

and mixed with chaffed (cut) hay. For idle horses, oats or corn should not be ground, nor need the hay or straw be chaffed (cut). A cow yielding a large flow of milk should be regarded as a hard-working animal and her feed prepared accordingly. Fattening steers or pigs may be crowded more rapidly with meal than with whole grain, though there is more danger attendant upon its use. Sheep worth feeding can always grind their own grain. In general, idle animals, and those having ample time for mastication, rumination and digestion do not need their grain or roughage prepared as carefully as those with only limited time for these essential operations.

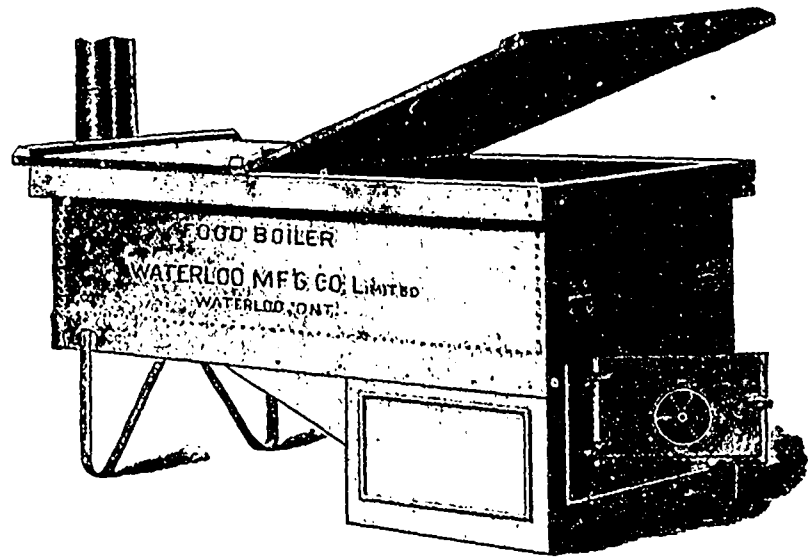
In two experiments conducted at the Kansas Station ear corn and corn meal were compared for feeding steers. In the first trial the results showed that the steers fed ear corn gained somewhat more than those fed cornmeal; they required however six per cent. more grain. In the second trial there was a saving of 35 per cent. of the corn by grinding. This is the the largest saving of grain by grinding yet reported by any of the experiment stations. In the western states it is the general practice to feed corn whole and on the cob to cattle and to allow young pigs to run after the cattle and pick up the droppings.

Experiments were conducted at the the Missouri, Kentucky and Ohio Stations in feeding shelled corn and corn-meal to hogs. In averaging these trials we find that 532 lbs. of cornmeal as against 543 lbs. of whole corn were required for 100 lbs. of gain. This shows that two per cent. only was saved by grinding. Some later experiments conducted at the Wisconsin Station on the same line with an addition of a little middlings to make a greater gain show that 459 lbs. of corn meal and middlings or 499 lbs. of whole corn and middlings, were required to make 100 lbs. of gain, thus effecting a saving by grinding of 8 per cent. It is claimed that for fattening cattle ground grain will enable a better finish to be put on.

There is a difference of opinion among experimentalists as to the value of cutting hay or other fodder for stock. One of the great advantages of cutting hay is that it can be got in less compass and can be handled easily. When hay or straw is cut, moistened and a little meal added before feeding, it is in a condition to be rapidly masticated and swallowed so that the nutriment has a longer time to remain in the stomach for digestion than when long dry hay is fed. This is an item of importance with hard worked horses which are in the stable only at night. In regard to this point Prof. Henry says: "Horses not hard worked, fattening cattle and farm stock generally, have ample time for mastication and digestion, and with these there is less necessity or none for cutting hay or straw." The results of some tests made at the Kansas Station extending through three seasons with corn stocks cut in lengths varying from $\frac{1}{4}$ to 2 inches, show that instead of the cows

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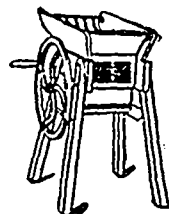
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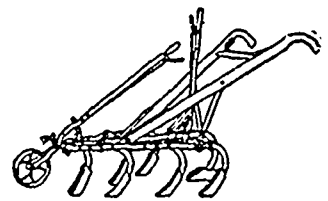
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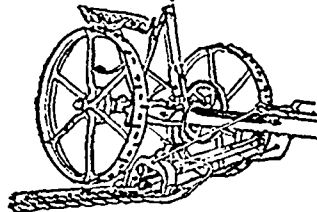
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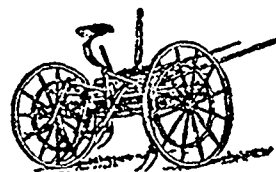
ROOT CUTTER.



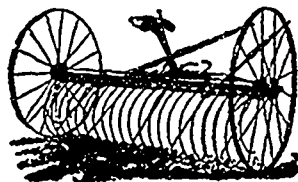
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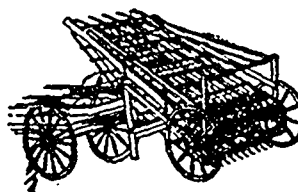
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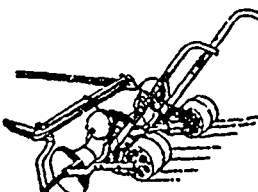
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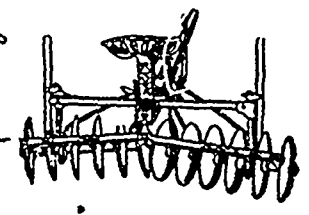
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