dollars a ton for it. The lime in plaster is as valuable as any other, while its sulphuric acid combined with ammonia always present in the atmosphere and ever drawing vegetation is probably the most valuable of all nitrogenous manures. We believe most that has been advanced of lime, but not a little of the effect of [illegible] phosphates is due to the proportion of sulphate (gypsum) which they all contain. We [illegible] freely not only on clover in spring, but [illegible] and manure heaps, both winter and summer, waste and make manures more quickly available. We all sow and grow clover largely not only for the [illegible] will be to the soil, but because it [illegible] crop, dearly is the use of plaster.

Dissolving Bones

The annexed, from the last [illegible] *Messenger* will supplement [illegible] last number of the CANADA FARMER to [illegible] who enquired for a way to dissolve bones:

The method I adopted in 1846, and [illegible] then, I have found satisfactory, [illegible] a sufficient quantity of any kind of ashes, and make as many pans of them round the heap as may be required, spread double the weight of bone dust or half-inch bones of a carboy of acid in a pan; sprinkle them with water from a watering can with a rose on, and make them *on* wet, then back a cart to the pan, and let one or two men empty a carboy of acid on the wet bones, another man should, at the same time, with a manure drag or other suitable implement, keep moving the bones and acid until they cease to boil freely; after the mixture has remained one or two days, turn it and the ashes together into a conical heap to dry, and after a few weeks turn over the heap, break the lumps well, and all will be fit to drill. The men must take care not to let the acid touch their clothes, as the least spot touched will be burned. The strength of the acid should not be less than 18°. On one occasion, I found the acid did not act as usual at the time it was put on the bones, and by inquiry I learned the strength was only a little over 17°00; this accounted for its not taking proper effect.

When the lumps of newly-made superphosphate are dry, probably some of the larger pieces of bones will not be quite dissolved, but I think the action of the acid upon them is sufficient to make them crumble away after they are drilled.

As it is necessary to wet the bones for the acid to take effect, probably if they were thoroughly soaked with water there might be no portions left undissolved.

HOW TO HANDLE HARDHEAD STONE. The cheapest way to break cobble-stone is to burn them; and the best way to burn them is to lay down two parallel rows of stone, of about an even size, and so far apart that the larger cobble-stone can be rolled on top and reach across from wall to wall. You can roll large stone up a strong plank on top, and you may put another tier top of these; then build a fire under. It forms an arch, and an hour's fire will heat almost any of them so they will break quite readily with a stone hammer. We had a couple of cords broken in twenty minutes after so heating. We use them for concrete walls, and don't care how fine they break. It costs ten times as much to drill and and blast them. *Live Stock Journal.*

CHARLOCK OR WILD MUSTARD—Says W. J. F., in the N. Y. *Times*.—Charlock will not grow in sod, but the seed, after lying dormant for years, is ready to spring up in oats or barley, often in such quantities as to make it economy to plough under the crop rather than weed by hand. Something may be done by destroying it in corn or potatoes the first year, and none should ever be allowed to seed in any hoed crop; but comparatively little charlock will grow on a freshly turned sod, and it is only the second year that it comes on in quantity. Charlock seeds by the million, and whenever a fresh surface is turned, a fresh supply is ready to germinate. The only way is to plough in Spring the same as for barley or oats, and cultivate once in two weeks through the season, seeding with wheat in the Fall. As there will be no sod to plough under, this kind of summer fallow is not advisable except to kill weeds. In order to get much benefit from it as possible, sow oats after each ploughing, and cultivate them under when six to ten inches high. Five bushels of oats per acre, costing three dollars, will give three green crops to be ploughed under in one season, worth much more as manure than the cost of the seed. Besides, I think charlock and other weed seeds more liable to grow with a thin seeding of oats at each cultivating than if the ground is left bare. The oats shade the ground, while the heat and moisture from the decay of the succulent leaves of young oats is the best preparation land can have as a seed-bed. Care should be taken not to harrow wheat in Spring on ground infested by charlock, as the harrowing will cause much to germinate that would otherwise have remained dormant.

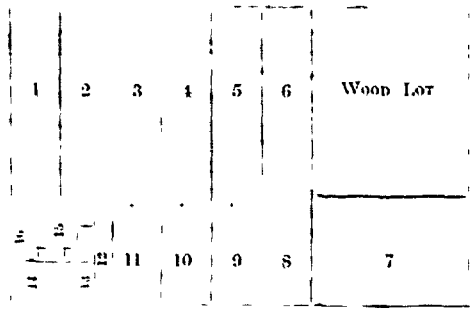
Laying-Out a Newly-Cleared Farm.

EDITOR CANADA FARMER.—In your March number, I saw a letter from a farmer in the county asking for a plan for laying out his farm; but asking such a plan with [illegible] information he has given respecting the surface [illegible] of his farm as to [illegible] for bricks without [illegible] the straw. He should have stated whether his [illegible] was rolling, whether it is intersected with [illegible] brooks, whether any part is swamp, as all these [illegible] should be taken into consideration in adapting the laying out of the fields to meet those various requirements. I therefore assume that his farm is level or nearly so, and also that the buildings are to remain in their present position.

There is a difference of opinion among farmers with regard to the size of their fields. Certainly twenty-acre fields require less fencing than those of half that size; still two acre fields are in some respects somewhat convenient. Only when the land is level and low, the snow is generally blown away from the middle of the large fields to the injury of fall wheat and clover which are often winter killed in such situations.

Farmers raise four different kinds of grain and two of root crops. These kinds of grain ripen at different times, and it is of some consequence to get the pigs into the grain stubbles before they are shut up to fatten, and as soon as the grain is safely secured in the barn. "Farmer" has one hundred and ten acres of land cleared, which will allow sixty acres for crops, twenty acres for meadow, and twenty acres for pasture; and the remaining ten acres will allow three acres near the barn divided into two fields for calves and pigs, five acres for orchard, and the remaining two acres for buildings and a garden between the house and concession road.

The only permanent road, as shown in the plan, leads from the concession road back to the wood lot, and, as all the fields open on that road, the stock can be removed from one field to another without having to cross other fields, and a gate may open from that road into the barn-yard, whilst a foot path might lead from the house, through the garden, to the concession road.



EXPLANATION.—1, 2, 3, 4, 5, 6, Fields of ten acres each, including road. 7, Meadow, twenty acres. 8, 9, 10, 11, Pasture fields, five acres each. 12, Calf field. 13, Pig field. 14, Orchard, five acres. 15, 16, Barn yard, garden, two acres.

By dividing the twenty acres intended for pasture into five-acre fields, they may be more profitably grazed than if the same amount of land was in one field. When the grass is sufficiently advanced in the spring, the cows might first be turned into No. 11 and kept there for a week, then removed to No. 10, and the horses turned into No. 11. At the end of another week, the cows would be removed to No. 9, the horses into No. 10 and the sheep be turned into No. 11; so that by grazing the fields in succession with different kinds of stock, one field would always be undepastured and so will have time to make a fresh start. Besides the fields will be better grazed, as what the cows don't like, horses do, and what is refused by the horses is acceptable to the sheep.

If this amount of land were laid down at first with different kinds of grass it might be kept as permanent pasture, and, being near the barn and stables might be readily top-dressed with fresh manure late every fall, the seeds of weeds in the manure would drop out amongst the grass and germinate early in the spring, but, as their roots would have no chance to penetrate the soil they would soon wither under the fierce rays of our summer sun, besides the cows would not have far to travel when brought home to be milked in the mornings and evenings.

If the house and barn are frame buildings, and the ground level or nearly so, they might be removed to a more central position, but this would necessitate an alteration in the plan, which, to be useful, would require a greater amount of local information than Farmer has yet been pleased to afford.

SARAWAK.

HOME MANUFACTURED SUPERPHOSPHATE. The *Maine Farmer* says: Mr. A. C. Emery purchased one hundred pounds of ground bone, placed it in a half hogshead tub and applied forty pounds of sulphuric acid, adding water as desired. In five days' time the whole mass was reduced to a consistency of thick jelly. Water was then added, and three hundred pounds of plaster used as a dryer, the whole being worked and shovelled over until it could be readily handled. The phosphate so made was applied to one acre of corn and one of potatoes, both being manured sufficiently, and a small quantity was left which was applied to his wheat field and to a plot of grass ground just to see what it would do. The result of this manure in the two latter instances was most marked, while the corn was heavy the growth being dark colored and stout, and the potatoes good. The entire cost of the phosphate was $7,50 and Mr. Emery thinks it the best expenditure in the way of purchased manures he ever made.

ROPING HAY.—As haying will soon be on, I will give you the method of harvesting which I noticed in some parts of the country last year, which I consider a great saving of labour. The hay, when cured, is raked into windrows, then a rope or chain, about 30 feet long, is laid with the centre on the end of the windrow; the horses are placed one on each side and hitched one to each end of the rope; the checks are let out long, so that they will not trample over the hay. One person stands on the curve of the rope on the hay; with a fork he smoothes the hay down, and keeps it from falling over the rope. A boy can drive the horses up the windrow until they get a sufficient quantity, or as much as the horses can draw. Then, if it is to be stacked in the field, it is taken direct to the stack, or barn if near by. One man and boy this way will draw as much as four men will stack or mow away. If the distance requires the hay to be loaded on a wagon, three heaps put together this way, will make a load; or, in case of threatening rain, with a little topping up, will stand a great deal of rain without much injury. Hay put together this way will pitch much easier than out of the windrow. The boy can ride also on the hay while drawing it together.—*Cor. Country Gentleman.*

AARON'S ROD.—As to killing it by cultivation, it is impossible; I have a large patch about one-half acre well stocked with it. I have tried various remedies, all of which have failed except one, and all my remedies but this one have improved its appearance. I find rock lime put upon it in large quantities the wet slacks with so much venom that it will kill; and until I find lime on or near my farm, I shall give it an awful letting alone, as experience has taught me that the least particle of root or branch dropped on the surface of the ground, either in grass or ploughed, will root, as also it will seed and scatter itself for some distance. If you will mow grass and dry it, in which some of it is left in, then burn the lot and wait two weeks, and you will find Mr Aaron growing the better for it. Furthermore, if you will cut a branch of it when eight or ten inches long, and hang it within one foot of your stove funnel with the top end down, it will turn and grow up for weeks and blossom in your face. If any one don't believe this, I will send you a sample that you may have the evidence, but don't plough nor harrow amongst it until you are satisfied.—*Cor. Massachusetts Ploughman.*

BUCKWHEAT. A Pennsylvania correspondent says, in the *American Farm Journal*.—We have two varieties of buckwheat in this State, namely: the common or gray buckwheat, and the Merino buckwheat. The latter is only fit for pig feed, and is inferior to the common variety for this purpose; but it yields enormously when sown upon good ground, and is not attended with the same difficulties in raising it. It can be sown any time from the first of April to the middle of July. The gray buckwheat should not be sown earlier than the 25th of June, nor later than the 10th of July. If sown too early it is liable to be injured by the hot rays of the sun, while in blossom, and if sown too late, it may be injured by early frosts in autumn. Even greater care should be taken to fit the ground before sowing than for other small grain. From my experience I would choose high, clayish soil, in preference to bottom lands. The ground should be ploughed early in the season, say the first of May, and stirred just before sowing. The ground should be well pulverized, or the harrowing should all be done before sowing. Then going over it with a light brush or a light harrowing will be quite sufficient. If care is taken with this crop, it will prove as remunerative as almost any crop we can raise. The flour has sold for more than wheat flour for the past year, and indeed is looked upon as quite a luxury by the town people.