FOUNDED 1866

definitely to which kingdom they thus find that the common conorms being sharply divided into ats is incorrect.

water which we place under the ay find a transparent animal a minute portion of the white of watch it we shall see 'that it es its shape, and this fact has e of Amoeba, which is derived "amoibe" meaning change. In have the simplest of all animals, rotoplasm, an organism which eproduces, is sensitive and has motion.

the Amoeba we see that it can its shape, but that it can move ce. How does it do it without e notice that a little projection ide, that this projection, which idopod or "false foot," grows the protoplasm gradually flows whole body (if we can use the speaking of such a single-celled eba) has moved into the place on first appeared. By this time of "has been advanced, and by a s process the Amoeba moves

w forms as the Amoeba we find many species, and that these their size and in the way in ss. In some the "false feet" er and long, in others they are seem like the whole front por-" and the animals appear to like a drop of water. The also in a very simple manner by gases taking place between the e water in which it lives. This ich all the single-celled animals only when we come to the more nimals, made up of many cells, and lungs required for respira-

Amoeba simply flows round its s of low forms of plants called s digested in the protoplasm, ows on leaving the undigested

the Amoeba is also extremely in two, and there are two method of reproduction is insideration of it leads us to the noeba is immortal, since there and no death as each half of a grows to full size, continues tely divides. There is thus no Amoeba only dies by accident, r instance as being eaten.

ba is sensitive we can very we raise the temperature of ich it is living some degrees unds itself into a sphere, as it ous substances, such tas acids, water or if an electric current

the water.

NOVEMBER 4, 1915

THE HORSE.

Sifting Out Army Horses. Recently on the Horse Exchange, in the Union stock Yards at Toronto the writer witnessed borges being purchased for army purposes. Carloads were coming in and being unloaded. The buyer and the veterinarian were inspecting the horses as they were led up to them for their consideration. This great number of horses at a casual glance appeared all right, yet when one casual grander and them from the buyer's viewpoint and to study their weak as well as their good points there was something lacking in the offering as a whole. Perhaps these animals did not represent the quality of the horses in the district from whence they came. It is natural to expect that farmers or horse dealers would endeavor to dispose of their poorer horses first and retain the good animals if they were obliged to keep more horses than they cared to. As many a horse was led before the purchaser he would often remark "take him away," before the animal had walked past him ten yards. There were some with weak loins, others had straight pasterns and shoulders, a number were thick in the legs, still others were not as good in the wind as they should be, and there were yet some that were undesirable in appearance and action. Taking the offering collectively they were not a spavined lot with ringbones and other serious defects as to legs and feet; neither were they affected with heaves, as horsemen generally know that trouble. spite of all they did not have, they were not as good a run of horses one would expect to see offered in this country, and a large percentage were not good enough for the buyers. A bystander who, from all appearances, belonged to the old school spoke rather uncomplimentary of the buyers for turning down so many horses. His argument was that they would be shot anyway and that a good one would last no longer than a poor one. He did not stop to consider the morale and efficiency of the army when men and horses were chosen without regard to individual qualifica-

The great majority of the horses were the get probably of a common mare and some type of pure-bred stallion, but what different breeds were represented in these horses it would be difficult to say. The breed would not matter so much if greater care had been taken in the selection of the sire and dam. It will scarcely pay at any time to use poor females and low-grade sires for raising colts. The market will have to be very keen indeed to warrant anyone raising horses of inferior quality. Only where the very best matings are resorted to is the result likely to be profitable.

We do not wish to write deprecating the quality of the Canadian horse, but the writer was disappointed at seeing so few really good horses in such a large collection. Neither would we have the reader infer that this number of animals was exceptionally bad, for they were not, but they did not quite measure up to present-day demands. Horsemen should be more careful in choosing the sire to use, and if they cannot afford the fee asked for the service of a high-class stallion it would be just as well not to breed the mare at all. A moderately good or inferior horse can be purchased more cheaply than raised, and there will always be enough of them to go round. sponsible for the inflamed and unhealthy condition of the skin, resulting sometimes in $v \in ry$ stubborn cases. Heat and cold alternately affecting the skin will excite the disease, and in a number of instances it is caused by washing the legs with hot or warm water and allowing them to dry off without rubbing dry. Friction, pressure, wet or dirt are also contributing causes, and standing in a poorly-ventilated stall or stable is not conducive to the best condition of the horse or his legs. While animals with beefy or thick legs are most subject to scratches a horse of any quality is liable to contract the disease. When scratches appear so early in the season as is recorded here the general condition of the patient is probably at fault.

THE FARMER'S ADVOCATE.

To make the wrong right the horse should be released from work for a few days and given a purgative of from 6 to 10 drams of aloes, according to size and temperament of the animal, and 2 drams ginger. Do everything possible to remove the cause, make the patient comfortable and feed bran only until purgation ceases, and even then feed very little grain until put to work again. Follow up the purgative with 3 drams nutrate of potash twice daily for a week or ten days.

Local treatment consists in keeping the affected parts clean but washing, especially with soap and water, is usually advised against. Unless wiped or rubbed dry the drying out of the skin and coming in contact with air colder than the water used will only irritate the trouble. Endeavor to clean the legs with a soft brush or cloth. Apply during cold weather an ointment, such as oxide of zinc ointment to which has been added 20 drops carbolic acid to the ounce. When a case has become chronic and what is

ing. It is not needful to give detailed accounts of all these sales, yet so abnormal have been the prices that some reference to them is required in a paper like "The Farmer's Advocate." Other abnormal features of these weeks have been floods, not unprecedented, but not experienced in the Northeast of Scotland since 1829, and the Reports of the Special Committees appointed in each of the three kingdoms to devise the best means of increasing the food supplies during time of war. Many of the sales have been directly caused by the war conditions. The reasons it would be impolitic on public grounds to say much about, yet the results are what no one ever dreamed of when the war began.

Many years ago a young Scottish farmer un-able to find a farm in Scotland migrated to Herts in England. His name was Samuel Wallace, and his native place was Chapelton, Maryhill, near to Glasgow., His father was him-self one of the ablest farmers in the district, excelling in the production of milk, potatoes, and hay, and young Sam was one of three brothers all of whom were farmers of conspicuous ability and energy. A characteristic story is told of one of his brothers, Rohert Wallace. He was being visited by his laird-a genial, kindly clergyman of the Church of England-but a Scot through and through. It was during the days of agricultural depression when Scottish farmers did not dream that they would ever again see the prices that The laird expressed his are now ruling. astonishment at the evidences of prosperity which met his vision, and the absence of grumbling on the part of his tenantry. He owned estates in England as well as in Scotland, and dwelt among his English tenantry. He expressed his agreeable surprise at the contrast between his tenants in



the south and those in the north, and invited Robert Wallace's opinion on the subject. He got it readily enough. "Nae doot sir, your English tenants will dress for dinner; 1 hardly have time to wash my hands." That was the position in a nutshell. Young Sam went south and farmed in the Scots fashion. He showed indomitable energy and pluck, and in spite of a bad start with an unusually dry season he held on his way. He grew potatoes and carried on a big dairy business. He early saw the possibilities of the Holstein-Friesian cows of Holland as milk producers, and pinned his faith to them. After farming vigorously in this fashion for nearly forty years he now means to take it a bit easier. His sons have been trained in the same school as himself, and the more exacting dairy work has been passed on to them. This called for the dispersion of the Swangley's British

1729

centre of the Amoeba there is s dot is called the "nucleus" nux"—a nut) and is an essenliving cell, whether this cell is as in the case of the Amoeba, a highly complex body. The denser protoplasm than the d it is the controlling part of ion the nucleus divides first, is cut in two the part which us will continue to live, the die.

een from our brief study of xhibits all the main life-proormed by higher forms, and of life are met by a little ght almost say is 'sans everysually associate with animal

a British nurse in the dead help the Germans win this se of the great bombardment in army must destroy some not destroy the British army their way to Calais, so they n the historic buildings of ot obliterate the love of freen the heart of a British nurse her life. Such cannot win

cow may not be considered be, but the other day we saw 60 which gave 9,400 lbs. of the and will freshen again in weigh, in her four-year-old id carries enough beef to albeef class.

Scratches, a Fall and Spring Trouble.

Editor "The Farmer's Advocate" :

I have two geldings seven and eight years old weighing about 1.300 lbs. each, and they are affected with scratches or something of that nature. One horse started with his fetlocks becoming greasy, and reddish water standing on the ends of the hair in the morning. He has got worse on three legs, the front ones are raw on the inside of the fetlocks over an area about the size of the palm of one's hand. The hair has nearly all fallen out. They are very greasy and bleed when he bites them. Up his front legs and back of the knees are raw spots about the size of a fifty-cent piece. They are like cracks and pieces of scurf come off. The other horse has a raw spot on each of his front fetlocks on the side rather to the front of his legs. His hind fetlocks are in much the same condition and there are a few greasy little lumps about the size of cherries. On each of his hocks are spots about the size of a quarter. They are not These but dry scurf can be rubbed off them. These horses are in good condition and engaged at moderate work. Kindly tell me what is the matter and the cause. Also recommend a good purgative and blood purifier for a horse. W. F. K.

Ans.—This disease is commonly known as scratches and when the legs up towards the body become involved it is often called mud fever. Some constitutional disturbance is usually re-



Bonnie Buchlyvie.

Clydesdale stallion which sold for the great price of £5,250 in the Old Land.

known as proud flesh appears it must be removed by applying a caustic, as butter of antimony, applied with a feather once daily for two or three days before the aforementioned treatment is adopted. When the parts emit a foul odor it is often advisable to poultice with linseed meal and a little powdered charcoal for about two days and nights. Fresh poultices should be applied warm about every eight hours before the general treatment is resorted to. Where some constitutional derangement is responsible for the diseased condition of the legs it is well to administer $1\frac{1}{2}$ ounces Fowler's solution of arsenic twice daily for a week in addition to the internal remedies already prescribed.

LIVE STOCK.

Our Scottish Letter.

Some weeks have elapsed since I last wrote, and during these weeks notable indications of the extraordinary values of Scottish Hve stock have been given. This has undoubtedly been the main feature of the month of September and the opening week of October. All classes of farm s ock have made remarkable figures. We have had unreserved sales of Ayrshires, Aberd en-Angus and British Holstein cattle; the annual Ram sales of the various breeds used in Scotland, and an unprecedented sale of pedigree Clydesdale horses in the week now closing. War prices have been the order of the day, and woe betide the man'who enters a farm under the conditions now prevailHolstein herd, and in the beginning of September a splendid sale was conducted at Swangleys, near to Knebworth, by John Thornton & Co., Lon-The 136 head of cows and heifers of all don. ages with only three bulls among them made the splendid average of £41 5s. 9d. This is certainsplendid average of £41 5s. 9d. ly a fine figure for a commercial dairy herd and speaks well for the future of the British Holsteins in this country. Buyers were present from as far north as Inverness, and the sale was well worth attending. Few men deserve better of their fellow-countrymen than Samuel Wallace. He has been a credit to the Scot's race, and his success has been an inspiration to many an expatriated Scot now farming in England. There are many such in Herts, Essex, Kent, and Surrey, and not a few also in the dairying districts of Buckinghamshire and Middlesex.

An Ayrshire dispersion took place this week at Old Graitney, Gretna, on the Scots' side of the Solway, when 95 Ayrshire cattle of all ages were sold by public auction for an average of $\pounds 16$ 2s. 8d. Wm. Kerr who owned this herd began farming in Old Graitney in comrany with his father more than 20 years ago. The father, Abram Kerr, was a notable judge of both Ayrshire cattle and Clydesdale horsos. He, however, rather fancied the thick-vesseled show type of Avrshire. These are now out of date, and a good many of the Old Graitney cattle were of The Clydesdales were an exceedingly that type. serviceable lot. 15 of them making an average of £81 16s. 7d. A succession of good farm geldings made £84 apiece.

Some months ago there passed away a very