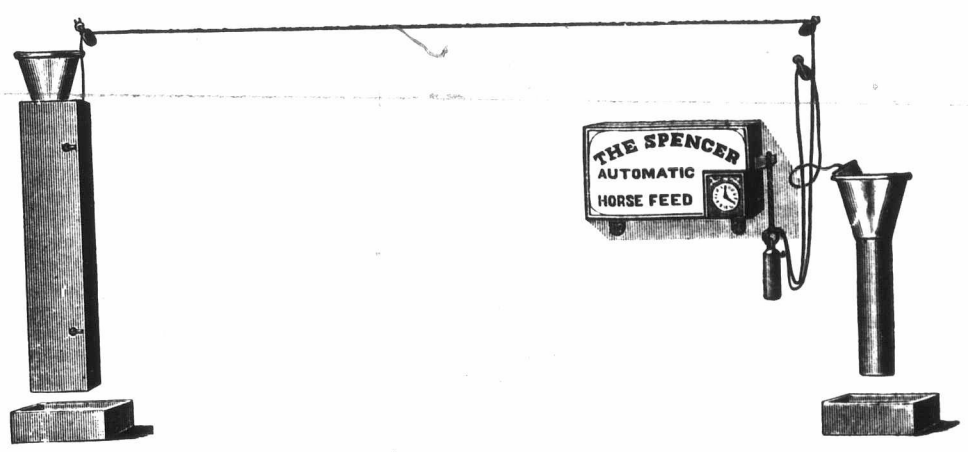
Spencer's Automatic Horse Feeder.

Our illustration of Spencer's Automatic Horse Feeder shows this contrivance set ready to be operated. The tubes on the right and left side show two different styles. Each can be made any desired size, and is capable of feeding oats only, hay only, or hay and oats in the separate departments of the manger as desired by the feeder. When charged with the required food the alarm clock is set so that the alarm will ring at the moment the food is required to be given. At the first stroke of the alarm the food is discharged into the manager. One clock and weight will work feeders for any required number of horses. This machine must do its work with precision, in fact it cannot do otherwise. Its construction is very simple, inexpensive, perfect and durable. The little boxes under the feeders represent the mangers into which the grain ration falls at the desired hour. The box containing the clock and attachments may be placed in the feed-room or in any part of the stable. This device was invented by Mr. John Spencer, V.S., of Bowmanville, Ont. It will be found on trial to be very useful and in fact invaluable to many persons who desire to feed horses regularly at an early hour, or at times when circumstances compel them to be absent at hours when the animals should be fed.

In writing of it Mr. Spencer says:—"Apart from convenience we claim many advantages for the feeder, overcoming indigestion in various forms and its chain of complications, which are due to irregular feeding, such as unthriftiness, diarrhœa, cholic, entiritis, diseases of the skin and lymptratics, scratches, grease, swelled legs and eczema. All these complaints generally disappear when the patient is fed systematically, thus enabling it to do more work with less feed than if it were fed irregularly." He guarantees each of his feeders to give entire satisfaction, requiring no skill to operate more than winding and setting an ordinary alarm clock. We have known Mr. Spencer since his childhood and can recommend him as an honorable man and one possessing much inventive and mechanical ability. He is also considered an able veterinary surgeon.



A Market for Butter and Eggs.

The firm of W. Davies & Co., 24 Queen street west, Toronto, have been long known as pork-packers and bacon curers, in which line they have built up quite an extensive export trade. They have now determined to add the handling of butter and eggs to their fast increasing business, and inform us that in butter they favor the style of package which has been advocated by the Travelling Dairy. We cheerfully commend this firm to the notice of those of our readers wishing to form a business connection for the sale of the above product.

If such houses were founded in each of our cities it would give a great impetus to the production of both butter and eggs, which are too often neglected on the farm for want of a proper means for their disposal.

Interesting Experiments in Growing Wheat.

The following important field experiment is reported by H. A. Huston, of the Indiana Experiment station:—

The superiority of nitrate of soda over ammonia salts as a source of nitrogen for wheat is well known; but comparatively little seems to have been done to test the relative value of the nitrogen in such organic compounds as are generally used in commercial fertilizers and that of of nitrates or ammonia compounds.

An experiment was therefore undertaken to test this matter in the field. The forms of nitrogen employed were nitrate of soda, sulphate of ammonia and dried blood or azotine. The land used had been cropped with wheat for a number of years, and the available nitrogen seemed to be nearly exhausted. The soil was a dark clay loam containing considerable sand, and rested upon gravel, which gives a drainage that is excessive in seasons where there is not an abundance of rainfall.

To the whole land enough dissolved bone-black and muriate of potash were applied to furnish the phosphoric acid and potash for three thirty-bushel crops of wheat.

Sixty-three plats were laid off, each forty-nine feet four inches by four feet, and a space one foot wide left between the plats. Nitrogen was applied to every alternate plat so that each plat that received nitrogen was compared with a plat on each side of it that received no nitrogen. The wheat was drilled in November 6, and the first nitrogen was applied November 12. There were six rows to each plat, and two rows in the spaces between the plats.

The main purpose was to find the form of nitrogen best adapted to wheat, while an attempt was also made to find if in field practice there was any advantage in fractional applications of the different forms, and whether any advantage would arise from changing the form of nitrogen applied at different stages of the growth of the plant. In all 200 grams of nitrogen were applied to each plat receiving nitrogen. On certain plats all the nitrogen was applied in the fall, on others one-half was applied in the fall and one-half at the opening of spring, April 15, and on others one-third was applied in the fall, one-third April 15 and one-third May 18, when the heads were just appearing. The wheat was harvested June 29. An examination of the results shows that in no case was any marked advantage derived from fractional applications, while in the case of the ammonia compound, a decided advantage (16 per cent.) arose from making the full application in the fall. Nitrate of soda gave the best results, sulphate of ammonia followed, while dried blood gave the poorest yield. Nitrate of soda gave a gain of 98.4 per cent. of grain and 105.5 per cent. of straw. Sulphate of ammonia gave a gain of 64.6 per cent. of grain and 73.8 per cent. of straw, while dried blood gave a gain of 54.4 per cent. of grain and 6.60 per cent. of straw.

On another series of plats the experiment to test the desirability of changing form of nitrogen at different stages of the growth of the plants showed no advantage from this source so far as the appearance of the plants indicated, and the amount of nitrate of soda applied seemed to be the most important factor in influencing the yields.

The season was an exceptionally favorable one for wheat, and the amount and distribution of the rainfall were such as to favor the assimilation of the nitrogen in the ammonia and organic compounds, and to prevent the nitrate of soda showing its well-known capacity to carry plants through seasons of drought. The amount and distribution of the rainfall and the character of the land were such as to favor the loss of nitrate by drainage; but from the fact that the applications of nitrate in one lot in the fall gave as good results as the application of it in three fractions, it is inferred that there is really not so much danger of loss of nitrates as many authorities would lead us to believe. The late sowing of the wheat probably resulted in a reduced yield, but it gave short, strong straw that enabled all the plants to remain upright until harvested, while the same variety of wheat on the same kind of land, close at hand, and receiving less than one-half as much nitrogen, but sown in September, lodged badly.

Apple Tree Prunning.

The frequent error of cutting the limb too far from its base, and thus leaving 2, 3 or 4 inches of the branch to be removed still remaining, is very injurious to the tree, from the fact that the wound thus caused will not properly heal and the stub begins to decay, affecting the health and life of the parent tree as time advances. To avoid such an undesirable result, when it is necessary to remove a branch of any size the point of cutting should be at the outer edge of the ring, which the bark forms at the juncture of the two, which, if done at the proper time of the year, will heal over, and as there is no surplus wood through which the life of the tree does not pass the parent stem will remain in a healthful condition.