

Cost, \$1800.

Studs, 2 × 6s, placed 2-1/2 feet on center.

Supports, two 2 × 6s in each stanchion.

Joists, main span 3 × 12s, 20 feet long, placed 14 inches on center.
Short spans over feed alleys, 2 × 10s.

Plate, 1 × 10-inch boards sprung around near top of studs.

Roof supports, 6 × 6s placed 12 feet apart. Purline plate rests on these posts and consists of 1 × 8s sprung to the circle.

Siding, 8-inch, put on horizontally, first story ceiled inside.

To clean out, a wagon is driven around between the two rows of cows.

The chief objection to this barn is insufficient light in the cow stable.

This barn and No. 3 are approximately the same in construction, and are more substantially built than barns No. 4 and 5.

[Illustration: FIG. 28. ARRANGEMENT OF COW STABLE IN BARN NO. 2; TWO ROWS OF COWS TAILED TOGETHER. THE BARN IS CLEANED BY DRIVING AROUND BEHIND THE COWS.]

[Illustration: FIG. 29. BARN NO. 3. 80 FEET IN DIAMETER.]

BARN NO. 4

Built in 1900.

Diameter, 90 feet.

Capacity, 105 cows, two rows heading together.

Cost, \$3000.

Foundation, width at base and top, 18 inches; depth in ground, 20 inches, (not sufficient).

Sills, 2 × 8s, sawed in short lengths, and placed flatwise.

Studding, 20-foot 2 × 8s, placed 3 feet on center and toenailed to sill.

Supports, first story 4 × 4s placed between stanchions in each row, making two rows of supports between the outside wall and the silo; 4 × 4s cut to a circle placed on top of these supports. The outside span, over cows, is 13 feet 6 inches; middle span, over feed alley, 6 feet 8 inches, and inside span, over cows, 13 feet.

Joists, 2 × 8s placed 3 feet apart at studs on outside wall. There are as many joists in center of barn as at the outside.

Supports, second-story, consist of one row of posts running around at a point immediately under the break in the roof. These are 16 feet apart and are made of three 2 × 8s kept 2 inches apart by horizontal braces which run from studding near the eave thru these posts to studding in silo. See Fig. 31.

Plate, rafter is set on top of each stud, and no plate is used.

Rafters, 2 × 6s resting on studs at outside and on circular plate at break in roof.

[Illustration: FIG. 30. BARN NO. 4. 90 FEET IN DIAMETER; ONE OF THE FEW DAIRY BARN WITH SUFFICIENT LIGHT; SAME SCALE AS DRAWING ON PAGE 37.]