



View of residence of A. B. Potter, Montgomery, Sask.

## Building Cement Houses

We may be said to have reached the cement age in the erection of many farm structures. A few years ago the use of cement was confined largely to the building of foundations for houses, bridges, etc. To-day its use is very much more general and there does not appear to be any kind of a structure which the cement manufacturer will not undertake to build out of cement and guarantee satisfaction. And he seems to be warranted in this by recent experience with cement in the erection of many farm and other buildings. Where suitable gravel is convenient cement concrete forms a good material for the construction of a dwelling. It makes a warm, dry and healthful residence.

One of the most recent developments in cement building is the use of cement blocks, that is, blocks of cement made in a mould. These may be a solid square or hollow, plain or fancy in appearance. In fact there is hardly any limit to the variety of blocks the builder may have at his disposal. They have a much better appearance than the plain concrete wall, and the fact that they can be made in nearly any color adds greatly to their value. In using blocks, however, the greatest care should be exercised in having the blocks properly bedded in the mortar, as they are apt to crack, and a broken cement block in a wall has a very unsightly appearance. The vertical points and the end of the blocks should also be carefully mortared. These points are very important if a strong and durable wall is required.

The accompanying plans and photograph are of a farm house built of cement concrete by A. B. Potter, Montgomery, Sask. The house was designed by Mr. Potter himself, and built by day labor, with an expert to oversee the erection of the walls above ground. The house is two storeys, besides attic and cellar. It would have looked better had there been more windows, but we presume Mr. Potter was guided by what would best suit the rigorous climate of the Canadian West when he designed the plan, rather than by outward appearance. The fewer windows

there are in a house the less chance there is for winter drafts.

The house is 28 x 32, cellar full size, 6½ ft. in height, 9 ft. first floor, 8 ft. second floor, and attic 6 ft. 4 in. between joists. The cellar walls are 28 inch footing and 22 inch thickness, with an inch board put in half way up, making two walls 13 inches and 9 inches, so as to break the frost. Walls are the full height of windows above ground. An 8-inch wall runs through the centre, and a 6-inch wall divides the dairy off. There is an 8-inch foundation under the frame entry over steps, also under the verandah. All these have a 12-inch footing with the wall centred. The first storey is 10 inches, stripped with one inch stuff and lathed; the second storey has 8-inch walls. All the walls, also a 45 barrel cistern, the foundation for the furnace and the dairy floor are built with Manitoba Union cement. The walls are plastered with the same thing on the outside and blocked off to 10 x 20 inches. The mortar for the outside was colored. The cistern is below the cellar bottom, with an

overflow drain 300 feet long, which would come out on the surface, but was put down 7½ feet deep with a cesspool and pump, so that it would do service in the winter for sink and bathtub. The dairy is lathed and plastered overhead and there are no furnace pipes except one cold air pipe, which is enclosed in joists.

Most of the lumber was bought in British Columbia, using fir dimensions and flooring and cedar finishing, and three feet wainscoting in kitchen. The first floor is double. There is barb wire, two strands twisted, put six times around the building in the walls over and under all windows. The house is plastered throughout with Manitoba hard wall plaster. The frame building over steps and east door was the one that was on the farm. As yet no finishing has been done in the attic, except the stairway leading into it, which is over the stairway from the lower floor. The roof is Mansard with a rise of 8 inches and 10 x 14 feet flat on top, and a dormer window on the south side, shingles on sides and galvanized iron on top. The walls of the building are 24 feet 6 inches high from bottom to top of plate, which is 4 x 8 inches. The hardware includes steel bath tub, excavating and roofing, also three pumps for cistern, cesspool and well, sink, tank, pipes, etc. The pantry and bathroom are over the cistern. There is a pump on the pantry floor, to pump into a well or force up to the tank. There is a pipe from the tank to the sink, with tap to draw into the hand basin.

All teaming was done by the farm teams. There was a haul of 17 miles for lumber and cement, two miles for stone and gravel. This work is charged at \$3 per day with board. The building of walls, digging of cellar and drains and 50 days' lathing and carpenter work by the proprietor or men are reckoned at one dollar per day, board extra. Board is put at \$2.50 per week. The priming was done by the farm hands. These particulars are given to enable others to figure as to cost. The carpenter work is charged at \$3 to \$3.50 per day, the farmer boarding the men, mason for plastering outside and inside, \$3.00 per day.

The plan shows the kitchen 10 x 14 feet, but there is also 6 x 6 feet between pantry and hall. The hall is 6 feet clear. The rooms both upstairs and downstairs are the thickness of the partitions less than the dimensions given in the plan.

