

Plank Frame Diagrams.

I have been very much interested in discussions throughout your paper about plank-frame barns, and would like to build one, but the carpenters around never built one, and really don't know how. So I would be pleased if you would mention in your paper how much material it would take to build a cow-barn 36 x 70 ft., with 18-ft. posts, and a barn 100 x 36 x 18 ft. posts, both to have a hip roof?

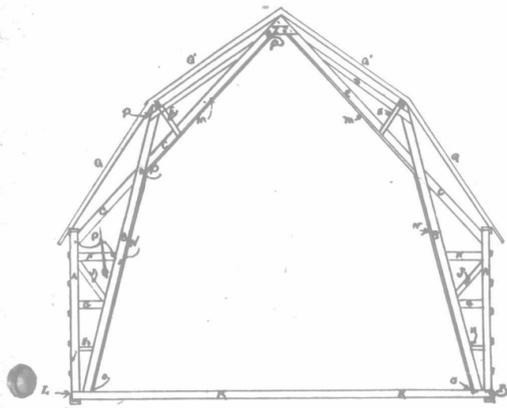
- Z3.—Gable girths, 4 pcs., 2 in. x 6 in. x 13 ft.
- Z4.—Gable girths, 1 pc., 2 in. x 6 in. x 20 ft.
- 13.—End trusses, 2 pcs., 2 in. x 8 in. x 18 ft.
- 11.—Post fillers, 3 pcs., 2 in. x 4 in. x 17 ft.
- Eight-inch bolts—8.
- Five-inch spikes—30 lbs.
- Four-inch spikes—10 lbs.

TIMBER FOR ONE INTERIOR BENT.

- A.—Side posts, 4 pcs., 2 in. x 8 in. x 19 ft.
- B.—Purlin posts, 4 pcs., 2 in. x 8 in. x 29 ft. 9 in.
- C.—Roof supports, 2 pcs., 2 in. x 8 in. x 29 ft. 6 in.
- D.—Sub-supports, 2 pcs., 2 in. x 6 in. x 12 ft.
- E.—Struts, 4 pcs., 2 in. x 4 in. x 3 ft.
- F.—Main ties, 2 pcs., 2 in. x 8 in. x 4 ft. 10 in.
- G.—Sub-ties, 2 pcs., 2 in. x 6 in. x 4 ft. 3 in.
- H.—Minor ties, 2 pcs., 2 in. x 6 in. x 3 ft. 3 in.
- I.—Collar ties, 2 pcs., 2 in. x 12 in. x 3 ft. 4 in.
- J.—Braces, 2 pcs., 2 in. x 6 in. x 5 ft. 8 in.
- K.—Cross sills, 2 pcs., 2 in. x 8 in. x 36 ft.
- L.—Short sills, 2 pcs., 2 in. x 8 in. x 2 ft. x 19 ft.
- M.—Roof support stiffener, 2 pcs., 2 in. x 6 in. x 19 ft.
- N.—Purlin posts, 2 pcs., 2 in. x 6 in. x 22 ft.
- O.—11 in. bolts, 4 pcs.
- P.—7 in. bolts, 14 pcs.
- Five-inch spikes—24 lbs.
- Four-inch spikes—6 lbs.

SIDE TIMBERS.

Place a 2 x 8 plumb from sill to plate in the centre of each space between the posts, edge to the outside to allow the girths to be spiked to it.



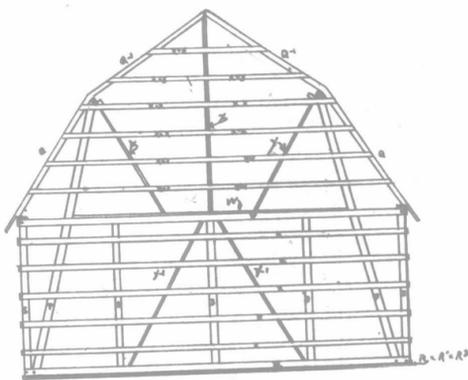
Interior Bent of Plank Frame.

So many subscribers are asking for lists of material and instructions on plank-frame barn construction that I believe it is advisable to reproduce drawings and other instructions on the erection of this class of buildings.

One reason which makes this frame so popular is that large timber is extremely difficult to get, and besides the plank-frame construction of side girths is well adapted for covering with galvanized corrugated iron. The girths are generally 2 in. x 4 in., or 2 in. x 6 in., and are nailed closer together than the old-style 6 in. x 6 in. timber girths were set. This presents an admirable means of securing the sheets at close intervals, and prevents rain, snow or sparks from blowing in on the contents, and is right in line with modern advancement.

The high cost of labor will soon prohibit the building of the heavy frame, even if the timber could be procured, and the iron, although a little higher in first cost, is very quickly laid, and when all the sides and roof are covered with it, a barn is ready for use in a very few days. Of course the fact that one of these barns is proof against lightning when equipped with wires to the ground is also considerable inducement.

Your barn 36 ft. x 70 ft. x 18 ft. will require the following material to construct it, according to latest developments in plank construction:



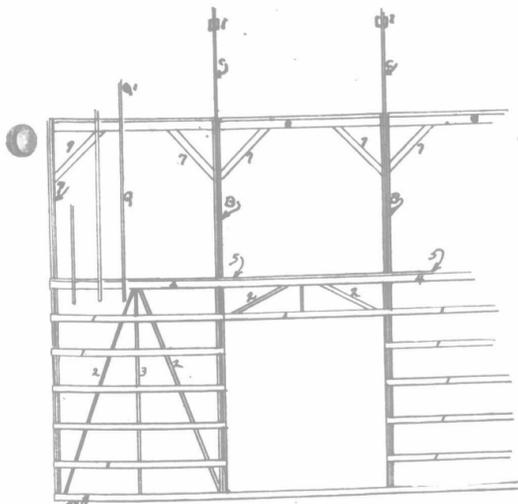
End Bent of Plank Frame.

Then run the braces, as shown on the drawing, from the bottom of the posts up to the plate on each side of this upright. Fill all the spans in this way, and then spike on 2 in. x 4 in. or 2 in. x 6 in. girths at 2-ft. or 3-ft. centres. These should have the joints come on posts. The side plate, as shown, consists of a 2 x 8 spiked down on top of the posts, then another 2 in. x 8 in. on the outside and finished with a 2 in. x 10 in. spiked over the first 2 in. x 8 in. and allowed to extend out over the side 2 x 8 to form a solid top for nailing the rafters into.

The purlin plate is two pieces, 2 in. x 8 in., of lengths to reach from post to post and have 2 in. x 4 in. or 2 in. x 6 in. braces down to the side of the purlin posts. It is not necessary to give a list of material for the sides, as I do not know how you will space off the bents and where the drive floor will be.

Several methods are followed in erecting these frames, some doing so by means of a "raising-bee" with pike poles and main strength, and in the past I used this method considerably in order to get farmers to collect and see the frame when I was at hand to explain anything they did not understand about the structure, but the best way is by the use of two gin poles, one at either side at the junction of the purlin post and the roof support.

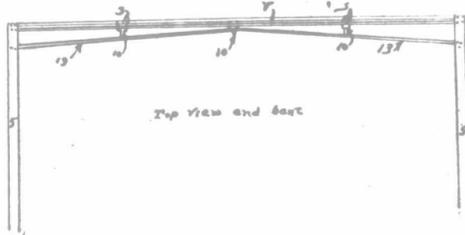
A three-sheave block above and a double one at the bent, with a 1/2-in. or 1-in. rope, will easily haul up one of these bents. Do not try to raise the bent up as is done at a bee with men, but place the top nearest the pole and as it raises the bent keeps drawing inward towards the pole until finally the whole bent is suspended clear of



Section of Side of Plank Frame.

TIMBER FOR ONE END BENT.

- S.—Posts, 10 pcs., 2 in. x 8 in. x 18 ft.
- T.—Purlin posts, 4 pcs., 2 in. x 8 in. x 29 ft. 9 in.
- U.—Cross sills, 4 pcs., 2 in. x 8 in. x 18 ft.
- V.—Beams, 4 pcs., 2 in. x 8 in. x 24 ft.
- W.—Beam stiffeners, 1 pc., 2 in. x 10 in. x 24 ft.
- 10.—Post stiffeners, 3 pcs., 3 in. x 6 in. x 18 ft.
- Y.—Purlin brace, 2 pcs., 2 in. x 6 in. x 12 ft.
- X.—Gable stiffeners, 2 pcs., 2 in. x 8 in. x 18 ft.
- Z.—End girths, 14 pcs., 2 in. x 6 in. x 20 ft.
- Y1.—End braces, 2 pcs., 2 in. x 6 in. x 17 ft.
- Z1.—Gable girths, 4 pcs., 2 in. x 6 in. x 17 ft.
- Z2.—Gable girths, 4 pcs., 2 in. x 6 in. x 17 ft.

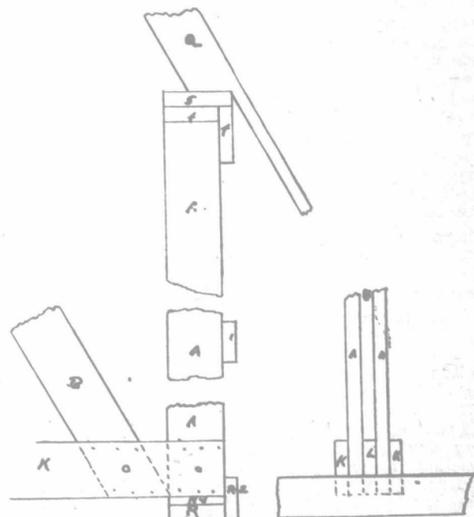


Top View End Bent Plank-frame Barn.

the floor, when the posts are easily placed over the proper position and the ropes slacked to let them drop into place.

Great care must be exercised in staying the bent, so no wind can blow it out of plumb, and it is best to put in the braces as the bents are raised to make all secure.

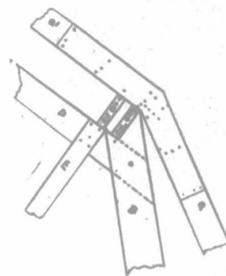
A. A. GILMORE.



Details at Side Post.

Harvesting Rape for Winter Use.

An ordinary mower may be used to excellent advantage in cutting rape, whether sown in drills or broadcast. Last year at Weldwood a small patch of broadcast rape remaining after the first snow came was mown and put into bunches. Unfavorable weather conditions subsequently prevented us making use of the rape in the manner intended, which was to draw it into the barn in small quantities as needed from time to time and feed after thawing it out. This was the late William Rennie's idea, but conditions in 1911 prevented us carrying out the plan. This year we had an acre of rape drilled in about August 1st on the edge of a field that was being summer-fallowed to kill bindweed. The rape grew rapidly and two scuffings sufficed to hold the weed pretty well in check. We commenced feeding late and as it could be given only to non-milking cattle most of it was still left on Nov. 23rd. On this date we ran the mower over half the patch, cutting two rows at a swath, put it together neatly with a side-delivery rake (which seems capable of picking up almost anything), drew two loads to the barn and forked the rest into small coils, about half the bulk of ordinary hay-cocks. We were afraid to risk too much this way, hence had not cut all at once. As it turned cold, however, with a light snowfall, we decided to cut the rest on Nov. 26th. The light snow did not interfere with the cutting or raking. The men are instructed to be very careful not to feed this rape in a frosty condition, but to allow it always to thaw out in the stable. Cattle relish it greatly after becoming accustomed to it, but like a little dry feed as well. The



Details at Purlin.

pigs would have none of it, though previously we have had them eat more or less of it. It is supposed to make good winter greens for poultry, and we notice the colt takes to it readily. We estimate that from this acre of late-sown rape we shall have something like ten tons of green feed, and are hopeful of using it satisfactorily until Christmas. It does not appear to heat or freeze readily when piled up in rackfuls at this season. In warmer weather it will heat and bleach.

Whatever the result of our experience in late feeding may be, we are prepared to recommend it highly for earlier use, at all events. It is a heavy yielder, a fine feed for cattle and other stock, is very productive, and may be sown at