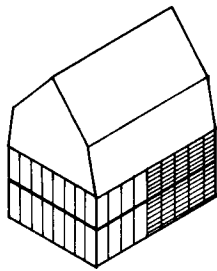


boot pier and panel house

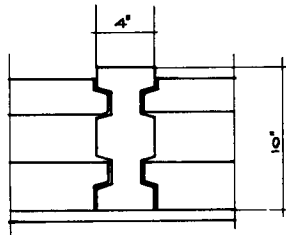
December, 1958.

BOOT PIER AND PANEL HOUSE

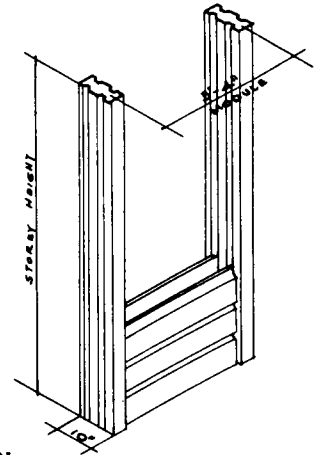
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor: Henry Boot and Sons, Ltd.
Date and Place of Origin.	2. U.K., 1925.
Materials Used.	3. Precast concrete piers, precast clinker concrete units.
Description.	4. Two storey construction. Piers are recessed into concrete 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).
Development to Date.	5. 8,000 to 9,000 houses built between 1926 and 1930 for several English municipal authorities.
Comment.	6. All concrete units are manufactured on the site. Piers are handled by crane.
References.	7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.



WHOLE HOUSE ASSEMBLY

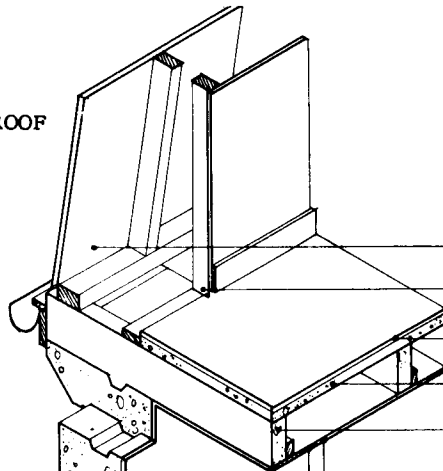


WALL UNIT JUNCTION



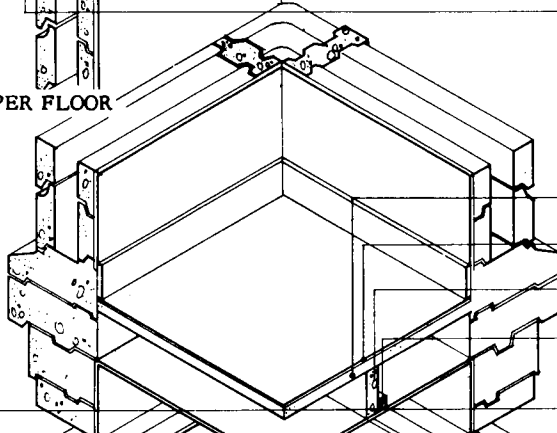
UNIT OF CONSTRUCTION

ROOF

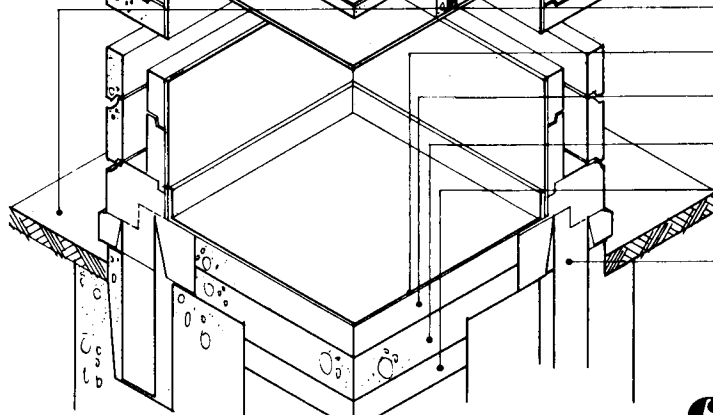


- Roof boarding
- 3" x 2" studding to mansard framing
- 5/8" pitchmastic floor on asphalter's felt
- 1 1/2" R.C. floor
- 2" x 7" R.C. floor joists
- plasterboard ceiling
- iron dog spacer

UPPER FLOOR

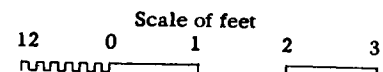


- 1 1/2" R.C. floor
- 5/8" pitchmastic floor on asphalter's felt
- 7" x 2" R.C. joists
- 2" x 1" batten bolted to floor joists, to carry plasterboard ceiling
- ground level



- 5/8" pitchmastic floor on asphalter's felt
- 4" concrete
- hardcore
- 4" filling
- standard tenoned through basestone into concrete foundation

GROUND FLOOR AND FOUNDATION

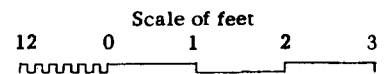
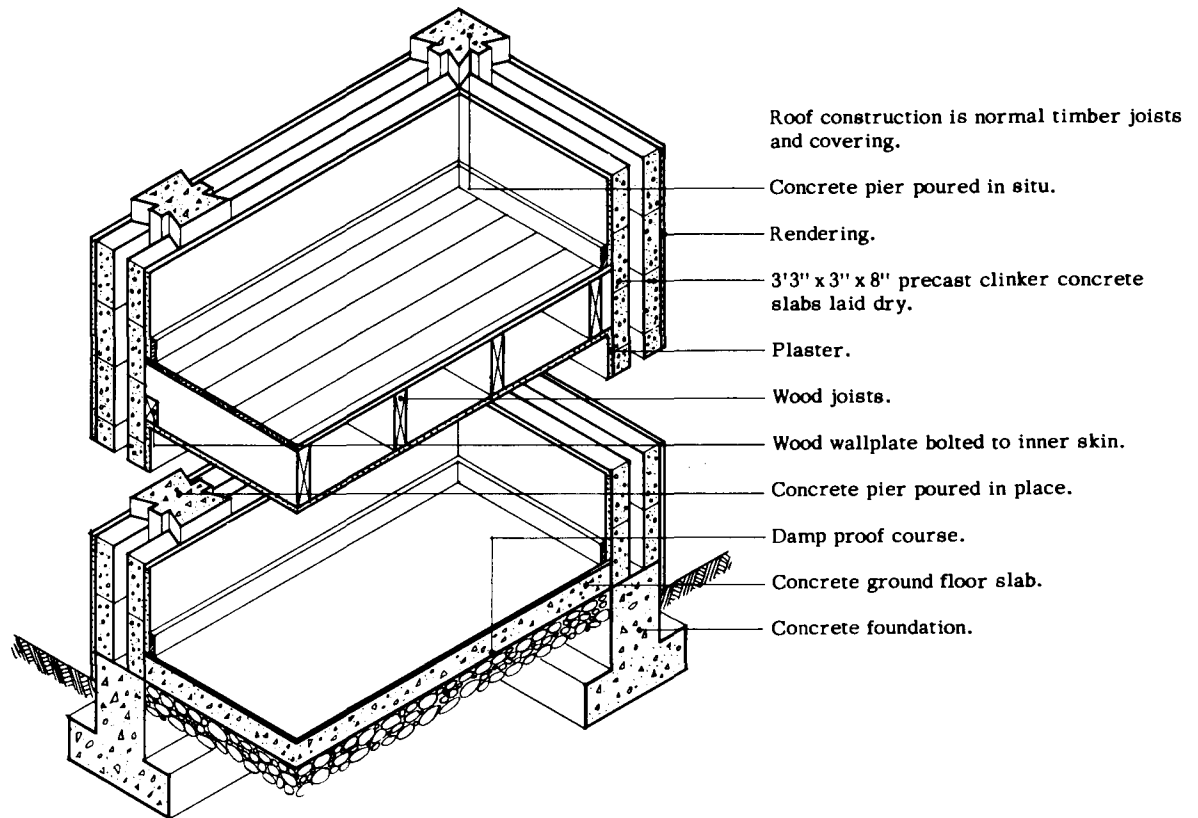
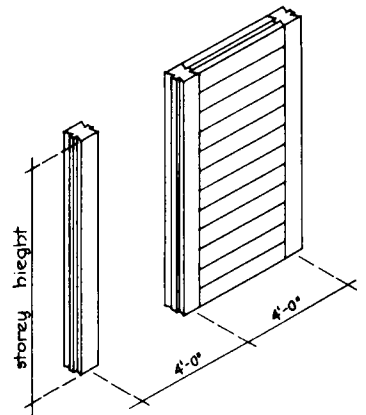
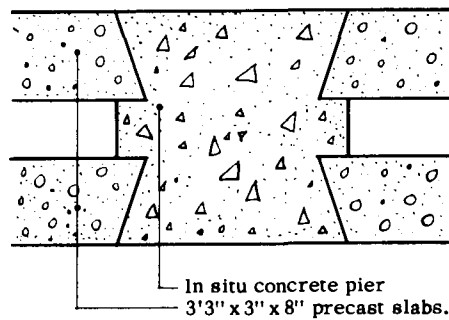


cornish unit

December, 1958.

CORNISH UNIT

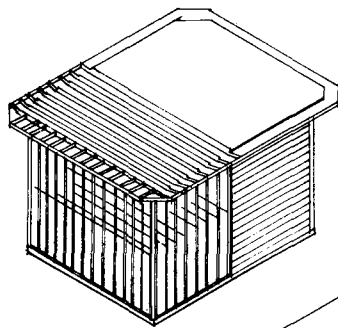
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Selleck Nicholls and Company Limited, (formerly Lovering Pochin) Heath Hill, St. Austell, Cornwall, U.K.
Date and Place of Origin.	2. United Kingdom 1946.
Materials Used.	3. Precast concrete.
Description.	4. A precast concrete pier and panel system, utilizing a mansard roof construction. U-2.1 (external wall construction as shown).
Development to Date.	5. 30,000 dwellings in England since 1946.
Comment.	6. Only the units are proprietary.
References.	7. -



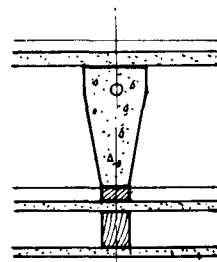
duo-slab house

AIREY DUO SLAB HOUSE

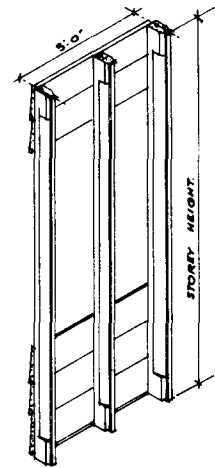
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor: Sir Edwin Airey and Sons, Eldon House, Leeds, England.
Date and Place of Origin.	2. Liverpool, 1922.
Materials Used.	3. Precast clinker concrete slabs, poured posts.
Description.	4. Two storey house. Slabs laid dry. Posts poured between as slabs rise. Slabs separated by 2" cavity. U=0.24 (External walls).
Development to Date.	5. 3,000 to 4,000 houses in the U.K. for several municipal authorities (1922-1924).
Comment.	6. Remainder of construction is conventional English wood construction.
References.	7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.



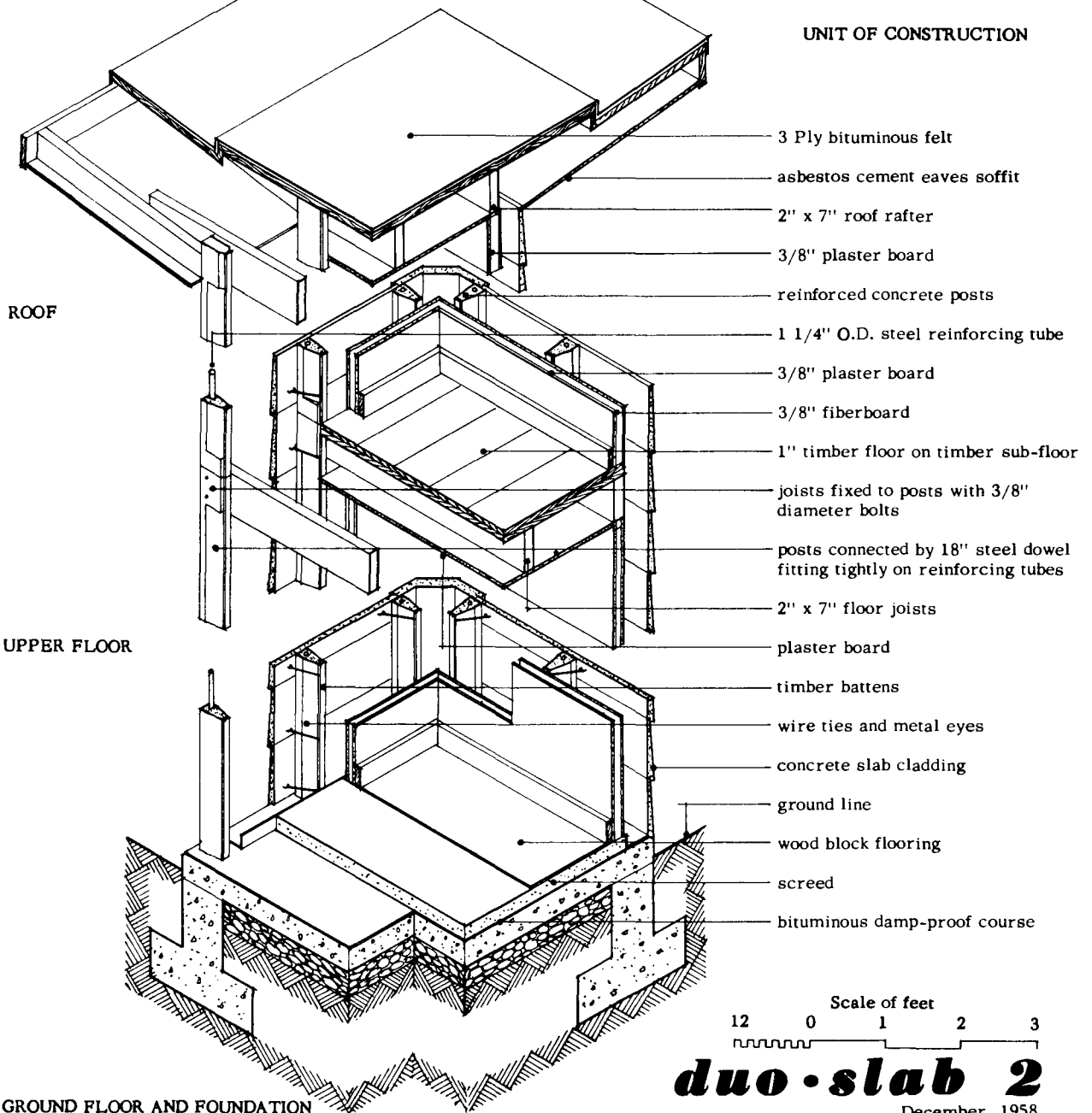
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

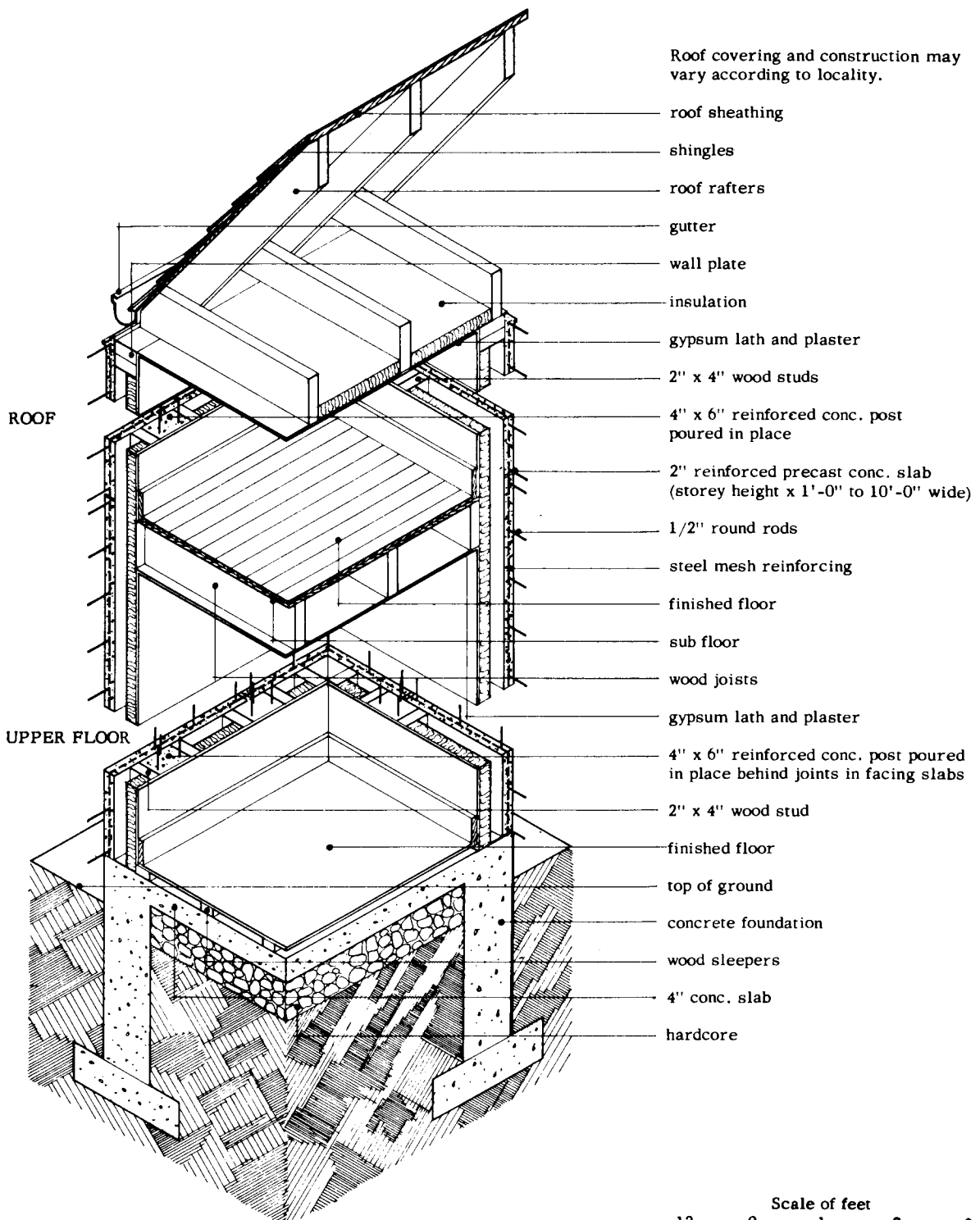


duo · slab 2

December, 1958.

DUO SLAB II

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional, Builder and Sponsor: Wm. Airey and Son (Leeds), Ltd.
Date and Place of Origin.	2. Leeds, 1946.
Materials Used.	3. Precast concrete.
Description.	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.
Development to Date.	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.
Comment.	6. Ministry of Works, London.
References.	7. "Post War Building Study No. 23" H.M. Stationery Office, London.



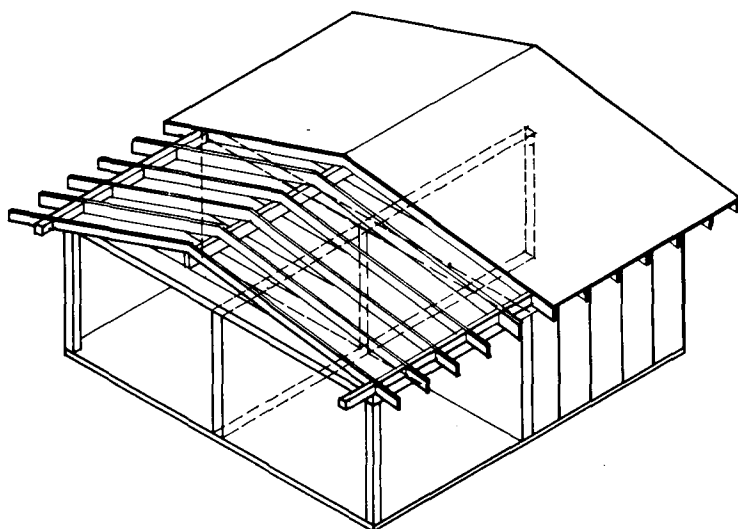
Scale of feet
12 0 1 2 3

earley system

December, 1958.

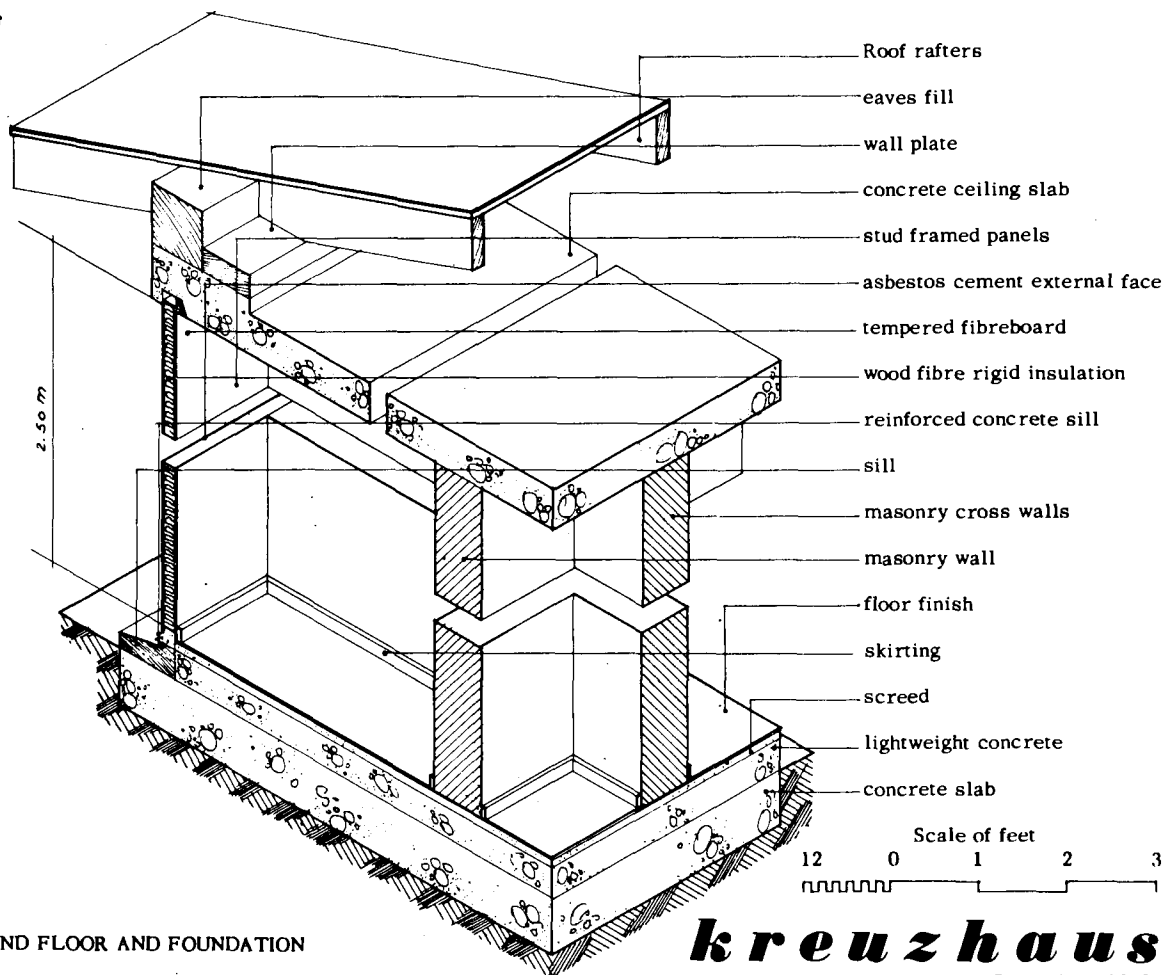
EARLEY SYSTEM

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. John J. Earley, Washington, D.C.
Date and Place of Origin.	2. U.S. 1915.
Materials Used.	3. Concrete.
Description.	4. Exterior slabs may be threaded for bolting to a steel frame. Concrete studs are poured immediately behind joints at 18" centres.
Development to Date.	5. Extensively used in U.S. around 1915.
Comment.	6. -
References.	7. American Architect and Architecture, September, 1936.



WHOLE HOUSE ASSEMBLY

ROOF



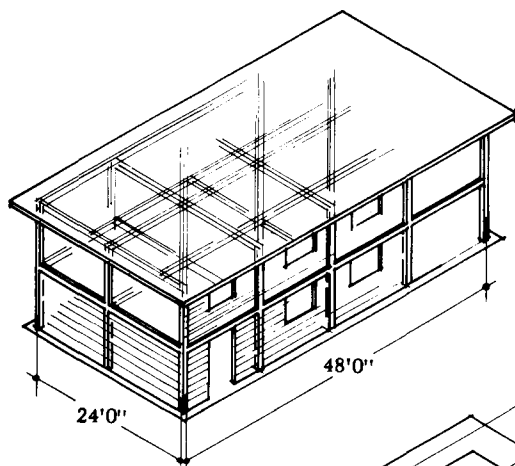
GROUND FLOOR AND FOUNDATION

k r e u z h a u s

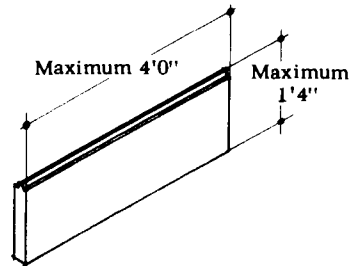
December, 1958.

KREUZHAUS

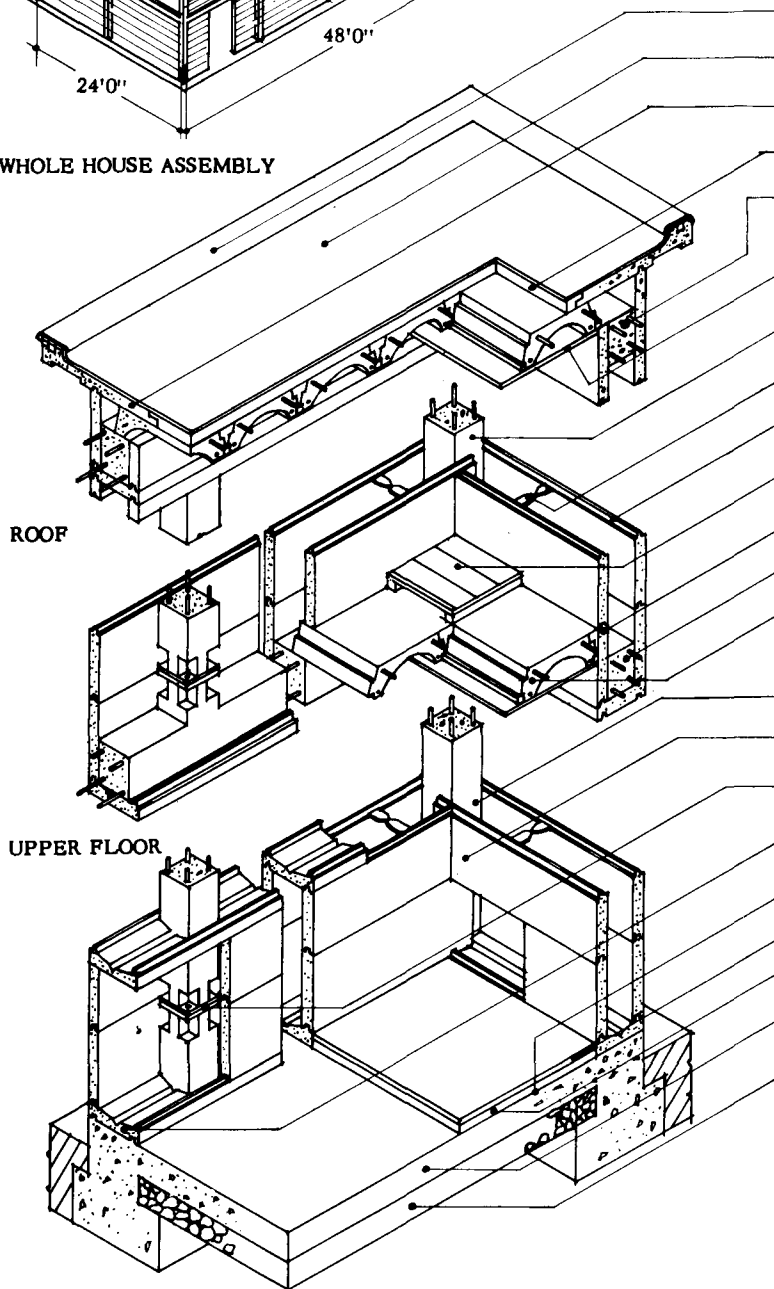
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Dr. J.W. Ludowici, Jockgrim/Reinpfalz, Landhaus, Germany.
Date and Place of Origin.	2. Germany, 1957.
Materials Used.	3. Masonry and wood.
Description.	4. The essential feature of this house is the masonry cross wall and concrete slab ceiling and corner posts. Exterior walls and roof are of traditional construction.
Development to Date.	5. Development is as yet unknown.
Comment.	6. -
References.	7. Sponsors literature.



WHOLE HOUSE ASSEMBLY



UNIT OF CONSTRUCTION



ROOF

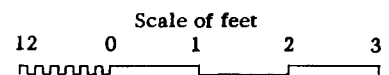
UPPER FLOOR

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.

Reproduced by permission of the Controller of H.M. Stationery Office.

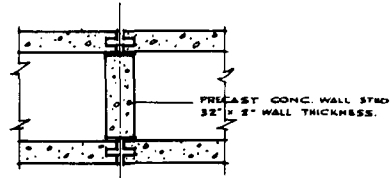


orlit house

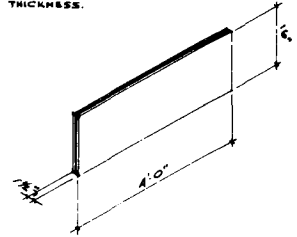
December, 1958.

ORLIT HOUSE

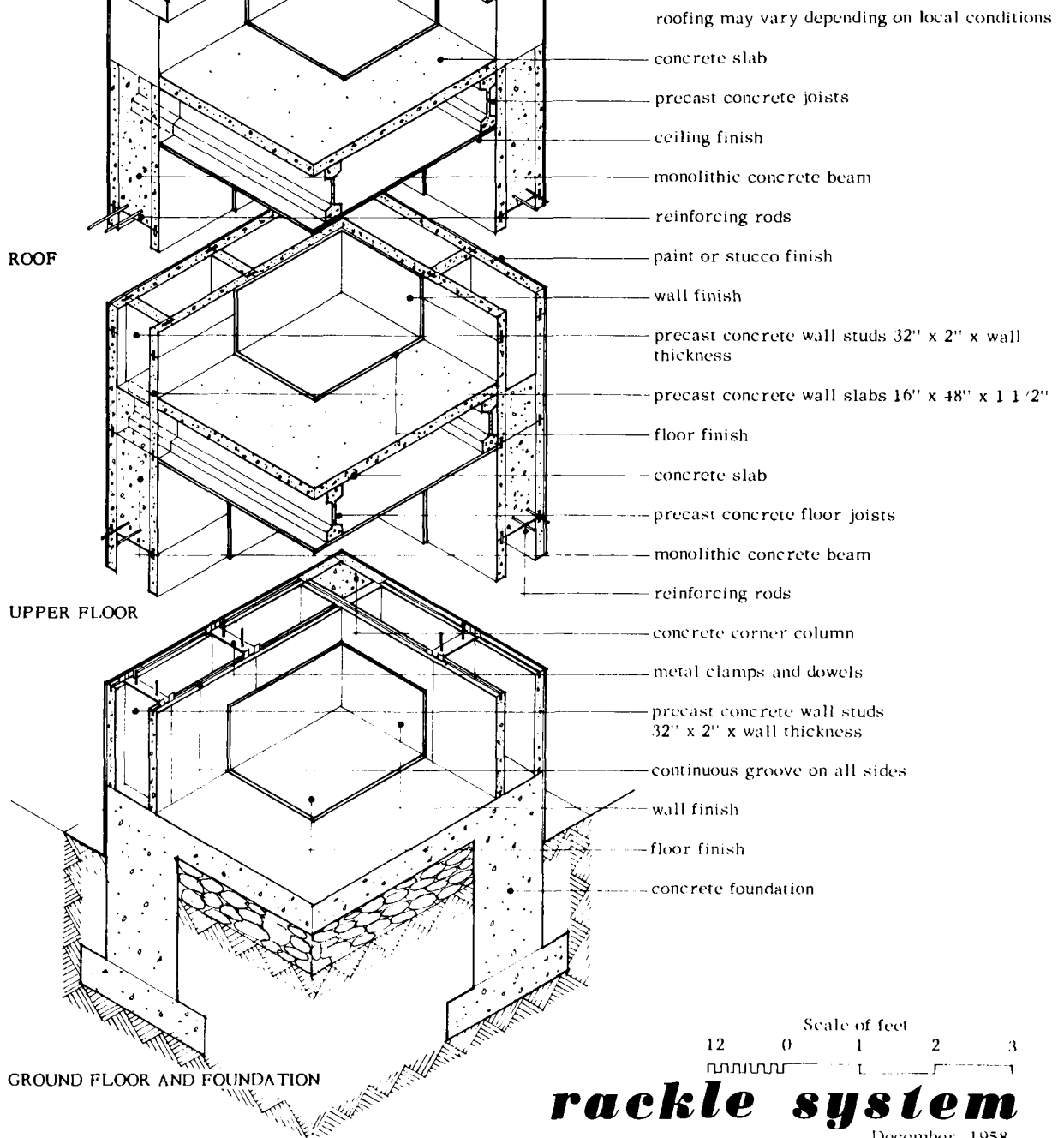
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Orlit Limited. Colnbrook By Pass, Bucks, England.
Date and Place of Origin.	2. U.K. 1945.
Materials Used.	3. Concrete and foamed slag.
Description.	4. Precast reinforced concrete columns, slabs, roof and floor units. U=0.27 (walls). Columns are bolted together first then inner and outer cladding is added.
Development to Date.	5. Prototype in London, 1946.
Comment.	6. -
References.	7. Post War Building Study No. 25, H.M. Stationery Office, London.



WALL UNIT JUNCTION

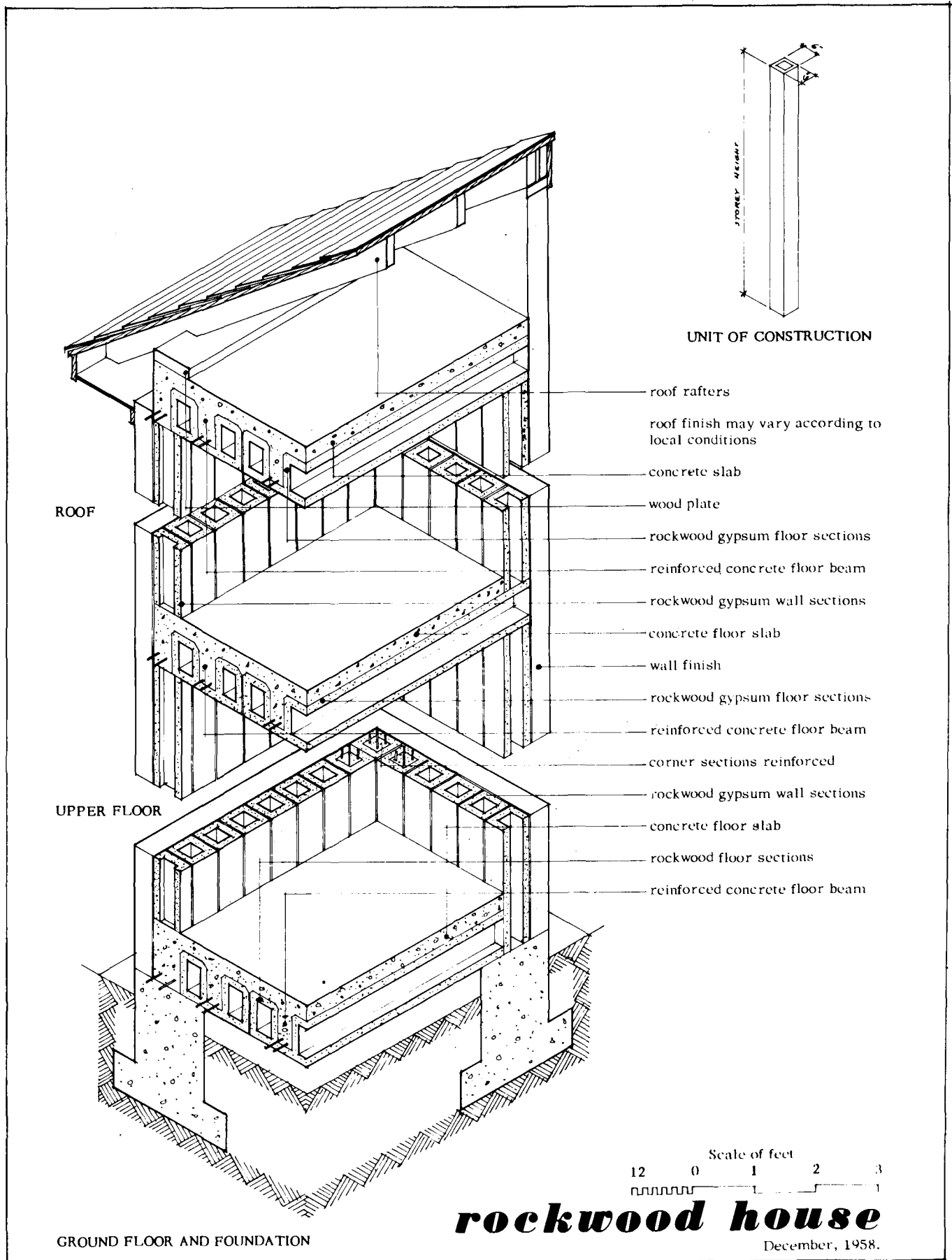


UNIT OF CONSTRUCTION



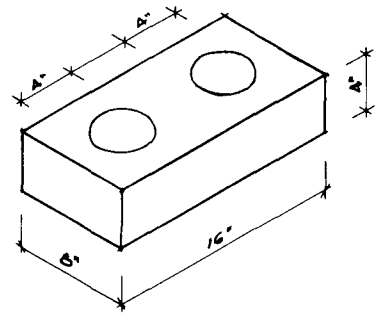
RACKLE SYSTEM

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. George Rackle and Sons Company, Cleveland, Ohio.
Date and Place of Origin.	2. U.S.A. Approximately 1936.
Materials Used.	3. Precast concrete units
Description.	4. Precast concrete units, joists and slabs. Wall: Outer and inner rows of precast slab units with precast stud members set at intervals. All edges are grooved. Studs have pro- jecting dowel bars at one end and dowel holes at the opposite end, thus providing a means of doweling superimposed stud sections. Base: Dowels lock the studs to a standard concrete foundation.
Development to Date.	5. No longer in operation.
Comment.	6. -
References.	7. American Architect and Architecture, September, 1936.

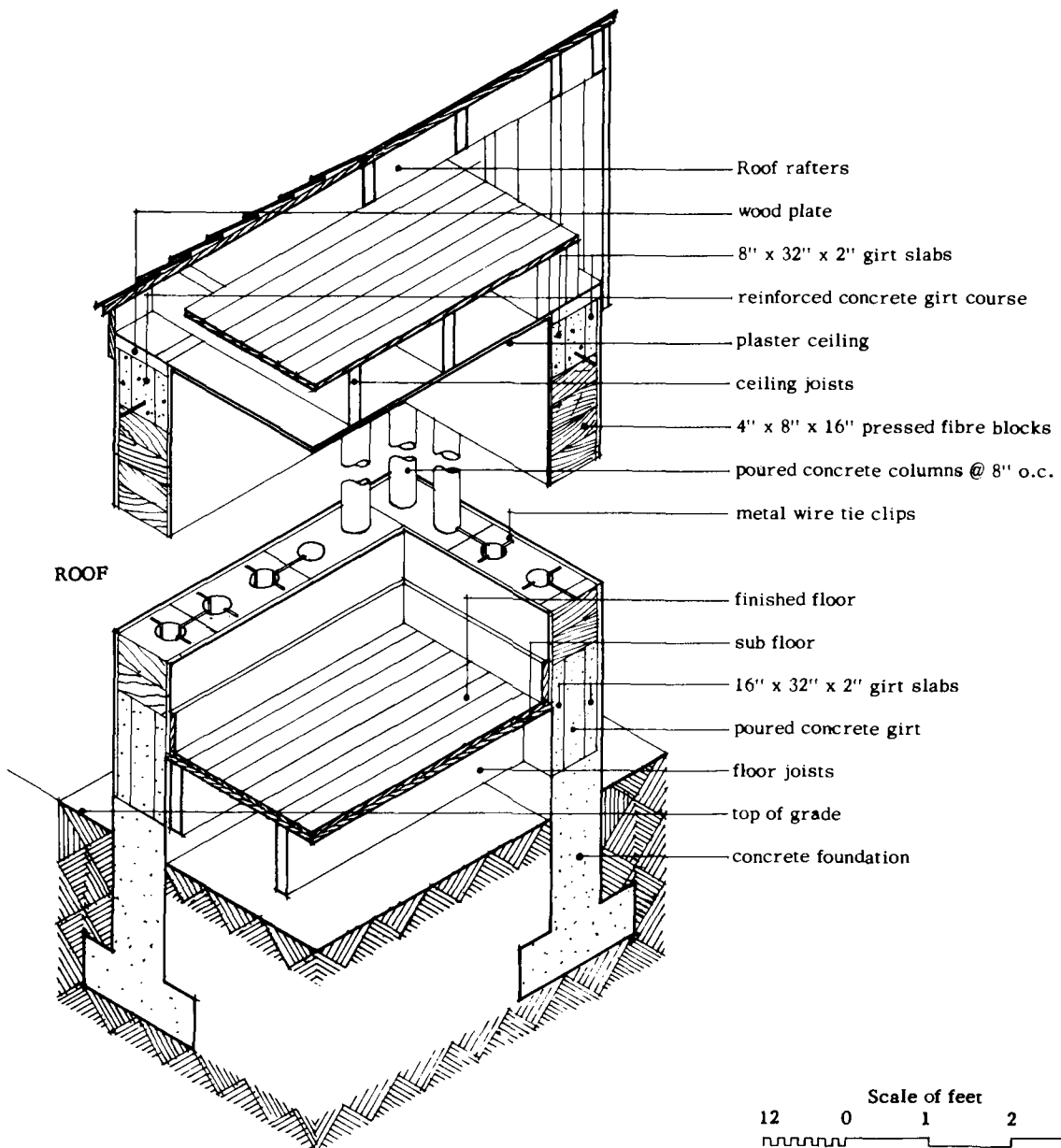


ROCKWOOD HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Rockwood Gypsum Lumber Corporation, New York, N.Y.
Date and Place of Origin.	2. U.S.A. Approximately 1936.
Materials Used.	3. Precast hollow gypsum units with reinforcing rods.
Description.	4. Wall: Hollow, precast gypsum units extending from floor to ceiling. Exterior walls are load bearing. A tongue and groove method is used for all vertical joints. Where required, steel reinforcing rods may be placed in vertical cells and concrete poured in. Base: Precast gypsum floor units with three rectangular full length cells are laid directly on a foundation. Reinforcing rods are laid in the cut-outs and concrete is poured in and graded over the units to form a rough floor slab. Any floor finish may be used.
Development to Date.	5. No longer in operation.
Comment.	6. -
References.	7. American Architect and Architecture September, 1936.



UNIT OF CONSTRUCTION

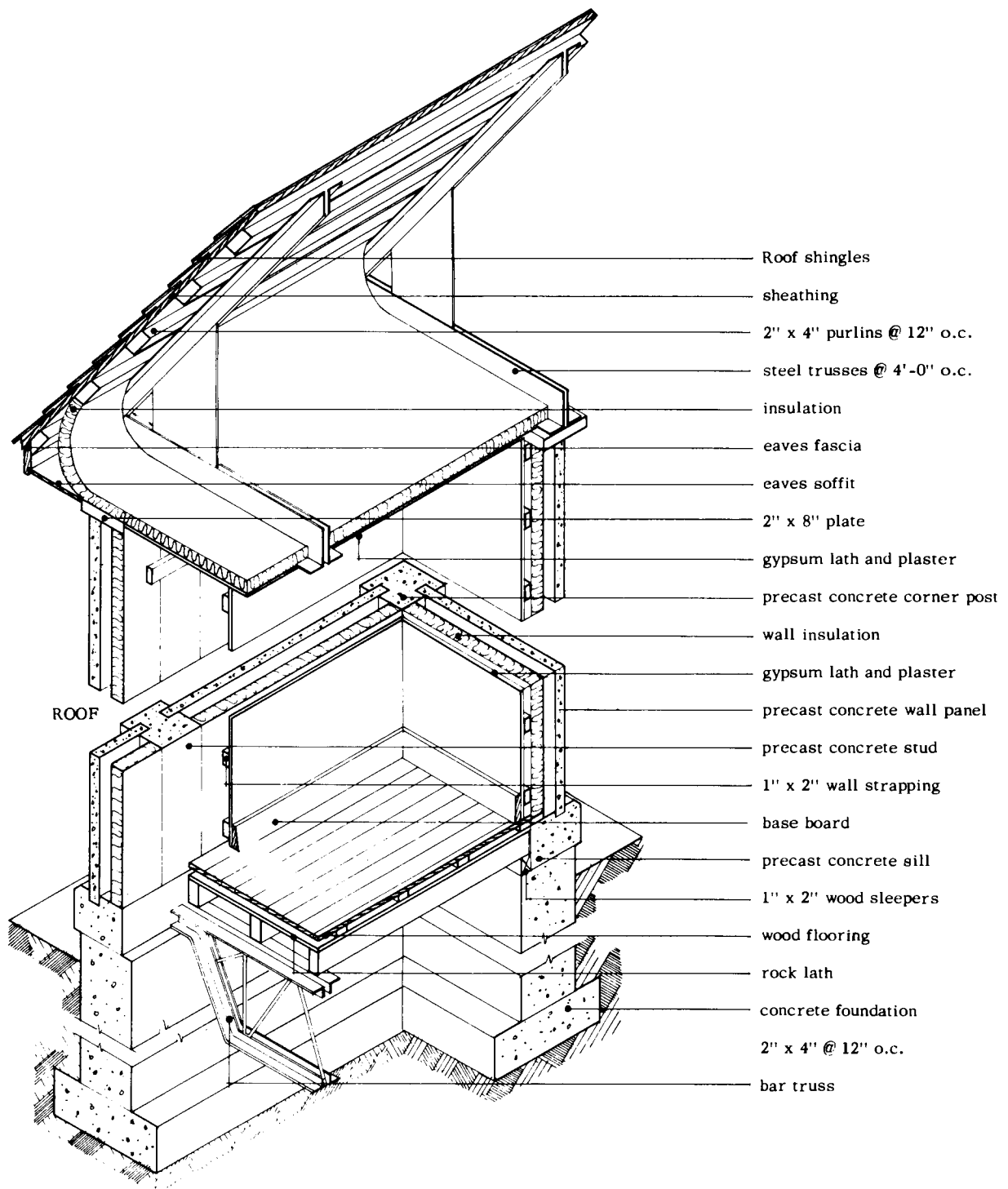


stockade house

December, 1958.

STOCKADE HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Stockade Building System, Inc., New York, N.Y.
Date and Place of Origin.	2. U.S. 1920.
Materials Used.	3. Wood fibre blocks and concrete fill.
Description.	4. A standard type of wood roof and floor construction is used in conjunction with this type of construction. Exterior is stuccoed, interior plastered.
Development to Date.	5. Many houses built in U.S. up to 1935.
Comment.	6. -
References.	7. American Architect and Architecture, September, 1936. "Evolving House III, Rational Design" A.F. Bemis.



ROOF

GROUND FLOOR AND FOUNDATION

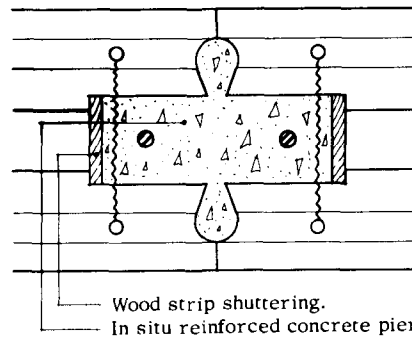
Scale of feet
12 0 1 2 3

swan house

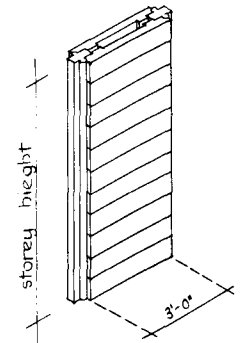
December, 1958.

SWAN HOUSE

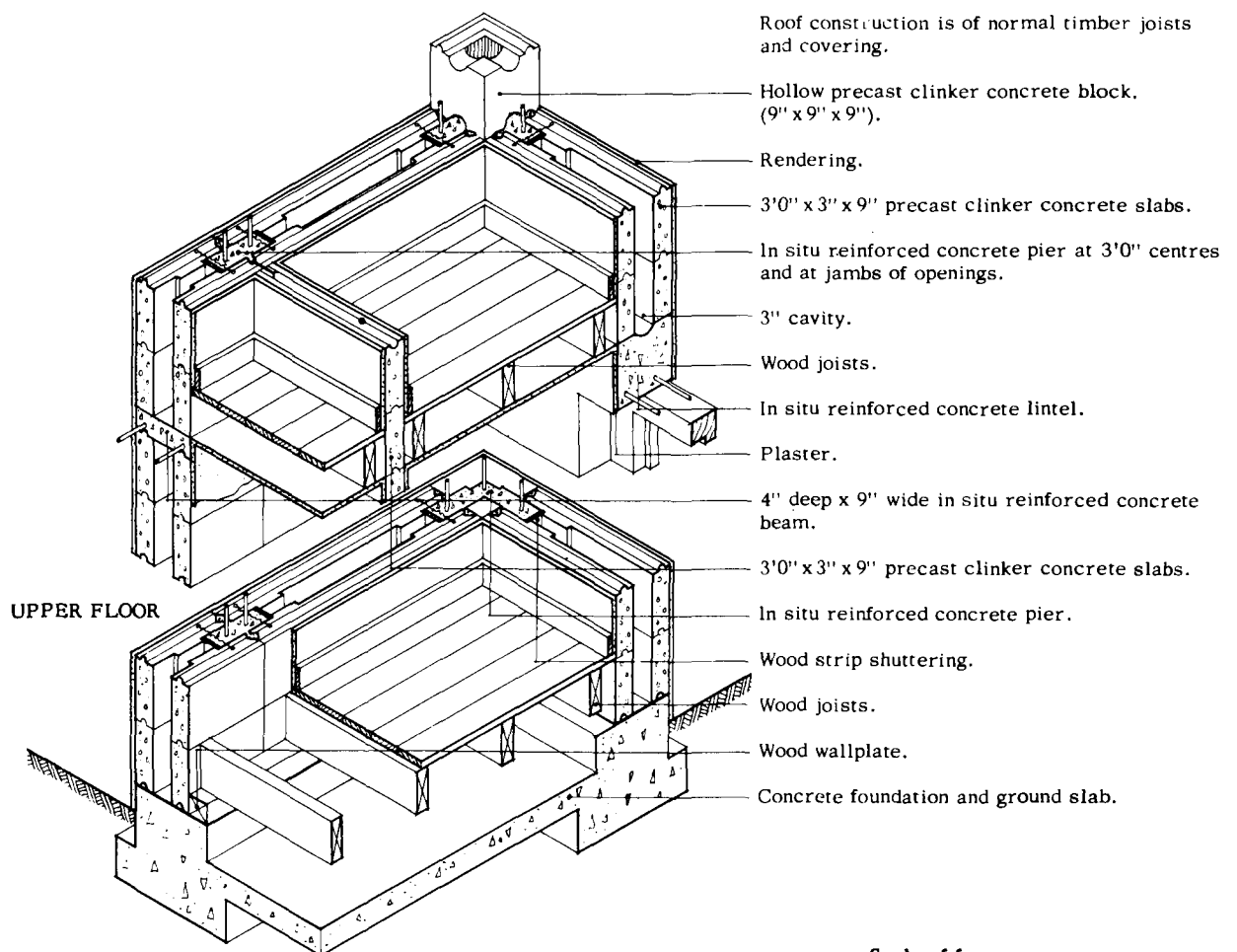
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. The Swan House, Inc., Chicago, Ill.
Date and Place of Origin.	2. U.S.A. Pre-1936.
Materials Used.	3. Concrete.
Description.	4. Interior finish may vary, no exterior finish is required. Foundations are conventional.
Development to Date.	5. -
Comment.	6. -
References.	7. American Architect and Architecture, September, 1936.



WALL UNIT JUNCTION

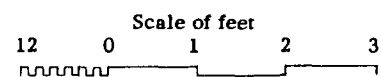


UNIT OF CONSTRUCTION



UPPER FLOOR

GROUND FLOOR AND FOUNDATION



winget house

December, 1958.

WINGET HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor: Winget, Ltd., Rochester, Kent, England.
Date and Place of Origin.	2. U.K., 1928.
Materials Used.	3. Poured reinforced concrete frame, clinker concrete panels.
Description.	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).
Development to Date.	5. 3,000 to 4,000 Houses in U.K. (1928-1931), for several municipal authorities.
Comment.	6. -
References.	7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.

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.

8
CM

CONCRETE MONOLITHIC

MONOLITHIC CONSTRUCTION

Sub-Classifications

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

Case Sheets

Aychar
Easiform House
Monolithic Concrete
Neff Airfoam

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,
Bouwmethoden,
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

Roorkee, 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 $3\frac{1}{2}'' \times 2''$ 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.

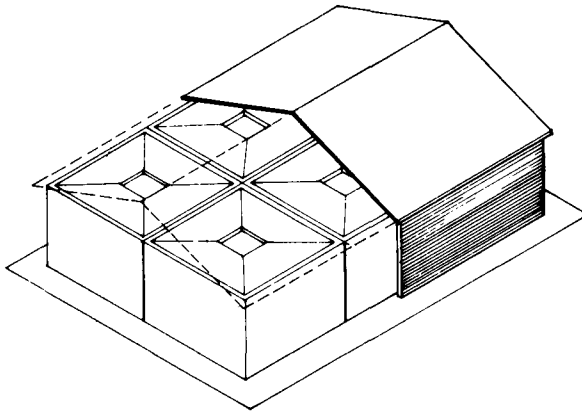
Neubauer p. 27,
Housing & T. C. P.
Bulletin No. 9. U. N.

RAMMED EARTH

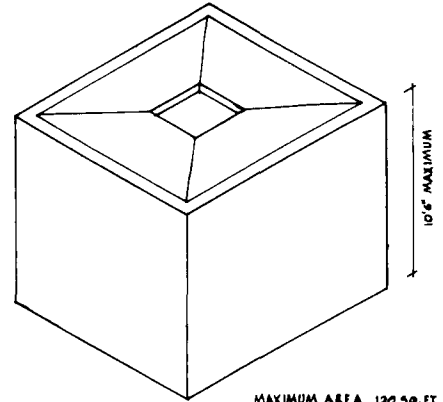
England.

English Cob.
Stiff mud placed without shuttering.

Neubauer,
Housing & T. C. P.
Bulletin No. 4. U. N.

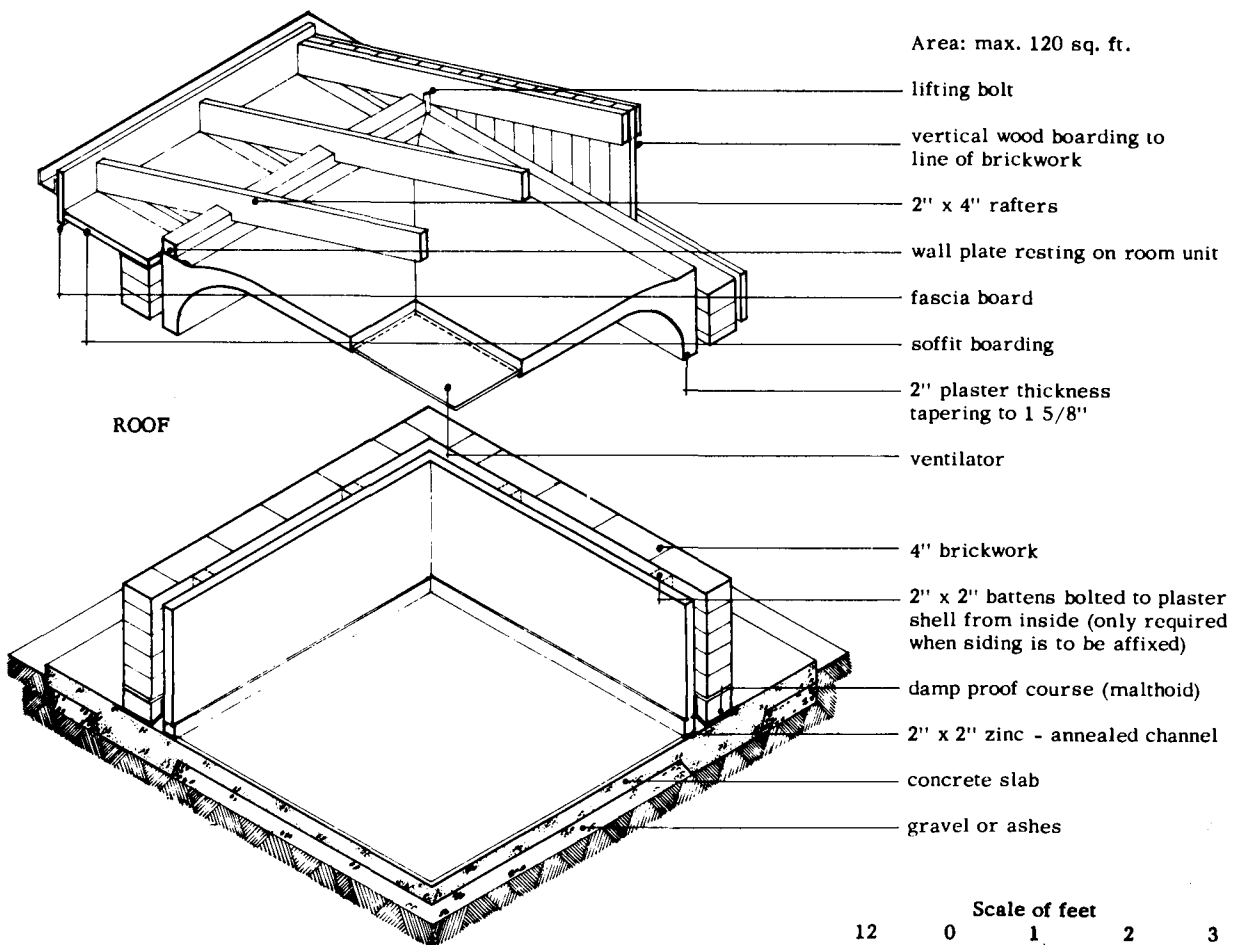


WHOLE HOUSE ASSEMBLY



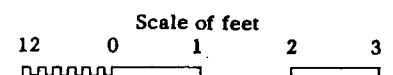
UNIT OF CONSTRUCTION

MAXIMUM AREA 120 sq. ft.



ROOF

GROUND FLOOR AND FOUNDATION

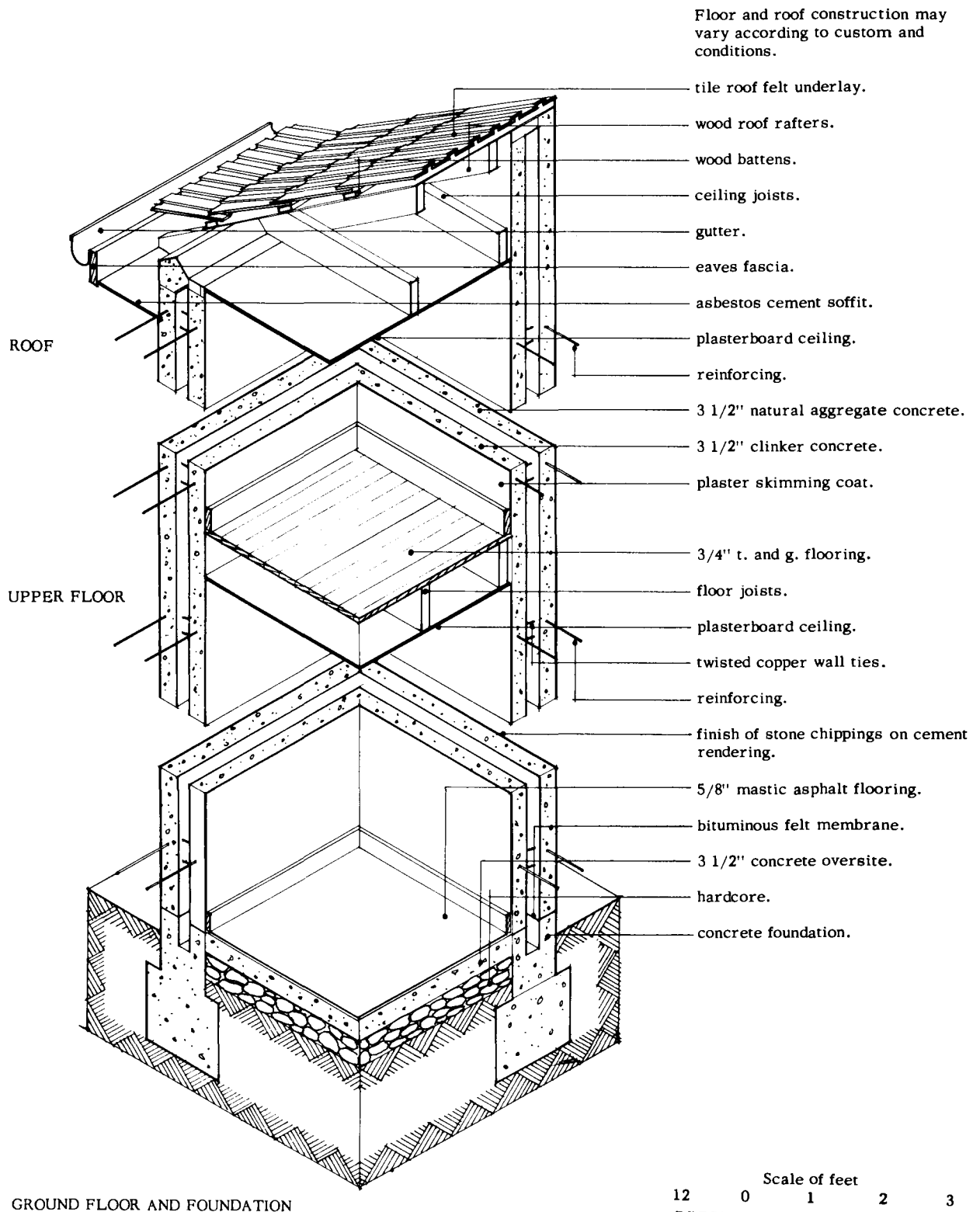


aychar

December, 1958.

AYCHAR PRECAST ROOMS

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Aychar Pty. Ltd., (originator: Bernard Evans) 5 Warrigal Road, Moorabbin, Victoria, Australia.
Date and Place of Origin.	2. Melbourne, Australia, 1945.
Materials Used.	3. Reinforced Gypsum Plaster. (2" minimum thickness).
Description.	4. Room units are cast in steel and concrete moulds at factory. Floor is prepared before delivery of room units. Units are strong enough to carry roof, cladding and own load, only.
Development to Date.	5. 25 buildings in Melbourne, Australia.
Comment.	6. Suitable only for 1 storey construction.
References.	7. Division of Building Research, Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia.

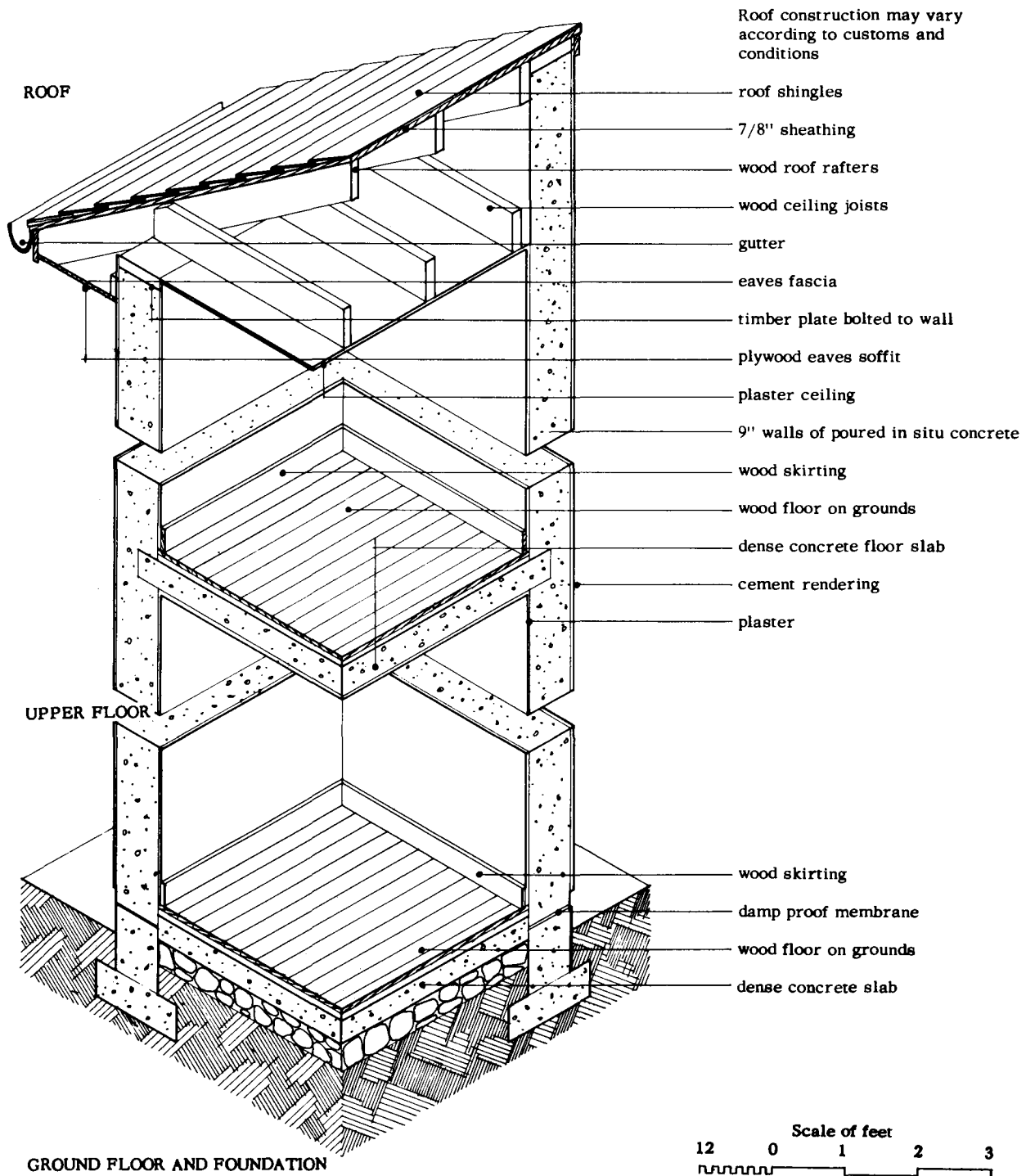


easiform house

December, 1958.

EASIFORM HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsors: J. Laing and Son Limited.
Date and Place of Origin.	2. Southern England about 1928.
Materials Used.	3. Reinforced concrete externally, clinker concrete internally.
Description.	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.
Development to Date.	5. -
Comment.	6. Boswell House is similar only with both walls in clinker concrete.
References.	7. "Post War Building Study No. 1", H.M. Stationery Office, London.

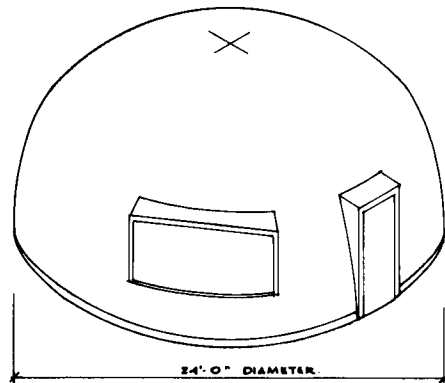


monolithic concrete

December, 1958.

MONOLITHIC CONCRETE

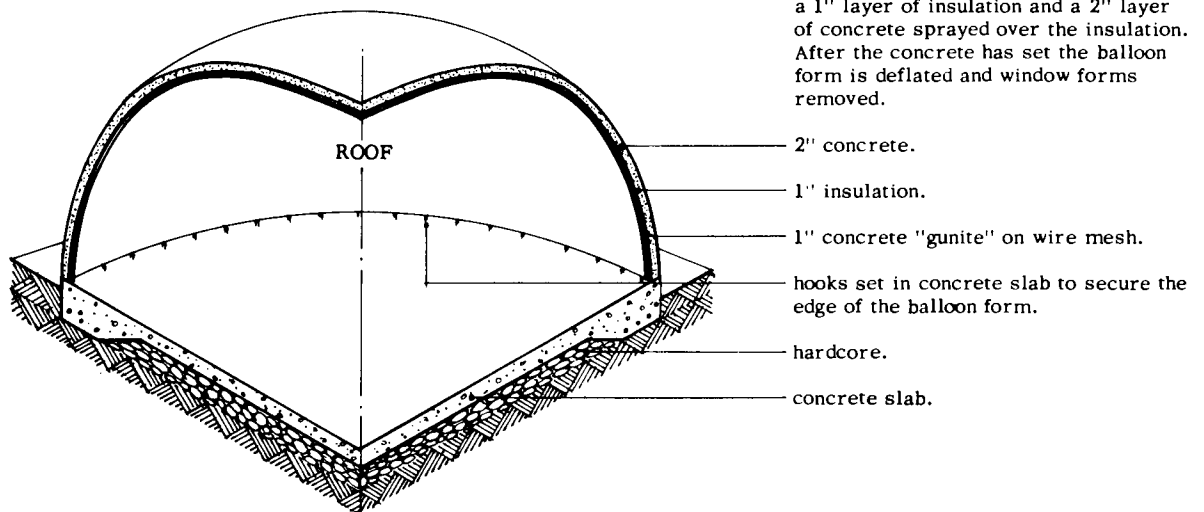
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. System used by several U.K. firms. Also used in Germany.
Date and Place of Origin.	2. U.K. 1920.
Materials Used.	3. Concrete.
Description.	4. Clinker concrete wall plastered both sides has $U=0.30$. "No-fines concrete" is concrete with no fine aggregate included (i.e. sand, etc.). Clinker whinstone gravel or blast furnace, coarse aggregate is used.
Development to Date.	5. Large number of dwellings in U.K. and elsewhere since 1930.
Comment.	6. This type of construction is used in conjunction with many varying types of roof and floor construction.
References.	7. "Post War Building Study No. 1", H.M. Stationery Office, London.



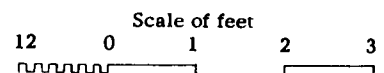
WHOLE HOUSE ASSEMBLY

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

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Wallace Neff, Architect, Hollywood, California, U.S.
Date and Place of Origin.	2. U.S. 1942.
Materials Used.	3. Concrete.
Description.	4. An inflated rubber half-balloon is blown up over a concrete slab on grade. Windows are placed against the form and a concrete and insulation sandwich poured producing a hemispherical shaped house.
Development to Date.	5. First developed at Falls Church, Virginia in 1942 and subsequently a variation of this in various parts of the world especially the tropics.
Comment.	6. -
References.	7. "Architectural Forum", 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,
Lafayette, Indiana,
U.S.A.

1957.

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. Frame-
less structural sandwich.

"Paper Industry",
May 1948.

PLASTIC HOUSE

Salon des Arts
Managers,
Paris, France..

"Chemistry &
Industry", 1956.
"Canadian Architect",
October 1956.

PORTABILT HOUSES

(Jamesway)
Francis Hughes &
Associates Limited,
4850 Amiens Street,
Montreal North, Quebec,
Canada.
also
51 James Street,
Ottawa, Ontario,
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.

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.

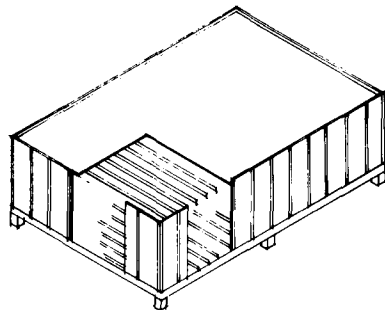
Utley-Lincoln System
Incorporated,
723 East New
Hampshire Avenue,
Royal Oak, Michigan,
U.S.A.

VINYLLITE

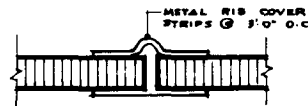
Anonymous (Panels
designed to demonstrate
Vinylite, a product of
Carbine & Carbon
Corporation),
U.S.A.

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.

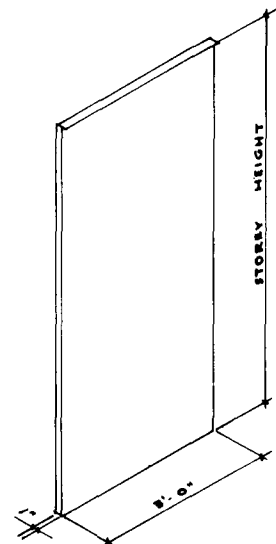
"The Evolving House
III, Rational Design",
(Bemis).



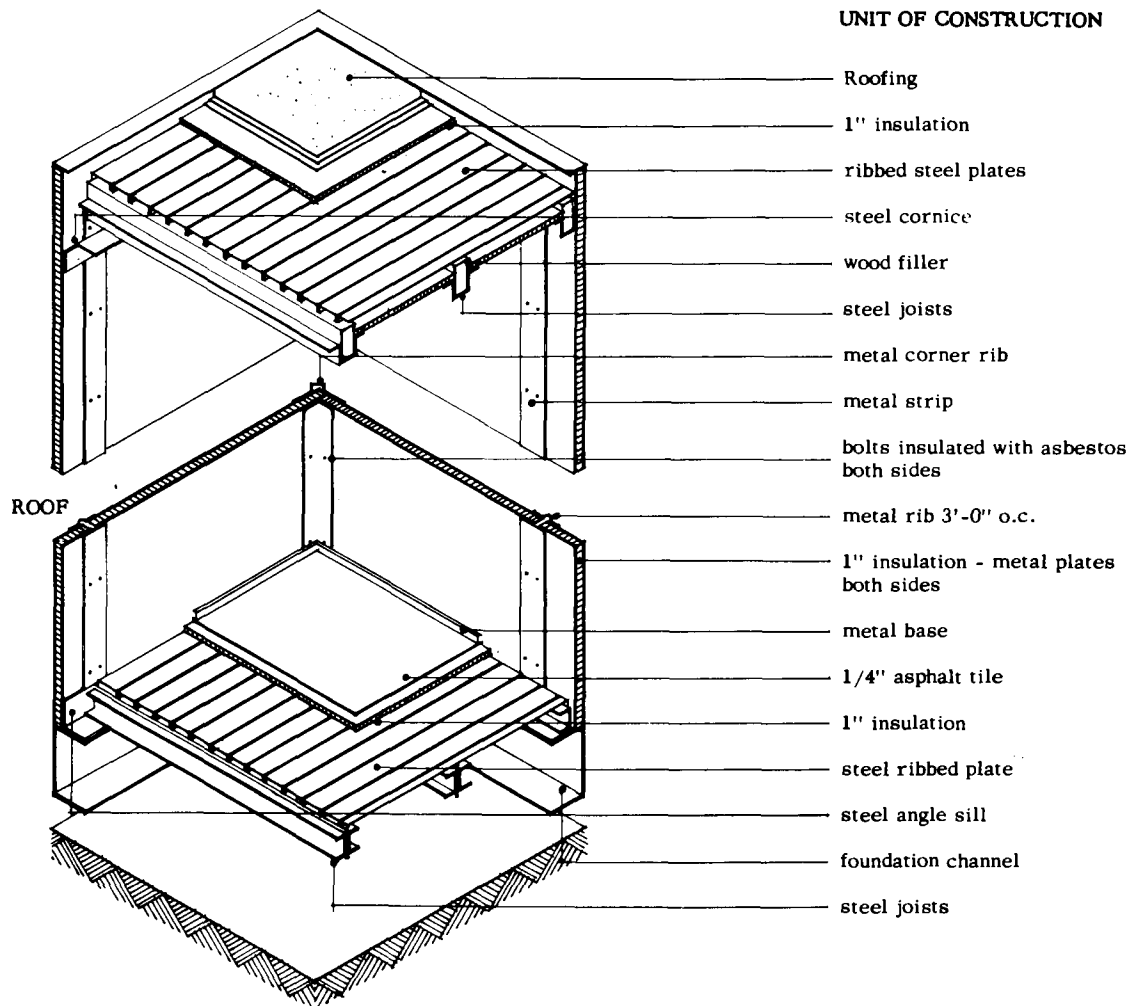
WHOLE HOUSE ASSEMBLY



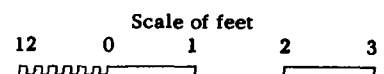
WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION

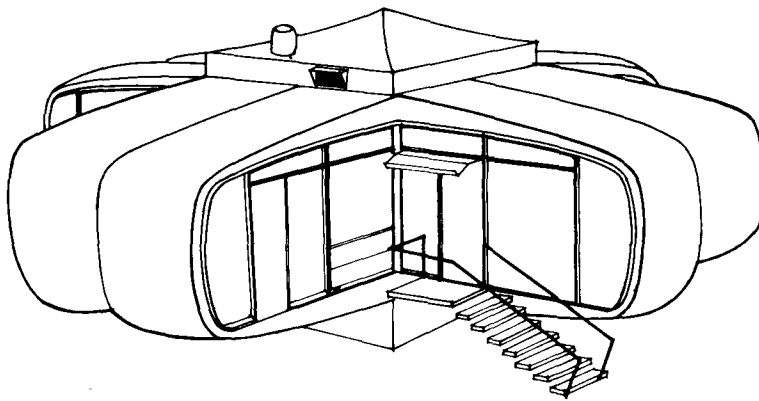


buell house

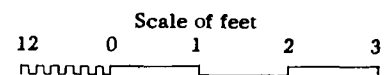
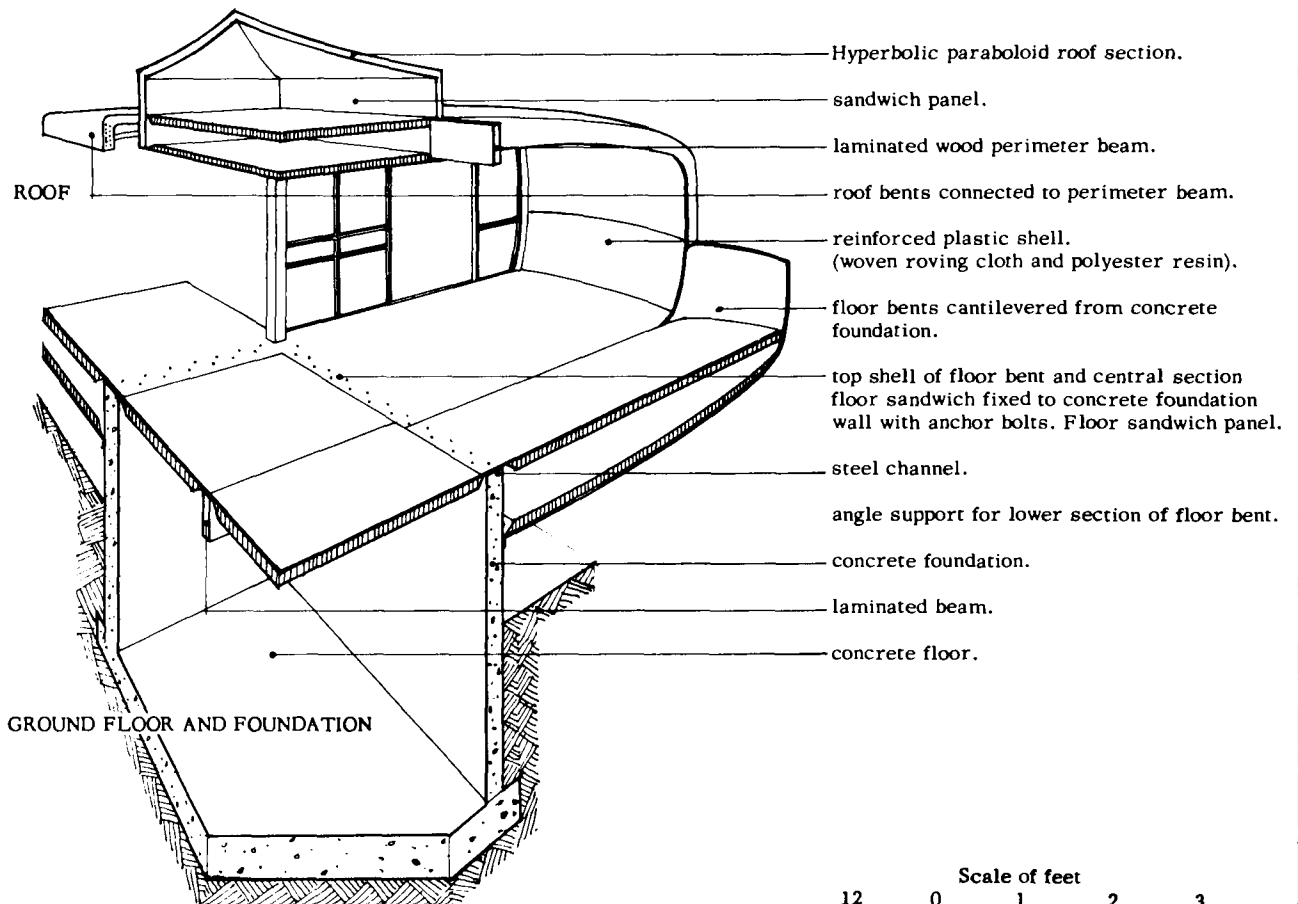
December, 1958.

BUELL HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. T.H. Buell and Co., Denver, Colo.
Date and Place of Origin.	2. U.S. Pre-1936.
Materials Used.	3. Metal.
Description.	4. House is entirely prefabricated in the style of an automobile. Sandwich panels are joined by metal ribs. Whole parcel is delivered in sections measuring 10'-0" x 19'-0" complete with fixtures. Weight is 3 lbs. per cu. ft.
Development to Date.	5. -
Comment.	6. -
References.	7. American Architect and Architecture, September, 1936. "The Evolving House, III - Rational Design.



WHOLE HOUSE ASSEMBLY

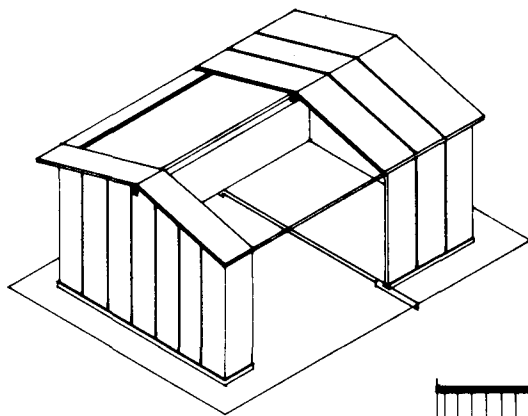


monsanto plastic house

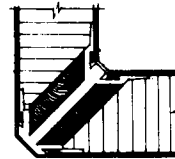
December, 1958.

MONSANTO PLASTIC HOUSE

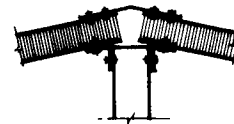
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Monsanto Chemical Company, 100 Monsanto Avenue, Springfield, 2, Massachusetts, U.S.
Date and Place of Origin.	2. Massachusetts Institute of Technology, 1957 U.S.
Materials Used.	3. Plastics.
Description.	4. Units are made up with a reinforced polyethylene glass fibre skins and a core of polyethylene foam and paper honey combs. The wings of the house act as cantilever beams supported from the central core.
Development to Date.	5. One experimental house built at Springfield, Massachusetts, and subsequently moved to Hollywood, California.
Comment.	6. This project was exploratory rather than an attempt at solving the housing problem.
References.	7. "Architectural Evolution and Engineering Analysis of a Plastics House of the Future", Massachusetts Institute of Technology.



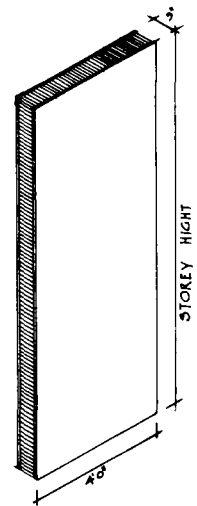
WHOLE HOUSE ASSEMBLY



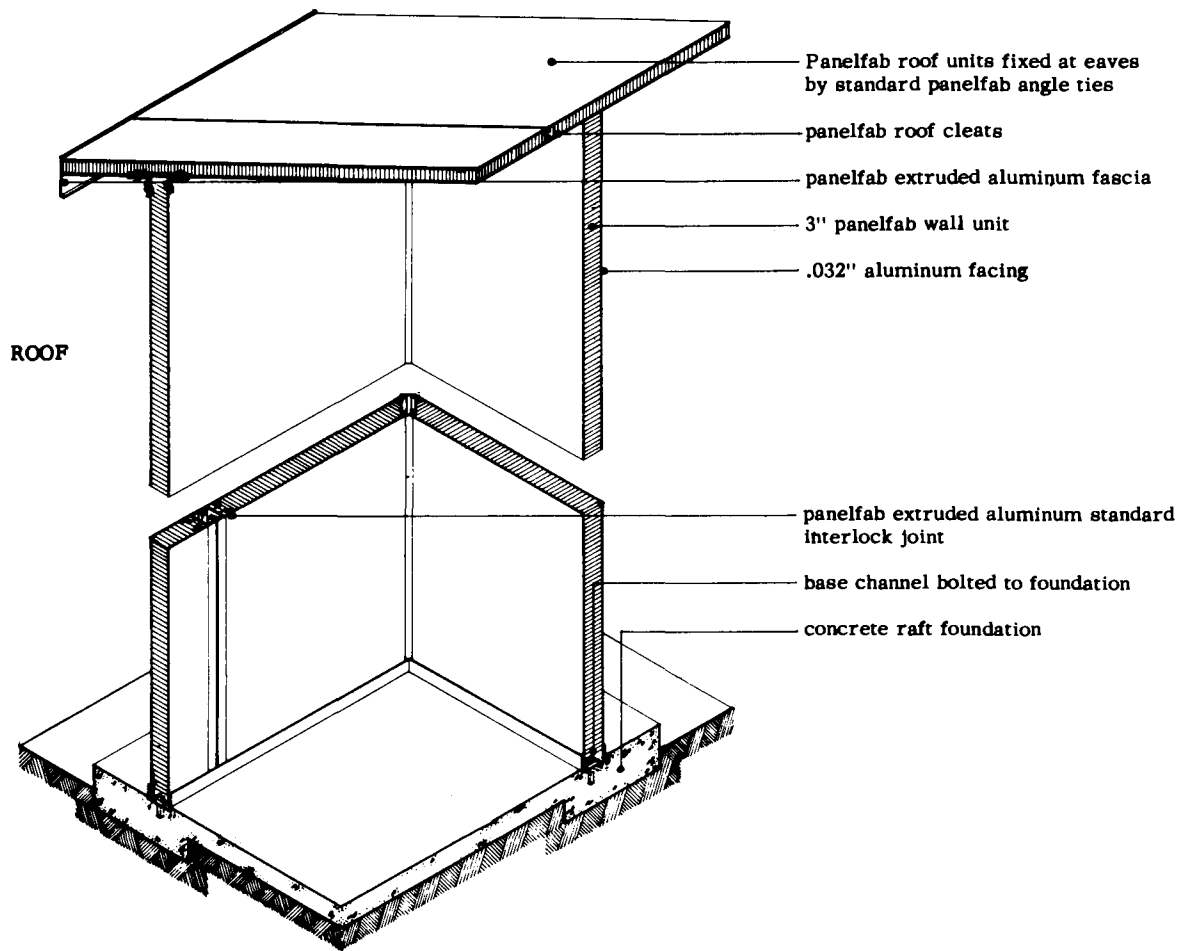
WALL UNIT JUNCTION



ROOF JUNCTION

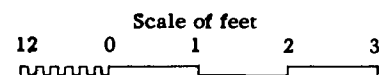


UNIT OF CONSTRUCTION



ROOF

GROUND FLOOR AND FOUNDATION

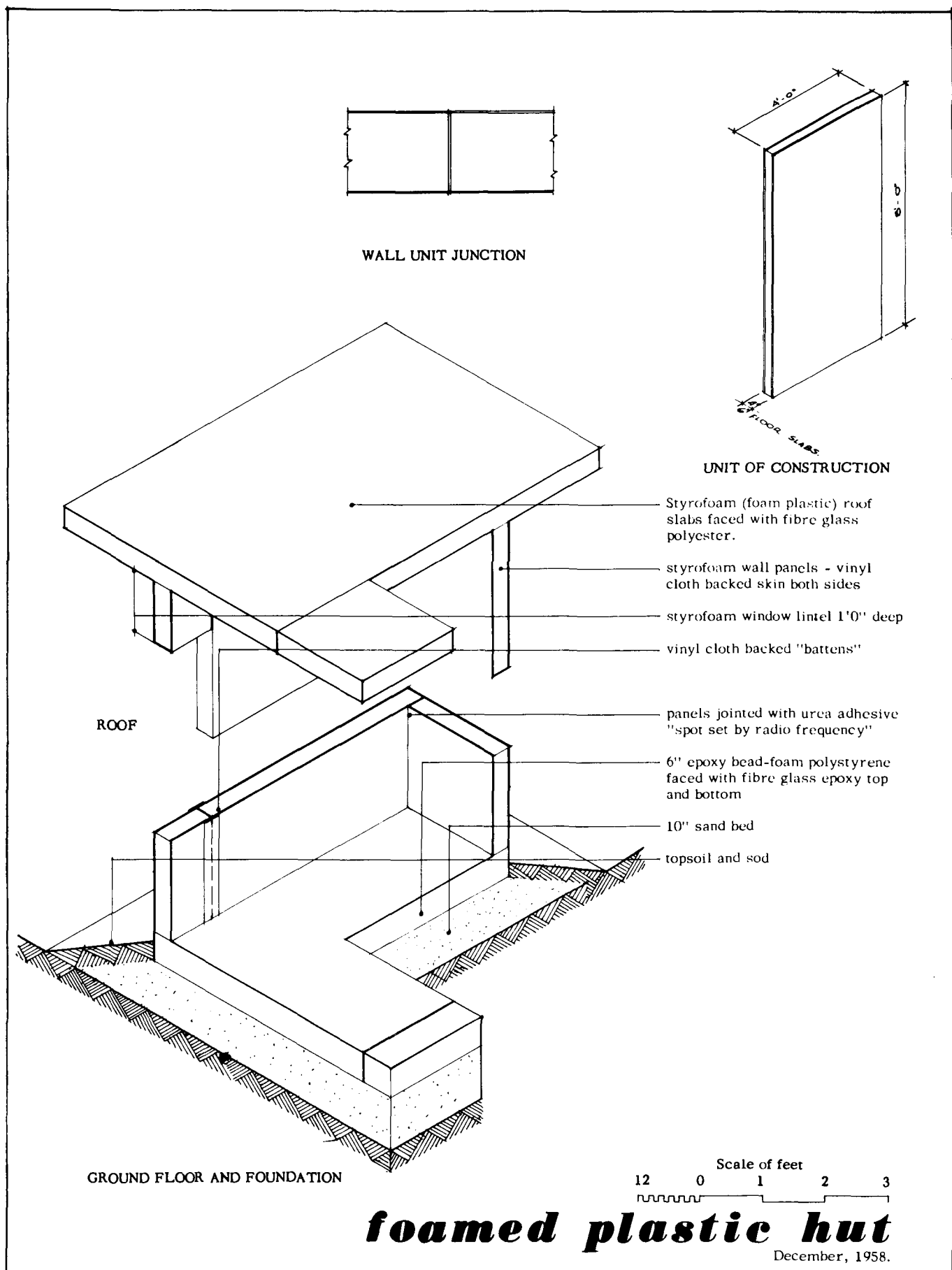


panelfab

December, 1958.

PANELFAB

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Panelfab Products Inc., 2000 N.E. 146th Street, North Miami, Florida.
Date and Place of Origin.	2. Florida, 1955.
Materials Used.	3. Phenolic impregnated Kraft honeycomb core with aluminum facing.
Description.	4. Panel joints are designed in such a way as to transmit stresses from one panel to the other thereby obviating any need for foaming. U= 0.17 (3" external wall panel). Joint has same U factor.
Development to Date.	5. Manufacturer alleges fair degree of use.
Comment.	6. This system is significant mainly for the jointing detail. Panels can be assembled in a variety of ways and for a variety of purposes.
References.	7. Sponsors' literature.



FOAMED PLASTIC HUT

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Central Mortgage and Housing Corporation, Ottawa, Ontario. National Research Council, Division of Building Research, Ottawa, Ontario.
Date and Place of Origin.	2. Ottawa, 1958.
Materials Used.	3. Expanded Polystyrene, Polyester with fibre glass reinforcing.
Description.	4. The floor panels 12' long x 4' wide x 6'' thick had plastic pipe embedded in them. The panels were assembled with an epoxy adhesive over the sand bed. A plastic pipe coupling with wire coiled around it was installed over the pipe ends and fused by the application of 6 volt D.C. after the assembly was completed. The wall and roof panels were assembled with a urea adhesive. Conventional wood window and door assemblies were installed in openings provided for them.
Development to Date.	5. One built for experimental purposes.
Comment.	6. -
References.	7. Central Mortgage and Housing Corporation, Ottawa, Ontario.

METAL STUD FRAMES

METAL STUD FRAMES

Sub-Classifications

Non Panelized Systems
Panelized Systems
Special Systems

Case Sheets

Birmingham Steel Frame
B.I.S.F. Steel Frame A
B.I.S.F. Steel Frame B
Harman
Hills Steel Frame House
Keyhouse Unibuilt
Lustron
Maison Phenix
Braithwaite Unit Frame
U.S. Steel Home

METAL STUD FRAME

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.

MSF

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.
Ruberoïd 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" con-
crete 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 rein-
forced 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.

**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.

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.

MSF

"Canadian Building
News", 1957.
"Canadian Builder",
October 1953.

Polynorm Companies,
Bunschoten, Holland.

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 cladding 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

MSF

VULKAN

Deutsche Schiffs &
Maschinenbau A.G.,
Vulkan Works,
Hamburg, Germany.

1927. Experimental houses
built. Steel frame, steel
sheeting. Lightweight in-
sulation, internally plastered.

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 Filled
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.

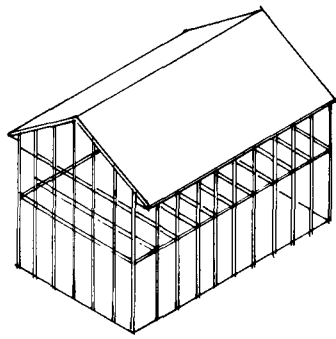
Nissen-Petren Limited,
England.

VOGEL & NOOT HOSZFELD

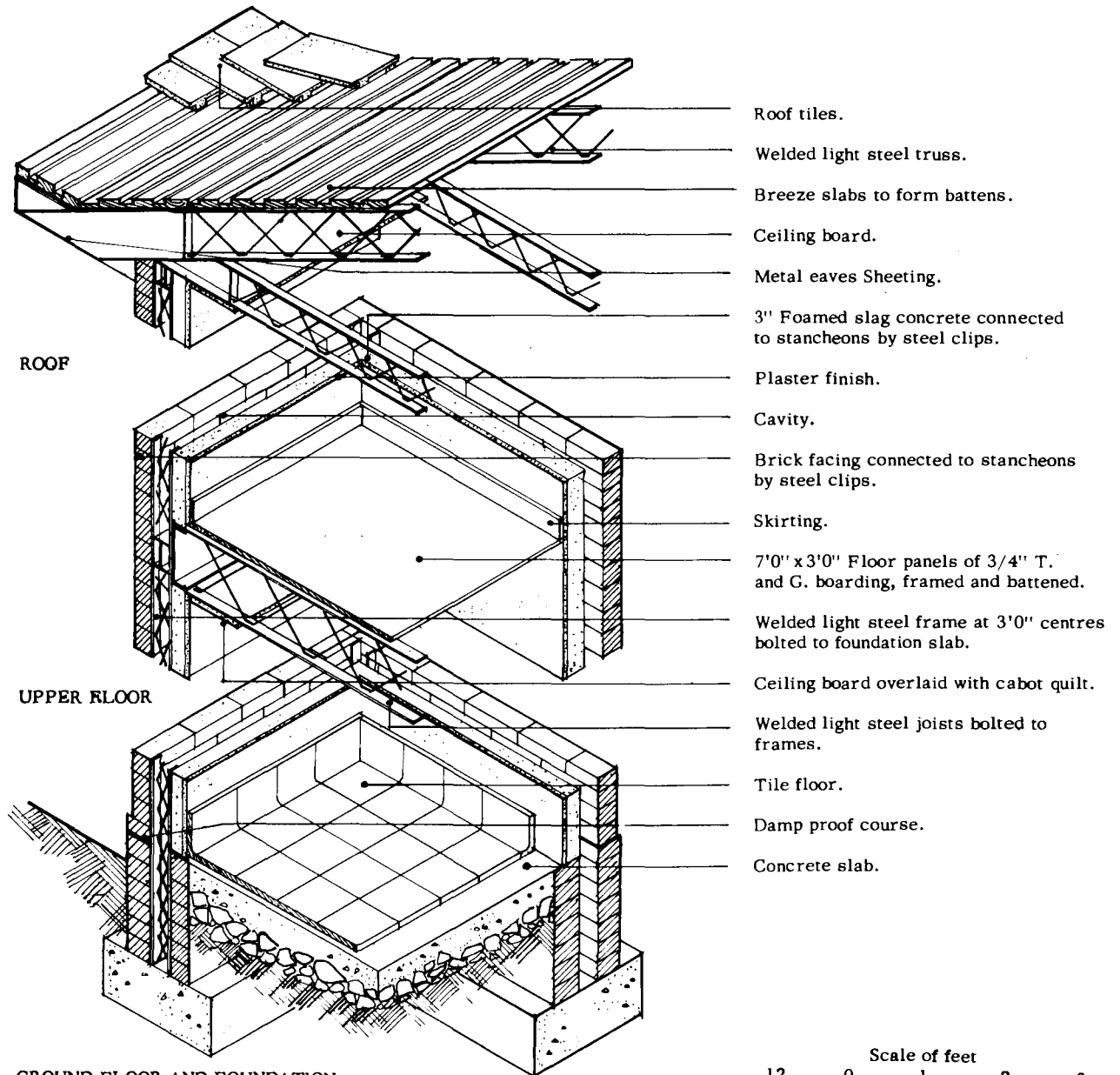
Vogel & Noot Company,
Vienna, Austria,
Prof. Josef Hoffmann,
Architect,
also
Sesam-Stahl-Siedlungsbau
D.R.P.
System Hoszfeld, Austria.

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



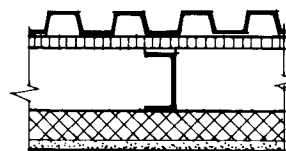
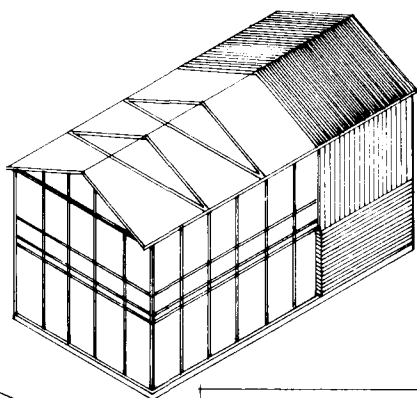
birmingham steel frame

December, 1958.

BIRMINGHAM CORPORATION HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Birmingham Corporation, England.
Date and Place of Origin.	2. Birmingham, 1946.
Materials Used.	3. Welded lattice steel frame, and brick and foamed slag.
Description.	4. Steel frame erected first to provide roof and floor to facilitate erection of wall panels. U= 0.24 (walls).
Development to Date.	5. -
Comment.	6. -
References.	7. Post War Building Study, No. 23, H.M. Stationery Office, London, England.

WHOLE HOUSE ASSEMBLY



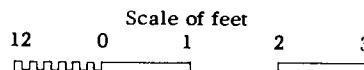
WALL UNIT JUNCTION

ROOF

UPPER FLOOR

GROUND FLOOR AND FOUNDATION

- 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.
- steel joist.
- steel angle.
- metal drip.
- 4 1/2" brickwork.
- vertical slate d.p.c.
- felt membrane.
- 2" screed.
- brickwork.

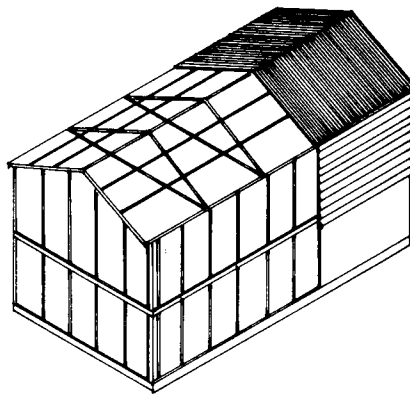


b.i.s.f. steel frame a

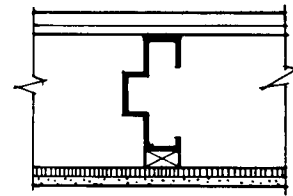
December, 1958.

B.I.S.F. STEEL FRAME "A"

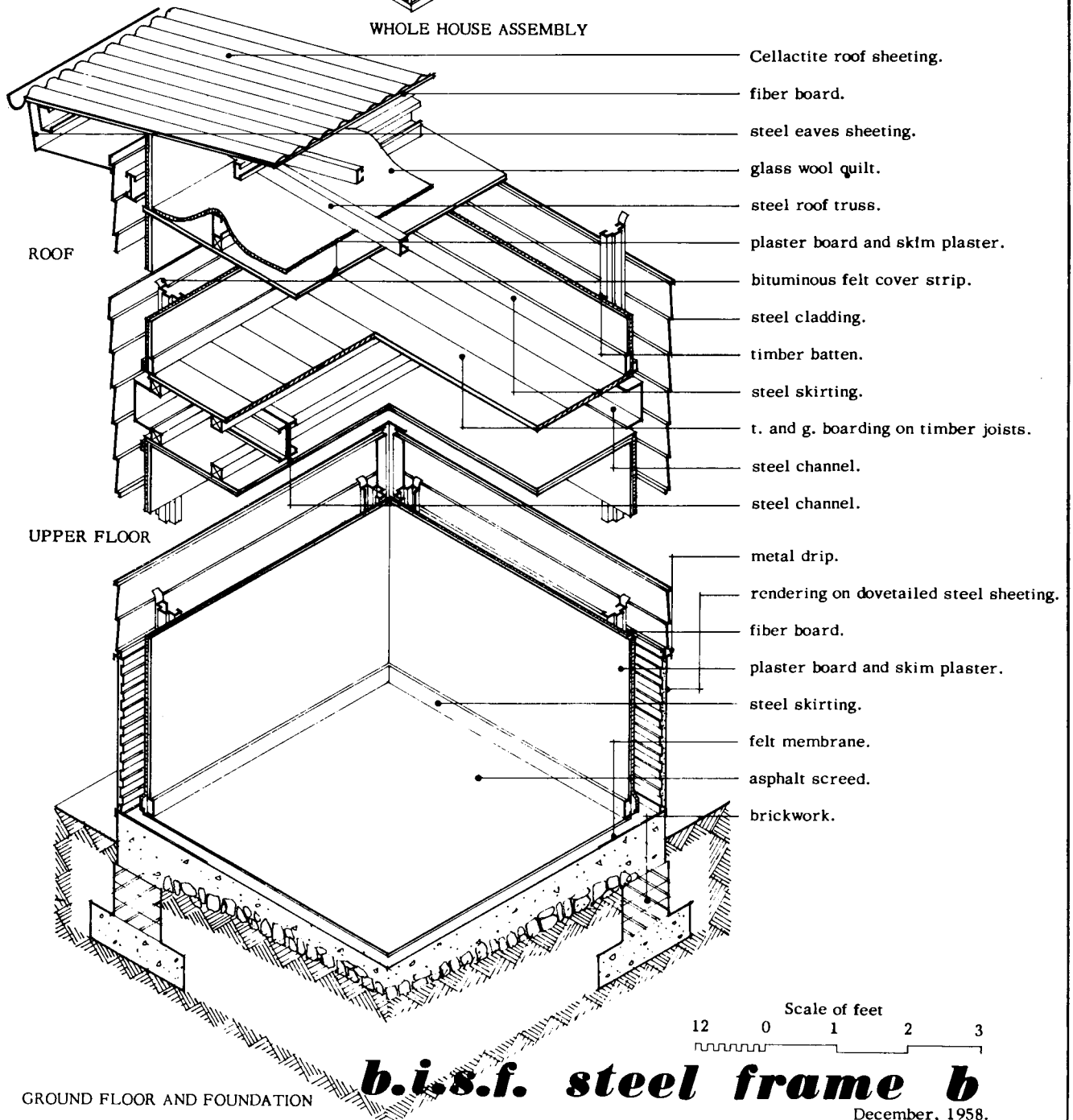
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor and Builder: British Iron and Steel Federation. Architect: Frederick Gibberd.
Date and Place of Origin.	2. Northolt, Middlesex, England 1946.
Materials Used.	3. Steel (hot rolled).
Description.	4. U=0.23 (walls). Steel Frame and Roof Trusses erected on site. Prefabricated cladding and insulation panels added. Rolled steel floor joists supported in interior by channel beam on tubular posts.
Development to Date.	5. -
Comment.	6. Ministry of Works, London.
References.	7. "Post War Building Study No. 23", H.M. Stationery Office, London.



WHOLE HOUSE ASSEMBLY



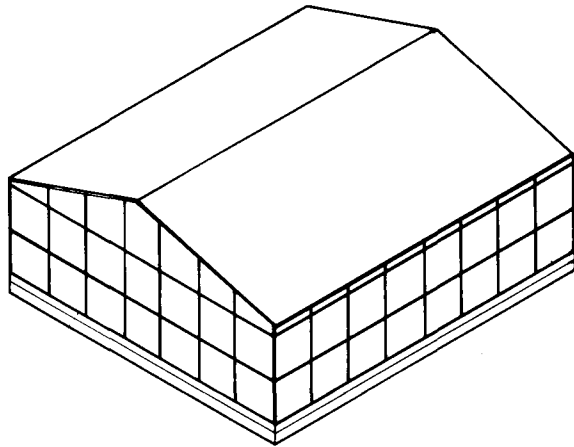
WALL UNIT JUNCTION



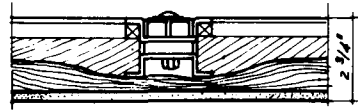
December, 1958.

B.I.S.F. STEEL FRAME "B"

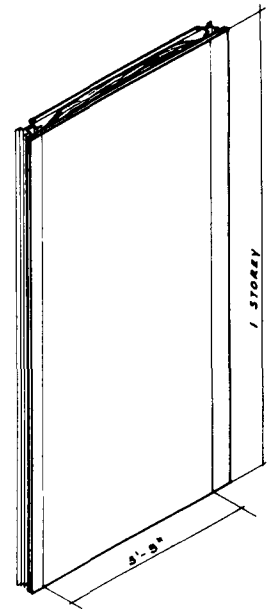
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor and Builder: British Iron and Steel Federation.
Date and Place of Origin.	2. Northolt, Middlesex, England 1946.
Materials Used.	3. Light gauge steel strip (cold formed).
Description.	4. U-0.27 (walls). Welded steel frames and trusses are erected on site, cladding and insulation added.
Development to Date.	5. -
Comment.	6. -
References.	7. "Post War Building Study No. 23", H.M. Stationery Office, London.



WHOLE HOUSE ASSEMBLY

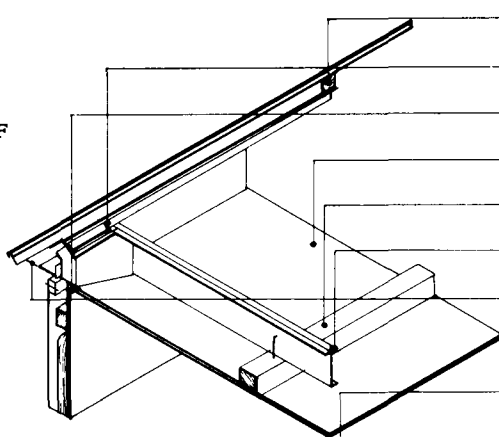


WALL UNIT JUNCTION

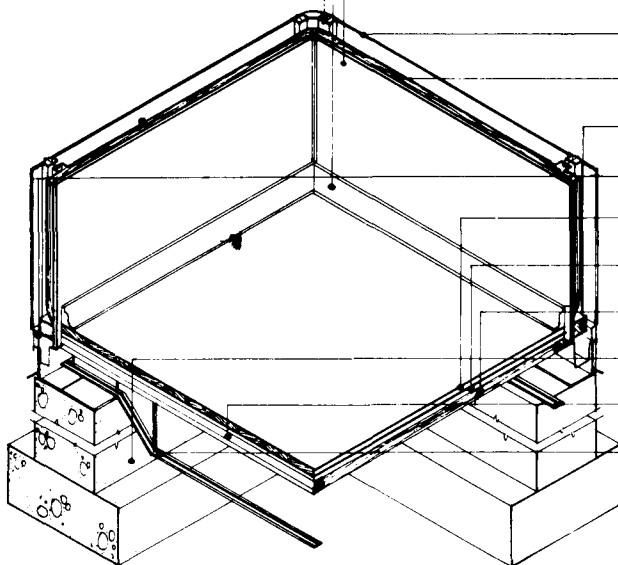


UNIT OF CONSTRUCTION

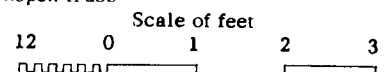
ROOF



- 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



GROUND FLOOR AND FOUNDATION

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.

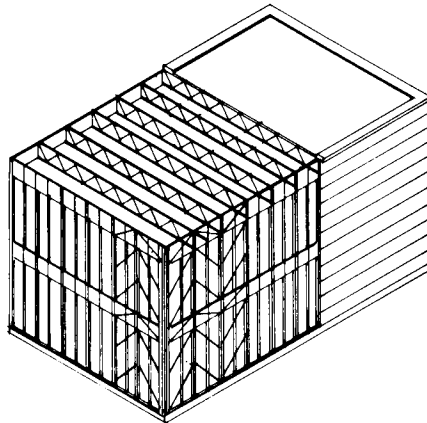
6. -

References.

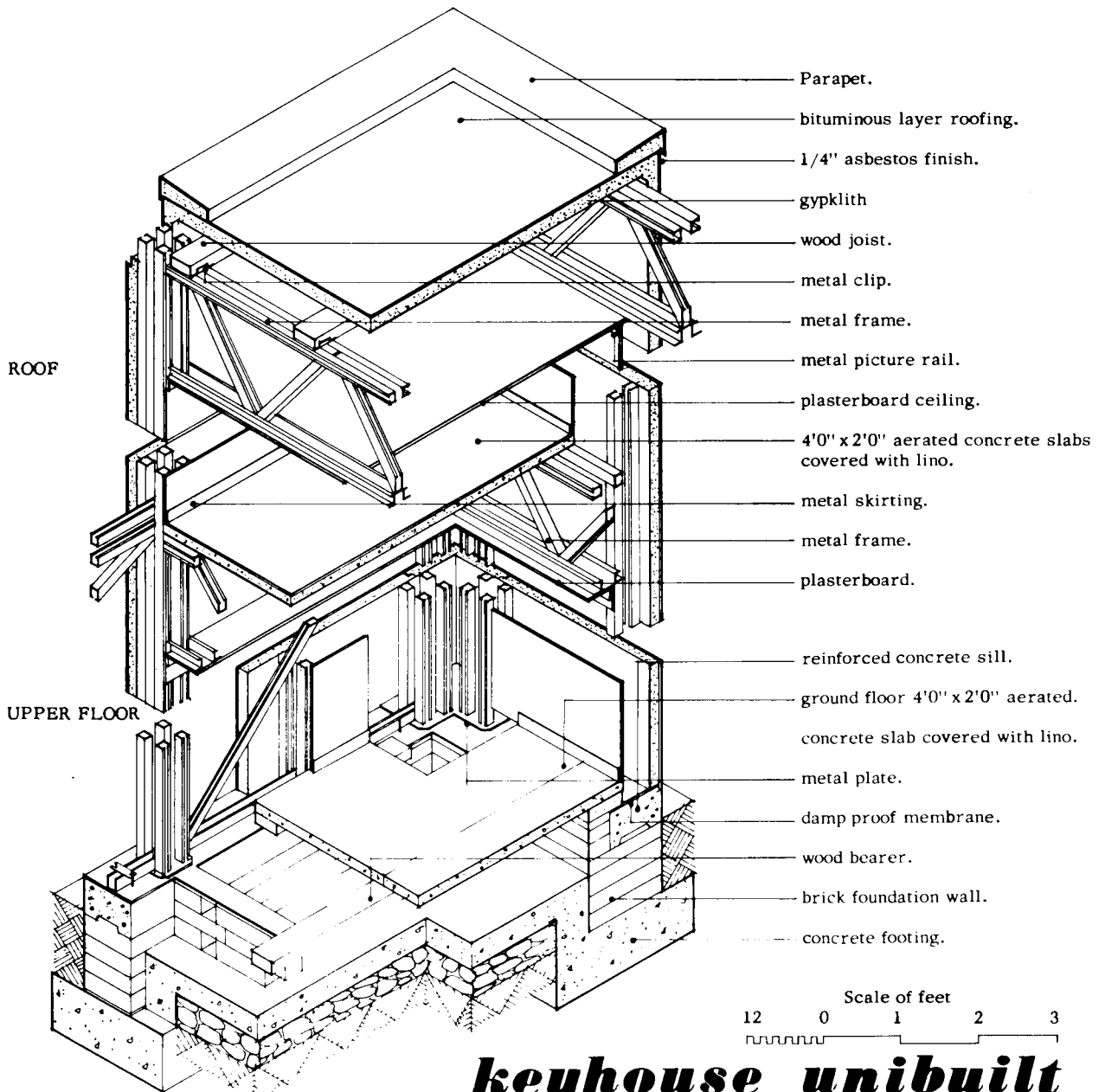
7. Architectural Forum January 1947.

HILLS CONCRETE CLAD HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Hills Patent Glazing Company, Ltd., Tottenham Court Road, London W.C. 1, England.
Date and Place of Origin.	2. London, England, 1945.
Materials Used.	3. Steel frame and concrete cladding.
Description.	4. According to insulation provided.
Development to Date.	5. Experimental house at Northolt, Middlesex, England.
Comment.	6. -
References.	7. "House Out of Factory" John Gloog and Grey Wornum 1946, London, England.



WHOLE HOUSE ASSEMBLY



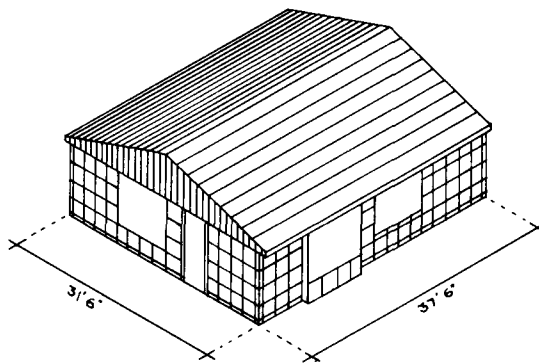
GROUND FLOOR AND FOUNDATION

keyhouse unibuilt

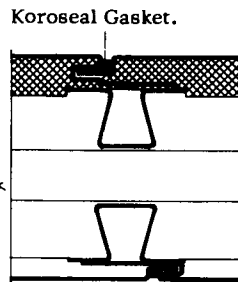
December, 1958.

KEYHOUSE UNIBUILT

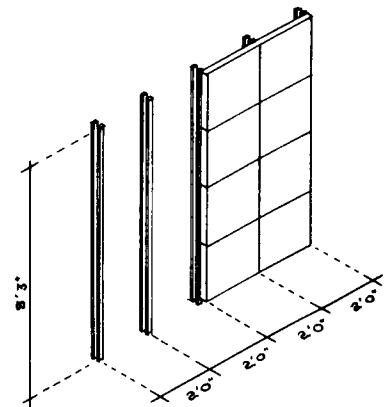
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor: Gyproc Products, Brockhouse and Co. Limited, J. Sankey and Sons Limited.
Date and Place of Origin.	2. Coventry, England 1945.
Materials Used.	3. Cold rolled strip welded steel frames.
Description.	4. A two storey construction. Frames, facings and insulation are clipped on in situ. Floors supported on 20 in. girders. Cladding joints mastic caulked.
Development to Date.	5. -
Comment.	6. Ministry of Works.
References.	7. "Post War Building Study No. 23", H.M. Stationery Office, London, England.



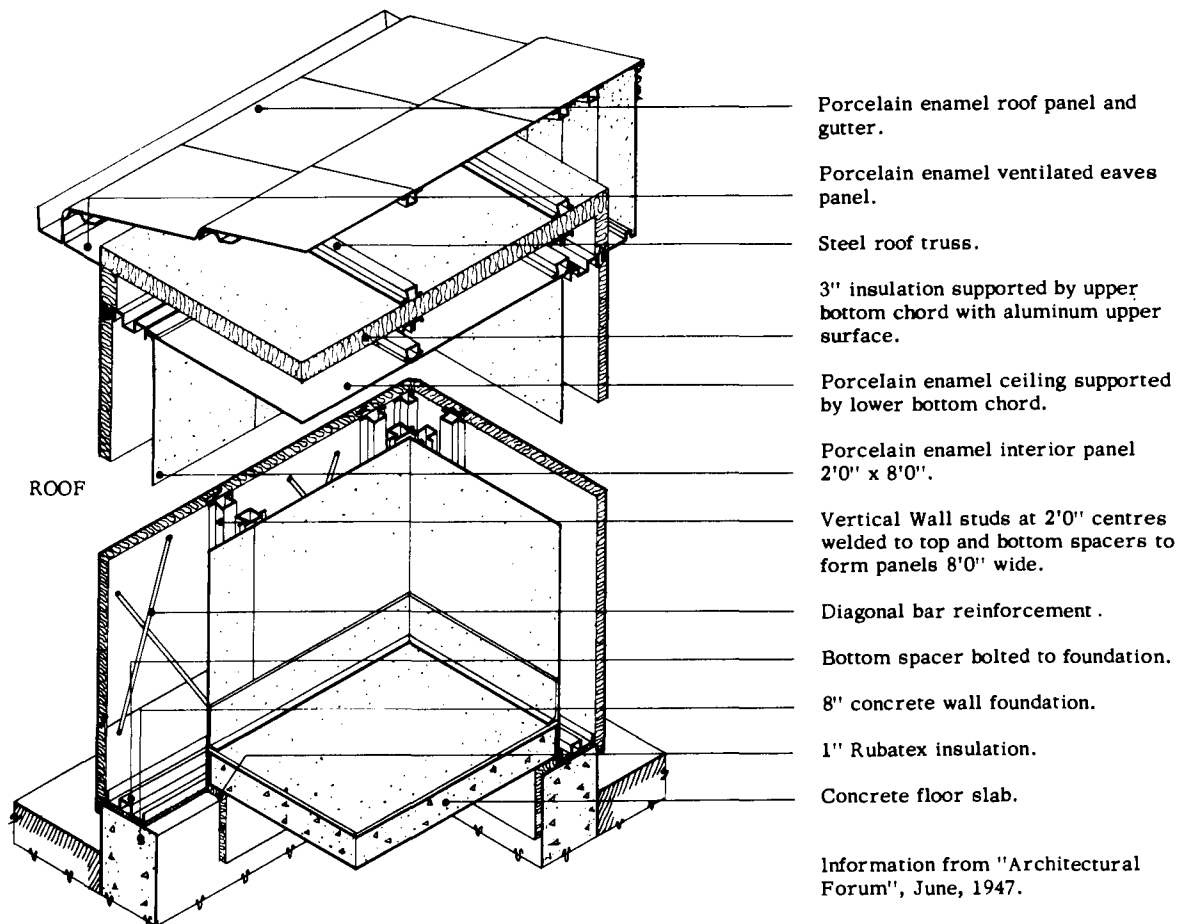
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



Scale of feet
12 0 1 2 3

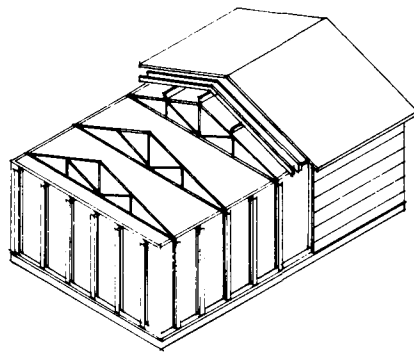
Information from "Architectural Forum", June, 1947.

lustron

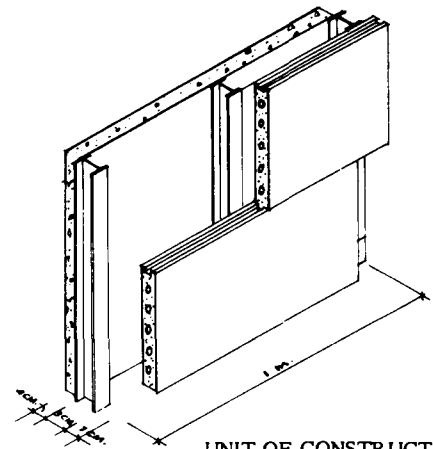
February, 1958.

LUSTRON

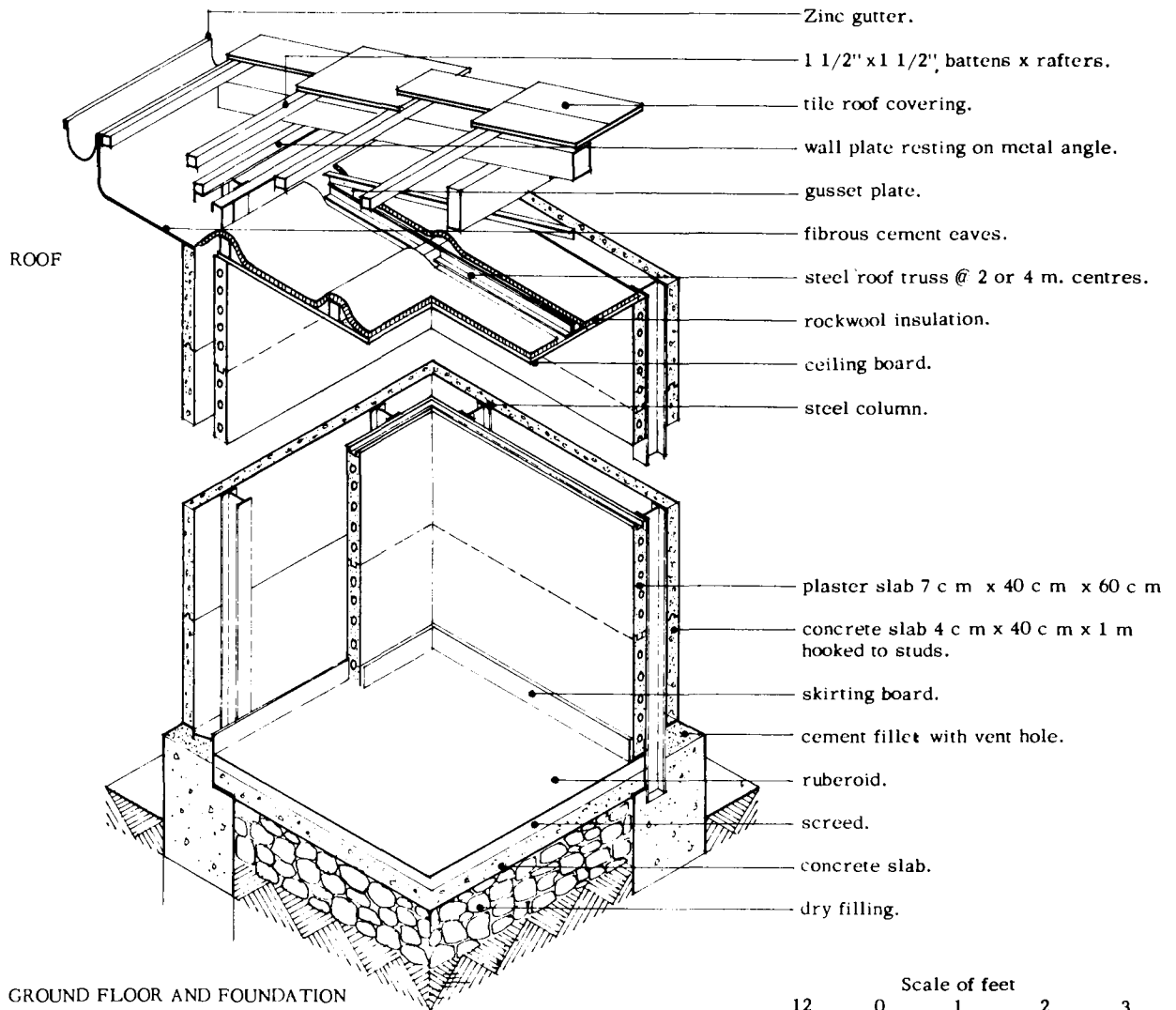
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Lustron Corporation, Columbus, Ohio. affiliate: Chicago Vitreous Enamel Product Company.
Date and Place of Origin.	2. Ohio, 1947. Production stopped 1950.
Materials Used.	3. Steel and Porcelain Enamel.
Description.	4. Delivered as a whole house unit made in the factory, complete except for foundation and floors, electrical conduit and pipe. Wall and roof frames and trusses are delivered ready welded.
Development to Date.	5. 2,000 houses produced, 1947 to 1950.
Comment.	6. Production was stopped in 1950 due to financial difficulties.
References.	7. "Prefabrication of Houses" p. 224 by Burnham Kelly, publ. John Wiley Fortune, Nov. 1949. Business Week, 25 Feb. 1950, 21 July 1951.



WHOLE HOUSE ASSEMBLY

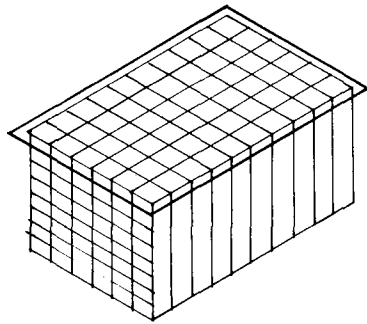


UNIT OF CONSTRUCTION

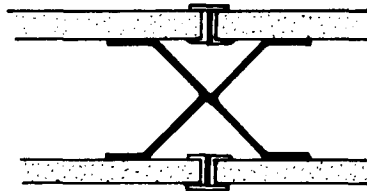


MAISON PHENIX

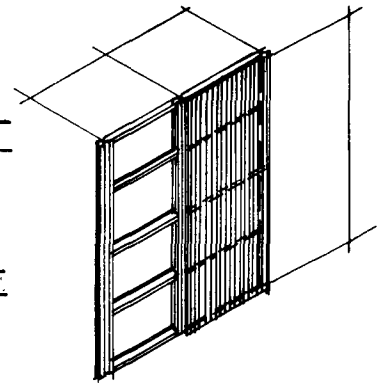
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Soc. des Maisons Phenix, 10 Rue Pergolese, Paris (16e) France.
Date and Place of Origin.	2. France 1945.
Materials Used.	3. Steel frame, steel windows and plaster slabs.
Description.	4. -
Development to Date.	5. 5,000 houses in France.
Comment.	6. -
References.	7. Centre Scientifique et Technique du Batiment, Bulletin No. A390, Paris, France.



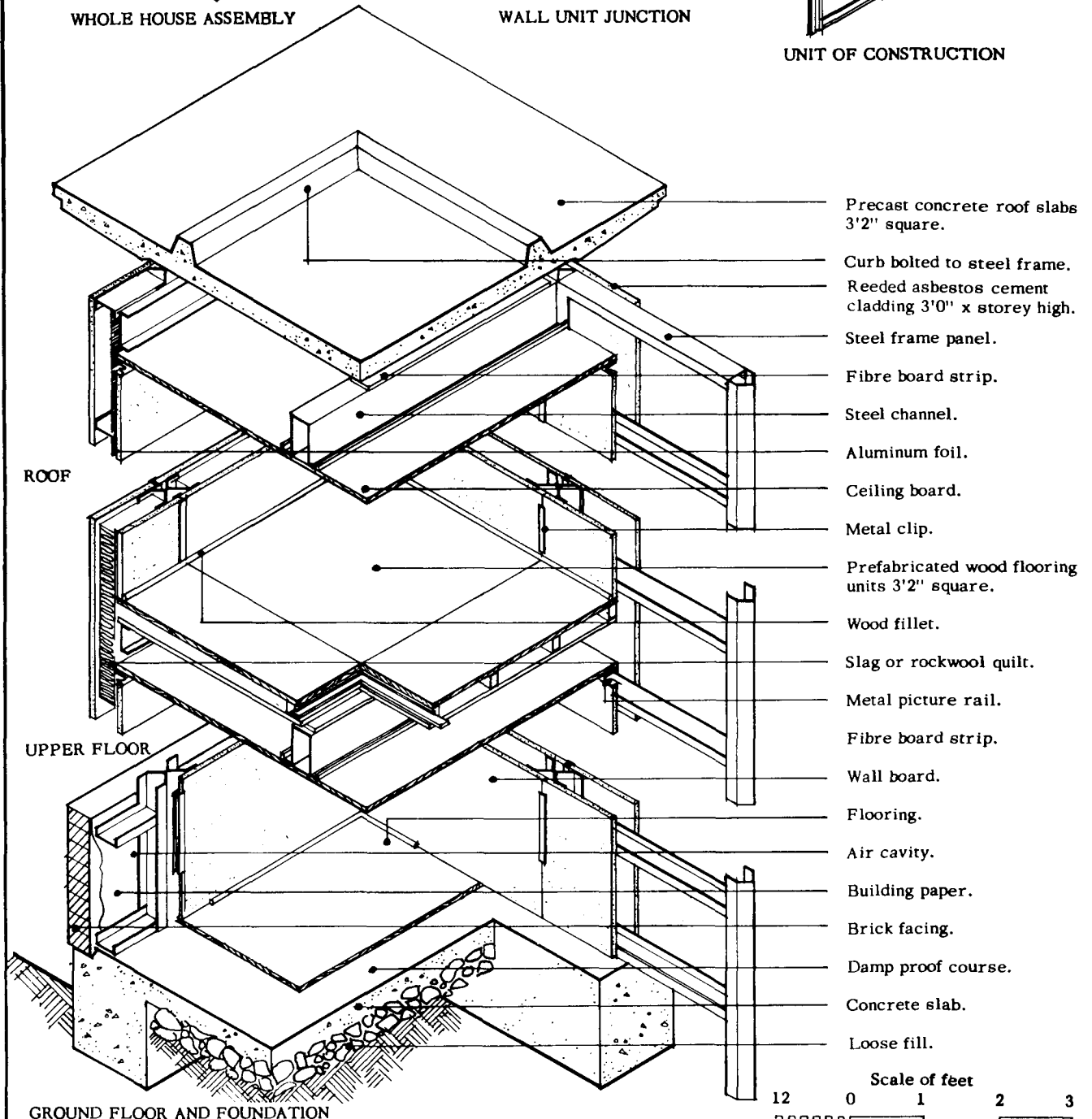
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION

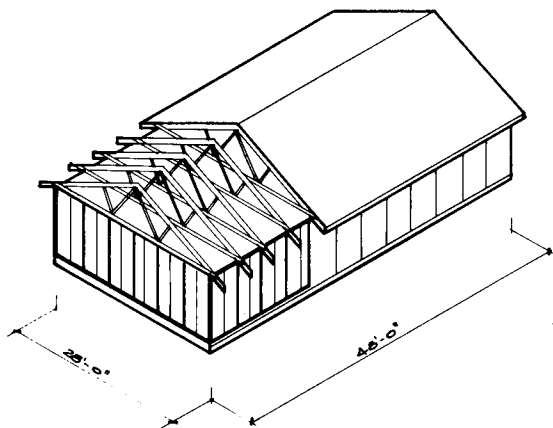


braithwaite unit frame

December, 1958.

BRAITHWAITE UNIT FRAME

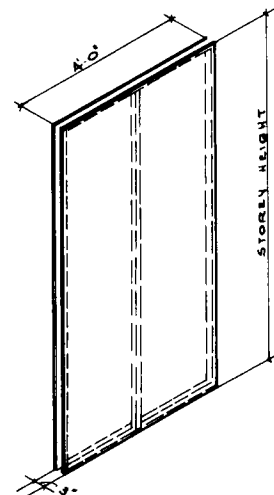
Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Braithwaite and Co., Ltd., Engineers.
Date and Place of Origin.	2. Burnt Oak, Middlesex, England, 1946.
Materials Used.	3. Cold rolled strip steel (frames only).
Description.	4. Two storey steel units, 3'2" or 6'4" wide 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.
Development to Date.	5. -
Comment.	6. -
References.	7. Post War Building Study, No. 23, H.M. Stationery Office, London, England.



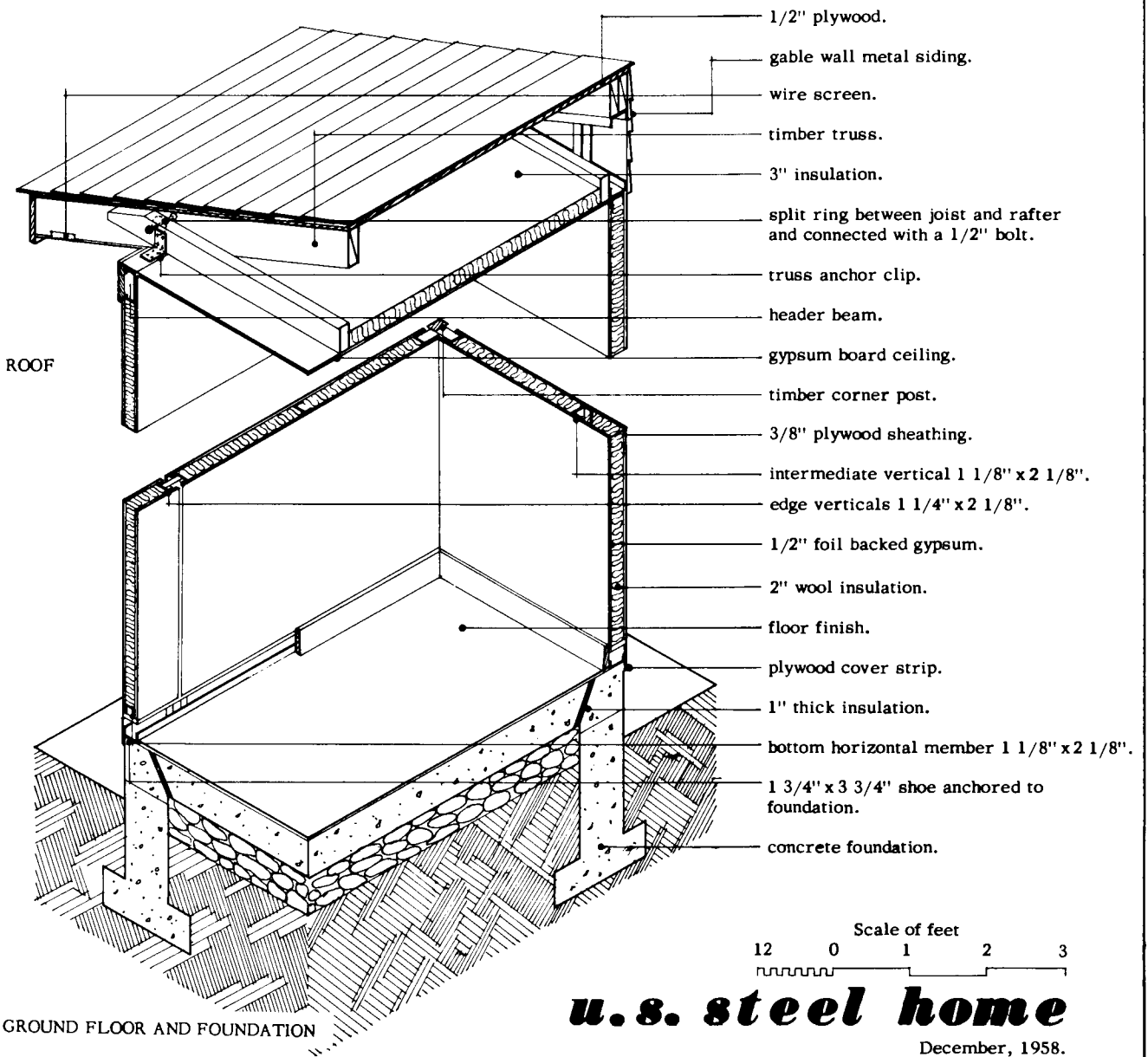
WHOLE HOUSE ASSEMBLY



WALL UNIT JUNCTION



UNIT OF CONSTRUCTION



UNITED STATES STEEL HOMES

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. U.S. Steel Homes, Frick Building, Pittsburg, Pennsylvania.
Date and Place of Origin.	2. United States 1938.
Materials Used.	3. Steel plywood and gypsum board.
Description.	4. -
Development to Date.	5. Considerable number of houses in U.S.
Comment.	6. Suitable only for one storey structures.
References.	7. F.H.A. Engineering Bulletin No. SE206.

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

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.

MPB

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

MPB

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.

M.O.W. Survey of
Prefabrication.
H. Spiegel, Der
Stahlhausbau, 1926.
"Baugilde", 1929.

WEEK END HOUSE

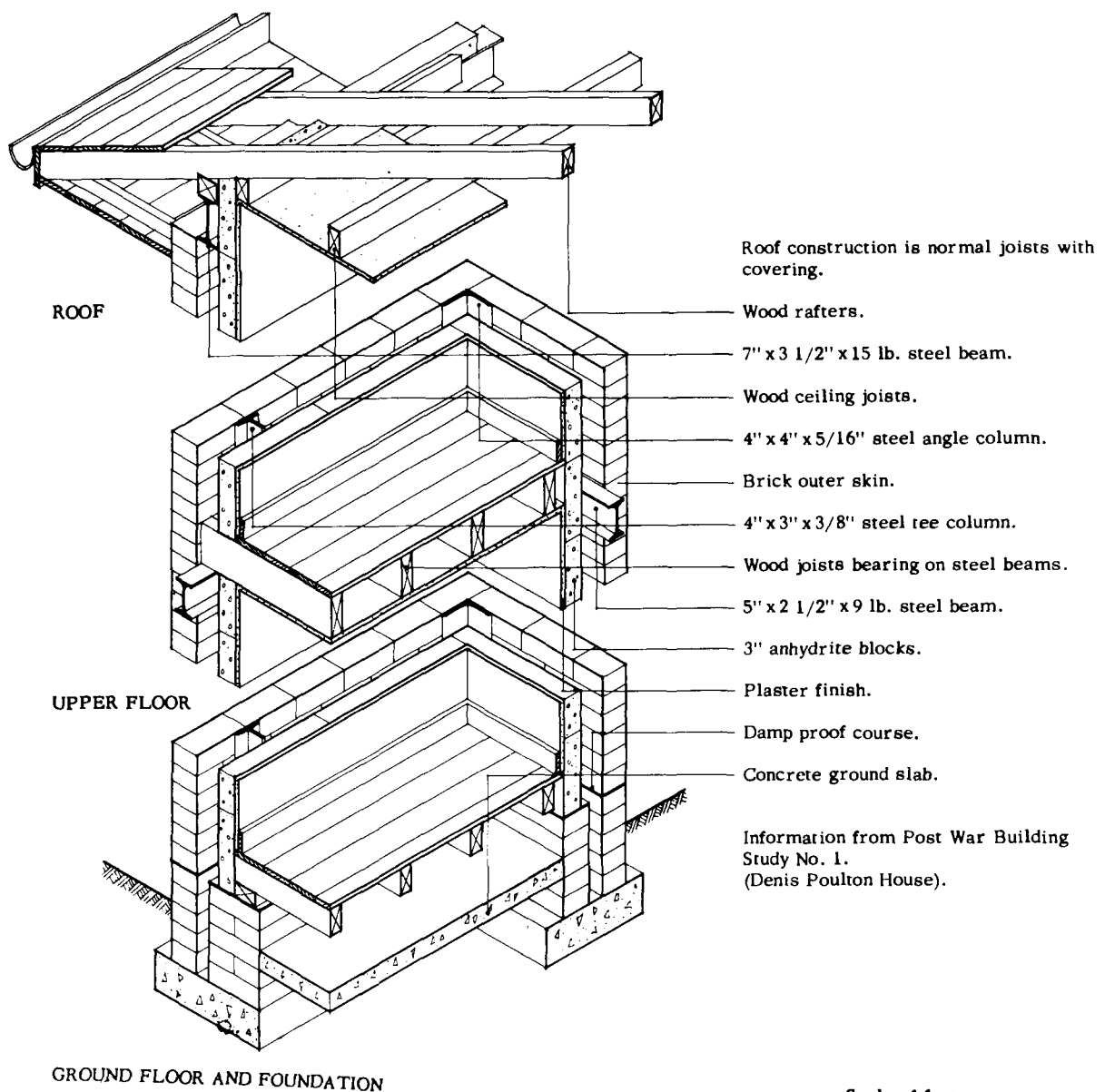
Guerin & Herbulot,
Architects,
France.

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.

M.O.W. Survey of
Prefabrication.
"Arch. d'Aujourd
'hui", February,
1935.

WINTER

See Winter under CPB.

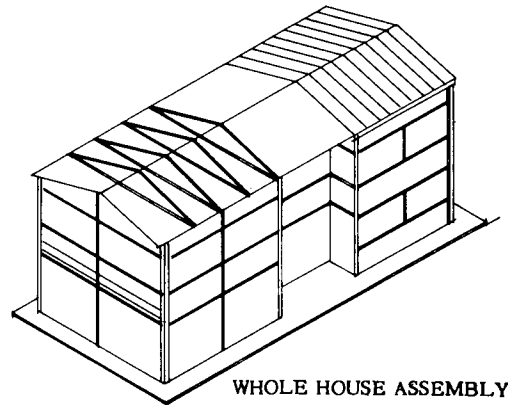


heavy steel frame and brick

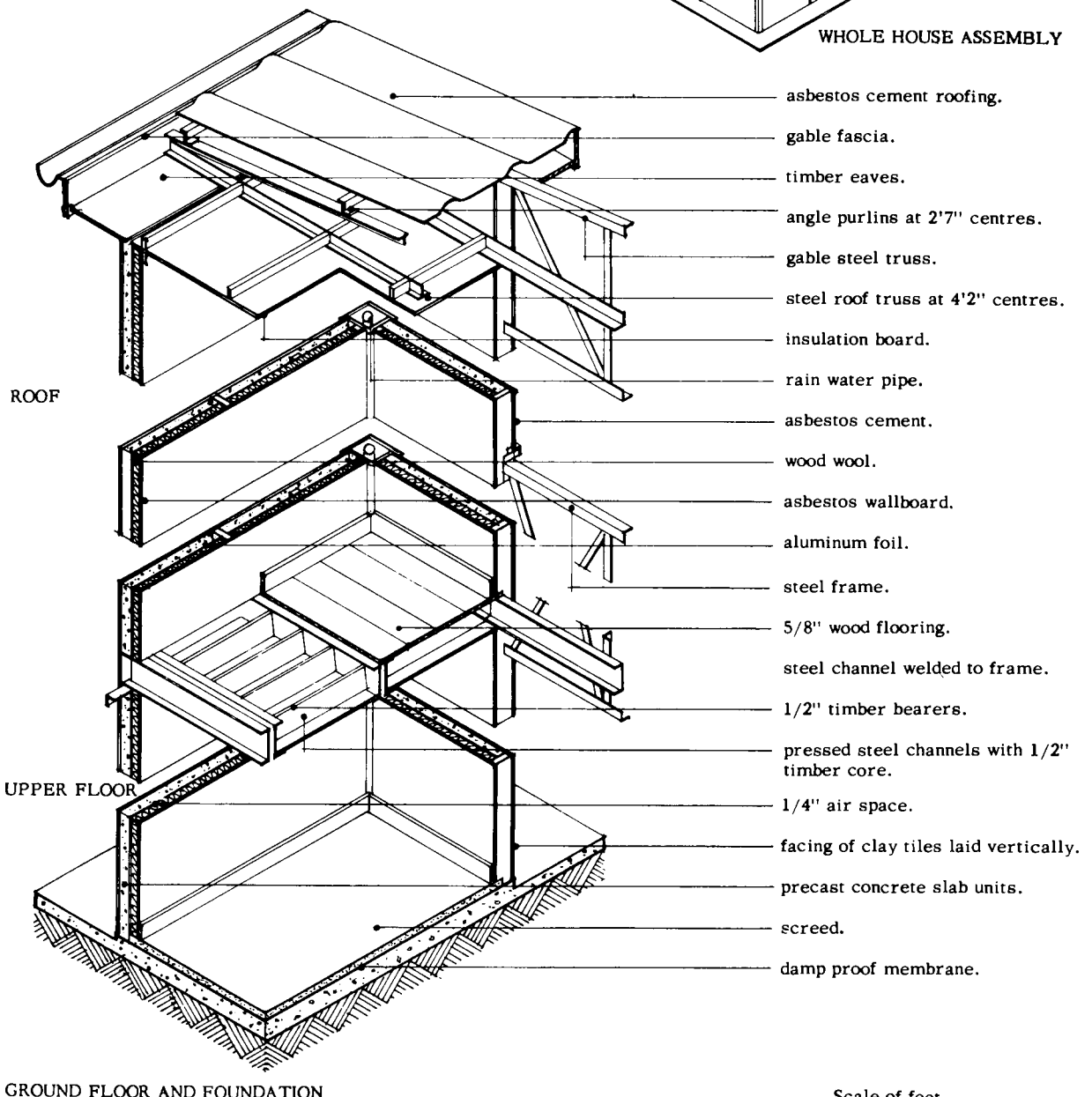
December, 1958.

HEAVY STEEL FRAME AND BRICK

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. 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.
Date and Place of Origin.	2. U.K. 1936.
Materials Used.	3. Heavy Rolled Steel and Brick.
Description	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).
Development to Date.	5. About 10,000 houses in U.K. from 1928 to 1937 (this and similar examples) for various municipal authorities.
Comment.	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.
References.	7. Post War Building Study No. 1, Ministry of Works Survey of Prefabrication, H.M. Stationery Office, London.



WHOLE HOUSE ASSEMBLY



Scale of feet
12 0 1 2 3

howard steel frame

December, 1958.

HOWARD STEEL FRAMED HOUSE

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Non-Traditional. Sponsor and Builder: John Howard and Company Limited.
Date and Place of Origin.	2. Datchet, Buckinghamshire, England.
Materials Used.	3. Steelframe, foamed slag.
Description.	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.
Development to Date.	5. -
Comment.	6. -
References.	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.

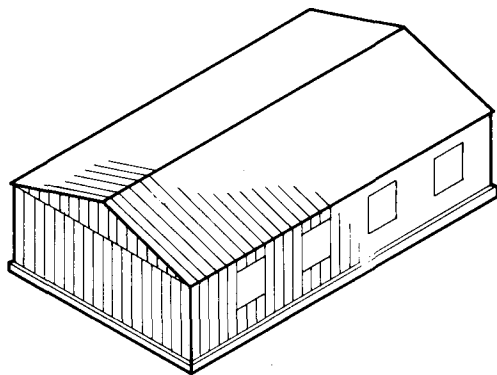
WILSON HOUSE

See Wilson House under CP.

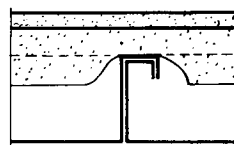
**WONDER BUILDING
COMPANY
3780 Dickens Street,
Montreal, Quebec,
Canada.**

**Mainly warehousing 30' 0"
x 60' 0" in diameter.
Semi circular form,
sectional.**

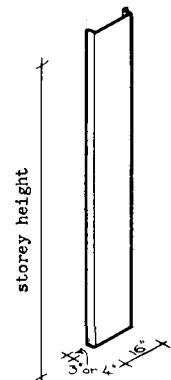
**Arch. File 17,
(A.I.A.).**



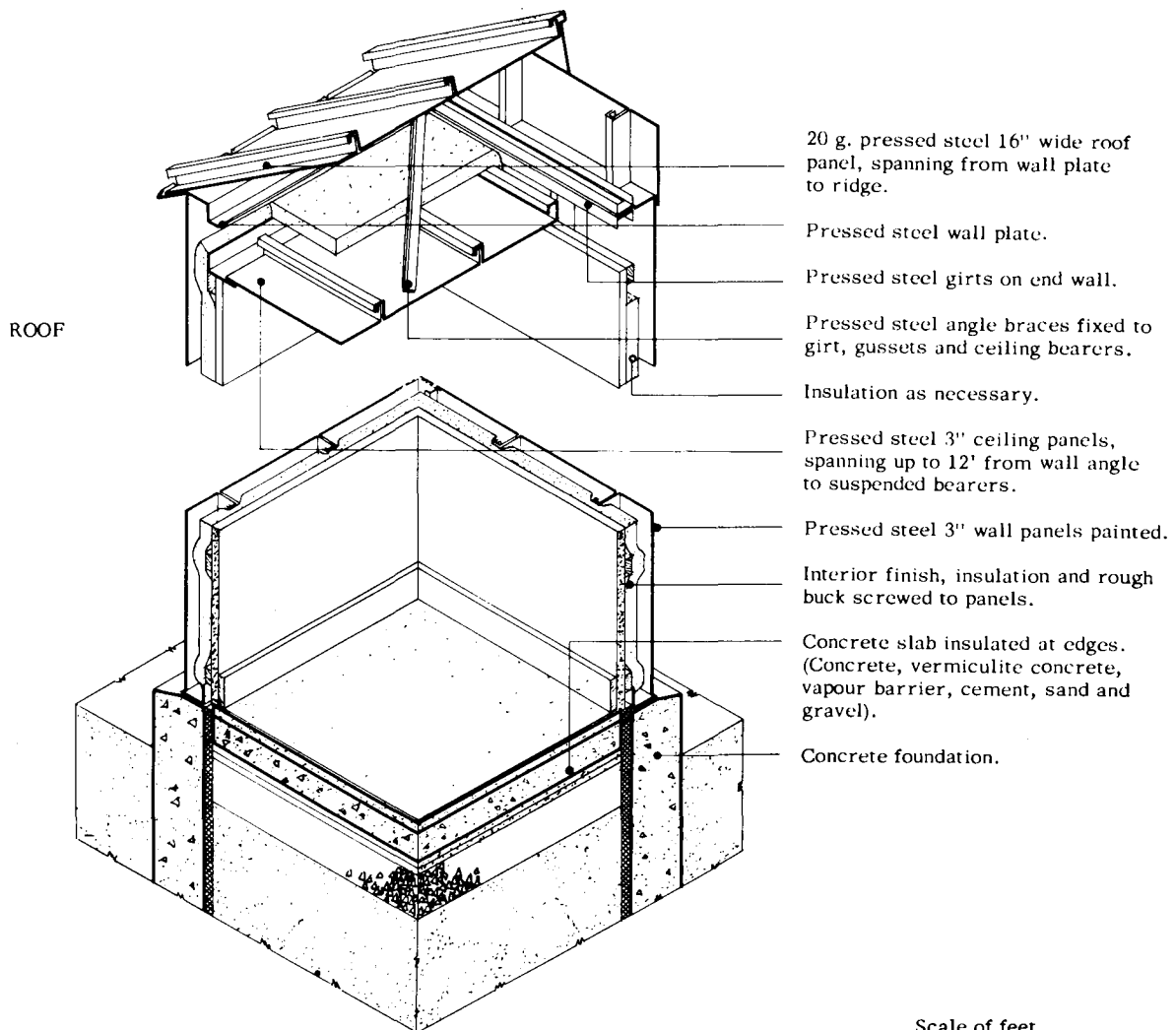
WHOLE HOUSE ASSEMBLY



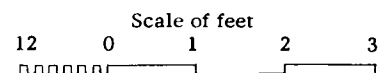
UNIT JUNCTION



UNIT OF CONSTRUCTION



GROUND FLOOR AND FOUNDATION



armco steelox

January, 1958.

ARMCO STEELOX

Traditional, Non-Traditional, Manufacturer, Sponsor or Builder.	1. Armco Drainage and Metal Products of Canada Ltd., Guelph, Ontario. Armco Drainage and Metal Products, Inc., and Armco International Corp., Middletown, Ohio.
Date and Place of Origin.	2. Chicago, Illinois, 1935.
Materials Used.	3. Pressed Steel.
Description.	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).
Development to Date.	5. Five hundred and fifty houses in U.S. up to 1945. Considerable use in Canada.
Comment.	6. The system is used mainly for commercial and industrial buildings where it is important to close in a structure speedily.
References.	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 inside 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>
UNITED STATES				
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. Co. 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>
<u>UNITED STATES</u>				
Byrne, Barry	New York	Byrne	CP	4
Carlton Lumber Co.	Oregon	Carlton	WFH	1
Carroll Tri Ply Co.	Illinois	Carroll	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
Ibec Housing Corp.	New York	Ibec 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 Bilt Structures	Amerston	Insulated Steel Bilt	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>
<u>UNITED STATES</u>				
Steelex Co.	Illinois	Armco Steelix	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
Utlely Lincoln System Inc.	Michigan	Utlely 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.)	Melbourne	Aychar Gypsum House	CM	8
Matthews, A.C.		A.C. Matthews	CPB	6
<u>AUSTRIA</u>				
Schmidt, Alfred	Vienna	Boehler	MP	12
Thermobau, G.M.B.H.	Vienna	Thermobau, C.M.B.H.	WFH	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 - Muche - Paulick	Leipzig	Kastner - Muche - Paulick	MSF	10
Kletzin	Berlin	Kletzin	MP	12
Kreuzhaus	Rheinfalz	Kreuzhaus	CPB	6
Kugel Haus (Round)	Rheinfalz	Kugel Haus (Round)	CM	8
Kunze, G.	Berlin	Kunze, G.	MP	12
Ludowici, Dr. J. W.	Rheinfalz	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
Channello Concrete Const. Ltd.	London	Channello	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

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<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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ditto	BMS2. Methods of Determining The Structural Properties of Low Cost House Constructions.	ditto
ditto	BMS5. Structural Properties of Six Masonry Wall Constructions.	ditto
ditto	BMS9. Structural Properties of The INSULATED STEEL CON- STRUCTION COMPANY'S "Frameless Steel" Con- struction for Walls, Partitions, Floors and Roofs.	ditto
ditto	BMS11. Structural Properties of THE CURREN FABRIHOME COR- PORATION'S "Fabrihome" Construction for Walls and Partitions.	ditto
ditto	BMS12. Structural Properties of "Steelox" Constructions for Walls, Partitions, Floors and Roofs Sponsored by STEEL BUILDINGS INCORPORATED.	ditto
ditto	BMS18. Structural Properties of "Pre-Fab" Constructions For Walls, Partitions and Floors. Sponsored by THE HARNISCHFEGER COR- PORATION.	ditto

National Bureau
of Standards

BMS20.
Structural Properties of
"Twachtman" Constructions
for Walls and Floors Sponsored
by CONNECTICUT PRECAST
BUILDINGS CORPORATION.

Department of Trade
& Commerce,
Washington, D. C.,
U. S. A.

ditto

BMS21.
Structural Properties of A
"Concrete-Block, Cavity
Wall" Construction Sponsored
by THE NATIONAL CONCRETE
MASONRY ASSOCIATION.

ditto

ditto

BMS22.
Structural Properties of
"Dun-Ti-Stone Wall" Con-
struction Sponsored by THE
W. E. DUNN MANUFACTURING
COMPANY.

ditto

ditto

BMS23.
Structural Properties of a
Brick Cavity Wall Construction
Sponsored by THE BRICK
MANUFACTURERS ASSOCIA-
TION OF NEW YORK IN-
CORPORATED.

ditto

ditto

BMS24.
Structural Properties of a
Reinforced Brick Wall Con-
struction and A Brick Tile
Cavity Wall Construction
Sponsored by THE STRUCTURAL
CLAY PRODUCTS INSTITUTE.

ditto

ditto

BMS25.
Structural Properties of
Conventional Wood Frame
Construction for Walls,
Partitions, Floors and Roofs.

ditto

National Bureau of Standards	BMS27. Structural Properties of "Bender Steel Home" Wall Construction Sponsored by THE BENDER BODY COMPANY.	Department of Trade & Commerce, Washington, D. C. U. S. A.
ditto	BMS30. Structural Properties of A Wood Frame Wall Construction Sponsored by THE DOUGLAS FIR PLYWOOD ASSOCIATION.	ditto
ditto	BMS31. Structural Properties of "Insulite" Wall and "Insulite" Partitions Constructions Sponsored by THE INSULITE COMPANY.	ditto
ditto	BMS32. Structural Properties of Two Brick-Concrete-Block Wall Constructions And A Concrete- Block Wall Construction Sponsored by THE NATIONAL CONCRETE MASONRY ASSOCIATION.	ditto
ditto	BMS36. Structural Properties of Wood- Frame, Wall, Partition, Floor and Roof Construction With "Red Strip" Lath Sponsored by THE WESTON PAPER AND MANUFACTURING COMPANY.	ditto
ditto	BMS37. Structural Properties of "Palisade Homes" Construc- tions for Walls, Partitions and Floors Sponsored by PALISADE HOMES.	ditto

**National Bureau
of Standards**

**BMS38.
Structural Properties of Two
"Dunstone" Wall Constructions
Sponsored by THE W. E. DUNN
MANUFACTURING COMPANY.**

**Department of Trade
& Commerce,
Washington, D. C. ,
U.S.A.**

ditto

**BMS39.
Structural Properties of A
Wall Construction of "Pfeifer
Units" Sponsored by THE
WISCONSIN UNITS COMPANY.**

ditto

ditto

**BMS40.
Structural Properties of A Wall
Construction of "Knapp Concrete
Wall Units" Sponsored by KNAPP
AMERICA INCORPORATED.**

ditto

ditto

**BMS42.
Structural Properties of
Wood-Frame Wall and
Partitions Constructions with
"Celotex" Insulating Boards
Sponsored by THE CELOTEX
CORPORATION.**

ditto

ditto

**BMS46.
Structural Properties of
"Scott-Bilt", Prefabricated
Sheet-Steel Construction for
Walls, Floors and Roofs
Sponsored by THE GLOBE-
WERNICKE COMPANY.**

ditto

ditto

**BMS47.
Structural Properties of
Prefabricated Wood-Frame
Constructions for Walls,
Partitions and Floors
Sponsored by AMERICAN
HOUSES INCORPORATED.**

ditto

ditto

**BMS48.
Structural Properties of
"Precision-Built" Frame,
Wall and Partition. Con-
struction Sponsored by THE
HOMASOTE COMPANY.**

ditto

National Bureau of Standards	BMS53. Structural Properties of A Masonry Wall Construction of "Munlock Dry Wall Brick" Sponsored by THE MUNLOCK ENGINEERING COMPANY.	Department of Trade & Commerce, Washington, D. C., U.S.A.
ditto	BMS61. Structural Properties of Two Non-Reinforced Monolithic Concrete Wall Constructions.	ditto
ditto	BMS67. Structural Properties of "Nu- Steel" Prefabricated Sheet-Steel Constructions for Walls, Partitions, Floors and Roofs Sponsored by HERMAN A. MUGLER.	ditto
ditto	BMS72. Structural Properties of Precision-Built Jr. Pre- fabricated Wood-Frame Wall Construction Sponsored by HOMASOTE COMPANY.	ditto
ditto	BMS74. Structural and Heat-Transfer Properties of "U.S.S. Panelbilt" Prefabricated Sheet Steel Con- structions for Walls, Partitions and Roofs Sponsored by THE TENNESSEE COAL, IRON & RAILROAD COMPANY.	ditto
ditto	BMS78. Structural, Heat-Transfer and Water Permeability. Properties of FIVE EARTH WALL CON- STRUCTIONS.	ditto
ditto	BMS89. Structural Properties of "Precision-Built Jr." (Second Construction) Prefabricated Wood Frame Wall Construction Sponsored by THE HOMASOTE COMPANY.	ditto

National Bureau of Standards	BMS90. Structural Properties of "PHC" Prefabricated Wood-Frame Constructions for Walls, Floors, Sponsored by THE PHC HOUSING CORPORATION.	Department of Trade & Commerce, Washington, D. C. , U.S. A.
ditto	BMS104. Structural Properties of Pre- fabricated Plywood Lightweight Constructions for Walls, Partitions, Floors and Roofs and Sponsored by THE DOUGLAS FIR PLYWOOD ASSOC.	ditto
ditto	BMS136. Properties of CAVITY WALLS.	ditto
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