which the areas average 160 and 320 acres respectively, the quantity of land to be located as a free grant, to any person, whether the head of a family having children under eighteen years of age, residing with him, or otherwise, shall be 160 acres, and be composed of a quarter section or a half lot as the case may be, and should any quarter section or any half of a lot so divided, contain less than the said quantity of 160 acres, the location shall be limited to such quarter section or half lot, and should they exceed the said quantity of 160 acres, the full quarter section or half lot may be located upon payment by any person who is not the head of a family, having children under eighteen years of age residing with him, for the quantity in excess of 160 acres, at the rate of fifty cents per acre.

2. Any locatee in said Townships shall be allowed to purchase an additional 160 acres, at the rate of fifty cents per acre, cash, at the time of such location, subject to the same reservations and conditions and the performance of the same settlement duties, as are provided in respect of Free Grant locations, by the 9th and 10th sections of the said Act, except that actual residence and building on the land purchased will not be required.

T. B. PARDEE, Commissioner.

Department of Crown Lands,
Toronto, August 11th, 1875.

PLASTER OF PARIS.—Please give your opinion on the use of Plaster of Paris; whether beneficial or not, and if beneficial, where does the plant get its benefit—by applying it on the leaves, or on the ground at the roots? GEO. M. BREWER.

Jordan, May 13th, 1876.

[We speak from our experience when we answer your query in the affirmative. We have used it, and found it very beneficial to corn, grass and potatoes. It has the property of attracting ammonia from the atmosphere and fixing or retaining it, notwithstanding its volatile nature; and, to use the language of Johnson in his work on Agricultural Chemistry, "the influence of ammonia on vegetation is conceded to be of a very powerful kind, assuming to promote the rapidity and luxuriance of vegetable life." In another column will be seen an article, abridged from our contemporary, the *Ohio Farmer*, on plaster as a fertilizer.—ED.]

The Horse.

How to Break a Balky Horse.

A correspondent of the New Orleans *Home Journal* has the following on the subject :—

Balky horses may be divided into three clases :

1st. Such as do not like to go from pure laziness, or stop when tired and refuse to go any further. This is a balky horse in a very mild form, and can generaly be cured by any good horseman.

2d. Embrace such horses as are really stubborn, and refuse to go from a headstrong disposition to have their own way. This class are generally the most troublesome, but, in fact, are the easiest to break ; and when once broken, seldom make any more trouble.

3d. Are timid horses combined with a stubborn disposition, and often refuse to go from fear as well as stubbornness. This is the worst form of the baulky horse and the hardest to manage, but can be broken so as to work good, but can never be considered really safe.

One important point should always be remembered in breaking horses ; always speak kind and pleasant, though you may use a commanding tone and even harsh means, but never lose your temper.

Now suppose we are to commence to break a balky horse of class second, and that he is sufficiently gentle to know what is wanted of him. Put on your harness and hitch him to anything you desire, either single or double, as you feel disposed, and give him the commanding word to go ahead. If he goes, you have nothing to do or say but let him go on and do your work ; but if he refuses to go take him out immediately, take all the harness off except the bridle, and take a small rope the size of the plow line, and tie the one end to the bit on the right hand side, and pull it through the ring of the left under the chop, pull his head around to his left side, and slip the rope under his tail like a crupper and make it fast, keeping his head tolerable close to his side. Now all is ready, so let him go, and take a good long whip and make him go, talking kindly to him all the time. He will travel like a dog after his tail, for he can travel no other way, but after a while he will fall down, when you will immediately let loose the rope and let him get up ; now talk kindly to him and caress him.

Your work is now half done, for you have only to tie the rope to the other side of the bit, and pull his head around the other way, and make it fast like a crupper, the same as before, and start him off again and let him go till he falls down a second time ; let him get up immediately and hitch him up, and you will, probably, never have any more trouble with him. I have tried the above many times, and have never known it to fail.

A Horse with Ascarides.

I have a good horse for some time much troubled with needle worms. I have given him worm balls and oil and turpentine, but he still continues to pass them, to rub his tail, get out of condition, and stare in the coat. He has a full allowance of corn, hay and potatoes. Can you explain the cause of the worms?—A. B.

Needle or whip worms, also called ascarides, now more specifically termed oxyuris curvala, are common amongst horses, infesting especially the posterior parts of the large intestines. The mode of their inception and growth is not yet fully made out, but the eggs are believed to be swallowed in muddy water, or with rough grass picked often near watering places, or licked from the skins of their fellows. A few days' warmth and moisture suffice to germinate the eggs of these worms, and in a suitable habitat, such as the intestines, the wriggling, irritating parasites, cause the annoyance and loss of condition of which you complain. Aloes and turpentine are the medicines usually given to purge away and destroy these visitors. But located so near the extreme end of the digestive canal, they are more readily, and with less annoyance to the patient, got rid of from behind. Occasional clysters of carbolic soap cause them to relinquish their hold on the intestinal walls, and be swept out. Decoctions of quassia chips and various other bitter substances kill and bring them away. An ounce of quassia used to the quart of water, makes an effectual clyster. Corrosive sublimate and other mercurials are sometimes injected, but, being poisonous, require to be used with caution. Good food, rock salt in the manger, and iron tonics, help to produce a more healthy state of the digestive organs, and thus render them a less favorable abode of worms.—*North British Agriculturist.*

How to Cure Scratches in Horses.

First cleanse the heels well from all dirt and other foreign matter, with a strong suds made by means of carbolic soap and warm water. This done, dry the parts well and be careful to remove the soapy matter thoroughly from the sore, in order to prevent the collection of dirt. Then dress the heels with a lotion composed of carbolic acid, one part, cold water, forty parts, three times a day. In one-quarter of an hour after using the lotion rub over the diseased surface with glycerine and keep the parts supple with it. Give him, mixed in his feed of grain, night and morning, one and a half ounces of liquor arsenicalis each time, and continue this treatment for a time after his heels have dried up.—*Turf, Field and Farm.*

The Horse's Foot.

Most of the horse shoers of the country prepare the foot, fit the shoe, and secure it to the hoof in the same manner that a wood butcher fits a shoe to an old wood or ox sled. The mechanism of a horse's hoof is one of the most wonderful and ingenious structures that can be found in all the works of the Creator. Beneath and in the rear of every hoof there is a frog, which is a tough and elastic pad for preventing injury to the animal whenever he plants his foot suddenly on any hard substance. Large rolls of cylinders of india-rubber are placed beneath the railway cars to prevent injury to any part of the car or to the cargo with which it is loaded. The frog beneath the foot of a horse is designed to subserve a similar purpose. But the manner in which most horses are shod lifts them as it were on short stilts, so the frog cannot perform its appropriate functions.

If we look carefully at the young horse when he is trotting or running, it will be perceived that every foot is brought down to the ground in such a manner that the frog receives the powerful blow. By this means all injury to the animal is avoided. Science teaches us to permit the frog to develop and point downward. But most blacksmiths seem to think that the all-wise Creator made a mistake when He formed the hoof of the horse. Hence they fall at the frog with red-hot burning irons, with edge tools and with any other appliance that will enable them to remove this extraneous excrescence. Illustrious ninnies ! Why not shave away all the rough, callous, adip se tissues beneath their own heels, and allow the bare bones to rest on an iron plate inside of their own boots and shoes ? No frog, no foot; no foot, no horse.—*N. Y. Herald.*

Harnessing Colts.

The utmost gentleness should be exercised in harnessing the colt for the first time. Any undue roughness as, for instance, throwing the harness over his back, the tugs and straps slapping against his sides, may forever render him exceedingly shy, restive and, consequently, dangerous to approach. First detach the harness from the pad, closely tying up the tugs. Then take them in both hands and place them gently over the collar, buckling below without jerking at the straps—the too common practice of grooms—after this, with both hands place the pad over the back, buckling just tight enough to prevent the pad from moving out of place. When this is done the tugs may be then drawn through the support straps and tied snugly up to them. The collar must be carefully adjusted to the animal's neck so as to prevent both scalding and chafing.

The Apiary.

Bee Items.

The pure Italian bee is known by its being uniform in color, having three golden bands running around its abdomen ; again, it is known by its being gentle and easily handled. A pure Italian colony will suffer its hive to be opened and handled without the use of smoke to subdue them; also, by remaining quietly upon the comb while being handled ; moreover, a pure Italian queen will always duplicate herself in her queen progeny. A queen who does not do that is a hybrid, and should not be tolerated a single moment to breed from.—*Rural World.*

A FARMER'S HIVE.—Mr. Clark, who has devoted much time for the past ten years to the honey bee and its ways, says :—The simplest hive is the best, and that the nearest and most satisfactory approach to this is a square box, which a swarm of bees will fill. The hive which Mr. Clark now uses is fourteen inches square by fourteen inches deep inside, provided with an excellent feeding arrangement, ample means for ventilation, and three hollow bars in the centre of the box, through which the bees can pass and repass at pleasure. He winters his bees out of doors, the hives being on a bench six or eight inches from the ground, over which is placed a box four or five inches larger than the hive, and one foot higher ; the top space above the hive being crowded full of straw. The top of the outside box is made water tight. In the spring this straw will be found all rotten, but the comb in the hive will be white and clean.—*Maine Farmer.*

EXPERIMENTS WITH HONEY.—A correspondent of the Scientific American gives his experiments with bees in 1874 : I put up six one-pound cans of beautiful linden honey, being careful to make it one homogeneous mass by stirring. It was thrown from the combs by an extractor, on July 20, and put into cans on Aug. 1. The cans were placed respectivly as follows: One in a dark, dry cellar, one each under shades red, yellow, green, and blue glass, and the sixth can under full light. On November 8th the honey in in the cellar candied to a white· November 22nd to December 10th, honey under colored shades candied, first in the red next in yellow, green, and blue; while the honey in full light remained transparent until January, when it soon cadied after exposure and intense cold weather. From my experience an equal temperature wou'd preserve certain kinds of honey, while other kinds would candy under almost any circumstances. I think that candied honey, instead of being looked upon with disfavor, should be looked upon as evidently pure. I hope however that the above experiments will lead others to follow up the light theory with benificial results.