

and must also allow of the steam freely passing all over the under side of the perforated false bottom. To get rid of the condensed water, without letting the steam escape also, requires a small piece of lead pipe, bent like the letter v. The upper end enters the puncheon, below the false bottom, and the lower end is left sufficiently long to be below the double, thus forming a syphon; half inch lead pipe will answer well. The water, as it condenses, will flow out of the lower end, without allowing any steam to escape. The puncheon is supported by an inch bar of iron passing through the lower part about fifteen inches from the bottom, and must be about six inches longer each side than the width of the puncheon. Two posts are driven into the earth, one on each side, with notches cut in the top to allow the projecting ends of the iron bar to rest in.

A square hole is cut in the upper head of the puncheon, to admit of the roots being filled in with a shovel, and emptied out. The piece that comes out forms a good cover to go back again, if a piece of blanket or cotton cloth is placed over the hole before the cover is put in, and this serves to keep in the steam and is sufficiently tight.

The puncheon is now in its place, the pipe connected with the nozzle, and a piece of cotton wound round it to keep it steam-tight. The syphon pipe, or leak water, is inserted on any convenient side. The boiler is filled with water, and the barrel on the top also. The fire is lighted underneath, and the whole arrangement is complete, with the exception of covering the lid of the kettle with about two inches of sand, which will prevent any small escape of steam, and keep in the heat. We now remove the square cover and fill the roots into the puncheon. If potatoes are used, they want no cutting; if mangolds are wanted, or turnips, they must be cut into pieces about the size of a goose egg. The puncheon can most readily be supplied with a handbarrow, with handles at each end, and the same barrow serves very conveniently to remove the roots when steamed. To do this you must place the barrow in front of the puncheon, disconnect the pipe at the back, and gently upset the puncheon (it will readily turn on the projecting ends) and all the roots will run out into the barrow. I used, for many years, an ordinary wine cask, that held about 120 gallons; and if good steam is used, with good dry wood, about one hour would steam the puncheon full of roots: but, of course, the time required much depends on the draught, mode of setting chimney, and general arrangement.

The foregoing plan is cheap, efficient and simple, and within the reach of any farmer fit to keep a pig. Of course frost must be guarded against, wherever steam works are used, as cocks and pipes will burst if left full of water. The potash kettle, however, will not be injured by frost. In setting the kettle allow plenty of room for fire all around and underneath.

### Cattle Stalls and Manure.

To the Editor.

Sir,—Referring to the letter of "Byreman," and your answer in the February number, I perfectly agree with you in your method of stabling and fattening stock, but you do not finish the story, and say what is to become of the manure after being taken from the byre at such short intervals. Is it to be thrown out to be wasted by the rains, or put under covered sheds to accumulate till wanted in the spring, or carted at once and spread on the frost on the fields where wanted, or piled in conical heaps in the fields?

Allow me to point out what appear to be the objections to these different methods, with a view to promote discussion, and also to gain information on this most important subject. It is unnecessary to speak of the first plan, as every intelligent farmer knows that it is ruinous. If put under sheds till spring, it is only farmers dunging small portions of land that can possibly delay their work till so late. If to be carted at once to the fields, it would be necessary that a farmer, by the plan you recommend, should have sufficient stock to keep a cart constantly employed, and even then, continuance of bad weather would cause great inconvenience. As to whether it should be made in heaps in the fields, or spread directly on the ground, I think, judging from the contradictory opinions of eminent chemists, and first-class agricultural journals, it is hard for the ordinary farmer to decide what to do.

I should propose a modification of your plan; the space behind the cattle should be so arranged as regards depth and width, that sufficient manure should be allowed to accumulate to make it a day or half a day's work for the teams to cart it to the fields to be dunged. I cannot see any objection to this, but I have never tried it.

I cannot agree with you in your objection to box feeding, having tried it for a number of years. Although living on a cold, exposed hill, we often have to leave the doors open to prevent the cattle from sweating, but I do not altogether believe in box feeding, as you cannot economise space sufficiently, and I believe that straw should be all turned into food, instead of bedding. I consider that the simple question of floors for stables in your February number involves one of the most scientific questions the farmer has to deal with in the present day; for if we can make and cart our manure to the place we want it all winter, it does away with one of the greatest drawbacks to Canadian farming. I hope that this subject will be taken up and discussed by able hands. A FARMER.

Windsor, N. S.

SALE OF STOCK.—Mr. Ashworth, of Belmont, Ottawa, has sold his shorthorn bull, The Viceroy of Belmont, got by Sweetmeat (20924) out of Souvenir of Thorndale by 2nd Grand Duke (12961), to the Hon. B. Seymour, of Port Hope.

### Veterinary Department.

#### Symptoms of Navicular Disease.

The professional veterinarian generally has little difficulty in detecting a confirmed case of navicular disease, but it is often puzzling to the casual observer or amateur, and mistakes in consequence are often made. The horse is always more or less lame, and the lameness is greatest when the animal is first brought out of his stable in the morning, at which time he generally walks with a tripping action, gradually becoming freer in his movements after exercise, and when warmed up to his work he appears to go almost sound. When standing he favours or points the affected foot, and when both feet are alike diseased, he keeps pointing with one foot, then pulls it backwards and favours the other. In severe cases, he seldom stands firm upon both fore feet at one time. The heels become contracted, and general atrophy or wasting of the foot is also the result. This is easily noticed when the disease is confined to one foot, for it becomes considerably smaller than its fellow. The toe of the shoe is also worn quickly down from the peculiar action. The muscles of the limb also waste, and more particularly the muscles on the outer part of the shoulder; and this wasting is often taken for the cause of the lameness, when it is only the effect. It is this condition of those muscles that often misleads as to the true nature of the disease, and the horse is supposed to be lame in the shoulder, when he is in reality a confirmed cripple from navicular disease. These symptoms may continue the same for a considerable time where the horse is moderately worked, but if he is hard wrought, they become more aggravated, until the horse is completely useless for any ordinary work, and particularly so when he has to carry weight. If the foot is taken up, and the sole at either side of the frog struck gently with a hammer, he at once evinces pain, shown by pulling his leg quickly and forcibly upwards. Pressure with the thumb upon the tendon immediately behind the frog will cause him to act in a similar manner. The above are the general symptoms of navicular disease. Exceptional cases are met with, where the foot is not contracted, and also where the horse points but very little.

The treatment of confirmed cases of this disease can only be of a palliative nature. In recent cases, however, a complete cure may be effected. The horse