Model Dairy Barn.

THE three following illustrations of a model dairy barn, are by Charles E. Benton, of Massachussets. It is hoped they may be of assistance to farmers who recognize the value of good accommodation for their dairy cows and who find it difficult to re-arrange their old barn to suit modern requirements.

Fig. 1 shows the ground plan of the stable with partitions between the cows, going half way back from the manger to the drop, and partitions between the cows' heads. There is

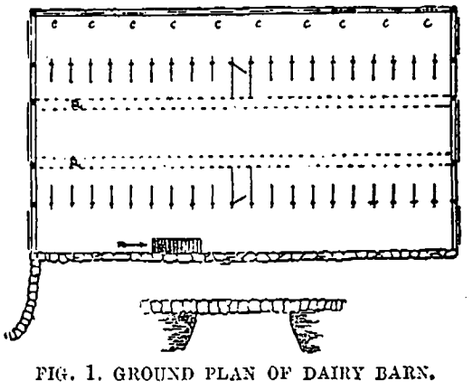

FIG. 1. GROUND PLAN OF DAIRY BARN.

also a stairway leading from the stable to the floors above. Fig. 2 gives a section of the barn and its approaches, showing the manner of constructing the frame. Fig. 3 shows the exterior of the building. The frame is thirty-six by sixty-eight feet, with twenty-two foot posts above the stable, which has accommodations for forty cows, giving a width of three and one-fourth feet to each cow, and leaving a passageway across the center. This barn is built on sloping ground, making it easy to gain access to the barn floor, which is fourteen feet wide and is placed eight feet above the stable. The space between this floor and the stable is used as a granary, and especially as a storage place for bran and other feed, which may be purchased cheap in the summer and stored for

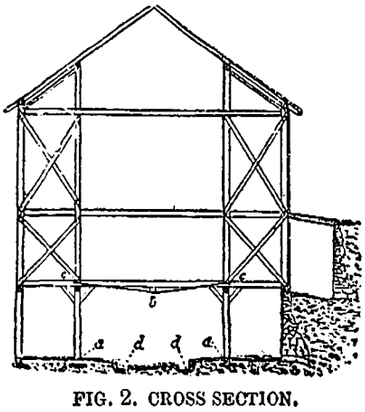

FIG. 2. CROSS SECTION.

winter use. The bins are filled through trap doors in the barn floor above, which saves a great deal of labor in handling. The grain is passed to the stable by wooden shutes which deliver it into a box on wheels in each feeding alley. As the top of a load of hay is twenty feet above the bottom of the mows, the unloading is mostly pitching down, which makes another great saving of labor in a busy time of year. The hay is also delivered to the stables by hay shutes in each corner of the bays. The cows stand in two rows, with their heads toward the outside of the barn, each feeding alley being eight feet wide. The standing floor for the cows is five feet from the stanchion to the drop, having a pitch of two inches in the distance. Running lengthwise of the stable are two long sills, *a*, which are well supported like the outside sills. On these, rest posts, in the line of stanchions, supporting stringers above, which sustain the weight of the hay. To avoid having posts in the centre which are a great inconvenience in a stable, the floors of the second story are supported thus: In the centre is another stringer, *b*, sustained by "cording." Every third sleeper is six by eight

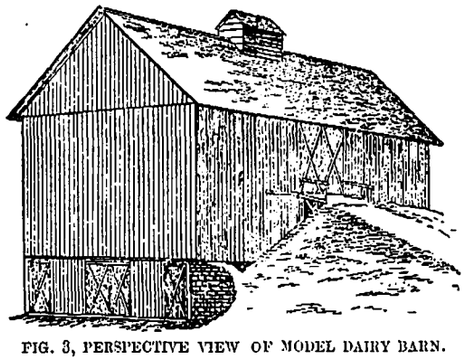

FIG. 3, PERSPECTIVE VIEW OF MODEL DAIRY BARN.

inches and over the stanchion at each side there is a notch, *c*, in the upper surface which receives a cross piece of iron two inches wide and one-half inch thick. Through holes in this iron rods fitted with nuts and thread go down each side of the sleeper, and passing under the stringer as shown in Fig. 2, sustain the floor very much as a suspension bridge is supported.

The drops, *d*, are twelve inches deep and eighteen inches wide, leaving a passageway seven feet wide between them in which to drive a cart or wagon to convey away the manure. The driveway is made six inches lower than the cow floor, making it easy to load the manure on the wagon.

There are ten windows, *e*, on the opposite side of the wall as shown in the ground plan. The stable is ventilated by means of air shafts leading to the cupola in the roof which are so adjusted that they may be partially closed in extreme weather. As one sill of the second story rests on a bank wall but little bracing is needed in the stable. Two of the braces cross one another on each side of the bent as in Fig. 2, and are bolted to the parts, giving great strength and stability to the frame and at the same time leaving the bays open from the floor to the ends of the barn. The bays hold eighty tons of hay and other fodder.

Hay Stack Toppings.

THOSE who are obliged to store a portion of their hay in stacks, from lack of storage room in the barns, know how difficult it is to build a stack that will remain good until it is drawn to the barn in the winter. This is because it continues to settle while the hay is passing through the process of fermentation, known as "sweating." Hence it is best to top the stacks after haying, using for the purpose swale grass when

FIG. 1. LADDER BRACKET.

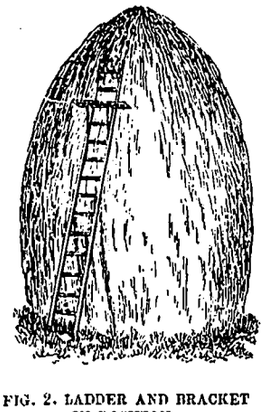

FIG. 2. LADDER AND BRACKET IN POSITION.

that can be obtained, not only because it is of small value for fodder, but also because the broad, tough leaves mat together and shed the rains better than upland grass.

When the stacks are of considerable size, I have found great convenience in using what is called a "ladder bracket." In the illustrations, Fig. 1 shows the manner in which it is constructed. The upper pieces are of spruce or other strong wood, two inches square. Across their top is bolted a light plank six feet long, which makes a convenient platform. At *a* are iron pins put through each piece, which serve for hooks. By this means the bracket is hooked on the ladder round at any height desired, making an adjustable platform on which an assistant can stand to receive the hay from the man on the load, and pitch it up to the man on the stack. Fig. 2 shows it placed on the ladder ready for use. By using this simple contrivance, which a farmer can make in an hour or two, it is easy to top a large stack, building it up to a good form. In order that it may be perfectly strong and secure, it is best not to use nails in its construction, but fasten it entirely with small carriage bolts.—C. E. BENTON, in *American Agriculturist.*

IT is generally safe to invest money in improving your farm.

USE odd spells in putting harness and other things in repair.

STUDY the easiest, speediest and cheapest way of doing things.

THE planning on the farm can be done in winter as well as in summer.

HAVE a regular system of doing chores so that nothing will be forgotten.

STUDY the secret of growing good crops when others fail. Prices are then good.

DURING the past year the flocks of the United States have increased by a million and a half head, and the wool product by ten million pounds. It would be hard to find any farmer who has contributed to this increase but who is better off for having done so.

THE increasing value of farm lands will be a factor in the profits of the farmer in the near future. This is quite as likely to come in the older settled districts as in the newer country. The exhaustion of the free public domain is one of the agencies which will bring it about, and better roads is another.

WHEN a large number of stumps is to be removed, a stump machine should be used. When there are only a few scattering ones a machine will not be required, as the trouble and expense in getting it will hardly pay unless the stumps be large and difficult to remove. For old stumps from which the tree has been removed for several years, and the small roots are all decayed, it will not be a difficult task to remove the earth from about the larger roots, cutting them off below the plow line if in a cultivated field, raising the stumps from their beds by long levers or the use of a team. When the tree has but recently been removed and the timber is hard, decay may be hastened by boring a hole as deep as the augur will admit down in the centre of the stump, placing in a handful of saltpeter and a little water, leaving the top open. This plan usually hastens decay very rapidly, and in a few years the stump falls to pieces whereas by the natural process the centre is quite sound after the outer portion has perished. Many farmers have plowed around a few stumps for many years, and lost enough time in the operation, as well as the use of land, to amount to a sum that would have hired them removed half a dozen times.