

Horse Power.

MANY have but an erroneous idea of the drawing power of a horse. Some, probably, have no idea that approaches correctness. The strength of different horses undoubtedly varies a great deal, but in calculating the power of an engine, the horse power is estimated as equivalent to a force capable of raising or moving 150 pounds 20 miles a day, at the rate of two and a half miles an hour. This seems small, but experiments have actually shown the power of the farm horses in this country to be considerably less.

On a level road or floor the horse is ordinarily as strong as five men, but up a steep incline the man has the advantage, for it has been found that a man can rise a steep hill with a load, where it would be out of the power of a horse to climb. A man of ordinary strength, placed in a position to exert his strength to the greatest advantage, can apply more power than a horse in drawing from a point two feet above the ground. It requires a heavy pair of horses to exert a force of five hundred pounds, in such a position.

As the horse's speed increases, his power of draught diminishes very greatly, till it becomes very difficult for him to move his own weight. On soft roads the draught is not so much affected by the speed, and the resistance is very little, if any, greater in a trot than in a walk, but a carriage on a dry hard pavement requires one half greater force when propelled in a trot than in a walk.—*Massachusetts Ploughman.*

BUTCHERS and speculators are stocking the mountain pastures of New Hampshire extensively with Canadian cattle.

"A FEMALE SWINE."—An over-fastidious American journal uses this ungrammatical and ridiculous phrase, to avoid the occurrence of the word "sow." "Female Swine" and "Rooster" belong, by good right, to the same vocabulary of refined vulgarity.

LICE ON DOGS.—The swine louse is readily destroyed by a strong decoction of quassia wood; tobacco water is also used, but requires especial caution in its application. A little benzine, dissolved in alcohol, applied with a shaving brush, or piece of sponge, is said to be a certain cure, but, like tobacco water, requires care in its use.—*Amer. Ag.*

KNIFE AND LANCET.—A pork butcher—so it respectfully said—is, so far, in advance of the age, inasmuch as he both kills and cures. Now, it is rare indeed that a doctor can achieve more than one of those delicate operations successfully at a time; at all events there is no living proof of the two having ever been performed completely to the patient's satisfaction.—*San Francisco Paper.*

A PROLIFIC PIG STORY.—The first of April, 1864, a sow under the barn of Edward Earl, in Worcester, had a litter of thirteen pigs, eleven of which, when six weeks old, sold for \$14. In August following, the same animal had thirteen more, and raised nine of them, which sold for \$15. The 24th of February, 1865, to cap the climax, she brought forth seventeen more fine, healthy pigs, (although she had only twelve teats for them,) making in all three litters, within thirteen months, of forty-three pigs.—*Worcester, (Mass.) Transcript.*

IMPROVEMENT IN CATTLE TRUCKS.—The last time we took the railroad—a day intensely warm, even with every mode of ventilation fully open—we chanced to pass a cattle train at a way station, crowded as full as they always are, with but very narrow gratings on the doors for the admission of air, with the fearful odor which accompanies such a train on a long journey, and the poor things inside pent up and panting for breath. Really something ought to be done to render the transportation of stock in hot weather less a source of misery to them; not out of mercy alone to the animal whose scanty supply of foetid air must become so intensely sickening, but for the sake of those who are to consume the feverish and unwholesome meat thus tainted more or less completely in every pore. As heretofore noticed in this column, the subject is attracting much attention in Great Britain, where the diseased character so imparted to the flesh has been fully proven. The last number of the *Scottish Farmer* gives an engraving of a railroad cattle truck, which is certainly a great improvement. It is open for the admission of air along both sides, just above the head of the cattle, and, at a proper height to be within their reach, a trough about 10 inches wide and 10 or 12 in depth, extends around the outside of the whole car, to be filled with water for their use at proper intervals on the journey. This plan has been patented, and the Highland Society has awarded a medal for it to the patentee.—*Country Gentleman.*

The Dairy.

A Visit to a Cheese Factory.

To the Editor of THE CANADA FARMER :

SIR,—I had the pleasure lately of visiting the cheese factory of Messrs Galloway & Co, situated on the 3rd Concession of West Oxford, and so great is the contrast in its operations to those carried on by our mothers and grandmothers in the dairy districts of England, twenty years ago, that I am induced to offer you a few remarks on the subject. I was raised in a dairy county, and therefore accustomed from childhood to the fuss and anxiety of cheesemakers, whose work was never done. The pastures were frequently from two to five miles from the homestead; a horse and cart provided with large cans to carry the milk was in readiness to start at 3 or 4 o'clock in the morning, and about one milker to 10 cows; then, through the whole day, a continued bustle was kept up by a large number of assistants to "get the cheese out of the way." That meant to get it into the press to remain a few hours, but it had to be turned repeatedly the next 48 hours. To manage a cheese of 70 lbs. weight was considered a herculean task for a woman to undertake; and it must not be forgotten that the dairy women of England, as a class, are strong, and able to endure a great amount of labour, and, I might add, seem to thrive on much less sleep than is required in Canada. If the dairy folks in England still pursue the old-fashioned mode I was accustomed to witness a quarter century back, I certainly think they "stand in their own light;" and if they could visit one of our modern factories, they would be inclined to adopt its conveniences, without regard to its origin.

The factory referred to is situated on the banks of a running stream. It is the property of Mr. G. Galloway, and was not complete at the time of my visit. A dam was in the course of erection, to facilitate the pumping of water to a tank over the vats, whence it could be conveyed to any part of the building through pipes, and especially send a constant stream, through a box of ice, underneath the milk, to cool it off before adding the rennet. At the time of my visit, Mr. Galloway was making four cheeses per day, from about 4,000 lbs. of milk. The cheeses would weigh 100 lbs. each. He milks 34 cows, which are driven to the yard twice a day, and with no noise or trouble, each cow voluntarily marches to her stall in the stable, and is thus secure from harm during the process of milking. This is much better than running over a dirty yard to milk. The system pursued with regard to milk brought by others, is the same as that mentioned in the CANADA FARMER of May 15th. The teams are driven close to one corner of the building, a "crane" picks up the can by the handles, hoists it, carries it round till it is in a position to run it into the weighing apparatus, and from thence its contents go into the vat. It is soon done, and the quantity brought by each person duly credited.

Mr. Galloway's vats were made by Buchanan & Gordon, of Ingersoll. They hold 500 gallons each, and cost \$105. Each vat is heated by a copper pipe or fire-box, and is under complete control, even to $\frac{1}{4}$ a degree. The milk is considered best to be cooled, to remove the animal heat, then heated to about 80° before putting in the rennet; it takes 40 minutes to coagulate; the gang-knife is then passed through it each way to allow the whey to settle. The curd can remain in this state for hours if necessary. It is then cut very fine with the gang-knife. The next process is scalding the curd, which takes an hour; it is heated gradually to 100°, and is constantly stirred by a stiff wire rake with two handles, the wire being about 2 feet long and an inch apart. This is considered the most particular operation, as the curd, if left a short time, forms into lumps, and no subsequent grinding or pressing can remove the whey until fermentation takes place and releases it. After it is scalded for an hour, it is allowed to remain all the whey subsides. It is then passed through a strainer, and a pipe under the floor conveys it to a tank outside the building, from whence it is pumped to a trough that leads to the piggery, 150 feet away. The curd is next laid on the rack to drain, where it remains till the morning's milk is made up and mixed with it; then both are ground together. The four hoops are filled and put in the press, where they remain till the same time

next day. When taken out a bandage of cotton, previously coloured with annatto, having a drawing string in each edge, is slipped over the cheese, the string tightened, and the cheese is ready for the drying house. This is situated farther up the stream; it is about 40 x 60, with two floors; a railroad leads to it from the making-house; it runs from the latter 100 feet or more, where there is a turn-table, then there are two tracks, at a right angle, one to the first floor, and the other on an inclined plane to the second story. The drying-house is well filled with trees similar to those described on page 7, Vol. 1, No. 1, of the CANADA FARMER. On these the cheeses are turned and rubbed with butter made from whey. The butter is melted and a little resin added; this forms a fine elastic rind, and prevents shippers doing any damage.

The buildings and all the apparatus connected with this factory will cost about \$2,000. This, for 400 lbs. of cheese per day, may not be considered a profitable investment; but I should judge that the premises are capable of making 1,000 lbs. per day without much additional outlay. Of course it would require more assistance to make this quantity. All the help Mr. Galloway now gets is from one boy, who churns the whey-butter, grinds the curd, attends the fires, &c. In the small amount of labour required, lies one advantage of the factory system, with all its facilities; but another equally conspicuous is the uniform quality of the article produced, ensuring a market at remunerating prices. I would advise all who are interested, and especially those who intend making cheese, to visit one of the factories now in operation in this county. Several farmers in this locality have commenced cheese-making with dairies of 20 to 30 cows of their own, and there is one on the system pursued in the South Riding. If Oxford legitimately loses the right to be styled the "garden of Canada," I trust it will speedily and fairly acquire a name equally honourable and even more creditable, viz., the "Cheddar" of Canada—the banner county in the dairy business.

East Zorra, June 26th, 1865.

R. W. S.

Cheese-making in the County of Oxford.

To the Editor of THE CANADA FARMER :

SIR,—In these times of depression it is pleasing to notice the opening up of new and profitable branches of industry, more especially in connection with the agricultural interests of the country. Any remunerative system of farming which will divert producers from the too exclusive growth of grain, and thereby afford an opportunity to recuperate to their exhausted lands, must be beneficial; and nothing would seem to be better adapted to this end than the manufacture of cheese on an extensive scale by the establishment of factories, as is now being successfully tried in this county.

The plan adopted is for a number of farmers to unite in a sort of Joint Stock Association, choose a Board of Directors, and appoint one of their number to act as Manager. The Manager engages a competent cheesemaker, provides the buildings and apparatus; all the labour, and all the materials required, except the milk. He is paid a certain sum (two cents per lb., I believe) on the quantity of cheese produced. The remainder of the proceeds of the cheese, which is of excellent quality, and readily saleable at ten cents per lb., at the factory, is divided among the contributors, in proportion to the quantity of milk supplied. The milk is delivered at the factory twice a day during the season, which lasts about six months. The first factory in Canada was established within the last two years, in the Township of Norwich, where the two largest in the Province now are. One has recently been got into operation in the Township of West Oxford, near this village, which, through the politeness of Mr. Harris, the worthy proprietor, I have to-day had an opportunity of inspecting. The factory premises, which will be much enlarged before another season, at present consist of a large two-story frame building erected for the purpose, divided on the ground floor into two rooms, one for manufacturing and the other for storing; the upper flat being exclusively used for storing. Here is brought daily the milk of about four hundred cows, about forty being owned by the proprietor. The milk is shot from the bright tin cans of the farmers into a large vessel, where it is weighed. Each gallon of milk weighs about ten pounds, and it was estimated that each ten pounds would produce one pound of cheese, but it is found that a fraction over nine pounds is sufficient.

After being weighed the milk is run off into an oblong rectangular vat, capable of holding about 500 gal-