Anatomy of a

#### C 0 0 0 r t 2 6-6= ()• ſ 19E 6 Characte 6

Features

+ Silos





### Michael Houser, Washington State Architectural Historian

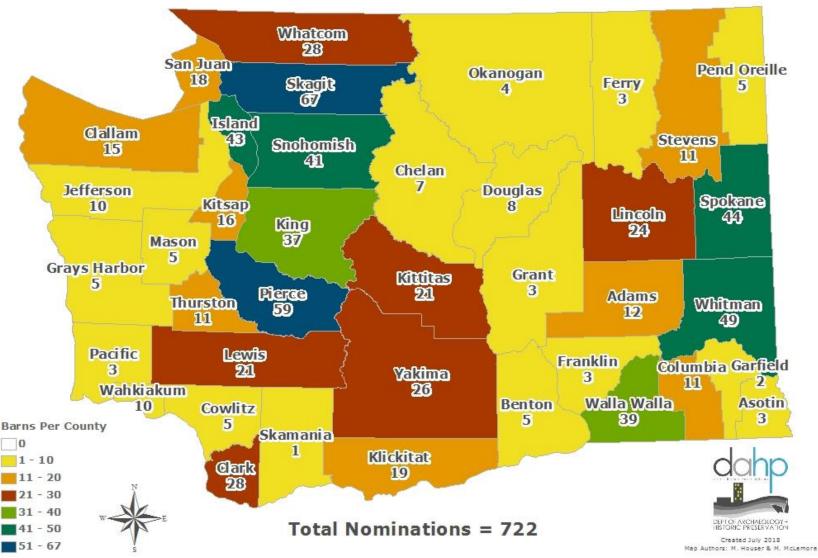




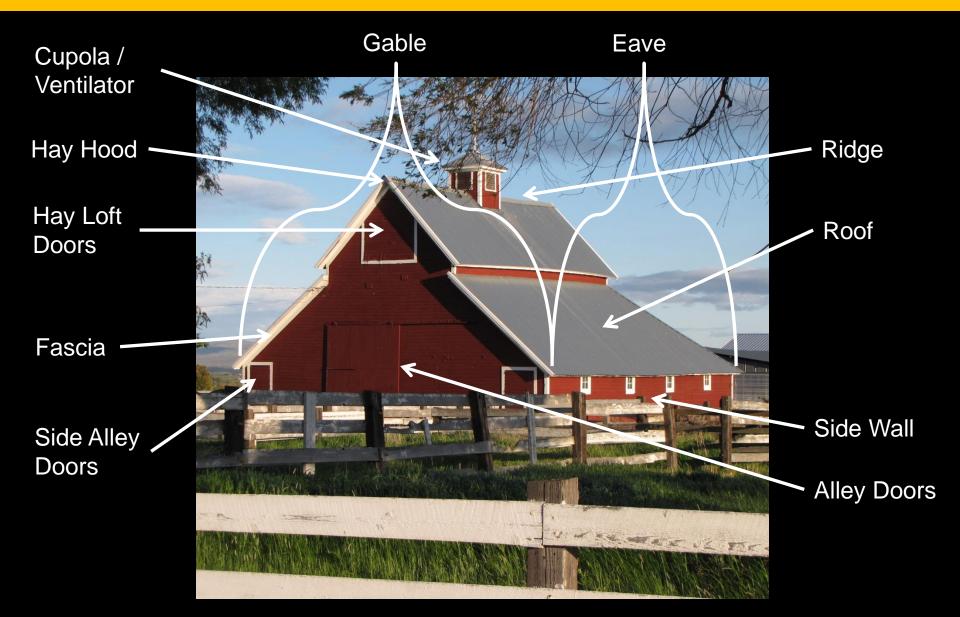
April - 2024

## Heritage Barn Register Listings Per County

Totals for Rounds 1 - 26

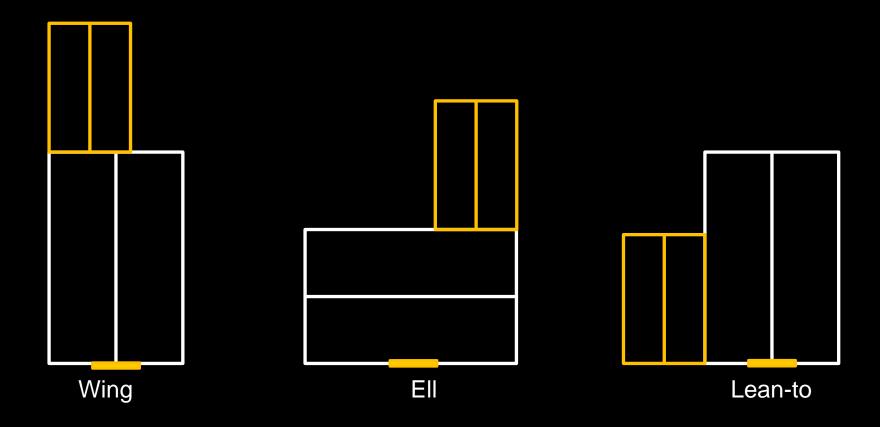


### Barn Elements





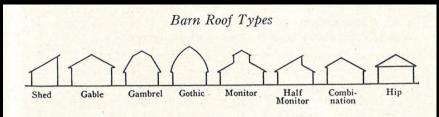
## Wing vs. Ell vs. Lean-to



Barn Plan View

## Barn Forms and Types





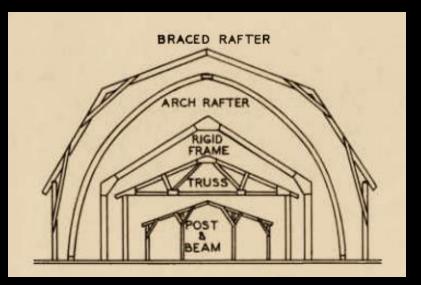




# Barn classification can be based on:

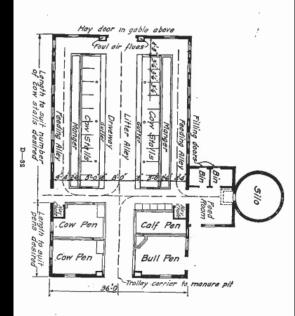
- Use/Purpose,
- Plan and shape,
- Framing system,
- Roof form

DAHP method









### **Barn - Forms & Types**

## **Gable** (sometimes referred to as an English / Yankee barn)





Shed, OR



Champoeg State Park, OR



Graham, WA



Boyd, OR

Kitsap County, WA

### **Barn - Forms & Types**

## Gable (sometimes referred to as an English barn)



Adams County, WA



Fox Island, WA



Peirce County, WA



Lincoln County, WA



Skagit County, WA



Dayville, OR

## Barn - Forms & Types Salt BOX (integrated lean-to)



Dayton, WA



Spokane County, WA





Brownsville, OR



### Pierce County, WA

Wallowa Valley, OR

# Barn - Forms & Types Salt BOX (integrated lean-to)





Anderson Island, WA





Philomath, OR

Finley National Wildlife Refuge, Benton County, OR



Waitsburg, WA

#### Poulsbo, WA

## Barn - Forms & Types Dutch Barn (roof projecting down to 1<sup>st</sup> floor)



Stevens County, WA



Dufur, OR



Benton County, OR



Snohomish County, WA



LaPine, OR

# Barn - Forms & Types Dutch Barn (roof projecting down to 1<sup>st</sup> floor)





Colfax, WA

#### Labanon, OR



Skagit County, WA



Victor Point, OR

## Barn - Forms & Types Broken Gable / Gable with High Lean-tos



### Klamath Falls, OR



Walla Walla, WA



### Edgewood, WA



San Juan County, WA

Hayward, OR

# Barn - Forms & Types Broken Gable / Gable with High Lean-tos



Diamond, OR



Deschutes County, OR



#### Eastonville, WA



Walla Walla County, WA

## Barn - Forms & Types Gable-on-Hip





Snohomish, WA

Drake Crossing, OR



Coupeville, WA



Burnt Wood, OR

## Barn - Forms & Types Gable-on-Hip





Weston, OR

### Walla Walla County, WA





Molalla, OR



San Juan County, WA

## Barn - Forms & Types English Gambrel



### Thurston County, WA



Ellensburg, WA





Donald, OR



Lynden, WA

### Enterprise, OR

# Barn - Forms & Types English Gambrel





Columbia County, WA



Tangent, OR



Alderton, WA

Lincoln County, WA

## Barn - Forms & Types Dutch Gambrel (note flare at eave line)



Fairfield, WA



Milton, WA







Willamette Valley, OR

Grays Harbor, WA

Scappose, OR

Salem, OR

# Barn - Forms & Types Dutch Gambrel (note flare at eave line)



Woodburn, OR



Pend Oreille County, WA



Troutdale, OR



Island County, WA

## Barn - Forms & Types Gambrel w/Lean - To



Pierce County, WA



Mount Vernon, WA



Elgin, OR





Yakima County, WA

Deer Park, WA

## Barn - Forms & Types Gambrel w/Lean - To



Graham, WA

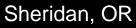


Snohomish County, WA



Scholls, OR





## Barn - Forms & Types Hip



Coupeville, WA



Moxee, WA



### Condon, OR



Vancouver, WA

## Barn - Forms & Types Gothic (pointed arch roof truss)





Lacey, WA

Tacoma, WA







Wilbur, WA

Vancouver, WA

Willamette Valley, OR

### Barn - Forms & Types Gothic (pointed arch roof truss)



Stayton, OR



Uniontown, WA



Colfax, WA



Weston, OR

## Barn - Forms & Types Bow / Rainbow Truss

(note completely arched trusses)





Pullman, WA



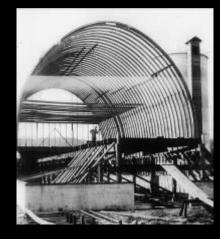
Ridgefield, WA



Satsop, WA



Sedro Wooley, WA



### Barn - Forms & Types Western Barn/ Monitor Barn / Basilican





Wasco, OR



### Pousbo, WA



### Skagit County, WA

Joseph, OR



Yakima County, WA

## Barn - Forms & Types Western Barn/ Monitor Barn / Basilican





Stanwood, WA

Joseph, OR



Linn County, OR



Thurston County, WA

### Barn - Forms & Types Conical / Round / Centric Barns



### Klickitat County, WA



Joseph, OR

Sisters, OR

Medical Lake, WA





Diamond, OR



Lostine, OR



St. Johns, WA

## Barn - Forms & Types Centric / Round / Conical Barns



Lakeview, OR



Hillsboro, OR



Pullman, WA





Blachly, OR



Lookingglass, OR

Grandview, WA



#### LIFE IS COLORFUL DOWN ON THE FARM

Red, for the barn and sheds, stands out in colorful contrast to the surrounding country. Natural + shingle roof and White trim. Garage, Colonial Yellow. Fence, White. Windmill, Aluminum paint.

Shades of green with white and gray barn has Silver Gray shingles and Dark Green trim. Garage and fence, White.

Blue trim, a Venetian Red roof, for an is White. Colers blend together nicely!









GAMBLE

STORES

MINNEAPOLIS

This brilliant red, high gloss, top grede paint will protect your property for years. It is economical because it wears so long. Barn paint must provide maximum protection at minimum cost. Made from maximum protoction at minimum cost, mode from the fasist ingredients available . . . assures great covering power and extreme dynability. Each of its first, belanced characteristics prove this to be, "a barn paint of real quality."

HOMEGUARD SUPER QUALITY BARN PAINT



PAINT FINISHES

FOR EVERY SURFACE

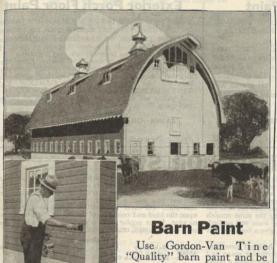
### Barn **Paint**







### Barn Paint



assured of success with your painting.

Farmers judge each other by their barns. Keep your barn well painted. Everyone sees it and it's theone best evidence of thrift and "getting on."

Our "Quality" brand barn paint is good and we know it. We on't sell anything but good paint. It is equally good for shingles or metal roofs, fences, bridges, grain elevators and silos. It will lengthen the life of shingles and metal roofing. It is a wood preservative and will add years to the life of your building.

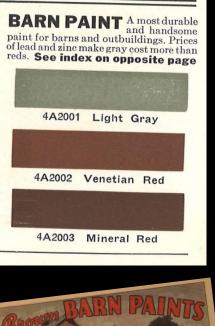
You may use this paint with perfect confidence, knowing that we will stand back of every can or barrel. Only the best ingredients are used. It is ground to an unusual fineness and thoroughly mixed and remixed by the most up-to-

date machinery. One gallon of Quality barn paint can be depended upon to cover about 250 "guare feet of surface, two full coats. Measure for it by the "square foot" method. You will never regret having given it a trial. **Colors** (See Page 65). 4A2001-Light Gray. 4A2002-Venetian Red. 4A2003-Mineral Red. PRICES PER GALLON

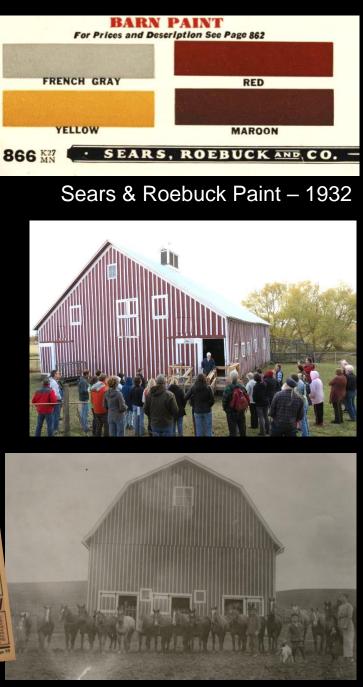
	lon Reds \$1.42 1 Gallon Reds \$1.55 s Gray 1.70 Cans Gray 1.80
--	--

**Gordon-Van Tine** Co. Catalogue – c.1924

Jim Brown's Bargain Book – 1936



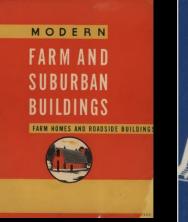




## Barn Plans

- Farmer
- Itinerant Builder
- Architect
- Plan Service
- Extension Office
- Lumber Yard
- Factory Pre /Ready-Cut







## BLUE PRINTS

#### COMPLETE SPECIFICATIONS SHOULD BE USED WHEN BUILDING

Because you will know in advance how the building will look. Because you will know in advance what the building will cost. Because you will save money by saving the contractor's time. Because we can furnish these plans and specifications at such a low price that you cannot afford to do without them.

Come to Our Office and Get Our Special Blue-Print Proposition

## **Barn Plans Ready Cut**



Practical Farm Barn

\$76100

The second state of the se

**BOOK OF BARNS** 

HONOR-BILT-ALREADY CUT

Fenner Barn No. 422 BARN No. 422, the standard size of which is 36x60, is a good sized barn for general use. The strong, gambrel roof adds many cubic feet of space to the already large loft, and makes an excellent outside appearance. The driveness mass clear through the barn in the center. To the left of ace to the aircady large loft, and makes an excellent outside appearance. The driveway goes clear through the barn, in the center. To the left of a driveway are stalls and accommodations for live stude while the encode The driveway goes clear through the barn, in the center. To the left of this driveway are stalls and accommodations for live stock, while the space this driveway are stalls and accommodations for live stock, while the space to the right may be used for storing wagons and implements, or may be use for more and food. The base in the relative is continued with a sile, which

to the right may be used for storing wagons and implements, or may be use for grain and feed. The barn in the picture is equipped with a silo, which, It is our policy to show in this catalog only those barns which are of y It is our policy to show in this catalog only those barns which are of accepted and standard design that they are recognized as the leaders e accepted and standard design that they are recognized as the leaders enders. Should the interior arrangement need changing to meet your recourse, we do not furnish. where. Should the interior arrangement need changing to meet your re-ments, we can change it, not only in this, but in any of our harns. Or, with a barn of any special design, it will user need to get any special design. ments, we can change it, not only in this, but in any of our barns. Or, wish a barn of any special design, it will pay you to get our prices, d to your own station, all cut to fit and ready to put together easily and

Fenner Manufacturing Company

trim, finish, cornice, and corner g of high grade Dougass Fin, cut

stra and 4s, uno. soor joists, First 2x8 Loft \* red cedar Rafters. Sheathing for 1 Roof, Extra \* Noof, Extra \* A Floors, stalls, 2x13 plank, and Ioft, 1x4 flooring, stalls, 1x16, Exterior walls, 1x16, with battens, Doors and window plant or stall is on exterior, not including root

Fenner Manufacturing Co., Portland, OR - 1921

Hardwa for ty



Fenner Barn No. 421 BARN No. 421 is de-Balan No. 421 is de-bigned for a small farm or for a person liv-ing in a small town who wishes to keep a number of barses or catile. It is a stander design that has met with design that proval and really allows a green kay square for

Return out Bullings of AL West



WAGONS



were, phase, phase, phase, and the traine or any phase are five stalls with a light, and twending passage-way in the rank phase stall is provided with freed bayes, and the tool room, the stall is provided with freed bayes, and the tool room, the stall is provided with the stall of the star is the star the stall is the star is table-fitting, and the tool room, the first the stall argue, and is in any stall stall for the star is the star to hold we have a star is table-fitting, and the tool room, and the stall argue, and is in the star is the star is the star to hold argue and the star is the star is the star is the star to hold argue and the star is the star is the star is the star mission is to ventilate and earry of all odors, which is does very offsetively.

STALL #5

STRLL "4

STALL \$3

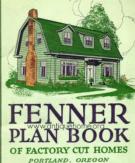
STALL ??

STALL #1

PASSAR

SPECIFICATIONS IC, 30'x34'. Center sirilers and sills, 5x5. Posts, 5x6 and 4x4. First Hour joists under stalls, 2x8. 187 D. C. 10" O. C. Sailer states, and states, and states, area, 10" O. C. Strukture, area, 10" O. C. Strukture, area, 24" O. C. Sheathing for root, Sheathing for root, Rear 24, 24" O. C. Sheathing for root, animulas, 24" A. \* red a stimulas. Annetes, Noors, stalls 7x12 plank, and loft 1x4 flooring. Interime walls, 1x12 with buildens. there, mails, binges, lock-t or strain for two even ther, not including root All In

Size, az'x60' Celling heights, first h-terior walls, 14'. Center girders and sills, 6x8. Posts, 6x6 and st4. Posts, 6x6 and joists, under stal under stalls.





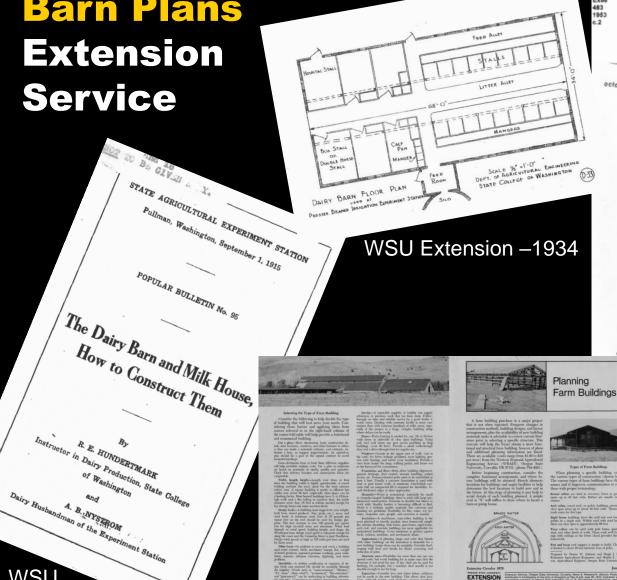
Plans for this Barn, \$190 Gordon Van Tine- 1915

## **Barn Plans Extension** Service

WSU

- 1915

Extension



extension bulletin 483 STATE LIBRARY \_ANNING YOUR OCT 7 1960 DAIRY BUILDINGS october - 1953 WASHINGTON STATE LIBRARY S rie STATE DEPOSITORY COP e S S re ructur t s RECEIVED E WA STATE LIBRINGY 0 extension service-institute of agricultural sciences stote college of washington- pullman, washington

#### **WSU** Extension -1953

### Smith-Lever Act of 1914

#### OSU Extension -1981

378.5

Ex8e

## **Barn Plans** Lumber Yard / **Plan Service**



**Radford's Practical** Barns Plans – 1907



ASTORIA, OREGON,

Mrs. adolph a

## Jamesway Co.

The Jamesway FARM BUILDING BOOK

OINTED ARCH POULTRY HOUSE

DEN







## Barn Roofing

- Wood Shake / Shingle
- Standing Seam
- Corrugated Metal
- Asphalt







## Barn Roofing – Wood Shingle / Shake

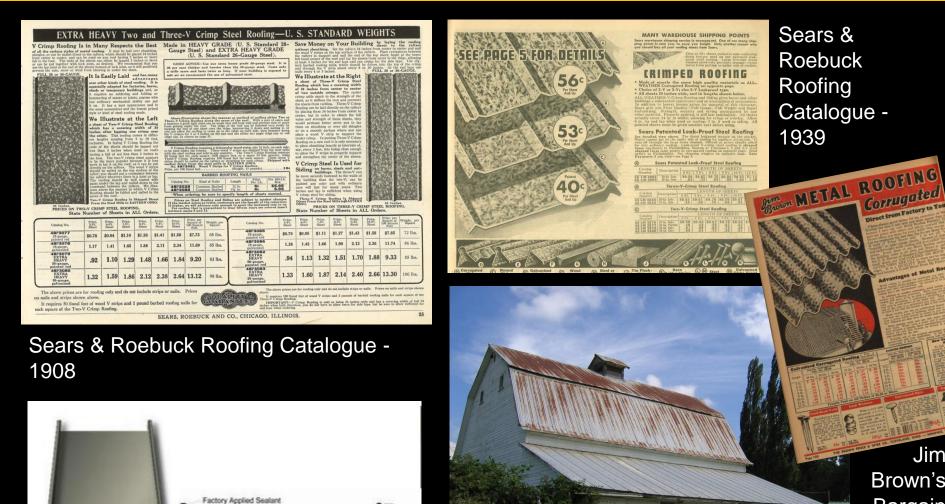








### Barn **Roofing – Standing Seam**



¶]1-3/4

Flat Pan

12" 16" or 18" Coverage

Jim Brown's Bargain Book-1936

Direct from Factory to You

### Barn Roofing – Corrugated Metal



## Barn Roofing - Asphalt



#### Gordon-Van Tine Co. Catalogue – c.1924



### ASPHALT ROOFING ON THE FARM





A Practical Handbook on How to Meet Wartime Housing Problems on the Farm with Serviceable ASPHALT Roofing Products

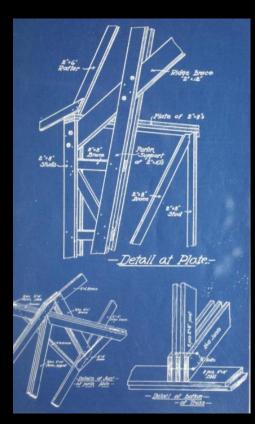
Asphalt Roofing on the Farm– c.1950

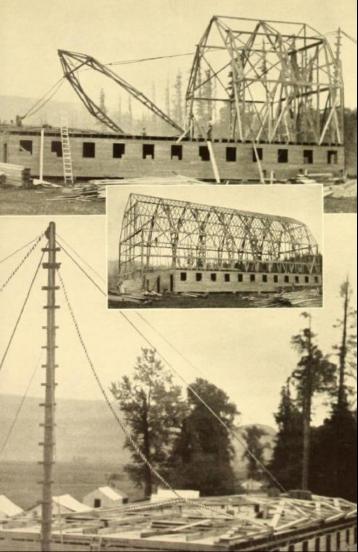
# Barn Framing / Truss System

- Log
- Heavy Timber Frame
- Pole Construction
- Plank Truss Frame
  - Braced Truss
  - Iowa Truss
  - Shawver Truss
- Concrete
- Clay Tile / Brick
- Plywood Rigid Frame









## Barn Framing / Truss System

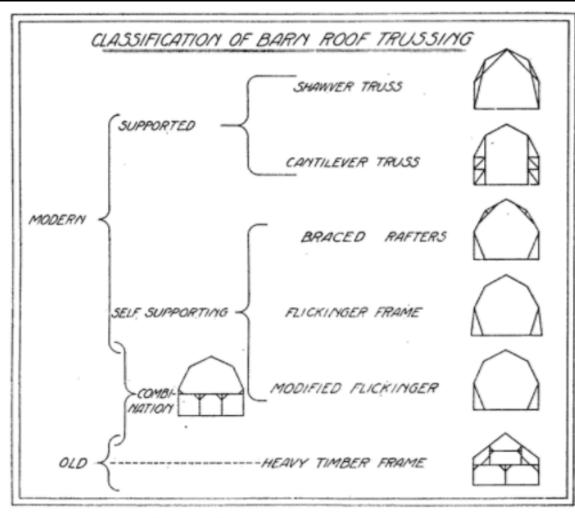
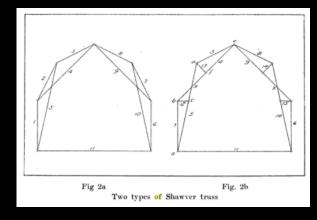


Fig. 1. Six types of barn roof trusses

#### ASAE Annual Meeting – Dec 1918, J.L. Strahan

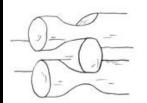


## American Society of Agricultural Engineers



## **Barn – Framing/ Truss System Log Framing**





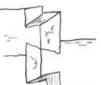
Saddle notch



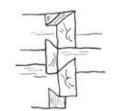
Diamond notch



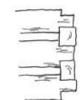
V-notch



Full Dovetail notch



Half Dovetail notch

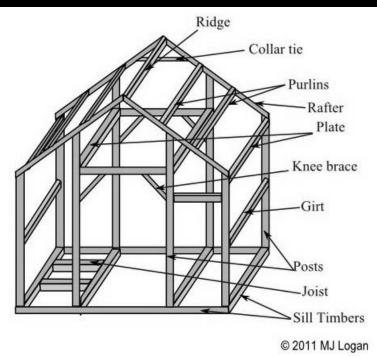


Square notch



### Barn – Framing/ Truss System Heavy Timber - Framing

### **Timber Framing Diagram**





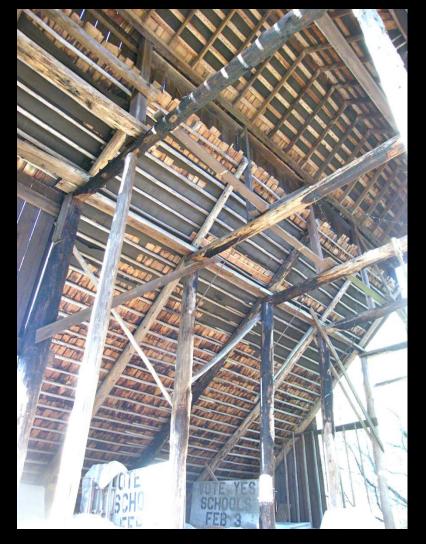








# Barn – Framing/ Truss System Pole Construction - Framing

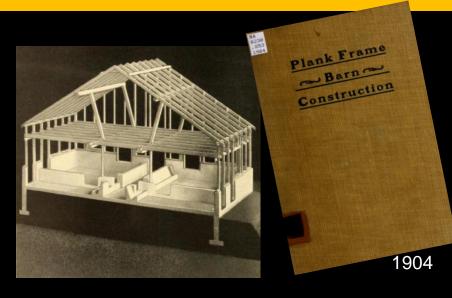








# Barn – Framing/ Truss System Plank Framing - Gable Framing









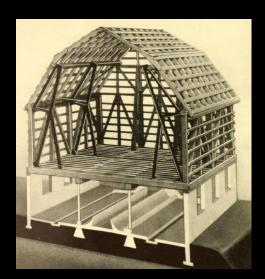
# Barn – Framing/ Truss System Plank Framing –Gambrel Framing





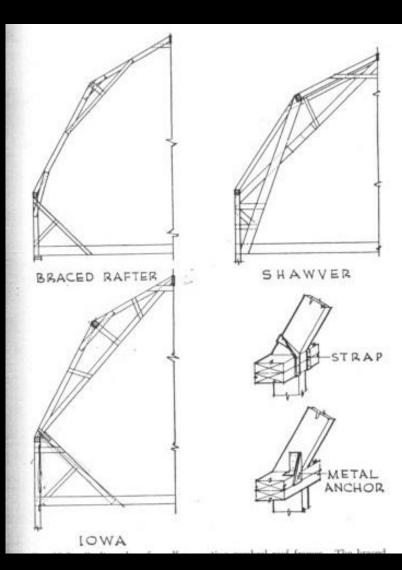


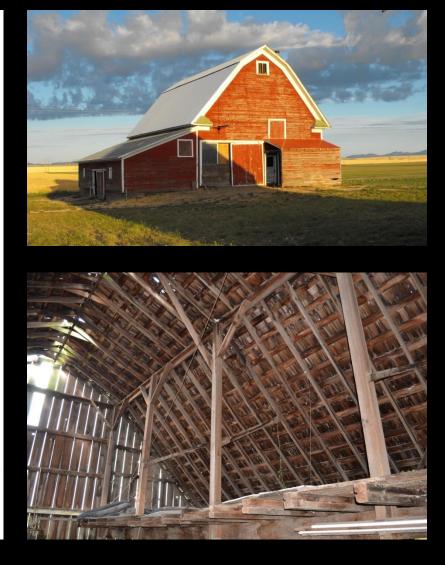




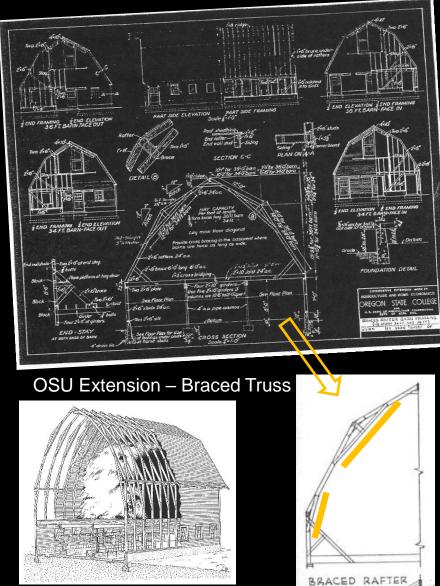


# Barn – Framing/ Truss System Plank Framing - Gambrel Framing





# Barn – Framing/ Truss System Braced Truss - Gambrel Framing

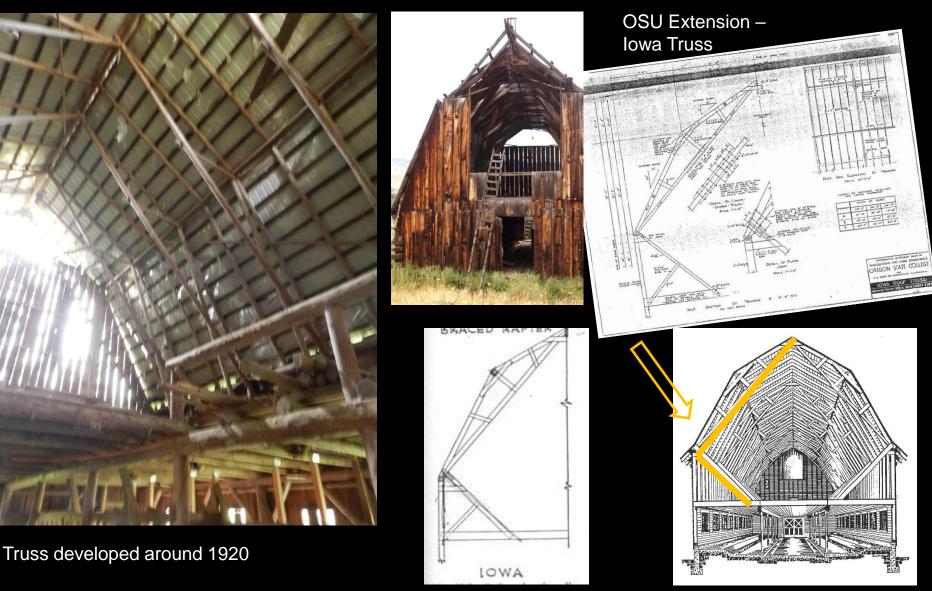




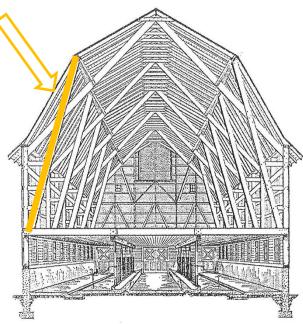




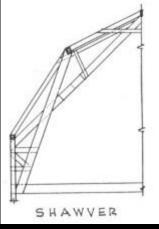
# Barn – Framing/ Truss System Iowa / Clyde Truss -Gambrel Framing



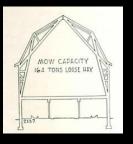
# Barn – Framing/ Truss System Shawver Truss - Gambrel Framing











Truss developed late 19<sup>th</sup> Century



# Barn Barn – Framing/ Truss System **??? Truss - Gambrel Framing**

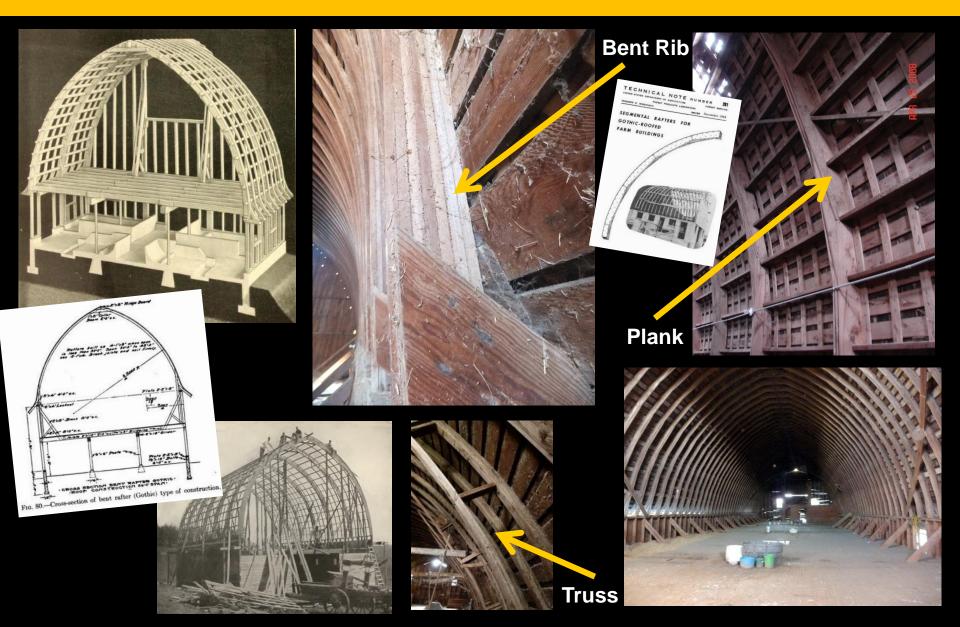
### Other truss systems



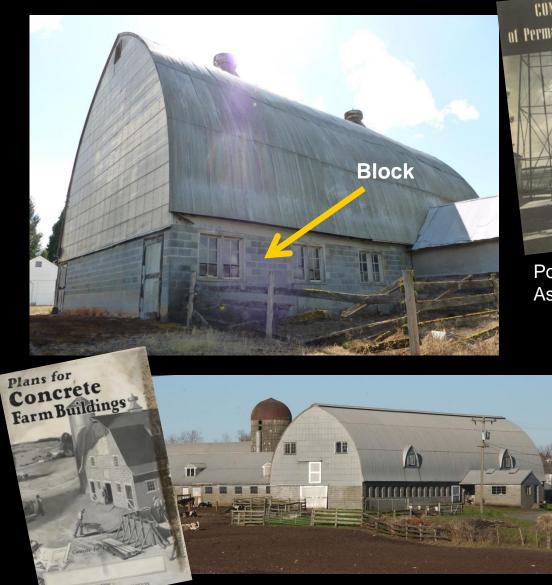


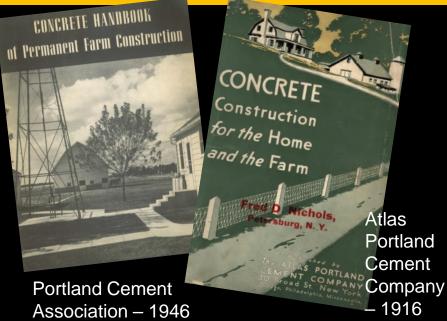


# Barn – Framing/ Truss System Plank Framing - Gothic Arch



### Barn – Framing/ Truss System – Concrete: Poured & Block







### Barn – Framing/ Truss System – Clay Tile: Block



## Barn – Framing/ Truss System – Plywood Rigid Frame



#### Lewis County Fairgrounds





Plywood Rigid Frame Design Manual

Buckley, WA, 1960



American Plywood Association – 1962-64

## **Barn - Details Hay Hoods**







Fig. A-Carrier

Fig. B-Fork Open

Fig. C-Fork Closed

### Hay Fork













## Barn - Details Hay Hoods



Garfield County, WA



Benton County, OR



Linn County, OR



Klickitat County, WA



Graham, WA



### **Barn - Details Cupolas & Ventilation**



#### Sears & Roebuck Roofing Catalogue - 1908

and not much was known about its real food and lifegiving value. It soon bethat these animals would be modern barn. It is true that every pound of feed and water

Much has been written on the subject of ventilation for farm



Whitman Co. - The Smith Place – 1935



Pierce Co. - c1923

### Barn - Details Cupolas & Ventilators



Snohomish Co. - Grimm-Jensen Farm – 1932



Spokane Co. -Hyslop Farm – 1926



Adams Co. - Krause Barn - 1901



Pend Oreille Co. -LaPorte Barn – 1901

### Barn - Details Equipment



Cook Family Farm – 1927



Grimm-Jensen Farm – 1932



Shady Nook Farm – 1920



Schindler Farm- 1909



Smith Place – 1935



## Barn - Details **Decoration**

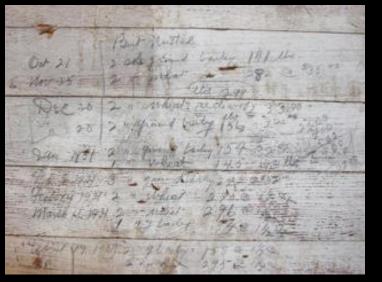


#### Heath Farm – c.1920



#### Bolick Farm – 1895





Ebby Road Farm – 1923



#### Brown Farm, Olympia- c. 1905

## Barn - Details **Decoration**





Barn, Oakland, OR

#### Cochran-Rice Farm, Cottage Grove, OR



Polson Farm, Waterville, WA – c. 1915



Gribble Barn, Canby, OR

## **Associated Farm Buildings**

- Bunk Houses
- Fruit Dryers
- Granaries
- Hop Dryers
- Machine Shed
- Milk Houses
- Poultry Houses
- Root Cellars
- Silos
- Smoke Houses
- Water Towers









## Associated Farm Buildings



Woodshed



Outhouse



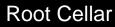
Granary





Homestead Cabin





#### Farmhouse

## Silos - Typology

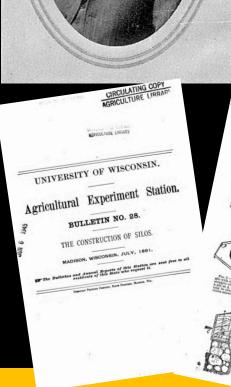


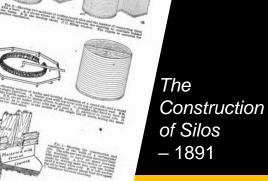
The Washington Farmer - June 15, 1914

## Silos - Typology

## King Silo (Note horizontal boards)

Franklin Hiram King
– Prof. University of Wisconsin





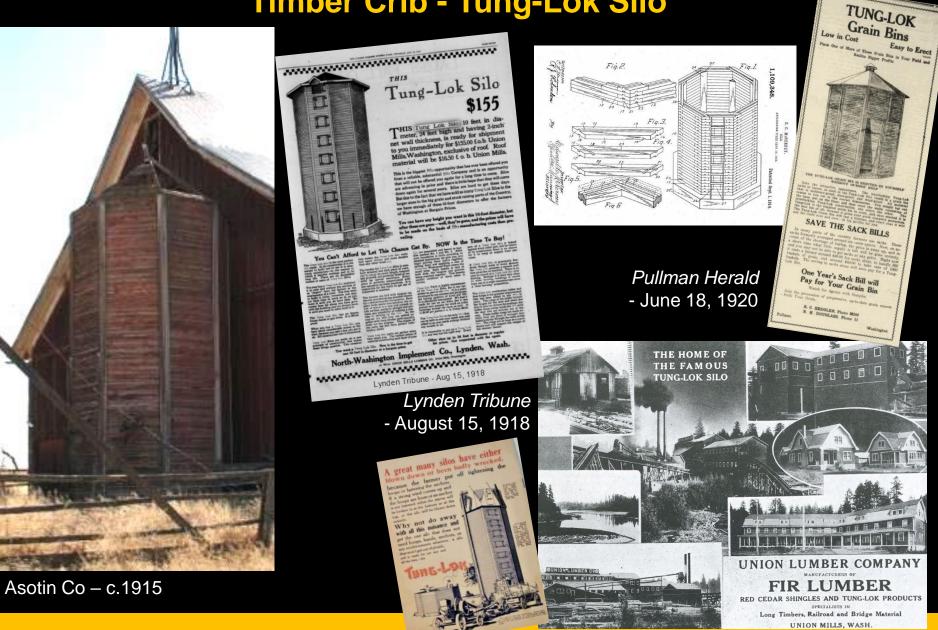


Klickitat Co. - 1900

## Silos - Typology Vertical Wood Stave Silo



## Silos - Typology Timber Crib - Tung-Lok Silo



## Silos - Typology Timber Crib – Common Sense Silo





Tonasket – c.1915



Okanogan Co. – c.1912



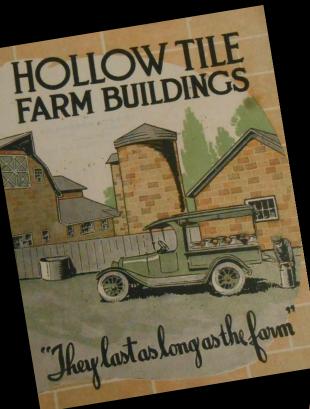
Sunnyside Daily Sun - April 17, 1913



Soos Creek Park -Kent. – c.1912

#### Silos - Typology Glazed Tile Silo





Hollow Tile Farm Buildings - 1918 The Preston-Lansing Vitrified Vitrified Tile Silos & Grain Bins

Clark Co. - 1920

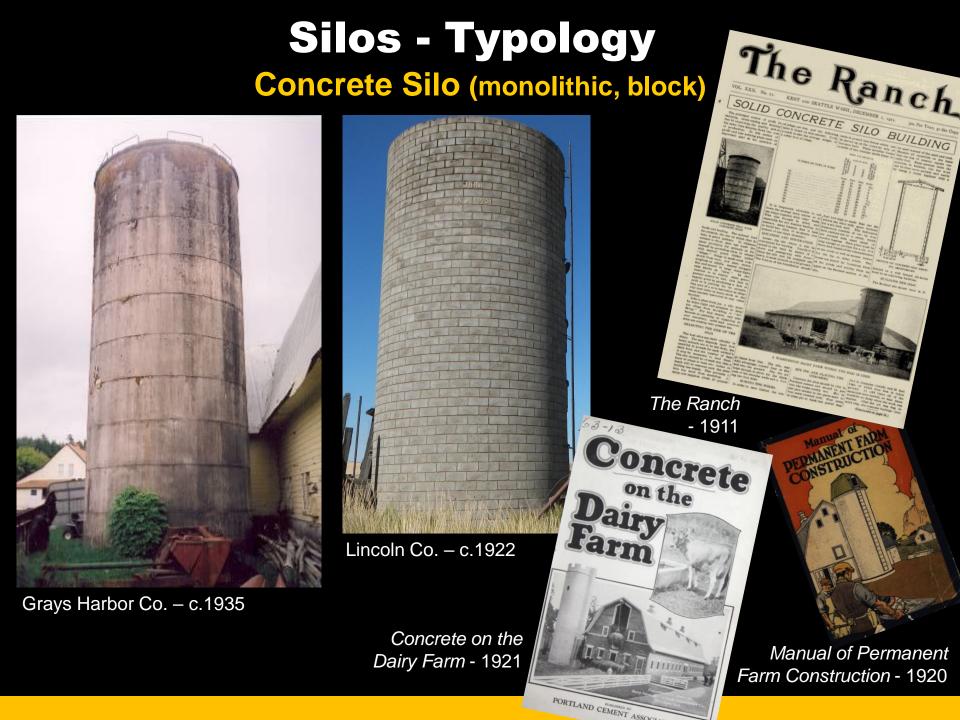
Preston-Lansing Vitrified Tile Silos & Grain Bins - 1919

### Silos - Typology Brick Silo



Cowlitz Co. – c.1920

Farm Homes of Brick - 1925



### Silos - Typology **Concrete Silo** (Ribstone / Stave Silo)

HOWE

Ribstone

3

RIB'STONE SILL

Feeding system specialists

Silos





Pierce Co. – c. 1920

### Silos - Typology **Steel Paneled (Harvestore) Silo**





Adams County - c. 1948

Advertisement - 1930

ett.O.

Advertisement

-



## **Plaque Program**



Custom plaque to be displayed on each barn for educational purposes and road-side identification





### **Heritage Barn Grant Program**



#### **Barn Rehabilitation Project**

Funded in part with a grant from the Washington State Department of Archaeology & Historic Preservation in association with the Heritage Barn Advisory Board The Heritage Barn Program began in 2007 with Subsitute House Bill 2115 which created the Washingtoe State Heritage Barn Register and established a grant program to support the preservation of historic barns across Washington State.

For more information contact DAHP at (360) S86-3065 or log ento www.dahp.wa.gov.















Prevedell Farm, Skagit Co.





Café Creek Ranch, Adams Co.







Erickson Farm, Thurston Co.



Straub Farm, Lincoln Co.









LaPorte Farm, Pend Oreille Co.

Crocker Ranch, Yakima Co.



Hall Ranch, Yakima Co.

Heidenreich Dairy, Whitman Co.

### The Washington State Department of Archaeology & Historic Preservation



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