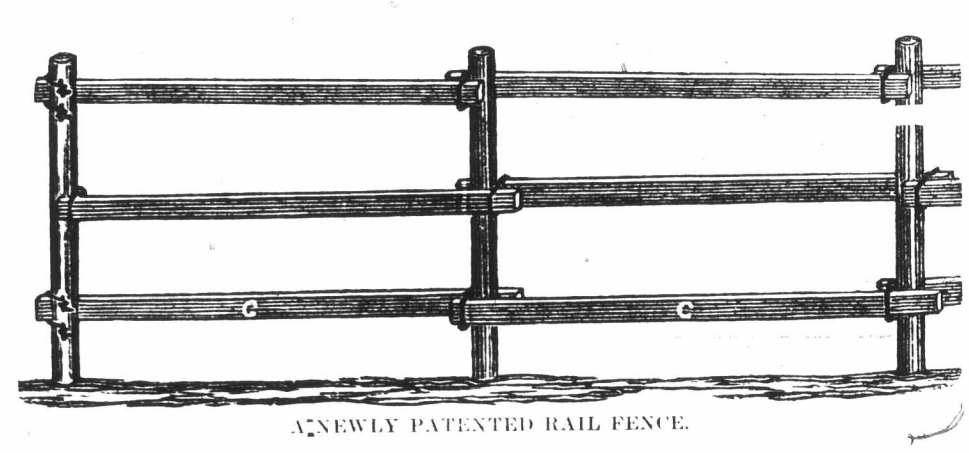
The Farm.

A Cheap and Serviceable Rail Fence

The accompanying illustration shows a new invention by Mr. C. Avery, Clinton, Ont., of which a patent has recently been issued. We have examined the fence and believe that for cheapness and substantiality combined it cannot be excelled for ordinary farm purposes in most localities. Mr. Avery, the inventor and patentee, is a practical farmer, and we believe he will deal honorably with those who wish to buy township or county rights from him.

The attachments firmly secure rails or boards of a fence to the posts, and consist of a loop of wire passing around the rails or boards and secured to the post by a staple. In attaching rails to posts, in the accompanying cut we start from the left, the loop is secured with staples, the rail is then inserted, then pressed up to next post; it makes a tension on the wire which binds the rail against the post, making the fence strong and rigid; a loop is then made to correspond with the next rail, passing around both ends; the next rail is put in the loop at an angle, then pressed up to third post, which binds both rails to the secon so on for an indefinite course. As will be seen by the cut, the rails may pass alternately from one side of one post to the othe side of next post, or they may be alternately on the same side of two posts, which leaves the fence perfectly balanced. It is possible, but not always practicable, to make the loops so tight that they will hold the boards or rails to the post without further appliances. The staples, however, involve little labor and expense, and make the work more substantial. One staple to each loop is sufficient, securing the wire loop to the post. No. 10 galvanized wire is recommended.



A NEWLY PATENTED RAIL FENCE.

In estimating cost of fence, count posts at 10cts. each, ash rails at 3½cts., or cedar at 5cts., the rails being 12 feet long, requiring about 8 inches of a lap; it will leave about 11 feet 4 inches, or about a post and a half to the rod, and four rails make a good stock fence, which will call for six rails for a rod, making 21cts. per rod for rails, 15cts. for posts, and 5cts. will supply wire and staples. With regard to setting the posts, it varies according to soils and locality, being from 6cts. to 10cts. a post. Two men will put up sixty rod in a day with a little practice. This makes a total of 60cts. a rod, and by using economy it can be built for 50cts. For a four rail fence the proper spaces will be six, eight and ten inches, then by banking up eight or ten inches, you will have a good four and-a-half foot fence. Again, for cattle and horses, two or three rails will make a reliable fence.

Rails do not lie on the ground to harbor weeds, but allow stock to clean out rubbish, so that by getting a supply of posts most farmers can extend their old rails for years, and save over half an acre on every ten acre field by closer cultivation as well as saving time every season repairing fences.

What About the Manure Heap?

In some farm practices the "old rut" has been proved to be better than the new one. Not so with reference to the common method of handling the manure, however: for a more senseless and wasteful practice could scarcely be devised.

No rule for saving the manure will apply to any two farmers; indeed, no one farmer can follow, year after year, the same rule with the best results. How important it is, then, that the first principles be thoroughly understood, so that variations in the different methods can be made from time to time to suit the ever-changing conditions. Under any circumstances, the manure heap should be figured on at least a year ahead, and now is the time to do the reckoning. Where the soil in every field on the farm has the same chemical and physical character, a more uniform method of saving the manure can be applied; but this is a rarity, and not a rule. The character of the crop has also something to do with the method of saving the manure, but not so much as the character of the soil. Where the barnyard manure is supplemented by commercial fertilizers, still greater skill is required in the management of the manure heap, and every farmer can greatly economize by the use of such fertilizers, providing always that he understands how to apply them.

There has been a great deal of tongue and pen warfare about the application of green vs. rotted manure. Such discussions produce no practical results, as the question is a settled one. It is important to understand this, for upon it depends whether the manure should be fermented in the barn yard or spread directly upon the field. The first question to be decided is, What changes, or losses, or gains, take place in the process of fermentation? In the first place, every farmer knows that the bulk is greatly reduced in size and weight, but whether or not a proportionate amount of plant food is lost cannot be detected by ordinary observation. One thing is certain, that no nutriment can be added by fermenting the heap, but this is no proof that the process is not advantageous, for it may change the availibility of the plant food—that is, may make it give quicker returns. The sources of loss may be divided into two classes: (1) The loss of carbonaceous matter which must take place, and which is not a direct source of nutriment for plants, but is useful in the soil for the purpose of acting upon the rocky particles and converting them into plant food; (2) the loss of the direct constituents of plant food, which should not take place to any appreciable extent in a well-managed heap. The latter loss is caused (1) by over-fermenting or "fire-fanging," and (2) by washings from heavy rains. In over-heating, the loss is confined to the ammonia; but in leaching, a large portion of all the valuable constituents are washed away. This loss is especially great when rain falls on a heap well advanced in the stage of fermentation, for the constituents are then more soluble. A loosely-made heap of rich manure is specially liable to over-heat, while it is difficult to start fermentation in a compact heap made from the droppings of poorly-fed animals. Fermentation can be best regulated by piling together the horse, cattle, sheep, and pig manure, making the heaps five to six feet wide, about the same height, the length depending upon the quantity of stock. Should it be required to ferment all the manure, more than one such heaps may be made, commencing before the frosty weather sets in. A covered shed is not necessary—sometimes it does more harm than good—but care should be taken that the manure be spread evenly over the heap in order to prevent its freezing in lumps, and if a heavy rain threatens, top off the heap so as to ward off surplus rain. A considerable amount of moisture, however, is necessary in order to take up the escaping ammonia and to prevent "fire-fang." Manure treated in this manner will be ready for the spring crops, a season's time thus being saved, quick returns made, and a loss of fertilizing matter prevented.

It is now necessary to understand what kind of soils manure thus prepared is adapted for. Its chief characteristic is that its mineral constituents are very soluble and readily taken up by the plants, so that if it be applied to a light porous soil some time before the crop is sown, much of the valuable constituents of plant food will leach through the soil and be wasted. Such manures are best adapted to sandy soils, and should never be applied except shortly before or after the crop is sown. They are also very suitable as top-dressings for meadows or other crops. Manure treated in the ordinary way—spread over the barnyard and left all summer to ferment—may be applied to light soils at any time, for it has scarcely any fertilizing matter to be lost. When the manure is placed in heaps in the fall and allowed to ferment during the winter months, sufficient straw should be used as litter to absorb all the urine, but no more, in which case the waste will be reduced to a minimum, and there will be great economy in using the driest part of the bedding from the horses and sheep under the cattle and pigs. The reason why coarse manures are not adapted to sandy soils is that it injures their mechanical texture, and there are few or no rocky particles to be acted upon by the carbonaceous matter, although such soils act very quickly in converting coarse manures into plant food.

It now remains to be considered what kind