

## BARN DESIGNED FOR SMALL FARM

Liberal Use of Concrete in Its Foundation Assures Permanence.

HAS LARGE STORAGE SPACE

Self-Supporting Roof Helps to Provide for That Important Matter—Central Feed Alley Saves Much Work—Ample Provision for Ventilation.

By WILLIAM A. RADFORD.

Mr. William A. Radford will answer questions and give advice FREE OF COST on all subjects pertaining to the subject of building work on the farm, for the readers of this paper. On account of his wide experience as Editor, Author and Manufacturer, he is, without doubt, the highest authority on all these subjects. Address all inquiries to William A. Radford, No. 127 Prairie avenue, Chicago, Ill., and only inclose two-cent stamp for reply.

There is no reason why the small farm should not have buildings of as high quality as those of the larger farms. There is little saving realized in the long run when cheap, poorly-constructed buildings are placed on a farm of any size. Small buildings may be constructed with just as careful regard for the latest ideas in farm-building construction as the larger structures. In order that a barn shall follow the latest practice in farm-building design it must be provided with a large number of windows which will allow the sunlight to penetrate every corner, and there must be a system of scientific ventilation to insure the health of live stock kept in the barn and prevent the formation of conditions resulting in an increased fire risk.

The permanence of a barn is dependent very largely upon its foundation. When the structure is given a good coat of paint at regular intervals and no accident occurs which weakens it at any point, the only rapid deterioration which is likely to occur is the rotting of timbers kept moist by an improperly-constructed foundation system. Con-

crete has furnished one of the most useful of materials in building farm structures which do not rot along the sills. By carrying the concrete foundation walls up 18 inches or two feet above grade and bolting the sills to the top of these walls the moisture is kept away from the wood and rotting is prevented. In addition, the walls and floors may be made of concrete throughout, furnishing strong construction and making the barn very easy to keep clean.

The heavy timber construction of barns in which numerous braces and ties were placed across the haymow to interfere with the storage space

is a substantial-looking, farm barn of small size designed in accordance with most approved practice in farm-building architecture. It is 32 feet by 26 feet in size on the ground, and the roof reaches up high enough to make a good-sized mow over the stable.

The concrete foundation is built up above the level of the barnyard about 18 inches to protect the sills of the building from moisture. The sill of the wooden building is laid in soft concrete mortar on top of the foundation wall, and anchor bolts tie the sill firmly to the concrete.

The floor over the cow stable and horse stable is made in the usual way, except that the joists are tied together at the ends and spiked into the studding at the sides to tie the building together. The timbers are all light and are put together on the plank frame construction plan, so that the trussed cross-ties help materially in making a solid building.

The shape of the roof also strengthens the building, so that even though the timbers are light the structure is very strong.

There is one central feed alley, which serves the horses on one side and the cows on the other, a plan which saves a great many steps at feeding time. Dutch doors are provided so that the upper parts of the doors may be left open for ventilation.

The horse stalls are made to use as double stalls when necessary. There is a door which makes the standing double stall into a box stall when this is an advantage. The box stall with the outside door is convenient for a mare and foal, since they can run out into the yard and come back to the stable at feeding time and at night. Box stalls are convenient in all barns where live stock is stabled.

An interesting feature of the plan is the hay door. It is made ten feet in width and is hung with weights like a window sash, so that it may be moved up or down and left in any position wanted. In summer time while the mow is being filled and for some time after, this door is pulled down to the full opening. Afterwards it may be partially closed until the hay is done sweating.

The weights move up and down in boxes at the sides of the studding. A raceway a little longer than the height of the door is necessary to allow for the stretch of the cord.

Gambrel roofs are becoming quite common in different parts of the coun-

# THANKSGIVING



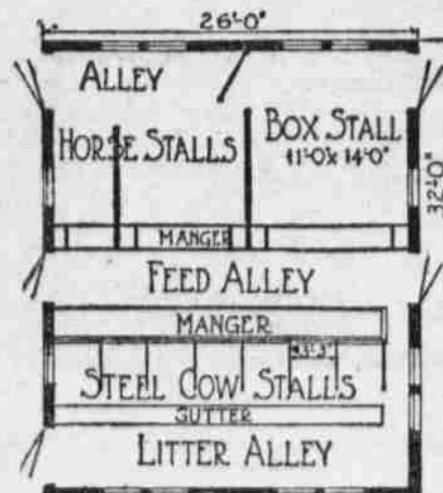
**G**OD be merciful unto us, and bless us; and cause his face to shine upon us; Selah. That thy way may be known upon Earth, thy saving health among all nations. Let the people praise Thee, O God; let all the people praise Thee. Then shall the Earth yield her increase; and God, even our own God, shall bless us. God shall bless us; and all the ends of the Earth shall fear him.

From the 67th Psalm.



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Floor Plan of Barn.

and add cost to the construction is low a thing of the past. Barns are built now with self-supporting roofs shaped to provide the greatest possible storage space in the mow without using unnecessary lumber. The strength of the structure is not lessened, it is a great deal easier to build, and the mow may be filled more quickly with a large quantity of material.

The barn shown in the illustrations

## PRAISE HIM for This Most Precious Gift

ON AN evening of this week it occurred to a man, sitting alone in an upper room, that Thanksgiving day was right at hand. So he bestirred his mind to consider those things for which an American might sensibly offer up gratitude to God.

He reflected that across the Atlantic millions of human beings were at that very moment engaged in the dreadful task of killing other human beings with every invention which ingenuity and skill could bring forth from the laboratories of science and the workshops of industry.

In other lands at that very moment tens of thousands upon tens of thousands of helpless folk—feeble, aged men and women, mothers with babes clinging convulsively to their breasts, little children sobbing in terror, a vast army of the innocent and the anguished—were enduring the extremities of exposure, of hunger, and of despair as they fled from their wasted farmsteads and burning villages, escaping from the pitiless cruelty of savage men only to lie down to suffer and die under the pitiless skies of God in the winter and the bitter storms.

At that very moment most dreadful war hid half the world in the blackness of its darkness and from that horrid cloud rained destruction upon unhappy Europe—upon her ancient capitals, upon her pleasant cities, upon her villages, her fields, her temples, her treasures of art, upon all the accumulations of a thousand years of genius, of learning, of industry, of skill and of patient advancement of the happiness and the civilization of the race of man.

So he that considered all this wickedness that was being done under the sun, this drunken dance of death and hell above the fetid corpses and the multitudinous graves, this awful nightmare of indescribable woe and wrath, said in the bitterness of his heart that no God ruled over such a maniac world and there was no thanksgiving due to the Giver of Gifts that were not good, but everyone altogether evil.

And when the man had made an end of his thinking, he went and stood in a window and looked out upon the evening, because it was fair to see.

He saw in vision at that instant the vastness of the republic and the multitude of the good and happy folk who live under the shelter of its strength. He reflected how brief a time had thus magnified the works of our pioneer fathers and our pioneer mothers, those brave and simple men and women whose names should never be mentioned with anything but profound gratitude.

And to this American, gladd with a great pride in the deeds of his people and the story of his country, and grateful to the Goodness which has guided and sheltered his fathers and his folk, lifted up his eyes to the night, to the quiet stars, to the brooding immensity above, and said in his heart:

"Thank God that I am an American!" And, citizens, that is the one outstanding, splendid fact for which each one of us should soberly and most gratefully thank God on Thanksgiving day this year.

The finest thing you possess or ever can possess is just your American citizenship. It is neither necessary nor becoming, on this day or on any other day, to cheapen this birthright of ours by brag or sprengle declamation.

But it is highly becoming on this Thanksgiving day to feel a deep gratitude and a manly pride in this heritage.

And so we firmly believe you do feel.

We all hear it repeated that patriotism is a thing of the past; that our people have become commercialized; that the masses have no deep-rooted loyalty to the country; that our rich men put dollars above the obligations of their citizenship; that our poor folk care little for the ideals of free government; that we Americans are decadent in the virtues and valor which marked our fathers.

That is not true.

If there be any power in the world which plots war against us Americans and promises itself victory over us on the assumption of our decadence in loyalty, that power will find how terrible was its mistake when our country calls her sons to battle in her defense.

We have, it is true, in our capacity as a collective people, left undone things that should have been done and done things which should have been left undone; and there is more truth than there should be in much that is jeeringly said by those who hate us.

We acknowledge that much of our politics offends common decency.

We see, here and there, painful evidence of corruption among lawmakers and even among the judges, who should know only justice and integrity.

We see rich men who do betray their country and foul their hands and soil their souls with most infamous dealings and most shameful profits.

We see Americans who do put the dollar above every consideration of right and duty, above the claims of our common humanity.

But while these things are true, it is true also that the heart and conscience of the American people, take them as a nation, are sound and sane and wholesome.

The blood of our fathers still runs in the veins of their sons. The spirit of the nation may in-

deed seem to slumber in the soft bed of long-enjoyed peace and security. But let war come against the land and no man need doubt that that spirit will spring up instantly awake.

We can rightfully be grateful that it has fallen to our happy lot to live in this most wonderful of all ages and to be citizens of this most wonderful of all the nations.

Let your hearts swell with just pride as you contemplate your country, so august, so splendid, so renowned in the earth.

Look upon your flag as it streams its bright folds yonder above your heads with proud and happy eyes. Remember how honorable is its story, and forget not how many thousands of brave and good men died that it might wave yonder, the ensign of a free people.

Tell to your children the story of their forebears, of those men and women who, amid the wilderness and forests that stood where now stand mighty cities and stretch cultivated farms, erected, with hardships and endurance and most heroic faith and valor, the noble edifice of our republican liberties.

Speak to them of Bunker Hill and Valley Forge and Saratoga and Yorktown, and of the great Declaration—that most famous Charter of Human Freedom.

Tell them to thank God for their fathers' and mothers' hardihood and courage, for the wars they fought, for the victories they won.

Tell them to salute their flag with high and proud hearts.

Tell them to thank God this Thanksgiving day that they are Americans.

And then do you soberly, gratefully, proudly thank God yourself that you are an American.

Oh, dear and mighty motherland, what better gift or more to be desired could God give than to be born and to die, strong Daughter of Liberty, between thy shining feet!—From the Chicago American.

## U. S. TROOPS MAY USE CACTUS FOR WATER

In the pursuit of Villa and his bandits through the arid regions of northern Mexico the United States troops traversed a region whose only vegetation is the barbed and forbidding cactus. To any but a cowboy or a trained plainsman of the Southwest, inhabitants themselves of the "cactus belt," this plant seemingly has no more value than the veriest weed, but it may well be that it may prove of great value to the troops in the absence of water, fodder, or even food for human beings.

In the punitive expedition there are many cow punchers of the "cactus belt" serving as scouts, and in the cowboy and the Indian of the Southwest the lowly cactus has its greatest admirer, for they know what a game struggle for life this plant has to make against an unyielding desert soil. Even their ponies and cattle and the poor beasts of the desert know of these uses of the cactus for water and fodder, says the New York Herald.

There are some thousand varieties of this monstrous vegetable family, not counting the 300 varieties of the agave, or century plant—incorrectly included by many—in northern Mexico. The varieties of the yucca palm and all other forms of vegetation known to the arid region have the same faculty of sucking up from the soil every drop of the all too little moisture in it and storing it up in their tough and leathery leaves and roots.

Of the many varieties perhaps the most remarkable is that member of the family known to those schooled in desert craft as the "water barrel." This plant is shaped somewhat like a beer keg and is about the same size. Through all the years of its growth it has been sopping up what moisture the parched earth contained and retaining it. It is the sole reliance of desert dwellers in time of drought, and the troops, far from water holes and with water scarce, may yet be galled to drink from it.

The "water barrel" is tapped by slicing off the top with a sword or machete and pounding the pulp until the water contained in it wells up into

the snorer thus formed. The pulp itself is pure and the water stored in it is likewise pure and refreshing.

Not all the water-bearing cacti are as gracious to famishing man, however, as the "water barrel," for most of them have protected themselves against the maraudings of those who would drink and live by imparting a bitter taste to the water they contain. The "peyote," especially, which abounds in the plains and deserts of Arizona, has a trick of discouraging depredations upon it, for its pump and juicy pulp secretes a bitter and poisonous juice.

In the last dozen years scientists have interested themselves in the study of the cactus for its possibilities as food, fodder and economic by-products. Dr. Leon E. Landow, foremost in the study of this desert plant, several years ago conducted extensive experiments in Los Angeles to ascertain the value of the thornless cactus as an article of food for human beings. In an effort to prove his contention that it contains food properties sufficient to enable a man to work 18 hours a day, he and his two secretaries for two weeks lived on a daily diet of the leaves and fruit of the cactus, the former being served green or fried and the latter either raw or cooked. While the "cactus squad" survived the experience and professor to have enjoyed their novel diet, it is a fact that the cactus never has attained the popularity of a flet mignon.

In the whole vegetable kingdom probably there is not another plant family having so many differentiations of form as the cacti. For it is possible to find among them species that crawl and creep like vines, other than stand erect in a single unbending stalk, like a green living monument of the desert; still others that are rooted to the spot, with their highest growth close to the ground and bearing almost no resemblance to usual forms of vegetation, and others, again, that branch out in thick unblooming branches.