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Available Agricultural Engineering Circulars and Blue Print Plans

A.E. Anderson

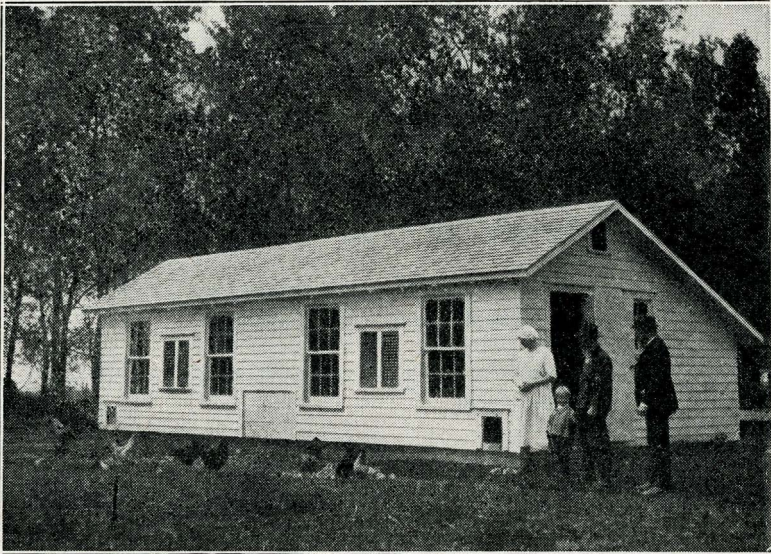
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Available Agricultural Engineering Circulars and Blue Print Plans



The South Dakota poultry house built from Plan No. 311 listed in this circular, on the farm of Joel Fahlberg, Beresford, South Dakota

Extension Service

South Dakota State College of Agriculture and Mechanic Arts
Brookings, South Dakota

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Building Facts

1.—The plans listed in this circular are not for elaborate and expensive buildings. Most of them are for plain substantial, well proportioned, serviceable buildings, designed for the owner of the farm. No particular claim for originality is made in the design of these buildings as the best ideas of construction have been freely taken from other plans from practically every state in the Union. Particular effort has been made to design these buildings so that they are uniformly strong. If a building is built stronger in one place than it is in another, lumber is wasted.

2.—The importance of constructing a building exactly according to the plan cannot be over-estimated. Usually a few changes will so re-arrange the plans as to change it entirely and often eliminate the best features. Small changes in a plan usually spoil the effectiveness of the ventilating system of that building.

3.—A modern attractive building is not fancy. It is plain, but in good proportion, with pleasing lines and well placed windows. It is substantially built, conveniently arranged and well painted.

4.—“A chain is no stronger than its weakest link.” A building frame is no stronger than its weakest point.

5.—A good job of nailing is an important item in the construction of frame buildings.

6.—A ventilating system alone will not prevent the deposit of moisture and frost; it will help by carrying out the excess moisture. Two other factors are important in the control of frost, the insulating of cold sidewalls and ceilings, and the keeping up of the temperature to a reasonable degree. The temperature is kept up by having plenty of stock in the barn and by keeping the overhead space low.

7.—In concrete work, the proportion of Portland cement to clean hard sand should vary from “1 to 2” to “1 to 3”. There should never be more than three parts of sand to one part of Portland cement in concrete work. This would be for the roughest work, such as foundations. Water-tight work should have the proportions of one part of cement to two parts of sand. Pebbles or crushed rock may be added to this mixture up to twice the amount of the sand without decreasing the strength.

PRINTED CIRCULARS

- Ext. Leaflet No. 6—A Movable Hog House Plan—Patty-----Free
- Ext. Circular No. 7—Hog Houses for South Dakota—Patty-----Free
- Ext. Circular No. 9—Vegetable Storage—McCall-----Free
- Ext. Circular No. 29—A Suggested Farm Entrance—Patty and
Starring -----Free
- Ext. Circular No. 31—Farm Building Ventilation—Patty-----Free
- Ext. Circular No. 32—A Serviceable Farm Barn—Patty and Larsen-Free
- Ext. Circular No. 35—Septic Tank for Sewage Disposal—Patty---Free
- Ext. Circular No. 264—Pit and Trench Silos—Patty-----Free
- Ext. Circular No. 265—Available Engineering Circulars and Blue
Print Plans (This Circular)-----Free

MIMEOGRAPHED PAMPHLETS

- The Trench Silo-----Free
 - Blasting Rock with Sodotol (Applies to Dynamite)-----Free
- The nominal charge made for blue print plans merely covers the cost of the blue print paper used in printing them.

BLUE PRINT PLANS

Barns

- No. 121—General Barn Plan-----4 sheets 40c
36-ft.x60-ft. Sets north and south, with feedway in center.
Capacity 8 horses, 13 cows. Calf pen and 2 box stalls. Side
walls of clay block up to loft, although may be built of
lumber.
- No. 122—General Barn Plan-----5 sheets 50c
36-ft.x60-ft., with "L" on northeast corner for loose and
young stock. Provides sheltered lot. Capacity 10 horses,
12 dairy cows, bull, 12 calves, and carload of loose stock.
Feed room and silo. Stock faces out, with driveway
through center. This barn is built in sections as funds
permit. Bill of material in Extension Circular No. 32.
- No. 123—General Barn Plan-----4 sheets 40c
38-ft.x48-ft. Sets north and south. Stock faces out, with
driveway through center. Capacity 8 horses, 10 cows and
good calf pen.
- No. 111—Dairy Barn Plan-----5 sheets 50c
36-ft.x72-ft. Sets north and south with "L" on the north
and east providing sheltered lot. Complete ventilating
system. Capacity for 25 cows, 17 calves, one bull pen, 100
tons of hay and bedding. Cattle face out, with driveway
through the center.
- No. 131—Beef Cattle Shed-----2 sheets 20c
20-ft.x96-ft. This shed sets east and west, with a feed
rack for hay along the north side. Designed for beef cat-
tle and range conditions. Fully ventilated.

Farm Houses

- No. 411—Farm House Plan-----3 sheets 30c
A full two-story square frame construction with 9 rooms
and bath. Contains wash room and office on first floor;
and laundry in basement. Over-all dimensions 40-ft.x28-ft.
Bill of material attached.
- No. 412—Farm Cottage-----4 sheets (large) 60c
28-ft.x30-ft. Story and a half. East front, 6 rooms and

- bath, with large closets and storage space. Enclosed porch and wash room combined. Full basement with built-in cistern. Estimated cost \$5000. Bill of material attached.
- No. 413—Farm Tenant House-----3 sheets 30c
 Story and a half, 5-room house. Estimated cost \$2000 without basement.

Ice Houses

- No. 441—Ice House Plan-----2 sheets 20c
 Semi-basement plan, with capacity for 20 to 25 tons. 12-ft.x12-ft. inside measurement. Concrete walls. May be tile or frame. Hip roof.
- No. 442—Ice House Plan-----1 sheet 10c
 14-ft.x18-ft. Built of cement blocks.

Poultry Houses

- No. 311—Poultry House Plan-----2 sheets 20c
 16-ft.x32-ft. as shown in plan. The plan calls for 16-ft. units, each unit the same. The house may be built in lengths of 16-ft., 32-ft., 48-ft., or 64-ft. Frame house, faces south, combination roof, straw loft, capacity of 65 to 75 birds for each 16-ft. unit. Bill of material attached.
- No. 351—Brooder and Colony House Plan-----1 sheet 10c
 10-ft.x12-ft., with combination roof. Matches poultry house plan No. 311. Movable. Bill of material on blue print. Estimated cost of material \$87.

Hog Houses—Centralized

- No. 211—Iowa Sunlit Type-----2 sheets 20c
 Clay tile construction, 25-ft.x60-ft., 20 pens. Sets north and south. Estimated cost, completely equipped, \$900. Bill of material given in Extension Circular No. 7.
- No. 212—Dakota Hog House Plan-----2 sheets 20c
 Clay tile walls. 25-ft.x60-ft., 20 pens. Sets east and west. Driveway and feeding floor through center.
- No. 213—Frame Hog House Plan-----2 sheets 20c
 24-ft.x48-ft. 16 pens. Sets north and south. No loft. Estimated cost, completely equipped, \$800.
- No. 214—Semi Monitor Hog House Plan-----2 sheets 20c
 24-ft.x48-ft, 16 pens. Frame construction. Sets east and west. Estimated cost, fully equipped, \$800.
- No. 215—Hog House with Loft Overhead-----2 sheets 20c
 24-ft.x48-ft., with loft for alfalfa and bedding. Gable roof, ventilating system. Sets north and south. Bill of material attached.
- No. 216—Small Hog House (not movable)-----1 sheet 10c
 12-ft.x18-ft., 3 pens in a row. Sets east and west. Combination roof. Bill of material on blue print. This house may be built longer.
- No. 217—Economy Hog House Plan-----1 sheet 10c
 8-ft.x36-ft., 6 pens. Sets east and west. Combination roof, rough lumber. No floor. Estimate cost of material, \$60. An excellent 2-pen movable house may be built from this plan if built only 2 pens long. Bill of material on blue print.

- No. 218—Small Shed Hog House Plan.....1 sheet 10c
12-ft.x30-ft. Shed house. Faces south, with feed alley
along north. 5 pens.

Hog Houses—Colony

- No. 251—Movable and Colony Hog House Plan.....1 sheet 10c
“A” type with sun doors in roof. 7-ft.x8-ft. on the ground.
Roomy, substantial, ventilated, easy to build, lumber cuts
right. May also be built 6-ft.x8-ft. Shown in Extension
Leaflet No. 6. Estimated cost of material, \$20. Bill of
material on blue print.
- No. 253—Movable Hog House Plan.....2 sheets 20c
Rectangular house with shed roof. 6-ft.x8-ft. Estimated
cost of material, \$33.75. Bill of material on blue print.

Miscellaneous Buildings

- No. 711—Machine Shed Plan.....2 sheets 20c
Frame building. 24-ft.x60-ft. Gable roof. Continuous
doors on side. Should face south or east.
- No. 911—Community Building Plan.....3 sheets 30c
Building for Farmers' Club or other organization. Full
basement, first story 32-ft.x60-ft. with stage extension
12-ft.x30-ft. Good basketball court. Cloak room, check
room, motion picture space, with auditorium on first floor
and dining room in basement. Estimated cost of material,
\$3000.
- No. 921—Livestock Sales Pavilion Plan.....2 sheets 20c
Square building, seats 800 people. Capacity 50 stalls for
cattle, 25 hog pens.
- No. 931—Exhibit Booth Plan.....1 sheet (small) 5c
An exhibit booth for fair or other exhibit.

Horse Eveners

- No. 5141—4-Horse Evener.....1 sheet (small) 5c
For 14-inch gang plow.
- No. 5151—5-Horse Eveners.....1 sheet 10c
This plan shows three different 5-horse hitches for gang
plows with horses strung out.
- No. 5161—6-Horse Eveners.....1 sheet (small) 10c
For 12-inch gang plow.

Self Feeders

- No. 5211—Self Feeder for Hogs.....1 sheet 10c
Shows plans for two feeders. One 2-way feeder for shell-
ed corn, grain and ground feed. Capacity 30 shoats. One
feeder for ear corn and tankage. Capacity 60 shoats. Bill
of material on blue print.
- No. 5212—Self Feeder for Hogs.....1 sheet 10c
One-way feeder for shelled corn, grain, and ground feed;
also tankage compartment. Capacity, 12 to 15 shoats.
Easy to build, easy to move. Good inside feeder. Design-
ed by A.H.K. Bill of material on blue print.
- No. 5219—Alfalfa Feeding Rack for Hogs.....1 sheet 10c
Rack 8 feet long. Capacity up to 30 hogs.
- No. 5231—Sheep Feeding Rack for Hay.....1 sheet (small) 5c

Stalls and Mangers

- No. 533—An Adjustable Cow Stall-----1 sheet 10c
An adjustable double stall for beef cattle. Could be used for dairy stall. Length of stall is adjusted by a moving manger.
- No. 534—Horse Stall-----1 sheet (small) 5c
Detail of horse stall, showing height of manger and partition. Steel stall guards and creosote wood block floor with concrete curb.

Hay Stackers

- No. 541—Hay Stacker-----1 sheet 10c
Simple home-made outdoor stacker with swinging boom on a vertical pole mounted on skids.

Fences

- No. 551—Fence Plan-----1 sheet 10c
A plan for an attractive, substantial plank fence for barn lot. Also plan for high tight board fence for sheltered lot.
- No. 552—Concrete Corner Post-----1 sheet 10c
Plan showing ornamental concrete corner and gate post. Also a suggested ornamental entrance.

Dipping Vats

- No. 561—Cattle Dipping Vat-----1 sheet 10c
After the Portland Cement Association plan. Concrete vat, 26 ft. 6 ins. long by 3 ft. wide, with steel reinforcement. Also plank chute for dripping pen. Bill of material on blue print.
- No. 562—Hog Dipping Vat-----1 sheet 10c
After Portland Cement Association plan. A concrete vat 18 feet long by 2 feet wide, with reinforced concrete. Also chute and dripping pen. Bill of material on blue print.

Ear Corn Tray

- No. 571—Exhibit Tray for Corn-----1 sheet (small) 5c
Plan for a 10-ear sample of corn for exhibits or corn shows.

Barn Framing

- No. 151—Barn Framing Plan-----2 sheets 20c
Shows standard plans for braced rafter, shawver, and Gothic roof construction. Designed from results of all testing work to date.

Home Improvements

- No. 612—Septic Tank Plan-----1 sheet 10c
A simple two-compartment tank. Family size. Highly efficient for farm service. Plan also shown in Extension Circular No. 35, which also contains the bill of material.
- No. 621—Sanitary Concrete Well Curb-----1 sheet 10c
- No. 631—Cistern Plan-----1 sheet 10c
A plan for inexpensive cistern where clay soils are available. Jug shaped. Plastered on soil.
- No. 632—Concrete Cistern Plan-----1 sheet 10c
Cistern of re-inforced concrete. Rectangular with filter on top. After Portland Cement Association plan.
- No. 641—Coolers-----1 sheet 10c
Iceless cooler, home-made. Principle of evaporation. Also cold window-box plan on same sheet.

- No. 651—Tea Cart -----1 sheet 10c
 Wheeled Tray, designed for Home Economics clubs. Estimated cost, \$10.
- No. 661—Fire Place Plan-----1 sheet 10c
 Fireplace showing arrangement for check damper and smoke shelf which prevents back draft.

Farmstead Plans

- No. 851—Farmstead Plans-----1 sheet 10c
 This plan shows four small farmsteads, each with the different front. It is suggested that this plan might be studied in connection with any front desired, together with special plans for the same.

The following plans are best adapted to a south front (facing road along the south).

- No. 811-----1 sheet 10c
 No. 812-----1 sheet 10c
 No. 813-----1 sheet 10c
 No. 814-----1 sheet 10c
 No. 815-----1 sheet 10c
 No. 816-----1 sheet 10c

The following plans are best adapted to an east front.

- No. 821-----1 sheet 10c
 No. 822-----1 sheet 10c
 No. 823-----1 sheet 10c
 No. 824-----1 sheet 10c

The following plans are best adapted to a north front.

- No. 831-----1 sheet 10c
 No. 832-----1 sheet 10c
 No. 833-----1 sheet 10c
 No. 834-----1 sheet 10c
 No. 835-----1 sheet 10c

The following plans are best adapted to a west front.

- No. 841-----1 sheet 10c
 No. 842-----1 sheet 10c
 No. 852—Yard Plan Only-----1 sheet (small) 5c

This plan is for the north or west front.

- No. 853—Yard Plan-----1 sheet (small) 5c
 East front.

- No. 854—Yard Plan-----1 sheet (small) 5c
 South or west front.

Plans for School Ground Planting
 (by A. L. Ford, Landscape Architect)

For Rural Schools

- No. 861—For Southeast Corner Location-----1 sheet 10c
 No. 862—For Any Location (not corner)-----1 sheet 10c
 Any front.
- No. 863—Corner Location (any corner)-----1 sheet 10c
 No. 864—Any Location. Plenty of trees-----1 sheet 10c
 No. 865—Corner Location -----1 sheet 10c
 Drive from each way.
- No. 867—For Large Ground-----1 sheet 10c
 With barn or garage location.

For Town Schools

- No. 871—Planting for Town School.....1 sheet 10c
 Grounds cover one city block, 300-ft.x400-ft.
- No. 872—Planting for Town School.....1 sheet 10c
 Planting for larger ground than above. Should cover at least two city blocks. Playground for small children; and ground for baseball and outdoor basketball court.

Miscellaneous

- No. 881—Shelter belts.....1 sheet (large) 15c
 Seven different plans for shelter belts are shown to suit the space and local conditions. Planting varieties included.
- No. 885—Farmstead Entrance Arch.....1 sheet 10c
 Frame construction. Includes sales-bulletin boards. Also shown in Extension Circular No. 29. Bill of material in circular.

PLANS OF DIVISION OF AGRICULTURAL ENGINEERING, U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

(These plans are printed from Van Dykes, furnished by the U.S.D.A. We can furnish them at the cost of the blue print paper as listed).

- 689-J 1454 Hurdles, for handling hogs, frame construction1 sheet 10c
- 698-B 1453 Hog Wallow, 12x9, concrete construction, bill of material.....1 sheet 10c
- 698-F 1472 Shipping Crates, various sizes, bill of material included1 sheet 10c
- 689-C 1449 Scale Fence, hinged pen for scales, suitable for hogs1 sheet 10c
- 670-P-4 B-1283 Septic Tank, capacity 20 persons, concrete construction, settling chamber 6'x3'6"x5'6" in depth. Automatic syphon1 sheet 20c
- 686-C B 500 Hay Shed, 28' wide by any length. 16' bents, enclosed second story.....1 sheet 20c
- 687-A 570 Implement Shed, with shop included, "L" shape, shop 16'x18' in center, frame construction.1 sheet 20c
- 685-D 1284 Colony Poultry House (movable), 14'x15', frame construction, shed roof.....1 sheet 20c
- 685-D 1278 Brooder House, 10'x14', frame construction, gable roof1 sheet 20c
- 686-E 883-C Storage Cellar, pole and plank construction, 16'x20'1 sheet 10c
- 686-D 889-B Granary, 60'x36', corn crib on one side, grain bins on other, 10' driveway, gable roof, 9' posts2 sheets 40c
- 687-F 1341 Milk House, 12'x14', one room, frame construction1 sheet 20c
- 687-F 1336 Milk House, 20x10', milkroom, washroom, boiler room, fuel bins and cooling tank, frame construction1 sheet 20c
- 685-A A 1175 Cattle Barn for Beef Cattle, 72'x36', twin silos, feed room, frame construction, dormer windows, 16' posts, gambrel roof, Wing frame....3 sheets 90c
- 689-H 1451 Breeding Crate for Hogs.....1 sheet 10c