

## Agricultural Department.

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### Building the New Barn.

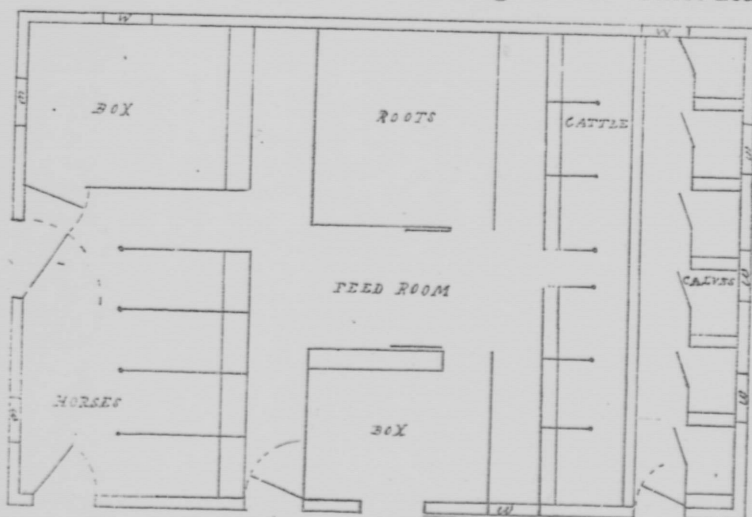
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#### VENTILATION.

The requirements of a good system of ventilation are:—

1. A constant change of air in the stable.
2. The introduction and distribution of fresh air without draughts.

There is a marked similarity in many respects between a stable and a furnace. The necessity for draft in a furnace is caused by the combustion of carbon, in which process oxygen is used up, and carbon dioxide and other gases given off. Heat is evolved; and consequently, the products of combustion are warmer than the elements entering into it. These heated gases



Plan No. 3—Barn 40 x 60, adapted to a small farm.

3. The removal of foul air without condensation and consequent dripping.

4. Economy in cost of installation.

Many systems have been devised, nearly all of them fulfilling some of these requirements, but comparatively few fulfilling all of them. Some of these devices are very simple, but only partially effective. Others are quite effective, but too cumbersome and expensive for use in farm buildings.

rise by convection until they are cooled to that temperature at which their specific gravity is the same as that of the surrounding air, when they tend to diffuse.

Similarly, in a stable, the necessity for fresh air arises from the continuous combustion of carbon in the animal body, using up oxygen and giving off carbon-dioxide and other deleterious gases. As in the furnace, so in the animal body, heat is evolved,