

AGRICULTURAL

Preserve Some Forest.

By R. W. PHIPPS.

There are opportunities enough, if we avail ourselves of them. All over the country, on many farms, there are still portions of the original forest. Great trees, under which Pontiac sat and warned his followers to check the advance of the white man as Hotspar might have checked that of his after tyrant—

When his blood was poor
Upon the naked beach at Ravenspug,

Patches of forest which were forest when King Charles hid in the oak top,

"While far beneath the Roundhead rode
Anp hummed a surly hymn."

That interminable expense of splendid woodland, that world sufficient storehouse of timber,—that ere while home of the springing deer, the greedy wolf, the stolid bear—is now no more. But here and there are the remains—one farmer has ten, another twenty—if he be rich he may sometimes have two hundred acres—of the ancient trees. Can we not preserve some of these portions? The axe is uncessingly wielded, and, if no check be given, in a few years settled Ontario will be destitute of forest. One farmer says, "I will cut down mine; I can buy fuel;" another says, "I also;" and yet, a little while and all will be gone.

A few words may be said, but this short article cannot, at length, lay before you the reasons why it would be so valuable to preserve, throughout Ontario, on every farm, ten or fifteen acres, at least, of sturdy hardwood and of towering pine. You say, "Grass is getting in, the trees seem dying—those oaks are dead at the top; look at that maple, you can feel under its rotten roots—even those young trees—something seems killing them. Let me cut the rubbish down, and make a good pasture—I can mow it now and then, and when the roots rot out I can plough it and get good wheat, and good grass afterwards."

Or you may say, "the trees are all blowing down, I cannot keep them; the patch may lie till I am ready; it will give firewood, but when I have some time I shall clean it up and make a field of it. I would have kept it—I would have liked a patch of wood left on the farm, but the plaguy thing would blow down."

But it need not have become the prey of the grasses—it need not have blown down. Throughout the land there are yet many remains of strong and vigorous forest. Surround them, I pray you—each of you what he can afford, ten or twenty acres, while yet the land is forest ground, moist, rich and fresh—with a sturdy fence. Keep cattle utterly thereout—it will not be a year till you shall see the result. All over the earth will rise the lusty sapling, all round the edges trees will grow, themselves immovable by the tempest, themselves also the strong shelter of the inner wood. The grass will be kept from covering the ground by the shade of the saplings, by the heavy annual coat of falling leaves, and by the forest shade above them all. The object of keeping grass away is this. Trees receive their nourishment by a number of little mouths projecting from their roots to near the surface of the ground. A thick grass coat prevents this action. Secondly, when grass is, tree seeds cannot take root; but if you fence the forest ground, it will not be long till beach and maple, oak and elm will rise high, young and vigorous among the older trees, ready to replace them when you need their timber or their room, your forest, instead of a place of desolation, half grasses wild and unnutritious, half dying wood, will be a mass of sturdy living healthy vegetation, beneficial to you yourself in many ways, to the country round about in many more.

Keep a portion of the forest bright and living on your farms. There at the heat of noon-day you can rest there, when for a few hours you can retire from the too absorbing pursuit of material advancement, you can repose without disturbance and contemplate without effort. Let the forest air breathe around you—it is not to be had in the house, it is not to be found in the field. There the great trees, stately of trunk and magnificent of branch, each humbly performing his purpose, sent hither by his creator to do his allotted share, passing in due time into invisible forms, not one atom of them being lost, but re-appearing in fulness of youth and of beauty in other ways, shall teach you that you also have a future change which is not now apparent, but which shall surely be. Let the little creature of the forest—the woodcock bright of plumage, the rabbit, timidly glancing from the covert—pass by you without fear, their lives are in your hand, spare them, your life is in the hand of Another. Spare some of the forest—protect it, it will not be ungrateful—that belongs to the reptile alone, the nobler natures, forest and field, tree and herbage—all dumb and all insensible though they appear to be—yet have their gratitude, and many a means of showing it to the protecting hand. Do you reduce your farm to a desert of clay—spare some forest land—let the great trunks stand by the pastures edge; let the vast branches chant their murmurs in the summer evening air; your wife shall sit in their shade—a beautiful picture, her dark eyes glowing beneath her clustering hair; your children, bright and rosy play around. As they grow up they shall say "Others destroyed utterly the forest and dried up the fertility of the land which God had given them, our father did not so, those nodding oaks, that changeful surface of summer tinted foliage preserve his memory."

ENSILAGE.

Report of Prof. Brown on the Conduct of Experimental Silos at the Agricultural College.

Prof. Brown's recent experiments, at the Ontario Experimental Farm, in preserving various green fodders by means of portable or permanent silos, are amongst the most interesting, valuable, and carefully-conducted that have come under our notice, and will be studied with interest by shippers and breeders of cattle. In portable silos three experiments were made with ordinary airtight barrels, two of which had square boxes fitted inside so as to secure more uniform packing than is possible in a simple barrel. These barrels were packed with green, succulent pasture fodder. A large tun was used for the fourth experiment, and

filled with the green grasses and with green oat fodder. After eighty-six days' enclosure the tun was opened and the grass fodder found to be juicy and sound in fibre, though it had a strong, sour taste and smell. The grass in the small barrels was found to be similar. The green oat fodder preserved in the tun was, however, "sound, sweet, and as palatable as that from the permanent silo." The permanent silo, the walls of which had been made smooth, was filled with 28 tons of green oat fodder, packed and covered with boards and earth. After 89 days, or on Dec. 31st, it was opened, and the ensilage was found to be, to quote Prof. Brown, "one body of sweet, well-colored oat-stalks, leaves, and heads." Generally the material "has a brown but not dark tinge, very slightly spoiled by fermentation or other form of decay, and when taken out actually smells sweet and tastes slightly salty," but acquires a smell and taste on exposure. In addition to the successful issue of these experiments with the silo, Mr. Brown secured by carefully conducted thermometer tests the daily variations and degrees of heat prevailing in various parts of the silo during the fermentation in progress. The average of the whole mass after the first week was 68°, and of the central parts 87°. That this heat continued for three months did not destroy the fodder will no doubt be interesting to those who know how heat and moisture combined very quickly ruin grasses and grains on the open field.

Composition of Manure.

The value of manure depends not only upon the character of the feed allowed, but also upon the condition of the animal, the breed and the age. The principal substances of value in manure are nitrogen, phosphoric acid and potash, the former substance being the most costly. In the artificial fertilizers, nitrogen exists in the shape of sulphate of ammonia, nitrate of soda, or as Peruvian guano, while ground dried blood, leather and other substances containing it are sometimes used. Potash is usually supplied in the form of the sulphate (kainit) or muriate, its quality depending upon the grade of the salt used for the purpose, while the phosphoric acid (usually combined with lime) is derived from bones and sometimes from guano deposits and marine formations. The Carolina phosphate beds have been largely instrumental in cheapening this article, while that from bones is usually associated with proportions of nitrogen.

Barnyard manure and artificial fertilizers differ only in form. The active ingredients of barnyard manure are the same as those in fertilizers, excepting that the manure contains small proportions of magnesia, soda, and a few other substances not always present in fertilizers, though easily added to them if necessary. Manure contains, however, a large quantity of carbon, which is considered by some a valuable fertilizer, but others contend that as plants appropriate carbon from the atmosphere through the agency of the leaves, such matter only adds to the bulk of the manure without improving the quality. When food is fed to animals it undergoes a chemical process in the body, which extracts the nutritive portions for sustenance, according to the digestive capacity of the animal, the residuum being voided as being no longer useful in that respect.

The amount of available fertilizing material in the manure thus voided, depends upon the character of the food, and its relative proportions of nitrogen, which is always costly. As growing animals require not only food for warmth, but for growth also, the manure from such is less in value than from animals that are matured. And as more food is required to assist the body against cold winter than for any other purpose, the warmth of the quarters is a factor in the matter also, especially if it be correct that carbon is beneficial as a manure to the roots of plants.

Assuming that animals are well fed an average quality of food, then, for every 1,000 lbs. of manure from horses more than 700 pounds consists of water, while the remainder is estimated at about twelve pounds of phosphoric acid, twenty-eight pounds of potash and five pounds of ammonia. The manure from the cow contains nearly 860 pounds of water in every 1,000, the amount of phosphoric acid in the remainder being about five pounds, potash ten pounds and nitrogen three pounds, the manure from the horse being double the value of that from the cow in all the substances except nitrogen, and even in nitrogen the horse manure is nearly twice as rich. Of the different kinds of manure, that from fowls and the human species is the richest in nitrogen, but this includes the urine, the solid portions being very deficient in that respect. Manure from the sheep is the richest in phosphoric acid. Urine is always rich in ammonia, (nitrogen,) with proportions of potash and small quantities of phosphoric acid. Considering this fact, too much importance cannot be given the saving of liquids, that from the human species being valued at half a cent per pound. The value of the solid portions of manure from a horse for one year is said to be about \$10, while the value of the liquids from the same source for the same period is nearly the same.

Considering the high value of the liquids, which are always immediately available a plant food when applied to the soil, the manure must be protected from drenching rains and melting snows, for as part of the inert matter of the manure is changed by chemical action in the heap during the process of decomposition into soluble matter, it is always lost unless protected.—*Philadelphia Record.*

The Naval Forces.

The total force in the naval service afloat in the year 1822 was 43,475 officers and men, of whom 23,220, or 53.4 per cent, were between the ages of 25 and 35; 4,675, or 10.75 per cent., were between the ages of 35 and 45; and 840, or 1.93 per cent., were above 45 years of age. The total number of cases of disease and injury entered on the sick list was 49,929. The total number of deaths was 413, of which number 290 were due to disease, and 144 to injury.

London *Truth* gives currency to the rumor that Lord Lorne will be called up to the House of Lords by one of his father's minor titles shortly after the meeting of Parliament. The object of the Court politics appears to be his early appointment either as Viceroy of India or as Lord-Lieutenant of Ireland.

FORTY YEARS AGO.

The Story of the Doctor of National Repute who turned out to be a Mail-Robber.

The Nutt murder trial recalls to mind the one other sensational case sent down from Fayette county for trial here—the peculiar and remarkable history and trial of Dr. John F. Bradee. The case was peculiar on account of the standing and reputation of the prisoner, and, like this one, remarkable by reason of the brilliant galaxy of legal talent engaged in the trial of the case. The death of Judge Wilson McCandless, June 30, 1882, removed the last one of those who took part in a case which attracted the attention of the whole country forty years ago, and has no parallel in the criminal jurisprudence of the state.

During the summer of 1840 the attention of the whole country, even in the midst of the exciting Harrison campaign, was drawn to a series of mail robberies committed on the thorough route between St. Louis and New York. So cunningly were they perpetrated that the best detective force the government could bring to its aid were for months unable to fix even the state in which it occurred. The first clew gained was the failure to arrive at their destination of three pouches forwarded from Wheeling on Dec. 13, 1840, and due in New York on the 16th. Following the line eastward the officers directed by subsequent events fixed the point of the robberies at or near Uniontown. They next selected William Corman, a driver from Washington to Uniontown, as one of the robbers. By skilful manipulation he was induced to make a clean breast of the affair, and implicated as his confederate and principal in the crime Dr. John F. Bradee, a physician of acknowledged skill, whose practice was immense. Dr. Bradee was arrested on a cold night in January, 1840, by the sheriff of Fayette county, and taken to the commissioner's office. While there he asked who had informed upon him; receiving no reply, he muttered something about "Cor—Corwin—Corman," and added, "he is a d—d ordinary stage driver, anyhow." These few words wrought his conviction. All the efforts of counsel, all the explanatory evidence, all the jail interviews were powerless alongside of the admission of the doctor that the stage-driver, Corman, was his accuser. It was proven that Corman was unworthy of belief. Witnesses were produced who had heard Corman say he would penitentiary Bradee. Others who had seen Corman with large sums of money, and even one who had been offered a princely sum to aid in a conspiracy against the young Frenchman, but it was of no avail. The few words he had spoken in the court house of Fayette county stamped him as the confederate, if not the employe, of the "d—d ordinary stage-driver." His bail was fixed at the enormous sum of \$120,000, and his friends, not yet recovered from the panic of 1837, were not able to command his release. Immediately following his arrest the people of his county divided in almost equal portions in favor of his guilt and innocence, and these relations they bore until their generation had passed away.

Dr. Bradee came to Uniontown when scarcely out of his teens; yet he proclaimed himself a physician with a Paris education, and his conduct and language bore out his statement. He was but very shortly established until his skill was acknowledged; and although he had not reached his 25th year, he soon became famous in all the regions where popular intelligence then travelled. His home was besieged by day and by night by the sick and afflicted, who came to him in all the regions lying between Portland, Me., and New Orleans. A larger portion of the stage passengers arriving at Uniontown then were invalids seeking the aid of this healer. He is best described in the speech of Judge McCandless, upon his behalf, when he said his house was the *lazarett* of the country. The sick and afflicted from the remote corners of the union were there at the pool of Bethesda, waiting for the moving of the waters. For years after his death it was recalled how out of the multitude of applying patients he singled those most needing his aid, and when no choice could be made he selected that one who had travelled farthest to seek his aid. It was developed at the trial—to show that he was not in such need of money as would lead to the crime charged against him—that he averaged from 100 to 200 patients per day, and that his income could not have been less than \$250 per day if he saw fit to collect it.

The trial came on before Judge Baldwin and Judge Irwin, of the United States courts, at the May term of 1841. In attendance were partisans of both sides. The good women sent down their husbands to testify upon his behalf, and every physician of the county was on hand to press his conviction. The counsel were such as have not since nor before been employed in any cause in western Pennsylvania. Each one of them was a man whose forensic powers and legal acumen are traditions to the present day. For the government appeared Cornelius Garragh, the then United States district attorney, A. W. Loomis, Samuel W. Back, J. W. Howell, and Moses Hampton. For his defense were John M. Austin, Richard Biddle, Walter Forward, Wilson McCandless, Samuel Austin, and W. P. Wells. It is pertinent here to state that at many rustic firesides has been told the story that the late Judge Hampton took a retainer upon both sides of the case. Such is not the case. Judge Hampton was the counsel for a man named Strayer, and the conviction of Bradee was the acquittal of Strayer, but the rustics of those days did not understand his relations to the case, and their descendants have perpetuated in a small measure their ignorance. Immediately after the arrest a search was made of Bradee's premises, and in his haymow was found a package of \$10,000 in the scrip and wildcat money of that day. In his house were a great many newspapers, among them *The Masonic Register*, and in his water closet the remains of the mail bags were disclosed. Upon the trial these things were all accounted for in some way, and it was even developed upon the testimony of Gen. Gideon John, an ex-sheriff of Fayette county, and Hon. John A. Sangister, who had been a state senator, that Bradee could neither read nor write. It was essential to prove this, because of the papers found upon his premises. But both witnesses lost caste in the community for giving such testimony. It did not seem possible that the physician who possessed such skill in the art curative should be wanting in the rudiments of learning. The doc-

tor produced witnesses from West Virginia, or the old state of Virginia, as it was then, and Ohio, who accounted for his monetary transactions. These could not overthrow the evidence of a St. Louis book-keeper who identified money found in his possession as bills he had forwarded by the mail which had left Wheeling Dec. 13, 1840. In the records of the trial figures one John Caspon, who was best known as the Yankee clock peddler. There was nothing favorable to the defense which he did not know, and, however unlikely his stories were, no deftly put queries of keen attorneys could entrap him. It mattered not what testimony could be adduced in his favor, there stood the testimony of William Corman that he had handed him mails from the foot of the stage, and had thrown them to the roadside at points agreed upon, and the stammering mention of Corman's name in the dingy office at Uniontown was a case which neither rhetoric nor suborned witnesses could overthrow. Nearly every lawyer on both sides addressed the jury, and Justice Baldwin charged them. Of the speeches the most part have been preserved, and they would put to shame much of the talk to juries in these days.

The jury in the case only deliberated two hours, when they returned a verdict of guilty upon three counts of the indictment. Dr. Bradee was sentenced to ten years' solitary confinement in the Western penitentiary. There are many people to this day who believe that he went west and became prosperous and wealthy, but the records of the institution to which he was consigned show that he died there at the age of 35, in 1846. When he reached the penitentiary it was found that he was wholly illiterate, as is shown in the following narrative. The spelling of the name changed between Uniontown and the penitentiary from Bradee to Braddee.

Officer Caskey, of the Western penitentiary, who has been for over fifty years in the institution, and who had special charge of Braddee, has distinct remembrance of him. "He was brought to the penitentiary," said he, "in June of 1841, and died nearly five years later. His term was only ten years. The doctor was a young man, only 29 years of age, six feet one inch tall, and very fine looking. He was a Frenchman and had a very fine appearance. I had him under my care, and he and I together planted those large Lombardy trees in front of the penitentiary. In the description given of him on the books of the office he is marked educated, but I found from my intercourse with him that he was very illiterate. He learned his letters with me, and before he died was able to spell nicely in letters of three syllables. He was a famous practitioner, however, and stories of his wonderful cures spread after his conviction and sentence. He told me that the way he worked it was to hire a smart clerk in his drug store to do the writings and keep the books. He may have been learned in French. He was a married man and had six children. His health was good during his confinement until his wife married his former clerk; that sickened him and he died in six months. There was a party going on in the reception-room at the time of his death. Before his death he made a confession, implicating several prominent people of Uniontown in his guilt, but no attention was paid to it.

"I buried him just outside of the walk—now inside—and so marked the grave that I could tell if his body had been stolen. It was never disturbed. We never compelled him to work, but he did some little at making boys' shoes. He was skilful in medicine though, and was much trusted where he lived. One prisoner sent in from Uniontown became sick, and the disease refused to yield to the prison doctor's treatment. He begged to have Dr. Braddee prescribe for him, and we allowed it. He was well in one month. There are stories of his escape from the institution, but I saw him die and I buried him."—*Pittsburgh Leader.*

How Astor Became Rich.

A late writer, speaking of the late John Jacob Astor, thus speaks of the mode by which he acquired his great wealth: "It was neither furs nor teas that gave him his \$20,000,000. When he arrived in New York it contained only 25,000 inhabitants. In 1809, when he began to have money to invest, the city had begun to double in population, and had advanced nearly a mile up the island. Astor foresaw the future growth, and bought all the land, and lots just beyond, on the verge of the city, that he could get. One little anecdote will show the wisdom of this proceeding. He sold a lot in the vicinity of Wall street, in 1810, for \$8,000, which was supposed to be somewhat under its value. The purchaser, after the papers were signed, seemed to chuckle over his bargain. 'Why, Mr. Astor, said he, 'this lot will be worth \$12,000.' 'Very true,' said Mr. Astor, 'but now you shall see what I will do with this money. With eight thousand dollars I will buy eighty lots above Canal street. By the time your lot is worth \$12,000 my eighty lots will be worth \$80,000—which proved to be the fact. In the course of time the island was dotted all over with Astor lands, to such an extent that the whole income from his estate for fifty years could be invested in new houses, without buying any more land."

The Editor's Trousers.

An editor in Chicago recently ordered a pair of trousers from the tailor. On trying them on they proved to be several inches too long. It being late on Saturday night, the tailor's shop was closed, and the editor took the trousers to his wife and asked her to cut them off and hem them over. The good lady, whose dinner had, perhaps, disagreed with her, brusquely refused. The same result followed an application to the wife's sister and the eldest daughter. But before bedtime the wife, relenting, took the pants and, cutting off six inches from the legs, hemmed them up nicely and restored them to the closet. Half an hour later her daughter, taken with compunction for the unfilial conduct, took the trousers and, cutting off six inches, hemmed and replaced them. Finally, the sister-in-law felt the pangs of conscience, and she too performed an additional surgical operation on the garment. When the editor appeared at breakfast on Sunday the family thought a Highland chieftan had arrived.—*The Century.*

FUNNYGRAMS.

A London tourist met a young woman going to the kirk, and, as was not unusual, she was carrying her boots in her hand and trudging along barefoot. "My girl," said he, "is it customary for all the people in these parts to go barefoot?" "Partly they do," said the girl, "and partly they mind their own business."

During a disturbance in the gallery of a theatre the excited crowd were on the point of "throwing over" one of the principal offenders in the parquet beneath, regardless of consequences. Observing the extravagant tendency, an Irishman of utilitarian views arose in his seat and roared out: "Sh! Don't washte him! Kill a fiddler wid him."

A gentleman who observed Johnnie carefully taking the census of a company assembled in the parlor awaiting a call to supper inquired: "What is the matter Johnnie?" "Why," returned the urchin, with a troubled air, "here's nine of us, counting me, and mamma has gone and cut the two pies into quarters, and that only makes eight pieces."

A friend of mine, who dabbles considerably in stocks, walked into a well-known banking-house the other day and created considerable excitement by remarking: "I got a pretty good thing when I bought that last Winter. It was 34 then, and to-day it stands at 95." "Well, I should say so," exclaimed the senior partner. "But what stock was it?" "It was a thermometer," coolly replied my friend.

Machine Guns in War.

The announcement that an American officer has received permission to inspect the British machine guns at Woolwich has called attention to their advantages and disadvantages in war. A writer in the *Pall Mall Gazette* thus criticises the employment of machine guns on the field of battle: "If the range is correct and the mark remains steady great execution will be done, but the slightest error will throw every bullet out, except at short range. Thus the French found that their attempts with the mitrailleuse, even at such short distance as 1,200 yards, were perfectly futile, and that their new weapon had not the slightest chance against the field artillery of that time. Since then the German field artillery has more than doubled its efficiency. Against their sharpnel, thrown with the present velocities, the mitrailleuse would have less chance than ever. The reply of the German army to the question, 'What is the place of the machine gun in the field of battle?' has been, 'It has no place, and whatever additional men and horses can be given should be devoted to increasing the field artillery.' Accordingly, machine guns have not been largely increased in proportion to the other arms. Exactly the same course has been pursued by the French and by every other great continental power. None have adopted machine guns for the field; all have increased and developed their field artillery. When we remember that France, Germany, Austria, Turkey, Russia, have all lately passed through the furnace of war, and had most of their crochety dross burned out of them, their unanimous opinion ought surely to outweigh the theoretical ideas of a few partisans who still cling to the notion of finding the machine gun a weapon worthy the cost of the men and horses required for its use. They admit that it cannot face field artillery at artillery ranges, that its projectiles have no power whatever against walls, or buildings, or earthworks, but they believe that, when two hostile bodies of infantry are closing the machine guns can be brought from cover, where they have remained until then, and will exercise a great influence over the result of the combat. No doubt they would in such a case, provided the infantry fight happened to be where they could go.

Earthquake Phenomena.

The causes of earthquakes have long been the subject of many conjectures. The numerous investigations of later years have contributed much to define their characters; and several data recently acquired tend further to make their mechanism clear. It is known that the shocks are by no means distributed at hap-hazard over the surface of the globe. The countries where the strata have preserved their original horizontal position, like the north of France, a part of Belgium, and the most of Russia, are privileged with tranquility. Violent commotions are manifested, particularly in regions that have suffered considerable mechanical accidents, and have acquired their last relief at a recent epoch, like the region of the Alps, Italy, and Sicily.

The tracts that are simultaneously disturbed by the same shock most frequently comprise acres of from 5 to 15 degrees, or from 300 to 1,500 kilometers. They rarely include a much more considerable fraction of the globe; although the celebrated catastrophe at Lisbon on the 1st of November, 1755, extended over some 17 or 18 degrees into Africa and the two Americas, or over a surface equal to about four times that of Europe.

The detailed examination of many earthquakes has enabled us to determine the centre of the shocks as well as the contours of the disturbed areas. From the manner in which the latter surfaces agree with the lines of pre-existing dislocations, several of the most distinguished geologists, including Mr. Dana, M. Saess, and Albert Heim, have considered the shocks in question as connected with the formation of chains of mountains, of which they may be a kind of continuation.

In fact the crust of the earth everywhere shows the enormous effects exercised by the lateral pressures that have been in operation at all epochs. The strata, bent over and over again many times through thousands of metres of thickness, as well as the great fractures that traverse them, are the eloquent witnesses of these mechanical actions. Notwithstanding the apparent tranquility now reigning on the surface of the globe, equilibrium does not exist in the earth, and commotions have not been arrested in its depths. The proof of this is found, not only in earthquakes, but also in the slow movements of the soil, of elevation and depression—a kind of warping, which has continued to manifest itself within historical times in all parts of the globe.—*Popular Science Monthly for February.*

There is no truth at all in the report that the prince of Wales has recently purchased a large tract of land near Kansas City.