

Agriculture.

THE POTATO BUG.

Sir.—The subject of insects and diseases is daily attracting more attention, for their depredations are daily becoming a greater evil, and the importance of entomological investigations is every day more plainly seen.

We hope to belong to that class who have faith in the ultimate triumph of good over evil in the moral world, and our faith is not less strong that the insect plagues shall, if not exterminated, at least be subdued, so that the labor of keeping them so far in check, that no material harm shall be caused by them, will be comparatively easy.

Means have been discovered for preventing the ravages of the currant worm curculio canker worm, caterpillar, melon bug, and aphid, and the mildew and other diseases of our vines. If we can do this, it is not reasonable to think that we can discover remedies, or the means of preventing all the diseases and depredations as they come into existence or under our notice.

Yours, &c., J. BERRINGTON, Gardener, Fredericton July 22, 1878.

Mr. Editor.—Thinking a few words from this section in reference to the state of the crops might prove of interest, I write you.

The general appearance of the country leads us to expect a fairly abundant harvest. Hay, which from the extensive intervals on both branches of the Oromocto river is the principal crop, is said to be greater in quantity and better in quality than that of last year.

Wheat, of which there has been sown probably twice the number of bushels than in any previous season, looks exceedingly promising, strong, and hardy, and gives promise of a bountiful yield.

Potatoes, of which large quantities have been planted, look thriving the rains of the past week being of great benefit thereto. Potato bugs have made their appearance in a few places but not in any very large numbers.

Turnips, mangolds, and cabbages are raised only in small quantities sufficient for home consumption. There seems to be a want of appreciation of the excellence of these products of the field in so far as the feeding of stock is concerned, which is to be much regretted as the favorable

opinion of stock raisers so frequently given through the columns of your paper, should in a slight measure at least be heeded as especially when attended with such beneficial and profitable results. The only exception to this rule of whom the writer is aware is the Hon. W. E. Perley, whose extensive fields of turnips etc. give evidence of his regard for the benefits arising from a large and thorough culture thereof.

Our farmers generally are fully aware of the necessity of the most modern improvements in implements for farm purposes and are well supplied with Mowing Machines, Horse Rakes, Steel Ploughs, Cultivators, etc. in fact everything that will facilitate operations in the field.

Attention is now being directed to the raising of sheep which will no doubt prove highly remunerative to those about engaging therein. Speculation is rife as to the results for which, however, we must await another year.

A writer in the "Aber" of last week makes some references to the purchase of Horse Rakes by the "Blissville Society" and from inquiry I am led to believe that much truth is contained therein. The transaction does not appear to have been conducted in that straight forward manner one would wish or expect.

Blissville, July 22, 1878.

USE AND CARE OF MOWING MACHINES.

A letter from L. W. Johnston, Manager of Agencies for G. M. Corsett & Bro., about the use and care of mowing machines.

1. Before commencing work see that the cutter-bar lies perfectly level, equal in height at both ends and with the guards neither up or down, then the stubble will be smooth and even.

2. See that the outer end of the cutter-bar does not sag back; some make of mowers tend to this more than others increasing the draft very much.

3. See that all nuts on the mower are turned tight. Five minutes labor thus spent may save half a days forced idleness from the loss of a bolt without which the mower can not be worked.

4. Buy the best oil. Poor oil will gum up and cause the shafts to run hard. Sperm oil is the best, and the next best for mowers is a mixture of one part coal oil to two parts castor oil, which are usually to be had in every house.

5. Keep all bearings well oiled, including the buttons that hold the scythes down to plates in the guards.

6. Keep the buttons down as close to the cutter as possible without binding. On all first-class mowers they are made of malleable iron and will wear pounding. Examine the position of the scythes under the buttons quite often and if the cutters are not in close contact with the plates of the guards, rap the buttons until the cutters are in such position, then you will get good work done but not otherwise.

7. Keep the scythes sharp. Take both of them with you always and have them keen to cut when you commence work. Every hour or two rub the edges with a good scythe stone, using first one scythe and then the other in the machine.

8. When the sections get worn to a point, buy new ones and have them put on; you will save time and get much better work done with less labor by the team. If possible retain the original shape of the sections in grinding keeping the point square as when new.

9. Examine your machine carefully when you are laying, tighten every nut, clean out all the bearings with coal oil, rub the same on the scythes and put them away in a dry place. If the mower needs repairing in any way, have it done and you may save yourself much trouble next year. Then put the machine carefully away and cover.

10. Mowers left out doors just where the horses were unhitched on completing the work, will gather rust and be damaged more than by all the season's work. Machines properly cared for, looked after and used as above will do good work for twenty years or more, not neglected they may not be serviceable till the end of five years.

L. W. JOHNSTON, Fredericton, July 23rd 1878.

For the "Agriculturist." The Aberdeen Agricultural Society is now in the 11th year of its existence, and is as hale and hearty as ever. Since the first subscription list was got up it has not been necessary to ask any one to join, nor has any public man been dunned for a donation. The aim of the Directors has been to make it pay. Any one who has agricultural implements or seeds to buy may become a member and can be supplied with reliable goods at a much lower price than can be had by any trader.

The Society has by a judicious selection of bulls, sheep and pigs from prominent breeders in our own Province, and by its purchases at the Government sale done much to improve the breed of these animals not only in Aberdeen but the surrounding country.

The Directors have just held their midsummer meeting, when it was decided to purchase a much larger quantity of hay tools than usual, and to hold a show in the fall. The show will be held early so that a selection of the best animals and articles may be made, and sent in charge of one or more of the Directors to the Provincial Exhibition. The expense will be defrayed by the Society, and the owners will get whatever prizes may be awarded to them.

The weather for the last fortnight has been extremely warm and dry. Hay will be an average crop, not more. It is much better than last year, but not so good as for the two or three preceding years. Potatoes and early sown grain never looked better, but the late sown grain is suffering from the long continued drought.

Less than the usual quantity of Turkeys will be grown on account of the late burning; our people have not got into the way of raising them on old land yet.

T. R. RONALD, July 9th, 1878.

THE PROVINCIAL EXHIBITION.

The hearty co-operation of the manufacturers with the farmers of the Province is essentially necessary for the success of the coming Provincial Exhibition. Are the manufacturers bearing in mind the fact, that the exhibition opens on the 8th October, and that they have very little over two months for preparation? Time flies like a white truth, but is one that we would do well to remember. It is to be hoped that they will not allow the opportunity to slip past for their own interests and the credit of the Province. In the large and handsome building, now in the course of construction, they will have ample and convenient space to display the products of their invention and skill. It is exceedingly desirable that the display should be comprehensive, and that no manufacturing industry should be unrepresented. Quality is hardly more essential than variety and quantity. One of the chief reasons for holding such exhibitions is the opportunity they afford of arriving at something like a correct idea of the existing condition of the industry of a country and of testing the progress it has made—a partial incomplete show will frustrate that object.

It is certain that Exhibitions pay the exhibitors directly or indirectly. Nations, or men do not persistently pursue an entirely losing game. The frequent occurrence of great international exhibitions proves, that besides having an improving tendency, there is money somewhere; they stimulate invention, fill the mind with ideas that bear fruit in improvements in all branches of manufacturing industry, and they afford an unequalled field for advertising, and they promote direct sales. What is true of such shows on the largest scale, is there is no reason for doubting, true of those more limited. Every one who has visited a great agricultural or cattle show, in England and America, knows with what avidity engineers, machinists, and manufacturers of implements and tools, and carriage builders, etc., seize on the opportunity to display their productions, and with what profuseness they scatter pamphlets, placards and bills, setting forth their particular and peculiar merits broadcast. They must find their count in it. They find the printer a good ally. If the manufacturers of the Province, and can be convinced that exhibitions may be made really paying affairs, they will throw off their apathy and go into them with a will.

It is to be hoped that no sectional feeling will deter any manufacturer from exhibiting, that no matter where they carry on their works they will do as well as if the show were at their own doors, and that the event will prove that the railway system has had the effect of bringing the different parts of the Province closely together.

There can be no successful exhibition unless St. John takes a large

share in it. Its manufacturers have a fine opportunity offered them to prove that the disaster that fell upon their city has neither touched their spirit or impaired their powers. But as yet there is no apparent sign that they are bestirring themselves. Is it not time that the press was making enquiries and stimulating exertion?

THE POTATO BUG.

Good advice given to the farmers of New England may be profitably taken by the farmers of New Brunswick. The potato bug has made its appearance in the fields of Maine so thickly as makes it impossible to get rid of them by hand picking. The farmers are advised to try in the first place, a Lewis Extirminator and the potato bug killer. Several gallons of liquid may be made at a cost of 50 cents—enough for a fair trial—and it should be applied freely to the hills that are covered with the pests, before they get large enough to shift quarters. This process failing, the farmers are advised to use Paris green in water. Directions for its use accompany each extirminator. A good way to prepare the Paris green is first to get a mackerel kit with two heads which will hold about two common pailfuls, then bore a two inch auger hole, fill the kit two thirds full of water, then add the Paris green according to directions—then stop the hole with a tight fitting plug when the kit may be shaken as much as necessary. Care should be taken in handling the Paris green by those who have cuts and sores on their hands.

CANADIAN LIVE STOCK TRADE.—Mr. Dyke, the Canadian Government agent at Liverpool, reports that 5211 head of cattle, 401 horses, 3318 sheep, and 838 pigs have been brought to Great Britain by the Canadian steamship lines during the six months ending June 30. In consequence of the available space in these steamships being secured until September, 2761 head of Canadian cattle, 963 sheep, and 386 horses have been conveyed by steamers sailing from Boston and New York, also 38 head of cattle and 203 pigs by sailing vessel from Montreal—making a total of 8010 cattle, 4281 sheep, 1041 pigs, and 787 horses. The imports from Canada in the year 1876 were 2767 cattle, 2607 sheep, 332 horses, no pigs; 1877—7412 cattle, 625 sheep, and 373 pigs.

DEATH OF A FAMOUS BULL.—The Warbury herd has sustained a great loss in the head of its herd "Royal Benedict" (27348). He was calved on July 1, 1877, by "Prince Christian" (23531), dam "Royal Bridesmaid" by "Prince Alfred" (34949), of the famous Strawberry or Hainaly family. He was a celebrated getter, being sire of many animals of the Warbury and other herds.

ONTARIO SCHOOL OF AGRICULTURE.

In an able report on the Agricultural Colleges of America, to which a gold medal was awarded by the Highland Society of Scotland, and which appears in the recently published volume of their Transactions, a full and very interesting notice is given of our School of Agriculture at Guelph. The writer is Mr. James Macdonald, Scotsman reporter, Aberdeen, who visited the institution in connection with several others of a similar character in the United States during the summer of 1877. It will be gratifying to the friends of the College, and encouraging to its zealous and efficient staff of teachers, to have the formal testimony of so able and disinterested an observer, who evidently regards our agricultural school as doing a most important work for the country, and in some respects already ahead of several analogous institutions in the neighboring Republic. After giving copious details of the character and management of the farm, and literary and scientific studies, Mr. Macdonald observes:—

"In midsummer (1877), the writer had an opportunity of seeing into the working of this College and its farm very fully, and it was indeed wonderful and gratifying to find everything moving on so systematically and efficiently in an institution which had only recently entered the third year of its existence. The staff seem most efficient, and work harmoniously together toward the same good end—the complete success of their institution. The students were employed mainly at outside work, some cutting and gathering peas, some carting, some tending live stock, some gardening, some engaged among the experimental plots, and some handling the plow, saw, and chisel in the mechanical department. The tone throughout seemed healthy and promising. Indeed, one could not help being struck by the practical nature of the foundation of a set of agricultural training that will be a boon, a blessing, and an honor to the great country that gave it existence. Short as the history of the College is, it is not altogether without the stamp of discontent. A few impatient citizens of the Dominion have been grumbling because the College has as yet 'done no good to the country.' It has done great work to accomplish, which, like all great works, can be accomplished only by small degrees. * * * * * Mr. Johnston, the able and energetic President of the College, assured the writer that once the College and farm were fairly established he believed he could carry on the institution with an appropriation of about \$10,000."

Since the date to which these remarks refer the new buildings have been finished, the number of students considerably increased, and the various appliances of scientific and practical education specially adapted to the wants of youth intended for farming pursuits have been advanced towards completeness.—Toronto Globe.

A QUESTION REGARDING CATTLE FEEDING.

A subscriber to the Cultivator and Country Gentleman having raised the question "whether, when steers which have been fed all winter are turned to grass about the first of May, double the amount of beef is put on by grass and corn as by corn and hay?" This is perhaps a strong statement of an important fact, and if cattle and other stock feeders fully comprehend it as a practical fact, it would represent millions in the practical result of cattle-feeding every year. Let us examine the foundation for his statement, that "twice the flesh may be put on with grass and corn as with corn and hay."

Nature furnishes succulent grass as the normal food of cattle. The young or grass is, the more soluble and digestible it is; and besides this, succulent grass is much richer in muscle forming matter and fat than hay. The common pasture grasses contain from 12 to 16 per cent. of albuminoid matter calculated without water, and 3 1/2 per cent. of fat. The young clovers are especially rich in albuminoid matter. It must be remembered that these succulent grasses are much more easily digested than hay—that both the albuminoids and carbonates are in the condition to be easily assimilated. It is also found that Indian corn, which contains 7 to 8 per cent. of fat, and some 65 per cent. of starch, is more digestible when fed with other food containing a larger proportion of nutritive matter, and the young clover grass furnishes just the right combination to utilize the starch and oil of the corn most economically. The English cattle-feeders use a large amount of oilcake with their other grain, as it is found to promote the fattening process. It assists in the digestion of other food, so likewise do the young grasses. It is thus seen that the condition of the food in summer is exactly adapted to produce a rapid laying on of flesh.

Further, the temperature in the grazing season is so congenial to the animals, requiring one-eighth to one-half less food to keep up animal heat, than in the winter season. The gain in weight—all the growth or increase in weight must come from one-third of the ration, but in warm weather, one-third of the ration will keep up animal heat and renew waste, and the other two-thirds of the ration will go to increase live weight. And, if we are to suppose that the animal can eat and digest as much in warm as cold weather, the same food must produce 50 to 100 per cent. more gain in warm than cold weather, when we add the greater digestibility of grass than hay, we see that double the gain on pasture and corn than on hay and corn is not beyond rational probability.

Another consideration of great importance, in this case, is the fact that the natural food of cattle—grass—requires the consumption of a very large bulk to produce a rapid growth; and it is certainly most to be desired, that the assimilation of a larger amount of nutriment than they can extract from grass alone, and thus a moderate gain on grass will all go to growth or increase in live weight. It is therefore no doubt a fact, that a bushel of corn, fed with grass, will produce twice the increase in weight, as a bushel fed with hay in cold weather. This is a question of great importance to the cattle feeder everywhere, and especially in the West, where grain is so easily obtained, and is, in fact, cheaper than hay—cheaper even than grass, because, when fed as an extra ration, it all goes to growth.

Another point rendering it particularly urgent upon the winter feeder to make the most of the warm season, is the fact that he usually has no stable for winter feeding, and seldom a good shelter from the rough blasts. It is certainly most to be desired, that the possible economy here to push the growth of steers during this favorable season. A strong, vigorous young animal will stand the coming cold much better than one that makes a moderately slow growth. It is quite true, that the fat of the body will be reduced extensively fast in the pinching cold, but when this fat is laid up in the animal body in warm weather, it will be able with this deposit ahead, to consume food enough to make a fair gain, even in a cold winter. The eastern feeder who has a warm stable, may feed to better purpose, in winter, by mixing his winter feeding with the main profit. In fact, the only safe rule to adopt is a constant growth from calf hood to marketable age. Stallstalls are expensive, and destroy all the profits.

SHALL THE HORSE BE SHOD? We find the following article in Canada Farmer of July 19 last:—An Englishman who has had great experience in Brazil with working unshod horses, writes to the London Times, proposing that the only important difficulty found with the asphalt pavement, viz., that on a wet day the horses cannot stand on them be solved by leaving them unshod. He says that he has worked unshod horses constantly over the hardest and roughest roads imaginable, and that the occurrence of anything the matter with their feet was almost unknown. He maintains that unshod horses could be used on London streets if they were used gently for a fortnight after the shoes were removed, and that in a couple of years after unshoeing all traces of corns, splints, and other nuisances would be gone. As to the objection that draught horses in starting a heavy load have to dig their toes into the ground, he says they do not have to do it when unshod, but start the heaviest load with ease from the flat of the feet. Probably very few horsemen will agree with these assertions in toto, but we have no doubt that there are many horses which might be left unshod to advantage. Especially do we think that there is an unnecessary amount of shoeing wasted on our farm-horses, and many good feet spoiled thereby.

The North British Agriculturist emphatically denies that there is any considerable number of horses in England that would be worked without shoes. Because horses abroad when unshod do a certain amount of work, mostly light, at a slow pace, and over a natural country with few made roads, it by no means follows that horses in England can do their work without shoes. The horses are different, and still more different is their work, and the roads over which they travel. Our horses are generally bigger and heavier than those of warm countries. Contrary to what Mr. Ransom and other authorities aver, their feet are more spreading and softer than those of horses reared in warmer climates. Shoes having been so long used in this country, the horn probably does not reach its maximum of toughness and strength. In Great Britain hundreds of yearlings and two-year-olds, running unworked at grass, are compelled to be shod to prevent undue wearing away of soft or brittle hoofs. Most of the Irish colts, and even the Welsh ponies, brought to English or Scotch fairs, are shod with tips to avoid breaking their feet during their few days' journey. Would the dealers undertake this trouble and expense if it were avoidable? Donkeys and ponies used to carry children, or employed for other light work, constantly get foot-sore and lame if travelling on the road.

But still more unpracticable would it be to obtain anything like full or regular work from unshod horses used for fast or heavy work on our macadamized roads or paved streets. Even the strongest, stoutest horses, would, in a few days, be battered and worn to the quick, and weeks would elapse before the slow-growing natural protecting horn could be reproduced. There can be no comparison in stoutness and wear between the toughest best hoof and the iron shoe which is generally used to protect it. Yet evidently the opponents of shoeing are unaware of the rapid wear of the best iron shoes on the feet of hard worked horses. Big cart horses in towns carry their shoes, which weigh about 5 lbs. each, five weeks in dry weather; but when the work is heavier, from the roads being wet, and the willing servant has to lay himself, as it were, down to his labor, and with forcible placed feet make good every yard of progress, the grinding away of the iron shoes is so great that in three week they are worn at the toes. More than an inch thick of iron, representing two or three pounds weight of metal, is thus ground off in three weeks! No horn, however tough and well prepared, can stand that sort of work.

FEEDING VALUE OF CORN AND OATS.—The results of experiments that have been made with some 10,000 horses of the cab company in Paris, and published by the president of the company, Mr. Bixio, add to the testimony of the omnibus company of that city last year, that the substitution of maize for oats affects a large economy while affecting no diminution in the working power of the animal. The 10,000 cab horses have been operated upon during a period of five years, their feeding being regulated according to the most scientific principles, and the no less important point attended to—book keeping. As compared with the year 1872 a saving of 19 centimes—nearly four cents per animal per day—was effected in 1877, representing a total economy for the year, of 1,058,610 francs.

LOSSES IN BREEDING.

A correspondent of the Cultivator and Country Gentleman (Albany N. Y.) writes on the "Losses in Breeding." It is the misfortune of all farmers to have occasionally some unprofitable stock. Sometimes it is a horse that has been reared at considerable cost, which in his yearling and two-year-old form was the pride of the farmer and his boys. At three years old, he was carefully broken. But now the colt of sound limbs and perfect health has changed into a horse of, perhaps, unsound limbs and constitution, or has developed vicious propensities that render the horse unsafe to keep and equally unsalable. The chances are very many in favor of a colt being injured in limbs, constitution or disposition before it becomes a well-trained and reliable horse. The greatest aggregate of losses results from animals bred for the dairy. The price of butter and cheese is low, and is apt to be low for years to come, and our scrub stock are inferior animals, and many are kept and bred from that ought not to be allowed to live. These would not be kept if the farmers kept an account of their cost and profit. Many of these animals do not pay the cost of wintering, to say nothing of breeding and raising.

There are, I presume, many good cows in common dairies, which paid their owners to raise, and if so, it will pay to raise their produce. I know at least a dozen good farmers, each one of whom thinks he owns a number of these good cows. To say nothing of a cow's milk-producing capacity, she must be docile, and a good feeder. A single breachy cow will ruin a whole herd.

It is true that ordinary cows can be purchased for less money than they can be bred, but really excellent stock, such only as it pays to keep for the dairy, can in no case be purchased for less money than the cost of breeding. Even where feed and grazing are cheap, calves are reared at a small expense, and the first season is necessarily an expensive one. I have a number of fine half-breed Jersey heifers, the result of using a Jersey bull on three-quarters bred Yorkshire cows. This spring I had four two-year olds, two of which came in and two did not. The two that came in were really excellent, although rather small. They were of good appearance and good milkers, giving rich milk, and each making over eight pounds of butter per week. They promise to be valuable dairy animals. These two animals are worth more than it cost to breed them. Now look at the other side of the question. Of these four heifers two have failed to come in at two years old. They cost just as much to keep for two years, as the heifers that give milk, and must be kept another year. At least such would be the usual course, but the heifers in question developed such a sterish appearance that I sold them for \$15 apiece. This allows me \$7.50 per year for keeping them until they are two years old. I submit that any farmer who has tried this is willing to admit that there is in this a very small margin for profit.

To illustrate what I lost by keeping these heifers two years, I will state that when I sold them I had a calf just four months old, for which I received \$10. It is not pleasant to know that I kept these heifers twenty months for five dollars each. The possibility of heifers not coming in at two years old, is less remote than many accidents that may happen to them and destroy their usefulness for the dairy. Calves are too often underfed and as frequently overfed. They are quite often stunted the first season, and some are lost by accidents. After they come in, there is danger from abortion, losing teats, or acquiring breachy habits, or of being injured by each other. In no department of farm labor, is judgement, prudence, and patience, so much required to insure success in breeding farm stock.

THE MOST SUCCESSFUL FARMER.

The most successful farmer is the one who knows how to save and wisely apply everything about his premises, in the shape of manure. After having exhausted every resource of his own, the farmer can look around for commercial fertilizers—if he should need them. In the first place, that everything possible is saved in the horse stable. I like to have this stable nice and clean. I have a tight floor of oak plank just a little sloping. I keep constantly on hand a good sawdust, and keep the floor littered with it. All liquids are absorbed by the sawdust, and being mixed with other ingredients, it becomes very valuable manure. It will heat quickly and become "fire fanged" if allowed to accumulate too long a time. My plan has been to

POULTRY IN SUMMER.

Extreme caution should be used during our hot season, to keep the fowls in good health and thrift. That trite old maxim, "an ounce of prevention is worth a pound of cure," is a very applicable one now. Guard carefully against disease in its first stages. That dread scourge of the poultry yard, the "cholera," can be avoided and prevented, but seldom cured. Be sure your roosting and laying houses are thoroughly cleaned, and kept well limed and free from vermin, that so often weaken the system of the fowls and make them an easy prey for diseases so common among fowls at this season. If disease has already got a foothold, better at once use the sulphur, and thoroughly, too; then cleanse, renovate thoroughly, and begin anew.

There are very many simple things that if remembered, will materially assist you in keeping your fowls in good health. Keeping a few old rusty nails in their water-dish is a good tonic. Be sure they are provided with a good dust bath; a soap box, or one larger sized, filled with the street dust is best; a part wood ashes are also beneficial, but clear ashes are too strong, and in wet weather the lye from them is injurious.

Another disease to guard against is the "scaly legs" in fowls. Various opinions are advanced as to their cause, but it is now generally conceded to be a small insect that adheres there and "builds his entrenchments" very much as the coral reefs in the far away coral islands. The best and simplest remedy is to use kerosene oil with a stiff brush. It being very penetrating will soon remove them; or kerosene mixed with lard and a little old-fashioned soft soap, as a mild form of using it. The prime cause of the disease is want of care and cleanliness; and in fact nine out of ten of all the diseases fowls are subject to, may be traced to that source.

A NEW PATENT APPARATUS FOR LIFTING HAY.—Quite lately there was exhibited in the West Main, Edinburg, a patent hay lifting, carrying, and elevating apparatus, the invention of Mr. J. B. Taylor, Seton West Main, Preston-pass. The apparatus is in two separate portions—one movable and the other stationary. The movable machine, known as the lifter and carrier, consists of a wagon with fixed front wheels. At the back are swivel wheels which can, by means of levers acting on both sides, be laid in a horizontal position. When so placed, the wagon forms a sloping platform, which is placed in front of a hayrick. Ropes are attached by means of hooks to the front of the wagon, passed round the hayrick, drawn forward over the wagon, and made fast to the horse's chains. On the horse moving forward the rick is drawn on to the wagon platform, which is restored to its normal position by means of the levers of the swivel wheels. The wagon so laden with the rick of hay is then drawn by the horse to the stackyard, where the stationary elevator is erected. It consists of a high sloping platform close to the lower end of which the hay wagon is drawn up. Ropes are once more passed round the rick to the end of the elevator, passed rick, taken through two pulleys, and then attached to a horse. The forward movement of the horse draws the rick off the wagon and up the sloping platform of the elevator, from which it may either be capped on to the haystack, or left on a level stacking at the end of the elevator, to be forked on to the stack. The chief novelty in the apparatus would seem to be the swivel wheels of the wagon.

A WEEKLY JOURNAL DEVOTED TO AGRICULTURE, LITERATURE, AND NEWS.

ANDREW LIPSETT, Publisher. "AGRICULTURE THE TRUE BASIS OF A NATION'S WEALTH." ANDREW ARCHER, Editor.

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