advantage of many opportunities to save labor and material.

KIND OF BARN NEEDED

The first thing to consider in the erection of a barn is a convenient arrangement for the purpose for which it is to be used. At the University of Illinois, two years ago, a twenty-acre demonstration dairy farm was started, the sole object being to produce the largest amount of milk per acre at the least possible cost. To meet the requirements of a barn for this purpose, it became imperative to build one that was convenient for feeding and caring for the cows, economical of construction, and containing a large storage capacity in both silo and mow. These are the requirements of a barn for every practical dairyman.

[Illustration: FIG. 2. FILLING THE SILO.]

A silo was needed that could be fed from the year round. With the small number of cows kept, a deep enough layer of silage could not be fed off each day to keep it good thru the summer, if the silo was more than 12 feet in diameter. As this small diameter was a necessity, it would require two silos 33 feet deep to supply enough silage. Two silos of such small diameter would not only be costly, but difficult to make stand, unless built of concrete. This difficulty was overcome by using the circular barn and placing in the center a silo which is 12 feet in diameter and 54 feet deep, thus making the one silo, with as much capacity as the two before mentioned, answer every purpose. This deep silo is an important part of the round barn, as it not only forms a support for the roof, but is protected by the barn, thus saving the cost of siding. Then, too, besides occupying the space least valuable for other purposes, it being centrally located, is in the most convenient place for feeding. The silage chute being open at the top forms a suction of air, which keeps the silage odor from the barn at milking time, and also assists in ventilation when the door to the chute is open.

ADVANTAGES OF THE ROUND BARN

The points of superiority that the round dairy barn shows over the rectangular form are convenience, strength, and cheapness.

ROUND BARN MOST CONVENIENT

Considering that the barn on a dairy farm is used twice every day in the year, and that for six months each year the cows occupy it almost continuously, and that during this time a large amount of the labor of the farm is done inside the barn, it is evident that the question of its convenience is a vital one. The amount of time and strength wasted in useless labor in poorly arranged buildings is appalling. People do not stop to consider the saving in a year or a lifetime by having the barn so conveniently arranged that there is a saving of only a few seconds on each task that has to be done two or three times every day.

[Illustration: Fig. 3. INTERIOR OF BARN, SECOND FLOOR, SHOWING SILO AND LOCATION OF ENSILAGE CUTTER. (TEAM UNHITCHED TO SHOW CUTTER.)]

The round barn has a special advantage in the work of distributing silage to the cows. The feeding commences at the chute where it is thrown down, and is continued around the circle, ending with the silage cart at the chute again, ready for the next feeding. The same thing is true in feeding hay and grain.

Still another great advantage is the large unobstructed hay mow. With the self-supporting roof, there are no timbers whatever obstructing the mow, which means no dragging of hay around posts or over girders. The hay carrier runs on a circular track around the mow, midway between the