

Rural Economy.

SMALL VS. LARGE FARMS.

We know of a farmer who has one hundred acres of land, ninety of which are under cultivation. There are a few hundred dollars yet due on his premises. He has the stock and necessary farming implements for a suitable cultivation of his land. Alongside of him is another hundred acres for sale which he is anxious to secure. By selling a portion of his stock the sum demanded down can be raised, while for the balance a long credit can be obtained. The question with the person is, "Will it be safe to buy?" - Rural New Yorker, No. 857.

Having already one hundred acres, and not all paid for, what advantage is to be derived from the possession of the adjoining hundred acres? Does the ninety acres under cultivation produce all it is capable of yielding? Has all the improvement required been made to show the full capacity of the soil under cultivation? Can you to advantage to yourself, everything considered, cultivate properly, and as it should be, double the quantity of land you now have under cultivation? Farther, is it a desirable life to lead, with a load of debt hanging over you?—for you know it is asserted in Holy Writ, that "the borrower is servant to the lender." If all the foregoing can be answered in the affirmative, and are desirable conditions, then there are further circumstances to consider. Have you a lease of life, and health, provided you have the requisite perseverance and economy to warrant the purchase, to insure of not entailing a load, if not loss upon your heirs or family?—for it should be the duty of every one in life and health to consider the future, not only for himself, but for those dependent upon him. Would it not in this case be better for the man to devote his energies to the producing of a sufficient amount to remove the debt already on his shoulders, and farther improve what he already has, and if a family growing up, to devote a portion of his income to the suitable education of his children?—children, who, in the course of a few years at most, must take their position in the world. And what better legacy can a parent leave a child than a good education?—one that prepares him or her for encountering all the various vicissitudes of life.

There is too much of that spirit in man, which desires to have what lies adjoining him, exhibited by a large majority of agriculturists in our land. The idea seems to be, "No pent up Utopia confines my powers." Could we be content to exert our powers to the utmost, we should be surprised at the narrowness of the space they might be profitably employed upon. We should be astonished at the amount that could be produced from a small piece of thoroughly prepared and cultivated land. No man has yet reached that limit where the soil has refused to yield a farther increase, when judiciously rewarded. Small or moderate-sized farms are more profitable than those of more extended area. The investment is less and the whole extent is more under the immediate eye of the owner; less proportional expense necessary in the management generally—for time is money, and it is necessarily expended in looking after fields, etc., far away from the dwelling; then, the carting or carrying crops, manure, material for fencing, etc., etc., amount to quite an item yearly. The extra help required in taking care of large plantations, and the necessary loss of time above specified, will be quite an item to come out of the profits. On the whole we find that moderate-sized, or small farms, give the greatest relative profit; they being more thoroughly tilled, and being more under the immediate eye of the owner, any negligence or irregularity is at once discovered, and less time and expense is necessarily required to repair than if farther away.

Should we not enjoy this life better, and exert a better influence upon those around us, if we, instead of adding acre to acre by purchasing adjoining fields, improved to the fullest extent what we already have? spent a portion of the income to beautify and adorn our homes—making them more attractive, creating associations that only end with life—thus inciting a love of rural life in the rising generation, instead of creating that dislike to farm life that is pretty sure to be the case, where our children are brought up as they necessarily would be were we to be shouldered with a heavy debt—one that would be likely to hang over us for years, causing a necessity for constant hard work and close economy in order to meet its requirements? Under such a state of things, what time is there for the culture of the intellect or the proper adornment of the home? All the strength is expended in the muscles, giving no chance for the intellectual. Do we, under such circumstances, fulfil the end for which we were created and placed in our sphere? Or do we enjoy life better than we should if living in suitable, comfortable dwellings, surrounded with attractive scenery, made so by the work of our hands, planned by a cultivated mind, and by generations growing up who will, when we are gone, arise and call us blessed?

In the foregoing I have omitted reference to several points which should be taken into consideration, from the text, which it is to be hoped the practical judgment of the reader will supply.

WM. H. WHITE.

SOUTH WINDSOR, CONN.

THE CUT WORM.

This destructive pest has been very numerous throughout the entire country this year. In this section and in the West, whole fields of corn have been destroyed by it, and as the season has been cold and backward, replanting has not succeeded first rate. The ravages of this enemy to the corn crop are becoming really alarming, and farmers should study the subject well, and understand the methods, if any there be, of abating the injury. We will briefly mention the best remedies known. Fall plowing, Dr. Fitch says, if done late so as to expose the grubs to the frost, will destroy many. This practice has been found to answer well, but it may cause more work to fit and tend the field the next year. A heavy clod crusher passed over the field just before or after planting will destroy worms within three inches of the surface. Making small holes in the ground, just after a rain, into which the worms will fall where the hot sun kills them, is another remedy. An

instrument could be easily made which would surround each hill with holes, or smooth, deep depressions in the earth. This we think, would be the best plan. At all events, it is well to study, and prepare beforehand means for destroying these rascals which work underground in the dark, and blast the prospects of the corn grower.

GAS LIME FOR FRUIT TREES.

Gas lime was recommended as excellent to repel the borer from entering fruit trees near the surface of the ground. W. S. Carpenter thought the borer, which is doing so much injury to our orchards, might be destroyed, or repelled, by the use of this lime. He had employed it with most satisfactory results, in repelling bugs from squash and cucumber vines, by sprinkling a small quantity of the lime near the growing vines. The poisonous effluvia arising from the lime will soon stupefy and kill every insect that approaches the vines. One person had used this lime twelve years ago for this purpose, and no bugs nor insects had appeared since in that locality.

THE "HAW" IN HORSESHOE.

Sometimes horses are rendered blind by the growing up of a fleshy substance from the lower corner of the eye till the sight is wholly obscured. To cure or remove this excrescence, the *Farrier* recommends an ointment composed of prepared calomine thirty six grains, red precipitate one drachm, cinnamon eighteen grains, and hog's lard one ounce. Apply twice a day; to the enlarged "haw," a portion of the ointment of the size of a small pea. Keep the animal on low diet and in a darkened stable. If this fails, draw out the fleshy substance with a wire hook and clip it off with a pair of scissors as the enlargement takes place.

Scientific.

GUNPOWDER.

Professor Abel recently delivered before the Royal Institution of London a lecture on the "History of Proposed Substitutes for Gunpowder." Notwithstanding the many substitutes hitherto proposed, gunpowder still maintains its position as the best of explosive compounds for the various uses to which it is applied. Its component parts remain the same as when originally invented, for nothing has been found to answer the purpose better than a mixture of charcoal, saltpetre and sulphur. Improvements have, however, been made in the proportions of those substances, and in the mode of manufacture, so as to render the explosive action more or less rapid, according to the various objects for which it is used. For small arms and for shells, a rapid action is required; but for large ordnance and for blasting, a much slower combustion is necessary to produce the required effects. Professor Abel mentioned numerous substances that had been tried as substitutes for charcoal, and for saltpetre, including that of nitro-glycerine, which explodes by percussion, and the dangerous nature of which, he said, had been proved by a disastrous explosion at Aspinwall. After having mentioned some other proposed substitutes, Professor Abel proceeded to notice gun-cotton, and to state some of the improvements that have been made in its manufacture during the last two years. Gun-cotton, indeed, seems to be susceptible of being made to suit all explosive purposes, and it possesses the great advantage of producing no smoke, and of leaving no residuum. Another advantage of no less importance is the safety with which it may be manufactured and stored, for it can be wetted and rendered incombustible, and its explosive properties are restored without injury when dried. Among other applications of which gun-cotton is susceptible, is that of fire-works, which might be exhibited in a room without nuisance, and he concluded the lecture, which was illustrated with numerous experiments, by giving a brilliant pyrotechnic display.

THE QUEEN'S MINIATURE.

Touching the miniature of the Queen for Mr. Peabody, the *Times* says:—"A familiar of the kindly and most gracious gift which Her Majesty offered to the great American philanthropist is now on view at Mr. Dickinson's gallery, Old Bond Street. In the present stage of the work, only the beautiful water-color, from which the enamel on gold is afterwards to be done, is now shown. This, however, in its magnificent frame of chased metal, gives a very fair idea of what the effect of the whole will be when finished. But the word "miniature" scarcely represents what the importance as regards the size of the likeness will be, for, though only half-length, the painting is 14 inches long by nearly 10 inches wide. For the first time for the presentation of her portrait to a private individual, Her Majesty sat in the only robes of state she has worn since the death of the Prince Consort, the costume in which she was attired at the opening of the present Parliament. This was a black silk dress, trimmed with ermine, and a long black velvet train, similarly adorned. Over her Majesty Stuart cap is the demi-crown, while the Koh-i-noor and one rich jewelled cross, presented by Prince Albert, form her only ornaments. To complete this portrait, Her Majesty gave Mr. Tilt several long sittings, and has now expressed her unqualified approval of the water-color shown at Mr. Dickinson's.

"This, however, is but the commencement of the process. The portrait is to be done in enamel by Mr. Tilt, on a panel of pure gold. In these enamel paintings, to bring out all the brilliancy of their colors, they have to be burnt in a furnace at least five and generally six times. The heat to which they are subjected is so intense as to be only short of that which would fuse gold, and the most exquisite care is necessary neither to let the picture heat too soon nor, above all, cool too rapidly, as in either case the enamel would crack. So large an enamel portrait has never been attempted in this country. It has, therefore, been found necessary to build a small heating furnace specifically for the execution of this work. It will take about six weeks to complete all

the processes, when the picture will be mounted in a most elaborate and massive chased frame of pure gold, surmounted with the Royal crown enamelled on the same metal in colors. Altogether it will form a gift worthy both of Her Majesty and of the gentleman to whom she presents it. In fidelity of portraiture, the likeness is not to be surpassed, and of course it was not till after many and long sittings that such perfect success was accomplished. After being submitted to the Queen, on its completion, it will be forwarded to Mr. Peabody, who intends to deposit it where it may be best seen, in a large institution which he has founded in Boston, his native town."

THE DODO.

This is one of the few animals that have become extinct under man's observation; and, as Sir Charles Lyell has remarked, it is the only animal the date of the destruction of the more perishable parts of which is a matter of record. On the 8th of January, 1755, the Vice-Chancellor and curators of the Ashmolean Museum, at Oxford, voted that the stuffed skin of the dodo, bequeathed to them just a century before by Tradescant, should be removed, *ad iustitiam*, for the purification of the museum. Every feather of this bird would now be prized the world over as a relic of the extraordinary creature which the early navigators killed and ate in the Mauritius, and of which some of the Dutch painters have left drawings, among them the one with which every boy is familiar in his books of natural history. There is reason to believe, from contemporary record that a live dodo was once exhibited in London. Luckily, in spite of the vote of the Vice-Chancellor and the curators, the head and one of the feet of the banished skin were saved, and still preserved at Oxford, and could not be bought for their weight in gold. A leg of another bird exists in the British Museum, and Reinhardt found, not long since, among some "venerable rubbish" in the museum at Copenhagen, another head. These, with a few bones, for a time constituted the only remains of this extinct animal. The history of the attempt to determine the natural affinities of this bird from the remains just referred to, is an instructive one, and goes far to show that the reconstruction of an animal from a part—a bone, a scale, or a tooth—is not the easy feat that the reading public have been led to believe. As matters now stand, he would be a hardy naturalist who would risk his reputation in the attempt. With a head and one of the legs as a basis for an opinion, Vigors placed the dodo between the ostriches and the curassows; Blainville, followed by La Fresnaye and Gould, placed it near the vultures; and Owen regarded it as a modified bird of prey, though he subsequently changed his views. John Edward Gray, of the British Museum, pronounced the bird a fabrication, in which the trunk of one bird had received the head of a second and the legs of a third—not thinking, apparently, that this only made matters worse, since it would require one extinct animal to possess the head and another to own the feet. The masters in science were at fault. Reinhardt, of Copenhagen, first pointed out its affinities with the pigeon, and in this view was soon afterward followed by Mr. Strickland and Dr. Melville, in their admirable and exhaustive memoir. Led by the analogies of other portions of the animal kingdom, in which certain species are characterized by their retaining through life embryonic forms, these last named naturalists brought forward the view that the dodo was a gigantic pigeon, as much larger than the existing pigeon as the moa of New Zealand is than ordinary birds, with this additional characteristic, that it had all the features of a nestling, with short wings and covering of down. For the credit of American science, we must not overlook the fact that, entirely independent of the labors of European naturalists, an eminent American ornithologist, Dr. Samuel Cabot, of Boston, from his own observations, arrived at precisely similar views, not only as to the affinity of the dodo to the pigeon, but as to the persistence of embryonic features. These views were printed in the *Boston Journal of Natural History* before the conclusions of Reinhardt, Strickland, and Melville had reached this country. The conclusions given above with regard to the nature of the dodo have been largely confirmed by recent discoveries. Some months since a considerable number of the bones of this bird were found in Mauritius, after the draining of a marsh. These have been examined by M. Alphonse Milne-Edwards, who finds them indicating a bird closely allied to the pigeons, like the vinagos, but still having certain features which make it not unlikely that a new natural family may be required to receive them.—*The Nation*.

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