THE

GENESEE FARMER,

A MONTHLY JOURNAL DEVOTED TO

AGRICULTURE & HORTICULTURE,

DOMESTIC AND RURAL ECONOMY.

ILLUSTRATED WITH ENGRAVINGS OF

FARM BUILDINGS, IMPLEMENTS, DOMESTIC ANIMALS,

FRUITS, FLOWERS, SHRUBS, &c.

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THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

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OUR CAUSE AND OURSELVES.

Every one must have observed the progress of Agricultural Improvement during the last TWENTY YEARS. The history of no century since man left that best of farms, in which "grew every tree that was pleasant to the sight and good for food," exhibits such a rational and rapid progress in the art that feeds the world. Farmers are fast becoming reading and thinking men — they are fast laying aside old prejudices and notions and signs, and are beginning to realize that common sense and intelligence can be as profitably and as honorably employed in cultivating a farm — an orchard — a garden — or in caring for the creatures over which God has given man dominion — as in any other pursuit of life. The appearance of farms and houses, barns and stables, gardens and orchards, in almost every neighborhood, proclaim this improvement, in language not to be misunderstood by the most careless observer. The slovenly, ill-managed, unproductive farm of other years, has been succeeded by one that is both a source of pride and profit to its possessor. The barns and dwellings whose loose boards were shaken like reeds by the wind, have given place to others that afford safety to the crops and comfort to the inmates. The "yard," so unsightly to behold, — the receptacle of refuse and rubbish, has in many cases been transformed into the flower-garden, or lawn, delighting the beholder with beauty and fragrance, and denoting the improved taste and increased happiness of the owners.

This progress in agriculture is doing much to improve the unstable and roving disposition of our people. A well kept garden and orchard, next to wife and children, gives home its charm. To him who loves his garden, or orchard, or farm, every plant — every tree, — is a friend with whom he communes. He has watched over its infancy — supported it in its weakness — given food in the time of need, and water when it was parched with thirst. He has curbed its disposition to ramble, and under his guidance it has grown up with a fine form and good habits. In return, it has poured into his lap its offering of gratitude. It has delighted him with its beauty and fragrance; and, as if this was not enough, it is daily inviting him to partake of its fruits. A man who thus erects Nature's temple around his home, and worships ner there, will not be apt to relinquish those pleasures for a "*new home*" in a strange land, or the *gold of California*; and should stern duty ever compell him to desert the much loved spot, it will be dear to his memory. He will often say in spirit —

> "An exile from home, splendor dazzles in vain.
> And I sigh for my lonely thatched cottage again."

This gratifying improvement has been effected in a great degree by the Agricultural and Horticultural periodicals. And we think we can with propriety say that the GENESEE FARMER has done its share of the work. Its low price has given it an unprecedented circulation, and thrown it into thousands of families where light was needed. The ability of its writers and correspondents, who are practical men, have given it a reputation as a reliable Farmer's Journal. This, together with its convenient form for binding, has secured it a place in almost every Farmer's Library.

Our present volume we intend to make more attractive and more valuable. We shall endeavor particularly to improve our YOUTH'S DEPARTMENT. We shall endeavor to interest, and while interesting, instruct the YOUTH.

Parents should teach their *children* to love and practice gardening. It will learn them system and order, patience and hope; it will give strength to the body and the mind; it will improve the head and the heart. It will teach them self-reliance — that success is the reward of industry and perseverance, while failure is the result of negligence. It will teach them to

> "Look from Nature up to Nature's God."

What affords pleasure like visiting the scene of our childhood, and there beholding, growing in majesty and pride, the trees we planted in our childish glee. What music so sweet as the shouting of the tempest in their lofty tops.

We shall endeavor to enforce this duty in our LADIES' DEPARTMENT, as also to urge upon our fair readers the necessity of devoting a portion of their own time to gardening. It will not only afford pleasure, but health. It will furnish the luxuries — the poetry of life, and the health essential to their enjoyment. Work among your flowers and plants every day during the season; it is the best cosmetic in the world — it will drive away that sallow, billious look. It will give you a color more beautiful, more lasting than rose or carmine. It will send the glow of health to the cheek, and joy to the heart.

With these few remarks on the progress of the CAUSE in which we are engaged, and OURSELVES in particular, we wish our friends a HAPPY NEW YEAR.

THE STUDY OF AGRICULTURE.

THE commencement of a new year is a capital time for every young farmer to begin the systematic study of his profession. No matter how thoroughly he fancies that he has already investigated all the phenomena of tillage, the growth of crops, and the feeding and improvement of domestic animals; in each of these departments there are many important truths which he and all others have yet to learn. No person of common understanding ever sought earnestly after useful knowledge, who did not gain something truly valuable for his labor. The rewards of study, when directed to noble objects, and good purposes, are certain. Successful agriculture, by which mankind are both fed and clothed, and the land made better, from year to year, is the basis of all social, all moral, and all intellectual improvement. Pursue the opposite course, deteriorate the soil, and you inevitably compel the whole community to give more and more labor for their daily food and necessary clothing.—You force them to separate farther and farther from each other's habitation, and ultimately to devote the time of all to the one pursuit of supplying the first wants of their common nature. The cultivation of a badly exhausted soil exclusively, from which much is needed by society, and little obtained, must check all progress in learning, science and the arts, by compelling every human being to give a great deal of the "sweat of his face," for a mere subsistance. We repeat the idea, that an *improving system* of tillage and farm economy, is the only true basis of all human elevation. The soundness of this position being conceded, it follows as a legitimate corollary, that agriculture conducted in obedience to the laws of nature, is the great hope of the world—the paramount interest of all of woman born.

It is not, then, to remove the tedium of an idle hour that one should study the natural laws which govern the results of rural industry. There is a higher purpose to be attained, a far nobler object near at hand, and within the reach of every studious mind.

The laws which God has appointed to regulate the growth of plants and animals on the surface of the globe, can only be wisely interpreted, by the careful analysis of all known facts which relate to the organization and disorganization of these living beings.

These *facts* and the *things* to which they belong, must be critically examined separately, and in all their natural relations one to another. It is an intimate knowledge of all the known things and known facts that pertain to agriculture, which makes one a scientific farmer. This knowledge comes not by intuition. It is the rich recompense of experience guided by sound reason and mental labor. Not only the muscles, but the mind of man must make an effort before it is possible to develop the natural powers with which its Creator has endowed it. The awaking of sleeping thought, the encouragement of young reason to exert its faculties and apply them to the patient investigation of natural phenomena, as they really present themselves in all farming operations, are the ends aimed at by much of what we write for the agricultural press. If we could by any means persuade every reader of the Farmer to study the slight difference which often exists between a good soil and a poor one, or a productive and an unproductive one, we should probably be the happiest man in America.

No fact is better established by human testimony, than that 100 pounds of common plaster of Paris (sulphate of lime) has added 2000 pounds to a crop of clover, grown on an acre of land. On this acre there are 43,560 square feet; and to descend no more than 12 inches into the subsoil, in estimating the whole weight of the earth concerned in making the crop, there are at least 4,356,000 pounds of solid matter, besides the 100 pounds of gypsum on the acre. Clearly the whole difference in a soil which produces 1000 lbs. of clover hay to the acre, and one that yields 3000 lbs. is, that the latter contains *one part in forty-three thousand five hundred and sixty of a particular salt*, more than the former. This salt contains less than 22 lbs. of sulphur: and less than 50 lbs. of lime in 100, the balance being water of crystalization, and oxygen combined with sulphur to form sulphuric acid, or oil of vitriol. On soils that contain more than a pound and a half of lime to the cubic foot, or some ten thousand grains, the addition of fifteen grains of plaster to the square foot, or 100 pounds of soil, produces a decided effect on its fertility. Now, it is by no means necessary to determine in what way this fertilizer operates to augment the crop, to render the demonstration complete that an extremely slight change in the condition of a soil is adequate to produce a remarkably large difference in its productiveness.

One hundred pounds of guano have given an increase of 40 bushels of corn in one field; and a gain of 100 of potatoes in another. That the atoms in this powerful fertilizer create any new ones in the soil or in the atmosphere above it, or that they furnish all the atoms in the crop of corn or potatoes, is not to be supposed.

The most obscure point in these interesting phenomena is, how 20 lbs. of available sulphur and a like weight of available phosphorus should give an addition of 40 lbs. of each of these elements of bread and meat, to a single crop, after their application in gypsum and ground bones.

We find on a critical analysis of clover, that the 2000 lbs. grown by 100 of plaster, contain twice as much sulphur as the plaster when applied to the land. We can only account for this fact by saying that available sulphur being in the soil but in a deficient quantity, the supply of a little more to the growing plants enables them to extend their roots deeper and wider into the earth, and thus imbibe sulphur-salts as well as other aliment, from a great distance. In other words, as the land gives a small crop of clover or grain without plaster, it must contain a little of all the things demanded by nature to organize said crop. Being, however, diluted and widely diffused in the mass of sand, clay and iron, the roots of small, feeble plants can imbibe but few of the fertilizing atoms which really exist in the surface and subsoil, from inability to reach them, without the aid of additional food to develope and extend the roots of those dwarfed beings. It is our opinion that starved plants uniformly fail to consume more than a fourth of the elements of bread and meat present in the soil, and that many of these dissolved atoms are needlessly lost to the husbandman, from the lack of a little timely nourishing of the crop, when plants are from four to ten weeks of age, and forming their tissues.

In agriculture, much depends on times and seasons, as well as on tillage and seed. A rain in summer, is called a "season" at the South; as without *timely* rain, the hope of the corn-grower is blasted.

A slight affair often changes the hygrometic power of soils. The increased condensation of dews and of gases, and the greater facility for the descent of water into the presence of the various soluble and fertilizing salts in the subsoil, and for the free ascent of water thus charged with the food of crops, upward and around the roots of needy plants, are all matters worthy of profound study. Draining and irrigation in all their bearings on rural economy, are far from being either well, or generally understood. We find that a gallon of the limpid water in the dry season of summer taken from the Genesee river, contains as much of the elements of wheat as twelve gallons of the water taken from the Savannah where it falls over the granite rock a few miles above Augusta.

What rain and snow water extract from soils and earths, and what this liquid takes with it into the circulation of growing plants, are points to which the writer has devoted considerable attention. Nothing more forcibly indicates both the wisdom and goodness of Providence than the fixed solubility of all the atoms appointed to build up the bodies of all vegetables and animals.

Change in a slight degree the *insolubility* of the shell of an oyster in the water of the sea, while the animal lives, and the speedy extinction of the race would soon follow. Render the elements of this shell equally insoluble in sea-water before the oyster imbibes the dissolved atoms, to form its stony covering, and no such protection could be had. If the earthy elements in the bones of a child, which are dissolved in the milk of its mother, remained equally soluble in the skeleton of her offspring, it could never stand nor sit up a moment in its life; nor could it long survive the absence of all bones, whether to protect its brain and heart, or for use in locomotion.

If for no other purpose, the science of agriculture should be studied for its humanizing, its moral influence on all rational beings as individuals, and on whole communities, states and nations. Let all good citizens unite with us in fostering the professional education of young men who are to follow the plow, and the general diffusion of useful knowledge that must certainly result from this course, will be invaluable to the country.

This effort to scatter scientific information broadcast over the whole Union, is free from the taint of any political, any sectional, or private objects. Every where one sees in his travels, valuable fertilizers wasted; wet fields that require draining: old fences that need repairing; briars and bushes which ought to be eradicated; and impoverished soils which may be economically renovated. But the great work of improvement is fairly under way. Scores of agricultural journals, and thousands of good men and true are devoted to the task of changing for the better the whole scope of American husbandry.

Agriculture.—It is an innocent pursuit that can do injury to no one. It invades no man's just rights, and predjudices no man's safety, health, peace, or reasonable enjoyment. It is a beneficial employment, for whoever cultivates the earth, and covers it with rich and golden crops, renders it more beautiful; and whoever causes the earth to yield its fruits, increases the means of human comfort and subsistence.

The only way to be permanently safe is to be habitually honest.

COMPOSITION OF BONES AND GUANO.

Bones differ slightly in composition in different animals. The bones of the same animal vary in their relative proportions of earthy elements at different ages. Young animals have more gelatine and less phosphate of lime in their bones than old ones. The following composition of the bones of a cow, will give the farmer a fair idea of the constituents of this substance as they commonly exist when applied to crops as a fertilizer:

Organised combustible matter [gelatine]	33¼
Phosphate of lime	55¼
Phosphate of magnesia	3
Carbon of lime	3¾
Soda and common salt	3
Chloride of Calcium	1
	100,0

One hundred pounds of Gelatine consists of.

Carbon	50,37
Hydrogen	6,33
Nitrogen	17,92
Oxygen	25,35
	100

As one-third of the weight of bones is gelatine, and 100 parts of gelatine contains 18 of nitrogen (less a small fraction,) it will be seen that 6 per cent of dry bones consists of organized nitrogen, an important ingredient in wheat, and the seeds of other plants.

As applied to land, bones contain about 18 per cent of water; Ichaboe guano from 20 to 25 per cent.—It is an important fact, that bones contain more than twice as much *phosphate* as guano. The composition of Ichaboe guano is thus stated by Prof. Johnston in a late Journal of the Highland Agricultural Society, as the average of several hundred analyses:

Organic animal matter	56
Phosphate of lime and magnesia	26
Salts of soda	6
Salts of potash	tracc.
Silicious matter	2
	100

By referring to the analysis of bone it will be seen that there are 55½ lbs. phosphate of lime and magnesia in 100 of bone.

Many interesting experiments have lately been tried in Scotland with bone dissolved in sulphuric acid, (oil of vitriol.)

It has been found that four, and in some cases two bushels, dissolved in acid, produced as good crops of turneps as sixteen or twenty bushels applied in the old way of grinding and using the dust.

Sulphuric acid is itself a valuable fertilizer alone; while it renders both the *gelatine* and *phosphates* in bones available *at once* to all plants, when placed near their roots. Prof. Johnston recommends the use of half as many pounds of acid undiluted as there are of bones, in which the latter are to be digested. The process in few words may be described as follows:

Break the bones into small fragments with an axe or hammer and throw 60 or 100 lbs. into a watertight barrel set partly into the ground in a back yard or garden. Add half as many lbs. of boiling water as bones, and a like quantity of strong sulphuric acid. Stir constantly the mass with a stick. A violent effervescence will take place by the escape of carbonic acid.

ORGANIC ACIDS—PARASITE PLANTS—MINERALS, &c.

BOUSSINGAULT found that young plants of trefoil watered with solutions of *oxalate* of ammonia diluted to 600 times its weight, died in the course of eight or ten days: although other plants similarly situated watered with distilled water did well, and blossomed. As ammonia is known to be highly useful when pure, or in a carbonate, if properly diluted, the bad effect of the oxalate was attributed to the oxalic, or *organic* acid.

Question. Do not parasite plants that grow on the trunks of trees draw their nourishment from juices or sap which was partly elaborated in the organs of the parent, or suffering plant?

Answer. This is a disputed point. Cryptogamous plants grow on old rails, the roofs of houses, and granite boulders as well as on living trees. Any *nidus*, or root-hold that will yield the little mineral salts which the plants require, whether extracted from stone or wood, seem to answer for those that need little beside air and water for their full developement.

Q. Why do you call air and water *minerals*, or mineral elements?

A. Because water and gases or air, form a large portion of the mineral or earthy crust of the globe. *Oxygen gas*, which forms 8 parts in 9 of pure water, weighs more in granite rock, and in both clayey and sandy soils, than any other simple element or mineral. Water also exists as one of the constant elements of the hardest and most durable crystals.

Q. I had thought that oxygen or vital air in the atmosphere, was as different from stone, or granite rocks as one thing can be unlike another. Explain how it happens that the air we breath and granite are to a large extent composed of the same simple element?

A. In 100 lbs. of the atmosphere there are 21 lbs. of oxygen. If 48 grains of a metalic base called *silicon* be burnt in 52 grains of this gas (oxygen) there will be formed 100 grains of a mineral called *silica* which is pure flint sand, such as is used for making glass. More than half the weight of granite is silica which has *acid* properties and is called by chemists "silicic acid." When crystallised, the mineral is usually called *quartz*. This silicic acid combines chemically with *alumina*—the basis of clay—and with magnesia, potash, soda, and lime, to form *felspar* and *mica*, the other minerals in granite, beside *quartz*.

Q. You say that oxygen forms 52 in every 100 parts of pure sand. In 100 lbs. of pure *alumina* is there any of this vital gas; and if any, how much?

A. In 100 lbs. of pure alumina there are, according to Prof. Kane,

Aluminum	53.3
Oxygen	46.7
	100.0

Q. Is pure pipe clay, or porcelain clay pure alumina; or is it some compound with other minerals?

A. The very purest clay in existence, such as is used for making China-ware, is properly speaking, a *salt*, or a compound formed by the union of about 60 parts of silicic acid (silicia) with 40 parts of alumina. Prof. Johnston thus states the composition of this mineral having water in its composition:

Silica	46.92
Alumina	34.81
Water	18.27
	100.00

In the above compound which forms pure clay, the amount of oxygen contained in the mineral is greater than the three other elements, silicon, aluminum and hydrogen put together.

Thus, in the silica there is 52 per cent	55 parts.
In the alumina 46.7 per cent	16 "
In the water 8-9 of the whole	16 "
	87

I have omitted fractions. The hydrogen is united with oxygen in the proportion of 1 lb. in 9 to form water.—*From Lee's Study of Soils.*

"JUMPING AT CONCLUSIONS"—AGAIN.

BY A YOUNG DIGGER.

MESSRS. EDITORS:—In the December number of the Farmer I made a few remarks on "Jumping at Conclusions," to which Mr. J. H. WATTS replied in what I considered a very bad spirit.

Mr. W. accuses me of "*attacking numerous correspondents*," (although I made no allusion whatever to any correspondent but himself,) which he appears to think very presumptious for a "*youngster*." I think I "*attacked*" no one, but merely gave a few hints regarding the too hasty adoption of opinions and theories founded only on single experiments, and without due regard to other influences that might have caused, or at least have affected the result. In this I am happy to be supported by the wisest and best—by both scientific and practical men, who have seen and lamented the evil. Mr. GARBUTT, in the last number of the Farmer remarks that "*one or two experiments*, APPARENTLY *favoring a theory, should not be taken even as a* PROBABILITY *of its correctness*." But Mr. WATTS founds his theory on a single experiment. Of course he was not of the opinion that digging around and manuring his pear tree would have had a tendency to injure it, or he would not thus have treated it. Mr. W. started in the spring with the idea that good culture was necessary to a healthy tree and fine fruit, and like a sensible cultivator removed the grass from his tree and gave it a dressing of manure. But, from some cause or other the tree *died* of fire-blight, and without waiting to repeat the experiment on other trees, in different seasons, and under different circumstances. Mr. WATTS jumped at the conclusion that his tree died of a *surfeit*, and the only preventive was to give trees *hard fare* and *short allowance*. He not only founded his theory on a single experiment, and one contradicted by the experience of nine out of ten (if not the tenth,) but publishes his baseless theory to the world as an impertant discovery, and is highly offended that a "*young digger*" should presume to question its correctness. How much confidence can there be placed in a theory thus rashly adopted, or in the opinions of a man so hasty in his conclusion?

Mr. W. says: "It is no small satisfaction to me that Mr. BARRY was willing to notice my article." And it is no small satisfaction to me that Mr. B's opinion of Mr. WATTS' theory and my own, are somewhat similar—that it is one of those hasty theories, not very injurious, because not likely to be adopted by men of thought.

I am called upon for a preventive of the blight.—The matter has been discussed by the best Horticultural writers in the country for the last few years, and various causes assigned, such as "*frozen sap*"—"*insects*"—"*effect of sun*," &c.. each theory having its advocates. While such men as HOVEY, DOWNING, BARRY, &c., disagree, as to the cause, I think

the ignorance of a young digger, on this point, excusable.

Mr. WATTS appears to derive peculiar pleasure in calling me a "*youngster*." I hope my follies will cease with my youth, and wisdom increase with my years, that in my *old age* I may not propagate baseless and visionary theories unworthy even the young and inexperienced. But, I have learned even in my youth not to form opinions hastily and without due reflection, and especially not to publish illy matured theories to the world. This Mr. WATTS has yet to learn. I have learned also, that when my opinions are published, they are common property, and to bear with good nature all comments, whether favorable or otherwise: this Mr. WATTS has to learn in his *old age*.

Mr. WATTS concludes by saying that he will "*leave me with the potato rot.*" I am willing to be left in the contemplation of this terrible disease, its cause and its consequences to the human family; but I am sorry to leave Mr. WATTS cultivating *weeds* and *grass*, in the vain hope of raising pears, forgetting that "what a man soweth, that shall he also reap."

AGRICULTURAL EDUCATION.

AT no period in the history of our country has Agricultural Education absorbed so large a share of attention as at the present time; the press throughout its entire extent teeming with articles in reference to it. This bespeaks the approach of a more enlightened epoch to the Agriculturist; and when the institutions anticipated shall be established, we may confidently expect, that the community of Farmers will be elevated to that exalted position, to which they are entitled by the nobleness of their vocation.

That Agricultural Colleges will be founded at no distant day, cannot be reasonably doubted — many circumstances inducing the belief. It is highly probable that the subject will be taken into consideration during the next session of Congress, but no efficient aid need be anticipated from that quarter. The objection that will be urged by the members of Congress, to an appropriation of Government funds for Agricultural Education, will be the great dearth in the Public Treasury, occasioned by the effectual drainage resulting from a protracted session, exorbitant mileage, foreign war, &c., &c. Thus, while they are liberally helping themselves, and annually expending large amounts in superfluous military preparations, and in sustaining an expensive institution for giving instruction in the horrid art of human butchery; the great interests of Agriculture are neglected, upon the condition of which depends that of the nation. Farmers should look into these matters, and when the promotion of their purposes is prevented by the cry of government poverty, they should inquire into the cause of that poverty.

Certainly no course of Legislation can be more judicious, than that which insures prosperity to that class of citizens that forms the reliable support of our boasted institutions. Republican France seems to be conscious of this fact, and in the organization of her twenty Agricultural Schools, she is adopting the most effectual means to nourish and sustain the divine plant of liberty.

Though we do not look with any hope to the Congressional decisions relative to this matter, still an agitation of the subject may be productive of some good. The brightest signs of the times are seen in the Empire State, and her Chief Magistrate has won a laurel, that will cause his name ever to be embalmed in the annals of Agriculture. The honor is ascribed to him, of being the first individual in the Union, who gave an official recommendation for the establishment of an Agricultural College, and that recommendation is meeting with a hearty response; and we are sanguine in the belief that New-York will lead the van in this important system of Education.

The means for obtaining that practical knowledge requisite for the Farmer, is at present very limited, the common College education, requiring four years of classical study, being wholly inapplicable to his wants. Therefore, institutions of a different nature must be organized; and why the Public Treasury, that has ever been accessible to the educational wants of the few, should be sealed against the necessities of the many, is a matter of no small moment. But while we would censure Legislators, we would not permit the Farmers to escape unnoticed, who if anything, have been more in fault, for not demanding their rights — which, instead of doing, they have denied the very existence of, by condemning Agricultural Education. But thanks, that "a change has come over the spirit of their dream," and that that semi-civilized notion, long cherished, is fast becoming obsolete. And we express it as our firm conviction, that the time will arrive when an illiterate tiller of the soil will be numbered among the things that were.

What a mistaken idea, that ignorance and Agriculture are fit companions! As reasonably might we assert that the rising of the sun would rivet the clouds of darkness to the earth. There is no vocation to which science more effectually lends its aid, and no one should be more intimately acquainted with the laws of nature, than he whose daily employment brings him into communion with her. The Farmer, then, should become thoroughly educated, that he may understand the delicate operations of vegetable and animal life, so as to be able to render that timely and efficient assistance that will insure a perfect development of every part, and that he may be qualified to enjoy the beauties by which he is surrounded. For the enlightened mind is at home in the field, and every object that meets the sight awakens a train of thought of transcendent sublimity. Whether the minute insect, the delicate blade of grass or the expanded wild flower blushing in the simplicity of unaffected nature, attracts his notice, he perceives on each the impress of Deity, blending together most beautifully the functions of every part, for the consummation of the object to be attained.

Then, in view of the two-fold desirable result produced by an Agricultural Education, and the admitted point, that the advance and elevation of this noble art is dependent upon such education, it becomes the duty of all Agricultural Journals to lend their powerful influence towards strengthening the feeling now striving for the ascendancy. *Germantown, Pa.*, 1849.

WOOD-HOUSES.—There is no convenience attached to a farm establishment of more importance than the wood-house. It need not be an expensive structure, although both convenience and economy require that its size, and the materials of which it is formed, should be adapted to the size and circumstances of the family. As a general thing, it should be a *wood-house* and nothing lessnor more. No tools or farming implements should be housed there, for these require a separate place.

SALT AS A MANURE.

EDS. GENESEE FARMER:—I some time since received a note from the *Secretary of the State Agricultural Society*, B. P. JOHSON, requesting my experience in the use of salt. With your permission, Messrs. Editors, I will reply through the columns of your valuable and widely circulated paper, and thus give the farmers of the whole country the benefit of my experience. The following is the note of the Secretary:

STATE AG. ROOMS, Albany, Aug. 2. 1849.

Mr. John Park — Dear Sir:— I saw a notice in a Rochester paper of your success in applying salt to your wheat. Will you oblige me by informing me what is the difference in the crop prepared with salt and that which was treated in the ordinary way — both as to the yield per acre, and the quality of the grain. Respectfully yours,

B. P. JOHNSON, *Sec'y State Ag. Society.*

Agriculture is, no doubt, the first and oldest art; for we read that Adam's eldest son was a tiller of the ground; and yet, through the lapse of centuries, how slow has been its improvement. It was not until the last half century that it received any material impulse by way of advancement. It is not enough for a man to be a practical farmer; he should understand something of astronomy and geology, and a knowledge of chemistry is most essential.

Perhaps in Great Britain farming is better understood than in any other part of Europe; and yet there it is only in its infancy. I know of no nation more worthy to be imitated, in many practical points of rural economy; but, as the climate of the United States is so different, the same mode of farming will not answer both. Great Britain being an island, (and no part of it is 100 miles from the sea,) let the wind blow from what point it will, it is a sea breeze, subject to sea fogs, and a continual moist atmosphere, which is very fertilizing. Cattle in England need no salt as in this country, and salt might not benefit the land, but salt judiciously used here is a most valuable mineral manure. I have been trying it several years, and it answers my most sanguine expectations.

Salt as a manure has several advantages over barn-yard manure — for the latter does not always get sufficiently rotten to kill noxious weeds — and we often get a better crop of red root, Canada thistles, &c., than is desirable. Second, the expense of manuring with salt is not a fifth that of barn-yard manure, which I calculate as follows:

24 loads barn-yard manure, say	$0,00
2 men, putting on ground, 2 days each, at 6s	3,00
1 span horses and 2 wagons, 2 days	3,00=6,00
1 barrel salt per acre	1,00
Expense of sowing	6=1,06
	$4,94

In this hot, dry climate the ground is full of innumerable quantities of visible and invisible insects, some of which destroy the seed. These insects must live on something, and some, no doubt, subsist on the nutritious properties of the soil, and the manure laid thereon, as it is well known that rich land and gardens mostly abound with worms. Salt will kill most of these, which of course puts a stop to their living on the fat of the soil, and their small dead carcasses will add something towards enriching the land, which with the fertilizing properties of the salt makes it in good condition to receive the seed. On fallow, or before seeding, I consider salt of the greatest advantage. A small quantity, say one bushel per acre, on wheat or meadow, sown in the spring, before it begins to vegetate, will greatly strengthen both.

I now proceed to give an account of my experiments. The first was on a small patch of corn about a foot nigh. I took a little salt in my finger and thumb and dropped on each hill; before many hours the leaves began to flag, and in two or three days they were all dead. I thought I had lost my crop and took no farther notice. About too weeks after I was surprised to see my corn up again, nearly as high as before. It was evident there was not a sufficient quantity to kill the seed. I also threw a small quantity on a white thorn fence. It killed the leaves, having the appearance of a blast. They came no more out that season.

I was not discouraged at my adventure, but knowing the effect of salt on the animal kingdom, and its near approximation to the vegetable, I determined to "try again." Having a seven acre field that had received no manure for four years, and then only a small quantity, I plowed it up the latter part of the 9th month, 1847, for the next summer fallow. In the 5th month following, 1847, I plowed it again after which I sowed seven barrels of salt, being a barrel per acre, in two of which I mixed two pounds of arsenic and sowed it in the middle of the field. I could not perceive any advantage where the arsenic was used, over the other part; all appeared alike. My object in using it was to make sure work in destroying the insects. About two weeks after I dragged it both ways, and the beginning of the 7th month plowed it again — kept the drag at work — and about the middle of the 8th month I plowed it the fourth and last time, (including the last fall's plowing.) On the 1st and 2d of the 9th month I sowed it with Soule Wheat, two bushels per acre. It was a fine growing time; it came up luxuriantly. Most of the blades were half an inch broad, and it would have jointed had I not eaten it off with four horses and two cows for three weeks, after which I spread their dung.

This was a novel mode of farming, and great interest was manifested in the neighborhood to see the result. Last winter was very unfavorable for wheat — severe frosts and rains with little snow; but it had good root-hold, and was well covered, which prevented its being thrown out. The past spring was backward, yet it looked well the early part of the 5th month. None was to be seen in the neighborhood to equal it. I commenced cutting it on the 11th of the 7th month. The heads were of a good size, and the yield close upon *forty* bushels per acre. The straw attracted particular notice, so beautifully bright and white; whether from the effects of the salt or not, I cannot say.

The next experiment was as follows: In one corner of an eight acre field was a complete swamp, of about an acre. Four years ago I commenced plowing it up, and although I selected a dry time, the horses sunk in up to their knees. My neighbors thought it was labor lost. I dug an open ditch at the low side and made very narrow channels, ridged and rounded them well up, and furrowed as deep as the ditch would allow. I tried turneps for the first crop, but from the insects and the hot dry weather they came to naught. Next year I tried potatoes, but with no better success — it was too wet. I tried potatoes again, and managed to raise a few. Next

year I sowed it with barley, and had a fair crop. I found this swamp improving every year. Last year I plowed and summer fallowed the remainder of the field, where had been meadow for several years. In the fall ('48) I sowed both the fallow and the swampy piece with wheat. It was a fine growing time and all came up well. The swampy part having been cropped so often, did not look as thrifty as the fallow. I got a very fair crop — not less than twenty bushels from the swampy acre. Having had a very good crop from the whole field, I concluded to put it all in wheat again. Preparatory to this I plowed it *once* and on the swampy acre I sowed about two bushels of salt — none on the fallow. All looks at this time very well, but the swampy piece looks stouter than the other part — another evidence of the beneficial effects of salt as a manure.

The following anecdotes will further show the utility of salt in killing worms, grubs, &c. A person at York, England, having in one part of his garden very rich ground of about 11 square yards, on which he could never raise any thing — it was sure to be destroyed by worms and snails. By way of experiment he sowed about three quarts of salt, and plowed it in, after which there was no further difficulty; it produced satisfactorily and luxuriantly.

My wife, who is partial to a flower garden, says when she wished to preserve any particular flower from snails, (which abound in English gardens,) she would enrich it with salt. The snails would come to the margin of the salt and turn away, which she discovered by the slimy path they make.

Further, if you put a few grains of salt on a leech that has been extracting blood, it will instantly vomit it out; a great many die, and those that survive linger along, and never appear to regain their health; while those that have the blood squeezed out of them with the finger and thumb, soon (with care) become healthy and fit for use again. JOHN PARK. *Gates, Monroe Co., N. Y.*, 1849.

A BIT OF PRACTICAL FARMING.

P. T. BARNUM, of Museum notoriety, has a country seat at Bridgeport, Conn. He has given some attention to farming and gardening, of late, and was elected President of the Fairfield Co. Agricultural Society. We give his experience in farming in his own words:

Selling Potatoes.— "In the fall of 1848," said he, "my head gardener reported that I had 80 bushels of potatoes to spare. So, of course, I directed them sold. They brought 67 cents a bushel. But, like most all small farmers, he sold the largest, and left us nothing but 'small potatoes' to eat at home. But the worst is to come. In March, we had not even a dish of *small* potatoes. So we bought more than we sold, and paid $1,25 a bushel at that! My experience, therefore, is, that a farmer had better ascertain first how much he wants for his own consumption, before he sends his produce to a cheap market."

Trimming Fruit Trees by an Amateur.—Another of Mr. Barnum's experiments was in the horticultural line, and was related by him with such inimical good humor, that his large audience was nearly convulsed with laughter. "Having been elected President of the Fairfield County Agricultural Society," continued he, "I felt the importance of my having a little *practical* experience as a farmer. Having reed a little about pruning, and watched my gardener awhile, I armed myself with a keen carving knife and set to work on my own hook. My first essay was upon a lot of young cherry trees. Half an hour, and my sharp knife gave them quite a symmetrical appearance, and removed all redundant limbs and sap-absorbing sprouts and suckers; and I prided myself somewhat upon this first effort as a pruner, and, of course, expected suitable commendation from my gardener for the labor I had saved him. Judge my astonishment, then, as he approached with a rueful countenance, and expression of 'Well, sir, you've done it now!' 'Why, yes, I fancy I have. How do you like my work?' said I. 'Like it! *Why, sir, you have cut off all the grafts!!*' This was a sad blow to my farming aspirations. But as I never despair, I shall continue to go ahead with improvements, but shall be a little cautious how I use the pruning knife, until I learn to know a sprout from a graft.

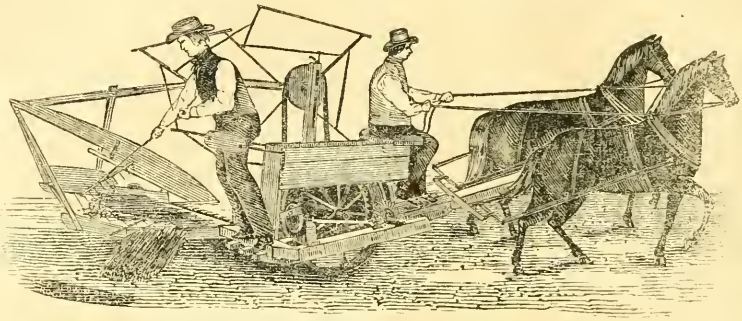
"I hope the relation of my *experience as a farmer* won't deter many others from seeking the same employment; for if they are capable of using the pruning knife at all, I think they are capable of learning to distinguish, perhaps, at less cost than I did, the useful from the useless, and if they did not, perhaps a little sprouting, *a la mode* our young days, might help to improve their education."

HUMAN PROGRESS.—Every individual, community and nation, must be interested in the moral, political and physical progress of humanity. It is a stock concern, in which we all have some share. We have not, however, the slightest intention of giving our readers on this Thanksgiving morning a moral essay on the law of human progress, but by way of adding a fact, not perhaps generally known, for which the lovers of long life and the blessings thereof may be thankful, we extract from an oration delivered by Cha's. Sumner, Esq., of Boston, before the Phi Beta Kappa Society of Union College, some time since, the following table, showing the diminution of mortality in several countries of Europe and in the largest cities thereof:

Deaths in England	in 1690, 1 in 33	in 1848, 1 in 47
" France	in 1775, 1 in 25½	in 1848, 1 in 42
" Germany	in 1788, 1 in 32	in 1848, 1 in 40
" Sweden	in 1760, 1 in 34	in 1848, 1 in 41
" Roman States	in 1767, 1 in 21½	in 1829, 1 in 28
" London	in 1690, 1 in 24	in 1844, 1 in 44
" Paris	in 1650, 1 in 25	in 1820, 1 in 32
" Berlin	in 1755, 1 in 28	in 1824, 1 in 34
" Vienna	in 1650, 1 in 20	in 1829, 1 in 26
" Rome	in 1770, 1 in 21	in 1828, 1 in 31
" Geneva	in 1560, 1 in 18	in 1821, 1 in 40

Although we have no statistics like the above in relation to our own country, it is to be inferred that we should compare favorably with any European nation, as we have not been behind any, but have rather led them, in all that tends to the advancement and progress of a great people — in all that elevates and ennobles humanity, and as a necessary consequence tends to lengthen out the period of man's brief sojourn here. A little more attention to the laws of health — laws written in the constitution of every man — will accomplish much in the physical department of human progress. Two-thirds of the sickness which afflicts mankind, in a thousand different forms, might be warded off by proper attention to vigorous and systematic exercise, more plain and simple diet, regular hours of recreation and sleep.—*Arg.*

We are glad to see so influential a paper as the Albany Argus calling public attention to the fact that, "two-thirds of the sickness which afflicts mankind" may be prevented. The importance of this truth can hardly be over-estimated. Evil habits, such as the excessive use of tobacco and other poisonous substances, fashions in matters of dress, wet feet, and exposure to miasmatic climates, bring thousands and millions of our race to premature graves. The time approaches when the laws of health will be both studied and obeyed as they deserve.



SEYMOUR & MORGAN'S IMPROVED REAPING MACHINE

As our country improves and our population becomes more dense — as our forests disappear before the woodman's axe and the boundless prairies become covered with the golden grain — as our home consumption increases and the nations of Europe look to us for bread, REAPING MACHINES will become absolutely necessary to secure our crops, especially in the Great West. Hundreds of acres every season in that section, are either materially injured or entirely lost for want of the proper facilities for harvesting. A machine that can do this work well will be of the greatest public benefit, as it will not only enable the farmer to secure his grain, at just the right time, and also be a great saving of expense, but it will also enable him to do by horses, oxen, or even steam, that which has hitherto been done by a most severe description of manual labor, rendered doubly oppressive by the season of the year in which it must necessarily be performed.

Reaping Machines have been used in England, to some extent, since the commencement of the present century. The mildness and moisture of the climate, however, making the ripening process slow, and the harvest comparatively lengthy, and the cheapness of labor, obviates, to some extent, the necessity which exists in this country. In 1821 a Reaping Machine was invented by JEREMIAH BAILEY, of Chester County. We believe this machine answered the purpose tolerably well, and was used to some extent. A machine was invented and built in this city some ten or twelve years ago, by a Mr. MOORE, that was designed to cut the grain and thresh it in the field. These machines have been improved, and are now manufactured and used at the West. The Reaping Machines most generally used of late years, is *McCormick's Virginia Reaper*, and *Hussey's Reaper*, both of which have been figured and described in previous volumes of this paper. Messrs. SEYMOUR & MORGAN, however, think their machine an improvement, and superior to either. We have not had an opportunity to witness it in operation, but those who have seen it work, pronounce it superior to any other in use: cutting from fifteen to twenty-five acres a day in the most perfect manner, even among wet and lodged wheat, never choking, though the grass be ever so abundant, and that it leaves the grain in a good condition for binding. We shall make it our business to see this machine at work, and shall then speak definitely of its merits; in the meantime we refer all interested to the advertisement of Messrs. SEYMOUR & MORGAN, and the certificates accompanying, in the present number.

CARE OF STOCK.

EDITORS OF THE FARMER: — IN addition to warm stables or sheds for cattle, such as are tied at all, should be fastened securely by the neck or head.— Many a one has lost a valuable cow by injuries received by loose steers, oxen or other cows attacking them in a savage manner, when there was no possibility of escape. Horses too are frequently injured by kicks by getting loose in stables; or by standing too closely together.

Great care should be taken in fitting up stables to have the floor sound and strong; the manger and stantions in the right places; and the animals kept clean and dry by some proper bedding and the frequent removal of all droppings. Warm stables, well ventilated and cut feed will enable one to winter stock with the least expense, and in a thriving condition. Not only should their food be given to them regularly and in due quantity, but their water and salt should be offered with equal uniformity as to times and seasons. System and order are indispensable to the stock grower and dairyman. The best way to salt cattle in winter is to feed them brined straw corn fodder or hay twice a week. In this way a little salt can be kept constantly in the systems of domestic animals and greatly promote their health and improvement. Avoid driving or sending stock a great distance to water in winter. They are apt to suffer much from thirst; and to drink to excess when they do reach the spring, well or creek.

Green feed such as turneps, carrots, pumpkins, potatoes and the like, is extremely useful to mix with the dry forage of the farm in winter. There is room for great improvement in wintering and fattening sheep, swine and neat cattle. Much may be gained by providing suitable food the season previous, and having it well protected from frost. In addition to this, warm pens and comfortable stables are indispensable to economy in saving living flesh from waste, and making new on the carcasses of domestic animals. ONTARIO.

ARNOLD'S PATENT SASH LOCK.

"Sands make the mountain"—our lives are made up of trifles. Those matters which afflict us the most sorely, and give us the greatest inconvenience and trouble in passing through the world are generally but trifles. The flood may come and destroy the farmer's crops; but it is gone, and he repairs the injury — its effects upon both temper and fortune are soon forgotten. The dripping of the rain through a decayed or broken shingle, (which half an hour's labor might remedy,) causes more annoyance, more damage to the house and the temper of its inmates than the flood. A man may lose half his fortune, and bear it like a philosopher, — but what has philosophy to do with hammering one's fingers or breaking a light or two of glass in attempting to make a rusty nail support or fasten a window sash, or in having a favorite book spoiled in the same work.

The engraving given in this article represents a *Window Fastener*, invented by Wm. E. Arnold, of this city, which either fastens the window down, or secures it in any position. We take the following from the New-York Scientific American: "Of all the various kinds of fasteners now in use, some of which are exceedingly ingenious, we know of none which recommends itself more thoroughly by its simplicity than this. The Lock consists simply of a bolt of iron or brass B & C with a sheet iron box A, the latter being morticed into the sash, leaving but a small part of the bolt B, perhaps three-fourths of an inch, projecting, by which it is moved. About this lock or fastener, there is no complicated machinery, no spring or screws, and a bolt being moved by its weight, forms a complete lock for the window. When once in the window they will last until the material of which it is composed wears out. The great fault with many other fasteners, is their liability to get out of order. Not so with the one represented above, for the simple reason that there is no machinery to require fixing or springs to be renewed. Those who know any thing of the perplexity of a bad fastener, will appreciate any invention which promises an improvement."

The Lock is designed to be put square through the left hand style of the upper and lower sash, about half way of its thickness, leaving the handles of the bolt a little more than the eighth of an inch from the inside of the glass. To save the trouble of morticing entirely through, bore with a half-inch auger bit until the point pricks through, leaving about one-quarter of an inch to mortice, which should be of sufficient width and thickness to drive the Lock through from the inside and let the bolt work free. A suitable number of mortices should be made in the window frame to receive the end of the bolt. All but the upper ones and the lower one for the lower sash, should slant up about one and a quarter inches. The iron stops should all be driven square into the frame, except the lower one for the lower sash, which should correspond with the shape of the end of the bolt to hold it down. We think we can corroborate all that is said in the above extract in favor of this fastener. We know of hundreds in use in this city, and we believe they give in every case entire satisfaction.

Value of Annealed Wire for Fences. — In a conversation with Mr. Grant, of fanning-mill notoriety, he remarked that annealed wire never rusts. He stated that he had now a wire screen to a cellar window, which has been very much exposed, on the north side of the house, for thirteen years, and until the chestnut frame is quite rotten, while the wire, although of No. 6, and never painted, is sound and good.—He remarks the same fact in regard to wire used for fanning mill seives. We also have some experience to the same point.

In putting up some wire around a poultry yard, to prevent the fowls from flying over the pickets, (which, by the by, were only 4½ feet high, with two wires above, and answered a good purpose,) we used bright wire. This rusted off, and failed entirely in one season. We then used annealed wire, which although much finer, is still sound and good, after three years' use.

Mr. Grant's opinion, corroborated by our own experience, is that annealed wire exposed to the atmosphere does not rust, at least not enough to destroy it, and that it is a better preventive than galvanizing, or any other process.

This important fact should be borne in mind by all who are intending to build wire fence.—*American Agriculturist.*

If wire can easily be preserved for an indefinite and very long time from all damage by rust, by simply annealing, it will soon come into general use as a fencing material. With read cedar, locust or stone posts, a fence might be made at once straight, beautiful, lasting and economical. In many sections, both rails and boards are scarce and high, and stone for walls not to be had. In such places, wire, perhaps with the aid of a ditch and bank of earth, may be resorted to with advantage. If one desires to combine ornament with utility, he can plant a row of trees 100 feet apart along the line where the fence is needed, attach the wire to them; having a few firm stakes between the trees to give strength to the fence, or the trees may stand nearer to each other. In most parts cedar grow well, and a few of their ever-green cone tops, interspersed with deciduous trees, will add much to the beauty of a fine farm. Even fruit trees might serve as supports to wires if desired.

Extraordinary Invention.—A Mr. Appold has invented a remarkable machine, called the "Centrifugal Pump." for draining marshes, &c., and a most ingenious affair it is.—You have heard of the turbine—a small bow water-wheel, possessing extraordinary capabilities for work. Well, Mr. Appold's model contains such a wheel made of tin, a little thicker, but no larger than a half-penny. This is fitted at the bottom of a square tube dipping into a small cistern containing water, which may represent a lake, &c. The little wheel, being made to rotate with great velocity, throwing up water rapidly into the tubes above itself, until it overflows in a continuous stream at the top, and the volume of the stream is such as to deliver eight gallons per minute; and, on aplying a nozzle, the stream is driven to a distance of twenty feet. This, you will say, is a marvelous effect from so apparently insignificant a cause, but a wheel, about fifteen inches in diameter, exhibited at the same time, will delive 1,800 gallons per minute; it requires to be worked by an engine of four horse power. Mr. Appold has lately proposed to the Dutch Government to fix a similar wheel on the Haarlem Sea, now in progress of being drained by forty pumps, driven by steam.

A centrifugal pump of forty feet in diameter would do more work than all the others put together, and would deliver—so the inventer asserts—1,500,000 gallons per minute. With such power at command, one would think we ought never more to hear of ships foundering at sea; and the emptying and reclaiming of the Zuyder Zee resolves itself into a possibility.—*Foreign Journal.*

The above "extraordinary invention" is not so extraordinary as the writer supposes. If we had Commissioner Eubank's able work on Hydraulics at hand it would probably inform us about the time when the kind of wheel spoken of was invented and first used. We have seen them in use in Georgia and elsewhere with success, and did not regard them as showing any new principle or fact.

CULTIVATION OF THE SWEET POTATO IN N. Y.

THE following remarks on the Cultivation of the Sweet Potato, is given in a letter from S. S. RIDDER, of Maria Forge, Alabama, to B. P. JOHNSON, Secretary of the New York State Ag. Society, and published in the Transactions for 1848:

"I have been asked by some of the members of your Society, my opinion about the practicability of cultivating the sweet potato in this State, and the best mode of cultivating them. I have no doubt of your being able to raise sweet potatoes in this climate if properly managed, as I have known them grow to a very large size in Alabama in three months; and you have three months of quite as warm weather here, generally, as we have in Alabama, (viz.,) June, July, and August. I will give you a brief statement of my experience in cultivating the sweet potato. When I went to Alabama, six years ago, I knew nothing about the method that it was best to pursue, and had to depend on the experience and instruction of my neighbors. I pursued their plan until I found a better. The best mode that I have found is the following: First prepare a bed for laying down your seed potatoes to produce slips for planting, by digging up a bed, say three feet wide and ten feet in length, longer or shorter, according to the quantity of potatoes you have; throw the earth out of this bed to the depth of one foot, and fill in manure from the horse stable sufficient to make a good hot bed. It should be raised some ten or twelve inches above the surface of the ground, and the top of the bed should be sand and loam. Place your potatoes in rows about six inches apart across the bed, and cover them to the depth of two or three inches; the manure should be kept moist to create heat, to foward the growth of the slips as fast as possible. As soon as the slips are five or six inches high they are ready for planting.

Your ground for planting should be a light soil of sand and loam, where it can be had, but good clay will produce very good potatoes sometimes. The ground should be plowed very deep, and thrown up in ridges or hills, such as Irish potato hills after they have been hoed. The ground should be ridged or hilled immediately before planting, so as to be moist, as this is a very important matter to the growth of the slips when first planted. It is best to choose a time for planting when there is a little rain and cloudy weather, but they may be planted in dry weather if they are watered for two or three evenings, and do well. When you draw slips from the bed you should place your hand over the potato, to keep it from coming out of the ground, and take hold of the slips with the other, catching them as close to the potato as possible, and pull them off. You can pull all that have full sized leaves, and in eight or ten days your bed will yield another crop. Plant one slip in a place; if in ridges put them about eight inches apart.—When you get done planting throw the earth from each side of the ridge with a plow or hoe, that the sun may warm the middle of the ridge. As soon as your vines get fully rooted and are ready to commence running, throw the earth back, and after the vines begin to spread, hoe out all the weeds, and draw the earth up well around the vines, but be careful that there is no earth allowed to go on them, as they will take root wherever they are covered, and produce a bunch of small, stringy potatoes. I was told to cover a part of the vines, and after following the direction and the custom of the country one or two years, I abandoned it, and I soon found that I had a much better crop. Although I had not as many in number as when I had the vines loaded with little stringy potatoes, my potatoes in the hill were all large and fine, and the aggregate crop much larger."

ARSENIC FOR THE WIRE-WORM.

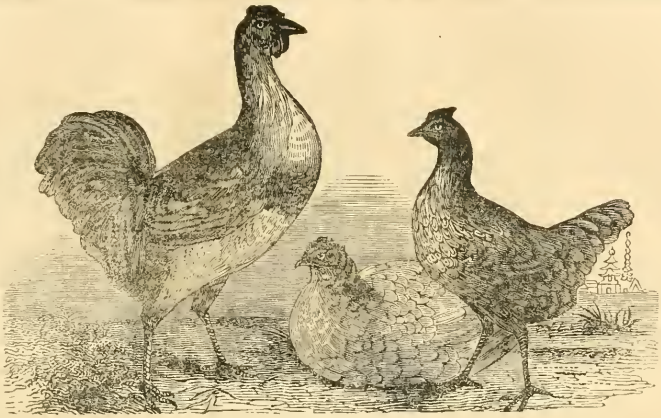
MESSRS. EDITORS:—Arsenic, although a very dangerous article, I am inclined to believe, might be used in destroying the wire-worm, which is destructive to wheat. In reading an English paper, I observed a statement that certain game-keepers found numbers of pheasants and patridges dead, and to ascertain the cause, their stomachs were analyzed and found to contain arsenic. This they had procured from the seed wheat they had picked out of the land, which had been soaked in arsenic and water. Would not such a hint be useful to our farmers when they plant corn? I should strongly recommend it, and after planting is finished, sow broad-cast a peck. This would save the crows the trouble of scratching it up, which no farmer would object to.

Should any one be induced to mix arsenic with salt, which I believe would completely clear the land of wire-worms, grubs, and all other insects, the man who sows it should do so with gloves on, as he might suffer if he did not take this precaution. The finger-nails show the effects first. If it is mixed on the barn floor, it should be washed clean, for if horses or cattle should lick the floor it might prove fatal.—The gloves and all connected with this mixture it would be safest to burn. JOHN PARK.—*Gates, 12th month*, 1849.

REMARKS.—Arsenic on land would undoubtedly prove destructive to both birds and insects. But we fear frightful accidents from carelessness would follow its general use. We are not surprised that English farmers should use arsenic, and we opine they feel no regret at the death of the patridges and pheasants. We have seen large fields of wheat two-thirds destroyed by the game. They are the curse of the farmers in many parts.

GUANO.—Does guano afford a permanent improvement to the soil, or does it act on the first crop, and then leave the land as poor, or poorer, than it was before? This is a question so often asked, we will once more answer, that this is like all other *stimulants*, whether applied to man or the soil, unless furnished with some other food, the effect will not be permanent. But give the land a small coat of marl, manure, or green crops, for the guano to work upon, and then it will be found that the effect will be not only beneficial to the first crop, but several succeeding ones. None but the genuine Peruvian guano can be depended upon. "Manufactured guano," in many cases, is nearly worthless. The Maryland Farmers, the past year, have tried various experiments in planting potatoes with guano, and find that when it is put on *top* of the hill or drill, and slightly covered with earth the yield is much greater than when placed at the *bottom* of the hill

A remarkable specimen of Indian corn is to be seen in Baltimore. The stalks are about eleven feet in height, and on the four exhibited there are 18 ears, large and well filled.



COCHIN-CHINA FOWLS.

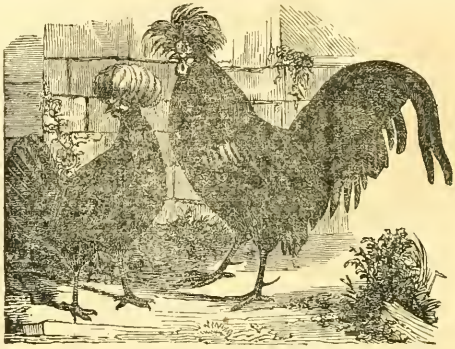
DOMESTIC FOWLS.

Few realize the importance of the Domestic Fowl. The poultry business has generally been considered too insignificant to claim the attention of the farmer, and hence this department has usually been consigned to the care of the younger members of the family. Yet no domestic animal pays a better profit on its care and keep than the dunghill fowl, when its keep and care are what they should be. The improvement of this species of birds is beginning to excite considerable interest, particularly in the vicinity of Boston, where new notions and "*Fowl Conventions*" are hatched with the shortest possible incubation. The late Convention at that place of the Fowl-Breeders of Boston and vicinity, has brought out some facts showing the importance of the business. The sales in Boston for the year 1848 was over a million of dollars. The proceeds of the sales of eggs for the same year was little short of a million of dollars. The value of poultry in the State of New York in 1840, as shown by the agricultural statistics, was *two million three hundred and seventy-three thousand and twenty-nine dollars!* which was more than the value of the swine, and nearly five times the value of its horses and mules.

The Boston papers represent this Convention as being one of the most interesting that ever assembled in Massachusetts. In the collection, which was very large, we notice the *Cochin-China, Poland, Dorkings, Bantams, Java,* and *Gold* and *Silver Pheasants.* The *Cochin-Chinas,* figured at the head of this article, were the most coveted, and prices were given for pairs of this description ranging from $9 to $18.

We copy the following description of this breed from Bement's book, taken originally from a London paper: "These extraordinary birds are of gigantic size, and in their proportions very nearly allied to the family of bustards, to which, in all probability, they are proximately related — in fact, they have already acquired the name of 'Ostrich Fowl.' In general color they are of rich glossy brown; tail black, and in the breast a horse-shoe marking black; the comb double. Two characters appear to be peculiar to them — one, the arrangement of the feathers on the back of the cock's neck, which are *turned upwards;* and the other, the form of the wing, which is jointed to fold together, so that, on occasion, the bird may double up its posterior half and bring it forward between the anterior half and body. The eggs are of a deep mahogany color, and of a delicious flavor. These birds are very healthy, quite attached to home, and in every respect suitable to the English climate."

The *Poland Fowls* have always been favorites of ours. Their shining black color contrasted with their clean white crest give them a beautiful appearance. They lay more eggs than any other variety, and are the least inclined to set. They have not improperly been termed "*everlasting layers.*" We always found it necessary to keep other hens to hatch their eggs. The following is Bement's description:— "The Poland Fowls, as they are generally called, were, according to English authors, said to be imported from Holland. Their color is a shining black, with a white top-knot of feathers on the heads of both cock and hen. The head is flat and surmounted by a fleshy protuberance, out of which springs the crown of feathers or top-knot, white or black, with the fleshy King David's crown, consisting of four or five spikes. They are not so thickly covered with feathers as some other breeds, and still less so with down. The true breed is rather above the middling size: their form is plump and deep, and the legs of the best sorts are not too long, and most have five claws. The top-knot of upright, white feathers, covers so much of the head as almost to blind the eyes; indeed some require clipping, or they would become an easy prey to the hawks. The contrast of this perfectly white crest with the black plumage, is truly beautiful; but the top-knot of the cock differs from his hen, hers being broad and erect feathers, while his are narrow and hanging down in every di-



BLACK POLAND TOP-KNOT FOWL.

rection, but they must be perfectly white and the rest of the plumage perfectly black; broken colors, it is said by some, show a cross breed." J. H. STANLEY, of Le Roy, in this State, we understand, has a fine lot of this breed.

Dr. BENNETT, of Plymouth, Mass., remarks in the Boston Cultivator: "The eggs of some breeds are twice as valuable as those of others—for instance, one egg of the pure Cochin China Fowl, of the Baylies' importation, contains nearly as much nutritious matter as two eggs of the Black Poland or Golden Pheasant Fowl, and is, consequently, much richer, better flavored and more valuable."

That great difference exists in the nutriment of eggs, is a fact well known; but that this results less from breeds than the way in which fowls are kept, admits of hardly a doubt. As a cow cannot elaborate rich milk from a slop made of sawdust and water, so a hen is incapable of making a highly nutritious egg from clean buckwheat bran alone. The silliest of all ideas is that which assumes, that a bird can lay any quantity of good eggs without a full supply of organized nitrogen, sulpur and phosphorus in its daily food, as well as of all the other ingredients demanded by nature to form a perfect chicken in the shell. Supply abundantly, the proper material to make a genuine and healthy bird in the aliment of the parents, and rich eggs and plenty of them, may reasonably be expected. There is much point in the following remarks of Dr. Bennett: "Chickens should be fed on worms or meat-food if you desire to keep them healthy, and have them grow rapidly; and the food of fowls in general should be greatly varied, especially if they are not suffered to run at large, which, however, should always be done when practicable. The quality of the *soil* makes a great difference in the *size* of fowls. Rich ground, as it contains more worms and a greater variety of such other articles as fowls feed upon than poor land, is, consequently, much better adapted to their nature, and produce much larger fowls under similar circumstances."

Some time since we were at breakfast at the table of a gentleman at his residence in the poor piny woods of Georgia, where lime, sulphur, phosphorus, and organized nitrogen did not abound for the production of any eggs larger than those of small yellow ants. Hen's eggs brought on the table had the thinnest possible shells, containing the poorest possible albumen and yolk. A pig which had lived four weeks and been systematically starved before killing, could not be more dejune and innocent of all fatness.

A short lecture on the domestic maufacture of eggs and the proper keep of fowls, soon doubled the supply of this article of food in that family. All poultry about the premises now have a plenty of pounded oyster shells, sulphur-water, ash-heaps to wallow in and keep off vermin, and animal food of some kind. In addition to the latter, cooked peas and oats, or the same fed raw, are given to the birds to be transformed into the finest flesh of the duck, turkey, or chicken. Nothing is more simple and direct in its natural progress than the vegetable and animal transition by which even night soil may be converted into fat turkeys, or eggs worth from ten to fifteen cents a pound.

CANADA THISTLES.

DEAR SIR:—The Canada thistle made its appearance among us a few years since, and has increased so fast that some of us are becoming alarmed about it. Having learned that it is very common with you, a neighbor of mine, and subscriber to your paper, requests me to apply to you, through the columns of your paper, for the best mode of destroying it, or different modes if there are more than one good one. I have seen it in many different parts of the country, and am inclined to the opinion that it was introduced into our country by sheep brought from the north. Would not a large quantity of lime put on it, destroy the vitality of the plant and roots? Yours, &c., JOHN LEHMAN.—*Hempfield, Lan. Co., Pa., Nov.*, 1849.

REMARKS.—Salt is altogether better than lime to destroy Canada thistles, or any other obnoxious plants. Frequent mowing, so that no seed whatever is permitted to mature, is all important to prevent this variety of thistles from spreading. Deep and frequent plowing has proved successful in many instances. Any one who has had experience in subduing Canada thistles, will oblige us by giving an account of the process for the benefit of the public.

Horticultural Department.

EDITED BY P. BARRY.

JANUARY.

In our climate January weather seldom admits of the performance of any considerable out-door work; but those who keep an eye to the future will find many things pertaining to the garden and orchard, that can very well be done under any condition of the weather. How often do we hear people apologise for the defective management of their gardens by saying, I "had no time to attend to this or that."—Their garden crops, fruit trees, &c., in their feeble and stunted growth, show a great deficiency in their supply of nutriment; but there was no manure prepared at leisure times, and when the hurry came there was enough to do of greater necessity. Here are trees and plants blown about by the wind, going zig-zag to destruction; but there are no stakes at hand, and "there is no time to attend to it." Implements and fences are out of repair, and no time to put them in order. Now, the coldest of our winter months is just the time to think and act upon those matters. These are things that people need not be told; but we find by experience that a hint of this kind in season is of great value.

Whoever wishes to have a fruitful and flourishing garden and orchard, must attend well to the preparation of manures and composts. You might as well attempt to fatten an ox on rye straw as to grow fine fruits, flowers, or vegetables, without a regular and abundant supply of suitable manures. How many orchards are there all over the country that might be doubled, and even quadrupled in value, by a dressing of manure; and if it be prepared at leisure times, its application will be an easy matter. Our purpose, at present, is not to speak of the kind or quality of manure. We have often heard it said that "everything but stones will make manure;" and there is much truth in it. It would be difficult to tell what material there is *not* in our compost heaps. For special purposes it may be necessary to observe some rules; but for general purposes of cultivation, all decomposable materials may be worked up into a fertilizing compound for trees and plants. Whatever may be said by chemists about the loss that manure undergoes by fermentation, we know by actual experience that it is unsafe to apply unfermented animal manure to living growing plants. For the garden and orchard it should be well decomposed, so that when applied it might be cut with a spade. The materials should all be collected and mixed, and frequently turned over during winter. If it is a year old before using it will be all the better. The farmer should have a separate heap for his garden and orchard.

Then, besides the manure heap, they are many articles that will be wanted in spring and summer. *Hot-beds*, for instance, for forwarding early vegetables; *frames* for the protection of tender or half-hardy plants; *stakes* for trees, dahlias, and other herbaceous plants; *trellises* and other designs for the support of climbing plants; *rustic baskets, labels, &c.*—all these may be made now, when nothing can be done out of doors. Then there are seeds to be cleaned and prepared, fruits to be taken care of, &c.

For reading and reflection, the great means of acquiring that taste and skill upon which all Horticultural progress depends, the winter affords glorious opportunities that every one should improve to the utmost. No branch of science or industrial pursuit requires so much reading — so much study — as that of Horticulture. There is at this time an excellent spirit abroad in relation to Horticulture. Its claims upon the attention of all classes of community are now very generally acknowledged, and the chief obstacle to its progress and successful practice, is the *want of knowledge*. Farm culture, defective though it be, is yet greatly superior as a general thing, to that of the garden. The arts of *grafting, budding, layering, inarching*, and other means of propagating trees and plants, that every man who has a garden should be familiar with, are understood by very few. The seasons and modes of sowing, gathering and saving seeds, planting, transplanting, and pruning, are all badly understood, and hardly understood at all by a large number of persons whose lives are devoted to cultivation. So it is with the preparation of manures, and the texture and improvement of soils.

Ignorance on these subjects would be excusable if there were no accessible remedy. But such is not the case. Books — and good books — treating fully on all these points, are cheap and abundant; and we take this occasion to suggest to those who wish to make their fruit and vegetable gardens and orchards profitable and creditable,—to embellish their homes with trees, shrubs, and flowers, as all homes should be, in this country particularly, to spend a portion of the leisure winter days and nights in culling from the current publications of the times such information as they may feel themselves in need of, in order that it may be carried into actual and profitable practice during the coming season of cultivation.

Address delivered before the Norfolk Ag. Society, on the occasion of its first Annual Exhibition at Dedham, Mass., September 6, 1849. By Hon. Marshall P. Wilder, of Boston, President of the Society.

The unusual early period at which the publishers find it necessary to issue the present number, leaves room at this moment merely to thank the author for his kindness in sending us a copy of this address. It is an elegantly printed pamphlet of 36 pages. The subject of Agricultural and Horticultural improvement are discussed with an ability and elegance of style rarely met with in such productions. The dignity and importance of agriculture—the application of science to farming—the importance and quality of manures—the arts of cultivation—and agricultural education are treated in a masterly manner. The author makes a general survey of our country, east and west—its wants and capabilities—and goes for New England against the world.

THE MAGNOLIAS.

AMONG the vast number of families of noble and beautiful trees with which nature has so bountifully clothed this continent, the Magnolia holds a prominent rank and deserves particular attention. In an ornamental point of view, we are inclined to place them among the first.

BROWN, in his "Trees of America," says truly that "the genus Magnolia embraces the most admirable productions of the vegetable world." LOUDON, in his Arboretum, describes eight American species and three from China and Japan:

1. GRANDIFLORA, or large flowered;
2. GLAUCA, or glaucous leaved;
3. TRIPETELA, or three petalled, or umbrella;
4. MACROPHYLLA, or long leaved;
5. ACUMINATA, or pointed leaved;
6. CORDATA, or heart leaved;
7. AURICULATA, or auricled leaved;
8. PYRAMIDATA, or pyramidal headed;
9. CONSPICUA, (YULAN, of the Chinese,) or conspicuous flowered;
10. PURPUREA, or purple flowered, (Japan;)
11. PURPUREA GRACILIS, or slender growing, purple flowered, (Japan;) besides many varieties and sub varieties of each, that European cultivators have produced by hybridization.

The Magnolias and our magnificent Rhododendrons, or "Mountain Laurel," are among the rarest and most highly prized ornaments of the parks and pleasure grounds of Europe. No pains or expense is spared to give them the soil, situation, and culture that will induce them to flourish, while here, at home, they are scarcely to be seen. How rare it is to see a fine specimen of a Magnolia! and yet it seems to us that every man who can plant half a dozen trees, should desire at least one. Next to the evergreen trees, such as the firs and cedars, we have a particular love for the Magnolia; and we hope to see the time when our country people, who are now planting the Horse Chestnut, Mountain Ash, Maple, &c., by sixes, twelves, twenties, and even hundreds, will remember that nature has kindly given them others, with which to give variety and beauty to their home scenery. There are at the present moment a vast number of trees planted around and in our cities and villages, and through the whole country; and if the selection of trees were made with more taste and judgment, how much greater would be the improvement! how much more interesting these little plantations in the streets and door-yards would be, not only to their possessors, but the public at large! If a man but plants trees of any sort, we are loth to find fault with him; but we must take this occasion to suggest to those who may be about to plant, to introduce a variety. The man who has a little town lot, and can plant only half a dozen to a dozen forest trees on the side walk opposite his house, should not plant all *Soft Maples*, or all *Buttonwoods*, or all *Horse Chestnuts*, or all of any other tree, because his neighbor may have done so. That little plantation is all that he and his family can enjoy daily of "nature's most beautiful production;" and why not make it as varied as possible? If we go to the woods for trees, why not get an *Elm*, a *Tulip tree*, a *Sugar Maple* and a *Soft Maple*, a *Linden* or *Basswood*, and a *Chestnut*, instead of half a dozen Maples or Buttonwoods. They may not be quite so easily obtained or transplanted, but only a trifling additional expense will be incurred.

It is not in man's nature to be delighted with a monotonous uniformity. A neighbor of ours has, on very small plantation, some sixty different sorts of forest trees. Another neighbor, who has recently built himself a large, costly, and commodious house, finished in the most complete and convenient manner outside, and intending to have a comfortable and beautiful home, sent a teamster to the woods and pulled up a number of shabby looking maples to plant on the side-walk before his door. The contrast is insufferable — annoying to the most common observers that pass along. And this was not economy ; for most likely half of these maples will die and will have to be replaced, and those that happen to live will not in years give either ornament or shade ; but it was not meant to be economy—for the man is of a liberal nature, and particularly so as regards things that pertain to his dwelling, — it was simply *a want of taste.* What a misfortune that people of taste are so apt to be poor and the wealthy so void of taste! But we have not space to dwell more at length on this subject now, and have only touched upon it incidentally ; our purpose was to draw attention to the beautiful tribe of Magnolias — not to describe a long list of species and varieties, but a few of the more desirable sorts, adapted to our climate and easily obtained. These are, the ACUMINATA, GLAUCA, TRIPETELA, MACROPHYLLA, CONSPICUA, PURPUREA, and SOULANGIANA.

These are all sufficiently hardy to stand the winter here (43°) without protection. The *Acuminata*, or Cucumber tree, which is found scattered over all the western portion of this State and in most of the Western States, is well known to every one who is at all acquainted with forest trees. It abounds on all wooded land on the banks of the Genesee. The finest specimens we have ever seen are on the timbered lands of Gen. BROOKS, in Canadea, Allegany county. Many are to be found there full eighty feet high and four feet and upwards in diameter, with clear branchless trunks till within a few feet of the top. What imposing objects they are! When grown singly on the lawn the branches are thrown out with great regularity, forming beautiful pyramidal trees. On young trees, and even those of large size if in a vigorous state on a suitable soil, the foliage is large, eight to ten inches long and half that in diameter. The flowers, which appear in May, are of a pale bluish color, three to four inches in diameter, and slightly odorous. Propagated from seeds that ripen.

Glauca. This abounds particularly in New Jersey, in moist and swampy ground, and is commonly known as the *Swamp Laurel.* It is a low branching tree, seldom exceeding fifteen to twenty feet in height ; the leaves are five or six inches long, of a bright bluish green, and remain fresh until a very late period in the fall. The flowers, which appear in May and June, are white, odorous, and about three inches in diameter. When in flower, this is a beautiful tree. Propagated from seed.

Tripetela, or Umbrella Tree. This is a magnificent tree, abounding principally in Carolina and Georgia. It attains the height of 30 to 40 feet with immense foliage, 18 inches long, and 7 or 8 broad, and white, sweet scented flowers 7 or 8 inches in diameter, propagated from seed.

Macrophylla, or Large Leaved Magnolia. The immense foliage of this tree gives it quite a tropical appearance. In habit it resembles the Tripetela. It seldom exceeds 20 to 30 feet in height. There was once a fine little grove of these in the old Linnæan Nursery at Flushing, (now in the possession of Messrs. WINTER & Co.,) planted by the late WM. PRINCE, who did more in his day than any man in America to disseminate this beautiful genus. At one time his nursery contained nearly every species and variety that were to be obtained. This tree is found scattered sparcely over nearly all the Southern States. Its large foliage, grayish bark, and gray silky or velvetty buds distinguish it from all the others.— Flowers in June, 8 to 10 inches in diameter and quite fragrant. This species has always been scarce and dear in all the nurseries of both this country and Europe. If more attention be given to collecting seeds it might soon be easily enough obtained.

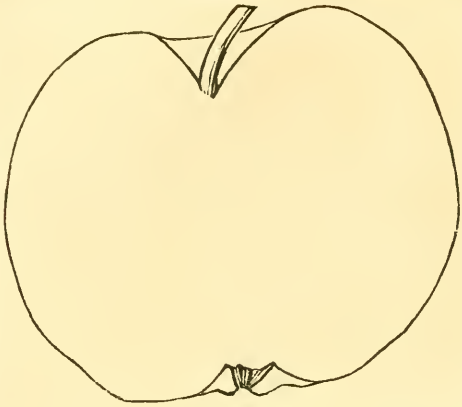
Conspicua, or Conspicuous Flowering (*Yulan* of the Chinese.) This is a native of China, and held there in the highest rank as an ornamental tree. In this country it ranks as a small tree or large shrub, but nothing can be more beautiful. Its flowers are pure white and appear in May, before the leaves, in the greatest profusion, even on young specimens. There are a few fine examples in this country, one of the finest is on the lawn of A. J. DOWNING, Esq., at Newburgh, a notice of which he has given in the Horticulturist. The habit of the tree is regular and pyramidal; leaves 5 to 6 inches long and 3 to 4 broad. LOUDON mentions one at Wormleybury, England, that in 1835 produced 5000 blossoms. It is usually propagated by inarching on the acuminata or purpurea—on the latter its growth is much dwarfed.

Purpurea, or Purple Flowering. This a small tree or large shrub, seldom attaining, here, 6 feet. It has large, dark green foliage, and purple flowers, which appear, like those of the Conspicua, before the leaves. It is more easily multiplied than most of the others, as it is increased by layers. There is always a good supply of it in the nurseries.

Soulangiana, or Soulange's Conspicuous Flowering Magnolia. This is a variety of the Canspicua or a hybrid between the Conspicua and Purpurea, raised at Fromont, near Paris, by the late M. LOULANGE BODIN. It resembles the Conspicua in all respects, but differs in having purple flowers.

We have not spoken of the *Grandiflora*, which is certainly the most superb Evergreen tree on this continent, or in the world, but requires protection in all the Northern States, and is consequently unsuited to general planting as an ornamental tree. Gentlemen who keep a gardener and can afford to give special attention to tender trees, should by all means enrich their grounds with at least one specimen. It is easily protected in winter by placing a box or board shed over it.

THE CHRYSANTHEMUM IN CHINA.—The Chrysanthemum is the Chinese gardener's favorite flower. There is no other with which he takes so much pains, or which he cultivates so well. His Camelias, Azaleas, and Roses, are well grown and well bloomed, but with all these we beat him in England; in the cultivation of the Chrysanthemum, however, he stands unrivalled. The plants themselves, seem, as it were, to meet him half way and grow just as he pleases; sometimes I met with them trained in the form of animals, such as horses and deer, and at other times they were made to resemble the pagodas, so common in the country. They are always in high health, and never fail to bloom most profusely in the autumn and winter.—*Gard. Chron.*



THE NORTHERN SWEETING APPLE.

Two years ago we saw this beautiful and delicious sweet apple, for the first time, exhibited at the Pomological Congress in New York, by JONATHAN BATTY, a respectable nurseryman of Keesville, N. Y. After tasting, we at once noted it as the *best sweet* apple we had yet seen at that season of the year, (October.) Others who then saw it, and who were fully competent to judge correctly, thought as highly of it as we did.

After our return from New York we were presented with specimens of the "Munson Sweeting" from a friend in Cortland Co., and it struck us at once as being identical with the "Northern Golden Sweet" of Mr. BATTY. This season we again saw it in New York, from Mr. BATTY; and our friend Mr. JESSE STORRS of Marathon, Cortland Co., sent us a small box of his "Munson Sweeting," which has confirmed our opinion as to their identity.

Mr. BATTY says it originated in the orchard of NATHAN LOCKWOOD, of St. George, Chittenden Co., Vermont, planted by his father more than sixty years ago. Mr. STORRS says it was brought into Cortland Co. from Massachusetts, and is probably known there as "Munson Sweeting." At the last session of the Pomological Congress, it was brought before the fruit committee, of which Dr. BRINKLE of Philadelphia was chairman, and Messrs. CHAS. DOWNING, C. M. HOVEY, and ROBT. MANNING, were members. The committee were much pleased with it, and suggested naming it "Northern Sweeting," leaving out Golden, as there is already an old and well known "Golden Sweeting."

This class of apples, called *sweet*, is much more sought for now than formerly, both for kitchen and table uses. There is scarcely a family now but seeks a small supply of sweet apples for cooking, and many persons prefer them, if good, for eating. We have several varieties of sweet apples here, many of them as large as small pumpkins and but little more palatable — their chief use is for feeding cattle. The *Pound Sweet* is of tolerable quality, bakes well, and makes good sauce. It is just now in season, and people are glad to get them at a dollar per bushel; but neither this nor any other that we know of in use now, cultivated here, can properly be called a *dessert* sweet apple. The *Bailey Sweet* is excellent, but its season is after the one we now notice. A fine sweet apple, fit for dessert or cooking in October and November, is therefore a great acquisition, notwithstanding the vast number of varieties now in cultivation. Such is the "Northern Sweeting." In the New England States it will undoubtedly succeed well, as also in New York and the Middle and Western States generally. Lovers of sweet apples will no doubt test it as soon as possible.

Size medium; form roundish, slightly angular or ribbed; stalk moderately stout, two-thirds of an inch long, in a pretty deep cavity. Calyx closed, segments long, in a pretty deep and slightly plaited cavity; skin smooth and fair, of clear yellow, becoming golden at maturity, with a red cheek; flesh yellowish, fine grained and tender, abounding with a rich, agreeable, saccharine juice; tree a vigorous grower and good bearer; season, October and November, and may be kept, we believe, through a considerable part of the winter.

THE CANANDAIGUA PEAR.

Catharine, erroneously, of Western New York.

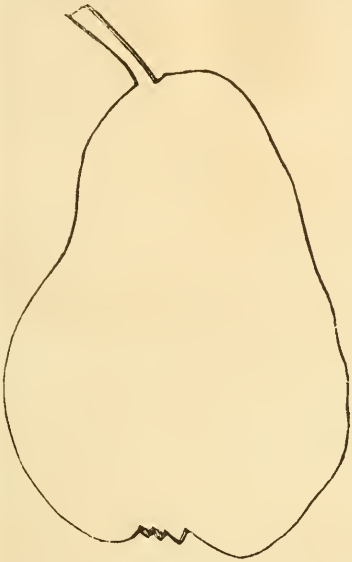
SOME seven or eight years ago, this pear was brought to our notice by HENRY FELLOWS, Esq.,* of Penfield, who has for a long time brought it to the Rochester market. At first sight, one would suppose it to be the Bartlett, but it is essentially different in many particulars of both tree and fruit. Mr. FELLOWS has fine old bearing trees, planted in 1812, being now between 30 and 40 years old. He informed us that he obtained his trees or grafts from the late Judge ATWATER of Canandaigua, who brought it there from Connecticut about the year 1806, or previous to that time. Until within a few years, this fine pear seems to have attracted very little attention here; but this is not at all remarkable, since it is but a short time since the White Doyenne (Virgalieu) was unmarketable, and left to the hogs or to rot under the tree; now they are hard to be obtained at $3 to $5 per bushel.

Up to this time this pear has been called by Mr. FELLOWS and others the "Catharine;" but this is evidently a misnomer, as there is an old and well known variety of that name. For this reason, and because it was said to be originally from Connecticut, we refrained from noticing it, expecting that it might be found cultivated in some other place under another name; but so far we have found no trace of it elsewhere. Recently it was exhibited at the Pomological Convention among seedling fruits from the neighborhood of Geneva, we believe, and the fruit committee to whom it was referred were much pleased with it, and suggested that it be called the "Canandaigua" pear, it being traced no farther than that place, and all the trees in Western New York having been obtained from that vicinity.

The history of this fruit is the same as that of the

* We shall obtain from Mr. FELLOWS some facts in his own experience with the culture of this pear. He and his sons are proprietors of a nursery at Penfield, in this county.

"Swan's Orange" or Onondaga, and is quite singular — both are traced to Connecticut, and yet neither of them are now to be found there. It may possibly be that both were seedling varieties that never had more than a local existence in Connecticut, and have entirely disappeared there now, and are perpetuated



CANANDAIGUA PEAR.

only by a single graft being brought into this country by early settlers from the immediate neighborhood of the parent trees. The *Canandaigua* is so much like the Bartlett, that if its history were not nearly as ancient, we should suppose it to be a seedling from it. As the matter stands, this is hardly possible.

In size it is usually medium, sometimes large, pyriform, slightly irregular, surface rather uneven; skin fair and smooth, of a pale yellow; stalk about three-fourths of an inch long, usually inserted somewhat obliquely; calyx open, very slightly sunk; flesh white, fine grained, buttery and melting; ripening from first to the middle of September; the tree is a vigorous and beautiful grower, both on pear and quince stock, and a good bearer every year.

Domestic Pine Apples.—The National Intelligencer states, that on Saturday, in the Washington Centre Market, Mr. Howlett, of that city, gardener and florist, exhibited a number of pine apples of his own raising, from the crowns of the foreign fruit, which were thrown into the street, and picked up there about a year ago.

"In time of peace prepare for war," is an old maxim, and has done mischief — in winter prepare for summer, is a new maxim for the horticulturist, and will do good.

THE FALL PIPPIN.

Mr. Editor:—It is not my design to engage in any pomological controversy. But I do not like to see the *old* "Fall Pippin" thrust out of any orchard to make room for any other apple; it is an old favorite of mine, one with which I have been intimately acquainted for more than forty years. I have spent many an hour in rambling among a number of large trees in "Old Dutchess," selecting the best apples I could find, such (as an old miser said with his money) as would do your eyes good to gaze upon. But I know of only two trees in western New-York that bear the same kind of apples, though there is a multitude of apples, in almost every orchard in every place that I am acquainted with that are called *Fall Pippins*, quite distinct from the Fall Pippin; yet I think good judges might take selected specimens of them at a certain state of maturity to be the true Fall Pippin.

The true Fall Pippin is generally larger, more yellow, more tender, less acid, not quite as long in proportion to its size, but not as good to keep. I think it would be far more difficult to keep them till the 1st of January than one of the so called Fall Pippins till the middle of February. Mr. Downing has a good description of the Fall Pippin in his work on fruits.

I intend to visit those two trees this winter, though some 14 miles from this place, to cut some Grafts from them and will send you a few, if you wish.

Where can I find some Sea Kale seed, and Pansy seed from choice varieties? Stephen Hale.—*Clyde, Nov.* 24, 1849.

Our correspondent will find no one, we think, who will dispute with him the merits of the *Fall Pippin*. In our opinion it has no superior if an equal of its season. The kind referred to is that known through this section as *Holland Pippin*, (but not the Holland Pippin of Mr. Downing,) a magnificent oblong apple, same texture and quality as the *Fall Pippin*. It keeps till March, and answers the description of the *White Spanish Reinette*, described by Mr. Downing and several European works. The tree in its growth &c., is a *fac simile* of the Fall Pippin.

Sea Kale seeds are usually found at the seed stores. Pansy seed of a choice variety is very difficult to obtain in this country.

ANSWER TO CORRESPONDETS.

Will you please name the best 25 sorts of Market Apples to be planted *solely for profit*, composed of 6 *Summer*, 4 *Fall*, and 10 *Winter* varieties?

Will you also state what varieties of Pears are *most* and which *least* liable to blight with you? F. K. Phœnix. *Delavan, Wisconsin.*

Remarks.— For profitable orchard culture in this region, we would choose,

Summer.—Early Harvest, Red Astrachan, Early Strawberry, American Summer, Sweet Bough, and Golden Sweeting.

Fall.—Gravenstein, St. Lawrence, Fall Pippin, and Jersey Sweeting.

Winter.—Rhode Island Greening, Yellow Bellflower, Baldwin, Esopus Spitzenburg, Roxbury Russet, Golden Russet, Pomme Gris, Northern Spy, Bailey Sweet, and Talman Sweet.

The selections above are made with a view to *profitable culture*, taking into consideration the vigor and productiveness of the tree, size, appearance, and keeping qualities of the fruit. Our own observations incline us to believe that no one variety of Pear is more liable to the blight than another.

Ladies' Department.

WE had designed to talk on various matters in this department; but we think the space is occupied to good advantage as it is. In our next, and subsequent numbers, we shall present thoughts and facts, important to the health, comfort and happiness of our fair readers. In this department we shall also have the assistance of several female writers, whose ability can but add interest and value to our paper.

SALLY SLY AND JENNY McKEAN'S BUTTER.

JOE'S wife was Sally Sly — when a small girl she was sly — she would not half wash the milk pail and sly it away and let it sour. She was sly at school and did not half get her lessons, but would have her book in sight when reciting; but as she grew older she learned that to get well married she must appear well, and so she bent all her cunning to get a superficial education in every thing, from roasting a potato to playing a piano. Poor Joe fell in love with her, and "love has no eyes" — so he married her. But soon after she entered on housekeeping, his eyesight came, and he saw his fix that it was "for better or for worse;" and he thought it was all for worse.— Like a true philosopher, he concluded to endure what he could not avoid nor cure, and got along tolerably well only when he came to her butter — for his mother was a real butter-maker. Every time he saw or tasted of Sally's butter he felt the horrors. Her manner of making butter was something as follows: she thinks it of no consequence whether the milk pail is sweet or sour — sets the milk in a warm room, because it is easier than to go in the cellar, and if some dirt should blow into the pans she thinks every man must "eat a peck of dirt," and no place will it slip down easier than in butter — she lets the cream pots be open, and when she churns forgets the poke; leaves the cream nearly at blood heat that it may come quick. When she takes it out of the churn she picks out the bodies of all flies and spiders — the legs and wings are so small they can be swallowed. She works out half the buttermilk and sets it away in a warm place for use. Poor Joe has seen so much butter of this kind that he declares butter does not agree with his health, and will not taste it. Yet his wife wonders why he does not try it, and marvels why he does not keep a dairy, and make butter for market.

Jonathan was a young brother of Joe, and he had occasion to eat at his brother's enough to know why he could not eat butter: and he declared he never would marry without knowing what his bread would be buttered with. Following the bent of his fancy, he made several attempts at matrimony, and Julia Juniper almost caught him, for there was always good butter on the table at tea, but he was determined to know who made it. On inquiry, she says, "La me! mother makes the butter: I take lessons on the piano." "Well," says Jonathan, "I want a wife that takes lessons on the churn — I shall look further." After several unsuccessful attempts, and just ready to despair, he started in pursuit of stray cattle, before breakfast, and wandered across the forest into the corner of the next town, and weary and hungry called at a decent looking house and asked for some refreshments, which was most cordially granted, for the family were what were called Scotch-Irish — in religion, Presbyterian, and in hospitality boundless.

Here he found the butter exactly right — though the weather was hot, the butter kept its shape as well as beeswax. He catechised the old lady about her housewifery — for the bread was as right as the butter. The old lady said her health was feeble — she could do but little, and Jenny had the whole management. He made some round-about inquiries concerning Jenny, and learned she was a hearty, black-eyed lass, of about two and twenty; had never seen a piano nor attended a ball — but knew the Assembly's catechism; could sing Old Hundred to a charm — spin flax and darn stockings, and was then gone to town with butter. He lingered, but she was delayed, and when his excuses for staying were all exhausted he started. He could not get the good butter out of his mind, and how it happened I know not, he soon found his way there again, and the result of his adventure was he made a wife of Jenny McKean. And now one lump of his butter is worth more than all Joe's would make in a month. There's no trouble in going to market — the keepers of genteel boarding houses in the neighboring village send and take it at the highest market price.

Now the main difference in these two women arises from the manner of training, though there is no difference in natural disposition. Old Madam Sly never looked on to see that Sally done up her work right, but suffered her to sly off her work as she chose, and though a good housekeeper herself, was altogether too indulgent, and like some other mothers, thought more of getting Sally well married than of making her fit for a wife — while old madam McKean was determined Jenny should be fit for any man a wife, whether she got married or not. Perhaps there is no more certain criterion by which to judge of a woman's general character for neatness and good house-keeping than by the quality of her butter. Find on the farmer's table a good, solid, properly salted, well worked slice of butter, and you need not fear to eat the pan-cakes or hash; but if you see a splash of half-worked butter — salt in lumps and a sprinkling of hair and flies' legs, you may be sure, if you board there long, death will not be obliged to wait for you to finish your peck of dirt.

"HOUSE AND HOME"

What's a House? You may buy it, or build it, or rent;
It may be a mansion, a cottage, a tent;
Its furniture costly, or humble and mean;
High walls may surround it, or meadows of green.

Tall servants in livery stand in the hall,
Or but one little maiden may wait on you all;
The tables may groan with rich viands and rare,
Or potatoes and bread be its costliest fare.

The inmates may glitter in purple and gold,
Or the raiment be homely and tattered and old;
'Tis a house, and no more, which vile money may buy
It may ring with a laugh, or but echo a sigh.

But a Home must be warmed with the embers of love;
Which none from its hearthstone may ever remove;
And be lighten'd at eve with a heat-kindled smile,
Which a breast, though in sorrow, of woe may beguile.

A home must be "Home," for no words can express it,—
Unless you have known it, you never can guess it;
'Tis in vain to describe what it means to a heart
Which can live out its life on the bubbles of art.

It may be a palace, it may be a cot,
It matters not which, and it matters not what;
'Tis a dwelling perfumed with the incense of love,
From which to its owner 'tis death remove.

Youths' Department.

Few of the youth in the country, we fear, appreciate or improve the advantages they enjoy — particularly those afforded by the long winter evenings. The youth in our cities, at most trades, have to labor as long, and longer, in the winter than at any other season. The evenings are not their own, but their employer's. In the country the winter is a season of leisure. The farmer's son and daughter employ the evenings as best suit their inclination. What an opportunity this affords for mental improvement — a rare chance to gain that knowledge which shall prepare them for respectability and usefulness in the world. A young man, by the assistance of such books as all can procure, in three or four winters can lay up a stock of knowledge that shall prepare him to act well his part as a farmer and citizen — a knowledge that will give him an influence over less intelligent neighbors, and if rightly used will advance the best interest of the country, and the good of all.

It is for every young man and every young woman to decide whether this golden opportunity shall be improved — these evenings well spent; or, whether they shall be wasted, or worse than wasted in idleness and frivolity. We would not detract from your pleasures — far from it; the pleasures of knowledge surpass any pleasure afforded by the too common amusement of the young. The fields of science afford solid pleasure — they furnish new sources of delight at every onward movement — they are strewn with flowers at every step. The pleasure of science is, perhaps, the only earthly exception to the words of the poet, that,

"Each pleasure hath its poison, too."

In the pages of the Farmer we can only hope to arrest the attention of the youth, and then bid them go on, furnishing them facilities, as far as possible, to help them search for knowledge — ever holding up the encouragement that industry and perseverance in a right cause ensures success.

Hints.—When I see a man hanging around the store, shop or taven, or loitering about home, because he has nothing to do, I am apt to think he likes company better than work, and is unwilling to work for what he can earn, that he promises to work for more persons at a time than would be best, and that he could find those in his neighborhood who would be glad to hire him to work, in order to obtain their just demands. I am apt to think, too, that he owes for some pig, bushel of corn, a few pounds of pork, house rent, or some other necessary, which on quarter-day will look rather squally. But I am apt also to think, if he becomes punctual in paying these little debts, faithful in his business, not extortionary in his wages, punctual in all his promises, and rendering himself useful to his employers to the best of his abilities, that he would be apt to find his business on the increase, wages improving, *less sauntering*, a firm demand for his labor, an increase in his pocket, a sweeter nap at night, a pleasanter wife, and withal — and what is best of all — a clear conscience.—*Boston Cultivator.*

Love of Fame.—The love of fame not regulated by principle, is more dangerous to the welfare of society than the love of money.

COUNTRY GIRLS.

Mrs. Swishelm, of the *Pittsburgh Visitor*, has written some very fine things. We extract the following from her *Letters to Country Girls*:—

"Well, girls, I know that, let others do as they will, you have to work, for if you do not, you would not be worthy the name of country girls. The drawling concerns who lounge round reading novels, lisping about the fashions and gentility, thumping some poor hired piano until it groans again, and putting on airs to catch husbands, while their mothers are toiling and boiling in the kitchen are not often met in the country. This class of girls are generally confined to cities; and you would be surprised to know how many of them are here. There are hundreds of girls in every large city who parade the streets in feathers, flowers, silks and laces, whose hands are soft and white as uselessness can make them, whose mothers keep boarders to get a living for their idle daughters. These mothers will cook, sweep, wait on table, carry loads of marketing, do the most menial drudgery, toil late and early, with very little more clothing than would be allowed to a Southern slave, while their hopeful daughters spend their mornings lounging in bed, reading some silly book, taking lessons in music and French, fixing finery, and the like. The evenings are devoted to dressing, displaying their charms and accomplishments to the the best advantage, for the wonderment and admiration of knights of the yardstick, and young aspirants for professional honors—doctors without patients, lawyers without clients—who are as brainless and soulless as themselves. After awhile the piano-pounding simpleton captivates a tape-measuring, law-expounding, or pill-making simpleton. The two ninnies spend every cent that can be raised by hook or by crook —get all that can be got on credit, in broadcloth, satin, flowers, lace, carriage, attendance, &c., hang their empty pockets on somebody's chair, lay their empty heads on somebody's pillow, and commence their empty life with no other prospect than living at somebody's expense—with no other purpose than living genteelly and spiting their neighbors.—This is a synopsis of the lives of thousands of street and ballroom belles, perhaps some of whose shining costumes you have envied from a passing glance. Thousands of women in cities dress elegantly on the streets, who have not a sufficiency of wholesome food, a comfortable bed, or fire enough to warm their rooms."

Early Rising.—Are you poor? you will probably forever remain so, if you habitually waste the precious hours of the morning in bed. Who will seek the labor or services of him who sleeps and dozes in the morning until seven or eight o'clock? If such a person is poor, he must remain poor. "He that would thrive must rise at five." The poor can ill afford to lose daily two or three hours of the best portion of the day. Economy of time and dilligence in business, are virtues peculiarly appropriate to those who depend upon their earnings for the means of subsistence. Allowing twelve working hours to a day, he who by rising at eight instead of five o'clock in the morning, thereby loses three hours labor daily, parts with one fourth of his means of supporting himself and family: ten year's labor lost in the course of forty years!—*Boston Cultivator.*

The idea about the want of time is a mere phantom.

Spirit of the Agricultural Press.

Fattening Animals.—A memoir was read to the Academy of Sciences at Paris, by M. M. Dumas, Boussingault and Payen, "Of researches on the fattening of animals, and on the formation of milk." These philosophers announce their belief that fatty matters are formed in plants alone; that they thence pass, ready formed, into the bodies of herbiviri, entering the chyle duct by the lacteals, and so passing into the blood; that the first degree of oxidation forms stearine or oleac acid; a further degree produces the margaric acid which characterizes fat, a still further degree the volatile fatty acids — in opposition to Liebig, who traces the origin of fat to the sugar or starch of the food. In confirmation of their views, they show that hay contains more per cent. of oleaginous matter than is produced in the butter from a cow fed on this hay; and that cows fed on potatoes, or other roots poor in fat, produce much less butter. They advance an influence, which bears much on rural economy, that a cow eliminates twice as much fat from a given quantity of food as does an ox; and hence the commerce of milk and butter deserves a high degree of attention. Some relative experiments on fattening pigs bear out the same general principles.—*Pol. Review.*

Subsoil Plowing.—Ex-Governor Hill states in the *Visitor*, that he has found great benefit from subsoil plowing on the "driest plains" near Concord, N. H. He states that in a field of potatoes on these plains, the past season, he found the length of the potato vines "sure index of the depth of the plowing." Wherever the ground was cheated of the subsoil plow, upon a balk, or in the field, the vines were as much shorter, as the soil was stirred a less depth." He gives the result of an experiment in subsoiling made several years since. The ground was plowed with a surface plow, eight inches deep, and a subsoil plow run in each furrow eight inches deep. He left two strips, a yard wide, not subsoiled. He had taken six crops from the field—three of grass, one of oats, one of corn—and the inferiority of each crop on the portions not subsoiled was apparent, and could be seen at the distance of forty to fifty rods. The subsoiled part gave from two to three tons of hay to the acre.

Starch from Indian Corn.—The Ohio Statesman informs us that large quantities of starch are made from this grain in that State. An establishment near Columbus is said to use 20,000 bushels of corn annually for this purpose. No attention is now paid to the color of the corn, as by the improved modes of manufacturing, as light-colored starch is produced from the dark-colored varieties, as from white.—The quality of the starch here made is said to be superior, commanding a higher price in New-York and New-Orleans than that made from wheat. The offal of the grain is feed to hogs, and at the manufactory alluded to, 500 to 600 head are annually fattened.

Potato Disease not caused by Insects—Mr. Curtis, a distinguished English entomologist, has just published a volume in reference to insects which attack the potato.—Speaking of the malady which has prevailed so extensively in potatoes for several years, he remarks—"Amongst the numerous causes which have been assigned for the appearance of this alarming and severe visitation, insects have been frequently taxed as the destrutive agents, but I am convinced the calamity is not to be attributed to their presence." He admits that there are many species of insects which prey upon the potato in its various stages, but he thinks there is no evidence that their attacks are in any way connected with what is called the potato disease.—*Albany Cultivator.*

Houses of Unburnt Bricks.—Houses of unburnt bricks may be made perfectly wind and water proof by being covered externally with a thin coat of mastic, which is prepared by mixing very coarse, sharp sand, or sifted road drift, with dry White Lead and Lithargee, beaten up with Linseed oil, and rendered sufficiently soft to work well with a trowel. This plastering becomes in a short time, so hard as to resist a nail, and will stand for an age without cracking or needing repair. For inside plastering, sharp sand and lime mortar is sufficient; papering the walls when dry.—*Boston Cultivator.*

This is a Great Country.—A correspondent of the New York Times states that, according to the report of the Commissioner of the General Land Office, that part of the United States territory not yet formed into States, will make *forty-six* States as large as Pennsylvania; each of which will contain *twenty-eight millions of acres.*

Hessian Fly and Good Wheat.—J. Oglesby, in the Pennsylvania Cultivator, states that he had a nine acre lot, from which he obtained 60 bushels of oats, the rest of the crop being briars, sumac, sassafras, Canada thistles, poke, elder, and nearly all other kinds of weeds. When the oats were harvested, the bushes were grubbed, and the weeds cut with a scythe. When perfectly dry, they were burned in a strong wind, as they lay over the ground. The nine acres then received 700 bushels of lime—the land was well plowed—and the next year it yielded 390 bushels of good wheat, untouched by the Hessian Fly, the fire having destroyed them.

Ventilating Bricks.—The London Builder says there has been registered in the Patent Office a brick so shaped that when two are placed end to end a circular space is left at the junction. This circular space connecting from course to course, a wall formed with them is, to a certain extent, hollow, and admits of currents of air through it either heated or otherwise. Each brick is nine inches square and three inches thick, the size of two common bricks.

We saw, the other day, some nice, large, healthy looking potatoes, which were grown in the center of a heap, of hard coal ashes. The height of the heap, to say nothing of the soil, if such it could be called, seemed most unfavorable to production of any kind, yet we have seldom seen finer potatoes raised under the most favorable circumstances. It may be thought that the value of coal ashes in agriculture is yet to be understood.—*Cambridge Chronicle.*

Cellars for Manure.—The claimants for the premiums on farms, offered by the Middlesex (Mas.) Agricultural Society, generally speak highly of the advantages of keeping manure in cellars. R. Chaffin states that he considers one load of manure composted in the cellar under his barn, worth three which have been exposed to the action of frost, rain, evaporation, &c. His cellar is closed, excluding the frost and rain altogether. His cows are kept in the barn, nights, all the year; their manure goes into the cellar where hogs are kept to root over the different materials, and mix them into a compost.—*Albany Cultivator.*

A New Machine.—A model of a machine called *The Bran Duster*, was exhibited at the Fairs held in this city in October, of which we had the opportunity of witnessing the operation, and which we deem worthy the attention of millers. This machine will, in every 100 barrels of flour, make 4 bbls. more which escapes with the bran, by the usual modes of grinding. The saving is thus easily calculated, and will be found an item of no inconsiderable amount. The machines sell for $300 to $400, and no doubt will soon be adopted by every miller. We understand that they are about being placed in some of the mills near this city. It can be seen in operation at the Turning establishment of Mr. Stowe in Usher's Alley.—*American Farmer.*

Flax Culture.—Mr. J. Galbraith, of Wisconsin, has undertaken to introduce the cultivation of flax into that State. He has been about two years in Wisconsin, and is well versed in the methods followed in Ireland, Holland and Belgium. His first trial was made at Musquinago, with 50 acres, and this year he has harvested the products of 100 acres. The fabric is stated to be quite equal to that of Irish and Belgian flax.—*Farmer & Mechanic.*

Important Discovery.—A surgeon of Gottingen has discovered a complete antidote to arsenic. It is peroxyde or the red oxyde of iron, twelve parts of which neutralize one of oxyde of arsenic. Experiments with this antidote have been tried upon rabbits and other animals with complete success. One advantage of it is that no injury can be done by too large a dose. In cases where too large quantities of arsenic have been taken, it has been found useful first to encourage vomiting.

Provisions from America.—During the last twelve months there were imported into Liverpool alone from the United States, 26,000 tierces beef, 37,000 barrels pork, 224,000 cwts. bacon, 15,000 hams, 50,000 barrels lard, 100,000 boxes cheese, 8,600 firkins butter. The value of the above is £1,000,000 sterling.

Large Crop of Beets.—We have received a bushel of nice and large Blood Beets, as a specimen of the crop raised by Mr. Turner, of the Insane Hospital in this town. Mr. Turner raised this season one hundred and sixty bushels of these beets on fifty-six rods of land.—*Maine Farmer.*

Irish Settlement.—Rev. Mr. Dove, of Ireland, has bought 20,000 acres of land in Cattaraugus Co., N. Y., and gone home to bring the population to settle on it.

Editor's Table.

We think none of our subscribers will complain of either the contents or the appearance of this number, although we have not made it as good as we shall make the succeeding number. We hope our friends will make an earnest effort to increase our circulation in their respective neighborhoods. Show the paper to your brother farmers—form a club—collect the *three* shillings and forward with the names.

Scene at our Office.—An intelligent looking, and apparently "well off" farmer of this county entered our office, when the following dialogue occurred.

Farmer—I want the December number of your paper.

Editor—You will perceive that this is the last number of the present year—I suppose you will renew your subscription for the next year.

Farmer—I merely called to get Mr.——'s paper I don't take the Farmer myself.

Editor—Don't you think it would be to your advantage to take the Farmer, and read it.

Farmer—I think I can plow and raise wheat as well as my neighbors who read the Farmer and sometimes I think better than most of them.

Editor—Suppose I grant that you can raise wheat better than *any* of your neighbors—I suppose you have some plan—some good method for doing so not known to them. Now don't you consider it your duty as a good citizen and neighbor to make this successful plan known.

Farmer—I am always willing to give my neighbors the benefit of my experience—indeed I consider it a duty, and I flatter myself I have done not a little good in this way.

Editor—I am glad you acknowledge your duty in this respect. Now if it is your duty to give the few you daily come in contact with the benefit of your experience, and you can do good in this way, how much greater is the duty to throw the light of your experience before the *one hundred thousand* readers of the Farmer, and how much greater will be the amount of good you can do in this way.

Farmer—I never wrote a line for a paper in my life, but I believe I will take the paper any way.

Editor—You must write, too,—give us the facts, no matter how, and we will put them in shape.

Farmer—I beleive I'll try.

Monroe County Ag. Society.—The annual meeting of the Monroe County Agricultural Society was held at the Court House in Rochester on the 11th of December. Premiums on field crops were awarded as follows: to Henry B. Moore, Brighton, first premium on corn, Ira Apthorp, Riga, second. L. B. Langworthy, Greece, first premium on carrots.

E. K. Hobbie, of Irondequoit, was elected President; N. Haywood, Brighton, 1st Vice President; F. P. Root, Sweden, 2d Vice President; John Row, Riga, 3d Vice President; Joseph Alleyn, Recording Secretary; James Vick, Jr., Cor. Secretary; and John Rapalje, Treasurer; Elisha Harmon, D. D. T. Moore, and John Rapalje, delegates to attend the annual meeting of the State Society at Albany.

An Agricultural Club has been formed in the town of Rush, in this county, of which Joseph Sibley is President. A club has also been in existence some time in the town of Webster. This is right. We think town clubs essential to the efficiency of County Societies. Our plan is for each County Society in which there are no town clubs, to take means to establish them in each town auxiliary to the County Society, making the President of each an *ex-officio* member of the County Executive Committee. The interests of town and county Societies would thus become one, as their objects are one. We make this suggestion for the consideration of those who are endeavoring to form or sustain agricultural associations.

Our Office.—We shall be happy at all times to see our friends and subscribers at our office. We keep files of all the Agricultural and Horticultural publications of this country, and many European works. They are always ready for the inspection and perusal of our freinds. We hope those who can make it convenient will make us a call, as we are always "at home". We will give any information, and render any service in our power, in procuring seeds, implements &c., or in any way in which we can advance the cause in which we are engaged.

Engravings.—The beautiful engravings in our present number were most of them designed and all executed by Mr. E. Baldwin, of this city. His work will be a better recommendation than any we can give. He is prepared to execute drawing and engravings of implements, stock, &c.

Tea Culture.—The New York Tribune has late advices from the tea plantation of Mr. Junius Smith, at Greenville, S. C. His plants are in blossom, and as healthy and flourishing as those of China at the same stage of growth. Every thing looks favorable, and Mr. Smith feels abundantly encouraged. He expects to place fresh tea upon the tea-tables of London and Paris in 20 days from his plantation.

Mr. Smith is a sanguine man. We fear he will find that labor is too high in this country to compete with the Chineese any better in producing tea than in growing silk. If cotton was down to four cents a pound instead of selling at ten, as it now does, tea might be raised and put up in the old planting States. The freight on a pound of tea from China is not over one or two cents, at most; and its first cost is all in the cheapest kind of human labor.

We are indebted to the author for a neat pamphlet containing an address delivered before the Buck's County (Pa.,) Ag. Society, by J. S. Skinner, Editor of the "Plough, the Loom and the Anvil." We extract one of the best passages in the address.

"Much better would Congress be employed in erecting a monument to Washington, in the establishment of a bureau as recommended by him, to enlighten the government in respect of its agricultural resources and interests, than in rearing perishable piles of stone and mortar, vain memorials, when built in honour of one whose fame already extends to the utmost verge of civilization, and will endure as long as the love of liberty shall remain unextinguished in the hearts of men.

"At a meeting of the London Horticultural Society, Nov. 6th, a paper was read from H. Dobree, Esq., of Beau Sigour Gurnsey. It stated that at the last Gurnsey fruit show, a Chaumontel Pear of perfect shape, and of the remarkable weight of 2 lbs. 4½ oz. Engish weight, was exhibited by his neighbor, Mr. T. A. Corbin.

"Some years ago Mr. Dobree transmitted a Chaumontel Pear to the Society, of the weight of 1 lb. 13½ oz. English weight, being the heaviest which had hitherto been produced in the Channel islands. The pear produced by Mr. Corbin, grew on a quince stock, and no artificial means were employed to increase the weight of the fruit, of which there was in addition a fair crop on the tree. The soil is a deep, strong, brown loam, which is occasionally manured."—*Gard. Chron., Nov.* 10.

The Chaumontel Pear of the Channel islands, Jersey and Guernsey, are famous all over Europe. Under ordinary cultivation a pound is not an unusual weight, but 2lbs. 4½oz., is certainly extraordinary. Such an instance as this is useful as showing what results may be obtained with certain varieties, where stock soil and situation are all favorable. In this country the Chaumontel is an early winter fruit of the first quality.

Elihu Burritt, the Learned Blacksmith, and the able champion of Peace, has just returned to the United States from Europe. A public meeting was called for his reception in Worcester, Mass., of which the Mayor was chairman. On taking the chair he gave a brief address, from which we take the following beautiful paragraph:

"A few days since I stood by the monument which marks the spot where the first enemy fell in the war of the Revolution. As I stood by that monument the question occurred, when will monuments be erected to commemorate the victories of Peace? And as I looked around me and saw each hill-side covered with the fruits of civilization, each valley filled with flocks and herds, each village with the cultivators of the earth, and each city with its smiling inhabitants, I felt that my answer was received, and that the monuments of Peace were already erected."

CONTENTS OF THIS NUMBER.

Premiums for 1850!

THREE SPLENDID AGRICULTURAL LIBRARIES!!

WITH a view to extend the circulation and increase the usefulness of the Genesee Farmer, the Proprietor offers the following liberal premiums to the friends of Rural Improvement, who may interest themselves in procuring Subscribers to the work. The LIBRARIES will be composed of the best Books published on *Agricultural Chemistry, Geology, Botany, Horticulture, Gardening Rural Architecture*—in short, just such works as are needed by every Farmer—a complete Library of Agriculture and its kindred sciences. Any one entitled to Premiums, and desiring any particular work that can be obtained either in this country or Europe, shall be accommodated. By this course we hope not only to aid the circulation of the FARMER, but to scatter GOOD BOOKS broadcast over the land

1st. A well selected Agricultural Library put up in a handsome case, (the books alone worth thirty dollars) to the person that shall send in the largest number of subscribers, at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May Number.

2d. A well selected Library handsomely put up in a case, (the books alone worth twenty-five dollars) to the person who shall send us the second highest list, as above.

3d. A well selected Library, in a handsome Case, (the books alone worth twenty dollars) to the person who shall send us the third highest list, as above.

4th. To the one who procures the fourth highest, the Transactions of the New York State Agricultural Society, from 1843 to 1850 inclusive.

5th. Such books as the receiver thereof may designate, worth ten dollars, to the fifth highest.

6th To the person obtaining the next (sixth) greatest number, five dollars, in Agricultural Books, on like conditions.

7th To EACH of the FOUR persons sending the next (7th, 8th, 9th and 10th greatest numbers, we will give volumes 6, 7, 8, 9, and 10 of the Farmer, bound together in boards with leather backs, or separate in marble paper, as may be preferred, worth $2.50.

BACK VOLUMES of the Farmer will be furnished, if desired and counted the same as new subscribers

☞ That all Post-Masters, Local Agents, and Subscribers, wherever the Farmer circulates, may have a fair and equal chance to obtain the Premiums, *traveling agents, post-riders, residents of Rochester and all city booksellers* are not included in our offer.

We shall keep a correct account of the subscribers sent by each person. In the March and April numbers of the Farmer we will publish a list giving the names of thirty or forty of the most successful competitors, so that each may know his prospect of success, and act accordingly. In the *May* number we shall announce the successful competitors.

Libraries and *Books* will be forwarded per order, immediately after the announcement of the successful competitors in the May number.

☞ Specimen numbers, show bills, &c., sent to all post-paid applicants All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at the risk of the publisher.

A CHEAP WAY TO OBTAIN GOOD BOOKS

No reasonable person can object to paying fifty cents for the Farmer for 1850. This being granted, any person who will send us ten names and five dollars, shall have ten copies of the Genesee Farmer for a year and Johnston's Agricultural Chemistry—a work that cost $1.25 at the book-stores.

If he will send ten dollars and twenty names, he shall have Boussingault's Rural Economy in addition to Johnston's Chemistry as a present At this rate, a young man who has a little leisure may easily obtain a good professional library by procuring subscribers to the Farmer, be getting one-fifth or one-fourth of all the money received, in good books!

First in Beauty and Value—Cheapest and Most Popular.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c

VOLUME XI. FOR 1850.

DANIEL LEE & JAMES VICK, JR., EDITORS.

P. BARRY, Conductor of Horticultural Department.

IN issuing a Prospectus for the *Eleventh* Volume of the GENESEE FARMER, the Publisher considers it unnecessary to state at length the design and objects of the work, or repeat former pledges as to its management. Those who read the Farmer are the best judges of its value and character, and can decide whether it is worthy of continued support—and those who are unacquainted with it are invited to examine its pages. IN POPULARITY and USEFULNESS it now ranks *first* among the various monthly journals of its class published in America, and every proper effort will be made to sustain its HIGH REPUTATION as an earnest and valuable aid to the Farmers and Fruit Culturists of the Country.

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DANIEL LEE.

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THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—FEBRUARY, 1850. NO. 2.

THE PRINCIPLES OF AGRICULTURE.

How much wheat or cheese can a farmer take from an acre of common, fair land, every year, and not impair its fertility? Suppose that he extracts the elements of wheat or cheese from his farm to the average depth of 12 inches; what amount of these elements will each cubic foot of his soil contain? In short, how much wheat, or how much cheese is there in that quantity of fair, common earth, provided one separated the whole of the matter that can by any known system of tillage, grazing or feeding, form the products named?

The bare statement of the propositions in the above form, is sufficient to satisfy a close observer, that not one man in a thousand has ever studied the first principles of scientific agriculture. Nor will the *things* in the soil that make good grass and a plenty of it, good wheat and sound potatoes, and a plenty of both, ever be generally known to the farming community till the elements of agriculture, like the elements of arithmetic and grammar, be well studied in common schools and academies. School boys can readily be taught to understand the language of science; but business men have little taste for, or patience with, what appears as the meaningless jargon of an unknown tongue. Take the case which we now have in hand. Our wish is to impart to all readers who know nothing of the terms and principles of analytical chemistry, a clear idea of all the substances in a cubic foot of earth that can be transformed into wheat or cheese. But the moment we begin to talk about the amount of phosphate of lime, and ammonia, in 100 lbs of soil, and the quantity of wheat or cheese which they will supply with those indispensable elements, the uneducated in agricultural chemistry will fail to comprehend the force of the reasoning submitted to his understanding. It will be like giving a boy a sum in cube root who has yet to learn addition, subtraction and multiplication. Hoping this defect in popular education will one day be removed by the Free Schools in the State of New York, we will proceed with our inquiry as to the quantity of wheat which a cubic foot can make, before the raw material will be mainly consumed in the crop, or lost in producing it.

No American citizen is so stupid as to believe that a bushel of wheat can be organized in any place from *nothing*. It will take *something* to make the first seed of this grain; and that something must come from somewhere. We have before us, in English journals, well authenticated cases, in which 200 *cwt.* of Peruvian guano applied to an acre of wheat have added a quarter, or 8 imperial bushels to the crop. Here is a gain of over four pounds of wheat to one of fertilizer. A critical analysis of any ordinary soil, of wheat, and of guano or bird dung, will show that the manure named will yield to growing wheat plants those elements of its seed, which are least abundant, and soonest exhausted in tilled land. These facts are of great practical importance, for they warrant the conclusion that so far as the material for making wheat is lacking in the soil, although the particular atoms needed be exceedingly small in the plant, yet the crop will not grow beyond the supply of its peculiar constituents. A great many experiments have been tried to determine what atoms are most needed in ordinary wheat soils to organize this grain; and ammonia or nitrogen in the form named, or in that of nitric acid, has been found most useful; but phosphates and sulphates of lime, potash and magnesia and common salt (chloride of sodium) are only a little less beneficial. Guano contains all of these as well as ammonia.

A cubic foot of fair wheat soil also contains all the elements of wheat or bird dung: but in no large quantities. English and Scotch farmers now grow about twice as much wheat per acre as any other farmers in the civilized world; and they do this simply by feeding the growing plants with the things known to be consumed by nature in organizing the crop. Strange as it may sound to such as have not investigated this matter, skilful dairymen have ceased to expect a cow to give a large product in butter or cheese, which is not well fed on nutritious food full of the organized elements of milk. Nor do they expect a dung hill fowl to form a decent shell to an egg without lime, or the egg itself, without organized nitrogen, sulphur, phosphorus and the other elementary bodies found in a chicken when first hatched.

The practical advantages of these researches are numerous. They reduce agriculture and rural economy to *a science* which is governed in all its essential parts by uniform and enduring Natural Laws. The time will never come when a calf or pig can form its bones out of iron; or when a kernel of corn will be organized from any other atoms than such as God first appointed, and fitted for the purpose. Hence, nothing is more variable than the quantity of corn, wheat and potatoes which can grow on an acre of land. Crops of this kind can never be made with the greatest economy of labor and material, till the composition of these crops be familiar to the farmer;

and he knows which elements are least abundant in his soil and in the atmosphere, and least available for use.

Stable manure kept under shelter, gypsum, salt, bones, ashes, and above all, the fertilizers that may be had from the vaults of privies in cities and villages, are rich in the elements of bread, meat, potatoes and cheese. If 100. lbs of dry *poudrette* will give 300 lbs. of wheat, why refuse to use this inodorous substance? Instead of planting five acres to raise 100 bushels of corn, why not try to grow that quantity on two acres or on one and a half?

Recollect that to waste the liquid excretions of a domestic animal, is to throw away half the value of its food, according to the experience of the best Belgian farmers. It is quite impossible to produce cheap food for cattle, horses, sheep and swine, without contriving to have cheap food for cultivated plants. A horse can live on nothing, or on pure flint sand, quite as long as a common vegetable. Make the economical improvement of land a particular study. It will repay you ten fold for the time so spent, in preventing the unskilful application of farm labor, and the unwise expenditure of money. Draining and liming are far from being as generally practiced as will prove advantageous to the soil.

GYPSUM—ITS ELEMENTS AND VALUE.

EDS. GEN. FARMER:—In the last Genesee Farmer I was pleased to see a brief notice, in a part of your late Address on Tillage, of the importance of gypsum to the farmer. Having been a subscriber for some time, I have long hoped to see in your paper a full analysis and description of this article. I am annually selling to cultivators of the soil, large quantities of Manlius Plaster, and I should esteem it a favor if you would turn your attention to this subject in your next.

1.—What are its elements as a fertilizer?

2.—Is its beneficial action upon the vegetable effected by absorption of mineral fertilizers from the earth, or from atmospheric gases, or both?

3.—Is its annual application to the same meadow, pasture or grain, prejudicial to the soil in the way of exhaustion?

Your answers, accompanied with such additional remarks as my questions may naturally excite, will not only much oblige a subscriber, but will doubtless be highly acceptable to a large portion of your numerous patrons. P. J. W.—*Fort Plain, N. Y., Jan'y, 1850.*

ANSWER TO THE ABOVE.—Our correspondent and all others are welcome to copy into any paper whatever appears in this journal, only not omitting, as too many do, to give the Genesee Farmer credit for its contributions to the agricultural literature and science of the United States.

QUESTION 1st.—"What are the elements of gypsum as a fertilizer?"

ANSWER.—*Sulphur* and *lime*. As dug from the earth, 100 pounds of this mineral usually contains some 21 lbs. of water, which can be driven off by burning at a red heat just as the much larger per cent. of water in alum may be expelled when placed on a hot shovel, in making burnt alum. Burned gypsum consists of 41⅓ parts of lime combined chemically with 58⅔ parts of oil of vitriol, or sulphuric acid. In 40 parts of the oil of vitriol there are 16 of sulphur and 24 of oxygen. Omitting small fractions, there are in 100 pounds of ground gypsum the following ingredients:

Lime,	33 lbs.
Oil of Vitriol,	46 "
Water,	21 "
Total,	100

In the oil of vitriol there are not far from 18⅔ lbs. of sulphur.

QUESTION 2d.—"Is its beneficial action upon vegetables effected by absorption of mineral fertilizers from the earth, or from atmospheric gasses, or both?"

ANSWER.—A bushel or one or two hundred pounds of this salt of lime spread pretty evenly over an acre, will soon be dissolved in rain or snow water, and can not essentially, if at all, increase the natural capacity of water to absorb common air or any fertilizing gases it may contain from the rotting of vegetables and animals on the surface of the earth. Gypsum does not, therefore in the opinion of the writer, contribute to the growth of plants from the fertilizers which it draws *directly* from the air, or from the soil. Being sufficiently soluble in water for all useful purposes, it enters directly into the roots of clover and other plants, and supplies their tissues with available sulphur and lime, from the lack of one or both of which the crop is diminished both in quantity and profit. In most soils it is available sulphur, more than available lime which is wanting; and ground plaster supplies this want. In 100 pounds of wool or hair there are five pounds of pure sulphur; which can only come from the grass, hay, and other food of sheep, cattle, and other domestic animals. The flesh and nerves of all animals, from man to the worm, contain sulphur. This comes from their aliment, which is derived primarily, from plants and the soil. When gypsum has enabled young clover, corn, peas, beans, and other plants to extend their roots in all directions, these extended roots imbibe food of every kind, including sulphur salts as well as phosphates, salts of ammonia, &c., which, without the aid of the gypsum, the comparatively few stunted roots had never reached, nor imbibed. The same law of vegetable development which enables the roots to descend deeper into the earth, and to extend themselves laterally, is equally operative in developing more and larger leaves above ground for the discharge of vapor and gases into the air; and probably, for imbibing aliment through the same organs. In this way, 15 or 20 grains of sulphate of lime spread over a cubic foot of earth, will enable little clover seeds, or the genus of the pea or bean plant to extract from that earth, more sulphur than the gypsum contained, and more of all else needed to form the plants named, both from the soil and the atmosphere.

Gypsum is not a "stimulant," for no plant has *nerves* or *muscles*, which can be *stimulated*. It is a simple, plain, every-day food, and nothing more. In all well drained, well-tilled land, sulphur salts need to be often added; because of their solubility and deficiency in quantity, in the soil. Form a stagnant swamp, or permit nature to do the same, and it will soon abound in the sulphate of iron, (copperas) in the sulphate of alumina and potash, (alum) in the sulphate of soda and magnesia, (epsom and glauber salts) and in the sulphate of lime, (gypsum.) Drain your swamp well, and away runs all your copperas, alum, glauber and epsom salts, and gypsum. Farmers must learn to feed their cultivated plants as they

do their hogs, sheep, cattle and horses—just what they need to meet the wants of nature, and *no more to be wasted.*

QUESTION 3d.—"Is the annual application of gypsum to the same meadow, pasture or grain, prejudicial to the soil, in the way of exhaustion?"

ANSWER.—It is not. If, however, the farmer is so unwise as to restore nothing in payment for the grass eaten by domestic animals, which per chance, daily go out of the pasture with full stomachs at night, and return with empty ones in the morning, as dairy cows often do; and he makes no restitution for the hay, grain and potatoes removed, then, of course, his land will grow poor, and poorer, and perhaps a little faster, by harvesting large, instead of small crops. Nevertheless, we seriously question the fact, whether a large crop impairs fertility more than a small one. On this point we have several highly interesting experiments in progress. If any reader sees, or thinks he sees, a material defect in our theory in reference to the beneficial operations of plaster, he will confer a favor by pointing it out.

TO DESTROY CANADA THISTLES.

MESSRS. EDITORS:—In your number for January, I see a letter requesting information relative to some practical mode of meeting the inroads of the Canada Thistle. This wide spread, noxious weed, is indeed alarming, though not necessarily so, except to the careless or inattentive cultivator, unless in stony and wet localities, unfit for, and preventing the free use of the plow. It cannot have escaped the notice of many of your readers, and probably you have once and again published the fact, that good wheat lands can be completely reclaimed from the dominion of the most inveterate growth of thistles by the simple process of a *free* and *timely* use of the plow. I am aware that many may say they have tried this remedy and found it to fail. To this remark I have only to say, that when *thoroughly* and *fairly* tried I never knew it to fail of so far succeeding as to leave scarce a thistle high enough at harvest to come within cut of the cradle; and that too, on fields completely covered with them before fallowing. This, however, applies particularly to old lands, where stumps, stones, &c., have been removed so as to present no obstacle to stirring the whole soil. But the desirable object of preventing the unsightly appearance in many harvest fields of rods, quarters, and half-acres of thistles left standing, or, cut only to open a passage to the laborers, can not be effected by the mere process of "breaking up," however well that may be performed. The determined resolution must be perseveringly carried out to put in the plow as soon as the thistles show a green surface, and this must be repeated to the third or fourth time, if necessary, previous to seeding, and if the season or time of plowing be hot and dry, so much the better. No one will understand that by this process a farm is to be cleared, root and branch, of this vile weed, in a single season, if indeed it be possible in a life-time, as the fields of the most careful farmer may be furnished from that of his adjoining neighbor with seed for a perpetual succession. It is merely intended to show the result of actual experience in some of the hardest cases in which good wheat has been raised without trouble from thistles. J. L.—*East Lansing, Tomp. Co., N. Y., Jan'y*, 1850.

STOCK IN GENESEE COUNTY.

BY E. S. BUCK.

EDITORS GENESEE FARMER.—I have just taken a trip for the purpose of seeing some fine cattle. Mr. HICOX, in Alexander, N. Y., has excellent cattle; he is much noted for matching and breaking steers, of which he has a number of yokes of different ages, all very good; one pair particularly, of two years old, handsome beyond discription.

I then went to see Mr. BRAINARD's stock, in Attica N. Y., he has a large stock of Durhams, all in high order, and it would well reward any man to go and see them. He was not at home, but I could see much skill and intelligence in the management of every thing about him.

I then went to see Mr. BECK's stock, in Sheldon, he was well pleased to show them, and well he might be. On going through his barn he opened the door which brought the cattle at once to view; and a more interesting sight I never saw. There were two large yards full of Devons, mostly pure blood; the older and the younger ones being kept separate, with a trough of pure running water in the middle. It was early in the morning; they had all been properly fed, and to see them play, was enough to make the heart rejoice. I saw other stocks of cattle which did credit to their owners.

On the other hand there are many Farmers whose cattle are half fed, and of all shapes and colors that can be thought of. Not having seen any better they suppose their own are excellent, or at least good enough, and have no thought of improving them. Such men should take some agricultural paper and they could learn to improve by the experience of others; they should go and see the stock of an intelligent reading Farmer, and learn the management of them; if so, we should have some fine cattle in almost every neighborhood, or at least in every town, which would be an invaluable benefit, not only to the owner, but to the community at large.

HEMLOCK SOIL.

MESSRS. EDITORS:—I notice in one of your papers an article on *Hemlock Soil*. I live in the town of Decatur, Otsego Co., and on hemlock soil, on a small farm of about 40 acres. For a few years past I have plowed some 3 or 4 acres of sod about the first of July, and let it lay until the last of August, and then thrown a light coat of manure over it, dragged it, and then sown my seed. In this way I have raised large crops of rye, much larger than those who plow two or three times. I think the more such land is plowed the more it freezes and thins out. Perhaps my experience may be of benefit to some. HAMILTON WATERMAN.—*Decatur, Jan.*, 1850.

SIMPLE REMEDY.—The following simple application for a horse's feet which are brittle, or hoof-bound, I learned from an English shoer, and having tried it with good effect and never having seen it fail, I send it to you to be used as you may deem proper.

Mix equal parts of tar and some soft grease, and having the foot clean and dry, apply it hot, but not boiling, to all parts, letting it run under the shoe as much as possible.

In bad cases the application should be made every day, for a while, and then two or three times a week, till the foot becomes strong and smooth. UTILITARIAN.—*Alfred, Alleg. Co., N. Y., Jan'y*, 1850.

Spirit of the European Ag. Press.

HUSBANDRY IN BELGIUM.

There is no subject connected with Belgium about which so much misapprehension prevails as its soil. We are accustomed to associate fine crops and superior farming with a fertile soil. And people generally, hearing of the great crops produced here, conclude without further inquiry that it is blessed with a fine soil and a finer climate—and the yearly, but not exaggerated account of the heavy crops, brought home by tourists, some of whom have compared the cutting of a field of wheat to the slicing of a plum cake, tend above all, to increase the mistake already abroad. The general character of the soil in the western provinces of Belgium, where the most perfect system of culture is carried on, is *lightness;* which includes all stages of fertility from the arid sand to the sandy loam. And though we find now much that really appears excellent soil, we have sufficient reason for supposing that it is not naturally rich, but has been brought to its present state of fertility by the most laborious cultivation, and there is not the least doubt, that if the farmers were to withdraw their careful attention from the soil, and the artificial treatment to which it is at present subjected were in the least relaxed, the broom and the fir would soon assert their ancient domain. The general aspect of the country is flat and open, not at all beautified by wood, and interesting to none but the farmer. There are no hedges, the fields being merely separated by ditches, on the banks of which are planted trees, which are cut at different intervals of time, from every fourth to every ninth year, according to the nature of the kind. They are planted merely to supply the people with firewood in those districts where other fuel is scarce. All kinds of trees are grown for this purpose. Some parts of the country are more wooded, which divests the scenery of that vapid tameness so peculiar to Belgium. But the cultivation of the country is by no means neglected. The luxuriant crops of rye, the healthy and equally dispersed drills of wheat, and the neatness with which all the fields are finished, give ample proof of the skill as well as the industry of the farmers. Grains of every stage of growth, and of every tint of green, flutter in the breeze, and the solid masses of ripe blossoms roll in the wind and form a beautiful contrast from their saffron yellow, with the surrounding crops. But there is still something wanting to animate this otherwise beautiful prospect. No herds enliven the landscape, no flocks send forth their bleating, and the milk maid's happy voice is mute. *Profit,* not *beauty,* is studied in Flanders. From Ghent to Antwerp we pass through the most thickly populated district in the world. There the soil is little better than sand, the most laborious culture is practised, and the greatest comparative average crops are raised of any district in Europe. In many places the soil presents a mottled appearance from the imperfect amalgamation of the sand with the decayed vegetable matter. In no part of the world, perhaps, is such strict attention paid to the tillage of each field; the consequence of which is, that the crops produced on the barren sand are not inferior to what you will find on ordinary soil. From the thickness of the population they are enabled to turn over almost all the soil with the spade, which would render the tillage, one would suppose, very tedious; but the tediousnes is not felt from the smallness of the farms and the excessive looseness of the soil.

A man with no pressure but that from his hands sinks the spade a foot into the ground; and truly it ought to be called *gardening,* rather than *farming,* from the great neatness and excessive care bestowed on every field. From the sandy nature of the soil, they are enabled to finish off each field with all the beauty of the flower-bed, while a border of well shorn grass, about ten feet wide surrounds the field, the edge of which is most carefully paved, so that on entering one of these fields, we are apt to suppose that we are trespassing on the carefully swept lawn of some noble residence. It is the Flemish farmers boast that the system of agriculture they practice has been handed down unchanged to them from their forefathers; and this is the more to be wondered at, when we consider that in no country have so many and such sanguinary battles and wars been fought and carried on as in Belgium. And yet the scenes of these dreadful struggles, the tendency of which is to retard all improvement, and to throw back to a state of pristine civilization all the arts of peace, of which agriculture is among the first, is also the seat of an organized and exemplary system of husbandry. Without attempting to account for this anomaly in the history of the arts of peace in a nation, let us proceed to inquire into some of the excellencies of that system which has been preserved amid the havoc of foreign and civil wars. The farms in Flanders are small, the average size not being more than fifty acres. Some are held on lease, others are not, and the duration of the lease varies from 3 to 15 years. The average rent for the best soils is not far from $8 the acre, besides the burdens or taxes, which usually amount to one-fifth the rent. The farmers of Belgium are a hard working class of men, in the habit of laboring on their farms, and generally ignorant of every other subject but their profession. But in this they show rare sagacity and experience. And though unaided by, and almost despising, the light of science, they discover in some parts of their system of agriculture a perfection to which science has never yet guided the farmers of this or any other country. The number of laborers, who live on the farm throughout the year is about six to the fifty acres, and they receive usually 20 shillings a month with their food, which the farmer values at about a shilling a day, making the full wages for a man equal to about $75 a year. Their food consists of boiled milk and bread for breakfast, soup or butter-milk and bread and butter for dinner, with potatoes and meat five times a week, and bread and milk for supper. They work at the different seasons of the year from ten to fourteen hours a day. The day-laborers, who are only employed at certain seasons, receive from 14 to 18 cents a day, with their food, and the boys and girls 10 to 12 cents. This must seem to us a very low rate of wages, but when we consider the corresponding cheapness of the necessaries of life, and that a laboring man can live very comfortably in any town in Belgium by paying one dollar a week for food and 20 cents for rent of a room, it alters the case materially. The number of horses kept on a farm is at the rate of a pair to fifty acres, and the number of animals supported altogether on such a farm far exceeds any thing we are accustomed to in this country. This, indeed, as we shall hereafter see, is one of the secrets of their farming. The keep of a horse is estimated at thirty cents a day. They are fed during the

winter on oats, straw, beans and hay, and in summer on cut grass. They are small, but compact, of beautiful action and high-spirited. These sleek Flemish horses were for ages held in high esteem in England and other parts of Europe. Their breed of cows is not distinguished by any peculiar excellence, as no attention has been paid to improving it. They have a practice by which they ensure the regular feeding of the calves, which is considered by them essential to quick fattening. This is, immediately after they have got their usual quantity of milk, to put baskets over their mouths, to prevent their eating anything in the interval between the feeding times. Very few sheep are kept, and these are of the worst description. Their fields are small, and merely divided by ditches. Such a thing as a hedge or a fence enclosing a field is never seen. These are unnecessary from the peculiar management of their stock. Under-drainage is rarely practised. Indeed the nature of the soil is such as not to require it. But to promote the drying of the fields, and to draw off the surface-water from the plants, a spading of earth is taken from each furrow, and scattered over the ridge, so that in a heavy shower, the rain-water finds a ready course to the ditch which skirts the fields. The attention which is paid to the working of the soil is one of the points in which they show their skill of management. They forbear from sowing any crop until the soil is thoroughly pulverized by repeated plowings and harrowings, and frequently resort to the spade to give additional depth to the furrow, and better to prepare the soil for the reception of the seed. The plows used by Belgium farmers are so simple and rude in their construction as scarcely to deserve the name. And in most parts of the country the spade is much more used for agricultural purposes. Such is the abundance and cheapness of labor, and the comparative scarcity of land, that it is common to weed out fields of grain and especially of flax, with as much nicety as a gardner in this country would weed a bed of carrots or onions. At certain seasons you will see rows of women in the fields creeping on their knees among the young crops and picking out with the greatest care the injurious weeds and grasses. This speaks well for the industry of the people, and could only be practiced in a community proverbial for indomitable patience and perseverance.

We now come to a subject which explains the grand secret of the success of the Flemish farmer in raising such large crops, and in transforming a country naturally unfruitful into what may justly be called the "garden of Europe." This is *his economy in saving, and skill in applying manures.* His first object and great aim is to save every thing which can possibly be converted into a fertilizer, to put back upon the land, and supply the constant drain of the elements of bread and meat which his large crops require. His ashes-cart and urine-barrels traverse every street in the town, and every bye-way in the country, to collect these valuable fertilizers to spread over his land. I have already mentioned the large number of animals, compared with the extent of the farms. This is an important feature in his system of husbandry, as they are kept tied up all the year round, and the utmost care taken that none of the manure is wasted. It is in this management that the farmers of Belgium excel those of every other country, and by this system they are able to raise larger crops than any other body of farmers in the world. Ashes are extensively used as a top-dressing, especially for clover. And they set so high a value, and depend so much upon them for the success of their clover-crop, that it is a current saying that, "he who buys ashes for his clover-crop *pays nothing*; but he who does it not, *pays double.*" On this all-important subject, the saving and application of manures, the farmers of our own country can learn a lesson from those of Belgium, and we may perhaps make it the subject of a future article. Suffice it now to say that this art, combined with unwearied industry and perseverance, has enabled them to convert a country naturally poor into one of unrivalled fertility.

—*Washington, Dec.*, 1849. W.

CULTIVATION OF CARROTS IN FRANCE.

The skill of French farmers in cultivating root crops is well known. In no country in the world is the sugar beet so extensively and successfully grown, both for extracting the sugar, and for feeding to stock. The carrot seems lately to have attracted much attention among the most experienced farmers, and I give below their most approved method of cultivating this valuable root, by which they often get a crop of 12 to 1500 bushels to the acre. The variety mostly raised is the *large white, green topped,* which grow a good deal out of the ground. They are prefered to the orange from their producing so much larger crops, although they are acknowledged to be less nutritious. The experience of the best French farmers is, that *three tons of carrots* are worth as much as *one ton of good hay,* either for keeping horses or milch-cows through the winter, or for fattening cattle. Now, estimating the crop of an acre of carrots at 1000 bushels, and by proper cultivation it can be made far to exceed this, you have what is equivalent to at least *ten tons of good hay,* which as the produce of one acre, well repays the extra labor and trouble required.

The analysis of this root, as well as the experience of farmers, shows that 60 lbs., of carrots given to a cow will supply as much of the materials to be elaborated into milk as 20 lbs. of clover hay. Both cattle and horses eat them with avidity, and after a little time appear to prefer them to any other kind of food. These facts all recommend the more extensive cultivation of carrots by our farmers, and I translate the following from the "Journal D'Agriculture Pratique," as the most approved method of preparing the land &c., now practiced in France.

To ensure a large crop of carrots you must have a deep well drained soil, *sandy loam* is best, with a sub-soil through which the root can easily penetrate, it must be completely pulverized, and rendered light and friable by the frequent use of the plow and harrow; it must be well enriched with manure, and above all be kept free from weeds. By observing these conditions you can depend with some degree of certainty upon an abundant crop, and one that will amply repay the labor expended. In the fall, soon after harvest, select a suitable piece of land from your wheat stubble, and give it a light plowing about the last of October. Two or three weeks after give it a second plowing still deeper, or what is better, go over it with the sub-soil plow, having first spread evenly over the land about one-half the quantity of manure you intend for the piece. Let it remain in this state during the winter, and the effect of the snow and frost will be to pulverize and mellow the soil, rendered light

and permeable to the air by the fall plowing. In the spring, as early as the weather will permit, spread over the remaining half of the manure, and plow it once more. This throws up on the surface the manure first applied, which is already partly decomposed, and buries beneath the soil that last put on, where it more readily undergoes the decomposition necessary before it can supply the food to the future crop. The land thus prepared should remain until about the 1st of May, before putting in the seed. It should then be gone over with the harrow, and rendered as level and smooth as possible. To sow the seed, a small seed-drill is useful, as it saves much time and labor. When this cannot be procured however, it can be done by hand. The drills should be two feet apart, and as straight as possible. This is necessary that you may use a horse cultivator or small plow to run through the rows, which saves much labor in weeding. The quantity of seed required to the acre is about three pounds. It is best to sow it thick, and the first time you weed them, to thin out the plants, so that they may stand three or four inches apart. In this way they grow much larger, and although fewer in number, they will yield on the whole a much greater crop. It is sometimes said that carrots delight to grow amongst weeds, and it does seem as if the reverse of this is true, that weeds delight to grow among carrots. Indeed, it is the labor of weeding them, that deters many farmers from cultivating them extensively to feed to stock. But if they are carefully weeded out twice during the season, and frequent use made of the horse-cultivator to run between the rows, it will be found quite sufficient, and will not constitute a very severe tax upon the time and patience of farmers. They should be allowed to remain in the ground as late in the fall as the weather will permit, as it is found they keep much better in this case, than if harvested early. In most parts of France the climate is so mild, as not to render it necessary to dig them up, until they are wanted to feed out to stock during the winter. But in England and other countries where the winters are more severe, they are either stored away in cellars, or piled up in the field, and covered first with straw, and then with a light coating of earth which protects them from the frost. W.

THE "GOOD TIME COMING."

I regard the Farmer as the best paper of the kind with which I have the pleasure of an acquaintance. I hail this as a promising era to the Agriculturists of our country. They are, as a mass, awakening to a sense of the importance and honor of their calling, and the time will soon come when, instead of being looked down upon as an inferior class of beings, it will be considered as the most honorable title which can be applied to a man, to call him an intelligent farmer. But this state of things can not be hoped for without an unceasing effort. The farmer, instead of striving to become notorious in the political world, must bend his whole energies to the improvement of his farm, his stock, his system of husbandry and his *mind*. He must show to the world that he is proud of his profession by bringing his children up to it, and that too, with an education that shall make them men fitted for any station. And then, and not till then, may we expect Agriculture and Agriculturists to hold that place in society to which they are justly entitled. Utilitarian.—*Alfred, N. Y. Jan.* 1850.

Drill Husbandry.

CORN vs. WHEAT—DRILL CULTURE, &c.

Messrs. Editors:—Much has been said on the relative profits of the wheat and corn crops of Western New-York. If you please, I will give you a short chapter of my own experiments. Last spring I found myself in possession of a field of eight acres on which wheat had been grown the preceding year. It was thickly seeded with blue grass, which I resolved to chastise by thorough summer-fallow. I had it turned over the last of April for that purpose, but then altered my mind and concluded to plant with corn. This last operation has completely annihilated the blue grass, a result which I could hardly have obtained by the most thorough course of summer-fallow. But now for the crop. I harvested from the 8 acres 600 bushels of ears of good corn. Not a very extraordinary crop you say, but wait a moment. Assuming that two crops of corn can be raised on the same piece, to one of wheat, and we have the following result:—The two crops as above, will give six hundred bushels of shelled corn, which at fifty cents a bushel, the average price, would give $300. One crop of wheat, at twenty bushels per acre, which is an average yield, would give, from the eight acres, 160 bushels, which at one dollar per bushel, would leave a balance in favor of the corn crop of $140, to say nothing of the cleansing of your fields of blue grass, red root, insects, and all the mighty hosts of enemies with which the wheat grower has to contend. Try it farmers of Western New-York, and see if I have figured right. Get you a wheat drill, if you have not one already—*any* one of them will answer. Seymour's is the *best*. By the way, do not be discouraged about the drilling system, because our enterprising friends at Brockport, in their efforts to simplify and cheapen, so as to bring their drill within the means of *all*, have given us a machine which is not in all respects perhaps what it should be, they will remedy that another year, and give us a *better* one. Get you a drill, I say, to plant your corn; and then a boy, with a team, will plant his 12 acres a day, and grow finely at that. Fill your cribs with the golden harvest; not to sell to the distillers to convert into whiskey, that bane and curse to humanity, but to convert into beef, pork and bread, to cause the heart of man to rejoice, and the widow's tongue to sing for joy. Do not plow up your ground in the fall (the opinion of Dr. Lee to the contrary notwithstanding) to bleach and "waste its fragrance in the desert air," but if practicable, plow it up one day and plant it the next; and then the fertilizing gasses (I do not know their names—Dr. Lee will tell you) as they escape from the earth, will be taken up by the growing crop and held in solution or in reserve for the future perfecting of the crop. Mother Nature is a great economizer, and curious rectifier of these matters. Read again the article in the last Farmer on the Philosophy of Tillage, and *blush* with me, at your ignorance of the *profession* which you have loved and cherished your life long, and resolve to send your sons to the Agricultural College which the *people* are now *demanding*, at the hands of your sapient legislators, as there is now some prospect that this just and reasonable demand, which we have made in vain these many years, will at last be granted. Calvin Sperry.—*Gates, Monroe County, N. Y., January,* 1850.

THE USE OF THE DRILL.

I HAVE used for the past two seasons the Drill for putting in the most of my wheat crops. Having come to the conclusion that the principle of *drilling* was the preferable mode of sowing grain, I, in the fall of 1848, hired a drill of RAPALJEE & BRIGGS, Rochester, one of Pennock's Patent. I did this for the purpose of experiment. It was the first drill used in this vicinity, and the result of its operations were watched with a great deal of interest both by neighboring farmers and myself.

The lateness of the season at which I procured the drill rendered it impossible to sow but few fields except my own; and indeed, I did not sow all my own wheat with it that fall,— using the gang and the harrow in the same field with the drill. The experiment confirmed me in the opinion I had formed of its utility, and I believe removed the doubts of a great many with regard to its usefulness, as is attested by the purchase since of quite a number of wheat drills in the neighborhood and vicinity; and if they do not come into general use, it will be owing more to bad construction, or want of skill in their use, than to any thing else.

The grain sown by the drill spoken of above grew and yielded handsomely. It was thought by some as well as by myself, that there was a marked difference in some fields in favor of the drill over either the gang or harrow; in others I could see no difference. Be that as it may, I again repeat my confidence in the mode of drilling in grain as preferable to any other now in use.

I do not know that my reasons for that opinion are new to any one, or different from the reasons of any body else, whose views coincide with my own with regard to the drill; but as my opinion has been frequently asked with reference to its use and benefits, its profitableness, &c., and which has always been expressed favorably, I will state MY REASONS for that OPINION, briefly.

First — The quantity you wish to sow to the acre can be determined, with great precision and accuracy: so much so that you might almost measure your land by the quantity of seed sown; no guess work about it.

Second — When the exact quantity of seed to the acre is determined upon, that principle of sowing which will give the most reasonable assurance that every grain sown will germinate and come to maturity, is most certainly the one to be adopted. The mode or principle that gives that assurance, (practically compared with any other in use,) is that of drilling; BECAUSE every grain is covered, and to such a depth as to insure germination, growth, and protection, till it is ready to yield up its 60 or an 100 fold. You see no seed lying scattered over the ground unburied where the drill has been to work, as is too frequently the case when sown broad-cast and put in with the harrow and other methods. No seed covered so shallow as merely to insure its sprouting and coming up, to grow awhile and then perish at last, for want of decent burial at first, sufficient to give it nourishment and support to the end. The drill in a great measure relieves you from these painful calamities.

Thirdly — On lands that are known to heave and leave the roots of crops exposed to the severity of cold bleak winds and frosts, the benefit of drilling must be apparent, owing to the reason, that the depth to which the seed is put in the ground, and the close manner in which the roots become matted together, before the frosty season comes round, give to the grain such a power of protection and resistance as greatly to overcome the evil.

Fourthly — Will a less quantity of seed to the acre drilled in, produce as much as the usual quantity sown broad-cast? (i. e., will 5 pecks, for instance, drilled in produce as much as six, sown broad-cast?) I cannot answer that question from experience satisfactorily to myself, and consequently to no one else. I am experimenting on that point, and will cheerfully make public the results when known. I can only say now that I incline to the opinion that a less quantity than is usually sown broad-cast, will answer. Why not, if a greater quantity of seed comes to maturity, when sown by the drill?

Fifthly — Can we obtain an equal amount of yield from the acre, by sowing the same quantity to the acre with the drill as when sown broad-cast? Most assuredly. And,

Sixthly — I would use a drill, whether I obtained any greater yield, or only as much, either from a less or the same quantity of seed sown to the acre, as by the usual method of broad-cast sowing, because it is such a neat, clean, handsome, satisfactory way of "seeding;" after your ground is properly prepared, one operation being all that is necessary to finish up in complete style both sowing and covering, saving the labor and expense of the former. If the rain comes down in the midst of your labor, you can bid it welcome: for it finds you with your work, *so far completed.* If your field is ready to sow, and you want to begin on a certain day, high winds need not prevent.

Seventhly — If my ground is suitably prepared, I can plant my corn, beans and peas, with a little extra care, as well with the drill, as in any other way.— Quite a saving of labor here.

The above, then, are in brief, chiefly my reasons, in favor of the principle of drilling. I have been asked how the drill would do on lands that are sweaty and spouty, where wheat is liable to perish on that account. I answer that the drill is no remedy against such an evil: and would advise such as have lands of that description to thoroughly underdrain, as the only remedy, and then the drill can be used upon them with pleasure and profit both.

Speaking of the drill, it is not to be supposed that it is yet brought to perfection, and no doubt all kinds have their faults and objections; some of which are vital, others of a less serious nature. We must be careful to procure the best in use. In my remarks on the relative value of drills, I shall speak only of those with which I am acquainted, and of those of which I have reliable information.

I found in using the Pennock Drill, although it executed its work sufficiently well and satisfactory, so far as getting the seed into ground was concerned, yet its complication, or perhaps I might better say, *the* fixtures, employed to adjust the drill-tubes, feeding-boxes, cylinders, &c., rendered access to these same drill-tubes, feeding-boxes, cylinders, &c., the very parts most needing care and attention while the drill was in operation, almost impossible, so far as relates to ease, facility, comfort, and what is of more value, profit — (time.) If any little accident occurred, such for instance, as the breaking of the "Wooden Peg," common to all drills, I believe, it was with some considerable difficulty with which you could

worm your way to the place of accident for its restoration. The same with regard to regulating the screws in the cylinder for the purpose of sowing a greater or less quantity of seed to the acre; as well also, as of a great many other little things absolutely necessary to to be "fixed" or handled during the time occupied in drilling. This rendered the use of said drill, to me at least, vexatious and troublesome, and quite objectionable; still it has its virtues. The principle of feeding with a cylinder I am much in favor of; if the drill is well made, and of good material it must be said to be *a good drill.*

I have not used the *Brockport Drill*, myself, but have examined it somewhat closely, and seen it in operation, as there were several bought and used in my neighborhood the past season. The drill seems to be simple in construction, and apparently quite easily handled and attended. But there is an objection or two brought against it, by some who have used them, which if true, must be vital:—and these are, that they easily clog in feeding, and do not distribute the seed evenly along the drill row, the feeding being done in pulsations. This is to be regretted; and it is to be hoped that the evil is not without remedy.

Of the *Seymour Drill*, I can only speak from reliable information. It is said to be a very simple, well constructed, handy, desirable drill. Mr. Seymour attaches an apparatus for sowing plaster, ashes, &c., to his drill, if the purchaser requests it.

I used myself, last fall, a drill invented and built by Bickford & Hoffman, of Macedon, Wayne Co., and must say I am much pleased with it. I cheerfully bear testimony to the complete and satisfactory manner in which it performed its work, executing it to my entire satisfaction every way, and especially as regards the three vital duties a drill has to perform, viz, regulating the quantity of seed to be sown to the acre, its equal and even distribution along the drill-furrow, and the depth of its burial in the ground. It feeds with a cylinder. The drill is simple in construction, and can be used with great ease and facility, owing to the readiness with which you can approach all its parts, especially those needing handling and attention while in use. It is strongly and firmly made, and of good material.

I know of no objections to the drill that are vital, nor none of any kind that need deter its purchase and use. I think it might be improved in a still more handy application of its apparatus used in raising and dropping the drill teeth, &c. Raising and lowering them all at once for instance.

But these things will readily suggest themselves to the inventor and many others, who will no doubt make improvements to it, as fast as its practical use shall develope their necessity. W. S. Fullerton.
—*Sparta, Liv. Co., N. Y., Jan. 1st*, 1850.

SENECA COUNTY FAIR AND TRANSACTIONS

We have received from John Delafield, Esq., the able and energetic President of the Seneca County Agricultural Society, a beautifully bound and printed copy of their transactions, for 1849, in quarto form. We only wish that every county in New York, and the Union, had such a society, and each society such a President. We give a short extract or two from the address of Wm. F. Coan.

Farmer, or mechanic, or laboring man of any calling, are you willing that your son, only because he holds the plow, or blows the forge, or drives the loom, shall be made to stand upon the outer porch and denied admission into that inner sanctuary where intelligence and refinement hold their Court! Shall your wife, shall your daughter, shall my daughter, when she takes her place in community, or society, shall her cheek be made to blush, not from guilt, not from a lack of cultivation, refinement, or of beauty, as she is pointed to a lower seat, solely because her husband or her father is a sunburnt farmer or a laboring mechanic! If ignorance or any other untoward cause has placed its withering hand upon us as a class, and confined us to a secondary position, let it be so no more. I speak to you, this day, in behalf of interests near and dear to me, and I excuse me if I speak earnestly. No other design actuated the men who founded and sustained these agricultural societies, but to diffuse light and refinement in the place of ignorance and rudeness. And I felt it my duty, as I wish every man did his, to come and contribute of my means and my influence, limited though they be, to sustain this Society, whose annual celebration we have been permitted to attend.

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If your children are not under the necessity of cutting down the forest and subduing the uncultivated wild, if the kind parent has endured privation and want that his child may not; may the blessing of God and your child's gratitude be your's; but, may we ask, if, while you have filled the purse of your child, you have neglected his head? Alas, the remark or the question could not be answered by a great many without a blush, for many a father and mother too, live, so that they may, when dying, put much money or farms in the hands of children who cannot write a legible hand or spell beyond three syllables.

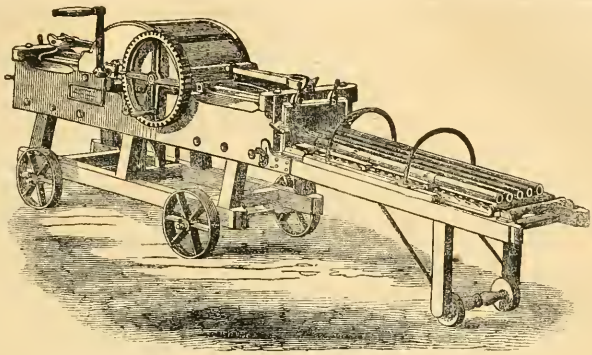
Do you say that you have not the time to devote to the cultivation of your child? Have you time to cultivate broad fields? Have you time to cultivate everything that adorns the farm or yard, and have not time to cultivate your own or the minds of your children? What makes you to differ from your ox? Nothing but the mind. If you fail to supply the mind of yourself or your child with wholesome, invigorating food—if you fail to occupy the mind with intellectual knowledge, it will be occupied with knowledge of a baser sort.

RURAL PURSUITS

We take the following extract touching this subject from the excellent Address delivered by S. B. Parsons, of Flushing L. I., before the New Haven Hort. Society:—

"I recollect two prominent instances of the effects of these widely differing modes of life. A man of talent, strong mind, and energetic character, came years ago to reside in one of our large cities. He became a merchant; he devoted his whole soul to the acquisition of wealth, he made money his idol and his success was beyond precedent. He became enormously wealthy, house was added to house and land to land. His character became year by year more narrow and his hand more grasping, until no other thought occupied his soul but that of money. About the same period of the commencement of this man's career, there entered upon active life in a highly fertile rural district in the interior of the same state, a man of equal talent, of equal energy, and of practical ability, recognised by the highest in the land. Commencing life as a surveyor, he was early familiar with the beauty and pleasures of country life, and his soul became insensibly refined by evidences of Almighty benevolence around him. With abundant opportunity to profit largely by purchase of public lands, he confined himself to his business, and retiring with a very moderate competence, occupied himself with his farm and various branches of natural science. As a botanist he had scarcely his equal, and as a keen observer of natural objects he has not a superior. His style of living is of the simplest kind, and every thing about him indicates the superiority of the mind over the body. When I last saw him it was delightful to witness his simplicity of manner, covering, as I knew it did, so much intelligence and intellectual cultivation. And although his hair was white with age, his eye would sparkle with pleasure while descanting upon the beauty of a favorite tribe of plants.* Now can there be a question whose life was the most rational or most productive of enjoyment, this man's or that of the man of millions."

* This is such a faithful portrait of our venerable friend David Thomas, of Cayuga Co., that those who know him will at once recognize it.



TILE MACHINE—IMPORTED FROM EUROPE BY J. DELAFIELD, ESQ.

DRAIN TILE MACHINE.

Draining, now so generally practiced in some parts of Europe, is attracting considerable attention in our country. In the last volume of the Farmer we gave all the information perhaps necessary, and we now refer to the subject for the purpose of noticing the Tile Machine recently imported from England, by J. Delafield, Esq., President of the Seneca County Agricultural Society, for making Drain Tiles, Soles, Pipe and other objects of use to farmers.

This Machine combines every improvement which has been sanctioned by the experience of the English and Scotch Agriculturists. It has a variety of dies, either of which can be used and changed at pleasure. Mr. B. F. Whartenby, of Waterloo, Seneca County, N. Y., who is an experienced Potter, works this Machine, and has already furnished a variety of drain tile to the farmers at very reduced prices.

The high price of tiles has been the great objection to their use in this country: the facility with which they are made by this Machine has reduced the cost. The following list exhibits the sizes of Tiles and Pipes which can be produced as needed, with their prices at the factory.

DRAIN TILES.

4 inches high, by 15 inches long at				$15 per 1000 Tiles.		
3	"	"	"	"	12 50	" "
2	"	"	"	"	10	" "
Soles for the above, if required,				$6 25 per	"	largest size
"	"	"	"	5	"	" smallest size

DRAIN PIPES.

4 inches diameter. 15 inches long, at				$16 per 1000 pipes.		
3	"	"	"	"	14	" "
2	"	"	"	"	10	" "
1½	"	"	"	"	9	" "
1	"	"	"	"	8	" "

Pipes of larger size can be made by this Machine, also semi-cylinders of 6 and 11 inches diameter. Roof and ridge tiles are turned out with equal facility. To all who desire to understand the system of draining, we advise a reference to the article contained in the last volume, (1849,) October number.

A plowman on his legs is higher than a gentleman on his knees.

MORE LIGHT GIVEN.

BY CALEDONIA.

Messrs. Editors:—In answer to "*Ridgway*," I will in the first place remark, that probably no one in perusing the statistical products of the farm referred to, in the October number of the Farmer, but will readily percieve a typographical error in relation to the number of acres of improved land. Instead of ninety-six acres, it should have been one hundred and ninety-six. This farm is all arable land, all susceptible of producing the finest wheat, or grain of any kind, and also well adapted to clover.

In order to satisfy Mr. Incredulous, I will state the manner in which the farm has been cropped and cultivated, during the time I have been acquainted with its management. The farm is regularly divided into 17 lots, each of which is appropriated either to wheat, corn, barley, oats, or clover, alternately. For the purpose of discriminating the fields they may be numbered, and the quantity of land in each exhibited. Lot No., 1, containing 6 acres; No. 2, 10 acres; No. 3, 16 acres; No. 10, 15 acres; No. 11, 18 acres; No. 14, 22 acres; and No. 17, ½ acre; were in wheat at the time the farm was purchased. Some of the fields lie adjacent to the highway, and in their measurement a portion of road is included, therefore the quantity of wheat on the ground, was in the neighborhood of 85 acres. Lots No. 5, containing 6 acres in barley; No. 9, 10 acres, in corn and potatoes; No. 15, 8 acres, in oats; No. 12, 14 acres, in meadow; the balance of the fields in pasture, and about 4½ acres occupied by buildings and garden.

His stock consisted of five horses, four cows, 35 sheep, after disposing of 26 fat ones, and a sufficient number of swine to make pork for his consumption. The corn and oat crops averaged about 40 bushels per acre, which afforded sufficient feed for teams, making pork, &c. Eight bushels of clover seed was sown on the fields, under wheat, and five tons of plaster. In lots No. 2 and 3 the clover caught well; the others very indifferently, owing probably to the wheat being extremely thick and heavy, and the fore part of the season rather dry.

The next season, were fallowed, lots No. 4, containing 16 acres; No. 6, 6 acres; No. 7, 12 acres; No. 8, 20 acres; No. 13, 10 acres; all of which were

cropped, with the exception of No. 13, which was put in on the first furrow with the cultivator; and lot No. 5, was put in after barley and well manured.—Making 70 acres, including fence and some road.

Lot No. 8, was the last field sown, fininshed on the 19th. of Sept. There were 30 bushels of seed, (soles wheat) sown on this field, which was a trifle more than 1½ bushels per acre. It was harvested and thrashed separate from the rest of his crop;—it produced 793 bushels, all of which was suitable for seed, and more than one half was used as such. This lot lies adjoining the highway, and the 20 acres includes nearly one acre,of read.

Lots No. 1, 9 and 17 were sown to barley without any manure; they produced 484½ bushels. Lot No. 15, was sown to oats again, in consequence of the drouth destroying the clover the year previous; the crop was more abundant than the first—some 45 bushels per acre.

Lot No. 12, a clover sod, which had lain two years, was planted to corn and potatoes, without applying any manure, it produced 1425 bushels of ears of corn, and 164 bushels of potatoes.

Lot No. 2—a crop of clover hay was taken from it the last day of June, and at the commencement of September following a crop of seed of 29 bushels. This item was omited in the products of the second year, therefore $85 should be added to the profits of the farm, and a sufficient quantity was reserved for the use of it for the next year.

Lots No. 3, 10, 11, 14 and 16, (the last of which contains 2 acres, and appropriated to the most choice fruit trees which furnishes a large supply of all kinds of fruit,) were in pasture. The quantity of clover seed sowed on this part, was seven and one half bush. and 6¾ tons of plaster were sown on the wheat and barley, and some 400 used on the corn and potatoes. The clover this season took as well as could be desired, the fields at the begining of winter were clothed with one of the most valuable fertilizers of the soil that can be produced, and from which the finest crops always ensue. The farm this season kept six horses, four cows, three calves, ninety-five sheep, and fifteen swine.

The lots put into wheat, the third year were No. 10, 11, 14, 16, all of which were fallowed early, and plowed twice. No. 15, was put in after the second crop of oats, with a fine dressing of manure; and lots No. 1, 9 and 17 were sown after barley, which make 80 acres and upwards. Lot No. 12, was in barley, the remainder of the fields were either mown or pastured. That which augments the profits of every farm, is the growing of all kinds of spring crops, at least in quantities sufficient for the feeding of teams, fatting pork &c. The occupant of this farm produced a surplus of these crops; therefore instead of using a portion of the money arising from the wheat in bying mill-feed for teams, &c. he has added several hundred dollars to his profits, from the sale of barley and corn.

This farm contains preicsely 215 acres of land, 196 of which is cultivated. It was bought in the winter of 1847, for the sum of $3,100, with 85 acres of wheat on the ground; it was sold a few weeks since at $70 per acre. There are 65 acres of wheat on the farm, and 10 acres of which are reserved in the sale, which at least is worth $200. The expense in making improvements during the time, will not exceed $150.

The occupant's net profits from the farm for the whole period, after deducting all expenses, amount to $6,300; which pay an interest of fifteen per cent on the capital invested, including $700 of capital for money invested in teams, utensils &c.

If I have not been sufficiently minute in a detailed history of the management of the farm referred to and in order to satisfy or remove the doubts of "Incredulous," I will make another effort, if requested.—*Caledonia, Liv. Co., N. Y., Dec.*, 1849.

IMPORTED CATTLE—BATES' STOCK.

THE August number of the "Farmer," for 1849, contains an article on the "recent importation of short horns," which does not entirely coincide with my views. The writer, referring to the bull, 3d Duke of Cambridge, which he had the honor of importing, says: "Breeders, desiring the blood of Mr. Bates, can no where else in this country, procure it *with such high characteristics of style, quality, symmetry, and substance.*

Allow me here, before discussing this paragraph, to remark, that *honorable competition* in breeding domestic animals, cannot fail to be a fruitful source of improvement, and should be countenanced and encouraged by every individual who desires to see the stock of our country raised to that high standard which its importance so justly merits and demands. The individual, however, who enters upon this enterprise with a desire and a determination to excel, will soon find himself surrounded with perplexities and prejudices, which he little anticipated; and, however desirous he may be to avoid controversy, circumstances may occur, where justice, both to himself and the public, demands that he should no longer remain silent. Experience will also sooner or later prove, that there is neither honor or profit to be acquired, by resorting to the frail support of either directly, or indirectly, assailing, or endeavoring to disparage the stock of others, by the assumption of high sounding pretensions, which cannot bear the test of truth and scrutiny.

But to the point. We presume no one will deny, that any one animal from any herd, to possess the power of imparting to his produce, "*higher characteristics of style, quality, symmetry, and substance,*" than any other animal from the same herd *must* possess more of the *choicest blood* of that particular herd. To doubt this, is at once questioning the efficacy of *blood animals.* The most natural inquiry, therefore, which would arise from a perusal of the paragraph queted, would be—"What is the *particular strain of blood*, in the late Mr. Bates' herd, which is superior to *all other*, and which gave him such a deservedly wide spread fame and reputation as a breeder?"—Now let this simple fact be clearly defined, and if 3d Duke of Cambridge possesses more of *such blood*, than any other animal in this country, then he may be fairly entitled to his claimed position of superiority. This is a point of the greatest importance to breeders of Short-horns in this country, and *particularly* so, to "all who wish to procure the blood of the late Mr. Bates' herd."

In order, therefore, to prove to the public conclusively, and to place the matter beyond the possibility of a doubt, that the *choicest blood* of Mr. Bates' herd consisted in his *pure, unalloyed Duchess tribe*, we quote his own opinion, from a communication addressed to the publishers of the print of his bull,

Duke of Northumberland. After giving the pedigree of this bull, Mr. Bates says:—

"The *whole* of this family" *(Duchess family, S. P. C.)* "of Short-horns are *alone* in my possession, having purchased my original cow of this tribe of cattle of the late Charles Colling, Esq., of Ketton, near Darlington, 35 years ago. They had been in the possession of Mr. C. Colling, 20 years, who purchased his *original cow from Stanwix*, of the agent of the late Duke of Northumberland, and called *her Duchess*, (which is the reason I have named the bull after that family,) as they are justly entitled to be held in commemoration for having possessed a *tribe* of cattle which Mr. C. Colling repeatedly assured me *was the best he ever had or ever saw*, and that he was never able to improve upon *her*, although put to his *best bulls*. And I have undoubted information from the best authority for saying that *this tribe* of Short-horns, were in the possession of the ancestors of the present duke, for *two centuries*, and that Sir Hugh Smythson, the grandfather of the present duke, kept up the celebrity of this tribe of cattle by paying the utmost attention to their breeding, and that he used regularly to weigh his cattle and the food they ate, to ascertain *the improvement made in proportion to the food consumed;* a system I adopted nearly 50 years ago, not knowing that it had been previously done; and from a minute and close attention to this subject, I obtained that knowledge of cattle, which enabled me to judge of their *real merits by their external characters*—and which I have never found to fail in my experience for above forty years as a breeder. From that knowledge, thus acquired, I selected *this tribe* of Short-horns as *superior to all other cattle*, not only as small consumers of food, but as great growers and quick graziers, with the finest quality of beef, and also giving *a great quantity of very rich milk*. The cow I bought of Mr. C. Colling, in 1804, calved at Halton Castle, in Northumberland, June 7th, 1807; she was kept on grass only, in a pasture with nineteen other cows, and made in butter and milk for some months, above *two guineas* per week, or *forty-two shillings* in English money."

We have in this extract, the opinion of Mr. Bates himself, in regard to the Duchess blood, as being *superior to all other*—also confirmed by the opinion of Mr. Charles Colling, who repeatedly said, *it was the best he ever had or ever saw.*

Now, whether this 3d Duke of Cambridge possesses more of *such blood*, or, if you please, has the blood of Mr. Bates' herd, with "higher characteristics of style, quality, symmetry and substance," than any other bull in this country, a brief reference to *pedigree* will show.

"*Pedigree of the 3d Duke of Cambridge*, (5942.) Roan, calved September 14th, 1841, bred by Thomas Bates, property, &c. Got by Duke of Northumberland [1940]; dam Waterloo II., by Belvidere [1706]; grand dam by Waterloo, [2316]. g. g. dam by Waterloo, [2316]." [Coates' Herd Book, 4 vol., page 614.]

By this pedigree it will be seen that 3d Duke of Cambridge possesses *only one quarter* of Duchess blood—his *sire*, Duke of Northumberland, being a *half* Duchess bull, and his *dam* Waterloo II, *having no Duchess blood in her.*

Among the individuals who have imported stock to this country from the late Mr. Bates' herd, we believe the importations of Mr. George Vail, of Troy, N. Y., have been the most extensive. In 1839 or 40, this gentleman imported direct from Mr. Bates, a bull calf, Duke of Wellington, and a heifer, Duchess. For the purpose of *comparison*, we insert the pedigree of Duke of Wellington, 55, [3654] as given by Mr. Bates.

"Roan, bred by Mr. Bates, &c. Calved Oct. 24th, 1839, got by Short-tail, [2621]; dam Oxford, [having obtained the first prize for the best Short-horned cow, open to all England, in July, 1839, given by the Royal English Agricultural Society,] by Duke of Cleaveland, [1937]; g. d. Matchem cow, by Matchem, [2231]; g. g. dam by Young Wynyard, [2859] sometimes called Young Wellington."

By this pedigree it will be seen that Wellington's Short-tail, was also a *half* Duchess bull. So far then his *equality* with Cambridge, as to Duchess blood, is established. But if we examine a little farther into this pedigree, we shall find that Wellington's dam, Oxford Cow, was *also* got by a *half* Duchess bull, Duke of Cleveland. Consequently, the *produce* of Wellington, from a cow *without* Duchess blood, would possess nearly as much Duchess blood, as Cambridge himself.

For the illustration, and to show the puplic that there are other animals in this country that possess *more* Duchess blood than Cambridge, we insert the pedigree, in part, of Mr. Vail's Duchess.

"White—bred by Mr. Bates, &c. Got by Duke of Northumberland [1940], dam Non-such the 2d, by Belvedere [1706], g. dam Non-such by Magnet, [2240]." &c. &c.

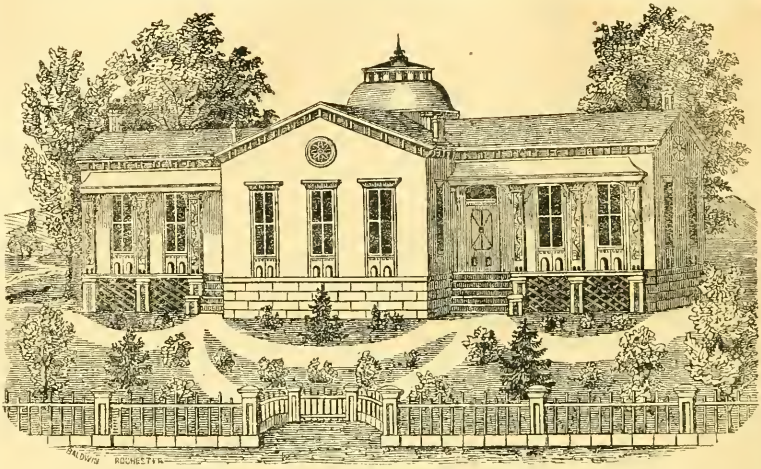
Mr. Vail's prize bull, Meteor, 104, was out of this heifer, and his sire is Duke of Wellington. He has therefore *three crosses* of the Duchess blood, and so also have the bulls Mr. Vail has sold to Col. Sherwood, of Auburn, N. Y., (and we can well bear testimony to the worth of this bull, Symmetry, as we have a cow of his get, and a very superior animal she is,) Col. Hampton, of S. C., Messrs. Ferguson and Wetenhall, of C. W., and Thomas Hillhouse, of Watervleit, N. Y. We might continue this account, as Mr. Vail has three more imported cows, sent him by Mr. Bates, all of which possess strains of the Duchess blood, but we deem it unnecessary.

We learn by the agricultural papers, that the *whole* of the late Mr. Bates' herd are to be sold the coming spring or summer; and consequently the *Duchess tribe* which Mr. Bates has always retained *exclusively in his possession*, will be dispersed in the hands of many. From the enterprise which has thus far characterized Mr. Vail, as a breeder, we sincerely hope and expect he will not let this opportunity pass without the introduction of one or more animals of the *full* Duchess blood, into his herd. He has already done much to bring the *Bates Stock* into deserved reputation in this country, and the benefit which its introduction has conferred upon other Durhams, which have received only a single cross of this strain of blood, is immense. We hope he will now introduce the Duchess blood *without alloy*; and we confidently expect the day would not be far distant, when the price of the American Short-horns, will compare favorably with the high sales of this stock in England. S. P. Chapman.—*Clockville, Mad. Co., N. Y., Dec.* 1849.

JEFFERSON COUNTY AGRICULTURAL FAIR.

We make the following extract from an address delivered before the Jefferson County Agricultural Association at its late Fair, held at Watertown, in this State, by Moses Eames, Esq., President.

"The Ladies, too, with a laudable spirit of competition and taste, have contributed handsomely to rendered this an occasion of delightful entertainment. Their presence and cheering smiles, always agreeable, are none the less so when they undertake to illustrate by their deeds the generous impulses of their hearts. The wives and daughters of the farmers of Jefferson county are able to show by their works that they have a common interest and sympathy with their husbands and fathers. It is their pride to exhibit in every room of our dwellings the productions of their industry, taste and skill. Cheerful, free, intelligent and happy at home, they have learned happily to blend all these qualities with industry and frugality, and wisely to accommodate themselves to the circumstances with which they are surrounded. The garden, the door-yard, the kitchen, the parlor, all present favorable indications of the character, intelligence and good taste of our Ladies. *More* than this I *need* not say: *less*, in justice to myself and them, I *could* not."



DESIGN FOR A SUBURBAN RESIDENCE.

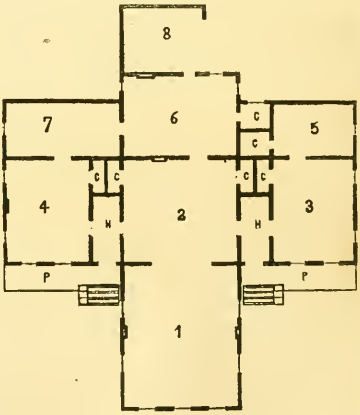
This beautiful cottage was designed by W. M. McConnell, of this city, for James Harris, the well known Landscape Painter, who intends to erect it on his ground within about one mile of the city. Many who have seen the design say that they know of no plan, combining so mnch of beauty and convenience, at so small an expense. Careful estimates and propositions for the erection of the building have been made, from which we think we may safely say the building could be erected here for $1,500. Every one, however, must be aware that the cost will vary in different places, governed, of course, by the cost of materials and labor. The only safe plan would be for each one having any idea of using this design, to obtain an estimate by some competent person in his own locality. Architects are apt to make their estimates too low, and serious embarrassment to the person building, is often the consequence.

In this estimate, it waa to be built of brick, and painted. The parlor, it will be seen, is large, and connected with the dining room by sliding doors, as shown on ground plan. The finish of these two rooms is intended to be the same; the dome in the dining room, as shown in perspective, is intended to start from the level of the ceiling, to be made plain and plastered, and then painted in imitation of pannels. There is no window in the dining room, and this dome furnishes all necessary light. The height of ceilings is twelve feet in the clear, with a cornice to correspond with that on the outside.

Two verandas, one in front of the sitting room and one in front of the family bed-room, will be seen on perspective. They are to be built light. The cornice on these will be the same as on the house, but lighter. The cornice on the house will have a projection of two feet, bracketed, as seen in drawing.

This cottage may be built of wood in localities where a wooden building can be erected at a much less expense than brick or stone.

In the arrangement of the ground plan, changes might be made to suit the convenience or fancy, though Mr. H. thinks the plan as good as can be devised. At our suggestion the kitchen was enlarged from the original plan. We think most architects err in making small and contracted kitchens. The kitchen is the business room, and we think should be the most commodious one in the house.



GROUND PLAN.

1, Parlor,	18 by 23	feet.
2, Dining-Room,	18 by 17½	"
3, Bed-Room,	17½ by 14	"
4, Sitting-Room,	17½ by 14	"
5, Bed-Room,	12 by 14	"
6, Kitchen,	18 by 13	"
7, Bed-Room,	12 by 14	"
8, Wood-Shed,	14 by 12	"

p, Porch. *c*, Closet

h, Hall.

NOTES FOR THE MONTH

The late opening of the Chemung R. R. to the head of Seneca Lake, and the Ithaca and Susquehanna R. R. from Oswego to Ithaca; has already opened a winter trade between western New York and the city of New York, through the Erie Rail Road, which gives an earnest of that great change in trade, which must favorably increase, change and modify, both the rural and domestic products of Western N. York.

The beautifully rural village of Aurora, on Cayuga Lake, has been of late, as if by magic, suddenly transformed into a busy animated mart or depot, from whence, fruit, pigs, and poultry, are daily shipped by steam to Ithaca, thence by Rail Road to Piermont and New York. On the Seneca Lake still greater changes have taken place. From Geneva two Steam Boats now start daily for the head of the Lake, loaded with passengers and light freight, up and back; freight barges are towed daily, loaded with bales of cotton and raw materials, for our Factories, as well as other articles down; and pork, whiskey, flour, &c., up. It is supposed that this very cheap winter communication with New York, will have the effect to lesson the fall purchases of our Manufacturers in Western New York, as well as to modify, change and increase the productions of our farmers generally. Fruit, pigs, poultry, &c., which heretofore have not been considered as paying products to the farmer, beyond a limited home or barter-trade; begin now to be a great element in this winter trade with our great Commercial Metropolis.

The late accounts from California seem to indicate that a reaction has commenced there in earnest. Labor is becoming cheaper, the Diggings are submerged in water or covered with snow; provisions are enormously dear, and vegetables are not: to those diseases which ordinarily afflict humanity on land, is added that loathsome scourge of the briny deep, scurvy. The presence of this malady alone, proclaims the sterility of the gold region to be a fixed fact; as in every other situation in the same latitude, not a desert; wild uncultivated nature has ever been found rich and beautiful in anti scorbutic productions. A practical farmer here just returned from the gold region, avers that the best portions of Upper California may possibly produce peas and grass, without irrigation, but that Indian corn and vegetables, must perish, either from cold and wet at first, or drought afterwards. He went over the famed plantation of Capt. Sutter, seeing it only as a barren sandy plain, with little evidence of its ever having been cultivated; an arid waste which no verdure quickened; but perhaps some allowance is to be made for the distempered imagination of a man longing after the leeks and onions of Seneca County.

Sixty-six subscribers to the Genesee Farmer, for 1850, have already been registered at our Post Office; yet what is this number compared to the thousands of farmers who sell their wheat and corn here? While many of our best farmers aver that they would not be without an Agricultural paper for ten times its cost, such is the benefit they think they receive from the theory and practice of others. Yet strange as it may seem, the number of those who have learned all without the aid of a book, is legion; and the variety which belongs to the moon tilling genera, cannot but be truly interesting to him who loves darkness rather than light.

From the late recommendations of Gov. Fish, and the President of the United States, it would seem, that Agriculture is now about to come in for a share of that public bounty, which has been heretofore almost limited to the Fisherman and the Manufacturer. But let every farmer put his own shoulder to the wheel without waiting for Hercules. In speaking of the education of farmers sons the veteran Editor of the Ohio Cultivator says: "However unwelcome the truth may appear, it is a fact which cannot be blinded, that the want of *education* or a proper developement of *mind* on the part of the mass of our farmers, is the *great* obstacle in the way of all improvements; and only by the removal of this barrier, can we hope to see the profession of Agriculture rise to that position and dignity which it should ever occupy in the land.

Let farmers no longer be content to see the school master abroad for the benefit of the more pretending classes; but let them at once take him home to their own school district, and domesticate him there, in the place of that itinerant low priced nonentity called a teacher, whose usurpation of the title is only a burlesque or a satire, upon the intelligence of those who employ him. S.W.—*Waterloo, N. Y., Jan.*, 1850.

PRODUCTS OF WAYNE COUNTY.

Address delivered before the Wayne County Agricultural Society, at its Annual Exhibition, in Palmyra, N. Y., 1849, by R. G. Pardee, Esq.

Mr. Pardee's address has given us much satisfaction. He has carefully brought out many useful facts in regard to his own county, as will be seen by the following extracts:

We further learn that the offices in our county cleared, during the last year, within 2 per cent. as many potatoes as the entire state west of us, via the Erie Canal, including Rochester, Buffalo, &c., and within less than one per cent. as much barley, as the whole state west on the Erie Canal.

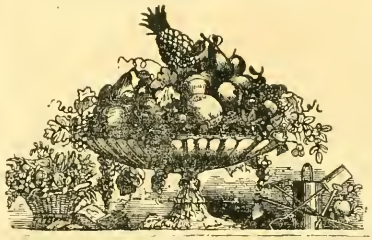
We also learn what was to me an astonishing fact, that the offices in Wayne county, during the year 1848, cleared more dried fruit, by more than 30 per cent, than the entire state west of us, to and including Buffalo; and also, more by 15 per cent. than the entire state east of us. The offices west cleared 538, 000 lbs.—those east 610,000lbs,—while Lyons and Palmyra cleared 708,000 lbs., or more than 30, 000 bushels.

This is indeed a noble tribute to the industry of the daughters of Wayne county; (for the women and children do the most of this work;)for who can calculate the enormous amount of labor, in drying 150,000 bushels of apples, peaches and plums—this being the requisite amount to make the 30, 000 bushels when dried.

For several years past, the Palmyra office has cleared about 60, 000 barrels of fine grafted apples per annum, or 150,000 bushels more of fruit; and if Lyons, Newark and Clyde together, send off as much more,(as they doubtless do from 50 to 100 per cent. more,)we then have the aggregate of 400,000 to 500,000 bushels of fruit, in a green and dried state, exported annually.

We may deliberately add, that the superiority of Wayne County Apples is as well known and appreciated in the New York market, as are the Princess Bay Oysters, or Orange county Butter. And if any of you wish to know whether our county produces peaches, pears and plums, unsurpassed in size and delicious flavor, even by the warm climes of the more sunny south; let me ask you to visit such magnificent and well cultivated fruit yards as Mr. Theron G. Yeoman's of Walworth, Messrs. J. Thomas and Wm. R. Smith's of Macedon, or Mr. J. G. Dickinson's of Lyons; not to mention many others around us; and you will be entirely satisfied.

And yet the capacity of Wayne county to produce fine fruits, has hardly begun to be tested; for at no previous day has there ever been enkindled a tithe of the enthusiasm to cultivate choice fruits, which is now prevading every mansion and hamlet within our borders, and infects almost every man who is so fortunate as to possess a portion of our luxuriant soil, sufficiently large to plant a tree, or nurture a hill of strawberries.



Horticultural Department.

EDITED BY P. BARRY.

FACTS TO BE REMEMBERED IN PRUNING.

THERE are important differences in the modes of growth and bearing of the various cultivated fruit trees, subjected to pruning and training, that every cultivator should study carefully. Every species is governed by laws no less regular and observable in this respect, than in their periods of blossoming and maturation; and these laws should be taken into strict account in pruning and every other process intended to modify the growth and productiveness of bearing trees. Most cultivators are too apt to overlook these important points, and hence the principles of pruning are badly understood. Immediate effects alone are too frequently looked to. If the head of a tree be too dense, or certain branches too long, a certain number, or a certain length, is cut away without considering the results that must follow; and it is this unskilful and undiscriminating pruning, as well as a total neglect of it, that produces such vast numbers of unsightly and unprofitable trees as now cumber the ground of a large portion of our orchards and gardens. At present we can give but a few hints on the subject, by way of calling attention to these points

The *Apple*, *Pear*, and *Quince* are all similar in their mode of bearing. The fruit buds are usually produced on spurs or short stout shoots along the sides of branches of two or more years' growth, and these shoots or spurs continue to renew their fruit buds and bear for several years in succession, if they enjoy the advantages of light and air, and are not deprived of a sufficient supply of nutriment by rapid growing portions of the tree above them. Occasionally we see fruit buds formed on the ends of shoots of one season's growth, but this is rare, except in particular varieties. The Quince is usually borne on the ends of the spurs.

The *Peach*, *Apricot*, and *Nectarine* bear their fruit almost exclusively on shoots, of the previous year; the fruit buds forming during the first season's growth.

The necessity of keeping up a constant annual supply of young wood on all parts of the tree, is therefore obvious. The same shoots bear only once — occasionally fruit spurs are produced from other branches, but these are comparatively feeble; not to be relied on.

The *Plum* and *Cherry* are quite similar in their modes of bearing. The shoots of last year, 1849, will, during 1850, become furnished with fruit buds that will produce fruit in 1851. A few buds towards the extremities of the shoots are usually developed into new shoots, while all the buds below are transformed into fruit buds. It sometimes happens when Cherry trees are not growing vigorously, that the buds at the base of the shoots become fruit buds the first year, and bear the next.

The *Morello Cherry* and a few others of its class, are exceptions to this rule, and they bear like the peach on wood of the previous year, the fruit buds being formed on the lower parts of the shoots of the current year.

Gooseberries and *Currants* produce their fruit like the Cherry and Plum. The fruit buds forming on shoots the second year, and bearing fruit the third and afterwards.

The *Grape Vine* and *Raspberry* are similar in mode of bearing, and differ from all the others. The fruit is produced on shoots of the current year's growth, starting from wood of the previous year. Young shoots from other parts of the vine do not produce fruit, but will the year following produce fruit bearing wood.

ANSWERS TO CORRESPONDENTS.

"M.," Geneva. It would give us great pleasure to give your letter a place in our columns as affording a very happy illustration of the way in which a love of gardening is growing up amongst us, and its practice and principles attracting attention and study; but the limited space we are allowed does not admit, as you will see, of anything but short and purely practical articles. We have to deny ourselves many a pleasure for this reason. We shall at all times feel obliged for an account of your success and mode of operation.

J. FRASER, Mecklenburg, N. Y. Your communication, which appears in this number, was mislaid, owing to some changes in the office, this is the reason it has not been acknowledged.

PROFITS IN PEARS.—In the fall of 1848, Mr. John Washburn, of Plymouth, bought two dwarf pear trees, (on quince stocks,) at $1.25 each. He set them that fall, and in less than a year from planting the trees, he took a dozen pears from them, and exhibited them at the annual show of the Massachusetts Horticultural Society, for which he received a premium of $6, and he sold the pears for $3 — making a dividend of $9 on the small investment of only $2.50. The pleasure and reputation of successful cultivation will pay ten times the trouble. The variety was the Louise Bon de Jersey.—*New England Farmer.*

HON. MARSHALL P. WILDER.—This distinguished Horticulturist and Pomologist has recently been elected President of the Massachusetts Senate, and we are sure he will do honor to that honorable office. We wish that more of our Senators and Representatives in the State and National Legislatures were such as he, if they were, we would soon see our Government do something worthy of it, for Agriculture and Horticulture. State and National Gardens would be more then *talked of*.

WINTER is the best time to look around your orchard and garden to see how matters stand—do what you can, and lay out your work for the spring.

PRUNING THE PEACH TREE.

DOWNING's "Fruit and Fruit Trees of America" was the first American work treating of the culture of fruit trees, that awoke any considerable degree of attention to the pruning of the peach. The *shortening in* system so long and so successfully practiced in France, and indeed in all other European countries where the peach is cultivated well, was explained and strongly commended to the attention of American cultivators. Since that work first made its appearance five years have elapsed, and no doubt many have by its influence adopted or carried into practice, to some extent, this system; for every now and again we see in the Horticultural journals, accounts of its beneficial results. Still the culture of the peach tree through the country generally is exceedingly defective, and stands in greater need of reform than does any other branch of tree culture. But the active and penetrating spirit that now exists can hardly fail to seize upon this neglected point, and give it proper attention. We have now before us several requests for information in regard to it, and we take this occasion, (the pruning season being at hand,) to present a few remarks on the subject. THOMAS' "American Fruit Culturist" being referred to by some of our correspondents, we will quote the article in that work as a *text:*

"No fruit trees need a more regular and constant pruning than the peach, and none more frequently meets with total neglect. The young shoots, to live and flourish, need a very full exposure to sun and air. But young peach trees, if left to grow in their own way, become covered with a dense profusion of leaves. These shade the interior, and as a necessary consequence, the central shoots gradually perish, and leave the bare limbs. As the tree advances in growth, these become long, naked branches—with tofts of leaves only at their extreme ends, (fig. 1.)—These extremities are loaded with an over-crop of fruit, diminished in flavor by crowding, and often breaking the peach tree under their lever-like weight.—Trees wholly neglected in pruning, usually become by this process, of little value, after the lapse of some years

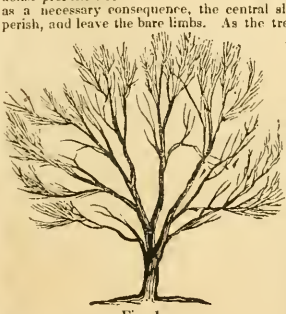


Fig. 1.

To avoid this unfavorable result, the *shortening-in* mode of pruning has been very successfully adopted, which consists in yearly cutting back the extremities, so as to counteract the spread of the limbs, and to lessen the weight of foliage.

The most easy, uniform, and certain rule to follow, in adopting this system of pruning, is to cut off, early in spring or in winter, one-third to one-half of all the shoots of the previous summer's growth. This thins the crop of fruit, and greatly reduces the amount of leaves; and while the fruit is lessened in number, the amount is not diminished, and the flavor is immeasurably improved. If this pruning is regularly and annually performed, the head of the tree will be preserved in an even, handsome, and compact shape, (fig. 2,) and in a healthy and vigorous condition; and it will become rarely necessary to shorten and thin out the limbs by cutting back the larger side-branches.

Fig. 2.

The pruning may be performed with a hedge or long-handled shears, or with nearly equal convenience by means of a light standing ladder and a common pruning knife.

Any cultivator who may doubt the value of shortening-in the peach, need only to try the experiment for a few successive years, on a tree standing side by side with one unpruned, to become fully convinced of its eminent advantages."

Now we consider it very important that cultivators who prune their peach trees should have a correct idea of the evil or defect, that their pruning is intended to remedy. The inexperienced would be very likely after reading the article we have quoted to attribute it to "*dense profusion of leaves,*" and as a consequence, would endeavor to reduce their quantity; but we consider this a misapprehension, for the actual result of pruning or *shortening-in,* is to maintain a profusion of leaves, by keeping all parts of the tree furnished with young growing and bearing shoots. Without pruning, the trees become denuded of young shoots and foliage on all but the extreme ends of the branches.

We conceive the true cause to be the great tendency of the sap in the peach tree, (a tendency to be observed in all trees, but particularly so in the peach,) to ascend to the points of the last year's shoots. Here the buds are most active, and the sap passes by all the lower and less fully developed buds to them, leaving the others to die off gradually for want of support. Thus the tree goes on year after year, when left to itself, the upper buds only, of the last year's shoots, being developed into new shoots, until all the leaves and fruit of the tree are confined to a few inches of the ends of the branches.

If any proof were wanted that a profusion of leaves is not the cause, we need only refer to the case of espalier peach trees, trained on a wall or trellis, where every portion of the tree is fully exposed to the light, and where shading of leaves is entirely out of the question. These, just as much as the common standard tree, become bare on the lower parts if not pruned, although their confined situation does not offer such great facilities for the flow of the sap. We have seen neglected espalier peach trees, covering 20 or 30 feet of a wall, and not over a foot on the end of each branch bearing leaves or fruit. It was not the shade of foliage but the uninterrupted flow of sap to the points. But if we take a young peach tree 2 years old and transplant it, leaving all its branches on, and although these are so few that they cannot possibly produce leaves enough to be any detriment to the interior or lower branches, still we see the buds on the extremities of the limbs alone grow and those below them perish.

Having thus considered the cause of the evil we complain of, the remedy becomes quite obvious, and with ordinary judgment may be applied with correctness and success.

Every one who has planted a young peach tree, say one year from the bud, must have observed that if the top buds are sound and healthy, they will grow while all the lower ones on the branches, if any, or on the stem, will die out, but if the tree or the branches are cut off, even to the lowest bud at the base, it will grow. We see the same results when the top buds are winter killed or the top is broken off: the buds that would otherwise have remained dor-

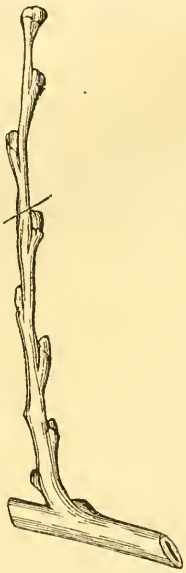


Fig. 3.

Fig. 4.

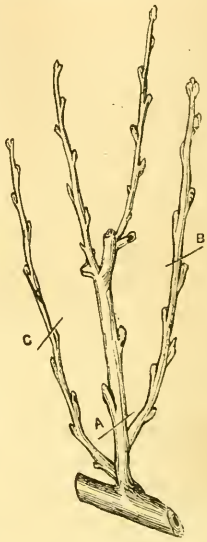


Fig. 5.

mant by the sap passing them to those at the summit, are made to develope themselves into shoots or branches. Hence it is that we apply *shortening-in.*

Let us take a young last year's shoot of the peach, (fig. 3,) furnished with both fruit and wood buds, for illustration. Now if this shoot is left entire, the buds at the point only will produce shoots, and all the rest will be a naked space. But we cut at the cross line, and thus induce the wood buds on the lower parts to develope and make young, vigorous shoots for next season, and at the same time we reduce the quantity of fruit, which is quite essential, not only to the health of the tree, but the perfection of the crop. It is on the same principle that a gardener, by repeatedly pinching off the ends of young shoots, will grow a geranium into a low bushy mass of branches and leaves, covering entirely the pot in which it grows, while if left to itself the same plant would have most likely formed a tall, branchless, weak, straggling plant, requiring the support of a stake. It is on the same principle too, of directing the sap from one channel into another by pruning and training, that we are enabled to make pyramidal pear trees, and to produce all the other forms that necessity or fancy has suggested. If the sap had not been thrown into the wood buds at the base of the shoot, (fig. 3,) we should have had a production the following year like fig. 4; but by *shortening-in* we produce something like fig. 5. Now the difference between cutting back a shoot and leaving it uncut makes just the difference we see between these two figures.

But *shortening-in* is not all that is required. If we continue to shorten the young shoots without cutting out some of the old, we will get a tree by and by like a brush that the light can not penetrate. In such productions as figure 5, the old shoot A, should be cut out at the cross line at the base, and we have the shoots B. and C., for next year's bearing, which are *shortened-in.** Then any of the main branches that take the lead of the other should be shortened, in order to maintain symmetry in the form of the head.

Mr. Thomas says: "The most easy, uniform and certain rule to follow, is to cut off, early in spring or winter, one-third to one-half of all the shoots of the previous summer's growth." This is not to be taken literally. He means of course that each of last year's shoots is to be cut back one-half to one-third its length. In the main this may be right, but some discrimination must be used. Vigorous shoots might be cut back one-third, while a weak, slender one, if placed where we want a good bearing shoot for next year, should be cut back to within a couple of buds of its base, so in proportion with branches of intermediate vigor. The cut should always be made at a wood bud or a triple bud, one of which is a wood bud. In this and similar latitudes, the latter end of February and beginning of March is the best time.

* It should be borne in mind that the Peach bears only on wood of the previous season's growth; and the same shoot only bears once, hence all the parts of the tree that become destitute of young wood, become at the same time barren.

Amalgamation.—A Texas paper tells a story of a man who by engrafting the black on the white grape succeeded in making "black, white and speckled," grow on the same *bunch.*

"PEAR BLIGHT."

As it was from my own experience that I wrote of "Pear Blight," I have been not a little curious to see how trees in other regions were effected. At Buffalo, in Bryant's Nursery, numerous Pear trees are growing, which have been suffered to remain 30 years, without any digging round them, which stand embargoed in turf, that have not been affected at all by "blight." At Batavia and Canandaigua, as well as at Rochester, there are many old trees, which have a slow but sure growth, treated as I proposed, and free of blight. "F. P. R.'s," of Sweden, have done pretty well, as he says, for 25 years, without blighting. I have but one word to say about the Pear tree and blight. I believe that if trees were planted on dry and good soil, and suffered to remain without other culture than a dressing of leached ashes, or bone dust, in the fall, that they will not blight. Mind and cover the roots well, and if the turf grows around them, do not disturb it, whatever the "Young Digger" says to the contrary. Let me extract from Mr. Downing's Book on Fruits, about the Pear tree.

First—he mentions Pear trees, "known as now living near 400 years; and some bearing 120 bushels a year;"—and says, "that the Pear succeeds so well as an open standard and requires so little care and pruning; less indeed in the latter respect than any other fruit tree that training is seldom thought of, except in gardens of the curious or skilful. Pear trees in a bearing state, where the growth is no longer luxuriant, should have every autumn a moderate top dressing of manure to keep them in good condition." (Had F. P. R. done this, perhaps he would not have had his trees *blight.)* "This, as it promotes *steady* and *regular growth*, is far preferable to occasional heavy manuring, which, as will be presently shown, has a tendency to induce the worst form of blight to which the tree is subject."

"The most successful remedies for this disastrous blight, as is evident, are chiefly *preventive ones.* The principal means of escaping the danger really lies in always studiously avoiding a damp soil for the fruit tree."

"A rich, dry soil, is, on the whole, the best, because there the tree will make a good growth in time to fully ripen its wood and will not likely make a second growth."

"It is in accordance with this that many persons have remarked that those Pear trees growing in common meadow land, were free from blight in seasons when those in rich garden soils were continually suffering from it."

Throughout, Mr. Downing recommends slow growth —dwarfing, to ensure it.—J. H. Watts.

DWARF STOCKS—INQUIRIES

Ma. Barry—*Dear Sir:* I wish to make some inquiries through your valuable paper, respecting *stocks* for dwarfing trees. The utility of Dwarf Fruit Trees is every day becoming more and more evident, not only for the amateur, but for those whose circumstances do not permit their owning much land, who can, if they have the taste, enjoy the production of some of the finest varieties of fruit in the narrow limits of a garden. And the taste will not be slow of formation when it is found that a few delicious pears can be grown on the same ground occupied by a sour currant or worthless gooseberry; in short it is doing for pomology what cheap publications are for literature — widely disseminating valuable things at small expense. The very successful dwarfing of the Pear, and more recently of the Apple and Cherry, leaves a deficiency of the Plum, Apricot and Peach, which it is desirable to see supplied. The necessity of dwarfing the latter does not seem to exist, yet how pleasing to the eye of any lover of beauty would be the sight of a mere shrub bending beneath clusters of the Red Rareripe or Melocoton. But the Plum and Apricot might more readily, as dwarfs, be protected from the curculio, their worst enemy in many parts, by which a great advantage would be gained. I have long wished to find a fitting dwarf for the plum, and was much pleased by the intelligence recently communicated by Mr. Rivers, that he had succeeded by employing the English Sloe or Blackthorn. This shrub, I presume, is not found in this country, but would it be likely to flourish on our soils? And is it reasonable to suppose that if the plum grows upon it, the Apricot and Peach would be likely to take? Is it known whether our native wild Plum, upon which the improved kinds grow readily, and vigorously the first year, proves a dwarf or not? Native stocks seem better adapted to the soil and climate, where they are found growing, than those brought from a distance, and it is not improbable that among our many wild fruit trees, some might be found valuable for dwarfing upon. For instance, the American Crab is said to furnish a good stock for the Apple. Has it been satisfactorily tested? Has the Service Tree, *(Pyrus Terminalis.)* ever been tried as a stock for the Apple, to which genus it belongs? Again, among our many varieties of Wild Cherry, is there none that will make a good stock for the improved sorts? The common Choke-Cherry is a dwarf, but grafts upon it, though taking readily, prove so short-lived that they seldom exist through the first season.

Should the Sloe of Mr. Rivers prove valuable, as I hope it will, I trust our nurserymen will not be tardy in importing it. J. Frasea.—*Mecklenburg, Tomp. Co., N. Y., Dec.*, 1849.

The Apricot and the Peach may both be dwarfed on Plum stocks, and perhaps some of our native species would answer that purpose well, whether on a Peach or Plum stock, the tree to be kept in a low and compact bushy form, will require to branch near the ground, and be regularly shortened in every year. We apprehend the *Sloe*, besides being difficult to work upon, will not make trees of much value; but as we have no such experience, we may be in error. It is certainly worthy of a trial.

ACKNOWLEDGEMENTS.

We are indebted to R. G. Pardee, Esq., of Palmyra, N. Y., for a box of the finest *Catawba Grapes*, now (January,) as fresh as when gathered; also for a paper of *Waite's Queen of Dwarf Peas.* "They are very productive and curious, as they grow only 12 to 15 inches high, but very stout, with heavy dark foliage." We know these to be an excellent *Dwarf Pea.* Also, a couple of ears of a very early and excellent sweet corn, supposed to be the *Early Burlington.*

To M. A. Noaton, Esq., of Victor, for a box of a new apple, *Norton's Purple*, which promises to be excellent, the specimens were too ripe before reaching us, but we hope to see it in perfection next season.

Ladies' Department.

JANE AND JOHN, OF FARMERSVILLE.

BY JAMES MAPLETON.

JANE GROVE was a pretty girl, or at least, most of the young folks used to think so in Farmersville, where she was "born and brought up;" with the exception of a jealous rival or two, who would acknowledge the fact with a *but*. Jane, however, unlike many *pretty* girls, was a girl of *pretty* good sense. She was not spoiled by flattery, yet it was nothing but her good sense that prevented it.

JANE had many admirers among the young men of the neighborhood, though all, for some cause or other, seemed to be kept at rather a respectful distance — too much so, for the liking of some of them it was very currently reported, I recollect at the time, not to mention some little experience I had on the subject.

At last, by some unforseen and altogether unaccountable circumstance or other, JOHN ELMLY seemed to get the start of all the rest. He came out clear ahead, and no one even thought that he was trying at all. JOHN was only a farmer's son. He was working a small farm — some thought he rented it, others that he worked it on shares, and still others, that he had bought it — though the prospect was that he never would pay for it. However, we all concluded that he had no ambition above raising corn and popatoes, while the rest of us where aiming to become clerks and merchants, and lawyers and statesmen. We unanimously acknowledged that JOHN was a pretty good sort of a boy, and nobody's fool at that. And after a while we made up our minds that the only reason JOHN was more successful than the rest of us, was that none of the rest of us had ever *tried*.

The old maxim that "the course of true love never runs smooth," did not prove true in this case, for before we expected it, or before any of the rest of us could have "raised the wind" to build a decent hen-coop, JOHN had a nice little cottage built, and him and JANE were declared "*one*." None of us exactly liked his taste in building his cottage,— though we thought it good enough,— and strangers expressed their delight at its neat and pretty appearance.

JANE no sooner got "at home" in the cottage than she commenced her work. Every day she might be seen early in the morning, and in the evening, in her garden — making flower beds, and planting seed. She did n't stand with her gloves on, and direct a gardener, but went at it herself, with the spade and the hoe. To-be-sure, JOHN did the hardest of the work, but JANE was the gardener.

"That is just as I expected — I knew he would make a slave of her"— said one. "He will have her out in the field digging potatoes soon," said another.

But, JANE's sparkling eyes, that had smitten us in other days, spoke of any thing but slavery — her rosy cheek and joyous laugh, told not of unwilling toil.

"She will soon be burned as brown as a squaw," said Miss SPRUCE, who could n't go into a room with the curtains up, without a sun-bonnet on.

Though JANE might be a little tanned, yet it was far better than that sallow, billious look, that calls for the frequent application of chalks and powders.

"I should like to know what kind of a housekeeper she is," said Miss JEALOUS. "I guess she isn't very neat — she spends too much of her time out doors, to keep things tidy in the house."

It is true JANE was n't so very neat as to make her husband pull off his boots and leave them under the fence as soon as he comes in sight of the house, but the old ladies who called on JANE said she was an "excellent house-keeper, and she and her cottage was a pattern for all the young folks of the place."

"Well, I do n't believe," said Miss SNIFFLIN, "that she ever cooks any thing. She spends so much of her time fixing posies, and pulling up weeds, that I guess there is rather poor fare at the cottage. She never was much of a cook."

But I can assert from experience that a dinner at the cottage was no fast; for, after I got reconciled to the matter a little, I often called, and had good reason to know. Indeed, the elderly ladies of the place often took tea with JANE, and I have it on their authority, that JANE made "a good cup of tea," and always had "two kinds of cake on the table"— which I believe is considered the *ne plus ultra*.

But these stories soon began to prove old,— envy and jealousy wore itself out — and now I believe it is acknowledged that JOHN has the prettiest wife — JANE the best husband — and both together, the best farm, the neatest garden, the prettiest cottage, and the prettiest children in all Farmersville.

LET ladies avoid the young man who does not behave with respect and honor towards his mother, and who is not courteous and kind to his own sisters.

OUR HOMESTEAD.

Our old brown homestead reared its walls,
From the wayside dust aloof,
Where the apple boughs could almost cast
Their fruitage on its roof:
And the cherry-tree so near it grew,
That when awake I've lain,
In the lonesome nights I've heard the limbs,
As they creaked against the pane:
And those orchard trees, oh, those orchard trees!
I've seen my little brothers rocked
In their tops by the summer breeze.

The sweet-brier under the window sill,
Which the early birds made glad,
And the damask rose by the garden fence
Were all the flowers we had.
I've looked at many a flower since then,
Exotics rich and rare,
That to other eyes were lovelier,
But not to me so fair:
For those roses bright, oh, those roses bright!
I have twined them with my sister's locks,
That are laid in the dust from sight!

We had a well, a deep old well,
Where the spring was never dry,
And the cool drops down from the mossy stones
Were falling constantly:
And there never was water half so sweet
As that in my little cup,
Drawn up to the curb by the rude old sweep,
Which my father's hand set up:
And that deep old well, oh, that deep old well!
I remember yet the plashing sound
Of the bucket as it fell.

Our homestead had an ample hearth,
Where at night we loved to meet;
There my mother's voice was always sweet,
And there I've sat on my fathers's knee,
And watched his thoughtful brow,
With my childish hand in his raven hair—
That hair is silver now!
But that broad hearth's light, oh, that broad hearth's light!
And my father's look, and my mother's smile,
They are in my heart to-night.

Youths' Department.

AGRICULTURE.

Agriculture is the art of cultivating the soil. It is the aim of all men to make their business, no matter what it may be, as profitable as they can. The object of the farmer in cultivating the soil is to raise the *largest crop* at the *smallest cost*. When the merchant, or speculator, or lawyer, increases his profits, it is often done at his neighbor's expense. But the farmer may increase his profits, and not only himself, but his neighbors, and his country be the better for it.

The farmer should not only aim to make large profits *for the present*, but this should be done *without injuring his land*. You would not think a carpenter made much of a speculation who had spoiled a set of tools worth $50 in making a barn-door, although perhaps he made the door very quick, and got twice what the job was worth. The banker who boasted of the large interest his money yielded, while at the same time his capital was continually depreciating, would be considered a strange financier. A man would be thought a downright idiot who would work his team extremely hard, without giving them sufficient food,—for the purpose of getting a week or two of profitable labor from them—until they became useless from over-work and poor fare. He would lose more in the injury done his team than the entire value of their labor. The wisest plan would be to find out what kind of work, and how much the team could endure, without injury, how much ford, and what kind was necessary to keep them in a good working condition, and act accordingly. The farmer shows as little sense, who, just to raise a crop or two, without much cost or labor, injures his land as much or more than the value of the crops raised. He should find out what his land is best suited for, and what *food* it will furnish his crop, and what is the best course to keep it in a "*good working condition*." To do this he must know something of the nature of the crops he raises, of the land on which they grow, and of the manure or food of plants which he applies to the land. A man who makes up his mind to build a house or a barn, will first examine the materials he has on hand, (if he has any,) and procure those suitable for the building which he intends to erect. Why should the farmer act less wisely when he undertakes to make a crop of wheat, or oats, or potatoes. We shall attempt to give the youth a little light on the subject.

1st—Of the nature of crops.—All vegetable substances consist of two parts, called the *organic*, and the other the *inorganic*. You have often seen a pile of wood, perhaps a log-heap, set on fire and burned. The *wood* was very heavy, but the greater part is burned away, and the *ash* that is left is light. The greater part which burns away is the *organic* part, and the small part that remains—the ash—the *inorganic* part. A stick of wood so heavy as to require a strong man to lift it, could be carried by a school-boy in his sachel after the *organic* part is burnt away. The *organic* part is more than *nine* pounds out of every *ten*.

Perhaps some of our young readers are ready to inquire by this time "*what that organic part is that burns away?*" The *organic* part of plants consists of *carbon, hydrogen, oxogen* and *nitrogen*. *Carbon* is a solid substance, wood-charcoal, black-lead, and the diamond, are varieties of carbon.

Hydrogen is a gas or air, and the lightest of all known substances. It burns in the air, but in it a candle will not burn, nor an animal live. You can make this gas by putting some iron filings in a tumbler, and pouring over them a small quantity of sulphuric acid, diluted with twice its bulk of water, and covering the glass for a few minutes. This is the gas with which baloons are filled.

Oxygen is also a kind of air, generally called gas. It is heavier than hydrogen, indeed, it is heavier than the air we breathe. It forms one-fifth of common air. A candle will burn in it with great brilliancy. The properties of oxygen may be shown in the following manner: take equal parts of oxide of copper and chlorate of potash, and rub them together in a mortar, then put the mixture into a common oil flask, and place it over a lamp, as seen in the figure, (fig. 1,) when a piece of charcoal or sulphur introduced at the end of a wire will burn brilliantly.

Fig. 1.

Nitrogen is also a kind of air differing from the other two. It will not burn, and a lighted taper will not burn in it. It is a little lighter than common air, of which it forms four-fifths of the bulk. The easiest method of obtaining this gas is by mixing together a quantity of sal ammonia with half its weight of salt-petre, both in fine powder, and heating them in a retort over a lamp. The gas is collected over water, as shown in figure 2.

All of these four elementary bodies, are not, however, found in all vegetable substances. The greater number contain only *oxygen, hydrogen* and *carbon*. Starch, sugar, the fibre of wood, fats, and many other substances contain no nitrogen.

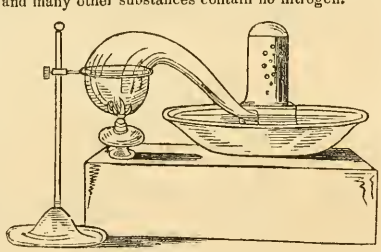


Fig. 2.

In our next number we shall speak of the *inorganic* part of plants.

A Word to Boys.—Some one has said:—"Boys, did you ever think that this great world, with all its wealth and woe, with all its mines and mountains, its oceans, seas and rivers, with all its shipping, its steamboats, railroads, and magnetic telegraphs, with all its millions of men, and all the science and progress of ages, will soon be given over to the hands of the boys of the present age—boys—like you assembled in school-rooms, or playing without them, on both sides the Atlantic? Believe it, and look abroad upon your inheritance, and get ready to enter upon its possession."

Editor's Table.

THE GENESEE FARMER commenced the year with the most flattering prospects, and thus far our anticipations are more than realized. The old subscribers are fast renewing their subscriptions, and we are receiving thousands of new subscribers from places where the Farmer never before circulated. Our friends who are exerting themselves to extend our circulation will accept our thanks—more than this, our pledge to spare neither labor or means to make the Farmer—a welcome and valuable monthly visitor—the FIRST—the BEST.

LIFE SUBSCRIBERS.—We have received many letters asking us to consider the writers life subscribers for the Farmer. May it be long before Death shall erase their names from our books, and deprive the world of the benefit of their influence and example. BENJ. HODGE, of Buffalo, writes: "I cannot afford to lose a single number of your paper, and you may consider me a subscriber for life."

ONE WAY TO DO IT.—We received a letter from a friend, a short time since, giving an account of the formation of an "*Agricultural, Horticultural, and Mechanical Association*," in a certain town in this State. The writer says; "By our *Constitution*, the necessary qualification for a person to become a member for *one year*, is to pay the club price of *three shillings*, and receive and read the *Genesee Farmer* for 1850."

YOUNG FARMERS.—The youth are beginning to turn their attention to agriculture, with their characteristic spirit and enthusiasm. We should be pleased to publish some of the letters we have received from our young friends during the past month, but space forbids. One in Chautauque Co., N. Y., 14 years of age, writes us that his father is a lawyer, but has consented that he should be a farmer. He forwarded his subscription to the Farmer for two years. We hope he has received, and will study carefully, the book we sent him. It will lay the right foundation for scientific and successful farming. We refer all such to our YOUTH'S DEPARTMENT.

OUR CORRESPONDENTS must bear with us a little, if they do not receive that attention to which they are entitled as early as could be wished. We are in the daily receipt of from forty to fifty letters, some of them requiring written answers; and many asking information as to the price of stock, &c., to obtain which, we have to write to those having them in their possession, which in some cases causes considerable delay. We shall do all justice, and as speedily as possible.

GLASS WATER PIPE.—Many object to the use of lead pipes as conductors of water, from the impurities they impart to the water. W. T. DE GOYLER, of Schenectady, has invented a *glass pipe*, which is highly spoken of where used. It has been in use over one year at Union College, Schenectady. RAPALJE & BRIGGS, of the Genesee Seed Store, in this city, are the exclusive agents for the counties of Ontario, Livingston, Monroe, Genesee, Erie, Wayne and Orleans, in this State.

CAULIFLOWER IN WINTER.—We were presented by J. P. FOGG, Esq., of this city, with a beautiful head of Cauliflower for our New-Year's dinner. Mr. F. took from his garden about one hundred that had not headed, and placed them in his cellar, where they headed beautifully. By this means a good supply of this delicious vegetable can be obtained for winter use. Though this plan is not new to experienced gardeners, we presume it will be new and valuable to many of our readers.

CANADA THISTLES.—We have a host of communications on the best means of destroying the Canada Thistle. We shall attend to them in our next. We think the thistles may consider themselves "used up."

WE are indebted to WM. P. FOGG, of the Patent Office, Washington, for valuable translations from the foreign Agricultural Journals. These translations will be a valuable feature in our paper the present year.

B. P. JOHNSON, Esq., of Albany, will accept our thanks for a most beautiful pamphlet copy of JOHNSTON'S address, at the late State Fair.

WAGENER APPLE.—It will be seen by Mr. WATTS' advertisement that he has scions of this celebrated apple for sale.

POSTAGE OF THE FARMER.—The Farmer is subject to *newspaper postage* only. A few postmasters, particularly at the West, have occasionally given our subscribers trouble, by attempting to collect the same rates of postage as on pamphlets. To save our friends any further annoyance, and set the matter forever at rest, we have taken the pains to lay the subject before the Post Office Department. The following is the very satisfactory decision.

POST OFFICE DEPARTMENT.
Appointment Office, Dec. 13, 1849.

SIR:—In reply to your's of this date, I have to inform you that the "Genesee Farmer" published at Rochester, New York, is regarded as a newspaper, and should be rated with one cent postage when carried in the mails over one hundred miles, or any distance within the State; and if carried over one hundred miles, and out of the State in which they are mailed, one and a half cents postage.

I have the honor to be, Very respectfully &c.,
FITZ HENRY WARREN,
Second Assistant Post Master General.
DR. DANIEL LEE, Washington, D. C.

STATE AGRICULTURAL SOCIETY.—The following are the Officers appointed for the ensuing year, at the annual meeting, held on the 17th inst., at Albany:

President.—E. P. PRENTICE, Albany.
Vice Presidents.—Ambrose Stevens, N. York; Lewis G. Morris Westchester; Anthony Van Bergen, Greene; Z. C. Platt Clinton; J. B. Burnett, Onondaga; E. C. Frost, Chemung; Oliver Phelps, Ontario; Nelson Van Ness, Chautauque.
Cor. Secretary.—B. P. Johnson
Rec. Secretary.—J. McD. McIntyre.
Treasurer.—Luther Tucker.
Executive Committee.—B. B. Kirtland, J. J. Viele, H. Wendell, A. Thompson, Henry Wager.

The next Fair is to be held at Albany. The Society unanimously adopted a resolution, requesting Congress to establish a National Agricultural Bureau.

BURRITT'S CHRISTIAN CITIZEN.—We refer our readers to the advertisement of this paper. Mr. BURRITT, the learned blacksmith, is too well and too favorably known to need our praise. He has given up making horse shoes, and is endeavoring to forge "swords into plow shares, and spears into pruning hooks." May success attend his benevolent labors until the arts of civilization shall supplant the barbarous arts of other days—peace and plenty make the hearts of millions rejoice—man no longer oppress his brother man—and the "nations learn war no more."

HOLDEN'S DOLLAR MAGAZINE.—We are indebted to the Agent of this city, D. M. DEWEY, for the January number of this valuable monthly. It contains an interesting story of the life and death of CHARLES W. HOLDEN, the late proprietor and the projector of the Magazine—a beautiful tribute to his memory. The portrait accompanying the sketch is a very fair likeness. Mr. H. left New York for California on the 17th of January, and died on the 30th of June. Like many others, who left their friends and homes with high anticipations and golden dreams, he breathed his last under the shade of a tree, on the shores of the Sacramento.

NEW PAPERS.—*Moore's Rural New Yorker* is a neat and valuable weekly paper just commenced in this city, devoted to Agriculture, Horticulture, the Mechanic Arts, Education, &c., by D. D. T. MOORE.

The *Family Visitor*, of Cleveland, Ohio, is another new weekly. The principal editor is Prof. J. P. KIRTLAND, one of the most scientific men, and perhaps the best Horticulturist of the West.

THE AGRICULTURAL PRESS.—The *Albany Cultivator* for January comes to us with its usual amount of valuable matter. Accompanying it is a *pictorial number*, interesting at least to the juveniles.

The Plough, the Loom, and the Anvil, by the veteran SKINNER, bids fair to sustain and increase its high reputation.

The *American Agriculturist*, the *Prairie Farmer*, the *American Farmer*, the *Wisconsin Farmer*, the *New England Farmer*, and the other Agricultural monthlies have been received. We wish them the success they merit.

Mr. T. B. GARRS, of Mayville, Chautauque County, N. Y., sends us an account of a native Cow, that was dried off in June last and fatted on grass exclusively, and slaughtered on the 10th of December, 1849. The neat weight of which was, beef, hide, and tallow 863 lbs., and divides, beef 623, hide 70, and tallow, tried and refined, 165. Considering the light weight of beef with the heavy weight of tallow, we think it cannot be beaten.

THE LAST HOURS OF REV. HENRY COLMAN.—We have been told within a day or so, that the late Mr. Colman, after having visited Ireland, on his second trip to Europe, only had strength left him to reach Islington, England, where he died. He had been charged with a private embassy to facilitate emigration from Ireland of the better class of her citizens, who might wish to settle on our shores, and there contracted a fever called the ship or typhus fever, which terminated his life. His reason left him, but his mind seemed exercised in deep commiseration for the *poor Irish* whom he had but just left in their misery. Those who knew the late Mr. C., either personally or as a profound writer upon agriculture, and as one of the warmest friends of the farmer, will hold his memory dear. Mr. C. edited the Genesee Farmer for several years, and was an occasional contributor since 1832. He dissolved his connection with the Former to enter on his European Tour.

FLYING.— It does seem as if man would never rest satisfied while any thing remained unaccomplished. He traverses the seas with almost the same certainty and safety as he does the land, crossing the Atlantic, and arriving at the destined port within an hour or two of the appointed time. He travels from Country to Country, and from State to State with little short of lightning speed, and is carried a hundred miles in less time than a few years ago he went ten. He sends his messages from one end of the Union to the other with the rapidity of thought, and yet he is unsatisfied—something yet remains undone. He cannot yet rival the Eagle in her flight to the skies. But he is on her track. The screaching of the steam whistle may yet warn the Eagle to "*look out for the Engine.*" The Scientific American describes a machine now building in New York by a Mr. PENNINGTON.

INDUSTRIAL SHOW OF NATIONS.—At the suggestion of PRINCE ALBERT, who is doing much for the cause of improvement in England, and the exhibition of whose fine stock we have before noticed, and under the patronage of his "better half," a grand exhibition of the industrial products of all nations is to be held in London, in 1851. The exhibition will probably be the most splendid affair of the kind ever witnessed in the world. It is proposed to raise £100,000 for the general expenses. The prizes are to be one money purse of £2,000, four of £1,000 each, and several costly medals, which are to be conferred by the Queen in person.

CLOVER AND TIMOTHY SEED.—Large lots of Clover Seed are purchased in Ohio, and come down the Lake in the fall, and we understand some five or six thousand bushels are now held in Rochester and this vicinity. The crop in this and the adjoining Counties was fair. Prices must necessarily be nearly, if not quite as low as last year: say from $4 to $5. This market is mostly supplied with *Timothy Seed* from Canada. The market is very quiet, and will probably remain so, until the opening of Lake navigation. Prices range from $1 25 to $2 25, according to quality.

OUR friend, A. HUIDEKOPER, Esq., Meadville, Pa., remits payment for ten copies of the Farmer, and adds—

"Our harvests during the past year were abundant in every thing but fruit. The spring promised well, but much of the fruit subsequently dropped off and that which matured was less fair, and not equal in size to its usual growth. It is also said not to keep so well this winter as in former years. The Belmot or Gate apple has begun to bear with us in this region, for a couple of seasons, and seems to sustain the reputation which DOWNING and Dr. KIRTLAND give it of being one of the best of all the early winter apples."

A SMALL FARM IN THE SOUTH WANTED.—One of our constant readers, who is "a poor man with a large family," wishes to get a small farm cheap in the northern or western part of Virginia. We should like to have this poor man, who regularly pays his four shillings for the Farmer, locate in some neighborhood where the *rich* farmers and planters are too *poor* to take an agricultural paper, and too *ignorant* to feel the want of one. The following tells its own story:

SIR: Will you allow me the privilege, of enquiring of some of your readers if it is probable I could get a few acres, say from 10 to 16; 3 to 5 acres cleared, the rest in wood; at the price of from $3 to $5 per acre, on a public road, (not a cross-road) I want to get it, if I can, in the northern or western part of Virginia; or somewhere on the Alleghany river, or some 20 or 30 miles from Wheeling, on the Ohio. If some one of your intelligent readers or correspondents can give me any idea where I can get what I have mentioned, they and you, sir, will be doing a great service to a poor man with a large family, who is looking out for a small independent home.

I am, Sir, your obedient servant, and constant reader,
Rochester, Jan'y 17, 1850. G. C.

SWEET POTATOES.—We have received several letters asking where sweet potatoes for seed can be obtained early enough for planting in this section. J. P. FOGG, of the Rochester Seed Store, will furnish them the coming spring to all who wish. Orders may be sent to our office.

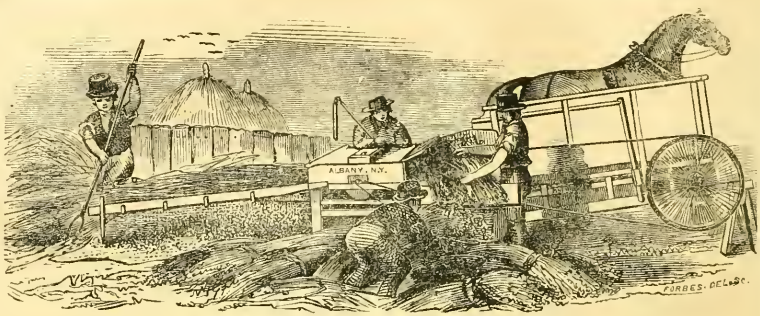
GRAND BANQUET TO THE POTATO.—That highly respected vegetable, the Potato, being now, it is hoped throughly re-established in health, it was determined by a few leading members of the Vegetable Kingdom to offer a banquet to the worthy and convalescent root on his happy recovery. The arrangements for the dinner were on a scale of great liberality, and the guests included all the principal vegetables. The invitations had been carried out by an efficient corps of Scarlet Runners, and the Onion occupied the chair. He was supported on his right by the head of the Asparagus family, while Salad occupied a bowl at the other end of the table, and was dressed in his usual manner. The Potato, though just out of his bed, was looking remarkably well, and wore his jacket, there being nothing to mark his recent illness, except perhaps a little apparent blackness round one of his eyes. After the cloth had been removed—

The Onion got up to propose a toast, "the Potato, their much respected guest." (Immense cheering.) He, the Onion, has known the Potato from infancy; and though they had not always been associated in life, they had frequently met at the same table. They had sometimes braved together the same broils, and had found themselves often together in such a stew (he alluded to the Irish stew) as had brought them, for the time being, into an alliance of the very closest kind. He the Onion, was delighted to see the Potato restored to his place in society, for he, the Onion, could say, without flattery, that society had endeavored to supply the place of the Potato in vain. (Hear, hear.) They had heard of Rice having been suggested to take the place of his honorable friend, but the suggestion was really ridiculous. *Risum teneatis, amici*, was all that he, the Onion, had to say to that. (Loud laughter, in which all but the Melon joined.) He the Onion, would not detain them longer, but would conclude by proposing health, long life, and prosperity to the Potato.

The toast was received with enthusiasm by all but the Cucumber: whose coolness seemed to excite disgust among his brother vegetables. The Onion had, in fact, affected many of those present to tears, and the Celery, who sat next to the Horseradish, hung down his head in an agony of sensibility. When the cheering had partially subsided, the Potato rose, but that was only a signal for renewed enthusiasm; and it was some minutes before silence was restored. At length the Potato proceeded nearly as follows;

"Friends and fellow-vegetables—It is with difficulty I express the feeling with which I have come here to-day. Having suffered for the last three or four years from a grievous disease which seemed to threaten me with total dissolution, it is with intense satisfaction I find myself once more among you in the vigor of health. (Cheers.) I should be indeed insensible to kindness were I to forget the anxious inquiries that have been made as to my state of health by those who have held me in esteem, and sometimes in a steam. (A laugh, in which all but the Melon joined.) I cannot boast of a long line of ancestors. I did not, like some of you come in with the Conqueror, but I came in the train of civilization, amidst the memorable luggage of Sir Walter Raleigh, in company with my right honorable friend the Tobacco, who is not new present, but who often helps the philosopher to take a bird's eye view of some of the finest subjects of reflection. (Immense cheering, and a nod of ascent from Turnip Top.) Though I may be a foriegner, I may justly say that I have taken root in the soil, and, though I may not have the grace of the Cucumber, who seemes to have come here in no enviable frame. (Loud cheers.) I believe I have done as much good as any living vegetable: for though almost always at the rich man's table, I am seldom absent from the poor man's humble board." (Loud applause.) "But," continued the Potato, "let me not get flowery, or mealy-mouthed, for there is something objectionable in each extreme. I have undergone many vicissitudes in the course of my existence. I have been served up, aye, and served out (a smile) in all sorts of ways. I have been roasted by some; I have been basted by others; and I have had my jacket rudely torn off my back by many who knew not the treatment I deserved. But this meeting my friends, repays me for all. Excuse me if my eyes are watery. (Sensation.) I am not very thin-skinned; but I feel deeply penetrated by your kindness this day."

The Potato resumed his seat amid tremendous cheering, which lasted for a considerable time.—*Punch.*



PATENT PORTABLE RAIL-ROAD HORSE POWER AND THRESHING MACHINE.

THE above celebrated Machines have, during the past year been more extensively sold and introduced than any year previous; and, what is most gratifying to the manufacturers, they give most unqualified satisfaction. Upwards of three hundred and fifty sets mostly for two horses, have been sold the past season without supplying the demand for them.

With our present increased facilities for their manufacture, and some additional improvement in their construction and materials, they are now offered to the public with increased confidence in their superiority over all other kinds of threshing machines for the farmers own use and economy.

Their durability is no longer a question, they having been in use for the last seven or eight years without any perceptible wear or expense, further than the oil and a new plank flooring for the horses every twenty or thirty thousand bushels of grain, which any farmer or mechanic can replace at his leisure.

Some of the advantages of the above machines to the farmer are, their *portability* and *compactness*, admitting of their use inside of barns during all weather, thereby protecting both man and beast, requiring no more room than is necessary for threshing with the flail. The whole may be operated by the force usually about the farm without calling together the whole neighborhood, thereby enabling the farmer to thresh his own grain, and during such time or weather as best suits his own convenience, or take advantage of markets, which last is often no small item in a farmer's receipts.

The One Horse Power requires, with a change of horses once or twice a day, but three men to thresh from seventy-five to one hundred bushels wheat or rye, or double that amount of oats or buckwheat, per day; and with the Double Power, without a change of the horses and with four or five men, double that amount can be done in the same time.

The prices will be about the same as last season, viz:

For the One Horse Power, Threshing Machine and Separator Bands, &c.	$120
For the Two Horse do. do. do. do. do. do.	150

Portable Saw-Mills for sawing wood, slitting boards, &c., for fencing, and a very useful machine about a farm or work shop, are furnished in complete running order, and adapted to the Horse Powers for $35.

All articles are warranted to be of the best materials and workmanship, and to come up to the above descriptions, or the purchase money shall be refunded on the machinery being returned within three months, provided the purchaser is not pleased or satisfied with it.

It has been exhibited the last three years at the State Fair and nearly half the County Fairs in this State, and extensively introduced in the States of Ohio, Indiana, Illinois, and Wisconsin, also to some extent in the Canadas. For further particulars, descriptions, terms, &c., &c. see Catalogue of Albany Agricultural Warehouse, furnished gratis on application or by mail - or the Agricultural Papers for the past three or four years. Address

H. L. EMERY,
No. 369 & 371 Broadway, Albany, N. Y.

N. B. May also be had of Jno. Mayher & Co., No. 197 Water street, New York, (who are the only authorized agents for the sale in that city,) at the manufacturers' home prices

Take Notice.

THREE Months Extra Pay and One Hundred and Sixty Acres of Land will be procured for all who enlisted for five years, or during the War of 1812, and for all including Volunteers who served in Mexico, and for the heirs of all who have died in the service.

Information will be given to relatives, Free of Charge, by writing to G. F. LEWIS,
Detroit, Michigan
Postage Paid.

Those who do not know what became of their friends, write when and where they joined the army.

Spring Grains.

150 bushels *Club Wheat*, a choice variety, certain of maturity, and yields well—a larger and lighter colored berry than the Black Sea.

500 bushels *Black Sea Wheat*. This has long been known, and is highly praised on account of its never failing from weevil, rust, or anything which so often destroys wheat of different kinds.

200 bushels Spring Rye.

500 bushels Timothy Seed, mostly reaped

A large supply of Large Clover, White Clover, with a full assortment of Garden Seeds, for sale at the lowest rates at the Albany Agricultural Warehouse and Seed Store, No. 369 and 371, Broadway, Albany. H. L. EMERY.

Seneca Lake Highland Nurseries,

CATHARINE, CHEMUNG COUNTY, N. Y.

WITH Nursery and Standard Trees, this establishment covers forty acres. Fruit trees of the best varieties, at reduced prices, wholesale or retail, of all the kinds suitable to this climate. Ornamental Trees and Shrubs of all the most rare kinds, both Deciduous and Evergreen; Green House Plants; in short, a Nursery in all its parts. Trees can be furnished of the new and popular "Wagener" apple, also the Danse or Hawley.

Trees carefully packed and forwarded by public conveyance to any part of the Union. Being located within two miles of the Chemung Rail Road, used by the New York and Erie Company, their agents certificate will be forwarded by mail on their delivery. Packages will reach the New York and Erie Road at Elmira, 16 miles south of this, and the Buffalo and Albany route at Geneva, 45 north, which makes it a very desirable location for sending trees by public conveyance. Neither the Pear or Plum Blight, or Peach Yellows, are known at this location.

The Horticultural Advertiser, containing a priced Catalogue, furnished gratis to all post-paid applicants.

January, 1850. E. C. FROST.

Fruit Scions.

I AM now ready to supply Scions for grafting for 1850, which can be sent by *mail* or Express; and in all cases they have been cut from orchards familiar to me, and by persons in whom I can confide.

APPLES.

Northern Spy,	Norton's Melon.
Early Joe,	Canada Red.
Fameuse,	Ribstone Pippin.
Yellow Bellflower,	Esopus Spitzenburgh.
Pomme Gris.	

When possible, shall send specimens of the fruit.

Price One Dollar per hundred. Post-paid applicants shall have prompt attention. Address JAMES H. WATTS,
Rochester, Monroe Co., N. Y.

January 1, 1850.

P. S. Also a few Scions of the "Wagener" apple, which the State Society awarded a premium for of $5

Wanted,

AT THE OLD ROCHESTER NURSERY, a few thousand two years old seedling Apple, Pear, and Quince trees. Post paid offers, stating quantity, quality, and price, will receive attention. S. MOULSON, 36 Front St., Rochester.

For Sale.

TWO Short Horned Bull Calves, one year old in April next. In color one is red, the other red with some white, both descended from the Bull "Yorkshireman," bred by the late Thos. BATES, Esq. *Letters of inquiry, post-paid*, will be attended to.

Auburn, Jan. 11, 1850. [2-2t] J. M. SHERWOOD.

CONTENTS OF THIS NUMBER.

ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Former, at the rate of $1,50 per square or folio (ten lines or 100 words) for the first insertion, and $1 for each subsequent publication — IN ADVANCE. The circulation of the Former is from FIVE to EIGHT thousand LARGER than that of any other agricultural journal published in the United States.

First in Beauty and Value — Cheapest and Most Popular.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, Fruits, &c

VOLUME XI. FOR 1850.

DANIEL LEE & JAMES VICK, JR., EDITORS.
P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2; Eight Copies for $3, and any larger number at the same rate.

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DANIEL LEE.
December, 1849. *Rochester, New York.*

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—MARCH, 1850. NO. 3.

SUB-SOIL PLOWING.

Much as has been said in favor of deep plowing and sub-soiling the earth, the subject has hardly begun to excite that general attenion among farmers which it ought to command. There is scarcely one acre in a thousand on which a deep, mellow, and productive soil can be found, without breaking the *pan*, or compact mass that lies just below the surface of the ground. So far as the warm atmosphere can freely penetrate, with its oxygen, carbonic acid, ammonia, and vapors, chemical action will be extended, roots will grow and *rot*, and a fertile soil be gradually developed. The benefits of deep tillage do not all accrue immediately after the operation is executed. The formation of a deep, mellow, and rich soil, by the most skilful use of natural elements and agencies, is the work of many years. To attain this result, one needs not only mineral and organic matter in due proportions in the surface of the earth, but both minerals and mold of a particular kind, and in a particular condition of solubility and combination.

After a man has deliberately made up his mind that it is better to own and cultivate good land than poor land, and that there is such a thing as improving the natural fertility of the earth, his first thoughts should be directed to the point, whether any field, or part of a field, needs draining. Stagnant water within three feet of the surface will rise by capillary attraction to a degree fatal to that warmth and friability of the soil, without which its highest productiveness can never be reached. All under-draining should be into ditches at least three feet deep. But there are millions of acres of tilled land that need no artificial drainage, which will be greatly improved by deep, or sub-soil plowing. The advantages of this mode of culture are the more speedy and decisive, as the manuring, liming, and ashing of the land accompany the breaking up of the inert mass of clay or gravel below the surface soil. It is not pretended that this dead earth will instantly become fertile. Admitting that the comminuted clay really contains salts of lime, potash, soda, magnesia, and soluble silica, it takes *time* to prepare these fertilizers for the nutrition of cereal plants. Salts of iron and alumina, such as copperas and alum, are apt to exist in excess, and require a little caustic lime to decompose them and form gypsum or sulphate of lime. Plants that contain considerable nitrogen, such as peas and clover, and of course yield a liberal per centage of the alkali called ammonia, when they decay, are exceedingly favorable to the deepening of a thin soil, in connection with deep plowing. Every farmer should understand the difference in the economical value of vegetable mold. Suppose one has 100 lbs. of cabbage, exclusive of water, in one heap, and a like weight of pine saw-dust in another. Which will form 50 lbs. of the better mold? The solid organized matter is alike in each mass; and why should there be any difference in the economical value of 100 lbs. of cabbage or 100 lbs. of saw-dust, either for feeding cows and children, or feeding wheat and corn plants?

In principle, there is no difference in feeding animals, from man down to a coral or sponge, and feeding plants. All living beings need food adapted to their peculiar natural wants. Hence, place a baby oyster in saline water that contains not a particle of lime, and its stony covering must cease to grow. Nature is incapable of creating the first atom of lime, or of any other element consumed to form any plant or animal. A deep, fertile soil, is one that abounds in the raw material for making bread, milk, and meat, in an available form, to the depth of twelve or twenty-four inches, as the case may be. Is there anything unreasonable in saying that such a soil possesses a very great intrinsic value? A cubic foot of such land in the valley of the Genesee contains, on an average, over a pound of common lime. This gives over 43,000 pounds of this mineral to an acre, within twelve inches of the surface of the ground. The writer is credibly informed by one of the best farmers in the State of Delaware, that a million bushels of burnt lime are now annually used for improving the soil in that small State. One farmer pays a $1000 a year for *guano*.

In the last number of the Working Farmer we find statements in regard to sub-soiling, from which we extract the following. James Carnahan, President of Princeton College, states the results of an "unintentional" experiment he made in 1848, in sub-soiling.

"I wished," says he, "to sub-soil a lot in soil with a hard pan, and as I had only one team, I hired another to turn over the sod preceding the sub-soil plow. He came and worked one day, but did not return the next. As the time for planting was approaching, I directed my farmer to go on and plow in the common way as deep as he could. He did so. The following day the other plowman returned, worked a day (sub-soiling) and then was absent.

"The result was, the lot was plowed alternately

with the common plow and the sub-soil. The whole lot manured and worked in the same way, except the sub-soiling of some parts and some not. The month of August was dry; the corn in the sub-soiled suffered very little; that on the part not-subsoiled suffered very much.

"When the corn was gathered, we could distinguish the very row where the sub-soiling was commenced and ended—*the ears were more numerous and of a larger size.* I did not measure the corn nor the ground, but the difference was so obvious to the sight, that no one could doubt the superiority of the corn or the ground sub-soiled.

"This year the whole of my corn ground was sub-soiled, and the yield was very satisfactory. The month of July was dry and hot, and the leaves of my corn did not shrivel, while those in the adjacent fields rolled up."

Every farmer knows that a deep, friable soil will take up more rain water without detriment to the growing crop, than will a shallow, compact soil. For a similar reason, moisture from below will more readily ascend in dry weather and supply the roots of needy plants with their liquid aliment. But, do not forget that a soil sixteen inches deep requires twice as much mold as one only eight inches in depth. Now, the richest mold is that formed from the carcass of a dead horse or sheep; but as such organic matter is attainable only in homœpathic doses, the farmer should test his skill in producing mold from clover, peas, corn, grass, and other vegetables, to mix with his sub-soil. Beware of the folly of spreading farm labor over too large an area for the highest permanent profit. Fifty acres of good land are more valuable than two hundred of poor land.

WHEN TO PLOW, AND WHEN NOT TO PLOW.

In the course of a few sensible remarks on the relative profits of corn and wheat culture, in the February number of this journal, our friend Mr. SPERRY, of Gates, says: "Do not plow your ground in the fall, (the opinion of Dr. LEE to the contrary notwithstanding,) to leech and waste its sweetness on the dessert air; but if practicable, plow it up one day and plant it the next."

As "there is a time for all things," there must be a time to plow. When is it?

Mr. S. is too good a farmer not to know that the proper time to commence tillage with a view to prepare the soil for seeding or planting, depends very much on the character of the earth to be cultivated. A light sandy loam needs but one good plowing and harrowing to prepare the ground for wheat or corn; and if it be sufficiently dry, no matter how soon the seeding follows the plowing. But suppose one has a stiff, close, compact clay, which breaks up in lumps as large as a man's head. What is so good to mellow these as the hard freezing of a northern winter and their thawing in early spring? When plowing is done late in the fall, as it should be, very little decomposition of organic matter will take place till warm weather sets in at and after planting, so that talking of "gases losing their sweetness on the desert air," is a poetical fiction, rather than a matter of fact.

As a general thing, we do not approve of plowing land and keeping it exposed naked to the sun and rains long before the seed is placed in the earth. It gains something by the mellowing influence of atmospheric air and other chemical agents in nature; but when this *fallowing* is long continued in warm weather, the soil loses a large share of the fertilizing elements evolved in the progress of tillage, before the young plants which are to form the crop become large enough to take up and organize its too abundant food. Thousands of farmers waste, and lose forever, no inconsiderable portion of their manure and the soluble elements of plants in the surface soil, by not skillfully adjusting the feed of living, growing vegetables, to their respective wants. This loss can only be avoided by studying all the changes which plowing effects in the soil, and *how cultivated plants grow.* When this is done, the enlightened agriculturist will know how early and how late he may properly break green sward, or plow any field for any crop. He will then comprehend the importance of *deep* and *fine tilth* to augment the available atoms required by nature to form a generous harvest.—These atoms often abound in an unavailable condition, which must be changed before the soil can become fertile. Many stir the earth when it is too wet. Drying immediately, the surface acquires an impervious crust, which arrests the most important chemical processes carried on in tilled land. It often demands a nice discrimination to say whether a certain piece of ground should or should not be plowed at a particular time. A sound judgment is indispensable to the farmer, if he is to escape committing grave errors in his complex profession. Experience and science should go together.

WHEAT.—ITS MINERAL FOOD.

Mr. WAY, Professor of Agricultural Chemistry in the Royal Agricultural College, Cirencester, England, has contributed to the Journal of the Royal Agricultural Society an extended and exceedingly valuable paper on the "Analysis of the Ashes of Plants." These researches embrace, among other matters of interest, the analyses of 62 varieties of wheat, so far as to determine the amount of minerals which an acre of grain, including straw and seed, removes at each harvest. In straw, the quantity of ash per 100 parts ranged from 3½ to 5 per cent. In one sample the ash was only 2.74 per cent; in another the per centage was as high 11. The mean of 40 specimens is 4½ per cent. These varieties of grain which had the most mineral matter in the straw were less liable to fall, and the stems were brighter and more exempt from mildew and rust.

The ash in wheat chaff varies from 7 to 16 per cent. In wheat, the analysis of 62 specimens gave a mean of 1.67 per cent. This result is about the mean between the results obtained by Dr. SPENGEL, as copied by Prof. JOHNSTON in his Lectures on Agricultural Chemistry, and M. BOUSSINGAULT. In looking over the tables, we find no ash of the seed which contains quite half its weight of phosphoric acid, and none that has so little as 40 per cent. The next most abundant element is potash. Of this the proportion ranges from 33 up to 39 per cent. The third most abundant mineral is magnesia, which ranges from 9 to 14 per cent. After this stand soda and silica, the latter being mostly in the bran. Of lime, the figures run from 1½ up to over 8 per cent. Sulphuric acid and chlorine also exist in small quantities. In all cases the grain was cut close to the ground, and yet the wheat was nearly as heavy as

the straw. The best yields were obtained by dibbling one seed four inches in drill and in rows twelve inches apart.

Considerable improvements are now making in England in the art of feeding wheat plants fertilizers that abound in available *azote* — a substance the agricultural value of which was first taught by Dr. Samuel Mitchell, of New York, about 60 years ago. It most abounds in cabbages or in cruciferous and leguminous plants. Azote is but another name for nitrogen, which forms about four-fifths of the air we breathe. This atmospheric nitrogen is not available in wheat culture till it is combined chemically with hydrogen to form ammonia, or hartshorn; or with oxygen to form nitric acid (*aquafortis.*) This acid combined with potash makes saltpetre, which is a most valuable fertilizer for wheat. Leached ashes and stable dung in a compost is a sort of nitre bed — a contrivance for converting atmospheric azote into nitric acid, just as burning wood converts the oxygen of the air into carbonic acid. The economical preparation of food for plants on scientific principles, is altogether too much neglected in this country. — Probably not one-tenth part of the liquid and solid excretions voided on the farms in the United States, is ever re-organized in the succeeding crops. After the manure is applied to the land, more than a moiety is lost before it enters the roots of plants. We can never have good crops of grain, grass, and potatoes, at a cheap rate, till we learn how to save all fertilizers, and work up the raw material of our several harvests to the best advantage. It is just as bad economy to apply too much as too little manure, to any given surface.

Two of the most expensive elements in grain culture are phosphoric acid and potash. These are derived from the soil alone, and are everywhere wasted, over more than 100,000,000 acres, in this empire of farmers. Other elements, equally necessary and nearly as expensive, are also thrown away in a thousand forms. It is high time there was a *poudrette* manufactory in every city and village in the Union; and that the fertilizing atoms so prepared be drilled in with seed wheat, here as in England, Belgium, and China. We evince a strange lack of common sense by continuing to impair the natural fertility of our arable lands, with the certainty that we must give more and more labor for every 100 bushels of potatoes, wheat, or corn that we annually grow. Keep all manure out of the rain. Be careful to save all ashes, and procure bones, gypsum, and lime.

OKRA.

Messrs. Editors: — Several of my neighbors have received seeds from the Patent Office at Washington, and among them was one paper of Okra seed. How are they used? Some say that the pods are pickled. If so, at what time. A. Willson.—*Marcellus, N. Y.*, 1850.

Okra is a native of the West Indies, where it is much used in soups and stews. Its use is rapidly increasing in this country. There are two varieties, the large and the small podded. The seeds are planted in the spring, either in rows or hills three feet apart. The plant thrives readily, and requires no further care than is requisite to keep it free from weeds.

THE COMPOSITION OF MILK.

Modern chemistry has thrown much light upon this very important branch of rural economy. Of all agricultural products, none is more valuable, more widely diffused, or more difficult to dispense with, than *milk*, and the *butter* and *cheese* manufactured from it. Many elaborate and careful experiments have been made by Boussingault in France, Prof. Thompson, and others in England, with the view to test the quantity and quality of milk produced by animals fed upon different kinds of food. These experiments have elicited many important facts of great value to the dairy farmer; but much remains yet to be done before this subject can be fully cleared up. The economical production of milk by means of the machinery which Nature has provided, must be carefully studied, and reduced to a science. This article, which constitutes so large a proportion of human food, will then be regarded as a *legitimate manufacture*, and improvements in the *machinery*, or the animals which elaborate it, will add millions to the agricultural wealth of the country.

The component parts of milk in all animals, both herbiverous and carnivorous, is the same. It differs only in the proportion of its principal ingredients. Substances are, however, occasionally found in milk, arising from the peculiar food of the animal, which render it medicinal, or even poisonous. The following table exhibits the composition of the milk of different animals, in its ordinary state, as found by Profs. Henry and Chevallier:—

	Woman.	Cow.	Ass	Goat
Casein, (cheese,)	1.52	4.43	1.82	4.08
Butter,	3.55	3.13	0.11	3.32
Milk Sugar,	6.50	4.77	6.08	5.28
Saline matter,	0.45	0.60	0.34	0.58
Water,	87.93	87.02	91.65	86.89
	100.00	100.00	100.00	100.00

From the above it will be seen that asses' milk contains much less butter and cheesey matter than that of the cow. It is probably from this circumstance, and its similarity to that of the human species, which, from the most remote times, has recommended it to invalids as a light and easily digested drink.

The richness, or proportion of butter and cheese, contained in cows' milk is well known to depend upon the food of the animal, the period of gestation, and the time of her giving the milk. That taken last from the cow during the same milking usually contains much the larger proportion of butter. Its temperature is from 65° to 75°. To the naked eye it seems a pure, white liquid; but when viewed through the microscope, an infinite number of minute globules appear, which contain the oily part, or the butter. When the milk is set away in the dairy, these oily particles, being the lightest, gradually rise to the surface and form the cream. But when milk is exposed to the atmosphere, the sugar it contains slowly changes into an acid called *lactic acid*. This causes the casein or curd to coagulate, prevents the separation of the cream, and the milk becomes *sour*. As this acid is usually formed before all the buttery globules have risen to the surface, the curd always contains more or less butter; sometimes as much as two per cent., or one-half the whole quantity contained in the milk. Hence, the longer we can keep the milk sweet the more cream we can obtain. Now, it is impossible to prevent the change of the sugar into lactic acid; but we can in some measure coun-

teract its effects by adding to the milk a substance that will absorb the acid as it is formed. *Carbonate of soda*, or the common soda of the shops, is the substance which experience has proved best for this purpose. Less than a tea-spoonful of soda dissolved in water and well mixed with four quarts of milk, will often keep it sweet for four or five days; thus allowing all the buttery particles to rise, and doubling the quantity of cream. In very warm weather more than the above proportion of soda is required.—Another advantage from this process is, that it matters little what kind of vessels are used to contain the milk, whether of stone-ware, wood, or metal. In France large wooden tubs are often used, with a faucet at the bottom, through which the liquid can can be drawn off from beneath the cream. In this way the labor of the dairy is made much more simple and easy.

In order that the butter may have no bad taste, the soda must be pure, and especially free from *sulphate of sodium*, (glauber salts,) which it often contains. To test its purity, dissolve a little in water and then add sufficient vinagar to make it effervesce. Now put into this a piece of silver, as a tea-spoon, for instance, and if after remaining a short time it retains its bright appearance, you may depend upon the soda as pure; for it it contains the least particle of *sulphur*, the silver will become tarnished. After the soda has been dissolved in water, it should be strained through a piece of linen before mixing it with the milk.

From forty-eight to seventy-two hours are required completely to separate the cream. When this has been done, the liquid loses its white color, and acquires that *bluish* appearance well known to be the characteristic of *skimmed-milk*.

The souring of the cream is caused by the acid formed in that portion of the milk that adheres to the oily particles, and can be prevented, or rather retarded, by the process above described. The *carbonate of magnesia*, or twenty drops of *ammonia*, will be found to answer the same purpose as soda. F.—*Washington, Feb'y*, 1850.

CHEMICAL PROPERTIES OF BUTTER.

Butter is nothing more than the substance formed by the union of the oily particles contained in milk. Each of these globules is surrounded by a very thin film of casein, or curd, which can be easily detected with a microscope. When the temperature of the cream or milk is raised, these, from their lightness, press towards the surface, break through the delicate covering which envelopes each globe, and run together into an oily mass: this is butter. The same result is attained by beating or violently agitating the cream, as in churning. This union is purely mechanical, and no chemical action takes place except in the formation of the acid by which the cream is soured, and which is absolutely necessary before the buttery particles will unite. Thus the cream must either be permitted to stand until it sours, or else it becomes sour during the process of churning. In the latter case it is often necessary to raise it to a higher temperature, and sometimes it is best to add a little sour milk, or some other acid substance while churning, and this will be found often to hasten the formation of butter. In many parts of Holland they are very careful to skim the milk while yet sweet, but allow the cream to become sour before it is churned. By churning the cream sweet, you obtain butter of a more delicate flavor but in less quantity. When soda or ammonia is used to keep the cream sweet, you obtain the largest possible quantity of butter, and it has all the delicate flavor peculiar to that made from sweet cream. In many countries all the milk is churned, under the impression that in this way more butter is obtained than from the cream alone. This cannot be the case where the cream has been properly separated from the milk; and besides, in churning the whole of the milk, it is impossible to separate all the butter, from the difficulty of acting equally upon and keeping in motion so large a body of fluid. In the vicinity of towns, where there is a ready sale for butter-milk, it may perhaps be good economy to churn the milk; but in the country, where there is no market for butter-milk, it is undoubtedly a better plan to churn only the cream, while from the skimmed milk a marketable cheese can always be manufactured. The proper temperature of cream in churning is about 55°; when the whole milk is churned it should be 8° or 10° higher. If it is raised too high, the butter comes quick, but is usually soft and white. This is often the case in warm weather, and the only remedy is to use ice, or to keep the milk in a very cool dairy. In churning, the motion should be regular and moderate; slower in warm weather than in cold, that the temperature may be uniform throughout the whole mass; and it has been found, from a series of experiments, that the hardest and finest quality of butter was obtained after churning at the above temperature from an hour and a quarter to an hour and a half. To ensure good hard butter at all seasons of the year, particular attention should be paid to the temperature of the cream; and on a good dairy farm ice should always be accessible, by which, even in the hottest summer weather, the cream can be brought down to the proper temperature.

It is well known that the food of the cow influences both the quantity and quality of the butter. When the cow is fed on hay or dry fodder, the butter always comes the hardest; and it is said that the orange carrot, when fed to milch cows, will impart an agreeable flavor and a rich yellow color to the butter. To add the juice of the carrot to the butter after it is made, as is sometimes done to give it a saleable color, is a very bad plan, as it makes it much more difficult to keep sweet. When butter is to be kept any length of time, it should be worked as free from butter-milk as possible. The imperfect manner in which this is done, is the principal cause of its becoming rancid so soon. On taking it from the churn, it should be placed in a linen cloth and pressed between two boards until most of the butter-milk is extracted: it should then be washed in cold water, changed as often as it becomes milky, and after being salted it should be set away in a cool place until the next day, when by again working it over, the remainder of the butter-milk can be easily separated. Now let it be put down in earthen or stone-ware jars, packed as closely as possible, and after sprinkling the top with salt, let a thin layer of powdered charcoal be put over all, the more effectually to exclude the air and to absorb those gases the tendency of which is to hasten decomposition. Butter put down in this way can be kept sweet a long time even in warm climates. In Holstein, where very choice butter is made, they pack it in firkins made of beech-wood charred on the inside. The salt used should be of the best quality and very

fine. Much butter is spoiled from using salt containing lime and other substances which hasten its decomposition. Salt can easily be purified by pouring upon it a little warm water and allowing it to drain: it dissolves and takes out the lime and other extraneous substances, and leaves the salt nearly pure. The quantity usually added to butter is one ounce to the pound. After butter has become rancid, it can be restored and made perfectly sweet by a very simple process. This is, to wash it well in cold water, often changed, and after pressing out the water, salt it anew and add a little sugar, say half an ounce to the pound. This will be found to render it much more palatable, although it may not entirely restore that delicate flavor peculiar to new and sweet butter, which once lost can never be restored.

The above hints on making and preserving butter, I have translated from a French Agricultural Journal, with such additions and alterations as make them applicable on this side the Atlantic. W. P. F.—*Washington, Jan'y*, 1850.

NOTES FOR THE MONTH.

A Milch Cow.—A correspondent in a late New York Journal of Commerce, under the signature of "Traveller," says that "on the farm of John Johnson of Fayette, near Seneca lake, a cow gave forty-two quarts of milk per day through the month of June, 1848; and for five days she gave forty-five quarts per day." It is a pity that a paper which so ably advocates our great agricultural and commercial interests, should thus condescend to lend a hand to hoax our farmers with such a *milk story* as this.

A gentleman of this place, Joseph Wright, who is justly distinguished for his great practical success in developing the resources of nature, in both her vegetable and animal kingdoms, went to the farm of Mr. Johnson one day in the same leafy month of June, 1848, where he saw the said cow, and learned from Mr. J. that she gave a pailful of milk three times a day. The pail now became an object of curiosity to our practical friend, which, when produced, proved to be a ten quart tin pail with a strainer of the ordinary kind! Mr. W. has since compassed the land east and west, to procure a cow that will give forty quarts of milk per day, without success. He now authorizes us to say that he will give $500 for any cow that will give forty quarts of milk per day for any three consecutive days in the year.

John Johnson of Fayette, stands in the front rank of Seneca's masterly farmers. As the "Traveller" says, he has "miles of under-drained fields," whose surface and sub-soil seems to have undergone an amelioration almost magical,—a successful experiment, which many of his astute neighbors are preparing to imitate. Such a man needs not the aid of fiction to gild his truly substantial respectability. If he told a "Traveller" a *fish story*, our word for it, it was only from that irresistable impulse to sportive *humor* a *trace* of which we trust may be found in the *organic elements* of his Scotch character.

Rural Literary Progress.—If we may judge from the tenor of the correspondence of Bateham's Ohio Cultivator, the rural population of that State are much more alive to the necessity of their own literary improvement, and to their progress in agricultural science, than are the same class in the Empire State. At the west, at least in Ohio, there seems to be a growing desire for progress, to which is added a sort of fear akin to jealousy, that rural New York has more State patronage, more schoolmasters in the field, and is going ahead of them in literature and science; while on the other hand the great mass of our farmers, good easy souls as they are, seem to lay the unction to their souls that being sovereigns of the Empire State, they have by birthright all the knowledge and all the honor necessary to their calling and position in life.

A farmer, writing to the Ohio Cultivator, speaks feelingly of the wretched common school system tolerated in that State. He adverts to the mode of hiring teachers as though the "price and not the qualifications" of the itinerant biped who claims the name and office of schoolmaster, was the great desideratum there.

A farmer's daughter, feeling a desire for more school learning than her district school can give her, appeals to the editor of the Cultivator for his opinion of the propriety of a farmer's daughter going to a select school, about which she has some misgivings, as two girls who had *finished* their education at a seminary, "came home, as every body said, 'too proud to work and too poor to live without it!'" So far from "finishing their education," it is most probable that the principal of that seminary would say that their studies had come to a sad ending. I once heard a master in Israel complain of the low state of talent generally in the priest's office. He said, if a man has a precocious son, he puts him into a law office or some other profession or trade where his genius may have scope; but if he has one son duller than the rest, the absence of genius or passion in him is *prima facie* evidence to the father that the son is pious, and he is fitted for the *ministry* as a matter of course. Had the parents of these two girls sent them apprentice to a milliner or a mantua-maker, they would have hit their vocation much better than in placing them at a select school. Who believes that a liberal school education unfits the mind to enjoy the plain domestic labors and comforts of the farm? So far from it, it opens to the mind the true avenues to the study and practice and just appreciation of the useful and ornamental, the beautiful and true, in intellectual, practical, and social life. It enables us to value the gloss and tinsel of the world at just what it is worth—to avoid mistaking the extrinsic for the intrinsic, pretence for merit, &c., &c.

Indian Corn.—Over fifty thousand bushels of Indian corn has been taken in by one firm in this village, within the last three months, at 50 cts. per bushel. Thirty years ago but little corn was grown in this county; wheat was then the great paying crop—the grand *arcanum* of the farmer In that day, corn was so much neglected that many fields of primitive fertility might be seen at harvest with more bulk of weeds than corn stalks—the cereal crop not averaging twenty bushels to the acre. But, as the French say, all that is changed now. Wheat is no longer a certain crop on the same soil, now exhausted of its phosphates, and of late a prey to the fly, the worm, and the rust. Indian corn being a grosser feeding cereal, requires only the strong nitrogenous manure of the barn-yard, the hog-pen, or old sward, with good, early, and frequent tillage, to insure a large crop almost any season in our climate. Hence, at this time corn is fast becoming the favorite crop of our farmers. An extended foreign market (thanks to free trade) has contributed greatly to the value of this crop; and this foreign demand must increase, as

the value of Indian corn as a palatable and economical article of food, is just beginning to be known in Great Britain. In fact, we are told that the only perfect article of Indian meal of the true sweet *nutty* flavor yet eaten there was imported into England on the cob.

For many years I have supposed that fresh barnyard manure well worked into a rich calcareous clay soil to be planted with corn, would enable the crop to stand our summer drouth better than old and well rotted manure; but the experiment of the past season proves otherwise. Last spring I put no manure on my corn patch. The drouth in July and August was the most trying, I have known for many years; yet not a corn leaf rolled. I never saw more corn, or more perfect ears, grow on the same extent of surface. Had this patch been manured as usual, the temperature of the soil would have been increased during the fermentation of the manure in the hot weather of the long drouth, and the evaporation would have been great: as it was, the manure applied the previous spring now performed in the soil the office of well rotted manure. Stirring the soil often during the drouth, let in the oxygen of the atmosphere, which readily formed water with the hydrogen of the decayed humus. For several previous years, my corn being manured with fresh stable dung, its leaves rolled during the drouth, and many ears did not fill. But I would advise farmers to manure with unfermented manure this spring, as the probability is that after so many dry seasons the next will be cold and wet, when a necessary increased temperature in the soil can only be attained by draining or the application of fermenting manures! S. W.—*Waterloo, N. Y., Feb'y*, 1850.

ON SMUT IN WHEAT, AND THE CAUSE OF IT.

MESSRS. EDITORS:—This being a season of the year when practical farmers have the most leisure time during the day, with long winter evenings in which to read, reflect, and learn the ways of men and things, I propose to furnish for your useful and widely circulated paper a few communications, containing statements of *facts* in relation to agricultural matters, as they "came to pass" with me, together with such inferences and opinions as I have formed upon those facts; and inasmuch as I have recently observed in newspapers some publications in which the old, absurd, and (as I had believed) exploded hypothesis of the "*fungus*" origin of smut in wheat is revived and inculcated, I will begin with that subject.

During the winter of 1833, while spending some months in Albany, I wrote and published in the Albany Argus a series of articles, containing my observations and experiments continued through several successive years, in relation to the "cause of smut." Those articles were written in the plain, common language of the country, *(as all such communications should be,)* and addressed to "*practical farmers*," as being the persons most immediately interested in the subject matter of them. A series of experiments, continued through the past *sixteen* years, has in every respect corroborated the statements made in my former publications on this subject. I will, therefore, here request you to insert those articles as follows:

NUMBER I.

I have read many essays on the subject of the smut in wheat, and almost every writer has invented a new hypothesis as to the cause of it. In the *refinement* of their theories, (like philosophers in most other speculations,) they have, in my opinion, wholly "overstepped the modesty of nature," in their vague conjectures about "*invisible insects*," *vitiating principles in the air*," "*diseases arising from unseasonable cold and wet*," and that *smut is of an animal nature*, &c., &c. None of these theories or conjectures were satisfactory to my mind; but as I had not sufficient information to enable me to controvert them, or even with any propriety to question them, until very recently, I have remained silent, hoping that some one more capable than myself, would undertake a series of observations and experiments, which might result in a discovery of the true cause. Not being aware that any one has done so, and believing that some facts in my possession relating to this evil may be of service to intelligent farmers, (by drawing their attention to it, if in no other respect,) I will proceed to state them. It is perhaps proper here to premise, that for several years previous to 1830 my wheat crop had been considerably affected by smut; but by letting it remain in the field, *uncut*, until it was thoroughly, or *dead* ripe, the smut grains became so perfectly dry, that when the crop was threshed, they were very nearly all broken. The dust was cleaned out by the fanning mill, leaving the wheat entirely free from the smut usually found sticking to the "*downy*" end of the grain. In the summer of 1830, finding that my wheat had an unusual quantity of smut in it, I determined, if possible, to discover the cause of it. I commenced my operations by pulling up the stools of the smut wheat and examining the roots. In all cases (and I examined a very great number) I found the roots mouldy and rotten, the outer covering or "bark" had evidently been eaten off by some worm or insect; but of what kind, I was unable to ascertain. After several days of fruitless examination, I accidentally discovered on one of the smut ears a very small ash colored *bug*, about an eighth of an inch in length, something less than a line in diameter, and about a line in height. It appeared to be busily employed in gnawing its way into the husk or chaff of one of the smut grains; in a few moments it perforated the chaff, and began to feed greedily on the smut grain within. My curiosity was excited by seeing that little insect feasting, with much apparent satisfaction, upon a substance that I had always supposed no animal in the world would eat. After some reflection, it occurred to me that many animals appear to have an innate knowledge or instinct, which pointed out to them the best mode of preparing their food; and observing that this bug seemed to be feeding on its natural aliment, I determined to make some experiments for the purpose of ascertaining what agency (if any) this species of bug had in the production of smut. On a careful examination, I found one or more bugs on almost all the smut ears. A day or two afterwards, I took a small clean glass bottle, into which, after much care and trouble, I succeeded in putting three or four smut ears with about a dozen bugs on them; a paper cover was then tied over the mouth of the bottle so closely that no insect could get in or out. The bugs continued to feed on the smut grains for about three weeks, when they all died. Thinking it probable that they had deposited their nits or eggs in the smut grains, I took the smut ears and dead bugs out of the bottle, cleansed it thoroughly, brushed the dirt off the ears, and again put them into the bottle, which was closed as before. Within about four weeks I had a considerable number of young bugs hatched out, which immediately began to feed on the remaining smut grains. I kept them several weeks, untill during autumn they all died also.

NUMBER II.

During the summer of 1831, I again found that my wheat was smutty, and repeated my experiments upon the same species of bug, (mentioned in my first number,) of which I found great numbers on the smut ears. As in the preceding year, I put as many of the smut ears, with the bugs on them, in my bottle as it would conveniently hold: as before, the bugs all died in the course of three or four weeks. I then carefully examined many of the smut grains, in nearly all of which I found a small maggot or worm. Some were about an eighth of an inch in length, and in diameter nearly as large as the parent bugs; others were smaller, and several so small as to be scarcely visible to the naked eye. In some of the grains I could not discover any maggots, I presume because they were too minute to be visible to the naked eye, and I had no lens with which to examine them. The remaining smut grains were left untouched in the ears, put into the bottle again, and in two weeks I again had another full crop of bugs hatched out. These last, with the smut ears in which they were bred, I now have in my possession. A few days after I had found the bugs in my bottle were

hatched out, I observed immense numbers of the "*smut bug*" (as I shall hereafter call them) almost literally covering the floor and timber of the barn where my wheat was housed. There must have been *millions* of them. No doubt they had been bred in the smut ears carried in with the wheat. Within three or four weeks they all disappeared. Those which I saw in the fields were extremely shy, and upon the slightest touch of the ear fell to the ground, where they laid perfectly still and inanimate, *feigning*, as it would seem, to be *dead*. Being so small, and in color approaching to that of the soil, *(a gravelly clay,)* it was very difficult to find them. After remaining quiet, however, for a few minutes, they ran up the stem of the smut wheat and resumed their feeding on the smut. They were quite active in *running*; but whether they ever did, or could *fly*, or not, I could not ascertain. Their *habits* appear to be similar to those of the *pea* bug; and on a close examination, I have found several smut heads, in which all the grains had evidently been perforated near the lower part in the same manner that pea pods are found to have been perforated by the pea bugs. The punctures were so minute as to be scarcely perceptible to the naked eye; but I do not doubt that with a good glass all the smut grains would have been found to have been perforated in the same manner.

Upon much reflection I have come to the conclusion, that smut wheat is the *natural* food of the bugs I have described. There may be, and very probably are, other vegetable substances upon which they sometimes subsist when their natural aliment is not to be obtained. But as *conjectures* without *facts* upon which to found them are oftentimes worse than useless, I shall refrain from suggesting any at present, although (if convenient) I may hazard some in a future number.

That the smut is *not produced by a disease in the plant*, is, I think, conclusively proved by the facts I have stated. But if *additional* proofs were wanting, I have them, sufficiently strong as I should imagine to convince the most sceptical, in some circumstances which took place on my farm during the past year. I had, the previous year, taken much pains to procure seed wheat, to sow in one of my fields, which was perfectly free from smut. The land had been in clover about three years. It was plowed three times, and was in excellent order. The wheat was sown in good season, and in the fall looked very well. It continued to grow finely until it cared out, when I discovered it to be more smutty than any other which I had on my farm, although there were *two* fields which had borne a smutty crop the previous year, that had been again sown. I was at a loss how to account for this, until I recollected that the *clean* field which I had sown with *clean* wheat, had been well *manured* a few weeks before the wheat was sown. The manure was taken from the barn yard where all the straw and chaff of the smutty crop of the previous year had been thrown when it was threshed out. The *smut grains* of the former crop were undoubtedly carried into the field with the manure. In these smut grains, I presume, the *maggots* of the smut bug existed in great numbers, and thence came the *insects*, which smutted the wheat to so great a degree as to amount, probably, to one-tenth part of the whole crop in the field J. H. H.

(To be continued.)

SALT AS A MANURE.

MESSRS. EDITORS:—In my Farmer for January I find that our friend PARK has given his experience in the application of *salt* as a manure. I confess I can not see any substantial proof of its efficacy as a manure, from his experiments. His first is on a seven acre lot which had had no manure for four years, and then only a small quantity. Now, mark—

At the commencement of his experiment he puts on a small quantity of manure. In September, 1847, he plowed it up; in May, 1848, he plowed it again and sowed on it seven barrels of salt; about two weeks after he dragged it both ways, and in the fore part of July plowed it again and kept the drag at work; about the middle of August plowed it the fourth and last time, and on the first and second of September sowed it with wheat at the rate of two bushels per acre. Now then, from friend PARK's care in fitting his land and putting in his seed, I think he could reasonably expect forty bushels per acre in a good year without an ounce of salt being put on his land. I believe his county is as good for wheat as Ontario; and I have seen in the town of East Bloomfield, Ontario county, thirty acres of common land, which had been cropped with wheat every other year for some time—not a particle of manure—plowed in May or fore part of June, cultivated in July, and again just before sowing, which was about the first of September. The next spring, or fore part of summer, it was injured by the worm to such a degree that the proprietor told me he would be willing to take thirty bushels for the whole crop; but afterwards it began to recruit. On harvesting and threshing, it averaged him thirty bushels per acre, thus showing to my mind that friend PARK might possibly have had just as good a crop without the salt.

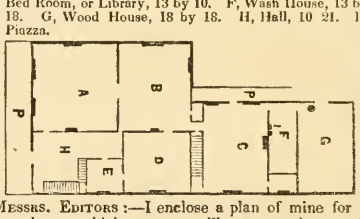
In his second experiment the evidence is more conclusive, but not indisputable to my mind; for his success might have arisen from other causes: First, had it been a very dry season, the swampy acre might have been sufficiently moist to keep the wheat growing, while the fallow would have been too dry; or, second, it might arise from the swamp muck not being sufficiently decomposed or mixed to promote a healthy growth before.

Now, in all probability friend PARK has other evidence in his mind which satisfies him of its utility. Will he not give us a little more light on this subject?

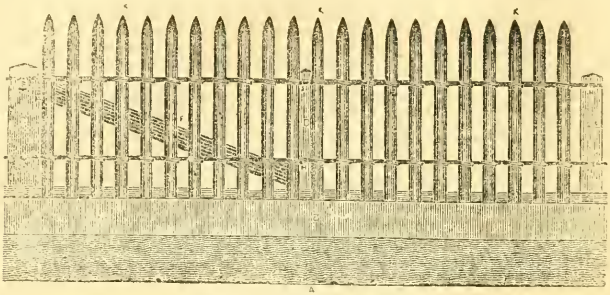
To convince myself, I have a small piece of land which I shall try with salt next spring. Yours, &c., C. B. JEWELL.—*Groton, N. Y., Jan'y*, 1850.

CONVENIENT PLAN FOR A FARM-HOUSE.

A, Parlor, 18 by 18. B, Sitting Room, 18 by 16. C, Kitchen, 14 by 18. D, Bed Room, 14 by 10. E, Children's Bed Room, or Library, 13 by 10. F, Wash House, 13 by 18. G, Wood House, 18 by 18. H, Hall, 10 21. P, Piazza.



MESSRS. EDITORS:—I enclose a plan of mine for a farm-house, which you are at liberty to make use of. It may not be new to you, but I do not recollect seeing anything exactly like it, nor have I seen any that suits my notion of a farm-house as well. I have not made any plan of the outside nor any estimate of the expense, as these would vary according to the location and means of the builder. The main building is 28 by 34 in the clear, and the wing, without the wood-house, 18 by 25. There is no room in the house but what may be entered without going through another, and but one room from which a person can not look out on the highway. The second story can be reached privately from the kitchen. The servants rooms are convenient to the kitchen, and that for the males can be entered from the wood-house. There is a stairway under the kitchen stairs, leading to the cellar, and an outside entrance can be had where it is desired, for the entrance of barrels or roots. The sketch is merely made from the eye in somewhat of a hurry, but will serve to give you an idea of what I mean. J. O. SCHULTZ.—*Sloatsburg, N. Y.*



WIRE TELEGRAPH FENCE.

We have received from Mr. Leavenworth, engravings and a discription of his Wire Telegraph Fence. We copy the following full description from the New York Farmer and Mechanic :—

"This fence is the invention of Mr. Lucius Leavenworth, of Trumansburg, Tompkins Co., N. Y., for which Letters Pattent were issued last October. The wire can be formed so as to put the pickets up in sections of any required length. It is drawn sufficiently tight at each corner of the field to strengthen the fence and fasten the pickets so that a brace is necessary at the first and last posts. The remainder of the posts, if wood, can be set in sills ; if iron, in flat stone. The hooks H, H, pass through the posts to allow the wires to be drawn. The screw on the opposite side of the posts will draw the end of the hook to the post which secures the wire. The wires are first secured on the post C, by screws or bolts, so that all the parts are of simple construction. The wires are formed, by a machine invented by Mr. Leavenworth, so as to encircle and retain the picket in a most simple manner. The machine forms the wire to any sized picket, and for any required space. The picket is turned with cylinder or traversing lathes.

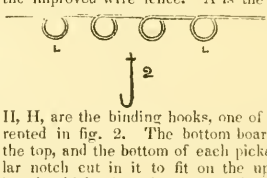
Fences made on this plan, attached to cast iron posts with wrought iron tennons and stone seats, would last for a number of years if well painted. The pickets can be made of the cheapest kind of timber ; and when it is painted will be durable. If preferred, a cheap kind of varnish could be used instead of paint. The pickets and wire might be painted or varnished before they are put up. On bottom lands, where a movable fence is required, it will supercede all others. It can be taken down, removed, and put up with very little trouble, weighing only about thirty-five pounds to the rod.

There are different plans for putting up this fence. The one in the engraving is probably the most substantial. The ground can be raised and a tier of stone laid instead of a board or the fence can be suspended from post to post without either.

This fence offers but little opposition to the wind, and consequently no snow wreaths are heaped around it. It is calculated to be a safe-guard against all animals commonly fenced against. The transportation of this fence will be trifling compared with other fences. It is well adapted for farmers on the western prairies, and in all countries where timber is scarce. With suitable machinery, where timber is plentiful, it is calculated that pickets can be manufactured for from thirty to thirty-five cents per rod ; the wire formed for putting it up will cost from twenty to twenty-five cents.

To make use of this fence for telegraph purposes, it will be necessary to suspend it from post to post, and insulate the wire at the posts. A farmer having his land inclosed with this plan of fence, with certain fixtures attached to it, can tell whether his fence is down or any part of it is broken without leaving his dwelling.

Figure 1 is a front, and fig. 2 a sectional view of the improved wire fence. A is the ground : B the bottom or base board ; C, D, E, are the posts ; K, K, K, are the pickets ; L, fig. 2, is the wire ; H, H, are the binding hooks, one of which is represented in fig. 2. The bottom board is bevelled at the top, and the bottom of each picket has an angular notch cut in it to fit on the upper edge of the board, which gives firmness to the fence, while the board presents a bevelled edge to the weather.



Any communications, post-paid, in regard to this fence, or for the purchase of Rights of States, Counties, &c., may be addressed to the patentee at his residence, or to Mr. John Savage, No. 9 Coenties Slip ; also, the editors of the Farmer and Mechanic, who are authorized agents for the same."

Messrs. Editors :—While reading an article in a late number of the Farmer, from the pen of Prof. Dewey, of Rochester, N. Y., the following inquiry arose in my mind : Suppose, as is generally believed, that the earth is an oblate spheroid, i. e. flattened at the poles, and at rest in space, i. e. having no rotation or revolution on its axis, and consequently no centrifugal force, where would its attraction, i e. the force of gravity, be greatest—at the equator ? or at the poles ! An answer (amounting to a mathematical demonstration, if possible,) is desired, if such a subject is admissable into the columns of the Farmer. H.—*Down East, Jan'y.* 1850.

Franklin found time in the midst of all his labors to dive into the hidden recesses of philosophy, and to explore the untrodden path of science. Want of time, therefore, is but a poor excuse for ignorance of one's profession.

PRESERVING FENCE POSTS FROM ROT, &c.

Eds. Farmer : — Much has been said and much more will undoubtedly he said on the subject of making fence. Much information has been elicited and much more yet remains in store to be hereafter given to the public. It is a subject of much magnitude to the farmer ; for a good fence is an important item, subject to no small outlay both in its original construction and its subsequent necessary repair. If your fence is not made of stone or iron, then it must be made of materials more perishable. And the question is, if the fence is made of wooden materials, what mode of construction and what timber is the best and most durable? Whoever has turned his attention to that subject for the last thirty years, must have perceived that all around him are common rail fences which have stood from thirty to forty years, having most of the rails in a state of perfect preservation. He will also see others, having stood less than fifteen years, in a state of total decay. And if he takes a still closer view, he will discover that the fences most durable are made of rails of chestnut, or black ash, as No. 1, for durability, black oak and cucumber as No. 2, and hemlock, hickory and basswood as No. 3.

With these facts before us, let us see what would be the best material for posts to use in constructing a board or even a wire fence : for no one will doubt the necessity, or at least the economy of using the cheapest and at the same time most durable timber. Red cedar posts, set in the earth for a board fence, will last — I can not tell how long ; for I have only tried thirty-two years, and as yet they are all sound. They cost with us about $20 per 100, or 20 cts. each. Chestnut and black ash will probably last from ten to fifteen years ; oak about ten years ; and the almost uniform time for *hemlock* is six years. I have emphasized the word hemlock from the fact that, excepting cedar, it has been more universally used than any other timber, while it has hardly its equal in its tendency to rapid decomposition. Even the posts sustaining the telegraph wires from Buffalo to Cleveland are mainly hemlock ; consequently they will not stand over about six years without renewal.

Every observer must have discovered that the post first gives way at the point where it enters the earth. To prevent the rot at that point has been the subject of much inquiry and many experiments. I will not attempt to go through with all the different methods taken to prevent the rot, such as charring, lime, ashes, corrosive sublimate, &c., but will ask the reader's attention to the one fact that, while the post decays at the place where it meets the surface of the ground, he will frequently find all above that in a state of entire preservation. The great question to be solved, then, is, How can we prevent the post from decaying at that point? I answer, that it can be done by one of the most simple and easy methods. But let us, in the first place, see what is the cause of the decay at that particular point. First, It is not moisture ; for timber will remain at the bottom of a river or lake for centuries. Second, It is not the want of moisture ; for timber will also last for centuries in a building where it is kept dry. It is, then, a combination of moisture and air that does the mischief. The remedy I now propose will not cause the post to endure for ever, but it will cause every part to be durable alike — the part below the earth to be as lasting, or nearly so, as the part above the earth.

Dig the hole for the post a sufficient depth — say two feet. Make the hole much larger than the post, especially in the longitudinal direction of the fence ; put the post in its place and fill the hole around the post with round cobble stones, weighing from five to twenty pounds each. Let none of the earth be returned to the place it came from ; the stones support the post and at the same time admit the air to it, and it is thus preserved. I have sometimes dug the hole three or four feet long in the direction the fence runs, and about one foot wide, then placing one large flat stone on each side the post in the direction of the strain. If the stones have an uneven surface, so much the better for admitting the air. In using this method, I leave the remainder of the hole without filling up. S. S.—*Westfield, N. Y.*, 1850.

MANAGEMENT OF SWINE

Messrs. Editors : — I give you my experience in the management of swine. In the first place, I take December pigs, let them run with the sows two months, then wean them and enclose them in a pen, in which they are moderately fed on corn with as much milk from the dairy, or good swill of some kind, as will keep up a thriftiness. As soon as clover is in blossom, I leave off grain feeding and give clover three times per day until after harvest. I then turn them on to stubble. They remain there until about the first of September, whence I remove them to a pasture adjacent to my corn field, and keep up their condition by giving them a small quantity of green corn. When the time of fattening comes on, I have my hogs in very fine condition to take on fast. I enclose them in a pen and feed them altogether on corn and water, and by the time the weather is cold enough, which is the latter part of November, I slaughter them at the age of about eleven and a half months. With this treatment they weigh from 225 to 250 pounds dressed pork. In the mean time, my second litter comes on in June, which have the benefit of the stubble with the first litter, and running with the sows, and sucking, they get a very fine start. At about two months old I wean them and enclose them in a pen, taking the same process as with the first litter, only forcing their growth more rapidly by giving good slops and as much corn as prudent, without fattening too rapidly for their growth. I continue this process until the first of January. I then slaughter them at about the age of six and a half months. They will average 150 pounds of dressed pork very readily. This is no fiction, but matter of fact, from personal observation.

You will now perceive that from one sow, say having two litters in one year, eight pigs in each litter, the result will be as follows : First litter, eight pigs, weighing 225 to 250 pounds each, aggregate 1800 to 2000 pounds ; second litter, eight pigs, average 150 pounds, aggregate 1200 pounds ; which would make from 3000 to 3200 pounds of dressed pork from one breeder. This has been my treatment of hogs for the last few years, and I am satisfied it is the most profitable way I have ever tried. Brother farmers, this is an experiment on the Bedford hog, which has the qualities of enormous size and great tendency to fatten at any age. Yours, &c., Edmund J. Rosenberger.—*Smith's Creek Farm, (near New Market,) Rockingham Co., Va., Jan'y*, 1850.

Industry and perseverance merit success.

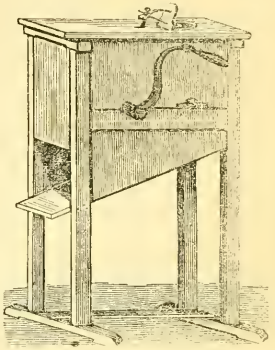
WOAD.

Messrs. Editors: — In Vol. 7, No. 3, of the Genesee Farmer, a subscriber wished information, through the columns of that paper, concerning Woad, &c. As no answer has appeared, and as I have some leisure time, I will proceed briefly to answer the inquiry, if better late than never. Where woad seed can be obtained, I can not positively say. In the catalogue of G. Thorburn & Sons, of New York city, and in the catalogue of Mr. Prince, of Flushing, Long Island, some years ago, among other seeds that of woad was advertised for sale. I know nothing about the price per pound. Several years ago I received a small quantity of woad seed from a friend, which I sowed early in the spring, on good sandy loam. The amount was small, but it grew finely. At the proper time the leaves were cut and manufactured in the usual way, and the article so manufactured was used by a neighboring dyer.— Woad seed should be sown early in the spring on good, dry, well prepared soil, in rows eighteen inches apart, to stand six inches, or more, apart in the row, and the ground to be frequently stirred with the hoe and kept free from weeds during the season. Its culture is extremely simple. In France, five crops are taken in one season from the same woad field; but our seasons in this country are too short for so many crops.

To manufacture woad for the use of dyers, the leaves are cut when they have attained maturity, and immediately taken to the mill to grind. The mill is like the old fashioned bark mill — a stone turns round in a circular trough; in this trough the leaves are placed, and by the action of the stone reduced to a paste. The whole is then put together in a mass and well beat down with a shovel to make it smooth. In this situation it is left to ferment for about two weeks. It is then well mixed by stirring, and then made into small balls and well dried without wet; it is then fit for use. The process above described is repeated with each successive crop of leaves, and the whole operation is performed under shelter, as no rain must be permitted to fall on the woad at any time after the leaves are cut. In France, indigo has been obtained from the leaves of woad by a process similar to that used in the manufacture of indigo from the Indigofera, or Indigo plant; and some thirty years ago, Gen. Dearborn, of Brinley place, near Boston, Mass., by a similar process, obtained indigo from woad, an account of which was published in a Massachusetts Agricultural Journal of that day. Before indigo was known to the dyers of Europe, woad was their only resort for fast blues, but is now seldom used except in conjunction with indigo, to facilitate the fermentation of the blue vat and assist the disoxygenation of the indigo. J. Ellingwood. —*Gainesville, Wyo. Co., N. Y.*, 1850.

Woad some years ago was considerably used in this country for dyeing, and generally as a base for blues, blacks, and some other colors. The produce is from about a ton to a ton and a half of green leaves. The price varies; but for woad of prime quality it is often from $125 to $150 per ton. The price of an inferior article is much less. It may now be used in the large dyeing establishments. However, we think it has generally gone into disuse. It is not to be found in any of our stores.

To prepare it for the dyer, it is bruised by machinery to express the watery part; it is afterwards formed into balls and fermented, re-ground, and fermented in vats, where it is evaporated into cakes in the manner of indigo. The haulm is burned for manure or spread over the straw-yard, to be fermented along with straw-dung. To save seed, leave some of the plants undenuded of their leaves the second year, and when it is ripe, in July or August, treat it like turnep-seed. The only diseases to which the woad is liable are the mildew and rust. When young it is often attacked by the fly, and the ground obliged to be resown, and this more than once even on winter-plowed grasslands.



YANKEE CORN SHELLER.

The Yankee Corn Sheller is one of the best. It has an iron hopper simply and firmly secured with a double spring to suit all sized ears, with a balance wheel inside. Thers are two sizes, at $10 and $12. The small size will shell a bushel easily in five minutes. For sale at the Agricultural Warehouse in this city.

THE SCIENCE OF FORCE AND MOTION.

At a recent meeting of the New York State Agricultural Society, says the Scientific American, a report was presented and read by Mr. Delafield, (Vice President,) on essays, experiments and works for schools. Mr. Delafield remarked that the science of Force and Motion was essential and important to the perfection of the farmer's work — that some knowledge of practical mechanics was necessary to a right understanding of the tools used in cultivating the earth, their uses, strength, and proper construction — that the forces of fluids as well as solids, were useful, and needed his study, as facilitating operations in draining, in irrigation, and protecting his soil from injury by running streams — that the common occupation of loading wagons and other farm operations, evidence the need of knowledge of the laws of gravity. With these impressions, it was urged that a premium be offered for the best essay on Mechanics, on the science of Force and Motion, to be divested as far as practicable of technicalities, and illustrating the importance of this branch of science in prosecuting successfully the ordinary pursuits of agriculture.

We learn that the Society determined, at a subsequent meeting, to offer a premium as recommended.

USEFUL RECIPES.

Messrs. Editors :—The following recipes I should be pleased to see published in the Farmer; it would be the means of having them preserved, presuming that most of your subscribers set as much store on it as I do and preserve the Farmer and have it bound at the end of every two years. In this way I consider that I have a book always worth the subscription.

To cure Wounds, Cuts, and Bruises in Horses—Take 1 oz. blue vitriol, 1 oz. Spanish flies, 1 pint of soot; pulverize and mix with 1 lb. of hog's lard. I have made use of the above for a number of years, and find nothing to excel it. Horses receiving severe kicks, or having sore backs, it will heal in less time than anything else I ever tried.

For Sprains, Wind Galls, and Bruises—Take 1 gill spirits of hartshorn, 1 gill spirits of turpentine, 1 gill laudanum, 1 gill sweet oil, 1 oz. camphor, 3 oz. spirits of wine, 1 oz. Castile soap; mix all together. The embrocation formed of the above ingredients I have tried, and find that it will certainly remove wind galls and swellings occasioned by sprains. It will cure blood or bog spavin if attended to in time. I would also say to persons afflicted with rheumatism, give it a trial.

Cure for Ringbone—Take 10 grains sublimate of mercury, 4 oz. spirits of wine, 2 drams tincture of musk, 12 oz. rose water; mix together and rub on the disordered place with a brush, two or three times a day. This I have never given a trial; it is said, however, to have the desired effect.

For Spavin.—Take 1 gill spirits of turpentine, 1 gill aquafortis, 1 gill quicksilver; put into 1 quart of small beer, and let it stand for two days before using. The manner of using is to tie a rag around the end of a stick, saturating it with the mixture, and apply it to the part affected two or three times a day. If it cracks the skin, do not use it so often. A little exercise is necessary.

This latter preparation I have known to effect permanent cures in several instances. Care, however, should be taken in its preparation, which ought to be intrusted to a druggist. Yours, &c., Jas. Patton. —*Paltonsville, Pa., Feb'y*, 1950.

ADDRESS BEFORE THE JEFFERSON AG. SOCIETY.

We selected several extracts last month from the address of Moses Eames, Esq., before the Jefferson County Agricultural Society, but they were all crowded out, save one. We now make room for further extracts. Mr. E. is President of the Society, and he is one of those who not only talks, but acts. Our subscription list in Jefferson County shows this.

Agriculture, it is natural to remark, is the great business of our country. Whatever other branch may fail to secure attention this must not be neglected, because, by it, we are sustained, fed, and clothed. Whatever changes the products of the soil may undergo before they arrive at the period of consumption, they must, nevertheless be sufficient for the demand of the country. Here it will be true for years to come as it is now, that the business of agriculture will give employment to five-sixths of our population. As it is the primary source of individual and national wealth and the mother of manufactures, its improvement and success are intimately connected with national independence, if not with national existence. It has a right to demand of the people, State and government the exercise of a most liberal policy on its behalf.

Any thing which tends to enlighten and to enlarge the mind enlisted in agricultural pursuits, develop the resources of the soil, or to throw light upon the best method of cultivation, may constitute a subject worthy of the most enlightened consideration. Especially is this true in a country like ours, where men cultivate with their hands their own fee simple acres, and from these derive, not only their subsistence, but also their spirit of independence and manly freedom. They are at once the proprietors of the soil, its cultivators, and defenders. Its toils, which would be burdensome and unendurable to men of other professions, form but subjects of pastime with them, and without which their habits and morals would be endangered. Then, whatever other subjects of real or seeming interest may be undervalued or overlooked, the cultivation of the earth should hold its rightful supremacy among all the works of a man's hands. With this, civilization thrives; without it, man is a savage. If there lives a man who may eat his bread with a conscience at peace, it is unquestionably he who has brought that bread out of the earth by his own honest industry. It is reasonably so.

This employment excites none of those hurtful passions which so often prove fatal to domestic peace and destructive to the enjoyment of the common blessings of life. But, on the contrary, it presents fewer temptations to vicious indulgence and is in the highest degree promotive of health and length of days.

But to attain a healthful prosperity, which should be the endeavor of every farmer, there are certain considerations indispensable to be observed. The first obstacle in the way of successful husbandry is the almost universal attempt at doing too much. Good farming and what is generally denominated a large farming business, are practically incompatible the one with the other. He who attempts to do too much in his profession, trade, or husbandry, will expose himself to the liability of doing nothing well. This is proved by all observation to be emphatically true of the cultivation of the soil, and shows clearly that the true policy is to cultivate no more than can be done in the best manner. Above all, if the object is to obtain the best, and, at the same time, the most profitable crop, the farmer cannot give too much heed to the approved methods of enriching the soil. The various manures constitute the great safety-fund of the farmer. On these, with the ordinary blessing of Heaven, he can safely rely for ample returns for all the labor and money expended in the prosecution of his business. Here is, perhaps not a subject pertaining to agriculture of more vital importance to the farming, community. Without manures, in some form, applied to the soil at suitable intervals, the farmer cannot, by any possibility, succeed in his avocation.

* * * * * * * * *

The lawyer, the accountant, the tradesman, all set their clerks and pupils to put in practice, as fast as they are able, the principles they have acquired. But, still, the idea prevails, that the farmer may educate his son in any other branches than those connected with his business, and afterwards make of him a finished farmer; with a constitution undermined, with foolish prejudice imbibed against manual labor, and too strongly tinctured with the general notions of what constitutes a gentleman, he is expected to enter upon the "rough and tumble" of a farmer's life. As things now are, we are destined to have farmers comparatively uneducated in their businesss, or *gentlemen* farmers, whose delicate nerves are shocked at the sight of manual labor. Now, I hold that each of these classes is ill adapted to its business; the first, by knowing too little; the seccond, by knowing too much of that which is of doubtful utility to any one. This class has been furnished by wealthy parents and guardians with the means of obtaining an education without effort or labor on their own part; and to break over the habits of an early education, and especially where taste is averse to the business about which it is engaged, is too generally out of the question. But, in reference to the first class, its education amounts to the simple bigotry of ignorance. It requires but little acquaintance with the farming communities of our country to convince one that this kind of training bids successful defiance to all improvement in agriculture. But shall the children's teeth be set on edge because the parents have eaten sour grapes? Certainly not; there may be schools which shall inculcate right notions of farming, and which shall contribute, in no trifling degree, to raise the character of this occupation to the rank which it should properly maintain: and I do not hesitate to believe and to say that such a school can be established and prosperously maintained in Jefferson County. This County may claim to rank among the first, if not *the* first, in the State in agricultural improvements."

THE SWEET POTATO.

How can the Sweet Potato be kept for seed through our winter till time to plant? and what is the best mode of culture? C. B. JEWELL.—*Groton, N. Y.*

Although the sweet potato may never become a general or profitable crop for the farmer to raise for market in this latitude, yet we believe nearly every farmer may raise enough, with little trouble, to supply his own table with this luxury; and those in the neighborhood of cities and large villages might make it a profitable crop. Residents of villages who take a pride in cultivating their own gardens and supplying their tables with the fruits of their own industry and skill, would need no other incentive to give the potatoes a trial, than to see, as we have seen them, rivaling the famed Carolinas, served up on the table of a friend, — the product of his own little garden.

SWEET POTATO. *(Convolvulus batatus.)*

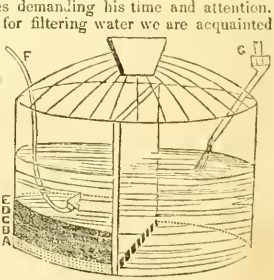
Great difficulty is experienced in preserving the sweet potato through the winter. The general direction given is, to preserve the roots from the extremes of heat and cold, with an exclusion of air and light; but we have tried in various ways to keep them, without success. We have tried them on a shelf in the cellar — in a box of earth — in baked sand; — but in every case have failed to preserve them. A friend in Brighton, in this county, treats them in the following manner, with success. In the fall he plants them in a box of earth and places them with his house plants. In a little while the shoots will show themselves, and when grown enough they are carefully removed by slipping them off without displacing the potato, and planted. They soon take root and form new plants. As soon as the weather is sufficiently warm, (say about the first of June,) these plants are placed in the open ground, according to the directions given in the January number.

Where seed can be obtained in the spring, the better way is to take large potatoes and divide them, as the common potato, and plant in a hot bed. There should be about four inches of mold over the manure. Place the potatoes on this, and cover with about three inches of light earth. As the sprouts appear, draw them, as practiced by our Brighton friend, and plant in your field or garden. If they have the benefit of a cloudy day or a shower about this time, all the better. When treated in this way, a bushel of seed will supply plants for an acre. For the accompanying engraving we are indebted to Allen's American Agriculture.

FILTERING CISTERN.

IT has been said that some men dig their own graves with their teeth. It is certainly true that many diseases that afflict our race are caused by improper eating and drinking — improper as to quality, quantity, and manner. And though it is true that water is the least injurious of all liquids taken into the stomach, and is the drink appointed by the Creator for every living thing; yet, we have no doubt that disease and death is often caused by the use of impure water. It enters into every thing we eat. Our bread as well as our tea and coffee are affected by it. This impurity may be so slight and the injury so little as to be imperceptible for a time; but it is the continual dropping that wears the stone, and the *continued* use of impure water must produce permanent injury to the human system. The young and tender tree may be driven to the ground by a sudden blast; but the genial influences of light, warmth, and air, seconding its natural disposition, it will again recover its erect position. Let the same tree be planted where it is subject to the prevailing and almost *constant* western winds, and it will be warped by it—trunk, branches, and foliage driven to the east.

Various filterers have been invented for purifying water by filtering. Most of these have been too troublesome in their operation to be favorably received by farmers. It may be well enough for a man of leisure, whose main business is to do the "*chores*," to be filtering water by the pailful; but the farmer has other duties demanding his time and attention. The best plan for filtering water we are acquainted with, is the one exhibited in the engraving. It is a cistern divided into two parts. G. is the pipe for conducting the water into the cistern; F, pipe connected with pump, for extracting the filtered water; A, B, &c., layers of charcoal, gravel, &c.; the black dots are passages for the water from one part of the cistern to the other. The engraving, with the following description, is from Allen's American Farm Book:



FILTERING CISTERN.

"They may be formed in various ways, and of different materials — stone, brick, or even wood; though the two former are preferable. They should be permanently divided into two apartments, one to receive the water, and another for a reservoir to contain such as is ready for use. Alternate layers of gravel, sand, and charcoal at the bottom of the first, and sand and gravel in the last, are sufficient; the water being allowed to pass through the several layers mentioned, will be rendered perfectly free from all impurities. Occasional cleaning may be necessary, and the substitution of new filtering materials will at all times keep them sweet.

Horticultural Department.

EDITED BY P. BARRY.

PRUNING AND TRAINING OF HARDY GRAPE VINES ON GARDEN WALLS, HOUSES, AND TRELLISES.

At the request of several correspondents we take this occasion to present a few brief hints on the pruning and training of Hardy Grapes, and particularly on garden walls and trellises. On this subject there is a very general lack of information; and this, added to a very prevalent negligence, has heretofore greatly diminished both the pleasure and profit which the judicious culture of this fruit is sure to yield. There is scarcely a garden of any pretension in this city, and very few in the surrounding country, but includes among their fruit trees at *least one* grape vine; but the training and pruning are so imperfect or so entirely neglected, that they are in most cases both unsightly and unproductive. In many instances very tasteful arbors and trellises are erected; but the unskillful and careless manner in which the vines are carried or allowed to run over over them, destroys their effect.

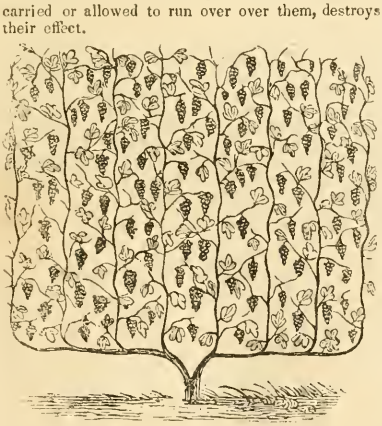


Fig. 1.

Nearly all the complaints that reach us of the vines not bearing, of fruit being small or not ripening well, are attributable to this bad pruning and training more than to defects in the soil; for our native hardy grapes, such as the Isabella, flourish in *all good garden soils* with dry sub-soils. We have not seen an exception.

The management of the foreign grape in our climate, either out of doors or in, requires considerable skill and experience to render success uniform and complete; but the treatment which our hardy native sorts require, is so truly simple that every man may, with a knowledge of a few leading principles and mechanical operations, manage them with as much success as he does a hill of corn or potatoes.

1st. The grape vine should not only be planted in a *warm, dry,* and *rich soil,* but it should have such an exposure to the south or southeast, and its branches be so trained and spread out, that every part may enjoy fully the advantages of light and heat — both indispensable to the maturation of the fruit and the wood. Soft, watery, unripe and unproductive shoots, and sour, unripe fruit, are invariably the results of a dark, northerly aspect, and allowing the branches to ramble in thickets in their natural way.

Fig. 2.

2d. During the growing season, the whole force of the vine should be directed to the sustenance of the fruit and the necessary shoots for training and bearing the following year. This point is secured by rubbing or pinching off, early in the season, (May) all superfluous or misplaced shoots. It frequently happens, in vines left to themselves or badly treated, that these superfluous and misplaced shoots, which are or ought to be cut off at the next pruning, destroy the regularity of growth in the vine by attracting an undue amount of the sap to them and stinting the allowance in contiguous parts. Thus vigorous shoots starting from the base of the stem acquire an immense developement at the expense of all the upper and bearing portions. Connected with this is the shortening of the bearing shoots, (in August or September,) by nipping off the extremeties at two or three eyes beyond the fruit. This checks the flow of the sap towards the points, and turns it to the use of the fruit and the shoots necessary for the extension of the vine. These simple attentions constitute the substance of what is called "*Summer Pruning,*" and though generally overlooked, are of the utmost importance, as without them we cannot hope for large, well ripened bunches of fruit, nor vigorous mature shoots for the next season. Some people have advised the removal of the leaves around the bunches of fruit, towards autumn, to hasten their ripening; but this is a fatal error. Last season we saw the effects of this on a vine trained on an arbor in the outskirts of this city. A great portion of the leaves had been carefully cut off with scissors by the lady proprietor, who followed some empirical advice, and she had the misfortune to see her fruit all shrivelled up instead of ripened. This was a natural result.

3d. The grape vine produces its fruits on shoots

of the current year from the last year's growth. That is, the buds on last year's shoots will next spring produce the shoots that will bear the fruit. Shoots from the older parts of the tree do not bear fruit, and the same shoots bear only once. Fig. 2 shows a portion of last year's wood with a fruit branch produced from one of its buds. It is important to understand this well, as it renders the necessity for a supply of vigorous young shoots quite obvious. We frequently see the lower parts of the main branches, or frame-work of grape vines, trained on houses or trellises, all destitute of young wood, like the lower parts of neglected peach trees. This was caused by either bad or no pruning. The growth went on mainly at the points, and the lower parts were starved out and the best portions of the vine rendered fruitless.

Having touched upon these general points, we may take up training and pruning more minutely. First, in regard to trellises. Many people are in the habit of training vines on the walls of houses: but the practice is bad, both for the house and the vine. It is much better to make a trellis that will stand a foot or two from the wall and be attached to it by brackets. Annexed is the figure of one, the principal

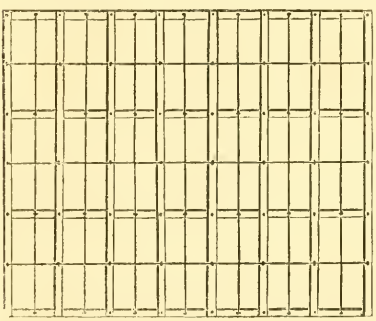


FIG. 3.

bars or frame work of which are boards three inches wide and one and a half inches thick nailed together at the angles. This trellis is intended for one vine, and may be of the height of the wall or house it is intended to cover. The vertical bars are eight in number, to each of which one of the permanent canes or branches of the vine is to be fastened. These are 3 feet apart, and between them, in the center, are rods of No. 12 wire, to which the lateral fruit buds may be attached with strings, or will attach themselves by the tendrills. The first, or lowest, cross bar may be two or three feet from the ground, as most convenient. Rods of wire may also be carried at equal distances between the cross bars, to facilitate the fastening of the lateral shoots.

The training of a vine on such a trellis as this is a very simple matter, and produces to the sight a most pleasing effect; indeed, it would be a highly ornamental screen for any place where a screen might be wanted, without interfering with either walls or windows. For garden arbors the same mode of training is equally suitable.

This form, as will be seen by figure 1, copied from "Allen's Treatise on the Vine," is that of two horizontal branches, one trained to the right and the other to the left, on the lower bar of the trellis. From these, eight permanent canes or branches are trained on the vertical posts. These are to be furnished all up the sides, at proper distances, with lateral spurs to produce the bearing shoots. To produce and manage a vine in this way, requires some such operations as the following:—Let us take a young vine as it is usually sent out from the nursery—one, two, or three years old. This will either be a single shoot one and a half to three feet in length, or there may be several branches one to two feet long, as the vigor of the plant may be. If one year old—a single shoot—the plant should be cut back, when planted, to within two eyes of the base; and if older, with some branches, all the weaker ones of them will be cut clean off, and the strongest one cut back to the last two eyes of the young wood. These vines, then, are all in the same situation, and are planted at the center of the trellis. When they commence growing, all the shoots but one, and that the strongest, are rubbed off, and this single shoot is trained and allowed to grow uninterruptedly till September, when the top may be nipped off to cause the wood to mature and strengthen. Next February this shoot is cut back to within three eyes of its starting point. These eyes will form shoots. The weakest one must be removed in May, and the two strongest carefully tied up and encouraged till September, when they will be topped as before. By this time these shoots will be vigorous and at least ten or twelve feet long, if the vine be healthy and in a good soil. (Close to where we write, a vine of Isabella last season, second after planting, made a strong shoot fifteen feet long.) Up to this time no fruit should be allowed. With these two shoots we commence the frame-work of the vine. At the February pruning, these shoots are cut back to within two or three feet of their base, and are then tied down, one to the right and one to the left, on the first horizontal bar of the trellis. Each of these will produce two shoots, one to be trained up to the first central post of its division of the trellis, and the other to continue the extension of the vine in a horizontal direction. All the other eyes or buds are cut out at the time of fastening down the branches. During the season, the requisite care will be to keep down all other shoots and to prevent too great a growth of lateral shoots on the young wood. Shoots that are growing in a horizontal direction are more disposed to produce lateral shoots than those that have a vertical or natural direction. The February following, these vertical shoots and the horizontal ones are cut back in proportion to their vigor, say within four to six eyes of the old wood. Each will produce a number of fruit shoots, and two more vertical shoots may be raised to the trellis from the horizontal ones, by the same process as the first year. Care must be taken to carry the leading shoots, for the extension of the vine, upward and outward, by the same system, until the trellis is covered. The vine must not be overtasked with the production of either too much wood or too much fruit. The success of the training depends upon keeping up a vigorous and uniform vegetation in all its parts. This is done by following the suggestions in the first part of these remarks.

To continue farther the treatment of the vine in its annual course, would be merely repeating what we have already said. Some people may think that there is too much system about this, and too much

labor involved for them to adopt it. To such we would say, that system in this, as in all things, is necessary. To train a vine over an arbor or trellis properly, nothing short of labor will do; and we know of no system requiring less labor than that we have in part described.

Those who wish their vines to grow without training, should plant them near the root of some old tree or in the corner of a rail fence—they have no business with walls or trellises. A modification of this method may be adopted; but in any case it must be remembered that leading shoots must be trained at proper distances for the frame-work, and these must be furnished with the material for bearing; and the training at random is neither satisfactory or safe.

In pruning the vine, and indeed all trees, the knife should be as sharp as a razor, to make a clean cut without the application of a great dragging force, and owing to the softness of its wood and large pith, nearly half an inch should be left between the cut and the bud cut to, (see figure 4;) and in the case of horizontal shoots, the cut should slope downwards. These precautions are necessary to guard the bud from injury.

NORTH AMERICAN POMOLOGICAL CONVENTION.

The proceedings of this Convention, held at Syracuse September 14, 1849, have been published in a neat pamphlet of some sixty pages, containing the discussions on fruits, with reports from J. A. Kennicot of Illinois; Dr. Herman Wendell of Albany; J. W. Knevels, Esq., of Fishkill, N. Y.; Jno. W. Bailey, Esq., of Plattsburg, N. Y.: W. R. Coppock, Esq., of Buffalo: F. R. Elliott, Esq., of Cleveland; F. K. Phenix, Esq., of Wisconsin; J. C. Holmes, Esq., of Detroit; and C. H. Goodrich, Esq., of Vermont.

Dr. Kennicot's report occupies about one-fourth of the pamphlet, and contains a great amount of local information regarding soil, climate, nurseries, orchards, &c. This, and the very agreeable style of the Doctor, makes it not only the most valuable, but the most readable paper of the whole. Some of his statistics of nurseries in Illinois are certainly surprising, and, as he says, afford the best evidence of what the people of this region are doing in the way of planting orchards. On this point the following extracts will be interesting. He says that "within a space of from fifty to sixty miles north, west, and south of The Grove, (his residence,) there are not less than 50 nursery establishments, twelve of which are in this county and most of the others within twenty-five miles of me." * * "In Kane Co., six nurseries are already established, setting annually 100,000 grafts or more." Mr. Harkness of Peoria, writes him—"We have started 31,000 grafts, 80,000 seedlings for budding, 40,000 stocks for grafting, 200,000 Virginia thorn plants, 350,000 wild orange plants, &c." A Mr. Slater of St. Albans, propagates all his fruit trees, except peaches and nectarines, by *layering*, and sells at 6¼ cents a piece "all round." To these statistics the Doctor adds—

"It strikes me that we are, at least about here, as they say south, 'running the thing into the ground;' and yet, this one fact speaks volumes for the good taste and intelligence of our inhabitants, and the adaptation of our soil and climate to the cultivation of fruits. Nurserymen are, I believe, always intelligent men, and should be shrewd observers, though I fear we are *not all* good 'business men.' Our 'bumps' of benevolence grow with our trees, and we are very apt to think that we are benefiting ourselves when we are doing good to others. Our 'hope is large;' our fruition small. We create the plant; others eat the fruit, or enjoy the profits. But the practice of our beneficent profession humanizes us, and simplifies and refines our tastes, and makes us better and happier, if not richer and wiser men. Why then should we not be satisfied with our share of the good we create?"

There are many points in this report to which we may refer hereafter, when treating of the subjects to which they relate.

NEW FRUITS.

Kirtland Pear.—We find a colored drawing and description of this new pear, by Prof. J. P. Kirtland of Cleveland. It was raised from seed of the Seckel, and is stated to be of medium size, color varying from a dull green to a rich crimson russet. "In point of hardiness and productiveness it far excels the Seckel, and in flavor is esteemed by many as superior." This is a high character, and Prof. Kirtland is good authority.

Kingsley Apple.—Dr. Wendell, in his report, gives an account of a seedling apple originated near Pittsford, in this county, and brought to notice by Dr. Moses Long of this city. It is called "Kingsley," having originated on the farm of a gentleman by that name. The tree is stated to be hardy and a profuse bearer. In 1848, the original tree, growing in a pasture lot, produced thirty bushels of fruit. The specimens from which his report was made "were eaten on the 10th of June, and were as fresh and free from defect as when taken from the tree."

Shannon Cherry.—Mr. Elliot gives a description of a valuable Morello cherry originated with Prof. Kirtland twenty years since, but never before described. It is described as larger than the May Duke, of a dark purplish red color, ripening 12th to 15th of July. We have several excellent cherries of the Morello class, ripening long after this.

DECAY OF FRUIT AT THE TIME OF MATURITY.

Mr. Elliott, after speaking of several causes, says that it is not improbable that it is induced by the same causes that produce leaf-blight in the pear and plum, viz: "a want of some material in the soil." Mr. Elliott is so taken with "special manures," that his imagination begins to run wild on the subject. It is very far from being a "fixed fact" that the leaf blight is owing to defects of the soil. We find it a wide spread malady, appearing in various soils, and it is said, in some parts of Europe as well as in this country. We know of no experiments that have established anything of the sort. It is a matter that yet requires careful investigation. But if it were established, how can we suppose that the same cause could affect the ripening fruit of the cherry. A pear tree leaf and a ripe cherry are of very different materials.

A great deal of successful culture depends on giving to particular species of trees their appropriate soil and manure as far as sound experience teaches us; but cultivators must guard against falling into the same error on the "*special*" manure subject that a large portion of the community have suffered themselves to be led into, by "special" or patent medicine compounders and venders.

THE MAGNOLIAS.

P. BARRY, Esq. : — *Dear Sir* — I am highly pleased with the article on Magnolias, in the January number of your paper. I had for some time intended to write to you for information respecting the propagation and culture of that interesting family of trees. The Magnolia acuminata is indigenous in this town, and when growing in open ground it forms a beautiful tree, not surpassed by any of our native forest trees. I have frequently transplanted them from the woods, but have never succeeded in making one live. They appeared to flourish for a time, but eventually, in spite of all the care bestowed upon them, they invariably dwindled and died, and without my being able to discover the reason why. Mr. DAVID THOMAS of Aurora, stated in the Genesee Farmer several years ago, that he had been unsuccessful in cultivating the Glauca and Tripetela, and that the plants when young required protection in this latitude ; and at a still later period he has said, that on a bed of sand brought more than twenty miles, he had Magnolia Glauca growing in great luxuriance ; all attempts to cultivate them in common garden soil had failed. Now I wish to be informed through the columns of your paper, how to succeed in the cultivation of the Magnolias. What soil and situation do they require ? Where can seeds of the different kinds be obtained that can be depended upon ? And how must I manage with the seed to insure success ? I want all the information in full, necessary to succeed with these invaluable trees for ornamental purposes.

I would like to know if your Taxodium Sempervirens is the same kind with that mentioned by DE CANDALLE as growing near Chapultepec in Mexico, (Cypresus disticha, Linn.,) one hundred and seventeen feet in circumference, and supposed to be several thousand years of age. (See Sears' Wonders of the World, page 324, Art. Chestnut Tree of Mount Ætna.)

Please answer in the March number of your paper. I would like to know as early in the season as a correct judgment can be formed how the new evergreens stand the winter. Yours, &c., J. ELLINGWOOD. — *Gainesville, Wyo. Co., N. Y., Feb'y*, 1850.

THE transplantation of the Magnolias from their native situations in the woods, is exceedingly difficult and very seldom attended with success ; and even from nurseries they are more uncertain than most other trees. The chief reason is, that new roots are emitted very slowly, and only when the trees have not suffered exposure and are planted in a favorable situation. Trees taken from the woods have usually tap roots only, and it is almost impossible to induce in them the emission of fibres. It is the same, as you are no doubt aware, with the Tulip tree, which is closely allied to the Magnolia.

The usual method employed by nurserymen to raise seedling Magnolias, is to plant the seeds as soon as ripe, in shallow boxes, say six to eight inches deep, filled with about equal parts of sandy loam and leaf-mold. The seeds may be covered about one inch deep. The boxes can be wintered in a cellar free from vermin. Another way is, to put the seed away as soon as gathered, in boxes of sand, and let it remain there till spring, (in a cellar.) Then prepare a spot of ground with compost such as we have mentioned, and sow the seeds and cover with a common hot-bed frame. This affords means of protecting the seedlings from the sun and wind, which often kill them in the open ground just when vegetating. Water can also be given, when necessary, in this way. The fierce mid-day sun should not be permitted to fall upon them. The first winter the young plants may be protected with leaves, and in the spring following transplanted into nursery rows. They should have a deep, rich, sandy soil. We find no difficulty in growing all the Magnolias here in common garden soil, when the plants are raised in this way from seed.

The *Taxodium distichum*, or Cypressus of LINN., alluded to, is a deciduous tree. The *Taxodium sempervireus* is evergreen, as its specific name indicates, — quite recently found in California — there called "Red Wood." It attains an immense size.

We will report on the new evergreens at the proper time.

TREATMENT OF PEAR SEEDLINGS.

MR. BARRY : — Having some pear seedlings of one year's growth, with tap-roots from 9 to 13 inches in length, to transplant next spring, I thought I would ask thy advice how best to do do it. Would thou recommend cutting off the tap-roots ? (and if so, to what length ?) or would thou prefer the method recommended in "Cole's American Fruit Book," of turning these roots to one side in the manner of planting a grape cutting ? and in either or both cases, would thou head back the tops ? and if so, how much ? (*a*)

I would also ask how best to make and manage a hot-bed for propagating sweet potato plants, and a garden-frame for starting gooseberry, grape, and other cuttings, in the spring ? (*b*)

If thou wilt answer these inquiries through the medium of the Genesee Farmer, thou will much oblige thy friend, B. W. STEER.—*Ravsin, Mich., 1st mo.*, 1850.

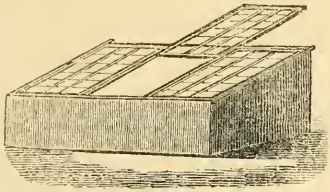
P. S. I cannot close this without alluding to the great interest that is taken in horticulture in this section of the country. I believe that Michigan is yet destined to equal, if not surpass, Western New York in the production of fine fruit. The variety, beauty, and excellence of the specimens of apples, quinces, grapes, &c., &c., exhibited at Adrian during the annual fair of the Lenawee County Agricultural and Horticultural Society, would do honor to any State in the Union. B. W. S.

(*a*) OUR practice is to cut off the tap-roots at a point where the size becomes very sensibly diminished, as in the cut. The stocks are not only planted with greater facility, but the emission of lateral roots is favored. In the case of seedling pears, the roots are so large in proportion to the stem that very slight amputations are necessary to reduce them to a balance with the roots. We can give no precise rule, as it depends entirely on the character and size of the plant. Tall, slender plants require more cutting back than stout ones. We are not very particular in the matter. Our workmen usually take them up in handfuls, and with two cuts dress the roots and tops of a dozen to twenty plants, or more, as the size may permit.

Pear seedling pruned ready for planting.

(*b*) A hot-bed frame is simply a rectangular box, of any size you choose to make it. Inch and a half or two inch board may be employed in its construction. The back part should be about double the height of the front. (See cut.) The sashes are usually about three feet wide. The more common size for a hot-bed is nine or ten feet long and five wide, so that three sashes of three feet wide and five feet long will cover it. But you will of course adapt the size to your purpose. Light rafters are placed across from back to front for the sashes to rest on. For propagating sweet potatoes, or anything else that needs artificial heat, a bed of manure three feet or so in depth is prepared, and this frame placed upon it. Fresh stable manure that has been repeatedly turned over, is the best material. Dry leaves

may be advantageously mixed, as they modify as well as retain the heat of the manure. For seeds and potato sets, &c., three to six inches of good fine earth is placed over the manure, and when the violent heat has been allowed to pass off for a day or two, the seeds, &c., may be planted. Hot-beds require to be carefully protected from the cold by matts, &c., and the plants require regular and careful watering, shading perhaps, from a very hot sun, and airing in mild days; but in doing this, be cautious.



HOT-BED FRAME.

A frame for your cuttings is but the hot-bed frame we have described: but for such as gooseberries, grapes, &c., you need no bottom heat. Prepare a bed to set the frame on, of light, friable, sandy soil, and in this put your cuttings. In this frame you can plant earlier than in the open ground, and protect them against sudden and injurious changes of the weather. Hot-beds and frames should face the south or southeast.

SELECTION OF STOCKS FOR GRAFTING.

We have a communication from Jas. H. Watts, Esq., on this subject, the substance of which is, "that scions of good sorts should be grafted into trees that assimilate somewhat with the scions in *quality*, *flavor*, and *growth*."

This is, in our opinion, quite unnecessary, and would be at the same time quite impracticable to any considerable extent. We understand Mr. Watts to have reference only to the re-grafting of large trees.

We do not dispute but that the stock does exercise an influence on the fruit; but the instances when such an influence is observable are very few, and in the few that are occasionally observed the cause may be found somewhere else than in the stock. It would be wrong to graft *only* on stocks that assimilate in *growth* to the scion. A proceeding quite opposite is in general practice, and is highly advantageous, viz: that of grafting *weak* and *slender* growing sorts on *vigorous* stocks. And stocks the most opposite in more characters than one are frequently resorted to with advantage, for ameliorating or modifying some particular character of the fruit, or peculiarity of the tree in its growth or bearing. What we would counsel, *in all cases*, would be to select and graft *only* upon sound, healthy, and vigorous stocks, whether large trees or small; and that scions, *too*, be chosen from equally sound and healthy trees. Feeble growth, disease, unproductiveness and death may be expected from grafting enfeebled stocks, old or young. Whether the stocks produce sweet or sour fruit, is a matter of little consequence in general; for the country is full of trees producing the most luscious fruit, on stocks the fruit of which in acidity would, to use Mr. Watts' expression, "put vinegar to the blush."

LIGHT IN THE EAST.

In the address of Asa T. Newhall, before the Essex (Mass.) Agricultural Society, we find the following:

"We cannot prolong the existence of any particular kind of fruit, by engrafting from old into young trees, beyond the natural life of the original tree, or the time it would cease to bear by old age, if living." * * "We might as well undertake to renew the age of an old cow by turning her into a new pasture, as the age of any species of fruit by grafting into young trees."

It is certainly surprising to find, at this day, such doctrines inculcated in an Agricultural address, within speaking distance of Boston. We apprehend that even in Massachusetts there is a great deal of the philosophy of culture to be learned. There can not be a more absurd notion entertained than that in the above extract. Every man who is at all familiar with the history of our cultivated fruits, knows that many varieties that are now, to all appearances, in the full vigor of youth, originated many generations ago. A peach tree will not, under the most favorable circumstances, live and bear over forty or fifty years, and few attain that; and yet we have varieties much older than that as healthy and vigorous as ever. The parent trees of many of our best apples and pears are long since dead of age, but the young trees propagated from them are at this moment in youth and vigor. See even in the case of *annual* plants — the petunia is a familiar instance — we sow the seeds in the spring, the plant grows, blossoms, produces seed, and dies the same season; but if we take cuttings of this plant while growing, keep them in a house over winter, and put them out again in the spring, they will blossom as freely and profusely as the parent; and we may in this way perpetuate that plant for any length of time. So in case of all fruit and ornamental trees, shrubs and plants cultivated by budding, grafting, layering, and other means of propagation, properly performed, we can perpetuate them to an indefinite period. It is unskillful and careless culture, and vicious systems of propagation, that produce deterioration, attributed erroneously to old age.

Pruning the Peach.—Those who intend to pursue the system of pruning the peach recommended in our February number, and who have not done so already, must remember that there is no time to be lost. It should be done at once. We are happy to learn from our correspondents, that the subject is attracting particular attention at this time.

ANSWERS TO CORRESPONDENTS.

A. W., *Marcellus*.—You are in error, regarding the production of different sorts of fruit on the same graft in consequence of the flowers having been fertilized by another variety. The effects of the fertilization, or crossing, would be developed only in the productions of the seed. The russety apple you found among your Greenings was nothing but a Greening; the russety character had been acquired from some particular cause that could not probably be explained; such instances occur frequently. So with all fruits. You will therefore excuse us from publishing your communication.

In regard to the blighted pear tree referred to, the fact was no doubt as you state; for if the whole bark had been *dead*, the tree could not have been saved. The reason is so obvious as to require no comment.

☞ We wish our friends and correspondents to bear in mind that we cannot appropriate our limited space to the discussion of wild theories. We would be pleased, now and again, to take them up, but we must deny ourselves the pleasure. We believe that we shall best consult the wants and wishes of those who read this paper, by devoting our few columns to the plain exposition of *sound practice*.

Ladies' Department.

A GOSSIP WITH THE LADIES.

The people and Legislatures of several States are talking pretty seriously about Agricultural Schools and Colleges. Let us talk a little on a subject of equal importance — the education of the fair daughters of our land for the responsible duties of life. It may be said, and truly, that the females of this land are better educated than those of any other country, and that the studies pursued in our female seminaries are of a more solid character than those of similar seminaries in Europe. We grant all this; and still we say that the system of female education is defective — more than this, destructive to the health and consequent happiness of thousands, — making the "sweet home" a home of anxiety, disease and wretchedness, and filling many an untimely grave. You may consider this rather a severe and random assertion; but it is too strictly and too fearfully true.

Travel our country over. Look at the young mothers of our land. Are they pictures of health and vigor, or of infirmity and disease? Does the bloom on the cheek denote that the blood is playing healthfully through the veins, or does the sallow complexion and shrunken features show that the purple tide pursues slowly and unwillingly its sluggish course? Does the sparkling eye exhibit the buoyancy of the feelings — is the joy of the heart shown through these windows of the soul; or is the melancholy, sunken eye, the index of a sad heart? Mr. Colman, in his European tour, was surprised at the health and consequent buoyancy of spirits of the English women — the mother the equal of the daughter in health and vigor. On the contrary, the wan and faded appearance of American women is remarked by all travellers. The celebrated De Tocqueville spoke much on this subject. Miss Beecher says — "An English mother at thirty or thirty-five, is in the full bloom of perfect womanhood; as fresh and healthful as her daughters. But where are the American mothers who can reach this period unfaded and unworn?"

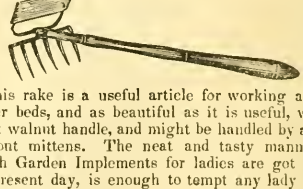
How few reach this period of age without suffering from head-ache, tic dolereaux, diseases of the spine, and other nervous diseases so common to the women of this country. We might show the extent of this evil more fully; but, as it will be admitted, we think, that the health and beauty of American ladies are but short lived — that they are peculiarly liable to nervous diseases, destroying their own happiness and the happiness of their families, — and finally life itself — it will be more profitable that we should point out the cause and the remedy.

The cause commences in the cradle, and too often ends in the grave. In infancy, the mother is afraid to have a little of heaven's fresh and balmy air breathe upon her child. Before the child is of proper age it is sent to school — its mental faculties taxed to their utmost capacity, and but little time or opportunity given for the development of the powers of the body by air and exercise. It grows up like a house-plant that has been deprived of light and air — weak and puny. The seeds of future suffering, perhaps early death, planted in its frame.

The child is become a young woman; and never having been accustomed to out-door exercise, she has no relish for it,— indeed, custom and fashion are opposed to it. A romp on the green — laboring with the hue and spade among the weeds and flowers, would be decidedly vulgar, and show a want of refinement. Walking a mile or two every day would be an outrageous imposition — father or brother must "harness up." The young lady must sit in the rocking-chair and read silly novels, exciting the imagination at the expense of the heart and health — attend balls, and "dance all night" for exercise, feed on pickles, sweet cake, and other indigestible trash, when the stomach should be at rest, and the whole body enjoying "nature's sweet restorer, balmy sleep." Young women thus grow up with impaired constitutions; and when active life with its cares and responsibilities comes upon them, they are unequal to the task, fall victims to their own and their parent's folly, and either drag out a miserable life, or fill an early grave. "The delicate and feeble appearance of many American women," says Miss Beecher, "is chiefly owing to the little use they make of their muscles. Many a pale, puny, shad-shaped girl, would have become a plump, rosy, well-formed person, if half the exercise afforded to her brothers in the open air had been secured to her during childhood and youth."

The remedy, then, is exercise, and exercise out-of-doors. The health of children must not be sacrificed to books. No over-anxiety of the parent must be permitted to bring on those very evils the parent dreads. Children love exercise — it is natural for them, and necessary to the development of their bodies — and they will have it, if not prevented by their parents. But exercise must not end with childhood. Our young ladies must walk, ride, and work in the open air. Never mind a little tanning in the sun and wind — health and comfort are cheaply purchased even at the expense of a fair complexion. By riding, we don't mean riding in a spring buggy with a cushioned seat — but horse-back. Saddle the horse yourself, young woman, and ride three or four miles every day. Or you can ramble through the woods and over the farm and fences. And have a garden — cultivate roses and carnations, and phloxes, and shrubs — and take good care of them. It will afford you exercise and pleasure; it will teach you more of nature than a thousand novels.

We had got thus far, and was about bringing our gossip to an end, when we were presented by Messrs. Rapalje & Briggs, of the Genesee Agricultural Warehouse, with a *Ladie's Floral Rake*, a cut of which we give. We would willingly make a present of it to any of our fair readers who would make a good use of it.



This rake is a useful article for working among flower beds, and as beautiful as it is useful, with a black walnut handle, and might be handled by a lady without mittens. The neat and tasty manner in which Garden Implements for ladies are got up at the present day, is enough to tempt any lady to try her hand at gardening.

Mothers, learn your children to love gardening — allot them a patch of ground for their own garden — get them such little implements as will entice them to work. It will do more to save them from years of suffering than all the drugs and sugar-pills in the universe.

Youths' Department.

AGRICULTURE.—No. 2.

In our last number we endeavored to give some information to the youth, on THE NATURE OF CROPS. We stated that all vegetable substances consisted of *two parts*, one called the ORGANIC and the other the INORGANIC — the *organic* part being that which is *burned away* when any vegetable substance, such as wood or straw, is set on fire; the *inorganic* part being that which remains (the ash) after the wood or straw is burned. The ORGANIC part, (or that part which is burned away,) we also told you was composed of *carbon, hydrogen, oxygen*, and *nitrogen*; and we shall now try to give you some idea of the INORGANIC. But you must not think, because we spoke of the organic part as being *burned away*, that it is *destroyed*. We can destroy nothing. We cannot destroy a stick of wood or a corn stalk. We may *change its form* — we may, indeed, cause the greater part to vanish out of our sight; but it is not lost, and is restored again to the earth. That omnipotent power that formed the first blade of grass, is alone able to destroy it.

The INORGANIC part of plants consists of *potash, lime, magnesia, soda, oxide of iron, oxide of manganese, sulphuric acid*, or oil of vitriol, *phosphoric acid, silica*, and *chlorine*.

Potash is a white powder, and is obtained by washing wood ashes and afterwards boiling the liquid to dryness. It is an *alkali*, with a hot, acrid taste, having the power of neutralizing, or destroying acids. Those boys who have eaten hot biscuits and happened to get a lump of saleratus in their mouths, know something of the taste of an alkali. When strong, it attacks all organic matter, dissolving and disorganizing them, and forms a compound with fat, called soap. It is to procure the potash that the farmer's wife washes or leaches ashes to make soft-soap.

Lime, the appearance of which all are acquainted with, is obtained by burning common lime-stone. It has a strong tendency to combine with water. This you can see by pouring water upon it, which it eagerly drinks up and becomes *slaked*.

Magnesia is a white powder, and is called in the drug-stores, calcined magnesia. It is a tasteless, earthy matter, and is found in some parts of the world forming rocky masses and veins. It is obtained chiefly from magnesian lime-stone and from sea water.

Soda is manufactured from sea-salt. It is a chrystalized substance, but becomes dry and powdery on being exposed to the air.

Oxide of Iron is iron-rust. When iron is exposed to the air, it becomes covered with rust This is caused by the iron attracting oxygen gas from the atmosphere, and this is the reason it is called *oxide of iron*.

Oxide of Manganese has the appearance of iron-rust, and is found in plants only in small quantities.

Sulphuric acid, or oil of vitriol, is a very sour, burning liquid. A piece of straw put into it will be found to be burned black. It is made by burning sulphur. BOUSSINGAULT says that some of the streams which come from the volcanic regions of the Andes are rendered sour by this acid. It exists in gypsum and alum.

Phosphoric acid, like oil of vitriol, is very sour, and will corrode and destroy vegtable substances. It is formed by burning phosphorus in the air. Phosphorus is the substance that causes the common friction matches to take fire so readily. If you rub a friction match so as to cause it to take fire, you will notice that it burns for a short time with a white flame, and a white smoke arises. This white flame is the burning of the phosphorus, and the white smoke is phosphoric acid.

Silica is the name given by chemists, to flint, rock-crystal, and sand-stone. It is one of the most abundant substances in nature. It exists abundantly in almost all soils, and is found in the ashes of all plants, without exception. Glass is made of *silica* mixed with potash, soda, or lime, and heated until it melts.

Chlorine is a kind of air of a greenish yellow color, and a strong, suffocating smell. It is nearly two and a half times heavier than common air, and therefore may be readily poured from one vessel to another, (as seen in figure 3.) It exists in large quantites in common salt. If you take a little dry chloride of lime and put it into a tall glass, (figure 3,) and pour upon it strong oil of vitriol, chlorine gas will be given off, and fill the lower part of the glass. You can then see its properties, and pour it from one glass to another.

FIG. 3.

These substances are all to be found in the ashes of our usually cultivated plants. Some plants leave more ash than others, and these substances exist in different proportions in plants. In our next we shall speak particularly of this subject. Having now given the elements of plants, we are prepared to apply these facts; for the knowledge we thus gain will be of little benefit, unless we apply it to useful purposes.

MARCH.

BY W. C. BRYANT.

THE stormy March is come at last,
With wind, and cloud, and changing skies;
I hear the rushing of the blast
That through the snowy valley flies.

Ah! passing few are they who speak,
Wild, stormy month, in praise of thee;
Yet, though thy winds are loud and bleak,
Thou art a welcome month to me.

For thou to northern lands again.
The glad and glorious sun doth bring,
And thou hast joined the gentle train,
And wear'st the gentle name of Spring.

And in thy reign of blast and storm,
Smiles many a long, bright, sunny day,
When the changed winds are soft and warm,
And heaven puts on the blue of May.

Then sing aloud the gushing rills
And the full springs, from frost set free,
That, brightly leaping down the hills,
Are just set out to meet the sea.

The year's departing beauty hides
Of wintry storms the sullen threat;
But in thy sternest frown abides
A look of kindly promise yet.

Thou bring' st the hope of those calm skies,
And that soft time of sunny showers,
When the wide bloom on earth that lies,
Seems of a brighter world than ours.

Editor's Table.

CORRESPONDENTS must not be discouraged because their communications are not published as soon as received. We have quite a number reserved for future publication. Several answers to Correspondents are also deferred.

AGRICULTURAL BOOKS FOR SCHOOL LIBRARIES. — We have been requested to call the attention of Trustees to the propriety of purchasing Agricultural Books for School Libraries. We think the bare mention of the matter will suffice. We will not insult the intelligence of Trustees who are Farmers, by attempting to show the propriety of this course, or urge upon them the performance of this duty. We have a good assortment of Agricultural Books for sale at our office — the best works published. In our next number we will give a full list, with prices.

MERINO SHEEP. — We had the pleasure of examining a fine lot of Merino Sheep, on their way from Vermont to Chautauque County, in this State. They were owned by A. S. PATTERSON, of Perry Center, Wyoming Co., and J. D. PATTERSON, of Westfield, Chautauque Co. They were selected from the flocks of EDWIN and WILLIAM HAMMOND, of Middlebury, and JESSE HINDS, of Brandon, Vt.

MONROE COUNTY AGRICULTURAL SOCIETY. — A meeting of the Executive Committee of this Society will be held at the Office of the Genesee Farmer, on Wednesday, the 13th of March, at 11 o'clock A. M. The President requests us to ask a general attendance of the Committee.

STOCKBRIDGE MECHANICAL AND AGRICULTURAL ASSOCIATION. — We have received the proceedings of a meeting held at Stockbridge, Madison co., N. Y., for the formation of an Association with the above title, with the Constitution, and Officers elected. The object of the Association is "the mutual improvement of its members in their occupations." JOHN POTTER, Esq., is the President of the Association. May success attend so worthy an enterprise.

FOWLS. — Those who have addressed inquiries to us on the subject, are informed that we have taken measures to supply all who wish, with the improved breeds of fowls.

HORTICULTURAL SOCIETY.—At the annual meeting of the *Horticultural Society of the Valley of the Genesee*, held in the city of Rochester, Feb. 4, 1850, the following gentlemen were elected officers of the Society for the ensuing year:

President — LEVI A. WARD, of Rochester.
Vice Pres'ts — 1. SAMUEL MILLER, 2. MATHEW G. WARNER, of Rochester; 3. HENRY P. NORTON, Brockport; 4. J. J. THOMAS, Macedon; 5. ASA ROWE, Sweden.
Corresponding Secretary — DELLON M. DEWEY.
Recording Secretary — JOSEPH A. EASTMAN.
Treasurer — JAMES H. WATTS.

COMMITTEES: *On Fruits* — Patrick Barry, Mathew G. Warner, J. W. Bissell, Samuel Moulson, Samuel Miller, James Buchan, John J. Thomas, James C. Campbell, Elias Pond, Isaac Hills, W. R. Smith, and Lyman B. Langworthy.

On Trees, Shrubs and Flowers — Geo. Ellwanger, Charles J. Ryan, Francis Brown, jr., D. W. Powers, William King, and Henry Billings.

On Vegetables — James P. Fogg, Jason W. Seward, John Rapalje, James Vick, Jr., and Samuel B. Dewey.

On Botany — Leander Wetherell, Chester P. Dewey, Geo. H. Smith, J. W. Seward, and J. M. Whitney.

On Entomology — Chester Dewey.

Executive Committee — Levi A. Ward, Samuel Miller, Patrick Barry, Geo. Ellwanger, James P. Fogg, L. Wetherell, and Chester Dewey.

We are happy to be able to add, that the Society is in a hopeful situation, and that measures have been adopted to extend its influence and usefulness during the ensuing year.

J. W. Seward, Esq., an active member and supporter of the Society, and a very skillful and successful amateur Horticulturist, has been appointed a committee to solicit a more general co-operation of our citizens with the Society, in order that it may the more effectually carry out its future plans of usefulness. It is contemplated to have weekly or monthly exhibitions, during the ensuing season.

DESTRUCTION OF CANADA THISTLES.

We have now before us about twenty communications from Farmers, giving their experience in subduing the Canada Thistle. All can see the impossibility of publishing them entire in our limited space, and also, the impropriety of doing so, even if we had room, as the practice of many perfectly agree — consequently the publication of these communications would be "a twice told tale."

CHARLES HANFORD, of Alabama, N. Y., has cleared his farm of 100 acres entirely of thistles. He gives his plan:

"I plowed the patches of thistles in July one week, dragged the ground in another week, plowed it again, and so on, three times. The next year, made a summer-fallow and plowed through those patches, and after sowing the wheat a few thistles came up. I had a chissel with a handle two feet long, and dug up every root that was seen. In the spring, the wheat being five or six inches high, chisseled out all that was seen. After harvest, I also chisseled out some near stumps and stones, that the plow missed, and next year the land was clover pastured, so that when I salted my cows, if any I could not get at with my chissel, I put on salt. Next year I drew off the stone, dug up the stumps, and sowed it to wheat. A very few thistles I chisseled out, and for seven or eight years have not seen one; and have done so with every field on my farm. I am now clear of all bad weeds."

S. H. SWETLAND, of Clifton Park, Saratoga Co., N. Y.:

"In the summer of 1848, I summer-fallowed one half of a lot that had become badly infested with this troublesome and obnoxious weed. The other half of the lot was sown to oats. The summer-fallow was plowed in the early part of June, and then again about the middle of July. In the fore part of September the whole lot was plowed and sown with rye. When the rye was harvested, the oat ground was unusually full of thistles, and on the fallow scarcely a thistle was to be found. The ground was ordinarily dry when plowed, and the thistles of a rank growth. This may operate so again on other pieces, and it may not. Summer-fallowing is the only way of success from plowing."

ALVIN WILCOX, of West Bloomfield, N. Y.:

"My first effort was with a good sized patch. I dug small holes where every spear stood, and filled them with fish brine. The next spring they came up as vigorously as ever. I then took boards and spread all over them, and battened the cracks with another tier, putting on stone and rails to keep them down. The thistles kept growing, under the boards, and working through every crevice they could find; but I kept them under. In July they all turned black, and there has been no Canada thistle there since. Having succeeded with them, I have adopted the following plan since. In the spring, when they are a few inches high, I take a stone and pound every thistle down, and lay a stone on it. Every week or two, I examine them and keep every spear covered up. If the work is done thoroughly I have never had it fail to destroy them by the middle of August."

MOSES C. CRAPSEY, of Lockport, N. Y.:

"The way to kill Canada thistles is by plowing and digging. There is no mistake about this. I have tried it more than once. It only needs to be well done."

M. R. VINCENT, Half Moon, Saratoga Co., N. Y.:

"Take a field of green-sward, full of Canada thistles, and plow it thoroughly once a month, from May or June until August, choosing the wettest time for the operation. I have tried this with good success, and my neighbors also. If the plowing is done well it is sure death to every one of them."

WM. PARSONS, Jr., Millville, Orleans co., N. Y.:

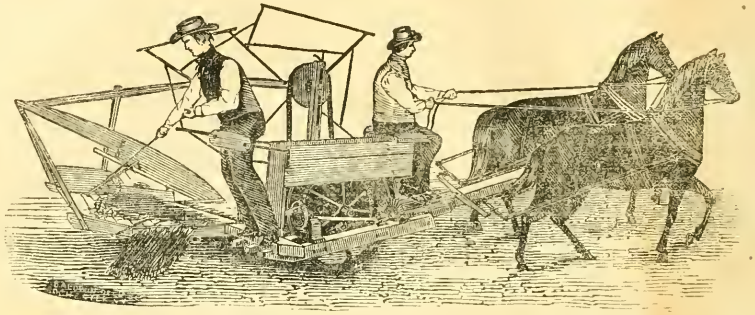
"I had nearly an acre of thistles, which had been spreading for a number of years. About four years ago I resolved to try an experiment, to subdue them. I planted the field to corn. When the corn was up big enough to hoe, the thistles also were up as high as the corn. I hoed them well, and from that time, once a week, went through them with the hoe, taking pains to destroy every thistle above ground. When the corn was fit to eat up, we had a heavy crop of corn, and not a thistle to be seen. I have since tried the same process, with equal success."

We shall give further extracts from letters on this subject in our next.

IMPROVED STOCK. — A communication from A. STEVENS, of New York, in reply to S. P. CHAPMAN, is deferred till next month.

To Competitors for our Premiums.—The competitors for our Premiums stood as follows, on our books, on the 15th of February—arranged according to the numbers sent, commencing with the highest:—

Joseph Watson, Clyde, N. Y.; E. C. Bliss, Westfield, N. Y.; J. H. Stanley, Le Roy, N. Y.; E. Howland, Mechanicsville, N. Y.; John Davis, Clarkston, Mich.; Moses Eames, Rutland, N. Y.; Wm. Knox, Waterloo, N. Y.; John B. Dolsen, Chatham, C. W.; Orrin Bishop, Dundee, N. Y.; Allen Hale, East Smithfield, Pa.; A. Conkey, Mt. Morris, N. Y.; Silsby & Keeler, Seneca Falls; R. A. Woodcock, Oxford, C. W.; A. Franklin, Honeoye, N. Y.; James Fraser, York, N. Y.; B. Coddington, Jr., Benton, N. Y.; Dr. Dow, Marion, N. Y.; O. C. Comstock, Marshall, Mich.; J. Wykoff, Romulus, N. Y.; Apollos Kent, Amboy, Ohio; Lyman Stroright, Trumansburgh, N. Y., L. L. Pratt, Fredonia, N. Y.; C. Hubbard, Adams Center, N. Y.; Isaac Minard, Hume, N. Y. John G. True, Castile, N. Y.; Jas. C. Robinson, Penn Yan, N. Y.; Jns. Macomber, Farmington, N. Y.; J. H. Bailey, Perry, N. Y.; T. S. Cowles, Springfield X Roads, Pa. Peter Himrod, Lodi, N. Y.; R. Craig Portersville, Pa.; W. H. Pattison, Saline, Mich.



SEYMOUR & MORGAN'S
IMPROVED REAPING MACHINE,

MANUFACTURED AT BROCKPORT, MONROE CO., N. Y.

THE subscribers are preparing to offer to the Farmers a superior REAPING MACHINE. Having for years been engaged in manufacturing a large number of *McCormick's Reapers*, they are confident that the Reaper which they are now manufacturing is far superior in every respect to any other now in use. It was thoroughly tested in the harvest fields last year and gave entire satisfaction to all who witnessed its operation. It surpasses any machine now before the public in many important points;—the *Cutter* or Sickle being in sections, in case of accident can be repaired by a good Blacksmith, without the owner being obliged to go to the manufacturers for a new blade. The ground wheel is 3 ft. in diameter, and all the geering runs in iron boxes. An early order is important from those wishing to purchase a machine, as we have already contracted for the sale of 300 for the West. In all cases a liberal warrant is given to the purchaser.

The improved Reaper was constructed under the supervision of our Foreman Mr. GEO. F BURNET, who has been engaged three years for us in the business. SEYMOUR & MORGAN.

Brockport, December 25, 1849.

CERTIFICATES.

SWEDEN, NOV. 12, 1849.

Messrs Seymour, Morgan & Co.—In my harvest, last season, I used one of your Improved Grain Reapers. I had formerly used one of McCormick's Improved Virginia Reapers, I have had considerable knowledge of them. In comparison, I think yours decidedly preferable; firstly—in point of perfection in cutting, which is the great desideratum, it is far in advance of this, and next, in ease of operation, I think it has decided advantage. I did not obtain your Reaper until a large part of my harvest was completed; consequently I had not an opportunity to test the amount that could be cut in a day, still I am satisfied that it is capable of cutting from fifteen to twenty-five acres per day, and that, too, in the most perfect manner. I used no change of team. I did not find it necessary in doing an ordinary day's work—about fifteen acres per day. I tested your machine in wet grain and when there was grass at the bottom; here I found it had a great advantage over other Reapers in use, it being able to go through almost any grain, some badly lodged, without any apparent difficulty of clogging the knife. And from my experience I think it a valuable labor-saving-machine, and would cheerfully recommend it to the attention of farmers, as I think grain can be cut with it, all expenses counted, at half the cost of cutting it the ordinary way — Wheat can be bound and shocked in a better manner, and with less labor, besides a great saving in the waste of grain.

Yours &c. F. P. ROOT.

I saw the aforesaid, Seymour & Morgan's Improved Reaper, in F. P. Root's harvest field and do concur in the foregoing statement. WM. ROOT, Esq.

D. H. ROOT.

I have seen the Machine work in very heavy, and also in wet wheat where it performed well, and believe it to be an improvement upon McCormick's Reaper. There was no clogging, as in the case of McCormick's and it must be a good machine if well made. NATHAN LOCKE.

BROCKPORT, NOV. 13, 1849.

Messrs. Seymour & Morgan:—Gents—I used one of our Improved Reapers in my harvest, which worked better than any I have seen before used—cutting wheat when there is much grass, without choking, which other machines that I have used would not do — I have had much experience with Reapers—having purchased the first one of McCormick's brought to this State. I have since put a large number of McCormick's in operation at the West, and believe yours to be the most perfect Reaper now in use.

A CHAPPELL.

I used one of Messrs. Seymour & Morgan's Reapers last harvest, and cheerfully recommend it to Farmers as the best machine within my knowledge for cutting grain. GEO. H. ALLEN.

BROCKPORT, NOV. 13, 1849.

This may certify that I used in my harvest of 1849, Seymour & Morgan's Improved Reaper, which worked to my entire satisfaction; cutting grain in all conditions. I believe it cannot be clogged in either grassy or green wheat. I have witnessed the operation of other Reapers now in common use and I believe it to be superior to any that I have seen—cutting wet or grassy wheat where other Reapers cannot. F. W. BREWSTER.

BROCKPORT NOV 12 1849.

We have seen the trial of Seymour & Morgan's Improved Reaper in the harvest of F. W. Brewster—and having witnessed the operaton of other Reapers, we believe this the most perfect machine now in use.

J. A. HOLMES, ALLEC POTTER,
D. A. WHITE, W. THEO. DOWNS,
MORGAN RANDLE, O. A. REYES.

Seneca Lake Highland Nurseries,

CATHARINE, CHEMUNG COUNTY, N Y.

WITH Nursery and Standard Trees, this establishment covers forty acres. Fruit trees of the best varieties, at reduced prices, wholesale or retail, of all the kinds suitable to this climate Ornamental Trees and Shrubs of all the most rare kinds, both Deciduous and Evergreen; Green House Plants; in short a Nursery in all its parts. Trees can be furnished of the new and popular "Wagener" apple also the Danse or Hawley.

Trees carefully packed and forwarded by public conveyance to any part of the Union. Being located within two miles of the Chemong Rail Road, used by the New York and Erie Company their agents certificate will be forwarded by mail on their delivery. Packages will reach the New York and Erie Road at Elmira, 16 miles south of this, and the Buffalo and Albany route at Geneva, 45 north, which makes it a very desirable location for sending trees by public conveyance. Neither the Pear or Plum Blight, or Peach Yellows, are known at this location.

The Horticultural Advertiser, containing a priced Catalogue, furnished gratis to all post-paid applicants.

January, 1850. [2-2t] E. C FROST

Choice Seedling Potatoes.

"*Buffalo Seedling Pinkeye.*" Rather long, marble white, eyes bright pink, productive, hardy, and excellent for the table.

"*Erie Seedling*" Long, intershaded with pink, purple, and green. Productive, hardy, and fine for the table.

"*Seedling Russet.*" Round, smooth, color cinnamon, hardy, early, productive, agreeably flavored, and fine for the table.

My "*Early Janes*" are large, round smooth, light orange white; on the whole, the best early potato for early marketing I have yet known.

Also, superior, renovated seedling potato seed, gathered from the most select varieties, combined with choice specimens late from Europe and South America.

Carefully packed and delivered at the depot, $2 per bush, $4 per bbl. Seed per packet sufficient to produce ten bushels, transmissive by mail at double postage, $1 per packet.

Buffalo, N. Y., Feb., 1850. [3-1t] N. S SMITH.

A Rare Chance.

THE subscriber offers at private sale, or in exchange for serviceable horses or mares, to dispose of his splendid bay colt of the Surprise stock. His connection and interest in the Norman horse make it desirable to be free from this charge. This stallion is nearly five years old, has very superior colts, and from his size, appearance, and muscular development, promises much. Communications may be directed to Robt B. Howland, Union Springs, Cayuga Co., N. Y. [3-2t]

CONTENTS OF THIS NUMBER.

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—APRIL, 1850. NO. 4.

THE ANALYSIS AND STUDY OF GRASSES.

Very few farmers duly appreciate the value of grass when turned to the best possible account. Broad acres have been too cheap, with their almost spontaneous herbage ready to be cropped by the domesticated animals of man, in this country, for him to study closely how to make two spires grow where only one grew before. In all the older States, however, this native abundance of nutritious forage and grazing is either gone or fast departing, never to return except through the art and science of the husbandman. The time has come when the study of the grasses is called for by every consideration of private interest and the public good.

In his account of the "Geographical Distribution of Grasses," Schouw remarks: "Persoon's *Synopsis* contains 812 species—1-26th part of all the plants therein enumerated. In the system of Rœmer and Shultes there are 1800; and since this work, were it brought to a conclusion, the family would probably contain *forty thousand* in all." This learned author adds: "The distribution of cultivated grasses is one of the most interesting of all subjects. It is determined not merely by climate, but depends on the civilization, industry, and traffic of the people, and often on historical events." The herdsmen of Switzerland find pastures for their cattle on mountain slopes above the range of forests; and the same is true on the high plateau of Central Asia.* One of the most valuable books for reference, on this and all kindred topics, is Prof. Lindley's "Vegetable Kingdom"—a work which will pay well to re-print in this country. Prof. Emmons has given the results of his analyses of several varieties of grasses grown in the United States, and of red and white clover, in his "Agriculture of New York," which furnish many new and valuable facts. On page 70, Vol. 2, he says:

"Timothy Grass. *(Phleum pratensis.)*—First specimen, collected May 20, 1848. Stalk 24 inches long, head not visible.

Proportions — Stalk,	65.30
Leaf,	34.70
	100.00

Water in stalk,	81.00
Dry matter,	17.80
Ash,	1.20
Ash calculated dry,	6.74
Water in the leaf,	75.00
Dry matter,	23.00
Ash,	2.00
Ash calculated dry,	8.69
Water in the whole plant,	78.00
Dry matter in the whole plant,	20.46
Ash, " " "	1.60
Ash calculated dry,	7.82"

As specimen No. 2 varies little from the above, we omit it. 100 parts of the ash of timothy hay gave the following results:

Silica,	41.650
Phosphates,	16.925
Carbonate of lime,	0.200
Magnesia,	0.500
Potash,	30.760
Soda,	1.020
Soluble silica,	0.200
Chloride of sodium,	2.490
Sulphuric acid,	4.130
	97.875

By the above figures it will be seen that over 72 per cent. of the earthy matter removed from a meadow or pasture in the plant called timothy, is silica and potash—both of which are of course dissolved in water before they enter the roots of the plant. The stems of all grasses are large consumers of these minerals, which in a soluble condition are seldom abundant in any soil. As in wheat, rye, oats, barley, and maize straw, the quantity of ash varies considerably in different samples grown on unlike soils, so in timothy, red top, orchard, and other cultivated grasses, the proportion of earthy matter varies in an equal degree. Nearly all meadows contain several species of this numerous family of social plants, besides more or less of clover. Probably 6 per cent. of ash per 100 lbs. of dry hay will be a fair estimate. This gives 120 lbs. per ton of hay removed from the soil.

The ash of Red Top *(Agrostis Vulgaris)* differs essentially from that of timothy. It contains much less potash and far more lime, as the following analysis by Prof. Emmons indicates:

Silica,	41.90
Phosphates,	13.75
Potash,	4.92
Chloride sodium, (salt,)	2.00
Carbonate of lime,	10.03
Magnesia,	6.64
Soda,	9.61
Organic matter,	2.35
Sulphuric acid,	7.30
	98.50

From the quantity of lime, sulphuric acid, and soda in the above ash, it is apparent that gypsum and

* See Humboldt's Travels, Vol. 3d.

common salt in addition to wood ashes, will be of great service on red top meadows. Salt and plaster are exceedingly valuable articles to mix with all stable and barn-yard manure, as well as with night soil, before their application to the land.

A luxuriant plant of Spear Grass, *(Poa pratensis,)* sometimes called herds grass, just headed out, gave of

Water,	81.564
Dry matter,	18.436
Ash,	2.267
Ash calculated dry,	12.296

ANALYSIS OF ASH FROM WELL DRIED HAY.

Silica,	56.320
Phosphates,	14.980
Carbonate of lime,	3.540
Potash,	15.624
Soda,	6.823
Magnesia,	1.996
Sulphuric acid,	0.200
Chlorine,	0.863
	100.351

Another specimen gave the following results, which Prof. E. suggests may be a fairer average sample of *poa pratensis* than the above :

Silica,	43.300
Phosphates,	11.650
Lime,	0.030
Magnesia,	trace.
Potash,	3.531
Soda,	13.505
Sodium,	4.130
Chlorine,	6.365
Sulphuric acid,	5.156
Organic acid,	4.400
	96.186

The quantity of chlorine, soda, and sodium, (all of which are common salt,) in the above deserves attention. The almost total absence of lime is remarkable. We respectfully suggest to farmers to try the easy experiment of sowing broad-cast about two bushels of salt on an acre as an experiment, applying it five weeks before haying time. It will be more likely to benefit dry than wet meadows. Two bushels of salt and two of wood ashes, unleached, will doubtless pay well for the expense incurred.

In former volumes of this journal we have frequently taken occasion to say, from our personal observation, that young clover, young corn, and other plants cut for soiling, should be partially dried before feeding. The following results bear upon that question. Red clover gathered when nine inches high, contained

Water in the stem,	88.30
Dry matter,	10.95
Ash,	0.75
Ash calculated dry,	6.85
Water in the leaf,	71.00
Dry matter,	20.00
Ash,	2.00
Ash calculated dry,	10.00
Water in *leaf and stalk*,	84.15
Dry matter,	14.48
Ash,	1.37
Ash calculated dry,	9.46
Ash in a ton,	211.68 lbs.

All plants, when young and growing rapidly, contain a large amount of water to facilitate the circulation of their aliment. There is more water in 100 pounds of young clover or corn than in a like weight of blood. In the arterial blood of a horse there is about 76 per cent. of water; in that drawn from a vein a little less, say 757.251 in 1000 parts. To keep horses, cows, working oxen, and sheep in health, and provide for them a generous supply of food, are objects of great importance to the farmer. Science will aid him much in this department of his great profession, if he will not treat her with rudeness or neglect.

S. W.'S NOTES FOR THE MONTH.

Our Winter Trade.—A correspondent of the Syracuse Star, in his statistical notices of freight coming from the east, to go via Geneva and the Erie Railroad to New York during the month of February, has omitted to include some hundred tons of whiskey, pork, cotton and woolen goods, &c., &c., which has gone by water from Waterloo to Geneva, whence the loaded boats were towed by steamer direct to the railroad depot at the head of Seneca Lake. Heavy goods, sugar, molasses, &c., are now brought by the Erie Railroad Company, from New York to Geneva, at 48 cts. per 100 lbs. The spring trade is thus early being supplied by this route, to the discouragement of our canal boatmen, many of whom are now bound to California.

Ireland and the Irish.—From the great rush of Irish emigrants into the United States, one would naturally suppose that Ireland was over peopled. So far from it, Carlysle tells us what a beautiful country Ireland might be ; but alas, says he, "it carries on it, as the surface of the earth ever does, ineffaceably legible, the physiognomy of the people that inhabit it — a people of holed breeches, dirty faces, ill roofed huts — a people of impetuosity and levity — of vehemence ; impatient, imperfect, fitful industry ; imperfect, fitful veracity." * * * "Vigorous corn, but thistles and docks equally vigorous ; ulcers of easily reclaimed bog, lying black, and miry, and abominable, at intervals of a few miles ; no tree shading you ; with fences as it were soliciting the cattle to be so good as not to come through — by no means a beautiful country just now ! but it tells all men how beautiful it might be." He advises all those patriots who talk about dying for Ireland, to reflect upon the better policy of living for it — "let them at least plant one tree each. That eight millions of persons will be persuaded to plant each his tree, we do not expect just yet ; but do thou, my friend, in silence go and plant thine."

The Fever for Gold.—One day last week, about $6,000 of the new gold coin was received in this village, fresh from the mint. This was the gross earnings of three individuals lately returned from a year's voyage to California. Their less fortunate associates were left behind to enjoy as they could their various health and fortune — the poorest and sickest buoyed up by that ever blessed hope, which the philosophic Hume said was worth a thousand pounds a year ! The sight of these money bags, for the time being, turned every head — nothing was talked of, thought of, or dreamed of, but fitting out or setting out for the El dorado ! Woe to that croaker who dared to speak of the uncertainty of the diggers' gains, the certainty of privation and sickness and suffering, as every eye was blind, every ear deaf, and the mind impassive to all the hindrances and positive evils that stood in the way of the glittering pile ? All accounts agree that from the east, the north, the south, and the far west, at this time the migrating army of gold diggers is greater than ever ; still greater, perhaps, than the host of crusaders that followed Peter the hermit to the holy land !

SOCIETY IN NEW YORK. — That *unique* and original weekly, the Home Journal, is translating DE TROBRIAND's articles on fashionable life in New York. The accomplished *reducteur* makes the New York ball a very poor affair, intellectually, as compared with the *reunions* of Paris. He says that the "young American, on his entrance into society, has often but one recommendation, the talent with which his tailor has endowed the cut of his coat." Also, that a man of mature age "is isolated in the gay throng, meeting rarely a woman worth seeing or talking to, and more rarely still a woman who finds as much charm in conversation as in waltzing — he soon gives it up, and balancing one ennui against another, he prefers that which does not give him the trouble of dressing, and which he can find weapons to contend with at home — pen or books, if his mind is active, and sleep if he has no faculty for anything but business."

THE SEASON. — This has been one of the most open, mild winters, known for many a year. The first snow fell early, and in the mud; this froze hard, making a good bottom for subsequent snows. No one here remembers a winter with so many weeks good sleighing during moderate weather and frequent rains. Our farmers are now hauling out their manure, a much easier process in cold, stimulating, March weather, than under an enervating April or May sun, to say nothing of the gain in time, from the lack of which, when too much work is crowded together, more than one field has had to go half tilled. An amateur farmer here has been occasionally, all winter, hauling manure from our livery stables to his little sandy farm. It may be said that he cleaned the Augean, as he went to the bottom of a hole or swale at the back of a range of stables, taking up the nitrogenous matter which, like guano, was improved by age and concentration. *Waterloo, March*, 1850.

SALT AND ARSENIC.

MESSRS. EDITORS :—In the January number of your most valuable paper appear two articles recommending the general use of salt as a manure, with the addition of a little *arsenic* when the land is infected to any extent with wire-worms and other destructive vermin. As your correspondents are not sufficiently explicit as regards the use of the latter article, permit me to inquire whether a larger quantity than that spoken of by Mr. PARK of Gates, in his first article, would not more effectually attain the desired object? That gentleman says he applied the small proportion of two pounds of arsenic to two barrels of salt. Now, as arsenic is not a dear article, I would be obliged if Dr. LEE would inform me if it contains any properties which could possibly have an injurious effect on vegetation. In Mr. PARK's second article, in the same paper, he says that a *peck* might be sown advantageously, but does not say on how much land to apply that quantity. I presume an acre — quite different from *two pounds*. If assured that arsenic would not have a bad effect, I would be disposed to make a trial of its virtues, or rather *poisons*. With due care, no danger to cattle need be apprehended.

I would thank Mr. PARK on behalf, I doubt not, of many of your readers, for his interesting articles referred to. We of the Cataract county would be happy to hear from him again on the same, or any other subject. R. H. J.—*Lockport, Feb'y*, 1850.

Wheat Husbandry.

ON SMUT IN WHEAT, AND THE CAUSE OF IT.

NUMBER III.

IN my former articles I gave a statement of facts. A leisure moment affords me an opportunity of giving my *theory*, founded on those facts.

I suppose the smut bug (or its precedent worm) to remain in the ground in a torpid state, during the winter, like the common fruit curculio. When the spring opens with sufficient warmth, it revives and commences its work of destruction by attacking the *roots* of the young wheat. I am led to believe this the more readily because, as stated in my first article, I have invariably found the vitality of the roots of the smut wheat destroyed by some worm or insect; and I can imagine none so likely to *commence* the destructive process as that which *completes* it, by its operations on the grains in the ear. It therefore probably feeds on the bark, or outer covering of the roots, until the time of the earing, or "heading out." Those plants which have been thus injured, generally throw up feeble stems, with small ears, not having received the proper quantity of nourishment from the roots. As soon as the ear appears above the sheath, and when it may be supposed to be in a critical state of *gestation*, the bug leaves the roots (the bark of which has become too tough, or too scanty, to supply it with suitable food,) and climbs the stem to the ear, where it consummates its destructive operations by perforating the chaff cases of the grain, within which it deposits its nit, or egg. The puncture probably injures the small vessels which would otherwise supply the grains with their proper nourishment, (in whole, or in part,) and causes an entire change in the substance of the grain. This change renders it the proper and natural food of the bug. It also becomes the fit receptacle for the deposition and nurture of the ova of the insect. I suppose the change in the grain to be produced by the perforation of the case, or chaff, and deposit of the nit or egg. I have now in my possession several ears, in which there are many grains of smut and good grain intermingled; and also several ears in which the grains are part smut and part good grain—some about half and half, and some more or less of each.

It has been conjectured by several writers on this subject, that a radical change in the plant is effected by the operation of some latent poisonous principle, before the earing out. One writer (DUCHAMEL) has stated he "found the ears smutted as early as March or April, upon carefully opening the hood, or blade, *even when not more than the sixth part of an inch in length*"! Another (TILLET) says, "the smutted heads or ears can oftentimes be found *vitiated in the hood*," &c.—SPALLANZANI "found (or supposed he found) that the smut was produced in the plants long before the impregnation." Whence DARWIN concluded, "that for want of impregnation, or the vivifying principle, the wheat corn might putrify, as is the case with addled eggs," &c.

With a knowledge of the facts stated in my former numbers, it is impossible for me to believe that the grain could have been smutted by any "vitiating principle in the air," when the ear was not more than the sixth part of an inch in length, and still "in the hood;" or that smut was produced from "unseasonable cold and wet." For, in either case, I must suppose that a diseased state of the stem, or ear, would so operate upon all the sap vessels, as to produce a change in *all* the grains in the ear, or at least of the *whole of each grain* affected by the disease. That there is a constant circulation of the sap in plants while growing, in some degree similar to the circulation of the blood in the animal creation, I presume no one will deny. Such being the case, it is difficult to imagine how one part of a grain can be good and the other bad, when the same sap is circulated and distributed to each section in precisely the same manner. I have little confidence in the statements of the discovery of smut at so early a stage in the growth of the plant — in the fine-spun theories respecting the cause of smut, I have none at all. My observations have convinced me that the change in the grain is produced *after the earing*, or "*heading out*," and while the germ of the grain is expanding. In cases where the grain is wholly smutted, I suppose the perforation to have been made at so early a period, that the germ being very small it is *wholly* affected and changed into smut. When the grain is only *in part* smutted, I suppose the nit to have been deposited at *so late a period* as to injure the part of the grain *immediately around* it; and that the other part of the grain being too much hardened to be operated upon,

produces good farina or flour. As the bug is slow in its operations (and but *one* perhaps on an ear) it may be, and probably is, several days in perforating the grains in a single ear. In such cases, some of the grains perhaps are not perforated at all, and of course are not affected, while others in the same ear are *entirely* or *in part* smutted. Whether the bug, when it deposites the nit or egg, leaves with it some *poisonous* matter for its sustenance, which produces the change in grain, or whether the nit very soon becomes a *worm, which nestles in the grain*, and thus produces it, I do not know.

When I wrote those articles for the Argus, I had no very definite opinion as to the particular manner in which the smut was formed by the operations of the "bug," (or "*beetle*," as some fastidious learned people insist upon calling the insect.) It will be perceived that in my third article I gave it as a *supposition* that "the bug, or its precedent worm, when revived by the warmth of the spring, commenced its work of destruction by attacking the roots of the young wheat." From subsequent examinations, I am convinced that that conjecture was not well founded. I am now perfectly satisfied that the excoriations of the roots of the wheat were made by the "*wire-worm*," which has for the last twenty-five or thirty years destroyed so much of our wheat; but which has generally been supposed to have been "*killed by the winter*." That the *ova*, or *larva*, of the *smut insect* remains, during the winter, *dormant* in the *smut grain, as an egg* or *worm*, there can be no doubt. The unexpected result of carrying the smut grains into my wheat field with the barn-yard manure, as stated in my second article, appears to afford sufficient proof of this. As great numbers assume the *insect form* in the fall, they probably pass the winter in that state, and, like other insects, revive in the spring. However this may be, those which I hatched all died after a few weeks spent in feeding on the smutted grains contained in the bottle with them.

From all the investigations which I have been enabled to make, in relation to the *manner* in which the smut is produced by the operations of the insect, it is this: It perforates the *glume (chaff case)* of the grain, and deposits its "*nit*," or "*egg*." On the outside of the chaff case the puncture closes up, (as do, generally, the lips of a punctured wound in flesh;) but in the inside the wound or puncture is kept open by the oozing in of the undigested sap of the plant, which runs into the unfilled cavity of the glume and fills it with *smut*, which is nothing more nor less than the *crude* or *unprepared* sap of the plant thus *prematurely* let in where good flour would have been formed if the sap had been left undisturbed, to pursue its ordinary course of preparation and circulation through the *natural channels* or *sap vessels*. And when *one part only* of the grain is smutted and the other part is *good* flour, it is, as suggested in my third article, because the perforation was made at so late a period that a *portion* of the cavity (less or more) had been already filled with *properly prepared* sap, *(flour,)* and but a part left unoccupied, but which was filled with *undigested* sap *(smut)* immediately after the puncture was made: both operations, that of forming good flour and the other of forming smut, no doubt going on at the same time; the latter, however, probably proceeding much the most rapidly.

Having, as I confidently believe, fully established the fact that smut in wheat is caused by the *operations of an insect*, and having discovered and identified that insect, I will proceed to consider as to the best means to be used as *preventive remedies*. And here I will confess that I have not any great degree of confidence that after the insect has been for several years an inhabitant of a farm, there is, or can be found, any certain and immediate preventive remedy for the evil, by the destruction of the insect, or otherwise. I have practiced several modes of preparing the seed wheat — at one time washing it with water; at another, soaking it in very strong lime water for twelve hours or more; in a third instance, wetting the wheat and mixing quick lime with it. Neither of these modes of preparation *entirely* prevented smut in the produce. The smut insect had become an established inhabitant of my farm, and I found it almost impossible to turn it out of the possession.

At length, however, I tried another plan. The heavy chaff and "tailings" of the cleanings of my wheat, containing the unbroken smut grains, (with, of course, the nits or eggs of the insect in them,) I carefully carried from the barn and destroyed them, so that none of the smut grains went into the manure. Particular care, also, was taken to sow no seed which had a *grain* of smut in it. This course was pursued for several successive years, and, after some twenty years of observations, experiments, and exertions to free my wheat from smut, I succeeded in raising good and clean wheat generally, but not always — occasionally I have found my old enemy smutting my wheat again. It probably strayed over into my fields from some neighboring farm; for, since the wheat in this vicinity was first discovered to have become smutty, the evil has occurred, I believe, in some locality or other, *every year*, in a greater or less degree. Notwithstanding all my care and exertion to free my wheat from smut, I am not at all sure but that *nature* had as much to do with my success as I had myself. I believe it is generally understood that some seasons are not as favorable to the reproduction of insects as others. Cold and wet weather no doubt destroys many of the young insects after they are warmed into life. Severe winter frosts may also do the work by freezing and *addling* the eggs. It is also asserted (and I believe truly,) that *parasitical* insects deposit their nits in other insects, which being hatched out, prey upon and destroy those that have thus served them for nests and food. Some one, or perhaps all of these causes combined, may have contributed to produce the desired result. Be this as it may, I am perfectly satisfied that the course which I pursued was the best, and indeed, the *only one* at all likely to be successful. If the *smut grains* are thrown into the barn-yard, and thence carried out upon the farm in the manure, I do not think it possible to free a farm from the smut insect. The insect appears to be brought to maturity at the time that the wheat is usually earing, or "heading" out, and the deposit of the *nit*, or *egg*, is commenced immediately thereafter. Early sown wheat generally fares the best: probably because of its "heading" out before the insect is ready to commence its operations. But if sown *very early*, for the purpose of having it ear or "head" out before the maturity of the smut insect, it is frequently attacked in the autumn by the "Hessian fly;" and thus, by attempting to escape one evil, we run into another oftentimes much worse; for the "Hessian fly" is generally far more destructive than the smut insect — the former frequently destroys the whole crop, the latter never destroys more than a minor portion of it. At the same time, however, *if the grain is cut before it becomes "dead" ripe*, it is very much injured by the grains being blackened by the dust of the smut

as well as by having the unbroken smut grains mixed with it. *Very late* sown grain is very liable to be smutted if the insect is in the neighborhood of it. Wheat should, therefore, be sown neither *very early* nor *very late*. The best season for sowing it is, undoubtedly, between the 5th and 25th of September. Yet, as to its being smutted or not, much will depend upon the weather of the succeeding spring. If the season should be cold and "*late*," it would probably retard the growth of even the *early sown* grain, and bring its *latest growing heads* within the period of time required by the insect for the deposit of its eggs. J. H. H.

"CORN vs. WHEAT"—AGAIN.

MESSRS. EDITORS:—As a constant reader of your invaluable paper, I have witnessed with much interest the increasing contributions of my brother farmers, (an auspicious sign, not only in practical but theoretical farming,) especially one from my fellow townsman, under the title of "Corn vs. Wheat.—Drill Culture, &c," as a subject calculated to elicit discussion on the comparative profits of these valuable crops. In the chapter Mr. SPERRY has furnished your readers, he has not given them the expense of raising his crop of corn, nor that of raising a crop of wheat. In this respect, therefore, he has failed to give us the full benefit of a careful, repeated, and reliable experiment.

With the "Young Digger," I think it exceedingly unsafe to *jump* at conclusions; and after several years of somewhat careful observation in farming, so various are our seasons, our soil, its condition, its culture, and our markets, that for one I am not ashamed to confess myself ignorant of the great art of husbandry and the relative profits of some of our staple crops, and much in need of the benefits of scientific instruction, even at the hands of our "sapient legislators," although some of my neighbors deride "book, or collegiate farming."

Now a few words in review of friend SPERRY's article on "Corn vs. Wheat." In giving the gross amount only of the value of his crop of corn, without charging it with the expense of manure and its application, plowing, planting, hoeing, harvesting, &c., Mr. SPERRY has failed to satisfy at least one of your readers of its comparative profits. He many not have used manure, and thereby saved that expense for that crop. Every practical farmer knows full well, without the aid of science, that corn is an exhausting crop—not more so, however, than some others; but it leaves nothing to restore the waste it occasions, consequently constant cropping with corn would require a heavy outlay for manure every year after the first or second, at longest—a heavy charge against the crop. I hold that any system of farming in Western New York, where much of the land is already too much exhausted by constant cropping, that does not essentially improve the soil, is unprofitable. In these remarks I would by no means disparage the raising of corn. Corn is invaluable to the farmer as a feeding or fattening crop, or for cleansing one's fields of foul grasses, if the quantity planted be confined to no more than will be done carefully and thoroughly.

A word about the use of the drill in planting corn, (which I see by friend SPERRY's frequent communications is quite a favorite with him.) He is silent *this year* on the subject of its use as a cultivator. Corn planted with a drill can be planted in rows but one way, while the other it will be scattered along the row or irregularly deposited in hills. We have had a little experience in this mode of planting. Our experience is, that when scattered in rows it may somewhat increase the amount of the crop; yet on a "blue or June grass" sod it greatly increases, nay, nearly doubles the expense of tillage, and in a wet season would utterly defeat a great object of corn culture, namely, that of destroying foul grasses. We have never found a better way, on the heavy soils of Gates, (these grasses being indiginous to such soils,) to "chastise them," than to row corn both ways. Make frequent use of the corn harrow, cultivator, or plow, and what is better, all of them both ways, not neglecting the faithful use of the hoe, even were we obliged to go to the "tombs of the Capulets" for them. "Work once well done is better than twice half done." Our opinion, on a review of the article in question, is, that for every day saved in planting on "blue grass" sod with a drill, four is lost in tilling. The most of the labor of raising a crop of corn is in the hoeing and tending. Such planting is "filling at the spiggot and leaking at the bung."

A word on the relative profits of "corn vs. wheat." Last season, after a crop of corn that had been planted on a clover sward manured, I well cultivated *both ways*, (which, by the by, was rather expensive,) and sowed wheat. The expense and produce, so far as I recollect, which is pretty near the mark, although the account was not accurately kept for the purpose of giving it to the public, was as follows:

5 acres, once plowing man and span horses, at the rate of 1¼ acres per day, 3¾ days at, $2 per day,	$6 66
Seed 1¼ bushels per acre, 7½ bush., at $1,12½,	8 44
Sowing and harrowing twice, boy and span of horses one day,	2 00
The crop stood well, and was harvested for $1 per acre,	5 00
Drawing and securing,	2 00
Threshing 150 bushels at 6 cents per bushel,	9 00
	$33 10
The Value of the crop, 150 bushels, at $1.12½ per bushel, about the average price last fall, although it brought more, was,	$168 75
Balance in favor of the profits of the crop,	$135 65

Friend SPERRY, or some other advocate of corn as a market crop, may figure his profits higher than this; for this is not given as an extraordinary result by any means, or as establishing a system of farming or cropping. A far greater produce in value, either of carrots or many other roots and vegetables, can be realized, and yet with less profit.

The lot mentioned above was thoroughly cleansed from foul grasses and seeded with clover. The season being favorable, it set well; and the soil being rich, it gave a most luxuriant velvet covering to the ground, securing the young clover roots against the frosts of winter, besides furnishing considerable feed.* Next summer this lot will not lie bare, exposed to the leaching rains and evaporating rays of a summer sun, "to waste its fragrance on the dessert air," as it would after corn, if the land was poor, (and it will will soon become so by raising two crops of corn to one of wheat,) or foul, or there was not time to sow it; but in beauteous and joyous contrast will give at least two or two and a half tons of hay to the acre,

* I would by no means recommend feeding clover fallows, except on rich lands where the whole crop is not needed for manure.

or what is better, give a large quantity of good feed and leave a sufficiency for plowing under and self-manuring. Managed in this way, with once plowing and the use of the cultivator thereafter, the same lot, if the season be a good one, is as safe for 40 bushels per acre the next crop as 30 after corn.

In this article, which is already too long, we have not noticed the subject of transforming corn at fifty cents a bushel, the basis on which our friend makes his profits, into pork and beef at from $4.00 to $4.50 per hundred; the secret I have never learned, and am therefore incompetent to such a task. A Gates Farmer *Gates, Feb'y*, 1850.

BENEFITS OF DEEP PLOWING.

Messrs. Editors:—Some fifteen years since, being in the State of New York, I saw for the first time an agricultural paper—the *Genesee Farmer*. In that was an article relative to deep plowing, which I perused carefully, and by it was induced to try an experiment. I had previously farmed it as others did, thinking that there was no way to increase the product but to increase the number of acres.

I had a field containing four acres and one hundred rods of ground, which had been cleared nine years and had had a grain crop on it every year—wheat, corn, and oats—the three last were oats. The field was considered nearly worn out, and would not have produced more than fifteen bushels of wheat per acre. There were many large stumps and four green trees on the field. The soil was clay loam. I had only a single team—a powerful span of horses—and a single plow, (Wood's.) I raised the end of the beam three inches and commenced plowing in June, when the ground was wet, turning up about five inches that had never been stirred before, plowing about three-fourths of an acre per day. The ground was dug up with a spade around the stumps, harrowed and plowed shallow twice afterwards, and sown the fifth day of October with two bushels of velvet bearded wheat per acre. In the spring were sown 150 pounds of plaster where the wheat looked the poorest. The result was, although much was wasted in gathering, for it shelled badly, I had by weight 196½ bushels besides one large load not threshed at the time, which would have increased the product to at least 212 bushels. Since that time I have plowed deep, and the result has been invariably the same, or at least doubling the crop. Deep plowing on a soil like mine will prevent the crop from suffering from wet or dry weather, and is a preventive of rust, or at least has been with me, and it will not turn to weeds, as much wheat does in Michigan. The editor of the Michigan Farmer thinks "it is almost a miracle" if a farmer here gets a good crop of wheat; yet none fail who cultivate their land properly. This we can prove by many farmers in this county.

The general system has been, ever since the first settlement of this country, to plow shallow and grow wheat after wheat, without manure, or even seeding to grass, until all the food for the wheat plant is exhausted, and then we are told that the seasons are such we cannot grow wheat and must turn our attention to raising sheep; but will sheep thrive if we serve them as we serve our wheat? Will they live without proper food? Or will they live in the water without turning to musk-rats? Yours, &c., Linus Cone.—*Troy, Oakland Co., Mich., Feb'y*, 1850.

ECONOMY IN RAISING WHEAT.

As the country improves with the introduction of labor-saving machines, quite a revolution is taking place in the management of fallows for wheat. Instead of following the old practice of plowing twice or thrice, re-inverting the sod and affording a fine opportunity for the grass to grow, the theory now obtaining is to plow once and deep, the after work being perfermed by the harrow and wheel-cultivator. The advantages arising from this mode of culture are as follows:—The sod once inverted remains below the surface, affording in its decomposition food for the young plants; it also affords an opportunity for the superabundant water to pass off, thereby removing the liability of the ground to bake or heave. On land comparatively free from stumps and stones, as all old cleared land should be, I consider this a decided improvement on the old plan. Another important consideration is, the ground once plowed, the labor is in a great measure accomplished. By the use of the harrow and cultivator occasionally, the ground will become finely pulverized; so when the time of seeding arrives, the ground is already prepared for the reception of the seed. If any doubt the superiority of this mode of tillage, let him try and see.

The present is emphatically an age of improvement, and he, whether farmer or otherwise, who neglects to avail himself of the advantages to be derived from the recent works of art, and the sciences, should have the honor of being alone in his glory. W. Ansley.—*Rushville, N. Y.*

A TROUBLESOME WEED.

Messrs. Editors:—As your columns are open to the interests of the farmer, I wish to make a few remarks in regard to an obnoxious weed, little known in this section, and yet abounding in a greater or less extent throughout the country. It is called *Ackley Clover*, but is probably a species of the white daisy. It takes its present name from the person who first introduced it into this State. It is probably the most injurious to the growing of wheat of any known foul weed, because, after becoming once seeded, it cannot be eradicated as long as you grow wheat. It grows equally well and sometimes as high as the grain, and by the thick mat it forms it is almost impossible to get through a field of it. It resembles May-weed in every respect, (excepting it grows more rank,) and this is one cause of its spreading so rapidly, people not knowing what it is, and calling it May-weed. The root lives until it is three years old, and continues to branch out and seed nearly all summer, and in its last year's growth, one root will cover as much ground as a half bushel. The seed is very small and of a yellowish cast, and can with difficulty be detected in clover seed, in which way it is being sown broadcast all over our country. I would advise all those purchasing clover seed to be careful and examine close.

Messrs. Editors, if you consider this scroll worthy of notice in your paper, you may re-model it to suit your fancy, as it is written in haste. I want to get the article before the farmers in Monroe county, and perhaps some one more competent to describe it will take it up and give some method of getting rid of so hateful a pest. Subscriber.—*Rush, N. Y., March*, 1850.

Answers to Inquiries.

APPLICATION OF BONES AS A MANURE.

Dr. Lee:—As I have been a constant reader of various agricultural journals, for seven or eight years, my attention has been attracted by frequent notices of the great utility of bones, in different conditions, as fertilizers; and being now in a situation to procure them, I wish to inquire of you, what is the most economical and effective manner of applying them. It seems that the method of reducing them now generally used, is by means of sulphuric acid; and a Prof. Way, of England, I believe, recommends the addition of equal weights of acid and common salt. On this I should like to have your opinion, as well as on the following points, viz:

1. For corn, on a clay loam, would leached ashes, charcoal *waste*, or both, be best to dry the bones with, after solution? 2. What is the best mode of application for corn or root crops, to drop it with the seed, or to cover the seed and apply immediately over it, or wait until the corn, carrots, &c., appear above ground? 3. Will the mixture be injured by lying in a heap a month or more? And lastly, how much is required per acre for corn?

An answer to the above questions, in season for the coming spring, will be very thankfully received.

My father purchased the farm that we occupy, in the spring of 1843. It consists mostly of a clay loam, on a stiff clay subsoil, and is underlaid by a species of limestone. Some boulders, of the same kind, also lie on the surface. The farm has been "skinned," pretty thoroughly; but we, being "book farmers," expect to increase its fertility somewhat before long, by means of deep plowing, turning under clover and buckwheat, by raising spring crops and manuring them well, to be followed by wheat; and, lastly, by keeping the ground always covered, as far as possible. The good effects of which mode of culture are apparent already. We are also trying to get up a "Farmers' Club," and to obtain some subscribers to your paper, which we get through your agent, Mr Reed, at Lockport.

But as your time is precious, I will not tax you further at present. J. Breading Trevor.—*Lockport, Feb'y*, 1850.

"Leached ashes and coal waste" will be useful on clay loam, for corn or any other crop. These fertilizers being mild in character, they should be applied to corn land in quantities sufficient to spread over the whole ground, and be incorporated with the soil by the plow, harrow and hoe. This should be done, i. e., the ashes should be applied before planting. Unleached ashes are most economically used by adding one bushel of salt, one half do. plaster, with two of ashes, and adding the mixture to the soil as a top dressing for each hill, after the first hoeing or weeding; taking care not to have the salt and ashes come in contact with the young plants. One or two ounces, or such a matter, spread over the roots of each hill will be of essential service to the crop.

Leached ashes and rotting manure, mixed in a compost heap, improve each other—the carbonic acid eliminated from the dung, or decaying organic matter, will render the potash, soda and lime salts (silicates) in the ashes soluble, while the alkalies named will aid in forming salt-petre. (See account of artificial nitre beds, in Johnston's Chemistry.)

The only objection to the use of sulphuric acid for dissolving bones is the expense of the article. To avoid this, we have preferred to break up bones with an old axe, pretty fine, and boil them to a powder in strong ley. To this compound we add a little salt and gypsum. It may then be mixed with a little fine dry loam and distributed with a drilling machine over seeds of corn, carrots, beets, or other plants. The compound is too caustic to be placed in contact with tender germs. It is a powerful fertilizer. As to quantity per acre, every man's judgment, means, quantity of land, &c., must decide that question.

HEMLOCK LANDS.

Although not a farmer myself at present, (a physician,) I was brought up on a farm, and now feel a deep interest in the scientific cultivation of the soil. I have been in contact with your paper for the last year, and I must say I am entirely satisfied with the general and practical principles therein inculcated. One thing, I hope you will as far and as often as possible observe, to give all the instruction you may obtain in relation to the cultivation of the soil of *hemlock land*. This is too much neglected in our *agricultural* papers. And as our soil in this section of Steuben is mostly "hemlock," I hope that your own remarks, as well as those of your practical correspondents, may be directed occasionally for our benefit. Yours, &c., Thos. Shannon.—*Orange, N. Y., Feb.*, 1850.

As a general thing, soils on which hemlock grows lack lime. Draining, liming and turning in clover, (the growth of which is greatly promoted by gypsum,) will improve all lands of the character which usually produce much hemlock. They are sometimes fair wheat soils, but commonly better adapted to grazing than to grain culture. By seeding liberally, and manuring, a good return in dairy products, wool, and neat stock, may be realized from soils not naturally fertile. In some countries and districts hemlock grows on very superior land, which will bear fine crops of all kinds adapted to the climate. No land that produces large forest trees can be *very* poor. With good management it will bring great crops of grass that can readily be transformed into gold.

WHEAT FLY OR WEEVIL.

A correspondent, of Crawford co., Ohio, communicates the following intelligence:

The wheat weevil has commenced its ravages in this section of the country. The first that I saw of them was in 1846. They have been increasing steadily every year since. Last harvest they destroyed the greater part of the late sown wheat. Will they continue to increase as they did in St. Lawrence co. and that part of Canada opposite there, until they take *all the winter wheat?* I believe they will. What is your opinion on this subject? S. P. Jaquith.

Is the insect spoken of a *little bug*, like that in peas, or a fly with wings, when it comes out of the seeds? We suppose it to be the *wheat fly*, and not a weevil at all. This insect deposits its eggs when the seed is forming, which hatches out after harvest in Western New-York, and is often seen in thousands when cleaning wheat, and sometimes later. The Hessian fly is a different insect. The only remedy for this pest, known to us, is to seed out of season—either quite early or very late in autumn. It is impossible to predict what will be the abundance or scarcity of this class of animals, at any future period.

INSECTS ON THE ROOTS OF CORN.

A correspondent writes at the close of a business letter as follows:

I have been hoping to see something said in the Farmer, relative to the louse that is so destructive to corn, in Kentucky. The roots of the young plants are attacked by them and its growth paralyzed. They attach themselves to the roots in great quantities and the plant becomes hard, and the growth stationary, and many farms do not yield half crops, when infested by them.

Any thing that would remedy this evil will be of immense value in Kentucky, if it is attainable. I would like very much to hear from some of your numerous readers on this subject. Yours, with due respect, Z. R. Huggins.

We suspect that the depredator is an aphis—perhaps the same that sometimes attacks the cotton plant. If any reader has any knowledge on this subject he will serve the cause of agriculture by communicating his information to the public through this journal.

CULTURE OF BEANS.

Messrs. Editors: — Will you please to answer me the following questions? The best kind of beans for field culture on an extensive scale? The manner of culture, commencing with the time of planting? The best manner of harvesting, drying and marketing? The place of marketing a crop, of one, two, or three hundred bushels?

I would also wish to know the probable number of bushels per acre — the ordinary price — also, the earliest time they may be taken from the ground: reference being had, throughout, to the fall sowing of the bean ground to wheat. Are they best planted in hills or rows? W. S. — *Canandaigua, N. Y., Feb.*, 1850.

The best field beans to plant, if reference be had to a market, is the small white, as it sells the most readily, and brings the highest price. The general mode of planting is in drills or hills; usually the latter. When planted in hills, there should be about six plants in a hill, and the hills about two feet apart. Judge Buel states that the largest crop he ever raised (48 bushels to the acre,) was in rows. The bean is partial to a quick, dry soil. It is a very tender plant and will not bear the sligtest frost. It is therefore unsafe to plant them until frost is no longer to be apprehended. Thirty bushel to the acre would be a good crop, though much larger crops have been raised, and much smaller might be very easily.

When the beans are fully formed, and there is danger of frost, pull and throw them into heaps, in which condition the frost scarcely affects them. If the ground is not wanted for other uses, they may stand till the latest pods assume a yellow color. They are pulled with ease when the plant is mature, as the fibres of the root are by that time dead. This is more quickly accomplished with an iron hook-rake, or if the stalks are partially green, they can be mown, or cut with a sickle. If the vines are not dry, let them remain for a while in small heaps, and afterwards collect in large piles, around stakes set at convenient distances, with the roots in the center and secured at the top by a wisp of straw. When well dried, thrash, clean and spread them, till they are quite free from dampness.

The price of beans ranges from six to twelve shillings a bushel. Nine shillings is now the price in this market. They generally find a ready sale. The time a crop could be got off must depend much on the season. The long garden white bean, and the China bean with a red eye, ripen earlier than most others, and are very productive.

Messrs. Editors: — Since my boyhood, I have been engaged in other business than farming, and all I know of it is what I then learned, and that in the old hobbling way, together with what observation I have made in riding about the country in the practice of physic, till four years ago, when I came in possession of a small piece of land, of some 22 acres, which I have endeavored to work to the best advantage. But I feel greatly the need of some experienced adviser, to enable me to do it *all* in the most approved manner. In my way of farming, I believe I have realized more profit than many do from a hundred acres; yet I am sensible that still greater improvement might be made, if I *only knew how*.

In reading your valuable publication, which I constantly peruse, I see that you have some communications to obtain answers to specified questions, and for this reason I address you. On my place I have all varieties of soil. Some half an acre, alluvial, six or seven acres, gravel, dry, seven or eight, clay entirely, and some muck.

Will leached ashes, from the ashery in our village, pay the expense of drawing on to any of the varieties of soil above mentioned? Will plaster be good for any or all? If so, when is the best time to sow?

Will alluvial or gravel be best for carrots? I have a garden spot of some fourth of an acre of dry gravelly soil, which was rich when I came here, and which I have manured from the barn every year since I have had it. Last spring I covered it well with rotten manure. Will it be good for onions? If so, and you will give me the best method of raising, as to kind of seed, time of planting, how to fit the ground, &c., &c., in minutia, I will do it right, and report my success in the fall. I want to beat every body else. How much seed shall I want?

I read, in the January number, an account of what you call a large crop of beets. I believe I beat that last year, although I have not accurately measured the ground. I raised some 90 bushels on less than half that ground. What soil is best for quince — wet or dry — rich or poor? Will they grow from slips? D. Seaver. — *Hume, Allegany co., N. Y., Feb.* 25, 1850.

Apply leached ashes to your gravelly soil and around your quince, apple and other fruit trees. Quinces will do best on a medium soil—neither wet nor dry. Hog manure, leached ashes, and spent lime, have produced the best crops of onions that we have ever seen. About three pounds of seed are required for an acre. Plant early and not too thick in the row, nor have the rows too close together. If you "beat every body," please write and let "every body" know *how* you do it.

THE MILCH COW.—S. W. AND MR. WRIGHT.

Messrs. Editors:—In your Farmer for March, is an article headed, "Milch Cow." The article seems to be intended to cast a doubt upon the capability of the cow, to impugn the judgment of the Journal of Commerce and the veracity of a "Traveler," as well as myself. Your friend Mr. "Wright" has done himself a great "*wrong*," showing a lack of discretion not very creditable; but that is his affair, and not mine. Your correspondent may have been "hoaxed" by Mr. Wright, in regard to the cow, the *pail*, and the milk; and it is very likely Mr. Wright made "a fish story" of it. If he had adhered to the facts as *he heard them*, and in fact *saw them*, he would have stated that my noble cow *did*, for about six weeks in June and July, 1847, *give forty-two quarts of milk each and every day — pure milk*, without froth — and some days more. The quantity was ascertained by a tin quart measure, such as is in common use through the country; true, it had not been sealed by the County Sealer, but I do not believe it could vary so much as to invalidate my assertions. I repeat, therefore, that "the milch cow" did yield, in 1847, for about six weeks, forty-two quarts of milk per day. The quantity given by the same cow in 1845 and 1846 was about the same as in 1847, though in 1848 and 1849 the quantity was diminished, which I attribute to her calving early in the season, too soon for grass. The quantity she gave last year, for a time, was about thirty-nine quarts per day. I regret that she is not in a condition to give me a calf this season, otherwise I doubt not Mr. Wright's $500 would have been transferred to me. In her present state, I am offered, by a neighbor, one hundred dollars; but I dissuade him from taking her, as I doubt whether she will have another calf.

Mr. Wright could not have seen a pail "with a strainer" here, as there never was such a pail about my house.

As to my under-drained fields, I will say, that I have laid on my farm 41,000 drain tiles of fifteen inches in length. S. W. may estimate the same in miles and fractions, and correct a "Traveller" if he can. Yours, &c., John Johnston.—*Near Geneva, March*, 1850.

IMPORTED SHORT-HORNS—BATES' STOCK.

In the August (1849) number of the Genesee Farmer, is an article by me on the Short-horns, which I imported last year for Mr. Sheafe, Col. Sherwood and myself. The January number contains strictures by S. P. Chapman, on so much of my article as relates to the Bull, Third Duke of Cambridge. As Mr. Chapman does not understand my views, and therefore misstates and misconstrues them, it is necessary to answer him. He makes many assertions and takes positions, which present questions and issues, so numerous, complicated and extensive, that, *at present*, I must leave them unnoticed. There is beside, *just now, a strong propriety* in not discussing these issues. As soon as *this condition* ends, *I shall resume the subject, and will fully consider them.* In this notice I propose merely to state my meaning in the paragraph, to a portion of which Mr. Chapman objects, as *he* understands it, and refute one of his positions. To be clear, I must re-produce the passage entire. Speaking of the Third Duke of Cambridge, I said:

"I have great pleasure in knowing that I have brought to this country so superior a bull from the herd of that eminent breeder, Mr. Bates He is the *only* bull in America got by Mr. Bates' *crack prize* bull, Duke of Northumberland (1940,) the best bull Mr. Bates ever bred. Mr Bates has *but one* more left got by the same bull; and Duke of Northumberland is now dead. Mr Bates repeatedly told me that 3d Duke of Cambridge was more like his sire than any bull ever got by him Breeders desiring the blood of Mr. Bates, can no where else in this country procure it *with such high characteristics of style, quality, symmetry, and substance.*"

Mr. Chapman quotes *merely* the last sentence and discusses it alone. The whole paragraph being connected, and the last sentence the conclusion or deduction, and the whole having been the subject of remark, I will briefly state what it *only* means, and was meant *only* to mean. I mean by it, that I have brought to America a superior bull, from the herd of Mr. Bates; that this bull, 3d Duke of Cambridge, (5941,) is the *only* bull in America *got* by Mr. Bates' *Duke of Northumberland*, (1940,) that Duke of Northumberland, (1940,) was Mr. Bates' "*crack prize*" bull, and was the *best* bull Mr. Bates ever bred, that Mr. Bates has but one more bull got by Duke of Northumberland, (1940,) that the Duke of Northumberland, (1940,) is dead, and that Mr. Bates repeatedly told me that 3d Duke of Cambridge, (5941,) was more like his sire, (Duke of Northumberland,) than any bull ever got by him, (Duke of Northumberland.) In 1845, Duke of Northumberland died. In July, 1848, Mr. Bates owned but two bulls got by Duke of Northumberland, and these two were 2d Duke of Oxford and 3d Duke of Cambridge. I brought 3d Duke of Cambridge to America, and this left but one son of Duke of Northumberland, (1940,) at Mr. Bates', and Mr. Bates did not in his lifetime part with that son. I designed to place before breeders the fact, that there is in this country but *one* bull the get of Mr. Bates' *best* bull, and that if they wish the blood of Mr. Bates' they could no where else in America, than from Cambridge, get *Mr. Bates' blood, through the particular channel of a resembling and superior son* of Mr. Bates' best bull, Duke of Northumberland, (1940.)

The last sentence of the paragraph which I have quoted from my August article, is this:—"Breeders desiring the blood of Mr. Bates, can no where else in this country procure it with such high characteristics of style, quality, symmetry, and substance." This sentence is the text; its disproval the object of Mr. Chapman's whole article. Never was an unfortunate sentence so misconstrued. In an article printed in Canada, it is made the basis on which to charge me with having asserted, "that from Mr. Sherwood, [through 3d Duke of Cambridge,] and from him alone, the Duchess *blood* can be procured" [in this country.] In letters addressed to others, and by the receivers shown to me, this sentence is made to mean, "that the 3d Duke of Cambridge possesses more of Mr. Bates' Duchess blood than any other bull in America," and I am charged by its use with *so saying* and *designing so to say.* Mr. Chapman makes it mean the *same* thing, *but does so* by way of *inference*, or *deduction.* His words are:—"No one will deny, that if any one animal from a herd possesses the power of imparting to his produce 'higher characteristics of style, quality, symmetry and substance,' than any other animal from the same herd, he must possess more of the *choice* blood of that particular herd. To question this, is at once doubting the efficacy of blood animals." That is, my position, if it be *true, must* be true, because 3d Duke of Cambridge has more of Mr. Bates' *choice* blood than any other bull in America. This is the meaning which by deduction Mr. Chapman places on my words. Having done this, he proceeds to prove, by quoting Mr. Bates' opinions, in his own words, from public printed letters, that the *choice* blood of his herd, in Mr. Bates' opinion, is the Duchess blood. No one ever doubted this, who either knew Mr. Bates or had read his printed or private letters. I knew such was his opinion. Mr. Chapman then gives from the 4th vol. of the Herd Book the pedigrees of 3d Duke of Cambridge, and Mr. Vail's Duke of Wellington, and by these pedigrees shows that Cambridge has by his sire *one* cross of Duchess blood, and that Wellington has *two* by his sire and the sire of his dam. The precise quantity which Mr. Chapman gives to each, is ¼, i. e. 2-8, of Duchess blood, to Cambridge, and ⅜ to Wellington; and therefore he concludes, that Wellington must be a better bull than Cambridge. Logical conclusion! Now all this shows a total want of knowledge of breeding and of pedigrees in general; and in special of the particular pedigrees which Mr. C. gives of the animals under his consideration. But to explain this as *to the pedigrees*, would require *too much space now*, and I pass it.

If Mr. Chapman be correct, then it would be true that a bull got by one of Mr. Bates' Duchess bulls, dam by a Duchess bull, grand-dam *a poor roadside tack*, would be a better getter—would impart more "high characteristics of style, quality, symmetry and substance"—than a bull got by a Duchess bull, out of a pure, full bred, stylish, short-horn cow, of another approved tribe. Such an absurdity, no one, I think, would maintain, though Mr. C.'s article *seems* to do so.

On Mr. Chapman's rule, if sires have each the same amount of Duchess blood, they would possess and impart equal "style, quality, symmetry and substance." Yet no two full brothers were ever equally good animals and equally good getters. Duke of Northumberland, [1940,] and 2d Duke of Northumberland, [3646,] were full brothers. The first was superior as an individual, and very superior as a getter. The last was far inferior to his brother as an individual: far inferior as a getter. The 3d and 4th Dukes of Northumberland were full brothers and *twins*. The 3d Duke Mr. Bates never used, he was far inferior, both as an individual and as a getter, to the 4th Duke. The 3d and 4th Dukes had *more Duchess* blood than their half brother Duke of Northumberland, (1940,) and were far, very far, inferior to Duke of Northumberland, as individuals and as getters. Mr. Vail's Duke of Wellington, (3654,) has more Duchess blood than his half brother Locomotive, (4242,) and yet Locomotive was a far better animal and better getter than Wellington. Mr. Harvey's bull Walton, (6658.) son of Locomotive, a distinguished winner even in Gt. Britain, is vastly superior to any thing ever got by Wellington. Duke of Cleveland, (1937,) the sire of the dam of Mr. Vail's Duke of Wellington, (3654,) was a Duchess bull, and was so inferior, that Mr. Bates says of him, "this bull never exceeded in weight forty stones of fourteen pounds per stone, when above three years old;" that is, 560 pounds dead weight; *not half* the proper weight of a *merely fair* animal of that age. (See the London New Farmer's Journal, Aug. 8, 1842.) Duke of Northumberland, (1940,) *at the same age*, weighed, live weight, 2520 lbs. Sink one third live weight, and his dead weight would be 1680 pounds; just *three times* the weight of Duke of Cleveland. Could any thing be *more despicable* than the Duke of Cleveland, (1937?) *Yet*, he had MORE *Duchess blood* than Duke of Northumberland, (1940,) by one half.

The second best bull, as an animal, ever bred by Mr. Bates, in his opinion, was the 1st Duke of Cambridge, (3639,) a full brother of 3d Duke of Cambridge, and winner of the head prize in his class at the show of the Royal Agricultural Society of England, in 1840—an animal for which he was offered more money than for any other, except Duke of Northumberland, (1940.) And yet 1st Duke of Cambridge had only one fourth as much Duchess blood as Duke of Cleveland, (1937.) 1st Duke of Cambridge was refused to Earl Spencer by Mr. Bates, at a very large price, and when sold to go to Australia, Mr. Bates said of him, "He is too good a bull to remain in England, out of my own herd." And so he was exported at twenty-one months old. Mr. Bates' Duchess bull Short-tail, (2621,) the sire of Mr. Vail's Duke of Wellington, had more Duchess blood than Belvedere, (1706,) for Belvedere had none; and yet Short-tail was an inferior animal, deficient in every point, except his brisket and his handling, and was at best only a moderate getter; while Belvidere, (1706,) was magnificent as an animal and the best getter that Mr. Bates ever used, and was the sire of the best animals he ever bred.

Mr. Renick, the agent of the Ohio Cattle Company, who went to England to purchase for them, said of Belvedere, that "he was the best and finest bull he ever saw in England or America." The best cow which I saw in Mr. Bates' herd was not a Duchess, and *was not* got by a Duchess bull; but *was* by Belvedere, (1706.) The poorest of the whole herd was a Duchess, and *was* got by a Duchess bull. The only other Duchess cow, *got by a Duchess bull*, was a very superior cow. These two last were equal in Duchess blood; and yet their produce were like themselves — from the superior one, superior, from the inferior one, inferior.

Oxford premium cow, the dam of Mr. Vail's imported Duke of Wellington, (3654,) was got by Duke of Cleveland, (1937.) Her half-sister Oxford, 2d, was got by Short-tail, (2621.) Short-tail and Duke of Cleveland had the *same precise amount of Duchess blood*, and of course Oxford premium cow and her half-sister Oxford, 2d, had also the *same precise amount* of Duchess blood. Yet Mr. Bates never kept on his place any thing out of Oxford premium cow, which he *could* sell; never used a bull *out of Oxford premium cow*, for any purpose, *even to get steers*. He *never* sold an animal out of Oxford, 2d, at all — and in a letter to Mr. Vail, printed in the American Agriculturist, he says he would not sell her produce, of which he then had four, for five hundred guineas [$2,500] each; nor, indeed, would he sell them at any price. The full brother and the sons of Oxford, 2d he used to his whole herd, except herself and her daughters. And Mr. Bates was right; for Oxford, 2d, and all her produce are vastly superior to Oxford premium cow and her produce.

Mr. Vail commissioned me, when in England, to select from Mr. Bates' herd a young bull. I could not get for him such a one as I approved, at a *suiting* price; and I did not therefore execute the commission. Mr. Bates offered me a bull calf, by 2d Earl of Beverly, (5963,) — a good Duchess bull — dam Oxford, 4th, by Duke of Northumberland, (1940,) *grandam Oxford premium cow*, but a regard for Mr. Vail's interest made me refuse the offer, though the *price suited*. I saw the *calf's dam;* I saw Mr. Bates' *opinion*, as shown by *his practice*, and acted accordingly, and refused the calf.

I have cited these peculiar examples, to show by animals having Duchess blood, the utter absurdity of Mr. Chapman's notions of breeding. I have compared animals to show his errors, and he set me the example. I have *confined* myself, in *my comparison*, to the blood that he selects for his comparisons, and have, like Mr. C., quoted Mr. Bates' opinions, as printed, as practical ones.

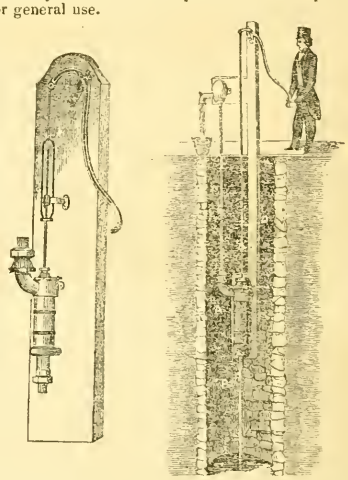
Having refuted the positions of Mr. Chapman, shown him his error, and proved that my position may be true, and not in consequence of the reasons he assigns; let me state what my words so often quoted *do* mean, what they were *intended* to mean, and what they *only can* be *made* to mean, by *any* construction of the words of the sentence. I mean and *only* mean, that 3d Duke of Cambridge will impart Mr. Bates' blood, in some degree, more or less, that in himself he is the bull having the most "style, quality, symmetry and substance," of all the bulls that have ever come to America *from Mr. Bates' herd;* that he will get produce with more "style, quality, symmetry, and substance," than any bull from Mr. Bates' herd in America. Now I meant *this*, and *nothing more;* and *not* that he *had* or would *impart* more *Duchess* blood.

Mr. Chapman does not pretend to deny my positions, when construed as I have here set them forth. *He makes another issue.* I admit that Mr. Vail's Wellington has more Duchess blood than Cambridge. I never thought he had not; never said he had not; and never wrote nor spoke a sentence that would in any manner directly or indirectly indicate such a thing; and should not, and but from misconception, I never would perhaps have been charged, directly or by deduction, with the assertion, that "from Mr. Sherwood, and *from him alone*, the *Duchess blood* can be procured," in this country; nor with the assertion, direct or consequential, "that Cambridge has more Duchess blood than any bull of Mr. Bates' breeding in America."

Mr. Chapman institutes a comparison between Mr. Vail's animals and Cambridge, in point of *Duchess blood*, giving pedigrees. I could *investigate* these pedigrees, and *will hereafter*. He wisely makes *no* comparison between those animals in their *physical* character. I could, but will not *now*, but will hereafter. I will merely say, that excellence in the physical animal consists of "style, quality, symmetry and substance," and excellence in blood consists in having good blood, *unmixed with bad blood;* and as like begets like, it is necessary that *animals should have their descent, not only from pure blood, but from animals who were characterised by physical excellence.* I know Mr. Bates' herd, and certainly am not to be instructed in the excellence of Mr. Bates' Duchess tribe, by those who have never seen a single animal of it. Mr. Chapman has stated matters to which I now make no allusion; but I beg to assure him that I will return to them hereafter, when it will be more proper to discuss them than now, and when I shall not be charged, as I have been, with views and purposes which I have never entertained. A. Stevens. — *February*, 1850.

DOUGLAS' PATENT SUCTION AND FORCE PUMP.

Douglass' *Suction and Force Pump* we think a very useful article. Farmers who depend upon wells for a supply of water for stock, as well as for domestic purposes, often feel the need of a force pump, by which they can force water into cisterns, reservoirs, or troughs, as may be needed for use. Force pumps generally have been too complicated and too expensive for general use.



In the engraving, A is the force pump, fastened to a plank about 25 or 30 feet from the surface of the water. B is suction pipe from force pump to the water. C, discharge pipe, terminating in a chamber or barrel with a spout, causing the pipe to throw a more uniform stream.

The inventor says "these pumps are designed to be used for deep wells or for forcing water up into Bathing Chambers, Factories, &c., &c.; and by the application of hose, may be used for the protection of buildings in extinguishing fires. They are adapted for being worked either by hand, water, steam, wind, horse, or any other power, as may be desired. Thus they may be used for conveying water by means of pipes from wells, springs, or streams, to any point or station required."

Price $15 and upwards, according to size. For sale at the Genesee Agricultural Warehouse, Rochester.

Caution. — Do not inhale the smoke of matches while ignited. It is highly poisonous.

METEOROLOGICAL ABSTRACTS OF 1848 AND 1849.

BY LEANDER WETHERELL.

The following abstract is from the Meteorological Observations kept in Rochester, during the years 1848 and 1849. The city of Rochester is situated on the Genesee river, seven miles from Lake Ontario: latitude 43° 8′ 17″; longitude 77° 51′ West from Greenwich, England. Elevation, 506 feet above tide water.

Monthly mean temp. of Jan.	1848,	30.66;	do.	1849,	23.14
" " Feb.	"	28.56;	do.	"	22.13
" " Mar.	"	32.25;	do.	"	34.57
" " April	"	44.70;	do.	"	41.65
" " May	"	59.72;	do.	"	51.10
" " June	"	67.63;	do.	"	66.01
" " July	"	69.23;	do.	"	70.05
" " Aug.	"	72.21;	do.	"	69.23
" " Sept.	"	56.20;	do.	"	60.20
" " Oct.	"	49.33;	do.	"	48.26
" " Nov.	"	35.81;	do.	"	46.66
" " Dec.	"	34.35;	do.	"	28.01
Annual mean temp. of the year	"	48.55;	do.	"	46.68
Highest degree of the year	"	94.00;	do.	"	95.00
Lowest	"	0.00,	do.	"	*-9.00
Greatest annual range	"	70.00;	do.	"	55.00
Warmest day in the year	"	Aug. 16;	do.	"	July 10
Coldest	"	Jan. 10;	do.	"	Feb. 16
Winds—North,	"	17½ d'ys;	do.	"	33 days
------ Northeast,	"	24½ " ;	do.	"	36½ "
------ East,	"	11½ " ;	do.	"	7 "
------ Southeast,	"	33 " ;	do.	"	25½ "
------ South,	"	23½ " ;	do.	"	23 "
------ Southwest,	"	62 " ;	do.	"	59 "
------ West,	"	67 " ;	do.	"	55½ "
------ Northwest,	"	120½ " ;	do.	"	120½ "
Prevailing wind of the year	"	NW ;	do.	"	NW.
Number of fair days,	"	126½,	do.	"	162
------ cloudy	"	177½;	do.	"	203
------ days on which rain fell	"	111 ;	do.	"	119
------ days " snow	"	57 ;	do.	"	69
------ days " rain & snow	"	23 ;	do.	"	14
Amount of rain & melted snow	"	32.03 in.;	do.	"	32.37 in
First frost in the autumn of	"	Sept. 27,	do.	"	Oct. 2
First snow in the autumn of	"	Sept. 22,	do.	"	Oct. 30
Robin first heard	"	March 8;	do.	"	March 9
Maple tree in bloom	"	Mar. 28;	do.	"	Mar. 27
Mean temp. of the Winter of	"	30.48,	do.	"	26.54
" " Spring	"	45.58,	do.	"	26.54
" " Summer	"	69.89;	do.	"	63.43
" " Autumn	"	47.11;	do.	"	51.71
Number of fair days in Winter	"	29½;	do.	"	21
------ cloudy	"	61½;	do.	"	69
------ fair days in Spring	"	50½;	do.	"	39
------ cloudy	"	41½,	do.	"	53
------ fair days in Summer	"	65 ;	do.	"	64½
------ cloudy	"	27 ;	do.	"	27½
------ fair days in Autumn	"	40 ;	do.	"	45½
------ cloudy	"	51 ;	do.	"	45½
Am't rain & melted snow, wint.	"	7.45 in.;	do.	"	6.79 in.
Amount of rain, Spring	"	7.03 ;	do.	"	7.60
Amount of rain, Summer	"	10.07 ,	do.	"	8.89
Amount of rain, Autumn	"	6.53 ;	do.	"	11.39
Number of days on which rain fell during April and May, (*grass season,*)	"	26 ;	do.	"	31
Do. from May 1 to end of Aug.	"	55 ;	do.	"	50
Do. from June 1 to end of Oct.	"	69 ;	do.	"	59
Inches of rain during April and May,	"	5.26;	do.	"	4.25
Do. from June 1 to end of Oct.	"	15.80;	do.	"	16.97
Mean temp. April and May	"	52.21;	do.	"	46.48
Do. from May 1 to end of Aug.	"	67.35,	do.	"	64.10
Do. from June 1 to end of Oct.	"	63.04;	do.	"	62.75

*9 below Zero.

Mr. Lawes, a contributor to the agricultural journals of England, says that April and May constitute the grass season, on the island of Great Britain. The wheat season begins with May and ends with August: the turnep season begins with June and ends with October. The grass season here is from the 20th of April to the end of June; the wheat season, May, June and the first half of July, the turnep season, from July first to the 25th, to the end of September.

A LARGE CALF.

On the 27th ult., a cow belonging to Samuel N. Franklin, who now resides on the farm of Mathias Hutchinson, produced a calf, well formed in every respect, which, when twelve hours old, weigned one hundred and fifty pounds. As it was weighed more than once, by different persons, we think there is no mistake. The cow is above the middle size, of native breed, and about four and a half years old.

About the same time, the cow of our neighbor, Abraham King, produced a heifer calf, which weighed one hundred and twenty pounds.

Again: David King, residing in the same neighborhood, a month since, counted beside one of his sows eighteen young pigs. Mathias Hutchinson —*King's Ferry, Cayuga Co., N. Y., 3d mo.*, 1850

LIVE FENCES.

Messrs. Editors:—Having been a reader of the Farmer for a few years, I have been both pleased and instructed. In an especial manner I have a deep interest in what has been said about live fences. The time is not far distant when fencing materials will be in great demand; and some are beginning to feel it already. Although my father's farm has plenty of rail timber for the present, he has thought fit to commence raising hedges, so that when he needs them he will have them. The object of writing this is to find out which is the best material. We have some of the English Hawthorn growing, but it is affected by a kind of white lice, something like those which are generally found on beech trees. Whether they will injure them or not we do not know. Some recommend Honey Locust very highly.

I would like to know your opinion concerning Buckthorn—whether it will make a durable fence and a good one; and when is the best time to plant it for a fence—in the fall, or spring; and where the seed can be obtained. I would also like to know whether the Osage Orange will answer for fencing in this climate. I would like to know, Messrs. Editors, which would prefer if you were going to plant fences for yourselves. Where can the materials for propogating be obtained, and at what price? What is the best way of propogating?

If you will answer these inquiries through the Farmer, you will oblige—D. S. Crozier.—*Benton, February*, 1850.

Remarks.—For live fencing, in this country, there are in use—

1st. The Hawthorn, European and American.

2d. The Buckthorn, native of the New England States.

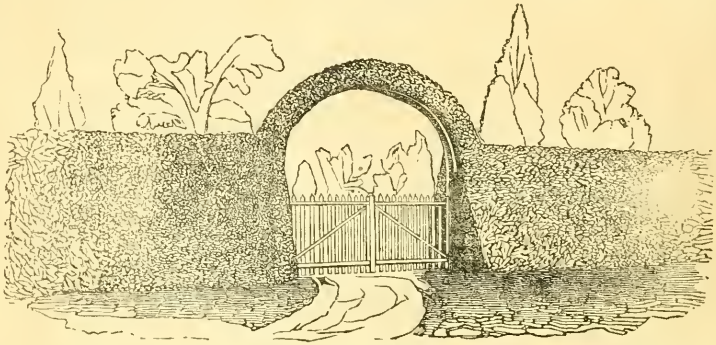
3d. The Honey Locust, native of the Western States.

4th. Osage Orange, native of the south and south west.

These are all strong, deciduous, thorny plants, that under favorable circumstances make excellent live fences. The best of them all, perhaps, is the Hawthorn, were it not that they are subject to attacks of

the *wooly aphis*, of which our correspondent complains, and of the *slug*, that devours the foliage of all this natural family of plants and some others. We know of many excellent hedges in this country of both the English and American thorn, and we believe that notwithstanding the difficulties we have alluded to, good hedges may be grown of one or the other, or both species, in all the Northern and Middle States. Our native varieties are very vigorous, and make a hedge in a very few years; but their habit of growth is not so dense as the English, and hence they require a heavier system of shearing or shortening to keep them close and impenetrable.

The Buckthorn has come into great favor of late. It is a vigorous and naturally a bushy plant, one of the hardiest of all our native species, and never attacked by disease or insects of any sort. During all the growing season, and till very late in the fall, its foliage never loses its rich deep verdure. It has but one defect, and that is, a deficiency of thorns. With more thorns it would be all we could desire for fencing in the Northern States. It has thorns, but they do not make their appearance till five or six years old, and then on the points of the shoots only. If the hedge is kept well furnished with shoots from the bottom, the fence may prove a barrier to cattle



BUCKTHORN HEDGE.

after the sixth or seventh year of its growth. No other plant is so easily raised or converted into a hedge. Plants may be bought at the nurseries at $5 per 1000. H. L. Emery, of the Albany Agricultural Warehouse, sells the berries at $13 per bushel, and clean seed at 75 cts. per quart. Spring is the best time for planting. Mr. Downing recommends the plants to be cut to within an inch of the ground line; the hedge to be planted in double rows, and the plants placed alternately, thus —

* * * * * * * *
* * * * * * * * *

the rows six inches apart and the plants one foot apart in the rows. This requires 32 plants to a rod, or 2000 plants to 1000 feet.

We give an engraving of a Buckthorn hedge, on the grounds of James C. Lee, of Salem, Mass.

The Honey Locust is a hardy vigorous tree with formidable thorns over every part of it. If well grown, we know of no other plant that would form such a complete and powerful hedge in a short time. Plants are sold at the nurseries at $5 to $10 per 1000, according to the age. Seeds are usually to be had at most of the seed stores. The seeds have a hard covering that prevents them from vegetating soon if placed in the ground dry. The proper way is to place them in a vessel and pour boiling water on them, and leave them until the covering begins to burst; then it may be mixed with sand or dry earth to facilitate its sowing. The soil should be light and the covering an inch deep. The plants are fit for hedge rows at one year from the seed, and may be planted as recommended for Buckthorn. We have seen excellent hedges of this plant, and we feel sure that it may be advantageously employed in all parts of the country, and particularly in prairie sections of the west, where it might be allowed to attain more than ordinary hedge height for purposes of shelter. The great point to be observed in this, as in all other live fences, will be to encourage a dense and vigorous growth of branches at the bottom.

The Osage Orange, we fear, will not prove hardy enough for the Northern States. It is a southern tree, and grows vigorous until late in the fall. The young shoots scarcely ever escape being killed a foot of their length. In New Jersey, Delaware, most of Pennsylvania, a great portion of the Western, and all the Southern and Southwestern States, it will no doubt answer well. Wherever it proves hardy we would give it the preference to all other plants, as it combines in a greater degree the requisite qualifications. Its growth is luxuriant and bushy, its foliage bright and shining, and in all parts of both old and young wood covered with stout, sharp thorns, equal to the Honey Locust. It requires, like the Locust, severe and constant pruning to prevent the upright growth from injuring the denseness and symmetry of the hedge. Plants are sold at the nurseries at about $5 per 1000 for one year plants. Seed is advertised by M. B. Bateham of Columbus, Ohio, at $1.25 per quart. We have always succeeded well by soaking the seed, for a day, in hot water before sowing. Mr. Bateham says "a patch of ground two or three rods square will be large enough for a quart of seed, and will produce 3000 to 4000 plants if successful." Planting is done in the same manas recommended for the others.

FOWLS, FOWL BOOKS, FOWL HOUSES, &c.

The letters we are constantly receiving, asking information in regard to the best and most profitable breeds of chickens, the best mode of constructing chicken houses, &c., not only shows that the subject is beginning to attract special attention at this time, but makes it our duty to give the desired information, as far as we can consistently with the pressure of other and important matters upon our columns.

THE DORKING FOWL.

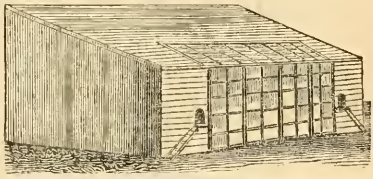
The book publishers have been awake, and are prepared to meet this increased demand for information on the subject. Several works are already before the public, and others are to follow. J. P. Jewett & Co., of Boston, have published a small work at twenty-five cents, in paper covers, which is a very neat and cheap work, and can be sent by mail. We have also received from the publisher, C. M. Saxton, New York, through D. Hoyt, bookseller, of this city, a copy of "*The American Poultry Yard*," by D. J. Browne. It is certainly a beautiful book, and not less useful than beautiful. Some of the descriptions of fowls in this book accord better with our experience than any we have before seen published. The accompanying engraving and description of the Dorking fowl is from this work:

"For those who wish to stock their poultry yards with fowls of most desirable shape and size, clothed in rich and variegated plumage, and, not expecting perfection, are willing to overlook one or two other points, the Dorkings are the breed, above all others, to be selected. They are larger-bodied, and of better proportions, according to their size, than any other variety I have yet seen, their bodies being rather long, plump, and well-fleshed; and the breeder, as well as the housewife, generally beholds with delight their short legs, full, broad breasts, little waste in offal, and the large quantity of good and profitable flesh, the flavor and appearance of which are inferior to none.

"The cocks are magnificent. The most gorgeous hues are frequently lavished upon them, which their large size and peculiarly square-built form display to great advantage. The original Dorkings are said to have been white, but such are now seldom to be seen. During all my rambles, in various parts of the country, only on one or two occasions did I meet with pure white birds. In all, however, as far as my knowledge extended, when pure-blooded, more or less white prevailed; but the cloudings and markings of the plumage were unlimited. Many were marked with bands, or bars, of ashy-grey, running into each other at their paler margins. Some had the hackles of the neck white, with a tinge of yellow, and the body of a darker or brownish-red, intermixed irregularly with white; while others were beautifully variegated with white, black, green, and brown, or were nearly uniform in their shades from a light cream color to almost black.

"Both the cocks and the hens are usually short-legged, thickly-feathered, having fine, delicate heads, with single, double, or large, flat, rose-like combs, which, when they are in high health, adds very much to their appearance, particularly if seen in the bright rays of the sun. Their legs are invariably white, or flesh-colored, each often armed with one or more toe-like claws; and, instead of four toes to each foot, a fifth one protrudes from the same root as the heel toe in the common varieties, which is generally regarded as a distinguishing mark of the breed.

"The weight of the Dorkings, at maturity, varies from five to eight pounds, and full-grown capons have been known to weigh ten or twelve. Their eggs are usually of a clear white, but sometimes of an ashy-grey color, rather large in size, very much rounded at both ends, and of an excellent flavor. The hens are not "everlasting layers," although they produce eggs in reasonable abundance, but at due or convenient intervals they manifest a desire to sit, in which they often most strenuously persevere. In this respect, they are steady and good mothers when the little ones appear. Their young, in this country, have thus far proved very hardy and easy to rear. The chicks are generally brownish-yellow, with a broad, brown stripe down the middle of the back, and a narrow one on each side."



CHEAP FOWL HOUSE.

Perhaps the above engraving represents as good a form for a *cheap* chicken house as anything we could give. We have constructed one somewhat similar, of rough boards well battened, and we find that it makes a tolerably warm and a convenient house. We shall have to defer remarks on the interior arrangement, mode of constructing nests, roosts, &c., for another number.

Horticultural Department.

EDITED BY P. BARRY.

A FEW HINTS ON THE PRUNING OF TREES AT THE TIME OF TRANSPLANTING.

About this season of the year there is not a day, nor scarcely an hour, that we do not hear the questions asked — "Do trees require to be pruned before planting?" — "How much should I prune trees before planting?" — and so on. The truth is, that although almost everybody is planting trees, very few are aware of the importance of pruning, or understand clearly the objects it is intended to attain, or the proper mode of doing it. A great majority are satisfied with digging a hole and putting the roots of the tree into it, and leaving it there just as it came from the nursery. Hence it is that so many trees utterly perish after planting, and so many more grow feebly, and slowly, and ill-shaped.

Pruning at the time of transplanting is performed with two objects in view — one of which is to restore the equilibrium between the roots and branches, which the removal of the tree had injured by the unavoidable mutilation of the roots; and the other is to mould the tree into such a form as taste or the circumstances of its position may dictate. To accomplish either or both of these ends, we must resort to pruning; and first, let us consider it with reference to restoring equilibrium between the roots and branches.

Peach tree one year from bud.

We take, for illustration, a peach tree of one year's growth from the bud, (fig. 1,) four to five feet in height, and furnished with vigorous branches, nearly from top to bottom. Our rough sketch is made from a specimen which has the general appearance of some thousands in nursery rows, and this we presume to be the ordinary character of yearling peach trees, when grown on good soil, with clean culture, and no summer pruning or shortening of the side branches. Now it seems to us that it must appear very evident to any one who will reflect on the matter for a moment, that after this tree has been taken from the ground, with its large roots necessarily shortened, and, if long out of ground, nearly all the fibrous roots dead, it will be impossible for it to sustain such a large surface of top. If left entire, the demand that so many buds, such a large growing surface, would make upon the roots, could not possibly be supplied — a great many will consequently perish, and probably the whole tree. This is the actual history of thousands of peach trees every year. A few days ago we looked into a gentleman's little city garden, and saw a dozen peach trees that had been planted last fall. They had precisely the appearance indicated by fig. 1. We asked him if he did not intend to prune them. He replied that he was not aware that it was necessary. But so necessary is it, that unless he prunes them, he will find that in the month of June or July next they will be "as good as dead." Such a tree we would prune in this way for a *low standard*, (which is the best for both garden and orchard in this country.) We want a clean stem of at least three feet: but it will not do to strip the branches off at once. We remove entirely the longer ones only, and shorten all the smaller ones to two or three eyes. When a peach tree is pruned too heavily or closely at one time, it is very likely to gum and canker — the sap not being absorbed by new leaves or branches, becomes stagnant and bursts the bark. Severe pruning, on any of the stone fruits particularly, will result in disease. On each side of the leading shoot we see a strong branch that has outgrown and weakened it. If we wanted to continue the tree farther in a vertical direction, with a leading shoot, we would choose the strongest of these two side branches for a leader, and cut back the other and the original leader to two buds; but, as we wish to form the head of the tree, we simply cut the original leader out to a bud or two, and top the other two strong side shoots to make them branch out. The small shoots left shortened along the trunk are cut off clean next season, or in the summer as soon as the tree is in a condition to spare them. In all cases the cut is made at a good, plump bud; and if the shoot is wanted to take a vertical direction, the bud must be on the upper side of the branch; if a horizontal direction, on the lower side.

Standard cherry tree, two years old.

In trees where the side branches have been kept down by summer pinching, or by having been closely planted, the trees will have two to two and a half feet of a clear stem, with a branching head; and in this case the pruning will be similar to the pruning of the ordinary nursery standard trees, such, for instance, as a two year old cherry, figure 2. The branches have merely to be shortened, as shown by the cross lines. In all

cases where a branch has a greater vigor than is consistent with the symmetry and balance of the head, it should be cut shorter in order that the sap may pass to the weaker ones.

Pruning to produce certain forms is a different thing. We will illustrate this by two young pear trees (fig. 3 and 4) of one year's growth from the bud or graft, worked on the quince at the surface of the ground. The specimens that we have taken our sketches from are a *Bloodgood*, (fig. 3,) four feet high and furnished with numerous side branches, and a *Duchess d'Angouleme* without branches, except two small shoots at the top of the second or fall growth. Now, supposing that these are intended for pyramidal trees, we would prune them as follows :—In the Bloodgood (fig. 3) we cut off entirely the lower branch at the base. This gives space enough between the ground and the first tier of branches for the free circulation of air. The other branches we shorten, as shown by the cross lines in the cut. The stronger these branches are, and the nearer they are situated to the extremity of the leading shoot, the closer they must be cut, in order to produce equality between the stronger and weaker branches, and to retain the sap sufficiently in the base of the tree. These are the main points to be observed in conducting pyramidal trees. The very small branches are not cut at all, in order to favor their growth. One of them, that has a drooping direction, should be tied up to increase its vigor.

Dwarf pear, one year from bud, with side branches.

The *Duchess d'Angouleme*, (figure 4,) that has only two weak shoots near the top, must be cut back far enough to ensure the production of side branches near the ground; and this will depend a good deal on the strength and prominence of the buds. In some cases it would be sufficient to cut the leading shoot back to the fifth bud, and the two side shoots to two buds each; but in general we must go lower and cut to a strong bud below the side shoots; and if, even after this, the lower branches do not push with vigor enough, the upper shoots must be pinched off early in the season, to check the growth above and favor it below. It very generally happens that the two or three buds nearest the leading shoots push so vigorously as to injure it. This must be prevented by timely pinching in the summer; and in all cases where a branch is likely to acquire undue vigor, to the detriment of others and the balance of the tree, it must be checked by pinching. We shall treat of this fully in season.

Dwarf pear, one year from bud, without side branches.

THE best pea sticks are Hazel or Filbert, Privet, and Lilac bushes — all other woods tried, last but a year or two, while these last many years, especially the lilac.—*Revue Horticole, Paris.*

THE OSWEGO BEURRE PEAR.

MR. P. BARRY : — In accordance with a promise made to you last fall, when I presented you specimens of the Oswego Beurre, I will give some further history of this pear, the result of three years' experience since it was described by Mr. DOWNING, in the January number of the Horticulturist for 1847. I ate my last specimen the 19th of February inst. They were kept till this late period of winter, by packing in boxes with shorts. Every week, during the winter, previous to this date, I have eaten them, either baked or raw. Last fall a portion of the crop was kept on the tree much later than on any former year. My specimens were sound during December and January. The last, eaten the 19th of this month, was about one third decayed on one side, sound at the core, and retained the peculiar flavor of the variety well. If the Oswego Beurre be allowed to remain on the tree till a sufficiently late period in the fall, I believe it may be relied upon in this latitude, both for the table and for cooking, from the middle of October to the last of January.

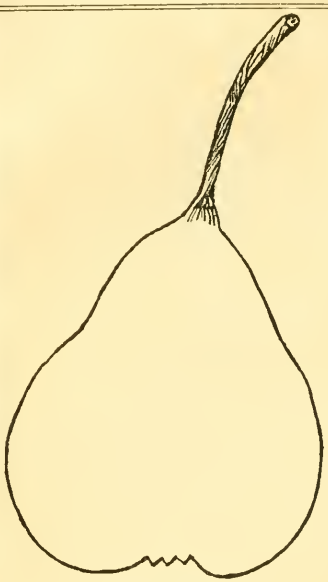
From the fact that nearly all of the specimens heretofore tested by pomologists have been picked before fully grown, it has been pronounced an acid pear. Mr. J. J. THOMAS, in the last edition of the Fruit Culturist, has very honestly no doubt said of the Oswego Beurre, it is "regarded as fully first rate by those who like the vinous flavor of the Brown Beurre or Beurre d'Aremberg." I ate a specimen of the Oswego Beurre with a Beurre d'Aremberg, on the first of January last, and found them nearly as far apart in flavor as the Lady Sweeting and Rhode Island Greening apples, tested at the same time.

Mr. N. GOODSELL, the pioneer pomologist of Western New York, who ate specimens with me, last Christmas, pronounced it one of the most saccharine pears he ever tasted. From the early and profuse bearing of this saccharine pear, I believe it would be the most profitable article to cultivate, (whether pomonal or vegetable,) for the purpose of manufacturing sugar.

Although a handsome pear, and uniformly fair, it has less of beauty than its parent, the White Doyenne. It has the red cheek, occasionally, of the latter, and approaches it nearer in general form than Mr. DOWNING's cut would indicate. Beauty excepted, it has been pronounced by the Fruit Committee of our Horticultural Society here superior to that "ne-plus ultra of perfection in flavor and beauty," the White Doyenne, or Virgalieu. J. W. P. ALLEN.—*Oswego, Feb.* 27, 1850.

We may add, that, from our own experience, the Oswego Beurre proves a vigorous and beautiful grower, and an early and prolific bearer, both on pear and quince. — ED.

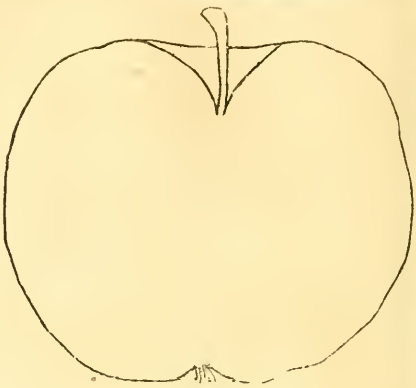
SWEET APPLES. — The scarcity of sweet apples for market should induce our fruit growers to cultivate more extensively. Let me advise, in addition to the Talman Sweeting, Chillicothe Sweet, Bailey Sweet, and other good varieties, and that the Green Sweeting be more generally grown. It is one of the finest eating apples, and for cooking, it is one of the best; and does a family want to use several barrels through the winter, it will keep firm and sound until May, when all other sweet fruit is gone. J. H. WATTS.



TYSON PEAR.

This pear, so far as we are informed, is universally acknowledged to be of the first class. It originated in a hedge near Philadelphia. The first full description published of it was in Hovey's Magazine, Vol. 12. Since then it has been frequently noticed in pomological works, periodicals, reports, &c. The largest bearing trees that we know of in Western New York, are of some ten or twelve year's growth, or more, in the orchard of Asa B. Smith, Esq., of Macedon, father of W. R. Smith, the well known nurserymen of that place. We saw these trees in in 1848, bearing a good crop of fruit. On the pear stock it is said to be tardy in coming into bearing, but it succeeds admirably on the quince, and those who wish fruit soon will choose to grow it in this way. The tree grows very much like the Seckel, but the shoots are rather longer and not quite so stout. They have the same dark, reddish brown bark.

Size medium, being usually from two and a quarter to two and a half inches long, and about two inches in diameter. Form variable, but most generally pyramidal, rounded off at the crown, and tapering gradually towards the stem, which is attached to it by a fleshy junction, quite protuberant on one side. Exterior color yellow, slightly russetted, covered somewhat profusely with black specks, and shaded with brilliant red on the sunny side. Texture fine, melting, juicy, and very rich. Color of flesh, white. Flavor richly aromatic, very sacharine, and exceedingly delicious. Core quite small. Seeds small, but plump, and of a brown color. Stem from one to one and a quarter inches long; obliquely curved and somewhat stout, as well as fleshy at its junction with the fruit. Eye round, of moderate size and depth, with the segments of the calyx short and reflexed.



THE BOURASSA APPLE.

In Lower Canada and the northern portions of this country, this is esteemed one of the very best of apples, ranking with the *Fameuse* and *Pomme Gris*, which are considered the standard of excellence. At our late exhibition of winter fruits, this variety was shown, and we believe pronounced by nearly all to be one of the highest flavored and best apples on the tables; some, indeed, went so far as to call it *the* best. For our own part, however, we think it a hardy, valuable variety for the north, high flavored and fine, but it lacks the tenderness, juicyness and delicacy of the Melon or Northern Spy, and for which we, at least, are disposed to give them the preference.

It is an apple that bears carriage exceedingly well, and a little frost does not hurt it. It keeps well, seldom becoming rotten at the core. It should occupy a prominent position in the orchard in cold northern localities. Size above medium. Form roundish conical, slightly ribbed. Stalk about three-fourths of an inch, slender, and inserted rather deeply in a pretty wide cavity. Calyx large, closed, and set in a shallow, plaited baisin. Skin reddish russet, some bright red on the sunny side. Flesh white, fine grained, crisp, not very juicy, with a sprightly, agreeable flavor. November to April.

INFLUENCE OF THE STOCK UPON THE GRAFT.

Mr. Barry: — I thank you for what you said in regard to the effects of stock upon grafts. How will you reconcile the statement of a friend of ours, who says he put scions of the "Northern Spy" into two trees, standing within two rows of each other, one on a Rhode Island Greening grafted tree, which produced beautiful and good fruit, while in the other, a natural tree, the fruit was sourer even than vinegar. Soil the same; and the trees but a few feet apart. How is all this. You must explain. J. H. Watts.

We have by no means denied that the stock has an influence on the graft. We are well acquainted with many facts which go to prove that it has; but we remarked that in grafting it would be neither safe nor practicable to any extent, to "graft only in stock that assimilate with the scions, in quality, flavor, and growth." A variety requiring such a course of treatment we should consider worthless. In re-

gard to this point, "Lindley's Theory of Horticulture" says: "It may be as well, however, to add, that there are some well attested facts relating to the preference of particular varieties for one kind of stock rather than another, which we cannot explain, but which are so important in practice as to deserve to be studied carefully." We know very well that some varieties of pear grow better and bear larger and finer flavored fruit, on the quince than on the pear stock, and some will not grow on it at all.

Some apples do much better on the Paradise stock than others. We are obliged for the fact communicated by Mr. Watts, and we solicit cultivators to give the matter attention, and favor us with any facts on this head they may deem worth communicating.

REMEDY FOR THE CURCULIO.

Mr. Editor: — In the May number of the Farmer is a communication from me on the culture of the plum. Had it been published in the April number, as intended, your correspondent, Wm. Wylde, of Erie co., Ohio, would have had better success in extirpating the curculio from his trees. I am rather surprised at the emphatic manner in which you state your want of faith in it as a remedy. Another year's experience has not diminished my faith in the least. To show you that it is no vain theory of my own, I send the enclosed scrap, which I cut from a stray paper that came into my hands, I think from Philadelphia, but am not positive. I think, if you will publish it, and will do so in the April number, it would prove beneficial to horticulturists, your faith to the contrary notwithstanding.

We are happy to be able to publish two direct experiments in support of the fact and discovery.

First, We bored and plugged with sulphur, in the usual way, a plum tree which commonly dropped, every year, all the plums before becoming ripe, the *curculios* lodging eggs in their germs. This was done when the tree was in blossom. On that year hardly any fruit fell, and the tree produced quite well.

Second, We find in the Genesee Farmer of January 28, 1832, that a young willow, nearly killed by aphis or lice, and ants feeding on their honey, was quite revived in three days, and all the lice and ants driven off, by boring the tree with an auger five feet from the ground and three-fourths through the diameter, filling with brimstone and plugging tight. The tree has thrived ever since.

The modus operandi of this singular process is very easy to explain. The vital energy of the tree and sap dissolves the sulphur, carries it into circulation, and evolves it in sulphuric gas, evaporating through all the pores of the branches, leaves and fruits. This gas is a deadly poison to insects and all animals, it suffocates them or drives them away as soon as they begin to smell it: but no injury whatever results to the tree.

We have never heard of any direct experiment on peach trees; but we are sure it will answer quite as well. If the sulphuric emanation could not reach quick enough the roots of the trees which are commonly attacked, the plugging must be done near the root, or at the time of the descending sap, when it will sooner reach the roots. Let it be tried and the results made known.

I will give you another fact, as to the efficacy of sulphur in the destruction of the locust borer. Six years ago this spring, I found that the beautiful locust trees which border my yard, were infested with the borer. I supposed they would soon be in the condition of some I had just seen in Onondaga county. I bored two or three holes, two thirds through the trees, and filled the holes with sulphur. The effect was perfectly satisfactory. The trees all lived and are now in a healthy condition. The succeeding summer I found large numbers in the bark, many of them dead. Whether sulphuric gas killed them, or whether they died a natural death, I do not pretend to decide. J. H. W. — *New-Haven, N. Y., March* 7, 1850. See Genesee Farmer, 1849, p. 209.

ANSWERS TO CORRESPONDENTS.

Bark Lice.—(L. H. Andrews, Plymouth, Ind.) Prof. Harris, in his "Treatise on Insects," says: "The best application for the destruction of these insects, is a wash made of two parts of soft soap and eight of water, with which is to be mixed lime enough to bring it to the consistence of thick white wash. This is to be put upon all parts of the tree, where the insects are, with a brush, so as to cover the whole surface and fill all the cracks in the bark. June, when the insects are young and tender, is the best time to do it." They are frequently got rid of by washing the trees with strong lye, and scrubbing with a hard brush, in the spring.

Grafting, and the Propagation of Fruit Trees.—(E. S., jr., Fort Covington.) These subjects are fully treated upon in Downing's, Thomas', Cole's, and other works on Fruit Trees; but if you will state any special points on which you wish more precise information, we will endeavor to explain.

Retarding the blossoming of Peach Trees, by treading the snow firmly around them.—(G. W. R., Webster.) Your communication on this subject was received too late for March, and is now out of season.

Preparation of New Land for Fruit Trees.—(A. G. H., Waukesha, Wis.) It will answer very well to prepare large holes, say four feet in diameter, for the trees as soon as the timber is cut. The greatest objection is, that it renders the breaking up afterwards more difficult. In such soil as yours we would use the sub-soil plow by all means, if possible; though it is not absolutely necessary.

Hardiest and best Peaches and Grapes.—(Charles Hanford, Alabama, Gen. Co., N. Y.) *Peaches*—Early Tillotson, Early York (serrate,) Early York large, Cole's Early Red, Cooledge's Favorite, Crawford's Early, Haines' Early, Barnard's or Yellow Alberge, Red Rare Ripe, Jacques' Rare Ripe, Snow Peach, Morris White, Lemon Cling, Large White Cling, and Oldmixen Free. *Grapes*—Isabella, Catawba, and Clinton.

Apples.—(Gardner Goold, West Carlton, N. Y.) We think your apple is the *Vandevere*—a good variety.

The Wilhelmina Pear.—("A Subscriber," Le Roy.) We have not seen the fruit of this variety, but have imported it from France as a winter pear. It is possible you have the Bartlett, though our trees, from the same importation as yours, are quite different, as we know by the tree. Our specimen tree bore last season, but the fruit was picked before we saw it. Will you send us a piece of a last year's shoot, for examination?

Messrs. Editors:—Will you do us the favor to inform us what we must do to our cedar trees to keep them in a green state. We have them planted in different kinds of soil, some on sandy soil with gravel and stone sub-soil; some in clay soil; and with being trimmed or sheared, many of them will turn brown and the lower limbs die. What substance is wanted to apply to the roots to keep them healthy? T. F.—*Fallston, Beaver Co., Pa.*

We wish you had stated what sort of cedar you cultivate. We presume, however, you mean the *arbor vitæ*, which is called "White Cedar," as the Red Cedar is seldom affected as you describe. Last fall we saw these trees quite brown in many places along the banks of the Hudson. They appeared to be almost in a dying state, and we were told that it was from the effects of a protracted drought. We have not seen them so affected here. Your trees may be suffering from an unsuitable soil. The natural situation of this tree is, we know, in wet swamps and on the steep rocky banks of streams and rivers. There are many swamps filled with them through the country, so wet that in the dryest weather in summer a man will sink to the knees, and again we find them flourishing on such rocky places as Queenston Heights, where there are only a few inches of earth. In dry open situations, the trees assume a more dense and pyramidal form, so as almost to appear a different species from the marsh trees. We would infer from these natural localities, that a light vegetable mold is their appropriate element, and hence it is very probable that your trees would be benefitted with a liberal dressing of leaf-mold from the woods, or swamp muck.

Ladies' Department.

A WORD FOR THE FLOWERS.

Messrs. Editors: — While perusing the columns of your valuable paper, dedicated to agriculture and science, my attention of course was particularly directed to "*A Gossip with the Ladies*," and as you promised to make a present of a Lady's Rake to any of your fair readers who would make a good use of it, I claim it, on the grounds that I am generally considered very fair, and likewise have a great taste for gardening. Yours, &c., H. A. C. — *Canandaigua, March*, 1850.

We have "one more left of the same sort," waiting a claimant; and as we wish them used, not only zealously, but intelligently, a few hints may not be inappropriate. We doubt not, during the last season, many of the readers of this article, as they observed the garden of their friends and neighbors, and were charmed with beauty and fragrance, such as a well-kept garden only can afford, regretted that they possessed not the knowledge necessary to make their own gardens bud and blossom, or that the knowledge they possessed had not been put in practice. But, alas! it was then too late! the spring had departed and with it the opportunity to sow and plant, summer had come, rewarding the industrious cultivators with the realization of their hopes, and telling as plainly as fruits and flowers can speak to the sensibilities of man, that intelligent industry meets its own reward.

Spring has again returned. April sun and showers will again warm into life and vigor the vegetable world. After the long repose of winter, each plant will appear to vie with its fellow, in the race of life and activity. We all start again on equal terms. Those who plant the best and cultivate the best shall reap the most abundant harvest. Now is the time to put into execution your good resolves, your well-formed plans. Delay a little longer — wait for a more convenient season — and the golden moment will be gone, and your regrets will be unavailing — the garden of your neighbor will cause your own and its owner a blush.

The ladies are the patrons of flowers the world over. As a general thing, perhaps, the men have not sufficient refinement to *love flowers*. Indeed, many *affect* a *manly* contempt of such trifles. Yet, we pity he man who has traveled far on the journey of life, without stopping for a moment to do them homage. They say they are of no *utility*. And is it for *utility*, Mr. *Utilitarian*, that you have built, and painted, and decorated, that fine house, in place of your former residence — as commodious, and equally convenient, though less pretending. Would your barbarous hands tear from the cottage the honeysuckles, the running roses, the Jessamines? Without these the cottage is a poor affair — old, rough, and unsightly. Covered with this drapery of nature, it is a gem of beauty which you might well envy and imitate. Is it of use, then, to spend your hundreds of dollars in beautifying your own residence, and of *no use* for the poor cottager, by the exercise of skill and taste, to made his residence a perfect picture of loveliness, showing the taste and refinement, while yours exhibits only the wealth of its possessor?

Those who undertake to cultivate flowers with little knowledge, are apt to be discouraged at the labor required. To persons who can only devote a spare hour to their flowers in the evening or morning, we would by all means recommend the Petunias and Verbenas. These are trailing or spreading plants, combining a great diversity of colors; and when a good selection of colors are planted together, they intermingle and form masses of great beauty, and no dry weather affects them — indeed, they love the warmest weather; and when other things are shrinking and withering, they are most flourishing. They may be grown in borders; but their appropriate place is in beds or figures of any shape, cut in the grass plot. To these we would add a few of the beautiful Dwarf Phloxes, Perpetual Roses, Scarlet Geraniums, and a few other choice things of this sort, and we have a flower garden gay with flowers from July to October, through all sorts of weather.

NEMOPHILA MACULATA.

The cultivation of annuals, to do it *well*, and no other way is satisfactory, requires a great deal of attention. Some want forwarding in a hot bed, transplanting, shading, watering, and watching in so many ways, that unless the greater portion of the time of one person can be devoted to them, the results will be noways satisfying. Still, there are a few really good and beautiful things that every body may have, because the seed may be sown in the border where they are intended to bloom, and require afterwards but to be kept clean of weeds, or thinned out; or, perhaps, a little tieing up, or pegging down, as the nature of the plant or the case otherwise may require. Of these, we will just mention, the *Mignonette*, that every one knows and loves for its sweetness; the *Phlox Drummondi*, a dwarf plant of all shades of pink and purple; *Sweet Alyssum*, white and sweet, very dwarf; *Sweet Peas*, of various colors; *Portulacca*, scarlet, pink and yellow varieties, a spreading, succulent plant, that loves the hottest and dryest of summer weather; *Viola Tricolor* or *Pansy*.

Nemophila insignis, is a dwarf plant with charming blue flowers, and a new species, *Maculata*, of which we give an engraving, has beautiful spotted flowers, of a procumbent habit, and the whole plant is covered with short, spreading hairs. The flowers grow from the axils singly, on stalks longer than the leaves. Another word on this subject next month.

Youths' Department.

AGRICULTURE.—No. 3.

In our previous numbers we gave the Composition of Plants — the material of which they are formed. Now, the common sense of all will teach them that this material must be derived from some source. Plants obtain their food partly from the air and partly from the soil — they take it from the air by their leaves, and from the soil by their roots. These roots consist wholly, or in part, of small *fibrils*, or minute, slender branches, as seen in figure 4. The delicate extremeties of these *fibrils* are called *spongioles*; and they are the organs which, by the all-wise provision of the Creator, absorb from the soil just such food as is necessary for the sustenance of the plant. If this food is found in sufficient quantity, the plant *flourishes*, if not, it *starves*.

Fig. 4.

In the leaves are many small openings or mouths, by which they suck in from the atmosphere whatever is needed for their growth.

As plants are composed of two parts—the *organic*, or that part which burns away, and the *inorganic*, which is left after the plant is burned, — so they require two kinds of food — organic food for the organic part, and inorganic food for the inorganic part. The organic food is obtained partly from the air and partly from the soil; the inorganic food wholly from the soil. Plants obtain their food from the air mostly in the form of carbonic acid gas, which exists in the air only in small quantities. It is this gas which causes the boiling up of soda water. It is heavier than common air. You can make it and see its properties by pouring diluted muriatic acid upon pieces of limestone in a tall glass, as seen in fig. 5. It is so heavy that you can pour it from one glass to another. A lighted taper put into it will be extinguished.

Fig. 5.

The air never lacks its part of of the nourishment of plants, and man can do nothing to improve it. But the soil is under man's control, and he can supply, when he knows the composition of his soil, and the composition of any plant, what may be lacking of material to make that plant; and he can grow certain plants on his land until they eat up all of their proper food, and then he can make them grow no more, until he furnishes to the soil the lacking substances. As all the inorganic part, and much of the organic part, of plants is obtained from the soil, it is of the highest importance to farmers to know the nature of their land.

The soil, like plants, is composed of an *organic* and an *inorganic* part — each part supplying its appropriate food to the plant. The *organic* part in good land is from one-tenth to one-twentieth of the whole. In peaty soils it is much greater. This is the reason that muck from a peaty bog makes a good manure for land lacking in organic matter. This part of the soil is derived from decayed roots, leaves, &c., the dung and bodies of animals, &c. As this organic matter is taken from the soil by the roots of plants, the land must of course become poorer and poorer, and less able to bear a crop, until at last it becomes what is called *worn out*. To prevent this, organic matter must be supplied in barn-yard manure, by which is returned to the field the hay, straw, &c., taken from it, and by plowing under clover and other green crops, &c.

The inorganic part of the soil consists of *sand, clay, lime, potash, soda, magnesia, oxide of iron, oxide of manganese, sulphuric acid, phosphoric acid*, and *chlorine*. Just the same substances that we told you in our last number were found in the ash of plants. These substances plants take from the soil with their roots, in a liquid state, being dissolved by rains, snows, and spring water, in the same way that you would dissolve salt in water. All productive soils contain these substances, though in different proportions.

A Family Scene. — The following little scene is by Mrs. Sigourney. It should teach our young readers the importance of being able to render themselves useful in a time of misfortune:

'I have lost my whole fortune,' said a merchant as he returned one evening to his home; 'we can no longer keep our carriage. We must leave this large house. The children can no longer go to expensive schools. Yesterday I was a rich man, to-day, there is nothing I can call my own.'

'Dear husband,' said the wife, 'we are still rich in each other and our children. Money may pass away, but God has given us a better treasure in those active hands and loving hearts.'

'Dear father,' said the children, 'do not look so sober. We will help you to get a living.'

'What can you do, poor things?' said he.

'You shall see! you shall see!' answered several voices. 'It is a pity, if we have been to school for nothing. How can the father of eight children be poor! We shall work and make you rich again!'

APRIL.

BY LONGFELLOW.

When the warm sun, that brings
Seed-time and harvest, has returned again,
'Tis sweet to visit the still wood, where springs
The first flower of the plain.

I love the season well.
When forest glades are teeming with bright forms,
Nor dark and many-folded clouds foretell
The coming in of storms.

From the earth's loosened mold
The sapling draws its sustenance, and thrives:
Though stricken to the heart with winter's cold,
The drooping tree revives.

The softly-warbled song
Comes through the pleasant woods, and colored wings
Are glancing in the golden sun, along
The forest openings.

And when bright sunset fills
The silver woods with light, the green slope throws
Its shadows in the hollows of the hills,
And wide the upland glows.

And when the day is gone,
In the blue lake, the sky, o'erreaching far,
Is hollowed out, and the moon dips her horn,
And twinkles many a star.

Inverted in the tide
Stand the gray rocks, and trembling shadows throw,
And the fair trees look over, side by side,
And see themselves below.

Sweet April, many a thought
Is wedded unto thee, as hearts are wed;
Nor shall they fail, till, to its autumn brought,
Life's golden fruit is shed.

Editor's Table.

Acknowledgements.—Our friends have placed us under so many obligations, in the way of books, pamphlets, reports, &c., that we fear their very kindness will cause on our part apparent neglect. It would be impossible for us publicly to acknowledge the receipt of the mass of communications, &c., with which we are favored. We are particularly indebted to B. P. Johnson, Esq., for Prof. Johnston's Lectures—some friend in Boston, for the Report of the Fowl Convention—Patent Office, Washington, for a valuable package of seeds—John W. Lincoln, Mass., for Transactions of Worcester Agricultural Society.

Hovey's Magazine of Horticulture and Rural Affairs.—This journal commences its sixteenth volume at the low price of $2 per annum, $3 being the former price, and the work is much better at this moment than it has ever been. For thirteen years we have looked to it monthly for useful and interesting information on gardening matters; it is only natural therefore that we rejoice in its success. We recommend it heartily to all who are seeking horticultural information, and its low price renders it accessible to all classes. D. M. Dewey is the agent in Rochester.

Durham Stock—Mr. Bates' Herd.—We reluctantly admitted the article of Mr. Stevens on this subject, as we think we can fill our columns with matter of more general interest than the discussion of these nice points. We think the experiments and experience of their brother farmers would be far more acceptable and profitable to our readers. Mr. S., however, considered his remarks misunderstood, and wished to make the correction; at the same time stating his intention, if he considered anything further should be necessary on the subject, to publish it in pamphlet form.

We are glad to see that the political editors throughout the country are introducing *Agricultural Departments* into their respective papers. In this way agricultural information is placed before thousands of farmers who will not take an agricultural paper. And we are not the less pleased that these papers copy column after column from the Farmer, although many do it without giving us a word of *credit*.

Agricultural Bookstore.—It will be seen by an advertisement in this number, that Mr. Chas. B. Norton has opened an Agricultural Bookstore in New York. Those wishing agricultural books can depend upon the honor and integrity of Mr. Norton.

Weather at the West.—Powell Howland, of Indianapolis, Ind., writes, Feb. 24th., as follows:—"Our winter has fairly vanished, and the weather has not been cold enough this winter to freeze the streams of two to six rods wide so as to bear a man, unless in some mill-pond. The ground is fairly settled. Wheat looks as fine as it can. On the 4th of February we had a sharp freeze that may hurt peaches." Henry G. Watkins, of Reed's Grove, Illinois, says: "We have had a very mild, open winter, with but little snow. Pigeons were seen on the first instant, and blue-birds to-day. The California fever is raging here to an alarming extent, and many of our citizens will be carried away by it."

In a Dilemma.—A correspondent says he is in a dilemma. He has bought a sub-soil plow, but is afraid to use it unless his land was drained, and he is too poor to drain, and asks our advice. Don't fear—use the plow. To satisfy yourself, sub-soil one half of a field and plow the other half in the ordinary way, treat it alike in every respect, and see its effect, and next year you will be *giving* instead of *asking* advice. As soon as you can raise the means, thoroughly drain a small piece, and see for yourself the effects of draining.

Monroe Co. Agricultural Society.—A meeting of the Executive Committee was held at our office, March 13th, when it was determined to make increased exertions to render the Society more efficient, and particularly to make the fair of the present year one worthy of the Society and the County. The Committee ask the co-operation of their brother farmers, and all friends of progress. The next meeting of the Society will be held in May.

The Prairie Farmer for February contains the following paragraph:

The Genesee Farmer.—This paper has changed hands once more. Its old proprietor, Dr. Daniel Lee, having become tired of going to Athens in Georgia to make an Agricultural paper, has returned, and succeeds Mr. Moore as the publisher of the Farmer. We observe little in the paper that would mark the change, except that it talks rather more of making mud and turf into bouts and tallow, and so on. We have no doubt that having got the bang of the thing, Dr. Lee will make the Farmer a first rate paper. The price of it is only 50 cents; but if the editor chooses to work for nothing, which he must do at that rate, it is none of our business. Mr. Barry still edits the Horticultural Department.

Our friend of the P. F. is in error in the above statements. "Dr. Daniel Lee," the "old proprietor" of the Genesee Farmer, never sold to Mr. Moore, nor to any other person, the interest which he has held in the paper since 1845, and purchased of Mr. Fogg. The remark, "This paper has changed hands *once more*," and what is said about the editor's "working for nothing," seem to imply that there is a screw loose somewhere out west.

Now, we plead guilty to the offence, if it be one, of being willing to perform a great deal of labor for a little pay, for the *hope* of doing some good through the medium of the cheapest agricultural journal in the world. There are some millions of farmers in the United States, who read no book nor periodical designed to illustrate the principles of tillage and farm economy. To reach these is an object of incalculable moment, and *experience* has demonstrated the fact, that a larger number will take a fifty cent than a dollar paper. Undoubtedly the editor and proprietor of this journal could make more money for himself by raising its price to that of the Prairie Farmer, than to keep it where it is; but so long as the friends of the Genesee Farmer will stand by it as they have done, it shall go for the *cause* and not for *money*. Reader! see that this, your old companion, has a circulation which will cover its current expenses, and it will neither be discontinued nor have its price raised. One who is willing to work twelve hours every day, in this country, is not likely to beg his bread.

It is extremely desirable to give the Farmer a circulation of 100,000 copies: not because it will benefit its proprietor, but for the good that will accrue to the great Agricultural Interest of the Union. Let it break the ice of prejudice against rural literature and rural science, and then the one, two, and three dollar journals will have easier sailing with the popular current created by our little pioneer craft that has gone ahead.

The Peach Crop.—We learn by the Ohio Cultivator, that the destruction of the peach buds by the winter is very extensive at the west. Here, everything in the fruit way looks well—not a bud or branch of anything we call *hardy* has been in the least effected.

Emery's Cylinder Dynomometer.—We have barely space to refer our readers to the advertisement of this useful instrument. An article with description, &c., prepared for this number, we are compelled to defer till our next.

To Competitors for our Premiums.—The competitors for our Premiums stood as follows, on our books, on the 15th of March—arranged according to the numbers sent, commencing with the highest:—

Joseph Watson, Clyde, N. Y.; E. C. Bliss, Westfield, N. Y.; P. Howland, Mechanicsville, N. Y.; J. H. Stanley, Le Roy, N. Y.; Orrin Bishop, Dundee, N. Y., John Davis, Birmingham, Mich.; Moses Eames, Rutland, N. Y.; Wm. Knox, Waterloo, N. Y., John L. Dolsen, Chatham, C. W.; Allen Hale, East Smithfield, Pa.; Isaac Minard, Home, N. Y.; James Fraser, York, N. Y.; R. A. Woodcock, Oxford, C. W.; John Row, Riga, N. Y.; Silsby & Keeler, Seneca Falls; B. Coddington, Jr., Benton, N. Y.; Dr. Dow, Marion, N. Y., O. C. Comstock, Marshall, Mich.; J. Wykoff, Romulus, N. Y.; A. Franklin, Honeoye, N. Y., W. H. Pattison, Saline, Mich., Apollos Kent, Amboy, Ohio, M. Beadle, Marengo, N. Y.; Lyman Strobridge, Trumansburgh, N. Y., L. L. Pratt, Fredonia, N. Y., C. Hubbard, Adams Center, N. Y.; R. Craig, Portersville, Pa.; T. S. Cowles, Springfield X Roads, Pa.; Jas. C. Robinson, Penn Yan, N. Y., Jas. Macomber, Farmington, N. Y.; Peter Himrod, Lodi, N. Y.; J. H. Bailey, Perry, N. Y.:

☞ Competitors must bear in mind that additions to their lists must be mailed so as to reach us by the 15th of April, as at that time we shall make out our report for the May number.

Important to Farmers.

AGRICULTURAL BOOK STORE.

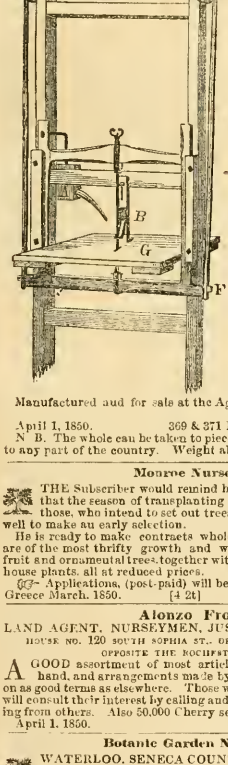
THE Subscriber has opened a Store at No. 71 Chambers st., "Irving House," New York, where he will be happy to attend to all orders for AGRICULTURAL or other Works, which will be sold at prices as low as can be furnished by any other house in the city.

☞ Books sent by mail or Express, carefully packed, to any part of the Union. Address CHARLES B. NORTON,
Agricultural Book Store, New York.

Upright Saw Mill,

FOR SAWING CURVED WORK IN WAGON MAKING, CABINET, WORK, &c.

THE annexed cut represents the most simple and effectual arrangement for a saw mill for the purposes designed.



As these are made, they are equally well adapted for our one Horse Power, or may be used by steam or water power as desired. Its construction is a simple frame with two uprights from 8 to 12 feet feet long, with three cross beams 3½ feet long, of 3½ by 6½ inches square. Near the upper end is hung a straight shaft with fly wheels D on each end, outside the frame.

E, two driving pulleys, (one loose.)

C, wrist pins in fly wheels, to drive connecting rods.

F, connection of the driving rods and lower part of saw gate.

G, table.

B, dog for holding down plank, &c.

A, wind box and pipe for cleaning away sawdust.

These mills can be afforded complete for $35, ready to be driven by horse, steam, or water power. They are warranted to be superior to any thing of the kind heretofore offered—and with one of the Railroad Horse Powers, is an important acquisition to mechanics having heavy or curved sawing to do.

Manufactured and for sale at the Agricultural Warehouse of
H. L. EMERY,
April 1, 1850. 369 & 371 Broadway, Albany, N. Y.

N B. The whole can be taken to pieces and packed for shipment to any part of the country. Weight about 300 pounds.

Monroe Nursery.

THE Subscriber would remind his friends and the public that the season of transplanting trees is at hand, so that those, who intend to set out trees this spring, would do as well to make an early selection.

He is ready to make contracts wholesale or retail. His trees are of the most thrifty growth and well assorted, consisting of fruit and ornamental trees, together with a beautiful stock of green house plants, all at reduced prices.

☞ Applications, (post-paid) will be promptly attended to.
Greece March, 1850. [4 2t] CHARLES POWIS.

Alonzo Frost,

LAND AGENT, NURSEYMEN, JUSTICE OF THE PEACE.
HOUSE NO. 120 SOUTH SOPHIA ST., OFFICE IN CHILD'S BLOCK, OPPOSITE THE ROCHESTER HOUSE.

A GOOD assortment of most articles in the Nursery line on hand, and arrangements made by which orders can be filled on as good terms as elsewhere. Those wishing to obtain fruit trees will consult their interest by calling and examining before purchasing from others. Also 50,000 Cherry seedlings, Black Mazzard.
April 1, 1850. [4-1t*]

Botanic Garden Nursery.

WATERLOO, SENECA COUNTY, N. Y., 4½ miles N. W. of Waterloo Village on the Vienna road. The subscriber offers for sale at wholesale or retail, a variety of FRUIT TREES selected by personal inspection from Bearing Trees, comprising Apples, Peaches, Cherries, &c. A choice selection of Evergreen and Deciduous Trees and Shrubs. Also, a superb assortment of Herbaceous Perennial Flowering Plants &c.

Native Trees, Shrubs and Plants Collected by the 100 or 1000 if ordered early.

Orders promptly executed and trees and plants packed for safe transportation to any part of the United States, Canada, or Europe.
[4-1t*] WM. S. DELL.

Highland Nurseries, Newburgh N. Y.

(LATE A. J. DOWNING & CO.)

THE PROPRIETORS beg leave to inform their patrons, and the public in general, that their stock of FRUIT AND ORNAMENTAL TREES, SHRUBS, ROSES, &c., for Spring planting, is unusually large and thrifty, and embraces all of the best varieties introduced into notice in this country or Europe; of Apple, Pear, Plum, Cherry, Peach, Nectarine, Apricot, Grape Vines, Gooseberry, Currants, Raspberry, Strawberry, &c.

Portugal Quince trees, standards extra size, each	$1 00
do do do quenouille, do do	1 00
Angers, (true,) extra	1 00
Trees of the usual size	0 50

Also, *Pears* on Quince, and *Apple* on Paradise stocks, for dwarf trees.

The stock of Ornamental Trees, shrubs, &c., is very large; and quantities to dealers or planters, on a large scale, will be furnished at greatly reduced rates.

HEDGE PLANTS.

A large stock of Buckthorn and Osage Orange plants.

Also, a large stock of Rhubarb and Asparagus roots.

The entire stock has been propagated under the personal supervision of A. SAUL, whose long connection with this establishment is some guarantee, from the reputation it has gained, (and the present proprietors are determined to merit,) as to the *genuineness* and accuracy of the present stock.

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VOLUME XI. FOR 1850.

DANIEL LEE & JAMES VICK, Jr., Editors.

P. BARRY, Conductor of Horticultural Department.

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December, 1849. *Rochester, New York*

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THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—MAY, 1850. NO. 5.

"ON THE COST OF PRODUCING CORN."

The above is the heading of an interesting paper in the March number of the Farmers' Magazine, (London,) which discusses a subject of universal moment to all cultivators of the soil. By the term "corn," the American reader is to understand "wheat," although barley, rye, and oats are sometimes included, as well as maize and rice—the word "corn" being used in a generic sense. The cost of producing wheat is the subject which we propose to consider at this time.

In looking over the back volumes of the New York State Agricultural Society, and of several of the leading agricultural journals of the country, we are unable to find any estimate of the value of the raw material in the soil, which is consumed or wasted in producing twenty bushels of wheat on an acre. This is a remarkable omission, and one which it is difficult to account for in any satisfactory manner. There are scores of estimates of the cost per bushel of growing wheat; but no one presumes to indicate the value of the fertilizing atoms extracted from the earth to form the crop; and nothing is allowed for replacing the phosphorus, sulphur, potash, magnesia, soluble flint, carbon, and ammonia, removed from the field in the seeds which are sent to a distant market. Is the supply of phosphorus in the soil unlimited? If so, why does it sell in all cities at from two to three dollars a pound? It is only obtained in any quantities from the *bones* of domestic animals; and they of course derive it from their daily food and the soil. Although carbonate of lime is an abundant mineral, such is not the fact with *apatite*, or phosphate of lime. It is true that phosphoric acid is combined with other bases than lime, in both surface and sub-soils, and especially with alumina and iron. We have long believed that one of the most important functions performed by lime, when applied to wheat bearing lands, is the decomposition of phosphates of alumina and iron by the *alkaline* base, which has a strong affinity for the acid named. By this union of phosphoric acid and lime, *bone earth* is formed, and rendered available to meet the wants of all cultivated plants. But after land has been limed and cultivated for many years, sad experience proves that the supply of phosphoric acid, potash, sulphur, magnesia, chlorine, and ammonia, fails. Hence, in producing wheat, the farmer consumes his capital without an equivalent, unless he provides for restoring to his fields all the elements of the crop, so far as nature does not furnish them in inexhaustible quantities.

The Rev. Mr. Hextable of England, lately published a pamphlet, in which he rashly assumed that ordinary wheat lands in that country will bear the loss of sixteen bushels of wheat a year per acre, without deterioration. This assertion is shown to be untrue, unless it be in peculiar localities. There are some marine deposits so rich in phosphates, sulphates, and chlorides of lime, potash, soda, and magnesia, as to bear severe cropping for ages, with little or no detriment. So, too, where the waters of rivers like the Nile can be made to irrigate large districts, they, as in portions of Egypt, may export the fruits of two thousand harvests, and still retain their virgin fertility. But these well marked exceptions only prove with increased certainty the soundness of the principle, that common soils can endure no such treatment. If they will not yield sixteen bushels of wheat a year, without impoverishment, what number can they produce? This is a question of the highest importance, not merely to farmers, but to every human being in America, who depends on the fruitfulness of its soil for the means of subsistence.

There is but a small part of the area of the United States that can spare twenty bushels of wheat per acre every third year, and keep good the supply of raw material for making this crop, by extracting the same from the sub-soil and the atmosphere. There is reason to believe that some choice wheat lands will do this for centuries, simply returning the straw, but none of the grain. But such soils must abound in lime, gypsum, and bone earth; in potash, common salt, and magnesia; and clover, peas, or some similar renovating crop, to form a mold rich in organic nitrogen, must also be grown in rotation with wheat.

Both the art and the science of wheat culture are in their infancy. Although all the experiments in growing wheat after wheat in England have failed, and mainly because land became exceedingly foul with weeds, yet we believe that means will be found to obviate this impediment; and the manufacture of wheat in the same workshop, year in and year out, will be found both practicable and profitable. Weeds do not grow without seeds, and the vitality of these may be destroyed.

Before wheat can be grown for many years in succession on the same land, the crop, including grain and straw, must be consumed so near, that all the essential elements of both may be economically restored to the earth whence they were taken. It is

the universal neglect to obey this law of nature, which is a law of God, that impoverishes so many millions of acres of American soils. The twenty-two millions of people now in the United States annually consume, or otherwise waste, enough of the elements of bread and meat, wool and cotton, tobacco and sugar cane, to form 500,000,000 bushels of wheat. All these elements of fertility are extracted from the surface of the earth, and never restored. If we allow only the quantity given to southern slaves, thirteen bushels to each on a plantation, old and young, the aggregate consumed by 22,000,000 of persons is 286,000,000 bushels per annum. The quantity of fertilizing atoms, directly or indirectly wasted in provisions, vegetables, and fruits, is ten per cent. greater than in bread-stuffs. The ten or twelve millions of acres planted every year in cotton, tobacco, and sugar cane, lose each the equivalent of twenty bushels of wheat. After traveling carefully over the whole ground, estimating the number now employed in tillage and husbandry in the free and slave States, and the several crops exported as well as consumed at home, our annual consumption drawn from the soil and not restored, is found to be equal to one thousand million bushels of corn. The number of laborers constantly employed in deteriorating the natural fruitfulness of the earth in thirty States, increases at the rate of some 200,000 a year.

There are 100,000,000 acres of land in the planting and grain growing States, which includes the whole, whose natural fertility, or supply of bone earth, potash, gypsum, magnesia, and soluble flint, can not be made good for ten dollars an acre, or for one thousand millions of dollars.

Number of persons employed in 1840.

In agriculture,	3,719,951
In manufactures and trades,	791,749
In commerce,	117,609
In learned professions,	65,255
In navigating the ocean,	56,021
In navigating the rivers, lakes, and canals,	32,276
In pensions,	20,793
In mining,	15,210
Total,	1,098,918

By adding the natural increase to the tillers of the earth, the increase by emigrants from Europe and Canada, and the gain by the annexation of Texas, and it will be found that 5,000,000 laborers are now employed in agriculture in the United States, this side of New Mexico. Before we can possibly persuade one half to do as much to enrich the earth as the other moiety do to impoverish it, twenty-five years will elapse, when five millions of laborers will still be employed in exhausting American soils. "Uncle Sam" has a magnificent farm; but his children manage it very badly.

The raw material for making a bushel of wheat, is worth from ten to thirty cents, according to its abundance in the soil and the location of the land. In England, where the average crops of wheat are about twice as large as in this country, an acre consumes some 25 lbs. of phosphoric acid, 62½ lbs. ammonia, 30 lbs. pure potash, 117 lbs. soluble silica, 10½ lbs. sulphuric acid, beside other important elements. At the cheapest rate, the ammonia alone is set down at £1 11*s.* 3*d.*, or about $7.60. If we have a right to assume that a good living is worth as much in the United States as in England, and that no generation has more than a life lease in the earth which it cultivates, and is bound to leave the soil as fertile as it found it, then to waste the elements of bread and meat, wool and cotton, as we now do, is one of the gravest offences against the inalienable rights of posterity. We compel our children and grand-children to give far more labor for a bushel of wheat than we do, if we impoverish one acre of arable land which they must cultivate. The safest and best property which a man can leave for his children, is a farm rich in all the elements of wheat, giving them a thorough professional education how to render it forever exceedingly productive, and at a small expense. It requires less wit to rob the soil than to rob a bank or granary; and some day it will be thought equally dishonest.

DURABILITY OF BONE MANURE.

At the last meeting of the Probus (Eng.) Farmers' Club, a paper on the analysis of the soils of Carnwinick farm — the property and in the occupation of C. A. T. HAWKINS, Esq., was read by Mr. KARKEEK. Its object was to show the durability of bone manure for a period of ten years.

It appears that, in 1835, a piece of waste ground was taken from the common, and prepared for turneps, the larger part of which was manured with bone dust, at the rate of three quarters (twenty-four bushels) to the acre. (The whole of the turnep plants were destroyed by the fly; consequently, little or none of the bone dust was used in that crop.) In the two following years it was successively cropped with oats, and with the last crop, laid down to permanent pasture, in which state it has remained ever since. At the present period, the effect of the bone dust can be plainly distinguished —the land having a rich green sward, while the adjoining part, where no bone dust has been applied, has a coarse, sterile appearance. This, and a great many other experiments of the same character, made by the manager of the farm, in all of which the effect of the bone was equally visible, induced the Club to send a sample of the soil from each part of the field on which the first named experiment was made, to Mr. HUNT, now curator of the Museum of Economic Geology, to be analysed, in order to ascertain if the bone could be detected at the present time. It should be observed that Mr. HUNT was kept altogether ignorant of the object of the Club, and that the result was perfectly satisfactory, inasmuch as he readily detected the bone in that portion of the field on which it had been applied ten years before. The following are the analyses:

	No. 1.	No. 2.
Water, evaporated by stove drying	14 06	14 18
Vegetable and animal matters burnt off	12 01	12 05
Silica and silicious grit	49 54	49.50
Oxide of iron	7 03	7.00
Carbonate of lime	1 05	1 06
Carbonate of magnesia	0.25	0.35
Sulphate of lime	1.05	1 04
Muriates	0 54	0 54
Alumina	7.10	6.64
Phosphate of lime	0 10	0.75
Phosphate of magnesia	0.00	0 05
Potash	1 00	1 27
Humus and soluble alkalies	6.00	6.17

Mr. KARKEEK contended, from these analyses, that the experiment went to prove an important fact, which had been a disputed question among agriculturists, viz: that the principal manuring properties of bone existed in the *earthy* matters, which constitute about two-thirds of bone, and *not* in the oily and gelatinous parts constituting the remaining third.

An interesting discussion ensued on the subject of the analyses, the Club being of opinion that the organic parts of bone evidently had a powerful effect as manure, but that it was next to an impossibility that any other than the earthy matter could have remained so long in the land — the whole of the animal matter having probably been consumed by the two crops of oats — and they agreed with Mr. KARKEEK, that the principal manuring properties of bone exist in the earthy phosphates.—*London Agricultural Gazette.*

The above instructive article calls forcibly to mind an incident in our chemical experience in Georgia, something over a year ago. Two parcels of minerals, having precisely the same appearance, were sent for analyses, with the implied understanding that

they were fertilizers like marl, from a common bed at different depths; when in truth, one was from the Cherokee country and the other from Nova Scotia. The analyses were entirely satisfactory, although we had not the remotest suspicion at the time, that the substances had been prepared to test the skill of the analyst. We have found soils so poor that 5,000 grains would give but one of sulphate of lime, or gypsum.

HINTS FOR MAY.

As the work of the farmer is about to begin in good earnest, it is well that he should look about him to see that he has all things in order. No sensible and prudent general would take his soldiers into action before he ascertained that his powder was dry. No captain would undertake to cross the Atlantic until he had first ascertained not only that his ship was in good condition, but well stored with provisions. No farmer should commence the contest for abundant crops, against foes large and small, animate and inanimate, sleepless and untiring, without having first surveyed the whole ground, marked out his mode of operation, examined every implement to see that it is in working order, and paid particular attention to the breastworks, (fences.)

In the first place, remember to feed your crops well, whatever they are, and never leave them to starve while you have enough food wasting in your barn-yard, to nourish and sustain them.

Look over the back numbers and volumes of the Farmer a little, of an evening or two: it will refresh your memory, and remind you of many things that at the time you had determined to do, but will have forgotten. If there is any point on which you have doubts, talk it over with your boys, or your neighbors. Try experiments carefully, but generally on a small scale. We have heard many farmers complain that their sons have no taste for farming — and who can wonder at it? If a farmer has a son more thoughtful than the rest, more inclined to *read* and *think*, that son leaves the farm and enters some city to study a profession, or to engage in commerce or the mechanic arts — and we say again, who can wonder at it, or who can blame him. He had been taught that a little manuring, plowing, sowing, and reaping, a few rules handed down from generation to generation, was the whole of a farmer's business — that it was a mere mechanical operation. He becomes disgusted with it, disdains to become a mere machine, and longs for a more intellectual business — a business that will afford food for thought — a field for the exercise of talents which he feels burning within him — an opportunity to gain distinction — to impress his character upon mind or matter. But give your sons agricultural papers and books — teach them that the farm calls for the exercise of the highest skill — that it is Nature's laboratory, and a knowledge of the natural sciences is necessary to the perfection of farming — that talents can be as successfully and as honorably employed in cultivating a farm, as in practicing law or medicine, and you will have no difficulty in getting your sons to *love* farming. They will engage in it with a *zeal* and a knowledge that will leave their fathers far behind them.

Attention should be given to *pruning fruit trees* and manuring; but as our Horticultural editor attends promptly to this department, our hints on the subject will be hardly necessary.

Corn should be planted as soon as there is no apprehension of frost, in hills three to five feet apart. Thick planting gives fewer ears upon a stalk, and those of less size.

Potatoes it is well to plant early. In fact, it is always better to be a little before the season in your work, than a little behind. All work with a better spirit when they know they are ahead — when they feel they are not *driven*, but *driving*. A stern chase is a hard one. It is easier to hold up a day or two if you get too far ahead, than it is to gain lost time.

In the *Kitchen Garden*, *peas*, if not already sown, should be immediately. *Onions*, if not sown last month, should be attended to. *Beets*, *radishes*, *lettuce*, *early corn*, and *beans*, should receive attention. *Strawberry-beds* should be put in complete order — the weeds all cleaned out, the earth lightened around the plants, or between the rows, and apply well rotted manure, if it was not done last fall — and in a month or so you will reap a *delicious* reward. Every farmer should have a small and *well-kept* kitchen garden. The man that has no fruit and vegetable garden, don't know much about *good living*.

THE PLOW.

The pages of the Genesee Farmer bear witness to a zeal and desire to promote the improvement of every agricultural implement. Every volume exhibits an effort to diminish resistence and gain power. In the conflict of opinions, we necessarily find the admixture of undigested ideas with vigorous thought ending in disappointment — the darling fancy of a visionary unsupported by a single mechanicle principle; and not unfrequently the claim of perfection stoutly maintained by a half instructed artisan, for the machine of his own invention and construction.

In no agricultural implement has ignorance and fancy had greater sway, than in the form and construction of the PLOW. In no other farm implement has prejudice and presumption caused more vexation or loss to the farmer. And yet there is much cause to be satisfied with our present condition: not that the plow is perfect — no, for the best is yet an imperfect implement; but when we remember the rude, rough plow, of a few years ago, we should be thankful for the improvements now at our command.

The movement made by the farmers of one of our central counties, last summer, seemed to give an additional impetus to ingenuity, touching a new chord among scientific mechanics. The notice of the State Agricultural Society for a trial of plows in June next, at Albany, is another and more powerful sign of improvement in the use and manufacture of the plow; and the coming trial may be hailed as an era in the history of the plow.

While in this country great efforts are being made to improve our system of agriculture, we notice the urgent demands upon British ingenuity, to maintain their ascendency and power of producing greater crops than *we* have yet accomplished as an average product. The encouragement offered in Great Britain, by large premiums, has at last produced a STEAM PLOW — a working steam plow, of admirable construction, and said to be perfect in its work. It is the invention of Mr. USHER, of Edinburgh, and unites the processes of plowing and digging. It consists of a series of plows in the same plane around an axis, so arranged that the plows come successively into action. The power is applied to give a rotary

motion to the series of plows, in such manner as that the resistance of the earth to the plows, as they enter and pass through the soil, causes the machine to be propelled. There is a difficulty in conveying an idea of this steam plow without a drawing. If, however, it continues to work satisfactorily, it will soon be among us. The plow, as now constructed, turns five furrows at the same time, and these may be increased or diminished at the pleasure of the farmer.

Here, then, is another stimulus for our ingenious mechanics; and no doubt need exist that if plowing can be done *economically* by steam power, it will be accomplished and perfected by some genius of American birth. Opus.

S W'S NOTES FOR THE MONTH.

Trade with England.—The British minister at Washington demurs to our raising the duty on English iron above the present 30 per cent. duty. In attempting to show that the British government does not reciprocate, by corresponding low duties on our products, the Boston Atlas adverts to the high duty levied on our tobacco, in the United Kingdom of Great Britain. Why can not the Atlas tell the whole truth, and say that cotton, our great agricultural staple of export, compared to which, our export of tobacco is but a drop in the bucket, is admitted free of duty, or nearly free, into England: and that since the modification of the British tariffs and corn laws, our flour, Indian corn, provisions, &c., &c., are admitted into Great Britain at very low duties. In Great Britain, the common articles of first necessity are spared, while luxuries, like brandy, wine, and tobacco, are heavily taxed.

The Wheat and Corn Crops.—All agree that wheat on the ground looks well this spring. In our severe climate, the liability of his wheat to winter-kill is always a source of apprehension to the farmer, until severe frosts are over. The rust is also a disease incidental to our extreme climate; but if any farmer wants to see how much good tillage will do toward putting the wheat crop ahead of all its enemies, let him go and look upon the wheat fields of John Johnson of Fayette, near Seneca lake. I am told by a farmer who has traveled through Seneca, Ontario, and Wayne, since the first of the month, that he has seen no wheat field to compare with these underdrained fields of Mr. J.'s, in the forward and fresh appearance of the growing crop. If the wheat crop in Ohio should realize its present promise, this cereal must necessarily be cheaper the coming year. Russia has now exceeded all the rest of Europe in the production of wheat for export; the port of Odessa, on the Euxine, can send to England two and a half millions of bushels, if necessary, in any one year. Chili, a country whose mild climate is peculiarly favorable to the growth of the wheat plant, now finds in the market of California a great stimulus to increase the culture of wheat. Hence it would seem that the export of wheat and flour from the United States must necessarily decrease, while the the export of Indian corn to Great Britain must, in the absence of competition, continue to increase. It is said that Indian corn alone has kept starvation out of Ireland, and that in England it is now in great and increasing demand, to take the place of oats, barley, and oil cake, in fatting hogs and cattle. Indian corn must be acknowledged, sooner or later, as the great indigenous and most profitable cereal of the United States. In spite of all the efforts of the great west to grow winter wheat, or its modified, inferior substitute, spring wheat, nature still triumphs! and all porkopolis proclaims, that without Indian corn, the present wealth, ease, comfort, and statistical respectability of the great west, would be almost unknown.

Flax Seed.—Ten years ago, the growing of flax for the seed was generally practiced by our farmers. The crop of flax, when removed, left the ground in good condition to be sown to wheat; but this double cropping has been abandoned of late, as being too exhausting a process of tillage; yet the practice of sowing wheat after corn is still continued by many of our best farmers, with great success. Now, as a corn crop takes more of the elements of nutrition from the soil than a crop of flax—as corn is a later crop, and requires much more labor to remove it from the field before the field can be plowed for wheat, it is evident at least that wheat may be more easily put in after flax than after corn; and if the soil was as well manured and put in as good condition for flax as for corn, the exhaustion of the soil must be less from the flax crop than from the corn crop. The probable continuance of the present very high price of flax seed, should encourage farmers to return to flax growing for the seed; the lint is already in request in its rough state, by the paper-makers; and the patent office report says that "progress is making in the preparation of flax, which promises great results." On analysis, it is found that the ashes of the flax plant contain nearly one-third potash and soda; hence, salt and house-ashes, sown broad-cast, are the best inorganic manure. Mr. Bartlett of Romulus, once tried the experiment of sowing salt broad-cast over a part of his flax field; the result was a visible increase of seed in the plants on that part of the field. *Waterloo, N. Y., April*, 1850.

TO PRESERVE HAMS THROUGH THE SUMMER.

Messrs. Editors:—As the time of year is at hand for good house-keepers to put away their hams for summer and fall use, and as I hear so much about hams not keeping through the summer, I have thought it best to send you my method of taking care of them: and those of your subscribers who will try it as it should be tried, may write me if it fail, and I will pay the postage.

Make a number of common cotton bags, a little larger than your hams; after the hams are well smoked, place them in the bags; then get the very best kind of sweet, well made hay, cut it with a cutting-box or knife, and with your hands press it well around the hams in the bags; tie your bags with good strings, put on a card the year, to show their age, and hang them up in your garret or some dry room; and my word for it, if you let them hang for five years, they will be better for boiling than on the day you put them up. I have kept them seven years, and have some now that are four years old. This method costs but little, as the bags will last for years. The only loss is the hay, and that the cattle will eat if given to them in the winter. No flies or bugs will trouble the hams if the hay is well pressed around them, the swetting of the hams will be taken up by the hay, and the hay will impart a fine flavor to the hams. W. T. Cuyler.—*Cuylerville, N. Y., March*, 1850.

Wheat Husbandry.

ON SMUT IN WHEAT, AND THE CAUSE OF IT.

We have received the following communication from one of the most experienced and observing of Seneca county farmers. The subject is one well worthy the consideration of thinking men:

MESSRS. EDITORS:—In the last Farmer I notice an article from an old and excellent friend of mine, upon the subject of SMUT. We are at issue, and I conclude he re-publishes his articles from the Argus of many years ago—thoroughly satisfied of the accuracy of his views. Herein you have an article written by me, aiming to cure an evil which I had noticed among my neighbors, though for myself I have never seen *smut* on my farm, except occasional ears of corn or a few among my barley—never in my wheat. My excellent friend J. H. H. is a sound thinking man; and my first feeling when I differ from him, is that I am wrong. Yet, upon every examination of the subject—upon a close scrutiny of his articles—I see nothing to change my views, which seem to me more in accordance with sound philosophy than those of my friend. You will, I think, upon examining his articles, see, and perhaps very clearly, that the insects noticed by him were, as *he says, feeding on the smut.* This I believe was the fact—they were attracted to their natural food—they found good pasture grounds and pleasant habitations in kernels of wheat for the care of their young, &c. I could call your attention to other points of fact in the numbers, all strictly true as stated, but all susceptible of very different inferences from those of my friend; at least, so I think, and shall be right glad to be corrected if I am in error. If the question appears to you worth pursuing, it might be well to quote the article written for the Seneca County Observer, and published in that paper, which is enclosed herein; it will give to your readers the opposing views of two farmers, and may lead other farmers to closer observation. I have pursued Entomology for many years as a study, and feel a powerful interest in drawing forth facts from observing men.

SMUT.—This is a disease too familiar to wheat growers generally, and is so extensive, to the discredit of farmers, that most millers have been compelled to erect smut machines, to cleanse the grain before grinding it; and even in England, where they boast so loudly of their agriculture, this disease is so extensive that many establishments have been erected for *washing* wheat, and for which process the millers pay about one shilling or 22 cents per quarter, causing a severe loss to the farmer, who is justly accountable for the deficiency in weight after washing.

There are *two kinds* of smut noticeable by the farmer. The one is common to wheat, barley, and oats, and when mature, it bursts the husk and appears among the chaff like soot. This kind of smut is not very injurious. It affects but few heads and never, as I believe, any crop extensively. It matures also before the grain is ripe, and is blown away, or washed off by the rains before it can reach the ripening harvest. The grain attacked by it perishes, but no evil is communicated to the adjoining plant.

The other kind of smut attacks *wheat only*, and when neglected it is destructive. We can readily detect it as soon as the ear breaks forth from the sheath; each grain is swollen, first appearing brown and then turning black. This smut will, also, when crushed between the fingers, yield a fœtid, disagreeable smell. Both kinds of smut are fungi, or parasitic plants, of the same nature as the mushroom. They are to be found upon the leaves and stems of many plants, giving a brown or scorched appearance. We know it to be fungus because, when under the lens of a microscope, it fully exhibits its vegetable character, and feeding on the juices of the plant infected, it destroys the structure of the grain to which it is attached.

Whatever may be the origin of this disease, it is easily propagated, and a few smutted grains will communicate the seeds of disease to very many, blighting the hopes of the farmer.

Happily for us, science and close observation present for our use an infallible remedy, and that is, a steep or wash of urine and salt. This has been tried again and again with success; but there can be little doubt that *a plain solution of salt* is all-sufficient; for we know that salt has an immediate and powerful effect upon all the fungus tribe. I would advise, therefore, to wash the seed first in pure water, then soak it in a solution of salt for the night, and no smut will be found in the succeeding crop. Lime water will produce the same effect, and so will a solution of vitriol: but common salt brine is within the easy command of every farmer, and will answer the desired end. Let no smut, therefore, be seen or known on Seneca county wheat. AN OLD FARMER.—*Oaklands, N. Y., March,* 1850.

A WORD ON SMUT WHEAT, THE CAUSE AND PREVENTIVE.

MESSRS. EDITORS:—In your Farmer for March, is an article from J. H. H., on the subject of "Smut in Wheat, and the cause of it," which I perused with much care. I saw that the subject was to be continued. The Farmer for April arrived, and my first attention was given to the continuation of the same subject. I anticipated that he was soon to arrive at the real and true *cause* of smut, when I found him among the "*roots* of young wheat," examining the "*vitality*" of the roots of the plants that produce smut; and had he continued his examination a little farther, he would have arrived at the true cause of "Smut in Wheat." But, unfortunately, he ran off from the track, or, in other words, instead of continuing to trace the effect to the cause, he turned about and followed the effect to its termination, viz: to the top of the plant, where he found the head containing the fruit (grain) of the cause which he sought, but not the cause itself, as yet. But it seems, from his last or improved article on this subject, that he has, in his opinion, arrived at the cause of "smut in wheat." He says: "Having, as I confidently believe, fully established the fact that smut in wheat is caused by the *operations of an insect*," he then proceeds to give said "operations" of the insect: "It perforates the glume (chaff case) of the grain, and deposits its '*nit*,' or '*egg*,'" And he says that this "insect appears to be brought to maturity at the time that it is usually earing, or 'heading' out, and the depositing of the nit or egg is commenced immediately thereafter."

It will be observed that, by the theory of J. H. H., the process by which smut is produced is after the heading out, &c. Now, if J. H. H. would go into a close examination to investigate the cause of heads of smut wheat, or the heads that his "*bugs*" have manufactured into smut, which stand, generally, through the field, one-fourth lower than those of the good wheat, I opine he would soon strike a vein that would lead to a different cause than that of insects producing smut.

Farmers generally know that vines are the *natural* food for a certain class of insects; that peas are the *natural* food for another class of insects, which by instinct perforate the peas and deposit their nits or eggs. So of potato tops, tomatoes, and various other vegetables; and so of smut wheat, peculiar for its odor, which is the *natural* food of still another class of insects; and by instinct, as the pea-bug, as appears from the discovery of J. H. H., deposits its "*nits*,"

or "*eggs*," in the berry. But I have never known the pea-bug, nor J. H. H.'s bug, to change the pea or berry to anything else, by the "*operations*" above alluded to,—they still remain the same. Now, it will be observed that J. H. H. admits, virtually, that the "*grain*" has formed its shape; for just then his *bugs* make their appearance, as by instinct, and deposit their *nits* or *eggs*. Now, we farmers know that the "*grain*" of smut wheat is globular; and I, for one, have never discovered that it was ever shaped like a berry of good wheat.

The phrenologists say my bump of marvelousness is small—that I will believe anything I can see—that I must have facts, &c. If J. H. H. will show me that his *bugs* by perforating a berry ("*grain*") of wheat changes its shape, after nature has formed it, and converts it to smut, I will give it up.

It frequently happens that one error begets another. It seems to have been the case with your correspondent, J. H. H.—that after he had discovered the cause of "smut in wheat," as he "*confidently*" believed, he (erroneously) "used" many ways "as *preventive remedies*," but to no effect; for he "occasionally" found his "old enemy *(bugs)* smutting" his wheat. Not having discovered his error, he continued his several experiments "for several successive years"—say some "twenty years,"—and still he would "occasionally" find his "old enemy smutting his wheat again," which he thought "probably strayed over into his fields from some neighboring farm." After having had some success in raising good wheat, and consequently having good seed, he came to the conclusion that, after all, "*nature*" had as much to do with his success as himself.

Here lies the secret of the *prevention* of "smut in wheat." If J. H. H. had separated the second and third quality of his wheat from the first, and had sown no other than the largest berries of wheat, his old enemy, (bugs,) per those of his neighbors, would have never succeeded in manufacturing smut for him. Give "*nature*" good, large, plump, healthy seed, and I will guarantee a good crop of wheat, clear from smut or chess, weighing some 63 or 64 lbs. to the bushel.

Now, as I do not partake much of the marvelous, and inasmuch as I require *facts*, as above stated, I am willing to accord to others that which I require myself, viz: *facts*. I will proceed to state my experiments, observations, and experience, although it is with no small degree of diffidence that I do so, not being skilled in the science of farming, and not accustomed to writing on such subjects, especially being aware that I am differing from so able a writer as J. H. H., who is, I infer, a practical and scientific farmer; one who has been a long and close observer, and has had much experience in investigating the subject of his articles "on Smut in Wheat, and the cause of it." I am highly pleased with, and admire the very able manner in which his articles are penned, although I cannot concur in the conclusions he has arrived at, touching the cause of smut in wheat.

When I first commenced raising wheat in Genesee county, my wheat was very smutty. I was put to much trouble to prepare it for market. Albany was then our market. A number of years subsequent, our market for wheat changed to Rochester, where we obtained thirty-one cents per bushel. The price not warranting much pay for our trouble to cleanse our wheat from smut, we paid but little attention to it or its cause, or prevention. When the canal was in full operation, the market near, and price greater, we began to turn our attention to raising more wheat; and when we found that the price of our wheat was *docked* in consequence of smut, chess, &c., we began to think on the subject, and the first step was to ascertain the cause, in order to know the remedy. My neighbors were trying all the preventives they could think, or hear of; but to no purpose; therefore I did not attempt it myself.

I was in the habit of watching my wheat crop in the spring, to see if my wheat was like to be smutty. I soon observed that all those plants that were not so vigorous, and standing considerable below the average of the good wheat, proved to be smut wheat. This led me to the "*roots*," where I was led to examine the "*vitality*," not of the roots particularly, but of the *seed*, which I found from after experiments to be wanting sufficient to produce good wheat. Here the remedy was suggested to my mind. I had manufactured for me a double sieve, which would retain in the first or upper seive, the largest and plumpest seed to sow; the second seive retaining the second quality, which I appropriated to the use of my family; and the third quality, the smallest wheat falling on to the barn floor, to be fed to my fowls and pigs. I sowed a field of fifteen acres, where I almost invariably had more or less smut in my wheat, with the first quality, reserving one-eighth of an acre to experiment on by sowing one half of said piece with the second, and the remainder with the third quality—neither quality having any smut, chess, or other foul seed in it.

When I harvested my field, the crop from the first quality of seed stood high and uniform, the heads of the wheat were long and large, well filled and plump, weighing 63 or 64 lbs. to the bushel, and no smut nor chess to be found. That from the second quality was some ten inches, on an average, below that of the first quality, containing some smut and some chess—the heads of the wheat short, berry not very plump. The third quality was still lower than the second, some ten inches on an average, and nearly all smut and chess, with here and there a small, short head of wheat, and some of them part smut and part wheat—a very small berry.

I have never been troubled with my "*old enemy*" (smut) since; neither have the "*bugs from some neighboring farm*" been able to manufacture smut in my wheat grown from such seed as the first quality aforesaid. Here you see I have learned by long experience, (it being over twenty years since I have raised any smut wheat,) what is the *cause* of "smut in wheat" and what is a *preventive*, and accidentally the cause of chess and the preventive. I have less trouble in preparing my seed than by any other mode of preparation that I ever knew or heard of—have better and more wheat to the acre, and am sure of having my wheat pass for the first quality. It is not necessary to prepare my seed in this way every year.

The next thing that is wanting, is to make the process of separating the seed as aforesaid more convenient and of less labor; and as I am not possessed of a very large bump of constructiveness, I would suggest that T. D. Burrall, or some one else of an inventive genius, would get up a separator for the purpose, which could be worked by hand, horse, or water power, as circumstances might require. E. T.

—*Batavia, N. Y., April*, 1850.

THE WEED.

Messrs. Editors:—In the April number of the Farmer, p. 86, is an article on "A troublesome Weed." As I have had some dealings with it, I can say it is rightly named; and that many, if not all my neighbors, are dreaming that they are secure; but they must soon learn that the enemy has been at work while they slept.

In 1847, my father bought Seneca clover seed of Mr. Sawyer, Rochester. It was bought for the large kind, but proved to be the small; and still worse, in the summer of 1848 we were surprized to find any quantity of rank May-weed scattered over the lot, containing seuenteen acres. Being ignorant of the nature of the *pest*, and an avowed enemy to *weeds*, we commenced a war of extermination, by pulling them up, (there was no trouble in finding them, being in full bloom,) but neglected to carry them off the field. After mowing, the field was plowed and wheat sown. Early last spring they appeared in full vigor. No pains were spared to destroy all that could be found through the season, though parts of the field were literally covered. I had hopes of seeing them no more, as I had spent over thirty days of faithful labor with them; but this spring they have re-appeared in full uniform, and a hardier set of plants I never saw. I think they belong to the order *Pyrethrum inodorum*—scentless May-weed, feverfew. I know of no way of exterminating them but by summer cropping and weeding, though this is slow and expensive. I have saved a few of the seeds of last summer's crop, which I will leave at your office, for inspection, should any one wish to see them there before knowing what they are by experience. Yours, &c., Chas. McVean.—*Wheatland, April*, 1850.

"SMUT BUGS."

Our correspondents have spoken pretty freely of the theory advanced by J. H. H., and we regret the necessity which requires us to notice and dissent from the views of our esteemed correspondent, in reference to the common malady called "smut" in wheat being caused by an insect. We concede that all his statements of what he has seen are true. It is only against the inferences drawn from well known facts, that we speak or write. We have seen the weevil which he alleges causes seeds of wheat to blight and become "smut," both in its larva and perfect state. That its young can feed and wax fat on the sporules of the *uredo segetum* and those of the *uredo fetida*, are facts which we have had occasion to study, and which were first pointed out to us by Gen. Harmon, who took the same view of this matter that our friend J. H. H. does.

The instances are numerous where insects produce remarkable changes in the growth and appearance of plants; but "smut" is so well known to be a parasitic fungus, which will grow as well without a "bug" as peas and wheat, that it is as philosophical to say that a skipper in a cheese made the cheese, as to say the egg or maggot of a weevil or "beetle" produces the food on which it subsists. Man feeds on mushrooms, and many insects devour parasitic plants, without being suspected of producing them. By planting seeds of wheat covered with the sporules or germs of smut, the next crop of wheat will be similarly affected, whether it be attacked by flies, or weevils, or not. No wheat should be sown without washing it thoroughly in strong brine, and then drying it in caustic lime. And it may be possible to kill the larvæ of the pea bug, and not destroy the germinating power of the seed. We wish that some reader who has peas with insects in them, would try his skill in killing the animal and not the vegetable, and report to the Farmer the result.

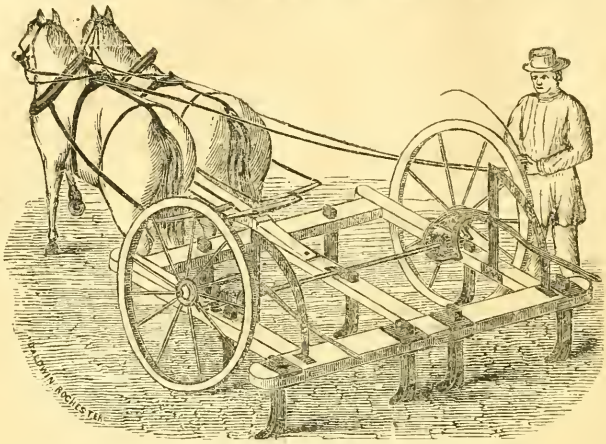
We have copied into the Agricultural Report for the Patent Office, from the last Journal of the Royal Agricultural Society of England, received in March, an admirable lecture on the "Parasitic Fungi of the British Farm," with numerous illustrations. We shall be careful to send a copy of this to our friends J. H. H. and Gen. Harmon. Recent improvements in microscopes have literally thrown much new light on both vegetable and animal organisms too small to be studied with success by old instruments. A single smut ball, which is smaller than a perfect wheat kernel, contains some four millions of sporules, each one of which will doubtless grow and produce other millions, under favorable circumstances.

THE COW FOUND.

Messrs. Editors:—In the Farmer for March, I saw an article respecting the famous milch cow of Mr. John Johnson, giving forty-five quarts per day, which turned out to be about twenty-four, according to Mr. Wright, who went and saw the famous ten quart pail; and he now offers to give $500 for any cow that will give forty quarts per day. Now, Messrs. Editors, please inform Mr. Wright that I want his money. I have a cow that will fill any two ten quart pails that he can find in Seneca, or any other county, at one milking, when she is milked regular; and no gammon or fish story about it. If he doubts it, he will please travel a little further southeast in this same Seneca county, "in the leafy month of June," 1850, and see with his own eyes a cow eight or nine years old, of good size, with the largest, finest, and squarest udder he ever saw in all his travels, "east and west." She has just dropped a calf. She gave twelve quarts this morning; calf three days old running with her.

Now, Messrs. Editors, without any puffing, this cow stands on her own merits; and I should like to have your practical Mr. Wright come and see her for himself. I weighed one mess of her milk, not the largest, which weighed 32½ pounds. Wm. H. Smith.—*Covert, Sen. Co., N. Y., March* 18, 1850.

Wrong application of Manure.—*Eds. Genesee Farmer:*—Many valuable essays have been published, relative to the best mode of applying manures; yet, instances are numerous where farmers and others, instead of placing them in a situation to be received by living vegetables, apply them in abundance to seasoned timber, and to their own organs of respiration. For instance: they pile heaps six feet high against their barns, perhaps under their stable windows; and the right proportion of moisture being present, when the weather becomes sufficiently warm, a decomposition takes place, and two-thirds of all that is valuable escapes in gas, to poison themselves and neighbors, and annoy all who may pass to the leeward of the pile. A few moments labor in turning over the stack, would prevent this active fermentation, save their buildings, retain their manure, and preserve the health of their own and their neighbors' families. M. Hutchinson.—*King's Ferry, N. Y.*, 1850.



ROGERS' PATENT WHEELED CULTIVATOR.

OUR mechanics are certainly taking a deep interest in the improvement of agricultural implements.—There appears to be a more lively competition at this time than ever before, as an examination of our advertising pages will readily show, and the farmers will no doubt reap the benefit of this competition in the production of good implements at moderate prices. Some of these machines may not stand the test of *use*, while many, we have no doubt, will be found truly valuable to the farmer, doing his work well and cheap. Perhaps of no agricultural machine has there been such a variety produced within the last few years, as of *Grain Drills*. Scarcely a number of the Farmer is issued, but some new drill is presented to the notice of agriculturists, through our advertising columns, or some old one improved urges its claims upon the atrention of the cultivators of the soil. We shall endeavor to keep our readers advised of the various improvements, and particularly to give the experience of our correspondents in their use. Of the advantage of drilling, they have already spoken pretty freely.

But, our object at this time was more particularly to speak of *Rogers' Patent Wheel Cultivator*, an engraving of which we give at the head of this article. Speaking of this machine, a correspondent says: "From its construction, it is well calculated to work after deep and thorough plowing; it pulverizes and mixes the ground more perfectly than any other machine now in use; it destroys thistles and other weeds more effectually than any other process of culture. It is a labor-saving machine — one team will go over about the same amount of ground per day (and the work will be better done) as four will with the common plow."

This machine was exhibited at the last State Fair, and took the first premium. The manufacturers, however, think that valuable as this machine was before, as proved by the committee who awarded the premium, they have much improved it the past winter, in the raising of one wheel at a time, or both if required, and the manner of "hitching to."

It is manufactured by J. GANSON & Co., of Brockport, in this county, who also manufacture *McCormick's Virginia Reaper* and *Atkins' Grain Drill*, both advertised in this number.

HARD-PAN SOILS.

AN excellent friend of the Farmer, MR. OSCAR F. WARREN, desires us to give a chapter on *Hard-pan Soils*, which is far easier than to plow and mellow them, as we know from considerable experience at the plow handles. It is of no use to mince the matter at all; *the under-crust must be broken*, and well broken, before one can have a deep, friable soil, on shallow, hard-pan land. Last autumn, a premium was awarded to a sub-soil plow which we presented at the great Fair of the Southern Agricultural Association, at Stone Mountain, in Georgia. Cultivators regard this implement as better than the New-England sub-soil plows; and if it should be our lot to dig an honest living out of the hard-pan hills of old Chenango, as in days past, a sub-soil plow would follow in the furrow of the turning one, and break the iron bound earth into small fragments. The Southern implement to which allusion has been made, is essentially a winged-coulter, made strong, and placed in a stout beam. A good single team can pull it without severe labor. Late English agricultural journals abound in discussions on the subject of pulverizing "iron-pan" in sub-soils. In some, the conglomerate mass is so petrified, that six heavy horses are barely able to break the crust; but experience proves the benefit and ultimate profit of the operation. If a soil which is six inches deep is worth $20 per acre, it will be worth $40, or twice as much, when the soil is made twelve inches deep. The art of manufacturing soils of any desirable depth, is destined to experience great improvements within a few years. Science, practical skill, and indomitable perseverance will add four-fold to the productiveness of all arable lands whose cultivation is necessary. Already lime is used on hard-pan soils with twice the good effects

which were formerly realized. A more thorough system of tillage, with a few powerful fertilizers, like the excretions of stall fed cattle, guano, or night-soil, is working wonders in Belgium and in some parts of France, as well as in England and Scotland. No industrious man should fear the task of changing a "pan" into a kindly, friable soil. Labor and skill can conquer every obstacle, and achieve the most brilliant results. The next generation will laugh at the folly and short-sightedness of their fathers and grandfathers, who cultivated the earth only from three to six inches in depth. The next generation will not waste, as we do, fertilizing elements enough to form 500,000,000 bushels of wheat.

FARMING IN NORTH CAROLINA

After ordering several copies of this journal, a gentleman in North Carolina concludes his letter as follows :—

As I am writing, I have concluded to make a few inquiries on the subject of agriculture. I am just making a small commencement at farming, and having been heretofore principally engaged in other pursuits, I have but little practical knowledge of it. I have, however, acquired from reading agricultural works, a slight *tinge* of theory ; at least, sufficient to induce me to believe that our farming in this section may be vastly improved. The soil here is a light, sandy, pine soil, underlaid by a stiff, red clay, which, from the color, I think contains a considerable quantity of iron. Lime can be purchased twenty miles from here, at nine or ten cents a bushel for slaked and sixteen or eighteen cents for unslaked. Plaster can perhaps be procured as cheap from New York as from any other source, in which case the carriage alone, to this place, will amount to about $1.50 per 100 lbs. Of swamp muck we have inexhaustible quantities, and the same may be said of forest leaves. I also keep a small stock of cattle and a few horses. These, with such other matters as the exhausted farms in this section generally afford, are about all the means of making manure I have at command. I should have stated that I feed my cattle under sheds, and keep them constantly, during the winter, in the dry. Now, my aim is to improve annually, by manuring, &c., a small portion of my farm, if it were only from four to six acres, so as to enable me to raise good crops of corn and roots, and to keep the rest of the farm (of which there are some thirty or forty acres under cultivation,) from getting worse ; or rather, I wish it to improve. It may be necessary to state that I procured a sub-soil plow last fall from the North, which I am using.

Now, I wish to know how I can effect the above object most economically ; or, in other words, how can I make the most manure and improve my farm with the least outlay of money, having but one hand besides myself to perform the labor? You will recollect that the farm is so badly exhausted, that the greater portion will produce only from ten to twenty bushels of corn per acre, and some four or six bushels of wheat. Will the use of the sub-soil plow, in your opinion, add much to the productiveness of a soil that has been plowed only some two or three inches for some twenty or thirty years ; as has been the case with mine? Would it be of advantage to procure some small variety of corn from the North, annually, for seed, (say the Dutton,) and would it allow to be planted so closely as it is at the North? How many cords of stable or barn-yard manure, that has been kept out of the weather, should be applied per acre? Will ashes, leached or unleached, expel ammonia from animal manures? or, is it more advantageous to apply them to the soil in some other manner, and how? Will air-slaked lime expel ammonia from dung, or be otherwise injurious? Can copperas (sulphate of iron) be used with advantage or economy, when it can be bought for three cents per pound, and will it fix ammonia in manure? Is there any other substance that can be used to advantage instead of plaster, to fix ammonia in manure or in the soil? or would it be good policy to send to New York for plaster, and would the advantage to the soil be such as to justify the expense of procuring it as above to apply to the soil?

Perhaps I should have stated that red clover springs up spontaneously, even on the poorest of my land ; and on a portion that was tolerably rich, I saw a growth of clover so heavy that it was difficult to cure the grass after being cut, the growth till June being from two to three feet high, and it laid over a foot thick on the ground, after being cut and spread.

Can beets, turneps, carrots, parsneps, artichokes, &c., &c., be profitably cultivated here, for stock? I cut my corn at the ground in the fall, and find the stalks better for cattle than the hay raised on our natural meadows. I have done this for five or six years ; but our corn grows so tall that it is heavy work to handle the stalks. J. R. Moser.—*Flint Rock, N. C., Feb'y*, 1850.

Our correspondent is on the right track, but should experiment with caution. No one should pay $1.50 per 100 lbs., or $30 per ton for gypsum, for agricultural purposes. Nor should he pay $3 per 100 lbs. for copperas, to apply to the dung heap. Common salt is equally valuable to fix ammonia, and should not cost much over half a cent a pound.

The red clay sub-soil of our friend doubtless contains sulphate of iron ; and the application of lime will give him gypsum, or sulphate of lime, at the cheapest rate. Both iron and alumina in stiff soils are combined chemically not only with sulphuric acid, but phosphoric acid. When the oil of vitriol (sulphuric acid) unites with alumina and potash, the well known salt called *alum* is formed. In some wet, tenacious sub-soils, this salt, as well as copperas, abounds. By draining these soils, cultivating deep, and using lime or marl, this alkaline mineral will take phosphoric acid away from alumina and iron, and form *bone earth*, or the mineral which makes the bones of man and all his domestic animals.

In addition to lime, (and draining, if necessary,) our correspondent should procure all the leached and unleached ashes which can be had at a low price. Leached ashes are rendered more soluble and valuable by being composted with fermenting manure. There is no danger of losing ammonia by using lime or unleached ashes in the same way, provided the heap be well covered with muck, charcoal, loam, garden mold, or rotted forest leaves ; but, as a general rule, it is best not to mix manure and lime, either caustic or a carbonate. With sour swamp muck, straw, trash, or forest leaves, lime and caustic ashes mix advantageously.

As to the amount of manure which one should put on an acre, every farmer should be the best judge who knows best the condition of his land, the crop he wishes to make, the strength of his fertilizers, and the quantity he has as compared with the area to be manured. With a good market for butter, and by raising clover, corn, peas, rye, carrots, and sweet potatoes for his cows, our friend can produce a vast quantity of cheap manure, and realize a good deal of money for his butter. If he will grow a few hundred bushels of such fine Scuppernong grapes as we have eaten in North Carolina, and put them up right, to keep fresh for the New York market, they will bring him in a handsome income.

Corn intended for a forage crop, should be cut as soon as the tassels are in blossom, and cured immediately. Small northern corn is best to cut up at the ground. Before this meets the eye of Mr. Moser, he will have received from the Patent Office a few packages of improved Morlyland corn, for seed.—Green crops and lime turned in, will give you a rich soil in a few years. As a general rule, it is better to apply ten bushels of lime per acre for five years in succession, than to put fifty bushels on at a dose.

The substantial prosperity of a country is always in the ratio of its agricultural industry and wealth.

NEW YORK STATE AGRICULTURAL SOCIETY.

PREMIUMS AT ANNUAL SHOW IN SEPT., 1850.

CATTLE.

SHORT HORNS.—Best bull over 3 years old. $25; 2d do. 15; 3d do 5 Best 2 years old bull $20; 2d do. 10; 3d do. 5 Best 1 year old bull. $15; 2d do 10; 3d do 5. Best bull calf $10; 2d do. Trans. and 3. Best cow over 3 years old $25; 2d do 15; 3d do. 5. Best 2 years old heifer. $20; 2d do. 10; 3d do. 5. Best 1 year old heifer. $15; 2d do. 10; 3d do 5 Best heifer calf. $10; 2d do, Trans and 3.

DEVONS.—Best bull over 3 years old $25; 2d do. 15; 3d do. 5. Best 2 years old bull, 20; 2d do 10; 3d do 5 Best 1 year old bull. 15; 2d do 10; 3d do 5 Best bull calf. 10; 2d do. Trans and 3. Best cow over 3 years old. 25; 2d do 15; 3d do. 5. Best 2 years old heifer. 20; 2d do. 10; 3d do 5. Best 1 year old heifer, 15; 2d do 10; 3d do, 5 Best heifer calf 10; 2d do. Trans and 3.

HEREFORDS.—Best bull over 3 years old. $25; 2d do. 15; 3d do 5. Best 2 years old bull 20, 2d do 10; 3d do. 5. Best 1 year old bull, 15; 2d do. 10; 3d do. 5. Best bull calf. 10; 2d do. Trans and 3. Best cow over 3 years old. 25; 2d do. 15; 3d do. 5. Best 2 years old heifer. 20; 2d do. 10; 3d do 5 Best 1 year old heifer. 15; 2d do. 10; 3d do 5 Best heifer calf 10; 2d do. Trans and 3.

AYRSHIRES.—Best bull over 3 years old $25; 2d do. 15; 3d do. 5. Best 2 years old bull 20; 2d do. 10; 3d do. 5. Best 1 year old bull, 15; 2d do. 10; 3d do. 5. Best bull calf. 10; 2d do. Trans and 3. Best cow over 3 years old. 25; 2d do 15; 3d do 5. Best 2 years old heifer. 20; 2d do. 10; 3d do 5. Best 1 year old heifer, 15; 2d do. 10; 3d do 5. Best heifer calf. 10; 2d do. Trans and 3.

NATIVE AND CROSS BETWEEN IMPROVED AND NATIVE CATTLE.—Best cow over 3 years old. $20; 2d do. 12; 3d do 4. Best heifer 2 years old 15; 2d do 10; 3d do 3 Best 1 year old heifer. 10; 2d do. 8; 3d do. 3 Best heifer calf. 3; 2d do, Trans

WORKING OXEN.—*Ox for oxen sold*—Best team of 20 yoke from any county. $50; 2d do 30. Best team from any town, not less than 10 yoke 25; 2d do, 20; 3d do. 10. Best yoke of oxen. 20; 2d do. 15; 3d do 5.

STEERS.—*Three years old*—Best 10 yoke from any county. $20. Best single yoke. 10; 2d do 8; 3d do. Trans and 3 To boys under 16 training yoke of steers, best. Silver Medal; 2d do. Trans. and 3 *Two years old*—Best ten yoke from any county. $15. Best single yoke 8; 2d do. 5; 3d do. Trans and 3 To boys under 16 training yoke of steers, best. Silver Medal; 2d do. Trans. and 3. *One year old*—Best ten yoke from any county. $15 Best single yoke 8; 2d do 5; 3d d . Trans and 3 To boys under 16 training yoke of steers, best. Silver Medal; 2d do. Trans. and 3.

No yoke of cattle competing in teams can compete as a single yoke; nor can a single yoke competing for premium, be allowed to compete in the county or town teams

MILCH COWS.

For best milch cow. $30.

The cow to be kept on grass only during the experiment and for fifteen days previous to each period of trial The time of trial from 10th to 20th of June, and from 10th to 20th of August.

Statement to be furnished, containing—

1st. The age and breed of cow, and time of calving

2d The quantity of milk in weight, and *also* of butter, during each period of ten days.

3d The butter made, to be exhibited with the cow, at the Fair, and the statement to be verified by the affidavit of competitor and one other person conversant with the facts.

FAT CATTLE.

Best pair fat oxen 4 years old. $25; 2d do. 15; 3d do. 10. Best single ox over 4. 15; 2d do. 10; 3d do. 6 Best fat cow over 4. 15; 2d do. 10; 3d do. 6 Best pair fat steers, four years old or und r 15; 2d do. 12; 3d do. 8. Best single steer 4 years or under. 10; 2d do. 6; 3d do 3. Best single heifer, 4 years or under, spayed or not 10; 2d do. 6; 3d do. 3

For animals fattened on hay and grass alone (after one year old)—Best pair oxen over 4 years old 20; 2d do 12; 3d do 8. Best single ox over 4. 10; 2d do 6; 3d d . 4. Best cow over 4 10; 2d do 6; 3d do. 4. Best pair fat steers 4 or under. 12; 2d do. 8; 3d do. 5. Best single steer 4 or under. 8; 2d do. 5; 3d do. Trans. Best heifer. 4 or under, spayed or not. 8; 2d do 3; 3d do. Trans.

Applicants for premiums on fat cattle, must furnish *particular statements of the manner of feeding, and kind, quantity and cost of food, and all the expenses connected with the fattening.*

Animals exhibited in pairs cannot compete for single premiums

FAT SHEEP.

LONG WOOLED.—*Over two years*—Best fat sheep. $5; 2d do. 3; 3d do Morrell's Shepherd *Two years or under*—Best fat sheep. 5; 2d do. 3; 3d do. Morrell's Shepherd.

MIDDLE WOOLED.—*Over two years*—Best fat sheep, $5; 2d do. 3; 3d do. Morrell's Shepherd. *Two years or under*—Best fat sheep. 5; 2d do 3; 3d do Morrell's Shepherd.

Statements required as to the *manner of feeding*, as for fat cattle.

HORSES.

CLASS I—*For all work.*—Best stallion, over 4 years old. $20; 2d do 12; 3d do 8; 4th do. Youatt. Best brood mare, with foal at her foot. 20; 2d do 12; 3d do. 8; 4th do. Youatt

CLASS II—*Draught Horses*—Best stallion, over 4 years old. $20; 2d do. 12; 3d do 8; 4th do. Youatt Best brood mare, with foal at her foot. 20; 2d do. 12; 3d do 8; 4th do. Youatt.

CLASS III—*Blood Horses.*—Best stallion, over 4 years old. $20; 2d do, 12; 3d do. 8; 4th do. Youatt Best brood mare, with foal at her foot, 20; 2d do. 12, 3d do, 8 ; 4th do, Youatt.

THREE YEARS OLD STALLIONS AND MARES.—Best stallion. 3 years old $15; 2d do 10; 3d do. Youatt, 4th do. Trans. Best stallion. 2 years old. $10; 2d do. Youatt; 3d do. Trans. Best mare, 3 years old. 15; 2d do. 10; 3d do. Youatt; 4th do. Trans. Best mare, 2 years old, $10; 2d do. Youatt; 3d do. Trans.

ONE YEAR COLTS.—Best stallion. $5; 2d do. Youatt; 3d do, Trans. Best mare, $5; 2d do. Youatt; 3d do. Trans.

MATCHED HORSES.—Best pair, Diploma and $15; 2d do, 10; 3d do. 8; 4th do, 5.

GELDINGS.—Best gelding, Dip. and $10; 2d do, 8; 3d do, 6; 4th do, 4.

SHEEP.

CLASS I—*Long Wooled.*—Best buck, over 2 years. $10; 2d do, 8; 3d do. 5 Best buck, 2 years or under. 10; 2d do. 8; 3d do, 5. Best pen 5 ewes over 2 years. 10; 2d do, 8; 3d do. 5 Best pen 5 ewes, 2 years or under. 10; 2d do. 8; 3d do. 5. Best pen 5 buck lambs, 8; 2d do 3 and Morrell's Shepherd. Best pen 5 ewe lambs. 8; 2d do. 3 and Morrell's Shepherd.

CLASS II—*Middle Wooled.*—Best buck, over 2 years. $10; 2d do, 8; 3d do 5 Best buck, 2 years or under, 10; 2d do. 8; 3d do. 5. Best pen 5 ewes, over 2 years. 10; 2d do. 8; 3d do 5. Best pen 5 ewes, 2 years or under. 10; 2d d . 8; 3d do. 5. Best pen 5 buck lambs. 8; 2d do 3 and Morrell's Shepherd. Best pen 5 ewe lambs. 5; 2d do, 3 and Morrell's Shepherd. Best sample of wool not less than ten fleeces, Silver Medal.

Samples of each fleece prepared for exhibition to be deposited with the Secretary of the Society, to be preserved in the Agricultural Museum

CLASS IV—*Saxons.*—Best buck, over 2 years 10; 2d do. 8; 3d do. 5. Best buck, 2 years or under. 10; 2d do. 8; 3d do. 5 Best pen 5 ewes, over 2 years. 10; 2d do. 8; 3d do. 5. Best pen 5 ewes 2 years or under. 10; 2d do. 8; 3d do. 5. Best pen 5 buck lambs. 8; 2d do, 3 and Morrell's Shepherd. Best pen 5 ewe lambs. 8; 2d do. 3 and Morrell's Shepherd. Best samples of wool not less than 10 fleeces, (as in Merino class.) Silver Medal.

NATIVES AND GRADES.—Best buck 2 years old. $10; 2d do. 8; 3d do. 5. Best buck, 2 years or under. 10; 2d do. 8; 2d do. 5 Best pen 5 ewes. 2 years. 10; 2d do. 8; 2d do. 5. Best pen 5 ewes, 2 years or under. 10. 2d do 8; 3d do 5. Best pen 5 buck lambs. 8; 2d do. 3 and Morrell's Shepherd Best pen 5 ewe lambs. 8; 2d do, 3 and Morrell's Shepherd.

SHEPHERD'S DOG.

Best shepherd's Dog. $5; 2d do, Morrell's Shepherd

Evidence to be furnished of the thorough training of the dog, otherwise no premium can be awarded.

SWINE.

Best boar over 2 years old $10; 2d do. 5. Best boar 1 year old, 10; 2d do. 5. Best boar 6 months and under 1 year. 8; 2d do 3. Best breeding sow over 2 years old. 10; 2d do. 5 Best breeding sow one year old. 10; 2d do. 5. Best sow 6 months and under 1 year. 8; 2d do 3. Best lot of pigs not less than 5. under 10 months, 10; 2d do. 5.

POULTRY.

Best lot of Dorkings, not less than 3 1 cock and 2 hens. $3; best lot of Polands, do do, 3; best lot of Large Fowls, do do, 3; best lot of turkeys, do. 3; best lot of Muscovy ducks, do 3; best lot of small ducks, do. 3; best lot of Guinea Hens, not less than 6. 3; best pair large geese, 3; best pair wild geese, 3; best lot of poultry owned by exhibitor, (statements to be furnished and verified.) 5; best exhibition of pigeons, 3; best lot of wild turkeys, 3.

PLOWS.

JUDGES—A Van Bergen, Coxsackie; John Delafield, Oaklands; J. Stanton Gould, Hudson; Sanford Howard, Albany; B B. Kirtland, Greenbush.

Best sod plow for stiff soils, furrow not less than 7 inches in depth nor over 10 inches width Diploma and $15; second best do, 10. Best sod plow for light soils, furrows 6 and 12 inches. Diploma and 15; 2d best do. 10. Best plow for fallows or "old land." Dip. and 10; 2d best do. 8 Best sub-soil plow, Diploma and 8. Best side-hill plow. Diploma and 8.

Trial to take place the second week in June. 1850, at Albany, to commence on Tuesday, 4th of June.

Competitors must become members and enter their names and plows at the rooms of the Society by the 15th of May with B. P. Johnson, Secretary; and the plows to which premiums are adjudged, to be deposited in the rooms of the Society, for exhibition, if plows of the same pattern are not already there.

The committee will meet at the Society Rooms on Monday 3d June to make arrangements for the trial Trial to continue until the committee and competitors are fully satisfied, so that the awards may with confidence be relied upon, from the thorough trial made, leading to practical and satisfactory results

N. B. A general competition is invited under this head, as the trials will be conducted and the decisions made without regard to any former trials or awards, and will be open to *competitors from any part of the world.*

In deciding the general questions, what are the best plows? the committee will be governed by the following principles: 1st, the

character of the work performed; 2d. the power required in draught; 3d. quality of materials, durability and cost of the implements

For *stiff* soil excellence of work shall consist first in leaving the furrow-slice light and friable; *second*, in so disposing the sod and all vegetable matter as to insure its ready decomposition.

For *sandy* soil, or that which is already *too light*, the points in regard to quality of work will be, *first*, thoroughly burying the vegetable matter; and *second*, leaving the ground generally level

For fallow, or old land, the principal point in reference to the quality of work will be thorough pulverization and friability of the soil.

In determining the power required in draught, the most perfect instrument will be used and the trial will be conducted in the most careful and thorough manner

The same implement for testing draught, and the same team, will be used for all plows in the same class

The plows may be held by the competitors or by persons appointed by them, as may be preferred

PLOWING MATCH.

First premium, $10; 2d do, 8; 3d do 5; 4th do Trans

Boys under 18 years of age—First premium, $10; 2d do, 5; 3d do. Trans.

The competition for plowing open to competitors out of the state.

The name of plowman must be given, as well as the kind of plow used, at the time of entry

Rules to be observed—depth of furrow 7 inches, width 10 inches.

FARM IMPLEMENTS NO. I.

Best farm wagon, $5; best harrow, 3; best corn cultivator, 3; best fanning mill 5; best corn stalk cutter, 5; best straw cutter, 3; best corn and cob crusher, by horse power, 5; best cider mill machine, 5; best flax and hemp dresser, 5; best horse cart for farm, 3; best ox cart, 2; best horse rake, 2; best ox yoke, 2; best roller for general use, 5; best clod crusher and roller combined, 5.

FARM IMPLEMENTS NO. II.

Best plow harness, $2; best wagon harness for farm, 2; best carriage harness 3; best saddle and bridle for general purposes, 2; best dozen axes, 2; best churn, 2; best cheese press, 2; best six milk pans 2; best potato washer, 2; best grain cradle, 2; best six hand rakes, 2; best six hay forks 2; best six grass scythes, 2; best six cradle scythes 2; best six manure forks 2, best hay rigging, 2; best lot of grain measures, 2; best dozen wire brooms, 3; 2d do do 2; best dozen Shaker, or twine tied brooms, 3; 2d do do, 2.

Samples of each kind of brooms to which premiums are awarded to be deposited in Museum.

FARM IMPLEMENTS NO. III.

Best horse power for general purposes, on the sweep or lever principle, $5 and Diploma; best horse power on railroad and endless chain principle, 5 and Dip; best iron horse power, 5 and Dip; best thrasher, to be used with horse or steam power, 5 and Dip; best seed planter, for hand or horse power for hills and drills, 3 and Dip; best wheat drill not less than 6 drills, Dip; best grain drill, with apparatus for depositing manure, Dip; best cultivator and drill combined, Dip; best broad-cast sower Dip; best wheat cultivator, Dip; best portable saw-mill for wood, fences, and for farm use, Dip; best corn sheller, horse power Dip; best corn sheller, hand power, Dip; best vegetable cutter, Dip; best and most numerous collection of agricultural implements 20 and Dip.; best and most numerous collection of agricultural implements, manufactured in the State of New York, by or under the supervision of the exhibitor, materials, workmanship, utility, durability, and prices to be considered in both cases, 20 and Dip.

In these last cases, a catalogue of the implements, and the price of each must be given, and certificate as to the manufacture

P. S. Persons presenting agricultural implements, or articles of mechanical ingenuity and utility are requested to furnish the Secretary with a particular description of the article, the price, and place where it can be had—as it is intended to publish a descriptive list of the articles exhibited at the Show, for the benefit of manufacturers and purchasers.

MACHINERY, AND IMPLEMENTS NO. IV.

For the most valuable machine or implement for the farmer, either newly invented, or an improvement on any one in use, Silver Medal

Steam Engine for Farm Purposes.—Best steam engine for agricultural purposes on the farm—being moveable—which from its utility in saving labor and expense, simplicity and cheapness of construction, or other circumstances, shall be deemed deserving of public notice. The report must be accompanied by drawings and description of the machine, and by a model—the model to be deposited in Society's Museum. Dip. and $25; 2d do do, $20.

Silver Medals will also be awarded for articles of mechanical ingenuity, and machinery deemed useful.

(Steam Power will be furnished on the grounds to drive such machinery as may require it, with shafting—the exhibitors to furnish their own bands, and to notify the Secretary, previous to the Fair, as to the motion they may require.)

DAIRY.

Best lot (quality as well as quantity considered) made from five cows in 30 consecutive days, 25 lbs. of the butter to be exhibited, $25; 2d do, 15; 3d do. 10

Compliance with the following rules will be strictly required of those who compete for these premiums, viz:—The cows to be fed on pasture, green corn stalk fodder or grass cut for the purpose, only. No grain, roots, or slops of any description, to be fed during the trial The cows to be owned by the competitors previous to the first day of February 1849 The milk drawn from the cows on some one day during the trial to be accurately weighed and measured and the result stated. A sample of at least 25 pounds of the butter so made to be exhibited at the Show for the inspection of the examining committee. The particular breed of cows to be stated, if known and the method of making and preserving the butter A certificate signed by the owners of the cows and at least one other person who assisted in milking and making the butter, detailing the above particulars will be required.

Let the above regulations be observed, and an opinion approximating to accuracy may be formed by the public, which of the several breeds of cows are the best for dairy purposes; and from those that prove the best, further improvements may be made

Best 25 lbs butter made in June, $10; 2d do 5; 3d do. Trans Best 50 lbs. made at any time, $15; 2d do, 10; 3d do, 5; 4th do, Trans Best half dozen butter firkins, $2 Best half dozen butter tubs, $2.

The claimants for premiums must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substance has been employed; also whether in the use of any variety of salt injurious results have occurred, if so, state variety and where manufactured.

The butter offered for premiums must be presented in butter tubs jars or firkins.

Girls under 21 years of age.—Best lot of butter not less than 10 lbs., made at any time, Silver Milk Cup; 2d do, Fair Butter Knives; 3d do. Sett Tea Spoons.

A statement of the manner of making the butter must accompany each sample.

CHEESE.

ONE YEAR OLD AND OVER.—Best 100 lbs. cheese, $20; 2d do. $10; 3d do. 5; 4th do, Trans.

LESS THAN ONE YEAR OLD.—Best 100 lbs., $15; 2d do, 10; 3d do. 5; 4th do, Trans. Best half dozen cheese boxes, $1

Those who present cheese for the premiums offered, must state in writing the time it was made; the number of cows kept; whether the cheese was made from one, two or more milkings; whether any addition is made of cream; the quantity of rennet used and the mode of preparing it, the mode of pressure; and the treatment of cheese afterwards and the kind of salt used.

SUGAR.

Best 25 lbs. maple sugar, $10; 2d do. 5; 3d do 3; 4th do Trans.

The process of manufacturing and clarifying must accompany the samples offered

HONEY AND BEE-HIVES.

Best 20 lbs., $5; 2d do, 3; 3d do. 1. Best bee-hive, Diploma.

The honey to be taken up without destroying the bees. Kind of hive to be specified, with a description of its construction.

MISCELLANEOUS ARTICLES.

Best iron gate for farm purposes Diploma; best ornamental cast iron vase on pedestal, Dip.; best water pipe of water line or other durable material other than iron or lead, Dip; best sample drain tile, Dip; best drain tile or pipe draining machine, Dip. and $10; best quarter acre osier willow and the specimen of product manufactured, $5; best wire hurdle fence, Dip.; best water ram or other hydraulic apparatus, Silver Medal; best wire fence for farm purposes, with full description, cost of construction, and evidence of its adaptation to practical, beneficial, and economical use, Silver Medal

For improvements in machinery useful to the farmer, and having valuable properties, and not included under any head of any of the regular premiums, discretionary premiums will be awarded.

DISCRETIONARY DEPARTMENT.

Under this general head, premiums will be awarded upon articles of ingenuity, usefulness and merit, which may be exhibited, which are not provided for in the lists of premiums.

In the several Discretionary Divisions, Diplomas, Silver Medals, large and small, Prof. Norton's Prize Essay, Downing, Thomas' Fruit and Transactions will be awarded, as the importance and perfection of the several articles shall demand.

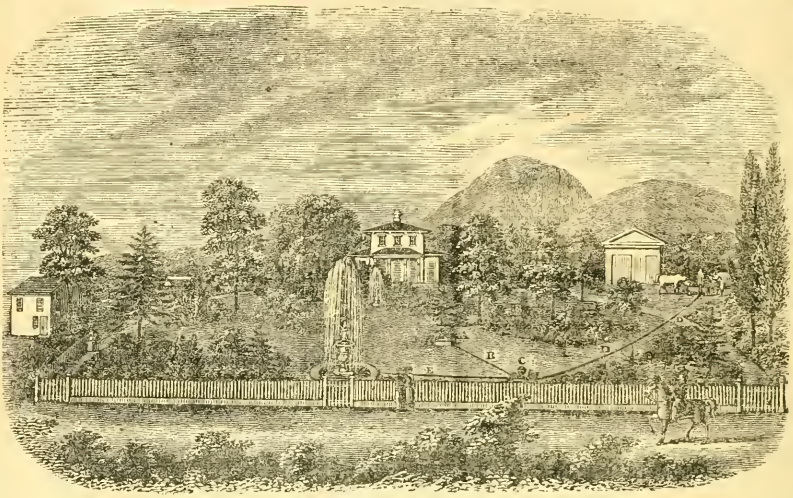
FOREIGN STOCK.

CATTLE.—*Two years or over*—Best *Short Horn* bull, Dip. and $25; best heifer or cow, Dip. and 25. Best *Devon* bull, Dip. and 25; best heifer or cow, Dip and 25. Best *Hereford* bull, Dip. and 25; best heifer or cow, Dip. and 25. Best *Ayrshire* bull Dip. and 25; best heifer or cow, Dip and 25.

HORSES.—*Over four years*—Best blood stallion, Dip and 20, best brood mare, Dip. and 20. Best stallion horse of all work, Dip. and 20; best brood mare, Dip. and 20. Best stallion draught horse, Dip and 20; best brood mare, Dip. and 20.

SHEEP.—*Long Wooled*—Best buck, Dip. and $10; best pen five ewes Dip. and 10; best pen five buck lambs, Dip. and 5; best pen five ewe lambs, Dip. and 5 *Middle Wooled*—Best buck, Dip and 10; best pen five ewes, Dip. and 10; best pen five buck lambs, Dip. and 5; best pen five ewe lambs, Dip. and 5. *Merinos*—Best buck, Dip. and 10; best pen five ewes, Dip and 10; best pen five buck lambs, Dip. and 5; best pen 5 ewe lambs, Dip and 5. *Saxons*—Best buck, Dip. and 10; best pen five ewes, Dip. and 10; best pen five buck lambs, Dip. and 5; best pen five ewe lambs, Dip. and 5.

(*To be continued*)



THE HYDRAULIC RAM.

EDS. FARMER :—I have heard of a machine to force water above its fountain head. I am very anxious to elevate my spring water forty-three feet, which will bring it to my wood-house, a distance of seven rods. Can you, through your excellent agricultural paper, benefit me, as well as your readers generally, by giving a description of the machine, together with the probable expense of elevating my spring water as above stated, and also where it can be had? W. B. CORYELL.—*Lodi, N. Y., Jan'y*, 1850.

We know of no better way to give information, than by answering the communications we are constantly receiving, especially when they seek information of the highest importance to farmers generally. And we prefer, as often as we can, to have them answered by other correspondents, who have had the teachings of experience, and who can testify of what they really know. Of this character is the article above, by W. B. CORYELL, and the practicability and utility of the operation is satisfactorily shown by the following, recently received from CHARLES HANFORD, one of the first settlers in this vicinity, but now of Alabama, Genesee county, in this State.

"I can recommend the *Hydraulic Ram* to farmers who want their springs brought to their houses and barn-yards. I had a good spring on one corner of my farm, with five feet fall, being 50 rods from my house ; I now have it brought to my house and to my barn-yard, and thence to my fields. The pipe used is one and a half inch for the fall to the ram, and half-inch pipe for the conductor up to the house, which is 60 feet rise, making it convenient for a fish pond in my garden, and a fine privilege for a milk house—cold spring water to run around the milk pans and to keep butter cool in the summer—also for a bathing room. It has worked well since it was put down, which was last September. C. H.—*Alabama, N. Y.*

We think the above, from Mr. H., sufficient to satisfy all as to the practicability of the plan, and of its immense advantage. We shall therefore confine our remarks to a description of the machine and the mode of operation. Lest, however, any of our readers should think we are recommending a plan on too slight evidence, we would say that, were it necessary, we could give abundance of such facts from men who have these rams.

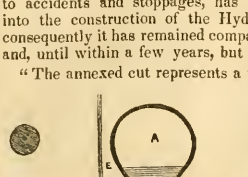
To assist in illustrating the subject, we introduce an engraving showing the Ram in operation. A is the spring, the water of which it is desirable to elevate to the barn, or house, or fountain. B, the pipe conveying water from the spring to the Hydraulic Ram, and from the spring to the ram there must of course be a fall. C is the ram. D, D, pipe conveying water to a trough for cattle, which might of course be carried in any other direction desired. E, pipe supplying water to a fountain. A fall of not less than eighteen inches at the spring, and a quantity of water not less than half a gallon per minute, are necessary to operate the ram : but the greater the fall and the quantity of water furnished, the greater will be the quantity of water elevated by the Ram. The ram and the pipes, when set up for use in a cold climate, should be placed some two or three feet below the surface of the ground, and so covered as to be secure from frost.

We think we could not better explain the philosophy of the Water Ram, than by quoting an article written by W. B. EMEAY, of the Albany Agricultural Warehouse, in the last volume of the Farmer, with the accompanying engraving. Mr. E. says :

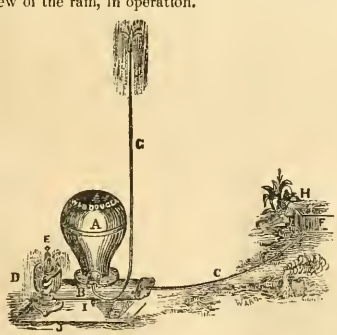
"Although the principle upon which it acts is one of the most simple in nature, and notwithstanding the fact that it has been applied to the raising of water for more than 3000 years, a kind of mystery has hung about it ; and the seeming absurdity of the idea that water can be made to elevate itself above

its level; and to supply a constant and abundant stream at any desired elevation, without the liability to accidents and stoppages, has prevented inquiry into the construction of the Hydraulic Ram; and consequently it has remained comparatively unknown and, until within a few years, but little used.

"The annexed cut represents a vertical section of the Ram. A, the air chamber; B, the waste valve; C, valve opening into the air chamber; D, the feed or driving pipe; E, pipe to convey the water where it is desired. The pipe D should be 30 to 50 feet long, and from 1 to 2 inches calibre; the pipe E any length desired, and about half-inch calibre. Lead pipe is commonly used. The circular figure on the left represents the form of the waste valve. The waste valve is made to vibrate up and down thus: The water passes down the driving pipe D, and escapes at the waste valve B. Now, as any descending body increases in velocity and force every instant of its descent, the column of water descending in the driving pipe, quickly attains sufficient velocity and force to lift the waste valve; but the valve in rising instantly stops the passage, and the whole momentum of the water strikes against it and seeks relief, which is only found at the valve C, through which a quantity of water is forced into the air chamber, where it is confined by the closing of the valve. The momentum being thus expended, and the water at rest, the valve B drops by its own gravity, and is ready to start again. After repeated vibrations, the air chamber becomes partly filled with water, compressing within a small space the air, which, by its elasticity, re-acts upon the water, and forces it up the pipe E to any desired elevation or distance."



The following engraving gives a more distinct view of the ram, in operation.



H, spring or brook. C, drive or supply pipe, from spring to ram. G, pipe conveying water to house or other point required for use. A, B, D, E, I, the Ram. J, the plank or other foundation to which the Ram is secured.

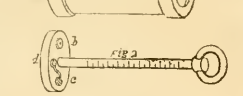
The cost must of course depend upon the distance the water is carried. Lead pipe, 1½ inch, can be procured for about 15 cts. a foot. The price of the Ram of a size fit for general use, is $25.

For the accompanying engravings we are indebted to W. & B. Douglas, the manufacturers, through their agents at this place, Rapalje & Briggs, of whom Rams can be procured, as also at most of the Agricultural Warehouses in the country.

EMERY'S CYLINDER DYNAMOMETER.

This instrument was invented the past season by H. L. Emery, of Albany, N. Y., at great expense for experimenting, altering, &c., &c., and as now made and used, it is nearest the thing for its purpose yet introduced. It has been used at several trials of plows the past season, as well as in experimenting, and has given entire satisfaction to the parties interested. It has been exhibited at the New York State Fair at Syracuse, at the American Institute at New York, and at the Worcester Mechanics' Association at Worcester, Mass., and by each the inventor was awarded a silver medal, with the highest encomiums of their several committees. We cannot give a better description, than to copy that of a committee of seven of the best practical mechanics, machinists and manufacturers, of the Worcester County Mechanics' Association, in whose report they say that "no article of any importance has received a mere cursory glance, or guess, at its merits; but pains have been taken to test every article according to its claims; and we present not our own opinions alone, but with them the facts on which they are predicated."

"It is intended to be used as a comparative test of the power required to overcome the resistance of bodies under draft, and more particularly that of plows.—The usual spring scale has many faults, the chief of which are its vibration, and absence of self-determination of the maximum of the force exerted. This invention remedies these faults. It consists of a strong iron cylinder about eight inches long and two and a half in diameter, into which a piston is ground steam tight, the piston rod passing through the stuffing box in the cylinder head, and receiving in its end the draft ring, a strap hook or ring at the other end of the cylinder, to serve as the attaching or connecting link,



CYLINDER DYNAMOMETER.

"It will be seen that if the piston be sent back to the end of the cylinder, and the space filled with some non-elastic fluid that no force employed for draft purposes could draw the piston out, and if a small opening be made through the piston, so as to make a communication with both ends of the cylinder, the fluid will escape under the pressure and the piston be drawn out in a given time with a given force. This is the arrangement of the Dynamometer under consideration, and a more simple and correct instrument we have never seen; and we recommend a silver medal be awarded the inventor."

A similar report, giving it the reputation of being the best thing of its kind yet seen and examined, is found in each of the published transactions of the State Society and American Institute, for 1849.

Answers to Inquiries.

HORIZONTAL PLOWING.

If your your editorial duties, and those connected with the Patent Office, would allow you time to give us, during the year, full and practical information relative to "horizontal" plowing, as now practiced at the far South, or any other method which will better prevent the "washings" during our heavy summer showers, the information will be gladly and thankfully received by us in this neighborhood. J. B. OWENS.—*West River, A. A. Co., Md.*

Horizontal plowing means, to keep the furrow so near on a level along a side hill, that the water shall not run in it and wash off the fine particles of light mold, loam, clay, and sand. It is mainly from these that the solvent elements of crops, both organic and inorganic, are derived. If the minute atoms in the surface soil are borne off in heavy rains, the fertility of the land is seriously impaired.

To meet extreme cases, horizontal ditches around hills, or along their sides, three or four rods apart, are also required at the South. These are usually twelve or fifteen inches deep and some twenty wide, and made with a plow and cleaned out with hoes. They are not horizontal, strictly speaking, but have a fall of one inch in twelve feet. Unless the water can escape by running off at one end of the ditch, it soon fills in a hard rain, breaks over at the lower side, and lets the whole current fall into the ditch below, which in turn gives way also, and a gully is soon formed, in light land, deep enough to hide a Pennsylvania six horse wagon and team.

The deeper land is plowed, the less liable it is to wash. Side hill plows should be used in plowing land much inclined to wash. In making side hill ditches, either a water or a spirit level is used to keep them on a true grade, although considerable experience enables one to locate a ditch by the eye alone. A fall of one foot in one hundred feet answers very well to give a gentle current to carry off water without damage.

STRIDING CATERPILLAR.

MESSRS. EDITORS:—A few years since, an insect called the "*Striding Caterpillar*," made its appearance in our hop fields early in July. It is of a green color, one-eighth of an inch long, increasing to an inch at maturity. Its depredations have been increasing ever since, first preying upon the leaf until the plant is stripped, and then attacking the hop.

If you have discovered any means of checking the ravages of this destructive insect, you will confer a great benefit upon hop culture, and a number of your old subscribers, by inserting them in your next number. AN OLD SUBSCRIBER. —*March*, 1850.

Will some reader give us more light in regard to this insect?

SALT.—THE LARGE WHITE GRUB.

MESSRS. EDITORS:—Two years ago I had a field of wheat almost entirely destroyed by the large white grub-worm, and I now have the same field in wheat again. The worms were still to be seen last fall, when the field was plowed. Would salt sown on the wheat in the spring, be a preventive? If not, but wool? JOHN DICKSON.—*Sandyville, Ohio. March*, 1850.

Salt enough to kill the worms would be likely to injure the crop. A little salt, however, will benefit the crop; and perhaps it will bear enough to destroy, or drive the depredators deep into the earth. Try a few rods, and report the result.

A DILEMMA.

MESSRS. EDITORS:—I find myself in a dilemma in relation to a quantity of straw which has been suffered to accumulate in my yard for a number of years, which, by the by, is well stocked with tare seed; and I should think by the appearance, that the pile has been made of about the whole straw produce of the farm for at least eight years.

Now, my trouble is not that there is so much of it, but I wish to know how I can get it into a suitable state for use in the quickest and cheapest manner. Can I put a quantity of stone lime at the bottom of the stack, apply water and slake it without danger of burning my barn? If I can not, please inform me how it can be done. Can you tell me of an article that will produce decomposition active enough to prevent the tare seed from vegetating? If so, please inform me through your next number, and I think it will be satisfactory to others as well as myself, as there are hundreds similarly situated. A NOVICE.—*Lima, N. Y., March*, 1850.

Place your heap of unslaked lime so far from your barn that if it sets fire to the mass of straw, it will burn nothing else; but if the mass of partly rotted straw be *wet*, as it should be, it will burn but little more than a snow bank. Oil of vitriol will kill the germs in seeds; but it is rather too expensive for your use. Heat generated by slaking lime, is the best means available. There is very little danger of setting a mass of wet straw on fire.

IRRIGATION AND SOILING.

MESSRS. EDITORS:—For the information of myself and some others of your readers, I would like to inquire whether soiling for dairy purposes is practiced in this country, and to what extent? and whether cows under that treament would be healthy during our hot summer months? and what would be the difference in the quantity of milk to a cow running at large? and whether this system would, or would not, be the most economical one, where water can be had in sufficient quantity for enriching or improving our small farms in the interior of this State? Any information on the above subject, accurately given from actual experience, would be received with interest, so that a young farmer might know with some degree of certainty, the profit or loss. LANSINGVILLE.—*Lansing, N. Y., March*, 1850.

Irrigate your pastures and meadows in all cases where it can be done at a moderate expense. This need not prevent one from growing corn, clover, rye, barley, oats, or peas, for soiling purposes. Partly cure all green succulent plants before feeding them to cows, horses, mules, or oxen. This practice is increasing in both the Northern and Southern States, and will long continue to increase as its advantages are better known. Of course, a man may commit blunders at this business, as in every other branch of farm economy about which he knows but little.

VALUE OF GAS LIME.

MESSRS. EDITORS:—Will you do me the favor of informing me of how much value for converting muck into manure, is the *gas lime*—lime used to purify gas. It is principally oyster shell lime that is used at this place, and can be bought at $3 per hundred bushels. Prof. JOHNSTON says that it is not worth much; but that, if made into compost, it will not hurt the crops. I have not found anything, from our own countrymen on the subject, or in your valuable journal. Please send me an account, if you can conveniently, and much oblige CHAS. P. COWLES.—*Syracuse, March*, 1850.

If you have but a short distance to haul the lime, it will pay well to buy it at $3 per one 100 bushels, unless your soil abounds in lime already. In that case, you will but carry coal to New Castle. All depends on your land. A little may be gained from the gas.

Horticultural Department.

EDITED BY P. BARRY.

HINTS ON THE MANAGEMENT OF TREES.

The planting of trees will now be finished, in most parts of the country. Presuming that this has been well done — that the ground was well prepared, the roots and tops judiciously pruned, and due pains taken to place the tree in such a condition in its new situation as to give a reasonable hope of its success — planters will probably consider the work done, and leave the trees to themselves for the summer; but this will not do. Every tree that has been planted this spring or last fall, should be examined. The frosts may have drawn them out of the ground; the earth may be settled so as to leave the roots exposed; the wind may have blown them out of their upright position, and left a crevice around the base for the air to penetrate; the earth may have become baked and cracked; and so on. Under any or all of these circumstances, immediate attention is necessary.— The growing season has commenced, and it is highly necessary, if we wish trees to prosper, to put them in such a condition that they can make the best of it. If stakes be necessary, they should be provided at once, and the trees be carefully tied to them. In all orchard planting, when trees are exposed and exceed four feet in height, stakes or supports are essential. The ground should be frequently stirred to keep it loose and fine, and when it has settled away from the roots, it should be drawn carefully up to them. Mulching is a great safeguard in our dry climate; indeed, every tree should be kept mulched for the first year: that is, the ground should be covered about the tree, as far as the roots extend, and a foot beyond, with litter or manure, to the depth of several inches. It preserves the moisture of the soil, and an even temperature, that greatly modifies the scorching influence of our hot sun, and facilitate the growth of new roots. We speak from abundant experience on this subject, and might quote pages of instances of the good effects it has produced; beside, it is actually a saving of labor; because, without mulching, the ground about the trees, if we wish to see them live and grow, must be kept clean and mellow. Mulching prevents the necessity of this, as it keeps down weeds and prevents the possibility of the ground baking or cracking. Mulch your trees, then, by all means, and do it soon — do it at once. If a severe drouth should ensue, newly planted trees in dry soils may require watering. This will be easily ascertained by the flagging and languishing of the young shoots. In such cases, the mulching and a couple of inches of soil should be removed, and a liberal supply of water be furnished; a pailful or two to a young tree is little enough to do any good; indeed, it should be poured in slowly until the ground for some distance from the tree is thoroughly saturated, and will contain no more; then replace the earth and mulching, and that will in nearly all cases be sufficient to carry the tree out of danger from drouth.

We are thus particular on this point, because we hear so much said continually about trees dying in dry weather, when a little care of this sort would have saved them and insured their prosperity. It is really shameful that people should purchase good trees, take pains in preparing their ground and in planting, and then for the want of a little watching and care afterwards, let them die, and throw the blame upon the nurseryman, or the planter, or some one else who had nothing to do with the cause of their failure.

Another point should be noted in the case of newly planted trees. If circumstances connected with the weather, the soil, or the time of planting be unfavorable, you may have left too much of head or side branches on your trees, the growth of the top may not be seconded or aided by the roots sufficiently, and the tree will either stand still or flag and die. In such cases, the remedy, in addition to that already alluded to, will be *cutting back closer*, thus reducing the growing surface and lessing the demand upon the roots. We have often had to cut back closer than we wished, to make the tree start vigorously. Last season we planted some pear trees in a damaged state, apparently quite hopeless cases, all dried and shriveled up. Some we pruned every branch off the stem, leaving only one eye at the base of each, to make a new branch. Others we cut stem and all off within a foot of the ground. Nearly all lived; but while the former made but an inch or two of growth of young branches, the latter threw up numerous strong branches from a foot to two feet in length, and in the autumn were much the handsomest and best trees — better rooted, and every way superior.

It is difficult to persuade our impatient planters into a proper system of reducing the heads of their trees. They will search the country over for *large* trees — "the larger the better" — and then they will not remove an inch of their wood; that would be directly opposed to their principle—their motto, "the larger the better." Experience, however, will remedy this; but it will be dearly bought in many cases. The experienced cultivator, when he goes to purchase trees, or select them for planting, will endeavor to procure first rate sorts; and instead of looking merely at the height of the trees, will see that they have *thrifty, stout bodies, and good roots;* the mere matter of height is of no importance to him, if everything else be right. The inexperienced, as a general thing, will cast his eye around for the *tallest* tree, and have that if he can, regarding all the other considerations of minor importance. What a mistake he makes!

The numerous and frequent attacks of insects require continual watching too, during all the growing season. As soon as the leaves are expanded, they are liable to suffer from leaf-rollers, aphis, slugs, caterpillars, and a multitude of leaf-devouring bugs and beetles. Everything that affects the foliage injuriously, should be carefully guarded against. The horticulturist who wishes to be successful, must wage an unceasing warfare against insects.

We ought to have remarked, while treating of

mulching, that it may be very advantageously applied to trees of any age or size, and particularly to pear trees. All dwarf trees should be kept mulched; the roots of the stocks they are usually worked upon are small, fibrous, and near the surface, and consequently more easily affected by external circumstances.—Mulching is therefore highly advantageous to them, of whatever age, and especially in dry soils. Dwarf bearing trees are greatly benefitted by an occasional application of liquid manure; it will aid greatly in keeping up and renewing their vigor, and will improve the size, beauty, and flavor of their fruit. Without such care as this, dwarf trees are apt to exhaust themselves by their excessive bearing.

THE DIANA GRAPE.

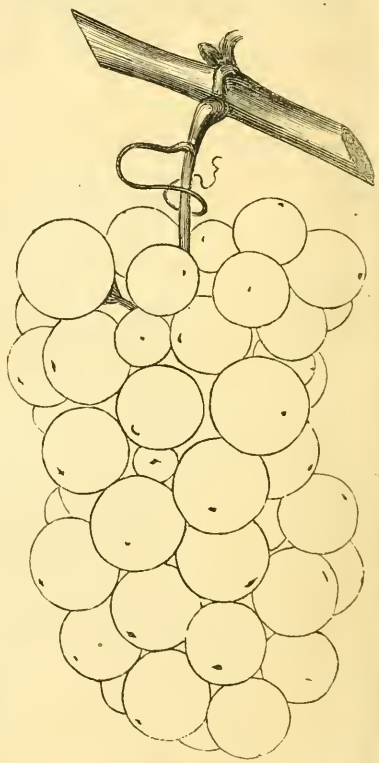
THE fact that foreign varieties of the Grape can not be successfully cultivated in the open air in our northern States, to any considerable extent, renders the acquisition of a new native sort of excellence a most important matter. At present the *Isabella*, *Catawba*, and *Clinton*, are the only sorts that can be relied upon for ordinary culture, and the Catawba requires a very favorable season to ripen, in a large portion of the country. The best of these too, in flavor, are quite below the delicious foreign sorts, and require great amelioration to make them what a grape ought to be.

This new variety, the *Diana*, from all accounts, is a great improvement, both in flavor and early ripening. We saw some specimens exhibited at the Congress of Fruit Growers last autumn, and in appearance they struck us as being very similar to, though not so large as the *Catawba*. We trust that further experience will prove it to be all that is claimed for it; and if so, it must soon occupy a place in every garden. We give the following figure and account of it from HOVEY'S Magazine:

The Diana, when first exhibited, was shown for the purpose of ascertaining the name of the variety; for although MRS. CREHORE raised the vine from seed, Squire SEAVER, of Roxbury, "had no doubt it was the Catawba," and she was naturally desirous of ascertaining whether it was in reality that variety; and we well remember that some of the gentlemen who first saw it, remarked, that though it was ripe so early as the 23d of September, it was doubtful whether it was not the Catawba, only grown in some warm and sheltered locality. Its great resemblance to the Catawba favored this impression so much, that after an inspection of the original vine, when in fruit, the succeeding year, some of our amateur cultivators were convinced it was only that variety.

MRS. CREHORE, from the high opinion we had expressed of the variety, and the desire to possess it, kindly sent us a few of the cuttings in the fall of 1843. From them we raised four or five plants, in pots, in the summer of 1844. But from the idea entertained by many, that it was only the Catawba, we neglected our vines. Two of them were turned out into the ground in the spring of 1846, and they did not again attract any attention till the fall of 1848, when, passing the vine after the leaves had partly fallen, we discovered a few straggling clusters of grapes. Naturally curious to know whether the variety was as fine as we originally esteemed it, we tasted some of the berries, and, to our great surprise, we found them perfectly delicious, far excelling the Catawba. We then regretted that we should not have earlier ascertained, and made known, its great merits. Last fall we had a crop of fine large clusters, ripe fully a week before the Isabella, and so superior to that variety that they obtained the prize of the Massachusetts Horticultural Society, as the finest native grape.

Vine vigorous, making rather slender wood when young; but growing more rapidly after it has attained age. Wood light brown, rather long-jointed. Leaves similar to the Catawba, without lobes. Bunch medium size, about four inches long, without shoulders. Berries medium size, round, closely set, forming a compact cluster, of a delicate pale red color, with a greyish bloom, not so dark as the Catawba. Flesh, with scarcely any pulp, juicy, rich, and vinous, with a high, delicious flavor. Seeds, generally two, rather small. Ripe from a week to ten days before the Isabella. It is a most abundant bearer, and has less of the taste peculiar to our native grape, than any other variety. It also possesses a peculiarity which we have not noticed in other sorts, as early as the first of September, when the berries first change to a grayish tinge, they are quite sweet, and agreeable to the taste, but they do not acquire the high flavor which constitutes its great excellence until they assume their full color, when it is one of the handsomest grapes we have ever seen.



DIANA GRAPE.

We have omitted, in Mr. HOVEY'S account, a letter from Mr. CREHORE, giving a history of its origin. On this point it may be proper to remark that it was produced from seeds sown in 1832, by MRS. CREHORE of Milton. It first bore in 1838, and was exhibited before the Massachusetts Hort. Society in 1843.

S. H. COLTON of Worcester, Mass., says in last month's Cultivator, that he and many others have succeeded badly in raising this grape from cuttings, owing, he remarks, probably to the slenderness of its wood.

WEEPING TREE ROSES.

In how many ways the Rose is capable of contributing to garden embellishment! We can have *Dwarf Roses* in clumps and masses on the lawn or border, covering the ground as completely as would a mass of verbenas or heliotropes; then we can have *Pillar Roses*, four to ten feet high—actually pillars of roses, as perfect as art could frame and weave them; then again we have *Climbing Roses*, covering walls and arbors, or spreading and mingling with the branches and foliage of trees; next we have *Tree Roses*—miniature trees, for garden avenues and to mingle with trees and shrubs for the decoration of lawns and shrubberies. In all these forms the Rose is susceptible of producing the most pleasing effect. As the culture of the Rose progresses, these modes will continue to be improved, and new ones, still more striking and effective, suggested; for Rose growers are not only taxing their genius in producing novelties in the flowers themselves, but in the forms and combinations of culture and training. The latest, and as it appears to us, one of the most pleasing novelties in the latter respect, is the production of *Tree Weeping Roses*.

Imagine a miniature tree, some six feet in height, with a spreading pendulous head measuring as much in diameter, covered with such beautiful roses as our Queen of the Prairies! We saw nothing abroad, connected with rose culture, so interesting as Mr. Rivers' specimens of these Weeping Roses. This gentleman is noted all the world over as a most successful rose grower; and he has been one of the first to illustrate and draw attention to this matter. We therefore copy from Beck's Florist the following article from his pen, which we are sure will be interesting to all our readers who are interested in the culture of the Rose.

WEEPING TREE ROSE.

Standard *Climbing* Roses!"—an odd assemblage of terms, and yet I know not what else to call them. "Weeping Roses" is scarcely applicable, for they are not all strictly pendulous. How diversified are the purposes to which the beautiful Rose is applied! Have we an unsightly wall, it may be hidden by Climbing Roses; an ornamental verandah to embellish, what is so beautiful as some of the Climbing Noisette Roses? a wilderness to ornament, nothing to equal some of the varieties of Sempervirens and Ayrshire Roses, suffered to grow as nature dictates; a highly dressed lawn to finish, what can be more beautiful than clumps of Bourbon and other Autumnal Roses?—but of this more anon. Your pages will, I trust, often derive additional interest from articles on the Rose and its culture; my business is now with those rustic beauties named at the head of this article; at present they are too little known, but I hope to make them more so.

Some six years since, having some rose-stocks five or six feet high, and stout as broom-handles, I was induced to try what effect some of the beautiful varieties of Rosa Sempervirens would have if budded on them, as I had some latent idea that they would form very graceful pendulous trees; I accordingly selected from that family a few of its most interesting varieties. These trees are, in the blooming season, pictures of beauty; not a shoot has ever been touched by the pruning-knife; there is consequently no formality; their beauty consists in their gracefulness and rusticity, which is quite refreshing in contrast to the closely pruned heads of the finer varieties of Standard Roses.

The most interesting sorts in the above named group, for standards, are the following:—Banksiæflora, with very double flowers, pure white, the center of each bloom pale yellow or straw-color. Donna Maria, flowers comparatively large, very double, and of the purest white. Felicite Perpetuelle, with flowers of a creamy white, tinted with pink on the outside: it really is *perfect* enjoyment to see this Rose, in a balmy morning in June, covered with its flowery gems more numerous than its leaves. Myrianthes, with its abundance of flowers of the most delicate pink, is equally worthy of a place on the lawn. Princesse Louise is also a charming variety, with flowers nearly of the same color as the preceding, but larger, and more cupped. Princesse Marie is nearly the deepest in color of this elegant group; its foliage is also darker, and its habit more robust than some others: it soon forms a most beautiful standard. In fine contrast is Rampant, with its flowers of pearly white: this lovely variety is most slender and graceful in its habit, and continues a long time in bloom, it also often gives a second crop of flowers in autumn. No one can tell how beautiful all these roses are as standards; they are nearly evergreen, and every season are they covered with their peculiarly neat and very double flowers; and in two or three years their pendulous branches, waving with every breeze, reach the ground. The lover of Roses may sit under the shade of a Rose-*tree*, and luxuriate in the contemplation of the varied beauties of nature assisted by art.

It will be seen that nearly all the foregoing are remarkable for the *delicacy* of their tints: some one perhaps will exclaim, "There is not enough variation in color; give us more color!" Well, then, let us turn to the most gorgeous of Roses.

The Rose Amadis, or Crimson Boursault, as a Standard Rose, is quite unrivalled; it is also one of the first to gladden us in "the merry month of June;" and when cultivated as standards in rich soils, not content with giving its brilliant crimson flowers (perhaps the most brilliant of Roses) in the utmost profusion, it continues to bloom at intervals nearly all the summer and autumn; but in June its branches are weighed to the ground with their splendid burden, arresting the attention of the most indifferent. I am not writing of what *will* or *may* be; for some trees, now from four to six years old, growing here, deserve more than my pen can convey. Their stems are eight inches in girth, and their heads spread over a space ten feet in diameter. How magnificent would be an avenue of standards of this Rose!

The Boursault Gracilis, with flowers of a bright pink,

capped, and beautifully formed, is equally eligible as a tall standard; its branches are thorny, and more rigid than those of the preceding; it comes into bloom a few days after it, and soon forms a fine spreading tree. Boursault Inermis has flowers of a rather deep and bright red; this has the same luxuriant growth, and, like the above, will soon make a tree of large size.

To make a collection of Standard Climbing Roses complete, we must enlist a few of the Ayrshire Roses, for a reason which I shall hereafter give; and among these, Bennet's Seedling, or Rosa Thoresbyana, which covers itself with its very double flowers of the purest white, deserves a place. The Dundee Rambler also is a most robust-growing and beautiful variety; the outer petals of its flowers are often tinted with pink. Roga, not quite so gracefully pendulous as some above enumerated, is exceedingly pretty, with its delicate flesh-colored blossoms, which are slightly fragrant; and Splendens, with its large globular flowers of creamy white, is remarkably and elegantly so; its branches have so much grace, waving with every breeze, that the eye is at once attracted. These few varieties I have described, bloom in succession nearly as follows:—first, the Crimson Boursault, and then the Boursault Gracilis and Boursault Inermis; Bennet's Seedling and the other Ayrshires trip merrily along, scarcely in the rear; and then our more steady and enduring friends, the varieties of Rosa Sempervirens, with their slowly fading flowers and never fading leaves.

If Standard Climbing Roses are purchased, supposing they are planted in December, they should be pruned in the February following, *i. e.* on being transplanted they must always be pruned. This pruning should be tolerably severe, each shoot shortened to within six or eight buds; the tree will then, the first season, form the foundation of a well proportioned head: no more pruning will be required. I have just stepped out to look at my standards, and find that some dead shoots in the center of some of my trees, hidden by the leaves in summer, may now be removed: and that is all. How pleasant it is to have Standard Roses requiring no pruning! for it really goes home to the heart of a Rose-lover to have to shear off, for the future welfare of the tree, all the finest and most luxuriant branches, which, as they fall to the ground under the knife of the operator, seem to lament their hard fate in being thus "*cut off*" only because they are too full of health and vigor.

Those who can procure their own stocks should select them perfectly straight, and none of them of less size than a gun-barrel, as much stouter as possible; their height may be from four to six feet,—if the situation they are to be planted in is exposed to winds, the former height is preferable; the first summer after planting they may be budded; three shoots, if possible, should be left for this purpose. the following spring they will "break" with much vigor. As soon as the shoot from each bud is six inches long, pinch off its top; laterals will be soon produced; these, if your three buds are successful, will not require further pinching; but if you have saved only one or two buds, you must pinch till you have enough laterals to form a well furnished head. Then all is finished, and you have nothing but enjoyment to look forward to; no pruning cares to disturb your equanimity and prick your fingers in winter, or pinching and disbudding with the same risk in summer.

The annexed cut, from Paul's Rose Garden, conveys a good idea of one of the Weeping Roses. Our double prairie roses, *Queen of the Prairies*, *Baltimore Belle*, *Perpetual Pink*, and all the others, are the very best for this purpose, and our native sweet briar, to be found in all parts of the country, an excellent stock, strong and hardy. Here we have at hand all the materials for the production, at little cost, of these charming trees. Who will neglect to cultivate them, that has a rod of ground to embellish?

Mr. Rivers treats so fully of the details of culture, that not a word more on that point need be added.

Answers to Correspondents.—J. W., *Ulysses*. Your thorn seeds will vegetate well the second year. It is better to put in a "rot heap" one year before sowing. It is a bad practice to cause the buds of fruit trees to start and grow the same year they are inserted. We quite agree with you in cautioning beginners against it.

FLOWER GARDENING.

This month (May,) is the time for giving the finishing touch to the flower gardens and borders, by turning out *Verbenas*, *Monthly Roses*, *Heliotropes*, *Petunias*, *Phloxes*, *Salvias*, and all such plants as have been grown in pots for this purpose. Have the ground in good order—*rich, mellow, and deep*. On a cloudy day, turn them out without breaking the balls of earth in which they grow. If the weather is warm and dry, water and shade them for a day or two. *Dahlias* should be planted about the end of the month. Strong young plants in pots are much better than old roots. Turn them carefully out of the pots, on a moist, cloudy day, if possible, and put a stake four or five feet high to each, that the stems may be tied to at once; they are succulent and easily broken by the wind. Plant none but first rate sorts, as a poor Dahlia is the meanest thing imaginable, and a really good one surpasses all other flowers of the garden, in richness and beauty. Box edging may be set all the month. This should be done neatly. When box is newly set, it should not show more than two or three inches of a thin, even, connected line above the ground. Some people plant it like trees, or hedge plants, leaving spaces between each, making a most ridiculous thing of it.

Evergreens may be planted all this month. There should be no house in the country, without evergreens. They are in every season both useful and beautiful, for the shade, shelter, and variety they give. The White Pine, Balsam Fir, Hemlock, Red and White Spruce, and Red and White Cedar, are all native trees and easily obtained. The Norway Spruce, Silver Fir, Scotch Fir, Austrian Fir, besides the new and rare species, such as the Deodar, Auracaria, Cedar of Lebanon, Lofty and Bhotan Pine, Smith's or Himalayan Spruce, and a multitude of others, can be had at the nurseries. Every man in the country who has an acre or two of ground about his house, to spare, should make an arboretum of it. By planting a few trees every year, at leisure times, he might soon have a collection equal to that of some of the English noblemen, and at a very trifling expenditure. See what a variety our own forests produce! Let us think and do a little for the beautiful, and not all and always for the useful.

The Season.—Up to this time (April 15th) we have had unusually cold weather for the season. Vegetation is no more forward now than it was in February last, generally speaking. The fruit buds, however, look well, and the probability is that when the weather does come warm, we shall have no material drawbacks in the way of unseasonable cold, as last season.

The New Hampshire Festival.—A very kind friend at Boston has favored us with a copy of the proceedings of this great festival, printed and bound in a style equal to our best annuals. We shall give an interesting extract from this work in our next.

Several communications on hand, but crowded out of this number. A. W., Marcellus, N. Y.; A. Stone, of Hinmanville: G. W., Victor; S. Trask, and others, will appear next month.

We learn that the proceedings of the Pomological Congress are in press, at Albany. It is a great pity their publication has been so long delayed.

Ladies' Department.

FLOWERS, CORRESPONDENCE, &c.

We are gratified that our efforts to interest and instruct the readers of this department have not been in vain. The notes we are receiving from our fair readers, thanking us for the information already given, and asking still more, is a grateful reward for any labor we may have bestowed. During the spring we shall treat of gardens and flowers, but we shall not forget the more responsible duties of life; and if we have our own way of teaching the *useful* in connection with the *beautiful*, we flatter ourselves that our plan is not a *bad* one. That some of our friends think so too, the following, and other communications we have in our possession, is proof:

Messrs. Editors:—If you will be so kind as to send me the remaining *Ladies' Rake*, I will try to use it with "zeal" and "intelligence." I thank you, in the name of my sex, for the "Ladies' Department" of your useful and interesting paper; and I earnestly hope your valuable suggestions, as regards the choice and culture of flowers, will be continued from time to time, as the sweet season progresses. A Farmer's Daughter.—*Rosedale, April*, 1850.

Whenever we stray away from home, and visit the country, villages, or cities, we notice the gardens more than people or houses, and we involuntarily have an impression made upon our mind, of the intelligence and refinement of the people by the appearance of the gardens. We have heard some remark that, whenever they heard music in a house, that house became associated in their minds with peace and refinement, cultivated taste, and a happy home. We take our key from the garden.

Flower Gardens are generally too "fixed up"—too "fussy," as the ladies sometimes say. Straight, narrow paths, bordered with stones, or shells, or box, and even bones,—small beds in the form of triangles, diamonds, hearts, &c., are too common, but never pleasing. You have often stood on the bank of some beautiful stream, and watched it, delighted—almost enchanted—as it wound its graceful meandering course through the valley, lost to your view at some points by intervening trees, and again appearing in the distance like a bright silver thread. The bank of that river is fringed with trees; but they stand not at regular distances, like sentinels, but here and there a group, connected perhaps by a few scattering trees. Let this be your model. Lay out your walks gracefully winding as the river; plant your flowers and shrubs and trees in little groups. Thus imitate nature, and the effect will be pleasing.

In our last we recommended Petunias, Verbenas, Dwarf Phloxes, Perpetual Roses, Scarlet Geraniums, &c., for planting in masses or groups; but we would not omit the Dahlias, as no flower garden can dispense with them—at least a dozen or two, to cheer and brighten the fading autumn, by their showy, brilliant, and perfect flowers. All these plants that we have alluded to, may be bought (excepting the Roses and Dahlias) at a dollar or two per dozen, in pots, at the nurseries, ready for turning out, and will bloom in a week or two after planting.

But, above all, the ground should at once be put in readiness by trenching (deep digging) and manuring, for without deep, rich, and mellow ground, success cannot be expected.

It appears from the following, that we have not only attracted attention to the cultivation of flowers, but even to the more useful and not less *exciting*:

Messrs. Editors:—As you are fond of gossiping with the ladies, permit me to have a short gossip with you. I had the pleasure, not long since, of perusing an article in your March number, addressed to the ladies, on the delights of out-door exercise, and have been induced, partly by that and partly by my own inclination, to throw aside my books and my embroidery, and turn my attention to the onion beds. Yes, Messrs. Editors, I expect shortly to equal the "fair onion weeders of Wethersfield" in their sublime art, and though I may not always have the "smile on my lip," I shall probably have the "tear in my eye." But I am only a beginner; can not you give me some information in your next, as to the best method of cultivation? I intend to cultivate the ornamental, however, as well as the useful, (by the way, as my onion beds are in a conspicuous situation, how do you think a border of phloxes would look around them?) and, Messrs. Editors, I have fallen in love with the *Ladies' Floral Rake*, which you say you are willing to give to "any lady who will make good use of it." Can you doubt, after what I have said, that I am *the one?* I know your gallantry will not permit you to refuse such a request from a lady; therefore I shall expect the rake will arrive by the next express, as I shall soon want to use it, and I find it perfectly impossible to use a heavy garden rake to advantage among the flowers. E. C. D.—*Brook's Grove, March*, 1850.

We believe in a place for every thing, and we think an onion bed is a poor place for phloxes. We really had no idea of causing the unbidden tear to flow, yet we think it far more sensible to weep over a bed of the *Allium cepa* than at the misfortunes of an imaginary hero or heroine.

Messrs. Editors:—In your March "gossip with the ladies," I *practically* admire your ideas of female accomplishments, albeit *I* can *not saddle* the horse. You also proffer to any of your *fair* readers, "who will make good use of it," that neat *Ladies' Floral Rake* you speak of. Now, those ladies who practice your precepts, will hardly fail to be "slightly tinged with brown," and thereby must be excluded from the prize.

Pa wished to say, in regard to pruning peach trees, that his experience of several years, with a large orchard, has taught him that early pruning will cause the branch to "die back"—that the trees should not be pruned until the bud is near blooming. Lucretia.

If "Lucretia" will send her address by mail, we will send her the rake, even if she be "slightly tinged with brown." You are quite right in regard to pruning the peach. We hope that "Lucretia" will send us some of her own experience in floriculture, during the season.

Messrs. Editors:—I can see no part of your valuable paper that ought to be dispensed with, not even the "Ladies' Department," particularly when supplied with such articles as the March number; for the cases are too rare in which it would not apply with *truth*. Yet, if farmers' wives would contribute (not their grievances) some of their *real, practical* knowledge, would it not do good in more ways than one? perhaps beget an interest in the good, orderly house-keeper, who sometimes complains that her husband takes so many papers, it keeps her busy arranging them, or that it takes all they can earn to pay for them.

The following recipe for making *Apple Dumplings* is at your disposal:—Fill a four quart pan half full of sour apples, pared and sliced; add a quart or sufficient water to cook them; put several bits of butter, about the size of a walnut, around the edge of the pan. For the crust, take a small sized tea-cupful of sour cream, two of sour milk, two teaspoonfuls of pulverized saleratus rubbed into the flour; add the wetting and a little salt. Roll it to fit the pan, and press it firmly all around; cover tight with another pan; set it upon the stove, and cook briskly three quarters of an hour; then remove the cover and try with a fork to see if done; if so, run a knife around the edge of the crust and turn the whole upon a platter, and you have a *dumpling proper*. Serve hot, with good butter and new maple syrup.

Preparation for Boots.—Place an iron vessel upon the stove, put in two or three pounds of tallow, and as much India rubber as the half of an old shoe, keep it very hot two or three hours, then add a little lamphlack. When sufficiently cool apply freely. A Farmer's Wife.

Editor's Table.

PREMIUMS FOR SUBSCRIBERS TO THE FARMER.—Below we give the PRIZES awarded for subscribers obtained to the Farmer up to the 15th of April. In addition to the names here given, many have procured and forwarded us large lists, who are not only entitled to our warmest thanks, but, considering the places in which they reside and the labor bestowed, are perhaps as fully entitled to premiums as any of the successful competitors. To such we have thus far endeavored to be as liberal as the low price of our paper would admit of; and we are gratified to state that while we have not heard one word of complaint from any, many have returned us sincere and *substantial* thanks, and even have expressed the opinion that we were doing more for them than their labors merited. Many of such friends will yet hear from us. Before this number reaches our subscribers, we shall have returned from New York and Boston with a complete assortment of Agricultural Books, and shall be able to attend to all orders from our friends. If any entitled to premiums wish any particular books, they will please send us word immediately, as also the manner in which they wish them sent, as otherwise we shall use our judgement in the selection of books, and also the best mode of conveyance. One object we have in view is the circulation of good Agricultural Books; but if particularly desired, we will substitute Agricultural Implements in payment of any of the premiums. In our next offer of premiums we shall not only offer more, but endeavor to make them so general that every one may "reap the reward of his labors.

1st. To Joseph Watson, Clyde, N. Y., an Agricultural Library worth $30, put up in a handsome case, for 360 subscribers.

2d. To E. C. Bliss, Westfield, N. Y., an Agricultural Library worth $25, with case, for 316 subscribers.

3d. E. Howland, Mechanicsville, N. Y., an Agricultural Library worth $20, with case, for 232 subscribers.

4th. J. H. Stanley, Le Roy, N. Y., Transactions of N.Y. State Agricultural Society from 1843 to 1850 inclusive, for 100 subscribers.

5th. Orrin Bishop, Dundee, N. Y., $10 in Agricultural Books, for 90 subscribers.

6th. John Davis, Birmingham, Michigan, $5 in Agricultural Books, for 85 subscribers.

John L. Dolsen, Chatham, C. W.; Moses Eames, Rutland, N. Y.; Allen Hale, East Smithfield, Pa.; R. A. Woodcock, Oxford, C. W.; and J. W. Reed, Lockport, N. Y., each five bound volumes of Farmer.

To avoid any dissatisfaction on the part of our competitors, we award O. B. Scott, of Woodville, Jeff. Co., N. Y., $10 in Agricultural Books, (a special premium,) for 96 subscribers. Mr. Scott has labored hard and faithfully, but we fear might be considered by some of our competitors a *traveling* rather than a *local* agent. This is the premium to which he would have been entitled, so that neither Mr. S. nor any of our friends will have cause to complain.

THE AMERICAN FARMER.—This is the title of a very neat monthly, of 32 pages, printed at Harrisburgh, Pa., in the German language. The publisher says:—

"Its object is to serve as a medium of mutual instruction, as a register of all useful improvements in practical farming, and as an advocate of the rights and interests of that large and respectable class of the agricultural community who, being more familiar with the German language, are but distantly reached by the powerful influences of the English agricultural press. The usefulness and importance of such a paper must be obvious to all who are aware of the extent to which the German language is used by the farming population of the middle states especially; and it being the only agricultural journal in the United States now published in the German language, it is confidently expected that the friends of this main stay of all national prosperity, will kindly exert their influence in widening the circulation of the 'Farmer.'"

It bids fair to be a valuable auxiliary in the work of improvement, and we earnestly hope that it will meet with success. We may occasionally give translations. J. M. BECK, publisher. $1 per year, in advance.

LARGE CROP OF BEETS.—D. WARNER, one of our subscribers at Cornwall, Vt., raised last season 585 bushels of the White Sugar beet on one-half acre. He took the first premium offered by the Addison County Society.

AGRICULTURAL IMPLEMENTS IN ROCHESTER.—We think we may safely say there is no place west of Albany where as good an assortment of all the valuable agricultural implements and machines can be found, as at Rochester. Messrs. RAPALJE & BRIGGS have an extensive establishment on Buffalo street, literally crammed full, containing every thing that can be asked for, from an apple-pearer to a threshing machine. JAMES P. FOGG, of the Seed Store No. 12 Front street, as will be seen by his advertisement, has leased the adjoining store, (No. 14,) where he intends to keep a good stock of Farming Tools. Mr. F. has been engaged in the Seed business, in this place, for seven or eight years, and his success is evidence that his manner of doing business is satisfactory to his customers.

We are at all times ready to aid our friends in purchasing and forwarding any implements they may need, or in giving any information in our power.

TRIAL OF PLOWS UNDER THE DIRECTION OF THE STATE AGRICULTURAL SOCIETY.—The Executive Committee have appointed a trial of plows, to take place the second week in June, at Albany. The object is to ascertain the *best plows* now made for the different kinds of work, a matter of the utmost importance to the farmer. The very efficient Secretary has issued a circular in which he says: "The only object of the Executive Committee is, to ascertain, if practicable, the best plows for *stiff soils*, for *sandy soils*, for *fallows on old land; best sub-soil plow; best side-hill plow.*" The competition is open to *all*, and we hope *all* will feel interested in making it alike interesting and profitable. For rules regulating the trial, &c., see premium list.

TO DESTROY BURDOCK.—We are requested to inform all farmers who are troubled with burdock, that this is the time to destroy them. As they are making their appearance above ground, cut just below the crown with a spade, and the work is done.

MONROE COUNTY AGRICULTURAL SOCIETY.—A meeting of this Society will be held at the office of the Genesee Farmer, on Tuesday, the 7th day of May next, to prepare a list of premiums, the appointment of Town Committees, and the selection of Judges for the ensuing year. A full attendance is requested. JOSEPH ALLEYN, Sec'y.

Rochester, April 18, 1850.

The Thorough Bred Blood Horse Sir Henry

WILL continue to stand at the stable of the subscriber, one and a half miles northwest of Churchville, in the town of Riga, Monroe county. Terms $10 to insure a foal. Gentlemen from a distance will find good pastures, and will receive such attention as they desire, and on the most reasonable terms.

Sir Henry is of a beautiful unfadlog bay color, stands 16 hands and 1 inch high without shoes, and is a sure foal getter. He is remarkable for his vigor of constitution, his developments of bone and muscle, and his intelligent, kind, and docile disposition. He is compact and short legged for a thorough bred Blood horse; yet of a raogey and majestic figure. His action is graceful, but at the same time proud and commanding. But what is perhaps of more importance, he is descended through all the generations that are recorded in the English turf register. There is no horse living that can boast of a more illustrious pedigree: his immediate ancestors, who are of unparalleled beauty and elegance of figure. The superiority and value of this horse is abundantly proved by the following facts:—In 1844 Sir Henry received the first premium for Blood horses at the Onondaga County Fair; in September, 1845, he took the second premium for Blood horses at the great State Fair at Utica, (see the report of the committee on Blood horses, in the Transactions of the N Y. State Ag. Society for 1845, volume 6;) and the same season the first premium at the Orleans County Fair; and in April, 1849, was brought into this county, and in the September following received the first premium at the Monroe County Agricultural Fair.

The proprietor has, at great expense, brought this horse into this county, hoping to improve its revenue by adding a valuable stock of horses for market, and supplying the harness of the county with thorough and pure blood of enduring and beautiful horses.

All accidents at the risk of the owners. Owners parting with mares before foaling time, without the consent of the subscriber, will be charged the insurance; and all mares not regularly returned to the horse once a week during the season, will be charged the insurance if not with foal.

May 1, 1850. [5-2t*] BILLING RICHMOND, Jr.

Young Morgan Tiger and Samson Chief

WILL be kept the ensuing season as follows:—On Mondays, Tuesdays, Wednesdays, and Thursdays, at the stable of the subscriber, two miles southeast of Clyde; on Fridays and Saturdays, at the stable of J. Landon, in Lyons.

PEDIGREE.—Young Morgan Tiger was sired by the celebrated horse Morgan Tiger, formerly owned by Dr. Wm. May of Palmyra. Samson Chief was sired by the imported Samson, imported by John Robinson of Palmyra.

TERMS—Eight dollars to insure a foal. All persons parting with their mares before foaling time will be held responsible for the insurance money. Good pasture will be furnished for mares from a distance at two shillings and six pence per week. All escapes and accidents at the risk of the owner.

Breeders of good horses are invited to call and see them and their stock. ☞ Young Morgan is a bright bay, coming five years old, sixteen hands high, and well proportioned. He was awarded the first premium at the Wayne County Fair held at Rose Valley in October, 1849. Samson was awarded the first premium as being the best three years old stallion exhibited, at the same place and time.

April 1, 1850. [4-2t*] ISAAC M. GILLETT.

The Celebrated Horse Cub Baccus,

THE best blooded and most perfect horse in this part of Michigan, will stand for the use of mares during the present season, at Bellevue, Marshall, and Penfield.

Cub Baccus is ten years old this spring, was sired by the well known horse Baccus; his dam was sired by the old Cub Messenger, who was sired by the imported horse Golden Farmer.

Farmers wishing to breed from a good horse, will please examine the Baccus and his stock, which is superior to that of any other horse in this part of Michigan.

Terms—$2 the leap, $4 the season, and $5 to insure.

JOHN F. HINMAN.

Bellevue, Eaton co., Mich., May 1, 1850 [5-2t*]

The Morgan Horse Major Gifford

WILL stand the ensuing season, on Mondays, Tuesdays, and Wednesdays, at the stable of E. W. Sheldon, Sennett; on Thursdays and Fridays at the stable of S. B. Rowe, Camillus; and on Saturdays at the stable of John C. Munro, Bellisle.

Major Gifford is seven years old this spring; his color is a beautiful chestnut. He was sired by the Gifford Morgan, his dam a pure Morgan. Breeders of good horses are invited to call and see him.

TERMS—Ten dollars to insure. Pasturage furnished. Accidents and escapes at the risk of the owners.

April 1 1850. [4-3t*] MASON & CO.

Morgan Horse General Gifford.

THIS justly celebrated horse will stand, the coming season, at Lodi village, Seneca county N. Y. He was got by Old Gifford Morgan, out of a pure Morgan mare. In his size, color, form, and action, he closely resembles his distinguished sire, and is one of the very best specimens of this invaluable race of horses.

Terms of insurance, $2. Good pasture provided at the usual rates, and all necessary attention given to mares from a distance. Accidents and escapes at the risk of the owners.

March, 1850. [5-2t*] CHARLES W. INGERSOLL.

THE AMERICAN POULTRY YARD.

SIX THOUSAND IN THREE WEEKS!

NEW AND BEST WORK ON POULTRY, comprising origin, history, and description of the different breeds of Domestic Poultry, with complete directions for their breeding, crossing, rearing, fattening, and preparation for market; including specific directions for caponizing fowls, and for the treatment of the principal diseases to which they are subject; drawn from authentic sources and personal observations; illustrated with numerous engravings. By D. J. Browne, author of the Sylva Americana. With an Appendix, embracing the comparative merits of different breeds of fowls. By Samuel Allen.

Four editions of the above work have been sold in two weeks. Price in cloth binding, $1. Mail edition, 75 cents.

EXTRACTS OF NOTICES.

"It is the *best work on the subject*, and should be in the hands of every 'Biddy Culturist.'"—*Mahoning Index.*

"The editor was well qualified to fulfil the task he undertook, and has accomplished it with fidelity and talent."—*American Farmer.*

"This is a work which will commend itself to every farmer."—*Mirror of the Times.*

"As a work of *practical utility* we recommend it."—*Farmer and Mechanic.*

"It would be a *cheap book* to a *farmer* at almost any price, if he would profit by its directions."—*Richmond Whig.*

"It is a good work, and will have general circulation."—*Fairfax News.*

"This is not merely a dry morsel, but is an interesting work on the natural history of Fowls, as well as the best modes of raising and treating them."—*Scientific American.*

ALSO—New edition of Allen's American Farm Book. Price $1; mail edition, 75 cents.

Allen's Diseases of Domestic Animals. 75 cts.

Miner's American Bee Keeper's Manual. $1.

Guenon's Milch Cows: new edition. 37½ cents.

In press—The American Bird Fancier 25 cts.

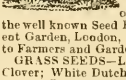
Published at C. M. SAXTON'S Agricultural Bookstore, 121 Fulton street, New York, and for sale by DAVID HOYT, 6 State street, Rochester.

Rochester, May 1, 1850. [5-2t]

SEEDS AND FARMING TOOLS.

NOS. 12 AND 14 FRONT STREET, ROCHESTER, N. Y.

JAMES P. FOGG, PROPRIETOR.



I INVITE Farmers, Gardeners, and Dealers, to examine my stock of Seeds and Tools. The Seeds have been selected with care, and grown by the most experienced Gardeners in this and the New England States. My stock of Foreign Seeds I have received direct from the well known Seed Establishment of George Charlwood, of Covent Garden, London, and I can recommend them with confidence to Farmers and Gardeners.

GRASS SEEDS—Large Red Clover, warranted; Small Western Clover; White Dutch Clover, for door yards; Lucerne, or French Clover; Red Top, eastern seed, extra quality, for wet lands; Timothy, or Herds Grass; Orchard Grass.

SPRING WHEAT; Spring Rye; Barley; Oats; Marrowfat Peas; Small Canada Peas; Early Garden Peas; the earliest in market; Field Beets; Field Carrots; Ruta Baga; Turnep; &c.

ALSO, a complete assortment of Vegetable and Flower Seeds, for retailing.

FARMING TOOLS.—I have leased, for a term of years, the store No. 14 Front street, adjoining the Seed Store, intending to devote this store entirely to Agricultural Implements. I have now room sufficient to keep on hand any Machines or Implements that the manufacturers are bringing to the notice of the farming community, and will give my personal attention to their exhibition and sale.

During the last seven years, my attention has been given to the Seed and Implement business, and my acquaintance with the Farmers in Central and Western New York, and Canada, is fully equal to that of any individual engaged in the business.

I shall keep a supply of the best PLOWS that are made, also the Points of most of the Plows now in use in this part of the State.

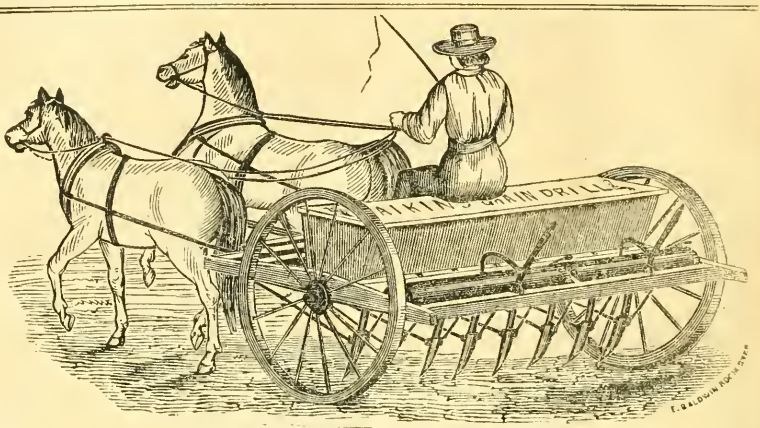
Cultivators and Wheel Cultivator Teeth, Seed Drills, Sub-soil and Side-hill Plows, Horse Powers and Threshing Machines, Hay and Stalk Cutters, Corn Shellers, Ox Yokes and Bows, Garden Spades, Shovels and Hoes, Horse Rakes, Scythes and Snaths, Budding Knives, Pruning Saws and Knives, Garden Rakes, Ladies' Garden Hoes and Transplanting Trowels, Thermometer Churns, Circular and Dash Churns, Cattle Ties, &c., &c.

Rochester, May 1, 1850. JAMES P. FOGG.

The Old Rochester Nursery

CONTAINS the usual assortment of trees, shrubs, and plants, among which are 30,000 Northern Spy Apple, at from 25 to 50 cents each, according to size; 5,000 of the celebrated Giant Rhubarb, the best sort for market or for hotel gardens, where large quantities are required through the season. This sort producing no seeds, it may be cut through a considerably longer period of time than other sorts. Price $80 per thousand, $10 per hundred, $2 per dozen, or 25 cts each. 1,000 of the celebrated Frost Gage plum tree. Also a few large ornamental trees at a bargain to clear the ground.

Orders by mail promptly executed, and trees packed in the best manner. S. MOULSON, 36 Front st., Rochester, N Y.



AIKIN'S GRAIN DRILL AND CORN PLANTER,

FOR SOWING IN DRILLS WHEAT, BARLEY, OATS, RYE AND PEAS, AND PLANTING CORN IN HILLS OR DRILLS.

THIS machine is now being extensively manufactured, and for sale, by the subscribers, at the old and and well known manufacturing establishment of Messrs. Fitch, Barry, & Co. It will sow up hill or down, and across dead furrows, as well as on level ground. It is easily guaged to sow any quantity required, and will distribute even and cover the grain at a uniform depth, and is warranted to do the work well, to be substantially made, and of good materials. We know of no drill made that equals it for sowing all kinds of grain.

The advantages of drill culture are now well established, which are, 20 per cent. saving in seed, 15 per cent. in labor, and from 5 to 30 per cent. is ordinarily gained in the increase of crop over the usual method of sowing. Many farmers who have tried it, speak much in favor of drilling in spring crops. We give a few references from persons who have used this drill:

Calvin I. Whicher, Sweden, N.Y.		Wm. Demming, Byron,	N.Y.
Joseph Niles,	"	Sherwood Parker, Elba,	"
David Stanley, Brighton,	"	Gilman Dickey, "	"
Selden C. Banning, Ogden,	"	N. S. Godfrey, "	"
Reuben Garrison, Clarkson,	"	C. R. Brinkerhoff, Batavia,	"
John Blossom, "	"	John Day, Medina,	"
H. Ruggles, Clarkson,	"	Elias Randall, Lockport,	"
Gilbert Bodine, Ovid,	N.Y.	V. D. Bateman, Somerset,	N.Y.
Frederick Brown, Byron,	"	David Hall, Gaines,	

Price of 7-drill, No. 1, without Corn Planter,		$60	Deliv'd at shop.
" " " with	"	65	
" 8-drill, No. 2 without	"	65	
" " " with	"	70	

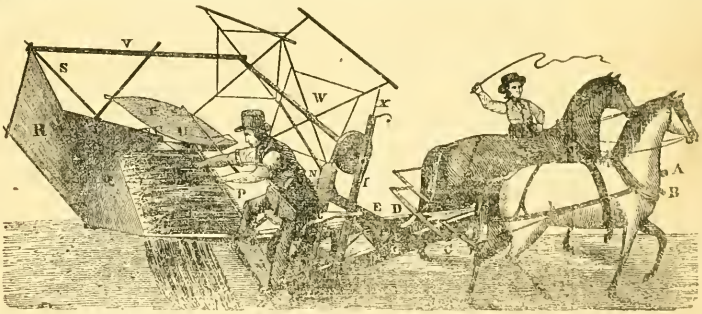
We are also manufacturing 200 of

Rogers' Wheeled Cultivator.

This machine has been much improved during the past winter. It consists in raising one wheel at a time, or both if required, and the manner of hitching to it, thereby giving the machine a better balance, and consequently an easier draught. This machine is well adapted for surface work—it pulverizes and mixes the ground thoroughly, and is said to be a complete cure for Canada thistles and other noxious weeds. This Cultivator, as also the Drill, was exhibited at the State Fair held at Syracuse last fall, and took the first premium. Price, delivered at the shop, $30.

Manufacturers wishing to build this machine, can do so by addressing Dorus Hinkston, Clarkson, N.Y.; or Enoch Sweat, Brockport, N. Y. A rare chance is offered.

The last, though not least, is



McCORMICK'S PATENT VIRGINIA REAPING MACHINE.

The Virginia Reaper is no longer an experiment, but has been fully proved to be perfectly adapted to the wants and convenience of every farmer. This machine has been much improved since last year, by attaching a seat for the driver, enlarging the ground wheel, with other important alterations in its construction. We believe that in a harvest of 60 acres this machine will save, in labor and grain, more than the price we ask for it.

Price, delivered at the shop, with one extra sickle and pinion, $80. We give a full guaranty as to its performance, and warrant the machine to be well made, and of good materials.

Brockport, N. Y., May 1, 1850.

REFERENCES.

Henry P. Halsted, Venlee,	N.Y.	A. T. Bailey, Niagara co.,	N.Y.
Samuel Westfall, Alloway,	"	Jona. Wadhams, Clarkson,	"
Geo. W. Spencer, Penn Yan,	"	Abram Bloomer, Romulus	"

We are manufacturing but 50 of the Reapers for the coming harvest. We shall have agents out for procuring orders for the different machines, and trust the farmers will send in their orders early. All orders by mail promptly attended to. All are invited to examine our work previous to purchasing.

J. GANSON & CO.

SEYMOUR & MORGAN'S
IMPROVED REAPING MACHINE,

MANUFACTURED AT BROCKPORT, MONROE CO., N. Y.

THE subscribers are preparing to offer to the Farmers a superior REAPING MACHINE. Having for years been engaged in manufacturing a large number of *McCormick's Reapers*, they are confident that the Reaper which they are now manufacturing is far superior in every respect to any other now in use. It was thoroughly tested in the harvest fields last year and gave entire satisfaction to all who witnessed its operation. It surpasses any machine now before the public in many important points;—the *Cutter* or Sickle being in sections, in case of accident can be repaired by a good Blacksmith, without the owner being obliged to go to the manufacturers for a new blade. The ground wheel is 3ft. in diameter, and all the geering runs in iron boxes. An early order is important from those wishing to purchase a machine, as we have already contracted for the sale of 300 for the West. In all cases a liberal warrant is given to the purchaser.

The improved Reaper was constructed under the supervision of our Foreman Mr. Geo. F. Burnet, who has been engaged three years for us in the business. SEYMOUR & MORGAN.

Brockport, December 25, 1849.

CERTIFICATES

Swpden, Nov 12. 1849

Messrs Seymour, Morgan & Co.—In my harvest, last season, I used one of your Improved Grain Reapers. I had formerly used one of McCormick's Improved Virginia Reapers. I have had considerable knowledge of them. In comparison, I think yours decidedly preferable; firstly—in point of perfection in cutting, which is the great desideratum, it is far in advance of his and next, in ease of operation, I think it has decided advantage. I did not obtain your Reaper until a large part of my harvest was completed; consequently I had not an opportunity to test the amount that could be cut in a day, still I am satisfied that it is capable of cutting from fifteen to twenty-five acres per day, and that, too, in the most perfect manner. I used no change of team. I did not find it necessary in doing an ordinary day's work—about fifteen acres per day. I tested your machine in wet grain and when there was grass at the bottom; here I found it had a great advantage over other Reapers in use, it being able to go through almost any grain, some badly lodged, without any apparent difficulty of clogging the knife. And from my experience I think it a valuable labor-saving machine, and would cheerfully recommend it to the attention of farmers, as I think grain can be cut with it, all expenses counted, at half the cost of cutting it the ordinary way.—Wheat can be bound and shocked in a better manner, and with less labor, besides a great saving in the waste of grain.

Yours &c. F. P. Root.

I saw the aforesaid, Seymour & Morgan's Improved Reaper, in F. P. Root's harvest field and do concur in the foregoing statement.

Wm. Root, Esq.
D. H. Root.

I have seen the Machine work in very heavy, and also in wet wheat where it performed well, and believe it to be an improvement upon McCormick's Reaper. There was no clogging, as in the case of McCormick's and it must be a good machine if well made.

Nathan Locke.

Brockport, Nov 13, 1849.

Messrs. Seymour & Morgan:—Gents—I used one of our Improved Reapers in my harvest, which worked better than any I have seen before used—cutting wheat when there is much grass, without choking, which other machines that I have used would not do.—I have had much experience with Reapers—having purchased the first one of McCormick's brought to this State. I have since put a large number of McCormick's in operation at the West, and believe yours to be the most perfect Reaper now in use.

A. Chappell.

I used one of Messrs Seymour & Morgan's Reapers last harvest, and cheerfully recommend it to Farmers as the best machine within my knowledge for cutting grain. Geo. H. Allen.

Brockport, Nov. 13, 1849.

This may certify that I used in my harvest of 1849, Seymour & Morgan's Improved Reaper, which worked to my entire satisfaction; cutting grain in all conditions. I believe it cannot be clogged in either grassy or green wheat. I have witnessed the operation of other Reapers now in common use and I believe it to be superior to any that I have seen—cutting wet or grassy wheat where other Reapers cannot. F. W. Brewster.

Brockport, Nov. 12 1849.

We have seen the trial of Seymour & Morgan's Improved Reaper in the harvest of F. W. Brewster—and having witnessed the operation of other Reapers, we believe this the most perfect machine now in use

J. A. Holmes, Allec Potter,
D. A. White, W. Theo. Downs,
Morgan Randle, O. A. Royce.

C. J. Hayden's
CABINET AND CHAIR WAREHOUSE

CONSTANTLY on hand every variety of CABINET FURNITURE, every style of Beadsteads and Chairs which he is now offering at greater bargains than can be had elsewhere in Western New York.

No. 6, Front street, Rochester, N. Y.

☞ All work warranted good, or no sale. [4-2t]

FRESH GARDEN SEEDS, IMPLEMENTS, &c.

RAPALJE & BRIGGS respectfully invite the attention of dealers in Garden Seeds to the stock they are now receiving at their Agricultural Warehouse and Seed Store, consisting in part of the following sorts:—

Beets, sorts; Broccolis; Cauliflowers; Cabbages, sorts; Carrots, sorts; Celery; Cress; Cucumbers, sorts; Lettuces, sorts; Melons, sorts; Onions, sorts; Peppers; Pumpkins; Radishes, sorts; Spinages; Tomatoes; Turnips; Early and Late Peas; Dwarf and Pole Beans; Early and Sweet Boiling Corn, Flower Seeds, &c.

The above seeds being raised expressly for us during the last season, by faithful and experienced Seed Growers, we have perfect confidence in offering them to the public.

Seed Grain.—One of the most important cares of the farmer, is the judicious selection of his Seed Grain; and in order that that care may be lightened, and that we may be able to furnish Seed of the best quality, and well adapted to this climate, we have had selected for us, of the following sorts, such Seed as we feel confident will give perfect satisfaction to all:—Black Sea Spring Wheat, Italian do. do., Siberian do. do., Spring Rye, Barley, Bedford Oats, Buckwheat, and many choice varieties of Corn. Also, an extensive assortment of Garden and Grass Seeds.

Our stock of Seeds is now the most complete and extensive in the country, having received from London, the past winter, immense quantities of *Turnip, Cabbage Seed, &c*

We have also, at our Warehouse, the largest and best assortment of Agricultural Implements in the State, consisting of Thrashing Machines, Reapers, Corn Shellers, Straw and Stalk Cutters, Horse Powers, Water Rams, Plows, Hoes, Spades, Forks, Pruning Saws and Knives, Churns, Harrows, Rakes, Drilling Machines, in short, every article used by the Farmer, the Gardener, or the Horticulturist, from an Apple-Pearer to a Saw-Mill.

We ask every Farmer who needs *Seed* or *Tools*, to give us a call, at our Warehouse in Rochester, nearly opposite the Eagle Hotel, on Buffalo street, where we think we can satisfy all that our stock and prices are right RAPALJE & BRIGGS.

A Rare Chance—Important to Wool Growers.

THE Subscriber having recently purchased of Merril Bingham, of Vermont, at a great price FIVE BUCK LAMBS, from pure blooded Spanish Merino Ewes sired by the celebrated French Merino Buck, imported at a great expense by Mr. Bingham and J. A. Tainter, of Connecticut, in 1847, offers the same for sale to farmers in this secton, desirous of improving their stock of sheep. The chance is a rare one, as the pedigree of these sheep have been substantiated beyond a question, and the evidence is *in hand*.

The subscriber also purchased 30 pure blooded Spanish Merino Ewes all in Lamb, by the old imported Buck above mentioned and now owned by Mr. Bingham, and a full blooded French Merino Ewe and Buck at $200, which will be held for service another fall. This class of imported sheep shear from 18 to 23 lbs. of pure washed wool to the head. The size of carcass exceeds any thing now known in America.

He is fully confident that the superior advantages and the opportunity for great improvement thus offered to the Wool Growers of this county and section of country, will be duly appreciated. All who wish to purchase or examin the Foreign Blood, can do so at any time by calling at his residence three miles north of Albion, and one mile north of Fair Haven.

JOHN J. McALLISTER.

Gaines, March 15, 1850. [4-3t]

THE subscriber, in returning his sincere thanks to the citizens of Rochester and the surrounding country, for the liberal patronage which he has received for the last twelve years, begs to inform them that he has removed his Greenhouse from Monroe street to Mount Hope Avenue, opposite Charissa street bridge, where he intends, in connection with Jabez Dow, Nurseryman and Gardener, to cultivate all kinds of Fruit Trees, Shrubs, Flower Seeds, Roots, and Greenhouse Plants, for sale cheap, and hopes he will still continue to receive a share of their patronage. He has upwards of 20,000 Fruit Trees for sale, of the very best kinds, cultivated principally from one of the largest and best orchards in the country, belonging to James Whitney, Esq., of this city. His facilities are such that he is able to afford to sell cheaper than any other establishment.

Rochester, May 1, 1850. WILLIAM KING.

Monroe Nursery.

THE Subscriber would remind his friends and the public that the season of transplanting trees is at hand, so that those, who intend to set out trees this spring, would do as well to make an early selection.

He is ready to make contracts wholesale or retail. His trees are of the most thrifty growth and well assorted, consisting of fruit and ornamental trees, together with a beautiful stock of green house plants, all at reduced prices.

☞ Applications, (post-paid) will be promptly attended to.

Greece March 1850. [4 2t] CHARLES POWIS.

Burrall's Clover Mill.

FOUR sizes made and sold by the Subscriber at Geneva N. Y. warranted to be thoroughly built and to work well. Among other premiums awarded, this Machine was the first, at the late State Fair.

Orders from abroad, or inquiries in respect to it, promptly attended to. [4-4t] E. J. BURRALL.

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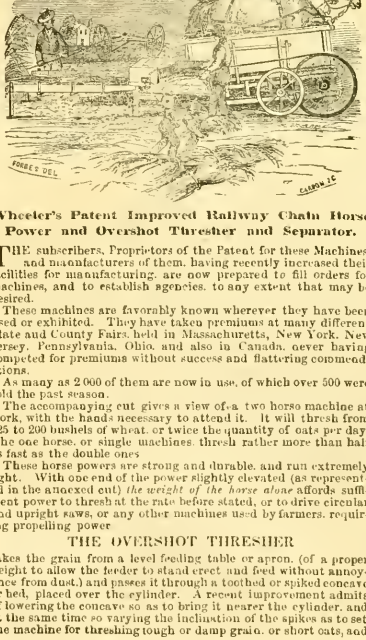


Wheeler's Patent Improved Railway Chain Horse Power and Overshot Thresher and Separator.

THE subscribers, Proprietors of the Patent for these Machines, and manufacturers of them, having recently increased their facilities for manufacturing, are now prepared to fill orders for machines, and to establish agencies, to any extent that may be desired.

These machines are favorably known wherever they have been used or exhibited. They have taken premiums at many different State and County Fairs, held in Massachuretts, New York, New Jersey, Pennsylvania, Ohio, and also in Canada, never having competed for premiums without success and flattering commendations.

As many as 2 000 of them are now in use, of which over 500 were sold the past season.

The accompanying cut gives a view of a two horse machine at work, with the hands necessary to attend it. It will thresh from 125 to 200 bushels of wheat, or twice the quantity of oats per day. The one horse, or single machines thresh rather more than half as fast as the double ones

These horse powers are strong and durable, and run extremely light. With one end of the power slightly elevated (as represented in the annexed cut) *the weight of the horse alone* affords sufficient power to thresh at the rate before stated, or to drive circular and upright saws, or any other machines used by farmers, requiring propelling power

THE OVERSHOT THRESHER

takes the grain from a level feeding table or apron, (of a proper height to allow the feeder to stand erect and feed without annoyance from dust) and passes it through a toothed or spiked concave or bed, placed over the cylinder. A recent improvement admits of lowering the concave so as to bring it nearer the cylinder, and at the same time so varying the inclination of the spikes as to set the machine for threshing tough or damp grain, or short oats, and re-setting it at pleasure, for long rye or wheat, or oats in good order, or for timothy grass or clover; and all this is accomplished without stopping the machine, so simple is the process. By means of the Separator the straw, as it comes from the Thresher, is effectually separated from the grain.

The *Power, Thresher and Separator*, complete, for either one or two horses, is easily loaded on a common farm wagon; but where frequent moving is desired, the two-horse machines are placed on wheels in such a manner that when used for threshing, the forward wheels are removed, dropping that end of the power, and leaving the opposite end elevated on the other axle, ready to receive the horses. By this arrangement, (which has been made for the convenience of those who make threshing a business and for partnership machines,) two men can with ease set a two horse machine ready for work in fifteen minutes, and re-load it for moving in the same time.

W., M., & Co., also manufacture Stalk, Hay, and Straw Cutters, to be used with their horse powers; and also Circular Saws and Benches, for cutting ordinary fire wood, and locomotive and other fuel.

Every machine made or sold by W., M., & Co., or their Agents, is WARRANTED to work to the satisfaction of the purchaser, or it may be returned to them, or to the Agent of whom it may have been purchased, within sixty days, and the purchase money [if paid] will be refunded.

These machines are so light, compact, and easily handled, as to admit of transportation to any part of the country with trifling expense. The weight of the two-horse machine, complete, being less than 2.000 pounds, and of the one-horse, about 1.200.

The manufacturers are now establishing agencies in all parts of the United States and Canadas, where they are needed to facilitate the sale of these machines. Good agents are wanted in the southern and western States and the Canadas, to whom liberal commissions will be allowed. Our Agents, as far as definitely ascertained, are—

Rapalje & Briggs, Rochester.
T. C. Peters & Brother, Buffalo
Peter R Sleight, Esq., Poughkeepsie.
F. F. Packer & Brother, Detroit.
——, Chicago.
W. D. Bacon, Wanksesha, Wisconsin
John Melick, Trenton, N. J.

These machines may also be had of Horace L. Emery, Albany, and of John Mayher & Co., New York city.

WHEELER, MELICK, & CO.,
Hamilton st., corner of Liberty and Union sts., Albany, N.Y.
May 1, 1850.

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—JUNE, 1850. NO. 6.

PREPARATION OF NIGHTSOIL.

We have received several private letters asking information as to the best way of preparing and using nightsoil, which we propose to answer through the pages of the Farmer.

Some experience and considerable research have convinced us of the necessity of restoring to all depastured, mown, and tilled lands, a part of all the plants removed in grass, hay, grain, or roots, either by man or his domestic animals. Every farmer should adopt a system of husbandry which will so improve his cultivated fields, that thirty bushels of wheat and sixty of corn will be a common harvest. To do this, those elements in the seeds of grain, roots, and grass, which form *meat*, and the richest manure, such as is found in the vaults of privies, must be saved and applied to the growing crops in the most skillful and economical manner.

There are two points to be attained in preparing nightsoil. First, to remove all odor or offensive smell from the fertilizer. Second, to get rid of the 75 per cent. of water in the semi-fluid mass. These purposes effected, and there remains a very concentrated and exceedingly valuable food for all cultivated plants, which may be drilled in with seed wheat, or sown broad-cast over growing crops. Every privy should have a water-tight box in the vault, so arranged that it can readily be drawn out at the back side or one end of the building, and emptied of its contents. Gypsum and common salt are the most economical deodorizing agents that can be used. A very moderate quantity of either will answer, although a little of both salts, that is, sulphate of lime (gypsum) and chloride of sodium, (common salt,) is better than to use but one. No more should be used than is required to fix all volatile elements, especially in cities and villages where the fertilizer has to be carried some distance. For this purpose, it is believed that 15 per cent. of gypsum or 10 of common salt will suffice, estimating the whole at its dry weight.—That is to say, 1000 lbs. of dry poudrette should contain 150 of gypsum, or 100 of salt. Where the last named articles are cheap, it might be better to have 250 lbs. of plaster of Paris and salt to 750 of dry excretions. The more of the salts contained in urine the fertilizer possesses, the larger the amount of gypsum or common salt one should use to fix the ammonia. Plaster of Paris will form *sulphate* of ammonia, the sulphuric acid (oil of vitriol) leaving the lime in the plaster to unite chemically with the volatile alkali called ammonia. In a similar manner, the chlorine in common salt (chloride of sodium) will leave the sodium to combine chemically with ammonia, and form sal. ammoniac, (chloride of ammonium.)

After gypsum and salt have been applied to the mass of stercoraceous matter, it should be well dried in the sun, precisely as common salt is made by solar evaporation. In large establishments in cities, the fecal matter, after it is dried, should be ground in a bark mill, to form a fine powder which could readily be drilled like the finest guano or ground hen dung.

One hundred pounds of dry food, consisting of bread, meat, potatoes, and vegetables, will form about forty of solid excretions. To this, ten pounds of salt and gypsum may be added, when the fertilizer on fair land will re-produce 150 lbs. of bread, meat, and potatoes again. On poor land, which is leachy, not over 50 or 75 pounds can reasonably be expected from the poudrette, or nightsoil.

We have so often stated the well ascertained fact, that some 60 per cent. of the solid matter in the food consumed by all the higher orders of animals, escapes from the body through the lungs in the process of breathing, that it appears unnecessary to explain again this natural phenomenon. In a barrel of flour sent to market, there are 186 pounds of carbon (charcoal) and the elements of water. When this flour is eaten in bread, about 117 lbs. escape as vapor and carbonic acid from the organs of respiration into the atmosphere, and 79 lbs. appear as feces and salts in urine. Of these 79 lbs., 70 are still nothing but carbon (coal) and the organized elements of water, (oxygen and hydrogen.) The other 9 lbs. are azote (base of ammonia) and incombustible salts, or earths. By retaining all of these elements, including nitrogen, or azote, in conjunction with 30 lbs. of organized carbon, oxygen, and hydrogen, it is confidently believed that 39 or 40 lbs. of the most precious atoms in a barrel of flour, drilled in with the seed, will produce, with fair tillage and fair seasons, wheat enough to make another barrel of flour. In this estimate, it is assumed that the farmer will make a good use of the bran, chaff, and straw, as well as the fertilizers derived from flour. By not loosing any straw nor bran, and regaining 20 per cent. of the *best* ingredients in the flour, good crops of wheat can be grown at much less expense than is now generally incurred.

Where nightsoil is not to be hauled but a short distance, dry muck and pulverized charcoal may be used to advantage as an absorbent. Copperas (sul-

phate of iron) was considerably used in the city of Augusta, Georgia, last summer and autumn, on the recommendation of the writer, as a disinfecting agent, and with the most satisfactory results. There was no cholera, and scarcely a case of fever in the city, during all the warm season of the year. The copperas used was an inferior article, which cost only a dollar per 100 lbs.

A GENERAL VIEW OF AMERICAN AGRICULTURE.

THE POSITION OF AMERICAN FARMERS.

Every one that eats bread, or wears cloth made of wool, cotton, or flax, has a direct personal interest in the results of Tillage and Farm Economy.—Hunger and nakedness are wants of the most pressing character: and Providence has placed them alike in every human being. In civilized communities, all are equally dependent on successful agriculture for the means of subsistence. Let the soil be permanently exhausted, or fail but for a year to reward the labor of the husbandman, and no language can adequately describe the intensity of the universal suffering that must ensue. Hence, this branch of national industry has peculiar and paramount claims to the earnest attention and the fostering care of all governments which are regardful of the public safety, and sustained by common sense.

American Agriculture offers for consideration several interesting and striking features. Prominent among these is the fact, that nearly three-fourths of the labor and capital of the country are employed in this single pursuit. Agriculturists are themselves a large majority of the voters, tax-payers, and consumers of all domestic and foreign goods.

Under their republican system, they are mainly responsible for the good government of each State, and of the Union. If their public servants, whether in Congress or State Legislatures, fail to promote improvements in agriculture, as recommended by President Washington, the fault is not in their representatives, but in those who neglect to ask for such aid as government may properly grant.

American farmers enjoy advantages superior to those of all other nations, for improving both themselves as a class, and their landed estates, up to the highest capabilities of man and of the earth which he cultivates. This republic proffers to rural art and rural science, more than one thousand millions of acres of available farming lands, of which as little or as much may be subdued and improved as wisdom shall dictate. There is neither compulsion nor restraint in either direction. With this entire freedom of action, is associated a degree of security for life, liberty, property, toleration of religion, and exemption from onerous taxes, without a parallel in the history of the world.

In extent of sea coast, facilities for river, lake, and canal navigation—for variety of climate, soil, vegetable and animal products—for indefinite and almost unlimited commercial, manufacturing, mineral, and hydraulic resources, no other country equals this. There is some danger, however, that we shall prove unworthy of so great blessings—that we may forget the source whence they come—abuse the peculiar advantages and the exalted privileges which we possess, and blindly cling to the barbarous practice of impoverishing the soil, to the incalculable injury of coming generations. Instead of exhausting millions of acres without any adequate recompense, instead of looking longingly to the wilderness of forest and prairie at the west, we should search closely into the lands already under the plow, and learn what can be done to add two, three, and four-fold to their present productiveness. The time has at last arrived, when it is indispensable to the continued prosperity of all the older States, that the principles both of renovating and exhausting cultivated fields, be thoroughly and universally understood.

A FEW FACTS ABOUT SOILS, PLANTS, AND ANIMALS.

Soils contain, as a general thing, not more than one part in a thousand of the atoms, in an available condition, which nature consumes in forming a crop of any kind. This statement expresses a fact of great practical importance; for the husbanding of these fertilizing atoms is the first step toward arresting the impoverishment of the earth. It is the matter in the soil which makes crops in one arrangement of its atoms, and forms manure in another condition of the same atoms, that the farmer should learn to preserve from waste and loss.

Soils of different degrees of productiveness, where their mechanical texture and physical properties are alike, always contain unlike quantities of the food of crops. It seems to make little difference how small is the amount of the lacking ingredient in the composition of cultivated plants. Its absence is fatal to the farther growth of the crop, after its appropriate aliment fails in the soil. It is easy to discover the wisdom of this universal law. Suppose Nature should organize grass, grain, and other plants which serve as the daily food of all the higher orders of animals, as well without bone earth (phosphate of lime) as with that mineral. Would it be possible for such grass and grain to yield to the blood of domestic animals and to that of man himself, that solid earthy matter which imparts strength to human bones, and to those of oxen, horses, sheep, and swine? Certainly not. Although *iron* is always present in the food and blood of animals, no farmer ever killed a calf, a pig, or an ox, which had iron for the frame of its system. No anatomist ever saw a bone in the body of a person, formed of other earthy atoms than such as Providence had fitted for this peculiar function in the animal economy.

The brains and muscles of all animals contain both sulphur and phosphorus as constituent elements. If their daily food, derived as it is from the soil, lacked either sulphur or phosphorus, must not this radical defect in their nourishment soon induce weakness and disease, and finally result in premature death? To prevent consequences so disastrous and so obvious, Nature refuses to organize plants without the presence in the soil, *in an available form*, of those peculiar atoms adapted alike to the wants of vegetable and animal vitality. This wise provision should be studied by every one who desires to enjoy sound health and a long and happy life. Most of the "ills that flesh is heir to," as well as most of the maladies of plants, have their origin in the violation of Nature's laws.

The growth and constitutional vigor of all living beings, not less than the revolution of the earth on its axis, are governed by immutable laws. One of these appears to be, that an atom of carbon (charcoal) shall not perform the function of an atom of iron; nor can an atom of iron perform the office of an atom of carbon, or that of any other element concerned in the organism of plants and animals. There are only

some fifteen kinds of elementary bodies used by Nature in forming every vegetable and animal substance produced on the farm, in the orchard, or in the garden.

The science of Rural Economy consists in the systematic study of atoms, and the laws by which they are governed, whether they exist in solid or crumbling rocks, in loose earths, in vegetable or animal mold, in fermenting manure, in the living tissues and cells of organized beings, or in the form of invisible gases diffused through the atmosphere. Every product of agricultural labor is either a vegetable or an animal substance; and in its production, not an atom of new matter is called into existence. In the language of science, all matter which is neither vegetable nor animal, including air and water, is *mineral*. All minerals are either solids, like sand, clay, and lime: or liquids, like water; or gases, like common air. The farmer deals largely with atoms in each of these forms; and hence he should be familiar with the several sciences which treat of natural phenomena as witness in the mineral, vegetable, and animal kingdoms. He should know that plants alone can subsist on mineral, or disorganized food — that if there were no plants in the ocean nor on land, neither marine nor land animals could have a being. In the absence of all vegetation, it is obvious that all animals must be carniverous, or cease to consume organized aliment. Being wholly dependent on mutual destruction for the means of subsistence, every day would diminish the aggregate supply of food, and the last animal would soon die of starvation.

From the above reasoning, it is plain that vegetable life is older on this planet than animal life, and that plants may have flourished thousands of years before the lowest type of a being which depended wholly on organized food for subsistence, was created. It will also be seen that the lines of demarkation between animals and plants is well defined, by the fact that the latter can organize the elements of all vegetable and animal substances into these compound bodies, which the former can not do. All plants *produce and increase* organized matter; all animals *consume and diminish* the quantity of organized food.*

WHAT THE COUNTRY HAS LOST BY IMPOVERISHING ITS SOILS.

Taking the census of 1840 as the basis of the calculation, and adding no more than the usual increase, and the number now employed in agriculture in the United States, does not vary much from five millions. The number of acres which they cultivate is not known. In the State of New York there are some 12,000,000 acres of improved land, which includes all meadows and enclosed pastures. This area employs about 500,000 laborers, being an average of 24 acres to the hand. At this ratio, the number of acres of improved land in the United States is 120,000,000. But New York is an old and more densely populated State than an average in the Union, and probably 25 acres per hand is a juster estimate for the whole country. At this rate the aggregate is 125,000,000. Of these improved lands, it is confidently believed that at least four-fifths are now suffering deterioration in a greater or less degree. The fertility of some, particularly in the planting States, is passing rapidly away; in others, the progress of exhaustion is so slow as hardly to be observed by the cultivators themselves. To keep within the truth, the annual income from the soil may be said to be diminished ten cents an acre, on 100,000,000 acres, or on four-fifths of the whole.

This loss of income is $10,000,000, and equal to the sinking of a capital of $166,666,000 a year, paying 6 per cent. annual interest. That improved farming lands may be justly regarded as capital, and a fair investment when paying 6 per cent. interest, and perfectly safe, no one will deny. This deterioration is not unavoidable; for thousands of skillful farmers have taken fields poor in point of natural productiveness, and instead of diminishing their fertility, they have added ten cents an acre to their annual income, over and above all expenses. If this wise and improving system of rotation, tillage, and husbandry were universally adopted, or applied to the 100,000,000 acres now being exhausted, it would be equivalent to creating each year an additional capital of $166,666,000, and placing it in a permanent real estate, where it would pay 6 per cent. annual interest. For all practical purposes, the difference between the two systems is $333,333,000 a year, to the country.

There is another view of this important subject, which is worthy of profound consideration. Of the 12,000,000 acres of improved land in the State of New York, 1,000,000 are so cultivated as to become richer from year to year. These improving soils are in the hands of 40,000 cultivators, who take and read agricultural journals, and nobly sustain the State and County Societies of that Commonwealth.

3,000,000 acres of the 12,000,000 are so managed as barely to hold their own in point of fertility.— These lands belong to a class of farmers who do as well as they know from personal observation, and seeing how reading men improve their estates and domestic animals.

8,000,000 acres are in the hands of 300,000 persons who still adhere to the colonial practice of extracting from the virgin soil all it will yield, so long as it will pay expenses to crop it, and then leave it in a thin, poor pasture, for a term of years. Some of these impoverished farms, which 75 years ago produced from 20 to 30 bushels of wheat, on an average, now yield only from 5 to 8 bushels. In an exceedingly interesting work, entitled "American Husbandry," published in London in 1775, and written by "an American," the following remarks may be found on page 98, Vol. 1: *

"Wheat in many parts of the province [New York] yields a larger produce than is common in England. Upon good lands about Albany, where the climate is the coldest in the country, they sow two bushels and better upon one acre, reap from *twenty* to *forty*; the latter quantity, however, is not often had, but from twenty to *thirty* are common; and with such bad husbandry as would not yield the like in England, and much less in Scotland. This is owing to the *richness* and *freshness* of the land."

According to the State census of 1845, Albany county now produces only 7½ bushels of wheat per acre, although its farmers are on tide water and near the capital of the State, with a good home market, and possess every facility for procuring the most valuable fertilizers. Dutchess counnty, also on the Hudson River, produces an average of only 5 bushels per acre; Rensselaer, 8; Westchester, 7; which is

* See Dumas — Balance of Organic Nature.

* We are indebted to the well stored library of JOHN S. SKINNER, Esq., the veteran editor of the "Plow, Loom, and Anvil," for the use of this old and curious work on the early agriculture of this country.

higher than the average of soils that once gave a return larger than the wheat lands of England, even with "bad husbandry."

Fully to renovate the 8,000,000 acres of partially exhausted lands in the State of New York, will cost at least an average of $12.50 per acre, or an aggregate of $100,000,000. It is not an easy task to replace all the bone earth, potash, sulphur, magnesia, and organized nitrogen in mold, consumed in a field which has been unwisely cultivated 50 or 75 years. Phosphorus is not an abundant mineral anywhere, and his *sub-soil* is about the only resource of the husbandman, after his surface-soil has lost most of its phosphates.

The 300,000 persons that cultivate these 8,000,000 acres of impoverished soils, annually produce less by $25 each, than they would if the land had not been injured. The aggregate of this loss to the State and the world is $7,500,000 per annum, or more than 7 per cent. interest on what it will cost to renovate the deteriorated soils. There is no possible escape from this oppressive tax on labor of $7,500,000, but to improve the land or run off and leave it. That the latter has been done to a large extent, is shown by comparing the population in rural districts at the census of 1830 with that of 1840. In nearly half the towns in the State, population had *decreased*, notwithstanding the rapid growth of cities and villages, demanding an increase of farm laborers to supply the mere local markets. The canals of New York have operated to hasten the exhaustion of its soils, just as a railroad to California would aid in extracting gold dust from its now unwashed sands. While the canals and railroads of New York convey a thousand tons of the few *precious atoms* in the surface of the earth, which can alone form bread and meat, to tide water, they do not carry back from tide water one ton of the raw material for making crops of any kind. A million tons of human food pass down the Mississippi where one ton of the elements of such food ascend "the father of waters."

It will be seen, on referring to the census of 1840, that the five States of Maryland, Virginia, North and South Carolina, and Georgia, employed at that time 1,013,463 persons in agriculture. Of this number, Maryland had 69,851; Virginia, 318,771; North Carolina, 217,095; South Carolina, 198,363; and Georgia, 209,383.

It is a statistical question of considerable importance, to determine how much less these laborers and the mules, horses, and oxen, which they work, annually produce, than they would had no acre of the arable lands in these States, so highly favored by climate and fertility, been damaged in the least by improper tillage. The difference in the cost of making crops on poor land and on good land, is really much greater than is generally supposed. The shrewd farmers of Massachusetts prefer giving 60 cents a bushel for Western corn, to growing this grain on their infertile soil; while the corn-growers of Indiana and Illinois are glad to sell their crops, made on rich land, at 20 cents a bushel. From these facts, is not the inference plain and satisfactory, that it costs three times more to produce a bushel of corn on *poor* than on *rich* land?

To do full justice to this interesting problem, "By what means, and to what extent, the soils of the five States above named have been injured," would fill a volume. A residence of more than two years in the most southern of these States, connected with its agricultural press, and devoting much time to the study of soils and their products, will warrant the writer in expressing an opinion on the weight of evidence collected from all sources within his reach. The annual loss on the labor of each hand and mule is believed to be $30. This estimate is too high on some plantations, and too low on others. The only reason why so many slaves have been sent South during the last 25 years, (and thousands sent out of Georgia,) is, that the labor of a person is worth twice as much to cultivate rich, fresh land, as poor, old land.

If the estimate of a yearly loss of $30 on each hand, and the domestic animals which he works, be not too high, then the aggregate exceeds *thirty millions of dollars*. This is equivalent to having sunk a productive capital invested in farming lands, *at a cheap rate*, of *five hundred millions of dollars*, yielding 6 per cent. annual interest. While England and France have derived hundreds of millions of profit and revenue from the tobacco and cotton exported from Georgia, the Carolinas, Virginia, and Maryland, a large share of all the proceeds received for these staples, which have so desolated the earth over immense districts, has left these old impoverished states, with their emigrating citizens, *never to return*.

This unwise system of tillage is extending rapidly in the United States.

Manufacturers, merchants, and mechanics, often shift their settled policy, when they see a profit in making a change. But whoever expects millions of isolated farmers to change suddenly their practices, ideas, and systems of culture and husbandry, shows that he has not labored twenty years to substitute an improving for an exhausting system of field culture. At a fair estimate, there are at this time 2,741,966 persons employed in agriculture in the fifteen slaveholding States. Before the study of rural economy as a science will become as popular as the study of politics, law, and medicine, the South will have at work in the field, a force of five millions of operatives. Who does not see that the wise and skillful employment of this vast power of production, is a matter of inestimable consequence to all the planting States, and to unborn millions who must dig their daily bread from impoverished soils, if the mighty work of land exhaustion is to increase and extend, as population spreads over the cotton, tobacco, and sugar growing parts of the Union? Propagated by buds instead of seeds, the sugar cane will be found, like the potato plant, less able to withstand the customary abuses of the earth — the rude violation of the laws of nature — than tobacco, corn, wheat, and cotton plants. But all these are suffering in vital force and constitutional vigor, by reason of their defective food, in partially exhausted soils. Any living being may habitually take a very little poison into its system without destroying life. Pursue the practice of poisoning the blood of animals or the juices of plants, only to a very small degree, and it will tell in the course of a few generations, in strange, new and incomprehensible maladies. An instructive and useful book might be written on the diseases of cultivated plants: to say nothing of those of domestic animals. Mildew, mold in cheese, rust on wheat and cotton, and fungi, believed by naturalists and botanists to be so injurious to potatoes, are all, in a good degree, like other vegetable creations, subject to the control of human industry and science.

If we visit the farmers of the Northwest, we shall find the popular feeling developing itself after this

fashion: "Let us construct railroads and canals, improve our navigable rivers and lake harbors, purchase the best farm implements, and then employ all our capital and energies in transforming every atom in the soil which will make grain, provisions, and wool, into those marketable commodities, and send them to distant cities and nations for consumption." This agricultural and commercial enterprise is complacently regarded as the wise development of the agricultural resources of a new country! Although the inevitable results of this practice may be seen in each of the old thirteen States, as in the valleys of the Mohawk and Hudson, yet it is confidently believed by sanguine farmers, that the truly rich soils of the West are inexhaustible.

Whoever will examine this great national question, of taking every thing out of the land and putting back nothing, must be satisfied that no other than the most disastrous consequences can follow. The number of laborers employed in this simple operation, increases at the rate of 200,000 a year, in the United States.

To repair the damage already done to the soil, will cost over one thousand millions of dollars.

S. W.'S NOTES FOR THE MONTH.

THE NEXT SENECA CO. AG. FAIR.—The rural village of Ovid has fairly won the palm from Waterloo and Seneca Falls, by overbidding them something less than $100 for the privilege of locating our next Cattle Show there. Well may friend MOORE, of the Rural New-Yorker, boast of the number of his Ovidian subscribers, as no other hamlet or village rural knows better how to keep up with the spirit and intelligence of this progressive age, than this same Ovid. For the benefit of those who have not travelled through this all fertile alluvial county of Seneca, let me say that this village, which takes its name from the most voluptuous poet of the Augustian age, is situated on the western brow of the dividing ridge which separates the Cayuga and Seneca lakes. From here you look down upon the broadest expanse of the Seneca, four miles distant, as upon a surface of moulten silver; what the perspective lacks in sterile grandeur of mountain precipice, or basaltic rocky cliff, is amply compensated by the richness of the picturesque landscape — green fields now and then, yellowing into harvest; neat and often ambitious farm-houses; capacious, painted barns; grain stacks and hay stacks: extensive orchards; all of which is relieved by very many patches of dark brown woods of very tall deciduous trees; — filling the mind with the idea of the land's fatness and man's thrift. But, reader, this half shire, romantically perched little village, is not by any means as beautiful as it will be; as it grew up in a utilitarian age, before DOWNING's day, you will not now see many cottages or sub-rural houses standing a little back from the street, with French windows looking out upon shrubs and flowers; but the conviction will force itself upon your mind, that this is the place for them, and that soon here they will be seen.

THE WEALTH OF OUR FARMERS. — It is a common observation that the farmers are full of money— "no debts to pay, no notes in the bank." When you find a bank put to it for notes to pay a check, the Cashier will tell you that the circulation has been paid out for farmers' products, and that it has not yet left their pockets. But I take it that the pecuniary ease of the farmers is not to be attributed to the high prices they have received for their surplus products, nor to the large amount of that surplus, but only to their superior industry, economy, self-reliance, and the paucity of their wants, growing out of their comparative expenseless social position. Few farmers seem to be aware of the great pecuniary saving incidental to life on a farm; hydra-headed corporation taxes do not reach them there; pauperism in its endless phases, from fixed domiciliated want to varied, daily, ambulating beggary and fraud, is only of the overgrown village or large town. 'Tis true that an occasional subscription paper may sometimes annoy the farmer, and beard him at his home; but they do not haunt him nightly, nor stare him in the face at all hours, and at every corner of the street. And then the expense of following the ever changing tyrant Fashion — the daily sacrifice made to the eyes of others — may be well dispensed with on the farm, where prying eyes from without are rarely seen. 'Tis true, of late, that many sons and daughters of thrifty farmers do follow the expensive fashions in dress, to a certain extent; but rarely beyond their ability to pay by the avails of their own superior industry. There may be among them the votary of fashion; but never its culpable slave.

It is said that the revenue of the United States will this year amount to $38,000,000 of dollars. The better part of this great sum is received for duties on imported luxuries and the finer articles of dress. Although two-thirds of the people are farmers, it is not supposed that one-fourth part of this great tax is paid by farmers. Hence, as I said before, farmers are rich only from the moderation and simplicity of their wants, and not from the high prices they receive for the products of their industry.

CALIFORNIA.—There seems to be a great discrepancy between the accounts by the private letters from California, and those of the California newspapers. All the California papers hold but one language, which may be summed up in the following lines of BEN JONSON:

> Here, are the golden mines,
> Great Solomon's Ophyr! He was sailing to 't
> Three years; but we have reach'd it in ten months.
> This is the day wherein, to all my friends,
> I will pronounce the happy word, BE RICH.

Yet, sad to say, from letters both published and private, we learn that within a short distance of these very printing offices, in the month of December last, more destitution, sickness, exposure, and positive suffering has been witnessed in a day, than can be met with in the United States in a twelvemonth — that "five out of every twelve are sick"— that thousands would return to the United States, had they the means to do it. A letter from Michigan states that money was scarce before; but since the California fever, it commands 25 per cent., secured on bond and mortgage by the infatuated farmer, who thus puts his fee-simple "upon a cast," to raise money to take him to El Dorado. Another letter, from Wisconsin, computes the amount of money already abstracted from that new State, by California adventurers, at the incredible amount of $3,000,000.

THE FORTY QUART COW. — Mr. H. SMITH, of Covert, says that his cow will give forty quarts of milk per day — that "he has weighed one mess, not the largest, which weighed 32½ lbs.;" this is only about sixteen quarts. JOSEPH WRIGHT says he must have some better evidence of a forty quart cow, before he goes to Covert with his $500. S. W.

Answers to Inquiries.

Messrs. Editors:—I am a reader of your paper, and find many things in it to commend, and it would be strange if there was nothing to condemn. I wish to see something on the opposite side or against the State's founding an institution to make scientific farmers. Now, if this could be accomplished so as every tax paying farmer could share equally, it would be admirable; but we have many institutions with endowments by the State, which only benefits that class which are well able to hear the expense without calling in the aid of poor tax payers. In my opinion, it would be like some advertisements we now and then read: Mr. A. has some fine bull calves to dispose of, worth from $100 to $300; Mr. B. has bucks, say $50, &c.; while his less noted neighbor has equally as good stock, but no one to puff him; therefore he must take up with one quarter of the above price. And again, the poor farmer would have (as now) to take up with the worst land, such as light sand or hard clay, which would cost the most to put in a state to produce; so I come to the conclusion not to tax him for the benefit of those that can do without it. I make the above observations merely to draw out your views on the subject.

One or two more questions, and I close. You write for the information of farmers: how many of your readers understand the phrases you use in analysing soils? Farmers have been so hoaxed with Latin terms by Lawyers and Doctors, that they think there is something behind the curtain. What will our grandchildren think when looking into a volume of the Genesee Farmer they see an advertisement with bolus and bottles. W. T.—*Alexander, March*, 1850.

We thank our correspondent for speaking his mind freely in the above note. He "wishes to see something said against the State's founding an institution to make scientific farmers." This seems to be hardly necessary; for nearly thirty years have elapsed since serious efforts were first made to establish agricultural schools in this State, and down to this hour no legislature has ever been convened in the capitol, that was willing to give the first dollar to aid in so great and important an undertaking. Why labor to kill a thing which never had vitality? The opponents of agricultural schools have it all their own way, and ought to be satisfed.

"W. T." seems to think that persons having choice domestic animals for sale should not advertise the public of the fact, although this information does no more than intimate to such as desire to purchase "fine bull calves," where they can be found. Not only must there be no schools for the improvement of young farmers, but there should be no advertising of anything which an agriculturist has to sell.

Our correspondent asks: "How many of your [our] readers understand the phrases used in analysing soils?" We answer, several thousands; and what is most encouraging, the number is daily increasing. The wild Indian who can count ten, and understands the value of each number from one up to the first decimal, finds eleven, twelve, and thirteen, just as incomprehensible terms as "W. T." does oxygen, hydrogen, and carbon. There is not a particle of difference. Thirteen is a worse word for a child to learn and fully comprehend, than the *name* of any visible or ponderable substance treated of in agricultural chemistry. If a farmer knows little or nothing of *chlorine*, which forms 60 lbs. in 100 of dry common salt, it is a good reason why his children should be better informed of the nature and properties of *salt*, than their father. As every new child born in a family must have a name different from all other sons and daughters, to distinguish it, so every new substance discovered in the progress of the arts and sciences, must have some name to designate and identify it. What better word will express our idea of sulphur, than *sulphur*; or of nitrogen, than an important element in nitre or saltpetre? There are less than twenty simples which form every plant and every animal on the globe; and are twenty names too many for an intelligent man or woman to learn?

Instead of making the Farmer too scientific, and too learned in the study of soils, we have erred, if at all, in the other direction. We should have labored more to convey to every reader a clearer idea of the matter in the soil which forms wheat, corn, oats, potatoes, and grass. It is *things*, not theories, that all cultivators should carefully investigate, and learn the true import of those natural laws which an all-wise Creator has appointed for the government of animate and inanimate matter. Those that have studied longest and closest, discover something of the height and depth of their ignorance, and of the inestimable value of well developed reason in practical agriculture. Not to discover that there is great room for improvement, indicates a very limited view of the possibilities in tillage, husbandry, and the education of millions of children, who are so soon to fill our places as the sovereign rulers of the State and Republic.

Messrs. Editors:—I wish that you or some of your correspondents would give us the analysis of the soil and subsoil that has grown a pear tree to the age of forty or fifty years, and done it in good, handsome style, with an abundance of fruit and of magnificent growth. I have seen such trees in this country, and I am sure that if I could remove the earth where it grew, sub-soil and all, into my garden, it would there produce another tree as healthy and fruitful as it did in the other location.

Is it not reasonable to conclude that the pear tree, like all other trees, grains, and vegetables, has some peculiar food in the soil, that it cannot live without. When we reflect that it grows in Sweden, France, Spain, England, Ireland, and in the State of Georgia, and in almost all the States, we must conclude that it is not badly affected by heat or cold. From my own observations and the observations of travelers, I am confident that when we find out what peculiarity of soil it wants, and how to prepare that soil, we are doing more for the tree than we are to talk of frozen sap, high training, low training, digging, no digging, and all such speculations put together.

As the season for transplanting has almost arrived, I wish that you or some of your correspondents would furnish a careful description of the soil, sub-soil, and every other circumstance in the soil, that has for the last forty or fifty years supported a healthy, fruitful, fine growing pear tree, as above desired. And if it does not cost over ten dollars to a tree, I will prepare the ground for a few of the finest varieties this spring. G. Wibors.—*Victor, N. Y., March*, 1850.

The earthy substances drawn from the surface and sub-soil, by a growing pear tree, are pretty well known. They are such elements as the wood, leaves, and fruit of the tree, yield on a critical analysis; and such as a peck of good unleached ashes and slaked lime, in equal amount, will supply to the soil. If it is poor in mold, some well rotted manure, chip dung, or swamp muck, should be mixed with the lime and ashes. The soil in which apple, pear, and peach trees are to grow, should not be made very rich with stable manure, as it tends to produce an excess of wood, and much of that not perfectly matured.—Pounded bones are valuable to put into the earth about the roots of pear trees. The best fruit tree soils in the world abound in bone earth, or phosphate of lime; but all hard wood ashes also contain this important fertilizer. Mix ashes and lime thoroughly with the soil around the tree, and beyond the extreme ends of its roots.

MESSRS. EDITORS:—Relying on your pledge made to a brother farmer in your January number, *I will try.*

First, to institute an inquiry for the general good both of farmers and all others who keep cows. Last spring I lost an excellent cow. She died in about two days after she calved, with what we call the calf fever. My son lost another in the same way, about the same time. We have lost two or three others within a few years past. My son has one sick now with the same disease. Several died in this neighborhood last spring, and I hear of others sick now. I have been a farmer all my days and am now over sixty years old, and never have been troubled with my cows in this way, till within a few years past. I formerly fed my cows on hay through the winter, and before calving I gave them a few messes of potatoes to loosen their bowels, and had no trouble. Within a few years I have fed them mostly on corn fodder, and have not been so particular about the potatoes previous to calving. Now, a query arises in my mind, whether corn fodder is the best food for a cow that is with calf; and not being a chemist myself, I wish the subject to go into the hands of men of science, for investigation, and the results of that investigation published in the Genesee Farmer. Also, the cause of the disease, and preventive, and best cure, if any. My cows are generally in good order. When taken with the disease, they first appear dumpish, disinclined to food, eyes dull; they soon get down and never get up again. They invariably swell up after a while, and appear in great distress till death ends their sufferings.

Now, Messrs. Editors, if you can give any light or instruction on this subject, or obtain it from practical or scientific men, you will bestow a great blessing on your countrymen and on that most invaluable animal with which God ever blessed the human family—the Cow. WM. PARSONS. *Millville, N. Y.*, 1850.

If Mr. PARSONS had now, as formerly, a few potatoes to feed his cows before they drop their calves, they would unquestionably suffer far less, if at all, from this strictly parturient fever. If he can not well raise green feed of any kind, he should mess his cows with bran wet with brine sufficient to keep the bowels loose, for several days before calving, and they will not die of the malady described by him. Dry corn fodder and dry hay are constipating, and tend to inflammation in the system when under considerable excitement from other causes. The disease is an inflammation, and should be prevented; and it may be by the use of carrots, turneps, beets, potatoes, or cabbage. Green food, not in excess, but in regular feed with dry forage, and a reasonable allowance of salt, will enable Mr. P. to save his cows and to obtain from them a generous flow of milk.

MESSRS. EDITORS:—I noticed an article in the February number of the Farmer, in answer to the inquiries of "P. J. W.," on the properties of plaster. Your theory is, no doubt, true, and satisfactory so far as you went; but I have a few questions to add to those that have already been given.

1st. Does plaster possess any soluble substances, or those that will be destroyed by its being wet? [It does not.]

2d. Does it retain its power so as to act on vegetation the second year? [It does.]

The following experiment gave rise to the preceding questions:—Two years ago this spring, I had a field of about four acres which I sowed to oats; I also seeded it, and after bestowing upon it proper labor, I sowed a little plaster on about half an acre of it. The first year there was no perceptible difference in the oats: but when I cut the grass the next year, that part on which the plaster was sown was exceedingly stout, the stalks were large and long, and from that half acre I received two loads of hay; but from the other three and a half acres I received about three loads. Now I would like to know whether I must ascribe this great difference of ratio to the plaster, or look to some other source for the cause. E. N.—*Oneida Castle, N. Y.*, 1850.

Plaster is so valuable a fertilizer, that measures should be taken to cheapen its transportation to the lowest attainable figure. Lime, ashes, and bones should also be carried at the minimum charge on railroads and canals. Plaster made the gain.

MESSRS. EDITORS:—I am preparing a room in my barn for a threshing machine; a corn sheller, a straw, hay, and corn stalk cutter; and I wish to procure and add a mill for grinding coarse grain for feeding purposes. It has occurred to me that all these might be operated upon, or rather driven by, a wind-mill. I mention these matters for the purpose of asking you whether you, or any of the contributors to the Genesee Farmer, know anything of the manner of construction and cost of a wind-mill? And whether there is any economy in the use of that kind of propelling power? Will you, or any contributor, be kind enough to communicate whatever is known on this subject? Would it be asking too much to request you to name the best and most approved of the four different machines mentioned above? If not, be pleased to do so. E. GUYER.—*Highland, Pa., May*, 1850.

There is but one wind-mill of any account now in the United States, which is known to us, and that is in the city of Washington. The wheel is some 60 feet in diameter. It is used for grinding grain, and is aided by steam. In Holland and England, as well as in this country, steam and horse-power are found to be more economical. A wind-mill is a simple and very primitive contrivance.

It would hardly meet our views of propriety to select the threshing machines, straw cutters, and corn shellers of particular manufacturers, and praise them, with the implied condemnation of all others. We aim to give all good mechanics an equal chance in our advertising columns, and avoid everything that looks like puffing or partiality.

MESSRS. EDITORS:—Many farmers who have used Wheatland plaster for years, think its effects upon the soil are not as good now as formerly, and have consequently discontinued its use to a great extent. They think the plaster has deteriorated in value, from some cause—either the beds are not as pure as they used to be, or, perhaps, lime-stone or some other stone is mixed with the gypsum. If Dr. LEE has analyzed the plaster of these beds, and can tell us whether or not our suppositions are well founded, he will much oblige many readers of the Genesee Farmer.

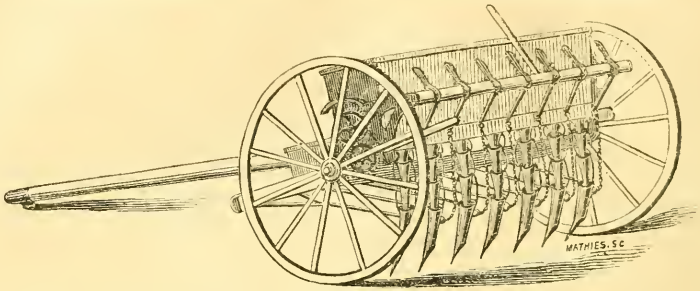
We have not analyzed any of the quarries of plaster in Wheatland, and we should be sorry to believe that any one would add marl, of which there is an abundance in the neighborhood, to the pure mineral. The difficulty doubtless is, that your soils are sick of gypsum, from the lack of bone-timber, potash, magnesia, and common salt, in the land. Plaster is not everything that nature demands to form a clover plant, or a crop of wheat, oats, or corn. Farmers must learn to take better care of the potash, phosphorus, and magnesia, in their soils.

MESSRS. EDITORS:—Could not the culture of indigo be resumed at the South, by adopting what is called the hot water process, latterly in use in India for extracting indigo from the leaves of the indigo plant? There is said to be a great saving of time by this method, and all danger to the health of the workmen, from the deleterious effects of the gases evolved in the old process of fermenting in water of the temperature of the atmosphere, is avoided. And could not the kermes producing oak be introduced at the South, for the purpose of producing kermes for home consumption? It is in some respects much superior to cochineal as a dye: and there is none of it imported, so far as I am aware. J. E.

Undoubtedly indigo culture will some day be resumed at the South; with cotton at its present price, its production will pay better. A large planter, and a late U. S. Senator, has discussed the subject; but the production of indigo is exceedingly unpopular.

The "Kermes oak" we have not studied at all.

TO CATCH RATS—Set a common fox trap; over which spread a piece of cotton or linen cloth, sufficiently large to cover, and sprinkle some meal over the pan—and you *have* him. At least I did. T. R. S.—*Omar, N. Y.*



BICKFORD AND HUFFMAN'S PATENT GRAIN DRILL.

BICKFORD & HUFFMAN'S DRILL.

SOME of our correspondents have expressed their satisfaction with the operation of Bickford & Huffman's Drill. W. S. FULLERTON, of Livingston county, in this State, expressed the opinion that, with slight improvements, this drill would be the best in use. We now give our readers an engraving of this Drill. A correspondents in Wayne county, writes us—"From what I have seen and been able to learn of this machine, I am inclined to think it one of the most valuable and perfect of any thing of the kind yet offered to the public. There is quite an improvement in adjusting with accuracy the quantity of seed distributed to the acre, which is effected with great precision by the use of toothed wheels of different sizes, increasing or diminishing at pleasure the revolutions of the distributing cylinder. The teeth may be elevated separately or simultaneously, according to the wish of the operator, and the drilling tubes themselves are remarkably well made.

BICKFORD & HUFFMAN manufactured and distributed to a considerable extent, last year, a Grain Drill of their own, which, so far as I have learned, gave great satisfaction. The one they now manufacture contains some decided improvements on their machine of last year. For cheapness and excellence combined, I do not know where farmers can get a better machine for the purposes intended; and I have no doubt it will prove of great service to the agricultural community, now that the advantages and increased productiveness resulting from drilling in wheat has been so fully and satisfactorily proved."

IMPROVED SHORT-HORNS—BATES' STOCK.

IN my February article on this subject I felt it a duty to place before the public the fact that Mr. BATES considered the *Duchess blood* THE CHOICEST BLOOD in his herd. Having proved this by *undisputable* evidence, and having also shown that Mr. VAIL's bull Duke of Wellington, bred by Mr. BATES, his Meteor, and other Bates bulls he had sold to gentlemen in this country and Canada, possessed, in addition to their other good breeding, more of this Duchess blood than 3d Duke of Cambridge, I think I may safely rest the matter here.

As, however, a *direct* attack has been made upon Mr. VAIL's very valuable bull Duke of Wellington, by endeavoring to depreciate in the estimation of the public his sire Short Tail and his dam Oxford Premium Cow, it may perhaps be well to show the utter fallacy of the attack. That Short Tail was a great favorite with Mr. BATES, and considered by him as one of his *best* sires, is well known to most breeders of Short-Horns; and were all other evidence wanting on this point, Mr. BATES' "opinion as shown by his practice," is fully recorded in the volumes of the English Herd Book. As to Oxford Premium Cow, Mr. BATES' estimate of her value is equally well known, and as a farther proof of her excellence, I need only add that this same cow was awarded the *first* premium by the Royal English Agricultural Society as THE BEST SHORT-HORN COW—competition open to *all England*.

In the last letter which Mr. BATES addressed to Mr. VAIL, speaking of the merits of the two animals in question, he says, "your Duke of Wellington is decidedly a better bull than 3d Duke of Cambridge." To show that Mr. BATES' opinion of the great value of Wellington as a sire was correct, I quote an extract from a letter Mr. VAIL received from Col. HAMPTON of South Carolina, to whom he sold a bull calf, Belvidere, got by Duke of Wellington out of Lady Barrington 3d. Col. H. paid $300 for this calf. He says: "The bull I purchased of you is not only the *best I ever had*, but *superior* to any I *ever saw*. His get are very beautiful and exhibit ALL THE EVIDENCES OF HIGH BLOOD. I have been a breeder of Short-Horns nearly *forty years*, have *imported several bulls*, and bought at various times others from the *best herds* at the North, but have *never* owned one whose stock has given me such *entire satisfaction*." Col. SUMMER also speaks in the highest terms of praise of this fine animal. I might add numerous other testimony showing the great value of Wellington, but I deem it unnecessary.

The main positions in the article alluded to, are just as easily refuted as the unjust attack on Duke of Wellington. The article, however, *in itself* is so *very inconsistent*, and the applications are so *wholly inappropriate* and unreasonable, that I deem any farther notice of it, or of whatever the writer may hereafter say on the subject, as entirely superfluous.

Mr. VAIL has recently sold another Bates bull, American Comet, to Mr. BELKNAP of Michigan, for $300, and also two cows and two calves about six months old for $700 more, making in all $1000. He has also still more recently sold two animals to the President of the New Hampshire Agricultural Society. S. P. CHAPMAN.—*Clockville, N. Y.*

Wheat Husbandry.

"RUST" ON WHEAT.

It is sometimes surprising to observe the propensity which is shown by many persons, to be mystified in regard to some of the most simple operations of Nature; overlooking the simple and direct manner in which she always produces effects, men frequently appear to be deluded with the idea that there must be some hidden and secret workings in Nature's laboratory, not visible to the vulgar eye, by which she introduces into being many of her most trivial productions. Hence, many learned men attempt to explore some indirect and round-about way of discovering the origin of things; and by so doing, oftentimes lead others into error, thereby verifying the adage of "the blind leading the blind." An instance of this kind may be found in regard to the cause of the "rust" of wheat; respecting which, in the mind of an observing, practical farmer, there is not a shadow of doubt or mystery; but in the minds of nearly all of those who have written upon that subject, all seems dark and mysterious; consequently they have fabricated the most unnatural and irrational hypotheses. Some writers have supposed the *rust* to be a "fungus plant," having "invisible seeds, which were carried by the wind among the standing grain, and coming into contact with the straws and leaves, were received into their pores, where they took root, grew, and fed upon the sap; thus robbing the grain of its nourishment"! Other writers have conjectured that the "invisible seeds" were lodged in the ground, whence, having been received into the mouths of the small sap vessels, they entered into the circulation with the sap of the plant—that by some of nature's mysterious operations they finally burst the external covering of the stem and leaves, grew upon them as a fungus parasite, robbed the plant of its juices, and caused the grain to "shrink." And "last, though not least," of all the preposterous conjectures concocted in the human brain, in regard to this subject, is the *new* supposition, that "as the wheat plant, when about to head, has been known to send a *tap root four feet into the earth*, to procure nutriment, (!) it comes in contact with cold clay, or a sour, wet sub-soil, turns back in dispair, and dies;"—that, "in accordance with the laws of nature, insects, or rust, which is itself a fungus, or vegetable insect, comes to finish the work of devastation on the dying wheat"! Shade of Ceres! deliver us from such tissues of absurdities!!! It is not enough, it seems, that we must lose our wheat crops by rust, "in the natural way," but we must have our craniums crammed (I had almost said *cracked*,) with these ridiculous conceits of *rusty* brained writers, who, it would seem, knew as little of the subject about which they wrote, as a goat does of Algebra!

But seriously; these fine spun hypotheses and net-works of mysteries are quite too absurd to satisfy the mind. 'Tis true they are sent forth as suppositions and conjectures only; but what sensible, practical man, can, for a moment, entertain such preposterous suppositions and conjectures? Who ever discovered a plant of any description, fungus or other, growing out of and feeding upon the living matter of another plant; the former subsisting upon and robbing the latter of its juices, so as to prevent it from perfecting its seeds? There may be, and no doubt are, many things that my "philosophy never dreamed of." I may be told of the "mistletoe" growing upon the oak, and of the "live-for-ever," "growing upon nothing." Be it so; but, I ask, has any one ever yet discovered that the mistletoe robs the former of its juices? No one, I believe, will assert that it does, any more than that the "live-for-ever" robs the latter.

There is no parasitical "fungus" growing upon the living wheat plant in the form of "rust;" what has been supposed to be a "fungus" upon it, is nothing but the crude and undigested sap of the plant itself, which, by the rupture of the sap vessels, runs out and dries on the outside of the straw and leaves. The rupture of the sap vessels is caused by a too vigorous growth of the straw, and consequently a redundancy of sap, induced by warm, damp, and "growing weather," early in the season of spring. If, during this plethoric state of the plant, with its sap vessels distended to their utmost capacity, and just as the grains begin to form in the head, a few days of excessively hot weather come on, the heat swells the sap, and thus ruptures the sap vessels in an immense number of places on the straw and leaves. When the sap first runs out of the ruptured vessels, it is clear and like water; in a few hours, however, it begins to change its color to a dull red, in which state it is called "red rust;" in the course of a day or two it usually changes to a dark brown color, and it is then called "black rust." The effect in the latter case is, that so much of the sap of the plant is withdrawn from it and wasted, that the seed or grain is not filled out, and the produce is called "shrunk wheat." If the hot weather comes on after a large portion of the grain is formed, and continues for a short time, (from one to two days only,) the straw is "struck" with "red rust," and the grain is then generally but little shrunk. If the excessively hot weather occurs at an early period of the filling out of the grain, and continues two, three, or four days, the wheat is usually "struck" with black rust," (the rust within that time generally becoming dark colored,) and the grain is then, most commonly, very much shrunk. The injury done to the crop is in proportion to the redundancy of sap and the degree of heat. Any person having good eyesight can, at the proper season, see the whole process without the aid of a lens, or magnifying glass. I observed it closely, with and without a lens, many consecutive years, during which time my wheat crop was very much injured, and sometimes almost destroyed, by rust. My land was in good condition and well cultivated. I was then in the habit of sowing plaster on such of my wheat fields as I had seeded with clover, for the purpose of making the clover seed take well. It had the desired effect upon the clover; but after several years of experience and observation, I discovered that the plaster caused a superfluous growth of straw with a redundancy of sap, which, with very hot weather, nearly destroyed my crops of wheat. Since I have abandoned the practice of sowing plaster, I have had but little rusty wheat, and what I have had was on black muck soil. The intervale lands (swales) frequently produce rusty wheat, because of the richness of the soil in them, and consequent excess of sap in the straw, when the uplands produce wheat free from rust. The latter, not having so much black muck, or vegetable mold, in its composition, produces less straw and less sap in the sap vessels of the plant. More or less rust, however, is found almost every year, in the swales, where the coldness of the soil retards the growth of the plant in the early part of

the season; and when the warm weather causes a rank and rapid growth of the straw, the sap vessels are of course very tender, and more liable to be ruptured by the heat. Late sown wheat is very liable to be rusted, because it comes to maturity so late in the season, that the weather is oftentimes excessively hot before it can be harvested.

As to the means of prevention, I know of none which can be relied on as specific. Preparations of the seed by means of lime, salt, copperas, &c., &c., are worse than useless, being expensive, laborious, and sometimes (as with arsenic) dangerous. It is evident that such preparations can be of no effect in preventing the superabundance of sap, nor the excessive heat, which are the causes of rust. The land should be in good condition; that is, sufficiently but not excessively rich. The seed should be sown as early as it can be done safely on account of the Hessian fly, which, it is well known, is usually ready in the autumn to deposit its nit, or egg, upon the very early sown grain. If, when wheat is becoming rapidly rusty, the grains are more than half grown, it is best to cut it immediately, unless cooler weather makes it unnecessary. If cut, it should lay in swath about half a day, more or less, so as to cure it a little, that it may not become musty in the sheaf. After a little drying in swarth, it should be raked and bound, and put up into shocks, in which situation it should be left until dry enough to put into the barn. It will be much less injured in the swarth and in shocks, than if left standing in the field uncut, because nearly all the straw will be in the shade, the rupture of the larger portion of the sap vessels by heat will be prevented, and the grains will be better filled out; beside, the air in the field is always very much cooler after the grain is cut, than it was before. If the grains are not fully half grown, the wheat cannot be advantageously cut, as in that case the straw withers suddenly, and the grains will not fill out much, if any. J. H. H.

CORN vs. WHEAT.

Eds. Gen. Farmer:—I read, in the February number, the communication of Mr. Sperry, on the subject of "Corn vs. Wheat;" also that of "A Gates Farmer," on "Corn vs. Wheat—again," in which he seems to doubt Mr. Sperry's conclusions, as he does not give the relative costs of manuring and tillage. He also thinks corn a very exhausting crop. It so happens that my farm consists of land well adapted to corn, and from experience I have adopted the theory, that as much clear money can be obtained in twenty years from 100 acres of good corn land, as from 200 acres of land devoted to wheat.

System of Tillage.—I plow with a large plow and double teams, making from 2½ to four acres per day; harrow well with a large, hinge harrow; plant from 20 to 25 acres per day with a machine of my own make, costing but $3, and drawn by one horse; it plants two rows at once, depositing one grain at a time and the grains 9 inches apart. When the corn begins to sprout, I commence harrowing lengthwise of the rows with my large harrow, and continue until the corn begins to appear above ground. This gives the corn a decided advantage over the weeds. I then use the cultivator freely, cut the weeds once with a hoe, after which I follow with the plow. To prevent the land from being exhausted and save the cost of manuring, I am careful to plow in all the stalks, which will thoroughly renovate and keep up the land for any number of years. I had 180 acres of corn last year, on some acres of which 120 bushels per acre grew. I plant 250 this year. I also let 250 acres more, to be planted. Any communication from my brother farmers, on the subject of corn raising, will be interesting to me. H. R. Jerome.—*Huron Co., O., April*, 1850.

THAT MILK STORY.

In the last Farmer I am accused by Mr. Johnson of concealing a part of the truth in relation to his 42 quart cow, and of misrepresenting his tin milk pail. As this is the first imputation of the kind that has ever been, to my knowledge, directly or indirectly made against me, I trust that the editors of the Farmer will give place in their columns to the following simple facts in the case, which I can substantiate, if necessary, by positive proof.

In the spring of 1848, I requested my drover friends Messrs. Woodruff & Lawrence, to look me up a cow, in the course of their travels, that would give forty quarts of milk per day. On their return they averred that they had seen no such cow, but that the day before, at Geneva, that had been told by Mr. Johnson that he had a cow on his farm in Fayette, which gave forty-two quarts of milk per day. The very next day I called at Mr. J.'s farm with a friend. After showing us the cow, Mr. J. remarked that the year before she had given forty-two quarts per day, but that her best yield now was only thirty-nine quarts, and that the day before he had been offered one hundred dollars for her by two drovers at Geneva. My friend then asked Mr. J. if he had ever measured the milk; to which he replied, that his pail held sixteen quarts, which the cow had filled three times a day. Allowing two quarts on each pail for froth, would leave forty-two quarts for the days yield. Mr. J. then, at our request, produced the pail; it was to our eyes a perfect fac simile of a ten quart tin milk pail, narrow at the bottom, partly covered at the top, with a broad open spout, of the usual form of those pails with inside strainers. My friend then told Mr. J. that if his cow would give thirty quarts of milk per day, he would give him two hundred dollars for her. Perhaps I need not here say that Mr. J. was a little offended at this implied doubt of his veracity, as he quickly and tartly replied that the cow was not for sale, and that he could afford to keep as good a cow as any other man.

Should Mr. J. have the good luck to get another calf from his cow, in order to convince him that I think I have not deceived myself, I will bet him one hundred dollars that we have a thirty quart cow in this village (Waterloo) that will give as much, or more, milk in any given time, as his much famed forty-two quart cow. Joseph Wright.—*Waterloo, March*, 1850.

To prevent Crows from pulling Corn.—Soak your seed twelve hours, in a solution of nitrate potash and sulphate of copper; three ounces of each to one bushel of seed. I have tried this solution two years, with success. Last year my neighbors complained much of the crows pulling their corn, while I saw them walk all over my field, and not a hill was pulled. C. G. Leavens.—*Rushford, Alleg. Co., N. Y., April*, 1850.

NEW YORK STATE AGRICULTURAL SOCIETY.

PREMIUMS AT ANNUAL SHOW IN SEPT., 1850.

(*Continued from page* 115)

DOMESTIC MANUFACTURES NO. I.

Best pair woolen blankets. $6; 2d do. 4; 3d do. 2. Best 10 yards flanel. 6; 2d do. 4; 3d do. 2. Best 10 yards woolen cloth. 10; 2d do. 8; 3d do. 3. Best 15 yards woolen carpet. 10; 2d do. 8; 3d do. 3. Best hearth rug. 5; 2d do. 4; 3d do. 3; 4th do. 2; 5th do. Small Silver Medal. Best rag carpet. 15 yards, 5; 2d do, 4; 3d do, Small Silver Medal.

DOMESTIC MANUFACTURES NO. II.

Best double carpet coverlet $5; 2d do. 4; 3d do. 3; 4th do. 2; 5th do. 1. Best 10 yards kersey. 5; 2d do. 4; 3d do. 2. Best pair woolen knit stockings. $2; 2d do. 1. Best pair woolen wove stockings, 2; 2d do. 1. Best pair woolen fringe mittens, 2; 2d do, 1.

DOMESTIC MANUFACTURES NO. III.

Best 10 yards linen $8; 2d do. 6; 3d do. 4. Best 10 yards linen diaper. 6; 2d do. 4; 3d do. 2. Best 15 yards tow cloth. 5; 2d do Small Silver Medal. Best pair of cotton knit stockings. 2; 2d do 1. Best pair cotton wove stockings. 2; 2d do. 1. Best pair linen knit stockings, 2. 2d do, 1. Best pair linen wove stockings, 2; 2d do, 1. Best pound linen sewing thread. 2; 2d do, 1.

Articles to be manufactured within the year; and in all cases the exhibitors must furnish evidence that the articles are so manufactured

Discretionary premiums will be awarded on articles of merit not included in the above lists.

MANUFACTURES.

Best piece of black broadcloth, not less than 20 yards, Diploma. Best piece of blue broadcloth. not less than 20 yards, Diploma. Best piece of woolen carpet. manufactured in factory. not less than 20 yards. Dip Best piece of satinet. 20 yards. Dip. Best piece of cotton shirting. bleached. 20 yards. Dip. Best piece of cotton shirting. unbleached, 20 yards. Dip. Best piece of oil cloth. 10 yards. Diploma Best piece of prints. 20 yards. Dip. Best piece of mousslin de laines. 20 yards, Dip. Best piece of black broadcloth from American wool. 20 yards. Dip. Best piece of blue broadcloth from American wool, 20 yards. Dip.

Competition open to any part of the world.

SILK.

Best specimen manufactured. woven into cloth or ribbons, not less than ten yards. Diploma and $10; 2d do. 8; 3d do. 3.

Reeled Silk—not less than one pound—best specimen Dip. and $5: 2d do. 3; 3d do. Trans.

Sewing Silk—not less than one pound—best specimen, Dip. and $8; 2d do. 5; 3d do Trans.

Cocoons—Best half bushel, (1850.) $5; 2d do. Trans.

Articles exhibited. to be the product or manufacture of the present year

FLOWERS.

Professional List—Greatest variety and quantity of flowers. $5; 2d do. 3. *Dahlias*—Greatest variety. 5; best 24 dissimilar blooms. 3; 2d do. 2; best single Dahlia. 2 *Roses*—Greatest variety. 5; best 24 dissimilar blooms, 3; 2d do. 2 *Petunias*—Best ten varieties. 3; best seedling. 2. *Verbenas*—Greatest variety. Silver Medal; best 12 varieties. 2; best seedling. 2. *German Asters*—Best collection. Silver Medal; 2d do, 2. *Pansies*—Best and greatest variety. 3; best 24 varieties. 2.

Amateur List.—Greatest variety and quantity of flowers. Silver Medal; 2d do. $3. *Dahlias*—Greatest variety. Silver Medal; best 12 dissimilar blooms. 3; best 6 varieties. 2; best single variety. Sm Sil Med. *Roses*—Greatest variety. Sil. Med; 2d do. 2, best 6 dissimilar blooms 3. *Phloxes*—Best 6 varieties. 3; best 3 varieties 2; best seedling. 2. *Verbenas*—Greatest variety. Sil. Med; best seedling. 2; best 6 varieties. 3; best 3 varieties. 2. *German Asters*—Best collection. Sil. Med.; 2d do. 2. *Pansies*—Best and greatest variety. Sil Med.; best 6 varieties. 2.

General List—*Open to all Competitors.*—Best collection of green house plants. owned by one person Sil Med; 2d do. $3. Best floral design. Sil Med.; 2d do. 3. Best floral ornament. Sil. Med.; 2d do. 3. Best hand boquet. *flot* 3; 2d do. 2. Best hand boquet. *round*. 3; 2d do. 2 Best basket boquet with handle Sil. Med. For the most beautifully arranged basket of flowers. Sil. Med Best floral exhibition. by any Horticultural Society, London's Encyclopedia of Gardening.

FRUIT.

Apples—For the best and largest number of varieties of good table apples 3 of each variety. named and labelled. grown by exhibitor. Diploma and Hovey's Colored Fruits; 2d do. $5; 3d do, Trans. For best 12 varieties of table apples. 5; 2d do. Trans. & 2 For best 6 winter varieties. 3; 2d do Trans and 2 For best fall seedling apple. for all purposes. with description of tree, history of its origin. &c — one dozen specimens to be exhibited, $5. Best basket of standard fruits. Sil Med.

Pears—For the largest number of varieties of good pears. named and labelled. Diploma and Hovey's Colored Fruits; 2d do. $5; 3d do Trans For the largest and best collection of autumn pears. named and labelled. Dip. and 5; 2d do. Trans and 2 For largest and best collection of winter pears. named and labelled. Dip. and 5; 2d do, Trans. and 2 Best collection of newly introduced pears. with a description. &c.. Diploma and Hovey's Colored Fruits

Peaches.—Best six varieties, named and labelled, Dip. and $5, 2d do. 3 Best 3 varieties. named and labelled. 3; 2d do. 2. Best 12 peaches. 2; 2d do. Trans. Best seedling variety. 6 specimens. 3.

Plums.—Best collection of plums. 6 specimens each variety. Dip. and $5; 2d do. 3. Best 4 varieties of good plums. 6 specimens each. 3; 2d do 2 Best 12 plums. choice variety. 2; 2d do. Trans. Best seedling plum. with description. Dip. and 5.

Nectarines.—Best and largest number of good varieties. six specimens each. 3; 2d do. 2. Best 12 specimens of any good variety. 2; 2d do. Trans

Quinces.—Best 12. of any variety. $3; 2d do. 2; 3d do. Trans.

Grapes.—Best and most extensive collection of good native grapes. grown in open air. $5; 2d do 2. Best 3 varieties of native or foreign grapes grown under glass. 3 bunches each to be shown, 5; 2d do. 2. Best dish of native grapes, Trans

Watermelons—Best specimens of any variety. 3; 2d do. 2. Best collection of watermelons. 3.

Muskmelons—Best specimens of any variety. 3; 2d do. 2. Best collection of muskmelons. 3.

Cranberries—Best peck of domestic culture. 8; 2d do. 5.

To be accompanied with a full description of the manner of cultivation. nature of soil. &c.

Any premiums may be withheld. in the discretion of the committee. if the samples exhibited are not worthy of a premium.

The fruit exhibited for which premiums are awarded. to be at the disposal of the committee.

No person can receive but a single premium on the same fruit.

Twelve volumes of Downing. common edition. and twelve of Thomas' Fruit Culturist. will be awarded by the committee in their discretion. for choice fruits not enumerated.

FOREIGN FRUITS.

For best exhibition of each variety of Fruits named in the above list by persons out of the State. Small Sil. Med. and Trans; 2d do, Downing or Thomas

Volumes of Downing or Thomas will be awarded by the judges in their discretion. for choice fruits not enumerated.

VEGETABLES.

12 best stalks of celery $3; 6 best heads of cauliflower. 3; 6 best heads of broccli 3; 12 best white table turneps 3; 12 best carrots. 3; 12 best table beets 3: 12 best parsneps. 3; 12 best onions. 3; 6 best heads of cabbage. 3; 12 best tomatoes. 3; 2 best purple egg plants 3; 12 best sweet potatoes 3; best half peck Lima beans. 3; best half peck Windsor beans. 3; best bunch double parsley. 3; three best squashes. 3; largest pumpkin. 3; 12 best ears of seed corn, 3: best half peck of table potatoes. 3; 2d do. 2; best and greatest variety of vegetables raised by exhibitor 5.

Discretionary premiums will be awarded on choice garden products not above enumerated.

STOVES NO. I.

Best cooking stove for wood fire. Sil. Med.; 2d do, S. Sil. Med. Best cooking stove for coal. Sil. Med; 2d do. S. Sil Med Best cooking range for families. Sil Med; 2d do. S. Sil Med. Best furnace or other apparatus for warming house—economy of construction and consumption of fuel. and security to premises. to be taken into consideration, Sil. Med.

STOVES NO. II.

Best ornamental parlor stove, Sil Med; 2d do. S. S. Med. Best hall stove. Sil. Med.; 2d do, S. S. Med. Best sample of hollow ware S. S. Med

SILVER WARE, CUTLERY, AND BRITANNIA WARE.

Best exhibition of silver ware. Sil Med Best exhibition of table cutlery. American manufacture, Sil. Med; 2d do, S. S. Med. Best exhibition pocket cutlery. American Manufacture. Sil. Med.; 2d do S. S Med. Best specimen of silver ware with agricultural designs. suitable for premiums. Sil. Med.; 2d do. S S. Med Best specimens of argentine and britannia ware, Sil. Med.; 2d do, S. Sil. Med.

GRAIN, FLOUR, AND SEEDS.

Best sample winter wheat. not less than one bbl. $5; 2d do. 3. Best sample spring wheat. 1 bbl. 3; 2d do. 3. Best sample rye. 1 bbl. 5; 2d do. 3. Best sample oats. 1 bbl. 5; 2d do. 3. Best sample barly, 1 bbl. 5; 2d do. 3. Best sample Indian corn. 1 bbl., 5; 2d do. 3. Best sample buckwheat. 1 bush., 3; 2d do. 2. Best sample flax seed. 1 bush., 3; 2d do. 2. Best sample hops. not less than 25 lbs. 5; 2d do. 3. Best sample timothy seed 1 bush. 3; 2d do. 2. Best barrel flour. S. S Med; 2d do. Trans. Best sample of newly introduced grain. valuable to the farmer, not less than 1 bbl., 3

Samples of grain and seed in all cases to be deposited in the Museum of the Society.

For the largest and best variety of samples of Farm Crops. cultivated and raised on any *one* farm. tastefully arranged and exhibited on a wagon or cart, $10; 2d do. 5; 3d do. Sm. Sil. Med.

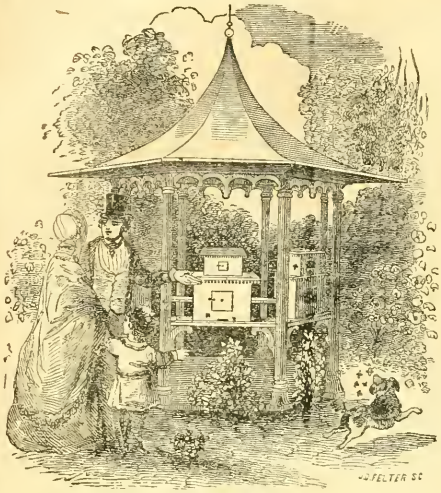
The exhibitors to present a certificate to the committee that all were raised on the exhibitor's own farm.

SALE OF IMPROVED STOCK AND IMPLEMENTS.

At the shows of the Society in 1848 and 1849 demand for the purchase of improved animals and implements having been very extensive. the Executive Committee. with a view of facilitating their sale. will open a Register for such animals and implements as the owners may desire to sell. and which they will offer for sale at the Show in September next

Farmers are desired to communicate freely with the Secretary, and any aid he can render them in procuring choice seeds. valuable implements or stock. will be most cheerfully performed, so far as in his power. B. P. JOHNSON, *Sec'y.*

State Agricultural Rooms, Albany, Feb'y, 1850.



BEES AND BEE HOUSES.

EDS. GENESEE FARMER :—I have been a subscriber to your paper for the past year, (and this day have subscribed for the present year,) and am much pleased with the perusal of the same; but I am somewhat disappointed that it does not speak more on the subject of BEES, and the best method of raising and treating them. As there are many within the bounds of your wide circulation interested in this subject, will you be so kind as to inform your subscribers in regard to the best way of managing; or, will some of your correspondents give their views on the subject, and oblige one who has just begun to keep bees? SARAH S. SARGEANT.—*Buffalo, April,* 1850.

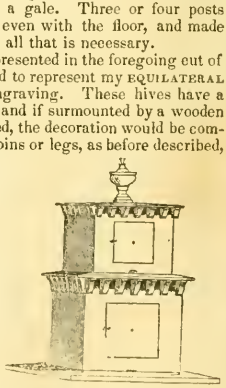
We are gratified to be able to inform our correspondent that T. B. MINER, the author of the *American Bee-Keeper's Manual,* one of the best books yet published, has promised us a series of articles on the subject, and we think we may say that Mr. M. is one of the most intelligent bee-cultivators in the world. In preference to giving any remarks of our own, therefore, we await the receipt of these articles, the first of which we shall undoubtedly be able to give in the July number; in the mean time, we give an engraving of a bee house, and a description from the *Manual:*

"The above engraving represents an ornamental bee house, from an original design, executed expressly for this work. It is not intended for general use, but as an ornament to lawns or flower gardens. This is the first design of this nature that has been laid before the public, to the best of my knowledge. In all the various works on the honey-bee, published in the old world, I find nothing but the ordinary bee stands of ages past, or simple sheds of no more beauty than a pig sty or a hen roost. That such a structure would truly be an ornament to the flower garden, every one will admit. Why, then, should such bee-houses not be erected? The cost will not be much. Thirty dollars will suffice to cover it.

"It will be perceived that the accompanying cut represents an *octangular* building; that is, one having eight angles or sides. This affords accommodation for eight hives, or one to each angle. The height should be sufficient to allow a person to walk under the lower extremety of the roof with facility, and no higher: consequently the posts should be about seven feet long. The roof should project over beyond the posts two feet, at least, in order to shade the hives during the heat of the day. The style of architecture may vary according to the taste of the owner: yet the style of the foregoing cut is not unbecoming, by any means. Instead of having a floor, as is here represented, the posts may be inserted in the ground about two and a half feet, and the area within the posts may be graveled, so as to have a neat and tidy appearance. The portion of the posts placed in the ground should be left untouched, and as large as possible. These posts may either be turned, as they appear in the cut, or they may be boxed in, and made with suitable mouldings to look very well. If they be set into the ground, they should be of some kind of durable wood, and the ends to be put below the surface ought to be charred with fire, to prevent decay.

"With box-columns or posts, the style of architecture should be changed. A cornice should be run around the structure; a dental cornice, perhaps, would look well. Every builder, however, will know how to give the best effect to the general appearance of the structure. If the posts be not inserted in the ground, let the floor be laid, and ordinary joists measuring three or four inches will do for the columns, if boxed in. In this case it will, perhaps, require some support to prevent the structure from being blown over in a gale. Three or four posts sunk into the ground even with the floor, and made fast thereto, would be all that is necessary.

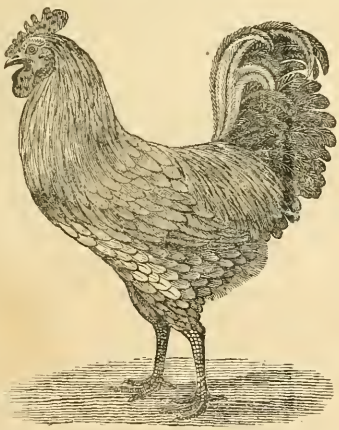
"The two hives represented in the foregoing cut of bee house, are intended to represent my EQUILATERAL hive, as shown in engraving. These hives have a beautiful appearance, and if surmounted by a wooden urn, handsomely turned, the decoration would be complete. They rest on pins or legs, as before described, during the spring and summer, and in the winter they are let down, and the openings in the front and rear are used. The general rules for the management of bees in other hives apply to these with the same force. One great advantage in an open apiary of this nature is, that it affords the least possible facilities for insect breeding. Every part is exposed, and the broom or the brush applied once a week, thoroughly, will root out every vestige of moths, spiders, wasps, &c."



We have a number of the *Bee-Keeper's Manual,* and can therefore furnish copies to those desirous of obtaining the fullest information on the subject. We will also give information in relation to the hives.

A CHAPTER ON FOWLS.

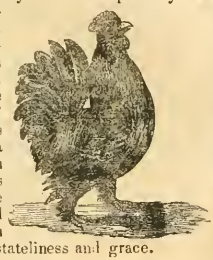
We never had much faith in the laying qualities of the large breeds of fowls. In a wild state, the larger birds lay but few eggs compared with the smaller ones. The *Polands* were always our favorites, and we still think they are unsurpassed for laying; and for beauty, to our fancy, they are unequalled. Their graceful form, their jet black pulmage, shaded with a beautiful metallic green, and their snowy top-knots, make them, to our notion, the *beau-ideal*. But they must be pure; for if crossed, they are a miserable fowl. In order to test the matter for ourselves, about a month since we procured a pair of the *Shanghae* fowls. Dr. Bennett, author of the "Poultry Book," says—"this variety of domestic fowl is, in my estimation, one of the *very best* known in America." They are scarcely six months old, and the cock weighs 8 lbs. 7 oz., the pullet 6 lbs. 5 oz. To our surprise and satisfaction the pullet has laid nearly every day since she came in our possession. They resemble in almost every respect the Cochin China, an engraving of which we give from *Browne's American Poultry Yard*, except that they are feathered on the legs. These fowls were imported from Sbanghae in China, and coming from the extreme *north* of that country, they will undoubtedly prove hardy in our climate. We shall have their portraits taken as soon as they get a little older. They are extremely docile, and the cock shows quite a disposition to become a pet.



COCHIN CHINA FOWL.

We have also eggs of the *Cochin China*, that will be hatched in a few days. Dr. Bennett says, "they are no more expensive to keep than the common hens, while they are about twice as large, better layers, less destructive to gardens, more docile and tractable, and very tender of their young. Their meat is fine and highly flavored. They usually commence laying at from six to seven months old. Their eggs are of a reddish or mahogany color, and of delicious flavor."

In contrast with these monsters we give the universal favorite, the little Bantam—small, to be sure, but important and consequential as the largest of the feathered tribe. He disdains to acknowledge as superior those whose only claim to superiority is a more portly frame—proclaims his equality, at least, in every motion, and declares in unmistakable language, that "the *soul's* the standard of the man."



These little fellows originated in Bantam, a town and kingdom in Java, famous for its pepper trade. They are of small size, lively and vigorous, exhibiting in their movements both stateliness and grace.

Messrs. Editors:—I have just been reading a very able work, entitled "The American Poultry Yard," by D. J. Browne, in an appendix to which (written by Samuel Allen,) the average weight of Cochin China, Malay, and Dorking cocks, is stated to be *seven pounds*. As I have been extremely anxious to procure some of these celebrated varieties, on account of their great size, this statement surprised me not a little, inasmuch as I am already the lucky owner of eleven fowls, the weights of which are as follows:

				lbs.	oz.
A cock,	8	months	old,	9	5
hen,	3	years	"	7	13
"	7	"	"	7	9
pullet,	8½	months	"	6	5*
"	9½	"	"	7	2*
"	9¾	"	"	6	5*
"	8	"	"	6	10*
"	9	"	"	6	2*
"	7¼	"	"	6	5*
"	6	"	"	5	10†
"	5	"	"	5	2†

* Some of these will outweigh the old hens before a great while.
† These two were hatched late and of course are not near grown.

I was induced to weigh them by the statement of Mr. Allen, and to send you a brief description of them, because they so greatly exceed in size the famous chickens named by him. Is not Mr. A. mistaken in limiting the weight of Malay and Cochin China cocks to seven pounds?

I purchased my two old hens and cock that weighed 8¾ lbs. last year, from an old man who brought them from Northampton county, in this State. I can trace them no further. From their appearance and character I judge them to belong either to the "Bucks County Breed," or the "Boobies," mentioned by Dr. Kittridge. Their general color is black, dotted with white; sometimes entirely black and sometimes grey. When first hatched, they are never black or even dark, but invariably light colored—much resembling young *Creoles*. Unlike any other large fowls I have ever seen, *they feather early*, being completely covered at six weeks old. Their legs are dark, combs double or single, combs and wattles usually large, some with small "top-knots" or crests, but mostly without them. They do not breed evenly, some growing considerably larger than others. They lay well. Last year the youngest of my two hens, then two years old, laid 109 eggs; the older, then six years old, laid 78. Of course pullets would have laid much better. All my hens are laying now, except three—the two old ones and the youngest. I have no doubt if well fed, warmly housed in winter, and their nests frequently broken up to prevent their becoming broody, they could be made to yield each 150 eggs a year. They are said to sit well, but do not cover their young as often as good mothers should. What is their name? D. T.—*Northumberland, Pa., Feb'y*, 1850.

We are unable to give your chickens a name; but they are undoubtedly a cross between one of the large breeds and some smaller variety, perhaps the common fowl. The fact that they "*do not breed evenly*" indicates this. Nothing goes farther to establish the distinctness of a race than uniformity in size of chickens of the same age. They are certainly very respectable for size and for their laying qualities.

Horticultural Department.

EDITED BY P. BARRY.

We have been struck with a few facts in regard to the planting season just closed, that indicate, to some extent, the changes that are taking place in the public mind on certain points in fruit culture: and we think it not amiss to take note of them now, while fresh in our memory.

The *first*, is a remarkable falling off of the damand for *new* varieties, especially among amateur cultivators. A few years ago — indeed, we need hardly go farther than a single year — a person having a small lot of 50 by 100 feet to plant, would order a dozen varieties of the newest, rarest, and most extraordinary to be found noticed in all "the books." These he *must* have; our good old sorts, with characters "beyond suspicion," would not by any means answer his purpose. He had just read an account of an extraordinary "*seedling cherry*," produced by Mr. A., in one part of the country; a wonderful seedling apple, by Mr. B., in another; a no less remarkable pear, by Mr. C., somewhere else; and an apricot and a plum that, in spite of the curculio, bore extraordinary crops, and out of the culture of which little fortunes had actually been made. These were just the articles for his garden, he thought, and he got them *if he could*. This was something like the way people were getting along in fruit tree planting, when various pomological conventions were held, to which planters everywhere looked for some advice in the matter of selecting varieties. These conventions, it will be remembered, recommended for *general cultivation* mainly the old, well known sorts, whose characters were fully established. This at once changed the current of taste among inexperienced planters. Hence it is that we see in the nurseries here over 100 new or rare varieties of the pear, from which scarcely a tree has been dug, unless for a nurseryman or an experimentalist, while for the old sorts of established merit the demand has been quite equal to the supply. This is as it should be. People who have small gardens that they wish to stock with really choice fruits for their own use, have no business with any but well tested and generally approved varieties. Neither should those who plant fruit gardens or orchards for the supply of the market, meddle with new or little known varieties. Nurserymen and pomologists alone should cultivate and test these: and it is their duty and a portion of their business to do so. The conventions have therefore accomplished some good, we might say a *great deal* of good, in this one simple particular, of recommending for general culture, varieties upon which nearly all the world had pronounced a favorable verdict.

The *second* fact we wish to note in reference to the planting taste of the past season, is the unusual demand for DWARF TREES. A few years ago, nobody sought for dwarf trees. Scarcely anybody knew of such things. The *tall standard*, with a bare trunk of six or eight feet high, was the only form of trees recognized for all sorts of circumstances. The little village garden of 50 by 20, or the orchard of twenty acres, were placed upon precisely the same footing in this respect. The consequence was, that small gardens were entirely unavailable to fruit culture beyond a few gooseberry or currant bushes; and thousands and tens of thousands of our citizens in all parts of the country, who will in a few years have charming little gardens of dwarf trees, were quite excluded from all the pleasure and profit which this interesting culture cannot fail to yield. People everywhere in our cities and villages, who have but a small lot of ground to cultivate, are very naturally delighted with these trees so admirably adapted to their circumstances. *Old people*, too, who could not reasonably hope to reap the fruits of standard trees that never yield in less than six to ten years, are planting dwarfs, because in two years at most they may gather their fruits. Thus, two large classes of persons heretofore quite excluded from fruit culture, are now brought in, and are in fact the most active. Whole orchards, too, of these dwarf trees, pears in particular, are being planted for the growth of fruit for market; and when we consider that not one out of a hundred will die in planting — that 300 to 500 may be put on an acre of ground — and that in two or three years at most they begin to bear — we do not see why they will not be profitable. Many are also very judiciously filling the spaces between standard pear and apple trees, with pyramidal pear trees on quince stocks, considering that at the end of twelve or fifteen years, when their standard trees have attained good size and have come into full bearing, and the dwarf trees begin to be in the way, they can very well afford to cast them off. This system of managing orchards is extensively practiced in France, where orchards and fruit gardens are models for all the world. It cannot but be highly advantageous in this country, at least in all the older districts, where land is valuable and fruit growing an important pursuit. An orchard of five acres, for example, will, at thirty feet apart each way, contain but 242 standard trees. — Among these we can put in 726 dwarf or pyramidal trees at fifteen feet distance all around. Until the eighth or tenth year, the standard trees will yield nothing worth reckoning upon; but from the third or fourth year, the dwarfs will yield a considerable income, and by the seventh or eighth year they will produce not less than from $1 to $5 worth per tree. When the standards require more ground, a part or the whole of the others may be removed, as the case will require. This gives to pear orcharding a very different aspect from that in which it usually appears, by reducing the period at which the income begins, nearly or quite ten years — equal to one-fourth the time that any one now, upwards of twenty-one years of age, can expect to live.

The planting of standard trees of any sort in small gardens, will unquestionably cease within a few years, as soon as people generally have acquired a little more information and experience in the different departments of tree culture, and trees suitable for

it more extensively propagated. The pyramidal system of training the apple, the pear, and the cherry, is so simple and beautiful, that it must meet with universal favor among the proprietors of small gardens. The peach and the aprient can be kept small enough for any moderately sized garden, by having them low headed and properly shortened in. Where very small trees are desirable, they may be worked on plum stocks. A few years ago, when we commenced the introduction of these trees, many persons who pretended to know something about tree culture, but in reality knew nothing, raised a cry against dwarf trees as being "short lived and worthless;" but we hear nothing of that sort now. People begin to understand that if they don't live a hundred years, they bear early, look very well in their gardens, and are easily replaced when they die out by old age.

SUMMER MANAGEMENT OF PYRAMIDAL TREES.

No matter how well trees may have been pruned before the growing season commenced, a little attention during summer is absolutely necessary. It is impossible for the most skillful pruner in existence to cut exactly, in all cases, at the proper point, or at least at the point that would induce the precise development of buds and branches that he wants; certain buds will push with greater or less vigor than he had reason to expect, from their appearance and position, and thus the balance proposed to be maintained is broken. In such cases we must, at the proper moment, when growth is going on, resort to what is called pinching — nipping off with the finger and thumb (a sharp knife is better,) the point of such shoots as are exceeding their due relative proportions. The leading shoot, that is intended to constitute the main trunk of the tree, should always take the lead; none of the lateral or side shoots should be permitted to dispute its supremacy. The annexed cut is intended to illustrate a case of this kind. B is the leading shoot, and A, A, side shoots, both of which have taken a more sturdy development than is consistent with the welfare of the leader and the pyramidal form of the tree. If A, A, had been timely nipped, the branches below them and the leader above would all have had their just proportions. We therefore point this out as an item of very great importance in growing pyramidal pears. When the tree is left to itself during the whole season, and in the fall we find it grown so out of proportion as the annexed cut, a great deal of severe pruning is necessary to restore the balance; these strong branches next the leader have to be cut to one eye perhaps, and the whole pyramid is injured and considerably retarded. What we have said has reference mainly to the leading shoot and those in its vicinity; but it applies with exactly the same force to all the main side branches, which may be considered as so many leading shoots, and will require the same care and treatment.

There is another evil that must be remedied by pinching: for instance, when we cut a leading shoot or a side shoot, expecting that all, or nearly all, the buds below the point where we cut, to break and make side shoots or spurs, and, contrary to our expectations, only two or three at the extremity grow, leaving the others dormant. To make these lower buds break, we must pinch those above them at a very early day. This checks the flow of sap and concentrates it in the lower parts, causing the buds there to break. This is the way to have all branches covered with fruit spurs their whole length. Pyramidal pear trees on *quince* stocks are naturally so fruitful, generally speaking, that pinching to form fruit buds and spurs is rarely necessary. The principal point to keep in view is the *form*. On pear stocks, however, both objects must be kept in view. All we have suggested on this point will be necessary in both cases. Pinching to promote fruitfulness consists in pinching or breaking off the ends of the small side shoots, stopping their elongation and turning the sap into the formation of fruit buds. This is practiced continually as growth advances and the condition of the trees render it proper, principally through July and August.

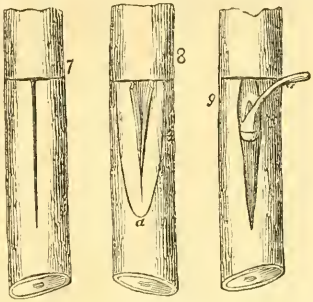
This pinching to promote fruitfulness requires more skill and practice in pruning, and much more physiological information respecting trees, than any other pruning. If done too soon or too severely, the object is defeated by having the buds break into new shoots, instead of forming fruit buds, thus requiring pinching and pinching again, before the object is attained. Vigorous and feeble growers require different degrees of pinching, and require it to be done at different seasons. Different soils and climate all affect this matter so much that no general rules can be safely adopted. Some rank growers on free stocks cannot be brought into bearing by this means, until the pinching and pruning are so severe as to weaken to some extent the whole force of the tree. Root pruning has the same effect, and in such cases is quite necessary: but this must be done in the fall, when growth has terminated.

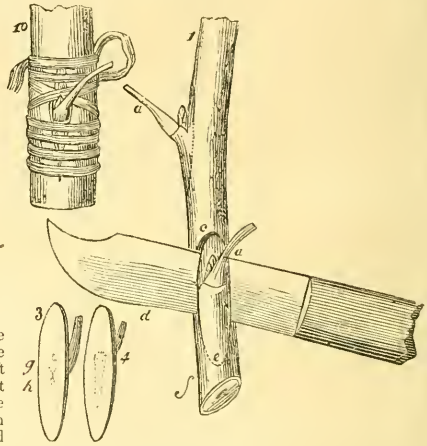
Thanks. — We are under obligations to Thos. Hancock, Esq., of the Ashton Nurseries, Burlington, N. J., for a packet of seeds of the "Round Borneo Citron," a splendid variety, that took the Pennsylvania Horticultural Society's premium, last September.

BUDDING AND LAYERING.

These two principal operations for the multiplication of plants, will commence this month. Roses can be budded as soon as ripe well formed buds can be got, and the bark on the stocks will rise freely; indeed these are the two conditions indispensible to the budding of all sorts of trees and plants. Roses and other things that we wish to start and grow this season, can be budded, no matter how early—the earlier the better; but the buds of fruit trees, that in our climate should not grow the same season they are inserted, should be delayed till there is no danger of this—say last of July and early in August, for plums and cherries; and August and September for all others.

Many of the recent subscribers to this journal are solicitous for information on the practical part of it; and to meet their wishes, we give the following illustrations. Remembering the conditions we have alluded to, proceed as follows:





BUDDING.

Take a young shoot (fig. 1) with good ripe buds, and strip the leaves off, leaving part of the leaf stalk as at *a*. The shoot is held in the left hand and the knife in the right: the lower part of the blade, say at the point *b*, is placed on the shoot at *c*, one-half to three-fourths of an inch above the bud; the thumb of the knife hand ests on the shoot at *f*, the lower extremity of the bark intended to be removed with the bud; the knife is then drawn towards you obliquely, parallel with the shoot, smooth and level, so that the bark and a very thin portion of the wood will be taken off. In cases where this wood is firmly attached to the bark, it is better to leave it; but where it is loose, or partly so, it may better be removed, which can be done by putting the edge of the knife under the wood, between it and the bark, and lifting it up. Care in doing this is necessary, to avoid pulling out the root of the bud, as in that case the bud is lost. Fig. 3 is a good bud; *g*, root of the bud, and *h*, root of the leaf. Fig. 4 represents a bad bud, always thrown away. Fig. 7 shows the stock cut in the form of a T, to receive the bud. Fig. 8, the bark raised with the ivory or bone handle of the knife. Fig. 9 represents the bud in its place. The top of the bud is always cut square, to fit the cross cut on the stock. Fig. 10 shows the bud tied with bark or orther material. The whole operation should be done neat and quick.

LAYERING

is a mode of propagating trees and plants by bending down the branches, generally, but not always, of the current seasons growth, and covering them at the point where we wish to produce roots, with two or three inches of earth. Roses, carnations, and a multitude of ornamental trees and plants, grape vines, quinces, gooseberries, &c., &c., are propagated with ease and certainty in this way. The annexed cut of a carnation layer conveys a very clear idea of the operation in general.

In the case of the carnation, the stems to be layered (usually done just as they go out of bloom,) are stripped of the leaves as far as it will be necessary to imbed them in the ground; the ends of the leaves are also cut off an inch or so; the knife is then in-

serted below a joint, and the stem cut half through; the knife is then drawn upward, slitting the stem to the next joint above; the small portion remaining below the joint where the incision was made, is cut clean off to the joint, and the stem is bent into the

ground, and pegged down with a crooked wooden peg, to keep it in its place and to keep the cut open; the earth is drawn around it, carefully placing it in an upright position; a good watering will then finish. For all layers the soil should be well prepared, and light and sandy. All ordinary layering is performed on the same principle. In two or three months, most plants will have rooted and be ready for transplanting. When a branch is layered, it is in most cases well to cut off a portion of its top, particularly if growing fast, as it checks the flow of sap to the point, and hastens the granulation and formation of roots at the cut. Where the shoots are soft and tender, great care is necessary to avoid breaking them off, and in such cases it is sometimes better to make the cut on the upper side, and twisting the branch a little to keep the cut open when pegged down. Roses are usually layered after they have gone out of bloom, and the other shrubs, &c., when the wood is sufficiently grown and matured to work well.

GRAPES AND PEARS.

Mr. Editor:—Allow me to state a fact in relation to pruning the grape, which argues strongly in favor of the thorough use of the knife. Gustavus Clark, Esq., of Clarkson, has recently practiced cutting *close* to the main branch every side shoot. He suffers two or three shoots to grow from the root, training them in different directions and tying to stakes four or five feet high. His crops of fruit are splendid—equal to any I ever saw. New shoots spring along the whole length of the old vine, on which grow the rich clusters. This fact should encourage timid pruners to a bolder and more thorough application of the knife.

Have you ever eaten a good Summer Franc Real pear? I have a tree of that variety—and genuine too—which has borne fruit three years, and not a specimen but proved worthless. Of the Duchess d'Angouleme, which has fruited the same length of time, the same remark is true. Not one pear have I had that was even tolerable. In the same soil, B. Diel, Ananas, Louise Bonne de Jersey, Bartlett, and White Doyenne, have produced delicious fruit, and B. Brown very good, H. P. N.—*March*, 1850.

We have eaten the Summer Franc Real, not *first rate*, but *second* at least. You may have let it hang too long; it ought to be picked soon. Duchess will be all right yet; *wait a little*.

ANSWERS TO CORRESPONDENTS.

Hedges.—(F. A. R.) We suppose you mean the common native thorn, which makes a good hedge. *Locust*—Put the seed in scalding water, and let it remain for 24 hours before sowing. Sow in drills three feet apart, and three or four inches apart in the drills. At six feet apart, about 1200 will plant an acre, and a couple of pounds of seed will produce plants enough. The Honey Locust will make a good hedge in four years from the seed. The seeds should, if possible, be all sowed in April or May—June will do. Ditches by hedges of this sort are not only unnecessary, but improper, subjecting the hedge too much to drouths.

Oleanders.—(Marcellus.) Don't use arsenic to kill worms in the pots; lime water is safer and better. We would advise the ladies to plant their Oleanders out in the garden during summer; there they will form fine new roots and get rid of worms.

Names of Flowers.—(O. A. A., Hemlock Lake.) We have no doubt your seedsmen have acted honestly. The *Gilia tricolor* and *Lupinus Cruikshankii* are well known annuals; but you will not find them, or mere *varieties* of any species, in botanical works.

PRUNING.

Mr. Editor:—I have recently visited many fine gardens and orchards in different parts of our country, and in no one thing am I so much disposed to find fault, as in the gross neglect to *prune fruit trees*. The long, thrifty shoots, are allowed to extend themselves to an unnatural length, and the lower branches become exhausted, sicken and die—the tree looses its symmetry and beauty; and if it produces any fruit worthy of its scion, it is in spite of bad usage. Not only this, but many seem to think that pruning a young fruit tree sets it back just to the extent of the pruning, and consequently they thus lose, as they suppose, a good share of a season's growth.

You well know that the orchards of our country suffer severely for the want of judicious pruning, and I would inquire if there is not some more efficient way to arouse the attention of our farmers to this all important subject? I am glad to see that this neglect is no fault of the Genesee Farmer. Wayne.

This is quite correct. From actual observation we know that a great majority of all bearing fruit trees in most parts of the country, are suffering seriously for want of a little pruning; but the matter is receiving more attention.

Effects of the Winter on Vegetation.—The frequent frosts we had towards spring, when the snow was gone, had an injurious effect on strawberries and other plants with small roots near the surface, not protected; they have been drawn out. Excepting this, we have seen no ill effects of the winter; no trees, not even tender ones, are winter killed in the least. The *Deodar Cedar* and *Auracaria* have stood quite safe without protection. The *Cryptomeria*, very slightly protected, quite safe, and will prove hardy. *Taxodium sempervirens* had its foliage burnt off, but the wood and buds are uninjured. Abies *Smithii* and *Douglassi*, *Picea pinsapo*, *Pinus excelsa*, *cembra* and *pumila*, all quite hardy. *Mahonia aquifolia* stands the winter well, retaining its foliage fresh and green; it is now finely in bloom, and is a beautiful lawn shrub. *Spiræa prunifolia* and *Budolea Lindleyana* are as hardy as can be desired.

We see by the Horticulturist for May, that all these plants have stood the winter at Newburgh, some unprotected, and others covered with boards.

PROCEEDINGS OF THE SECOND CONGRESS OF FRUIT GROWERS, convened under the auspices of the American Institue, in the city of New York. 1849

The proceedings of this body have at length appeared in a very handsome, well printed pamphlet, of upwards of 100 pages; and we are indebted to the President of the Congress, Hon. M. P. Wilder, for a copy. It is impossible for us to say anything about it, or to give any extracts from it, until next month, as the whole of this number of the Farmer was ready for the press before it came to hand.

The Season.—Our spring here has been unusually cold and backward; up to the middle of May we had rarely a warm spring day: but it has been a fine season for planting, and all have had a long and favorable time for completing their improvements. The weather now, May 16th, is fine, and fruit trees are loaded with blossoms, promising a most abundant crop. The thinning process will very generally have to be resorted to, if no untimely frost or other accident occurs after this date.

Ladies' Department.

WE have promptly forwarded to all applicants the "*Floral Rake*," though we fear some of them will never reach their destination, on account of the distance some of our friends reside from the regular express routes. Though wisely making no attempts at rhyme, many of our lady correspondents are truly poetical :

EDS. GENESEE FARMER :—That rake, if you please, sirs, —shall "use it without gloves,' receive it thankfully, and send you a boquet in return. Hoping the mignionette will have a sweeter fragrance and the petunias a richer bloom through its agency, I ask you to send it soon. N. A. S.—*Ripley, Brown Co., Ohio.*

Was it not for the advantage our near readers would have over those more distant, we would offer *Downing's Flower Garden, Parsons on the Rose*, and other good books, as a premium for the best boquet sent to our office during the season. But as we can not at present make this offer so as to be available to our friends generally, we would urge the formation of Horticultural Associations in every city and village and county of our country ; and the offer, by such associations, of similar premiums. The labor will be light, the expense little ; and in return, flowers will spring up where grow the thorn and thistle—homes will be made more pleasant, eyes more bright, and hearts more happy. The cheeks of loved ones will catch the bloom of the rose, the sweetness of the honeysuckle. True, flowers cannot furnish food for the body ; but, shall the body be fattened, and the mind and the affections starved ? Shall we work for the body always, and never for that which distinguishes man, and makes him greater than the brute ? Is it right that we should eat, work, and die, like the ox ? Is it not as sinful to stultify and starve the mind as the body ?

Few realize the injury they do, and actually suffer, by depriving themselves and their children of the pleasure afforded by the cultivation of flowers—these children of the field. A farmer and his wife, in easy circumstances, not a thousand miles from this, had an only son, who, much to the sorrow of his parents, had imbibed a desire "to go to sea." He had read of the raging billows—of strange people in strange lands—of orange groves—of lands where the pineapple grows—of exciting scenes in capturing the whale,—and his whole heart seemed set on seeing foreign lands and living on the ocean wave. In vain his parents endeavored to interest him in the operations of the farm. He worked, to be sure, but his heart was not in the work. It was a drudgery, and he longed for the time when he could bid farewell to parents and home, and see the world for himself. At that time a Horticultural Society was established in the county, and at the first exhibition fruits and flowers of the finest kinds were displayed, many of them brought from a distance, and such as had never been seen in the neighborhood before. Our young friend attended this exhibition, and looked at the display with wonder and surprise. Nothing astonished him more than the lively, joyous interest, those engaged took in the arrangement of their several collections. While he had looked upon everything connected with the cultivation of the soil as a heartless drudgery, here even the ladies appeared to engage in it with a zeal and a pleasure he could not account for. One class of flowers particularly attracted his notice ; he procured a few plants—planted them and nursed and watched them, and waited anxiously and impatiently for the coming bloom. In due time his plants blossomed, and their extraordinary beauty repaid him for his toil. He carried off the prize at the next show. Elated at his success, and the pleasure it afforded him, he increased his collection—forgot all about the sea and strange lands—and became one of the most enthusiastic and intelligent cultivators, and the most successful competitor for prizes at the shows of the Horticultural Society. He now takes hold of farming in earnest—aims at the finest crops ; and the parents reap in the society, perhaps the salvation of their son, and in the better management of the farm, the happy influence of flowers on the young mind, and *the benefits of Horticultural Societies.*

BUTTER MAKING.

As this is the season for making butter, I think it not inappropriate to write a little on that subject. Butter making is a business that justly occupies the attention of the farmers of this country at present ; and although each one that has published his process has a somewhat different manner, yet they are all the best—all get the premium. One churns the whole milk, one skims sweet, another skims sour ; and the conclusion to be drawn from all this is, that in this respect we are like all other nations that have a surplus of butter. The Irish and Dutch have the reputation of making the best butter ; yet they are as unlike as they can be in their manufacture. Even in different parts of Ireland, their management is wholly different ; in one part they churn the whole milk, in another they skim as soon as changed, saying that if the milk turns thick before it is skimmed, the cream will turn soft and consequently the butter will be soft and will not keep. I had in my employ the past season, an Irish girl from the south of Ireland, who has worked in an extensive dairy in that country. She says they use more salt in their butter for transportation than they do for home consumption, and that their butter is never worked after it is salted, but is finished and packed in firkins. I intend to pack a pot next June, exactly after her directions ; but I do not suppose it will be fit for anything but soapgrease. In Johnston's Agricultural Chemistry, I think the Dutch are mentioned as churning the whole milk, but let it stand until it is so thick that it will hold a stick up, with which they stir it. A FARMER'S WIFE.—*Saratoga Co., N. Y., May*, 1850.

EXERCISE.—Throughout all nature, want of motion indicates weakness, corruption, inanimation and death. Trenck in his damp prison, leaped about like a lion, in his fetters of seventy pounds weight, in order to preserve his health; and an illustrious physician observes: "I know not which is most necessary for the support of the human frame—food or motion." Were the exercise of the body attended to in a corresponding degree with that of the mind, not only would children suffer less from sicknes, and their lives be less uncertain, but men and women, and particularly men of learning, would be more healthy and vigorous, more happy in their domestic lives, and the better able to perform their duties. In fine, with propriety it may be said that the highest refinement of mind, without improvement of the can never present anything more than half a human being.

Youths' Department.

"SPECIAL MANURES."

The editors of the Horticulturist and the Boston Horticultural Magazine can not agree on the subject of "special manures." Mr. Downing takes the *pro*, and Mr. Hovey the *con* side of the question. The Magazine conductor insinuates that "the theory of special manures may answer very well for *beginners* in gardening, but every practical man knows" that it has no foundation in nature. To this the Horticulturist editor replies by copying extracts of a letter received from a member of the Albany Horticultural Society, giving an account of "several old White Doyenne (Virgalieu) pear trees, the fruit from which was nearly worthless, being *cracked, knerly,* and small." After the use of special fertilizers, these trees produced superb fruit, which took the premium in competition with the finest cultivated varieties in the city and county of Albany; and fruit from these renovated trees was exhibited at the Pomological Congress in New York, which was fair and beautiful. What Mr. Hovey will say to this evidence, we have yet to learn, as it only appears in the May number of the Horticulturist. For ourselves, we have so long believed in the theory of feeding a plant or tree on the constituent elements from which its whole weight and substance are formed, that we can not remember when we first began to learn and preach the doctrine. The distinguished Dr. Samuel Mitchell taught this theory in 1794, or before Liebig, Downing, or the writer was born.

The modern doctrine of special manures is about sixty years old; although there is evidence which leads us to believe that it was acted on, and in some degree understood, in the eras of Columela, Virgil, and perhaps by old Hesiod himself. The theory is substantially this: To organize the tissues and fruit of apple, pear, peach, and other cultivated trees and plants, the incombustible matter which appears as *ashes*, when their stems, leaves, and fruit are burnt, *are indispensable elements.* Hence, if the potash, lime, and other things which make *ashes*, be deficient in the soil, the defect will operate injuriously on the tree and its fruit. A soil may lack mold, or organic, as well as mineral matter; but as a general rule, the farmer has only to supply potash, lime, and bones, to secure the growth of fair crops. Thus one-third of the ash obtained by burning wheat, is pure potash: and nearly fifty parts of the remaining sixty-six are phosphoric acid. Hence, ground or dissolved bones are a special manure; so also are wood ashes and gypsum.

Those who have carefully read the articles on Agriculture in our Youth's Department, will be satisfied that it is possible to starve a tree or a plant, as well as a cow or a horse; and that there is very little sense in blindly giving a tree *manure* without knowing, or thinking, or caring whether we are giving just what the ground lacks and the tree needs, or whether we are supplying that with which it is already surfeited. The man who would wilfully shut his eyes and wander about the streets in darkness, would be entitled to very little sympathy, even though he should fall into the ditch. If science furnishes the means of ascertaining of what substances every tree and every plant is composed, and that some part of their composition is taken from the soil, and our common sense teaches us that unless the needed substances are in the soil the wants of the tree can not be supplied, and if science likewise furnishes us the means of knowing whether the required substances are in the soil or not—the man who, with these facts before him, clear and bright and invaluable as the noon-day sun, shuts his eyes alike to the light of science and the teachings of common sense, will be at best but a blind follower of the blind.

DIGNITY OF LABOR.

One of the editors of the Farmer was called upon to deliver an address before an Association of Mechanics and Farmers, mostly young men, on Franklin's Birthday. An extract or two may not be unprofitable to our youthful readers.

"Franklin had the greatest respect for those who render themselves useful, no matter how humble the occupation. And yet there are young men and women too, in our own country, who pride themselves on their ignorance of all useful and honorable employment—who boast their own uselessness, and glory in their own shame. The drones of society, they affect to despise those who furnish the luxuries on which they subsist; who by their own industry and skill provide for those dependent on them—cause the wilderness to blossom as the rose—build our cities, beautify our dwellings, and cover the seas with the heralds of commerce and civilization.

Let the young farmer or mechanic scorn every association that asserts his inferiority or his dependence, his inability to provide for himself, or to perform with credit his part in the great theatre of life; even though ostensibly formed for his elevation. Let the very imputation fire your soul with a lofty ambition. Show to the world by a proper self respect that you appreciate your station. Jehovah himself, the Great Architect of the Universe, might as well be despised for his mighty works, as that you should be lowly esteemed for your very usefulness. Unite economy and industry with decision of character, and with the ordinary blessings of Providence you can ensure competence—yea, respectability, usefulness and honor will be your reward.

How insignificant do those appear who boast only a *noble* parentage or a high sounding title, in comparison with one of nature's noblemen, like Franklin; the briar by the road-side would better compare with the tall cedars of Lebanon, or the spark from the electric machine with the lightnings of heaven. Let every one who admires his character and his success take at once the first steps in mental discipline.

Young man! are you suffering under the tyranny of an unprincipled master—look up! talent accompanied by industry, in this land, more than in any other, brings its sure reward. Remember that he whose birth we this night commemorate, suffered in this respect, all it is possible for you to endure. Remember Franklin the *poor apprentice*, and Franklin the *proud philosopher*. Have you become the dupe of the designing, are you depending on the promises of friends, or labor saving associations, or any thing short of your own well directed industry, for success in the world? Remember the fate of Franklin.—Depend alone on the strength of your own right arm, the force of your own genius. Have you been unwittingly led into a course of conduct that must end in injury to others, and disgrace to yourself? Institute a rigid self-examination, such as arrested Franklin in his course of folly."

Editor's Table.

WE recently made a trip east—and a very pleasant one. Our journey brought us in contact with many of our friends—and we number in this list all who read the Farmer—particularly on the route of the New York and Erie Railroad. There may have been a time when farmers doubted the advantage of railroads to the agricultural community, considering them more beneficial to capitalists than farmers; but that time, if it ever really existed, is past. The benefits of the New York and Erie Railroad to the southern tier of counties in this State, is felt no doubt by all, as it was expressed by every one with whom we conversed.

We were particularly interested in the large quantities of milk taken by this road to New York city, from Orange and some other counties. We have no means of ascertaining the quantities daily supplied, but we saw railroad trains, called "*milk trains*," and steamboats, loaded with thousands of cans of milk, and nothing else. This is contracted for in New York. Each farmer makes his contract with some wholesale purchaser, stating the number of cows he keeps, and about the quantity he can supply daily. The farmer then procures large tin cans, marking on them his own name and that of the person who purchases his milk. Along the line of the road "*milk depots*" are established, and all the seller has to do, is to fill his cans and have them at the nearest depot. The "*milk trains*" stop at each depot and take up the cans—the contractor being on hand at the arrival of the boat to receive them. The empty cans are returned in the same manner. The price paid the farmer is *two* cents a quart in summer and *three* in winter. (the purchaser paying freight.) The milk is retailed at three and four cents a quart. We suppose from the appearance of the milk on the tables in the city, that Croton water adds a little to the profit; but the New Yorkers have reason to be thankful that they can now get pure milk and water.

We came from New York in company with one of our subscribers in Orange county, who had been to the city to collect his account for milk for the last three months. He stated that but little butter comparatively is now made in the county, the farmers prefering to sell their milk; and less attention being paid to butter making, Orange county butter will ere long lose its well earned reputation.

We are much indebted for the agreeableness of our trip, to the kind attentions of Mr. MARSH, Secretary N. Y. & Erie Railroad, and Capt. DAKIN, of the fine steamboat "*Ben Loder*," on Seneca Lake.

THE present number completes the first half of the current volume. We are more than gratified that our efforts to furnish farmers with a paper at once cheap and valuable, and particularly to make the present volume superior to any of its predecessors, are appreciated in the most encouraging and substantial manner. From every quarter our friends are giving us the no unpleasant duty of adding new names to our already extended list. The FARMER has now a circulation larger than ever before, and it is still rapidly increasing. We would say, in answer to many inquiries, that that we can supply back numbers from January.

PATENT OFFICE REPORT—PART II.—The Report from the Patent Office, which is now in the hands of the printers, is divided into two parts. The first relates to Patents and Mechanical arts, and the second exclusively to Agriculture. Congress has ordered 130,000 copies of the latter printed and bound. It is expected to make a volume of some 600 pages. We give an extract from the document, in this number of the Farmer, and will copy from the Washington Republic "Suggestions for the Improvement of Agriculture," in our next.

L. G. MORRIS, of Mt. Fordham, N. Y., sailed for Europe in April last, for the purpose of examining the best herds in Europe, and purchasing such animals as he may consider a valuable acquisition to his present stock. He will attend the sale of BATES' herd, and return in September. His Second Annual Sale will be in October, particulars of which will be given through the Farmer. The Bates' sale was announced for the 9th of May.

BEE MOTH.—A new method of preventing the ravages of the Bee Moth is given in the advertisement of Mr. WHALEN, in this number. Mr. W. is the President of the Saratoga County Agricultural Society, and not a man likely to attempt to "humbug" the public.

CLINTON COUNTY, (N. Y.) AGRICULTURAL SOCIETY.—We should have acknowledged last month the receipt of the premium list of this Society for the current year, and also an able address to the "farmers and friends of agriculture." We should judge from the liberal premiums, the ability of the address, and the number of our subscribers in the county this year, that the Clinton County Agricultural Society is one of the most efficient in the State. The officers are Elias A. Hurlburt, President; Peter Keese, Samuel H. Moore, S. V. R. Havens, Anderson Keese, J. S. Stetson, Z. C. Platt, Roswell H. Barber, John W. Bailey, A. J. Moses, John Dunning, Vice Presidents, Willetts Keese, Secretary; J. Battey, Treasurer.

MONROE CO. AGRICULTURAL SOCIETY.—A meeting of this Society for the adoption of Premiums to be awarded at the next Fair, the appointment of Judges, &c., was held at the office of the Farmer on the 7th May. We should have given some portions of the premiums offered, as requested, but found it impossible to obtain a copy from the Secretary.

THE AMERICAN BIRD FANCIER, by D. J. BROWNE, author of the "Poultry Yard," is a neat little work for the lovers of the feathered songsters, containing directions for rearing, feeding, and the general management of House and Cage Birds. Published by C. M. SAXTON, N. Y.

REAPERS.—We call attention to the advertisement of "McCormick's Virginia Reaper," in another column. Our correspondents at the west speak favorably of the operation of this Reaper. On the same page will be found the advertisement of RAPALJE & BRIGGS, agents for Hussey's Reaper.

THE FARMERS' GUIDE TO SCIENTIFIC AND PRACTICAL AGRICULTURE, by Henry Stephens, Scotland, adapted to this country, by Professor Norton. It is issued in numbers of 64 pages, handsomely embellished, at 25 cents each. Leonard Scott, & Co., publishers, N. Y.

SPANISH MERINO SHEEP.—We refer our readers to the advertisement of JOHN J. MCALLISTER, of Gaines, N. Y. Mr. M. has some fine Spanish Merino Sheep, well worthy the attention of wool growers.

PRINCESS TRIBE OF SHORT HORNS.—For an advertisement of the produce of a young bull of this superior tribe of shorthorn cattle, see advertising pages.

McCORMICK'S PATENT VIRGINIA REAPER.

THE undersigned, now on his way from the south to Chicago, Ill., finds only time, and room in the columns of the June number of the Genesee Farmer, to insert a short notice of his Reaper, and to promise a fuller and more detailed one in the next number.

The undersigned would respectfully state, in the first place, that a certain machine, advertised in the May number of the Farmer, and called "Seymour & Morgan's Improved Reaping Machine," though much inferior, from its compounded arrangement of some parts of other genius, &c., with that of the undersigned, is yet a palpable infringement of the latter—that a legal process has been instituted to hold them (Seymour & Morgan) to their just accountability for the same—and that the purchase and use of said machine by others, will make them equally liable with the manufacturers, to a prosecution. Purchasers are also further warned to take care that this machine is not palmed upon them in such a manner as to release the *seller* from responsibility to *them* for the *use* of it.

In the same number of said journal, is also an advertisement of "J. Ganson & Co.," also of Brockport, which may require a little explanation, by way of guarding against a possibility of misconstruction. In the HANDBILLS of Messrs. Ganson & Co., their right to manufacture and sell the Virginia Reaper is expressly restricted to the counties of Monroe & Orleans, which is not so CLEARLY the case in the ADVERTISMENT in question. It should be distinctly understood that while the right of J. Ganson & Co., to manufacture and sell said Reaper is limited to the *time* stated by them, (March 1st, 1851,) this right is equally *restricted* to the counties of Monroe and Orleans, in its broadest sense. And if they prefer making a *sacrifice* upon their machines, to insure the sale of all they have manufactured to be sold in the two counties, (having no patent fee to pay for the time specified,) it can have no influence upon the price elsewhere.

The patentee of this Machine has for a number of years been careful to preserve as much uniformity in its price and sale as may be, and designs still to do so. And if his price, shipped from Chicago, is a *little* higher than that of his Reapers manufactured in this State, he trusts, from his facilities, to make his Machines at least that much a better article. It may here be remarked that great injustice has been done to the Virginia Reaper, by those manufactured at *Brockport* for a few years past; but *all* that were sold *last year*, without the late improvements, by Fitch, Ganson, & Co., of that place, gave entire satisfaction.

Perhaps the *best evidence* of the superiority of the undersigned's Reaper over all others, is the unparalleled demand for it in the *great western field*, having there almost entirely superseded all others, and where all that have really been tested have been *introduced*; and who ever heard of *any* new machine just got out, that was not *certified* to be *just the thing*, by good friends of course, who either may be incapable of judging, or if they discover defects, may confide in the *ingenuity of their friend* to remove them, but which in perhaps nine cases of every ten, is found *imaginary*.

But, as previously stated, for want of room in the present number of the Farmer, the *evidence*—and that of the most convincing character—of the superiority of the Virginia Reaper over all others, as last improved and manufactured at Chicago, is unavoidably postponed until the next number—1500 of them having been manufactured there (at Chicago) for the last, and 1000 now about completed for the ensuing harvest. Recollect that $5 or $10 in the price of a Reaper at harvest, is a small matter in comparison with the *great consideration* of having the best Reaper—the most reliable Reaper. *Recollect that.*

The undersigned will only add that one of these Reapers, manufactured for the last harvest, and having all the present improvements, was represented by the owner to have cut in the harvest 300 acres of grain, without a shilling's worth of repairs, *without changing or grinding the sickle*, and for which he refused its first cost, at the close of the harvest, and ordered another for the next.

A considerable number of these machines will shortly be sent to the Hon. Thos. J. Paterson, at Rochester, as general agent for the State, and who has appointed sub-agents in various parts of the wheat-growing territory, and distributed handbills which will be found to contain more full and detailed evidence of the value of the Reaper, as manufactured at Chicago

June, 1850. C. H. McCORMICK.

J. W. Sherman's Wheat Drill and Seed Planter.

WE are building three different qualities of these machines. No. 1 is a superior Drill and Broad-cast Sower, and will sow fine manure (such as plaster, ashes, guano, &c.) bread-cast or in the drill rows, any desirable quantity per acre, at the same time of drilling in the grain. It is well finished, substantially made, of good material, and WARRANTED, at the low price of $65.

No. 2 is built for drilling all kinds of grain. It will also sow fine manure broad-cast on crops. Price $55.

No. 3 is a plain Wheat Drill; simple, accurate, substantial. None of our machines will clog in the runs; they can not do so with the most difficult kind of seed. The distributing principle is entirely new, invented this spring, and thoroughly tested.

We are prepared to supply all orders. Those wishing to purchase drills, would do well to see ours before purchasing elsewhere. The sooner the order is given, the more sure you will be of getting your Drill in time. All the above are seven tube Drills.

N. B.—Persons wishing to sell our Drills, are offered a good chance. A large descriptive bill will soon be issued, with cuts. All communications or inquiries, post paid, will receive prompt attention. Address SHERMAN, FOSTER, & CO.

June, 1850. [6-1t] Palmyra, Wayne Co., N.Y.

HUSSEY'S REAPING MACHINE.

WE would respectfully call the attention of farmers to the fact that we have the exclusive agency and the exclusive sale of the above named Reaper, in all that part of the State of New York west of Ontario county, and we are also general agents for the United States and Canada. We sell the Reapers at the Manufacturer's prices, adding only cost of transportation. They can be examined at our Store. All who design purchasing are earnestly requested to hand in their orders at once, as this will enable us to have on hand in season all that may be required, and prevent any being disappointed, as might be the case if orders were delayed till the harvest had begun. That they are the best Reapers made, and that it would be greatly to the advantage of farmers to have them, there is no doubt.

Annexed are a few of the many certificates which might be given:

MACEDON, Aug. 29, 1849.

Messrs. Rapalje & Briggs—Gents:—The Reaping Machine I bought of you, made by Messrs. Eldred & Hussey, at Auburn, has been thoroughly tested by me the present harvest, and I am happy to say has exceeded my most sanguine expectations. I have cut with it 125 acres of wheat, besides my own crop, making some 200 acres of oats and wheat; and I can confidently recommend it to my brother farmers as just the machine they want. I have cut 12 acres of oats in half a day, and 20 acres of stout wheat in one day, with three horses abreast, and most of the time it was bad cutting. I think I can cut 25 acres of good wheat in a day, and do it better than can be done in any other way. My machine is now in perfect order, and I consider it full as good as when I got it of you.

Yours most respectfully, THOS. RUSHMORE.

WHEATLAND, August 20, 1849.

Messrs. Eldred & Hussey—Gents:—I have now used one of your Reaping Machines for two years, and do most cheerfully say that it has given the best satisfaction. I have cut my whole harvest, and a large one too, with my ordinary farm hands. I have cut 20 acres of stout wheat a day with ease, and I would most cheerfully recommend it to my brother farmers as the best and most economical machine that is used on a farm. In fact I think so much of it, that five hundred dollars would not induce me to part with it if I could not get another. I have also two brothers, each of whom have one of your machines, which they like very much, and could not be induced to be without. I think your agents, Messrs. Rapalje & Briggs, will sell a large number of them in our county next season, as many of my acquaintances have told me they intend to purchase one of your Reapers another season. ANAN HARMON.

BERGEN, Sept. 1st, 1849.

This is to certify that I have this season used one of Hussey's Reaping Machines, which I purchased of Messrs. Rapalje & Briggs, of Rochester, and that it gives perfect satisfaction. I have cut my wheat, which was very badly lodged, much faster, better, and cheaper than it could be done any other way. I have had one of McCormick's for the last three years, and it now stands in the road as a useless article, as I consider it, having tried to use it for three years without any success.

I consider Hussey's Machine just the thing for our farmers, and I could not now, after proving its merits, be induced to be without one. NOAH WILBUR.

GREECE, Sept. 7th, 1849.

Messrs. Rapalje & Briggs—Gent'n:—The Reaping Machine bought of you by Mr. Champion, for me, exceeds any thing of the kind I ever saw. You will remember that when I got it I said to you I was sure it would not work in my badly lodged wheat, as I had seen McCormick's tried repeatedly, and it was a perfect failure; but I was most agreeably disappointed. It cut any of my wheat better and faster than eight good cradlers could do, and I think it saved me from two to three dollars per acre in all my lodged wheat, in getting it clean and fast. In short, too much cannot be said in its favor. I would not sell it, if I could not get another, for one thousand dollars, for should I raise as much wheat for eight or ten years to come as I have for the last ten, it would save me more than that sum, and I think it will last me longer than that time. Yours, most respectfully, J. NORTON.

June 1, 1850. RAPALJE & BRIGGS.

Genesee Seed Store and Ag. Warehouse, Rochester, N.Y.

Morgan Horse General Gifford.

THIS justly celebrated horse will stand, the coming season, at Lodi village, Seneca county, N. Y. He was got by Old Gifford Morgan, out of a pure Morgan mare. In his size, color, form, and action, he closely resembles his distinguished sire, and is one of the very best specimens of this invaluable race of horses.

Terms of insurance, $12. Good pasture provided at the usual rates, and all necessary attention given to mares from a distance. Accidents and escapes at the risk of the owners.

March, 1850. [5-2t] CHARLES W. INGERSOLL.

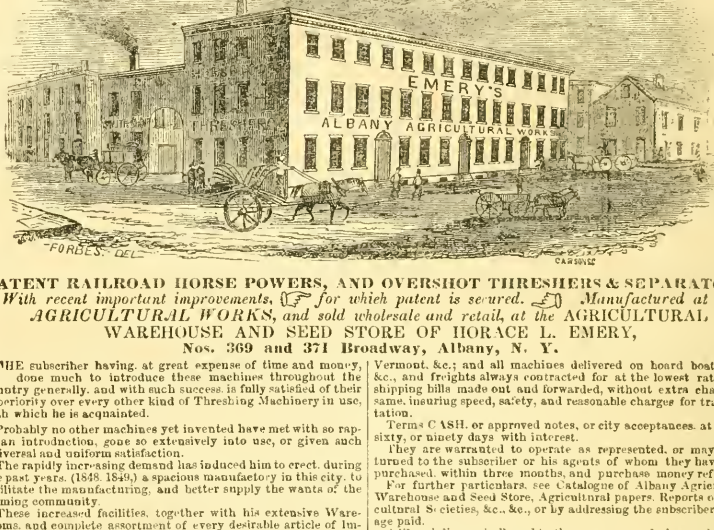
Morgan Hunter and Morgan Chief.

MORGAN HUNTER will stand the coming season, at the stable of S. A. Gilbert, East Hamilton. Terms $10 to insure. This fine horse is seven years old; was bred in Springfield, Vt.; got by Gifford Morgan; dam by the same horse. For figure and description, see *The Cultivator* for 1849, page 216.

MORGAN CHIEF will be three years old on the 18th of June, 1850. He is a very superior colt; was got by Gifford Morgan, dam by Green Mountain Morgan. See *The Cultivator* for 1849, page 67. He will be kept for a few mares only, at the stable of H. R. Ackley, East Hamilton. Terms $10 to insure.

ACKLEY & GILBERT.

East Hamilton, Madison Co., N.Y., June 1, 1850. [6-1t]



PATENT RAILROAD HORSE POWERS, AND OVERSHOT THRESHERS & SEPARATORS,
With recent important improvements, ☞ *for which patent is secured.* ☜ *Manufactured at the*
AGRICULTURAL WORKS, and sold wholesale and retail, at the AGRICULTURAL
WAREHOUSE AND SEED STORE OF HORACE L. EMERY,
Nos. 369 and 371 Broadway, Albany, N. Y.

THE subscriber having, at great expense of time and money, done much to introduce these machines throughout the country generally, and with such success, is fully satisfied of their superiority over every other kind of Threshing Machinery in use, with which he is acquainted.

Probably no other machines yet invented have met with so rapid an introduction, gone so extensively into use, or given such universal and uniform satisfaction.

The rapidly increasing demand has induced him to erect, during the past years, (1848, 1849,) a spacious manufactory in this city, to facilitate the manufacturing, and better supply the wants of the farming community.

These increased facilities, together with his extensive Warerooms, and complete assortment of every desirable article of Implement or Seeds wanted by the farmer, enables him to offer great inducements to the public to purchase their supplies of and through him, whether for their own use or to sell again.

Particular attention is called to the RAILROAD HORSE POWERS, AND OVERSHOT THRESHING MACHINES & SEPARATORS, as recently improved, by which the application of power is applied from the Endless Platform to the shaft of the driving hand wheel, in such a manner as to *remove* the liability of *breaking of links and wearing of the small wheels,* and the slipping and wearing of the links and pinions in consequence, is *wholly avoided.* Greater strength, durability, and lighter friction are secured; all of which being important points not before attained in these machines.

They are comparatively light and portable—the One Horse Power, complete, weighing about 1100 pounds; the Two Horse Power, complete, weighing about 1900 pounds. When they are to be often removed, axles and wheels are attached, forming of itself a wagon. When in use, one pair of wheels are removed.

They are operated by the weight of the horse or horses, at an elevation of about one and a half to two inches to the foot, or 16 to 22 inches, according to the weight of the horses.

Three men with the One Horse Power and a change of horses twice a day, can readily thresh from 150 to 200 bushels wheat or rye, or double that quantity of oats or buckwheat per day.

All can be operated inside of barns in stormy weather, when men and teams could do little else to advantage.

The Thresher is Overshot, and is driven without any crossing of bands. The feeder stands erect, and is not annoyed with dust. There is no liability of accident from the spikes, &c., as no hard substance can injure or break them. A Separator is attached to all the Threshers, and answers an admirable purpose for separating the straw from the grain, leaving it with the fine chaff, fit for the Fanning Mill.

They have been exhibited in operation by the subscriber during the past three years, at all the principal State and County Fairs of New York, Massachusetts, Ohio, and the Canadas, and have been extensively introduced and used among the farmers of the States and Vermont, Rhode Island, Connecticut, Virginia, North Carolina, Tennessee, Indiana, Illinois, Missouri, Iowa, Wisconsin, and Michigan.

The First Premiums of the Societies have been awarded them, and the highest encomiums of committees and farmers have been bestowed upon them for their SIMPLICITY, EFFICIENCY, UTILITY, DURABILITY and CHEAPNESS.

They can be taken in pieces and packed very compactly, and forwarded to any part of the country, by railroad, canal, or steamboats.

He has efficient agents for receiving and forwarding machines in all the principal towns and cities in the States of New York, Michigan, Indiana, Illinois, Iowa, Wisconsin, Ohio, Kentucky, Missouri, Vermont, &c.; and all machines delivered on board boats, cars, &c., and freights always contracted for at the lowest rates, and shipping bills made out and forwarded, without extra charge for same, insuring speed, safety, and reasonable charges for transportation.

Terms CASH, or approved notes, or city acceptances, at thirty, sixty, or ninety days with interest.

They are warranted to operate as represented, or may be returned to the subscriber or his agents of whom they have been purchased, within three months, and purchase money refunded.

For further particulars, see Catalogue of Albany Agricultural Warehouse and Seed Store, Agricultural papers, Reports of Agricultural Societies, &c., &c., or by addressing the subscriber, postage paid.

A liberal discount allowed to those persons ordering and selling the machines in their vicinity, and agents wanted to sell and put them in operation, where not introduced.

Having had long experience in the manufacture and sale of agricultural machinery, he feels assured the public will hazard nothing in purchasing their Agricultural Implements and Machinery of and through him. For the satisfaction of those unacquainted with him, and his manner of doing business, he would refer them to the following gentlemen:

Luther Tucker, Editor and Publisher Albany Cultivator, and Treasurer New York State Agricultural Society, Albany.
Sanford Howard, Associate Editor Albany Cultivator, Albany
E. P. Prentice, Esq., President N. Y. S. A. S., Albany, N. Y.
George Vail, Esq., Ex-Pres't do do Troy, N. Y.
A. Van Bergen, Esq., do do do Coxsackie, N. Y.
J. M. Sherwood, Esq., do do do Auburn, N. Y.
B. P. Johnson, Esq., do and present Secretary N. Y. S. A. S.
J. McD. McIntyre, Rec. Sec. N. Y. S. A. S., Albany, N. Y.
D. D. T. Moore, Esq., former Ed. and Pub. Gen. Far., and present Ed. and Pub. of Rural New-Yorker, Rochester, N. Y.
Jas. Vick, Jr., Esq., Ed. Genesee Farmer, Rochester, N. Y.
J. A. Wight, Esq., Ed. of Prairie Farmer, Chicago, Ill.
C. N. Bement, Esq., late Ed. and Pub. Am. Jour. of Ag., Albany.
Ruggles, Nourse, & Mason, Manufacturers and Dealers in Ag. Implements, Worcester and Boston, Mass.
John Mayher & Co., Dealers in Ag. Implements, New York.

Rare Evergreen Trees.

WE have on hand a fine stock of
DEODAR, or *Indian Cedar;*
ARAUCARIA, or *Chili Pine;*
CEDAR OF LEBANON;
ABIES MORINDA, or *Himalayan Spruce;*
PINUS EXCELSA, or *Lafiy Pine;*
PINUS CEMBRA, or *Cembran Pine;*
CRYPTOMERIA JAPONICA;
TAXODIUM SEMPERVIRENS;
and many other species, all in pots, imported last season, and well established. Priced lists furnished on application.
ELLWANGER & BARRY,
Mount Hope Garden & Nurseries, Rochester, N. Y.
March 1850.

Burrall's Clover Mill.

FOUR sizes made and sold by the Subscriber at Geneva N. Y., warranted to be thoroughly built and to work well. Among other premiums awarded, this Machine was the first, at the late State Fair.

Orders from abroad, or inquiries in respect to it, promptly attended to. [4-4t] E. J. BURRALL.

Wheeler's Patent Improved Railway Chain Horse Power and Overshot Thresher and Separator.

THE subscribers, Proprietors of the Patent for these Machines, and manufacturers of them, having recently increased their facilities for manufacturing, are now prepared to fill orders for machines and to establish agencies, to any extent that may be desired.

These machines are favorably known wherever they have been used or exhibited. They have taken premiums at many different State and County Fairs, held in Massachusetts, New York, New Jersey, Pennsylvania, Ohio, and also in Canada, never having competed for premiums without success and flattering commendations.

As many as 2 000 of them are now in use, of which over 500 were sold the past season.

The accompanying cut gives a view of a two horse machine at work, with the bands necessary to attend it. It will thresh from 125 to 200 bushels of wheat, or twice the quantity of oats per day. The one horse, or single machines, thresh rather more than half as fast as the double ones

These horse powers are strong and durable, and run extremely light. With one end of the power slightly elevated (as represented in the annexed cut) *the weight of the horse alone* affords sufficient power to thresh at the rate before stated, or to drive circular and upright saws, or any other machines used by farmers, requiring propelling power

THE OVERSHOT THRESHER

takes the grain from a level feeding table or apron, (of a proper height to allow the feeder to stand erect and feed without annoyance from dust,) and passes it through a toothed or spiked concave or bed, placed over the cylinder. A recent improvement admits of lowering the concave so as to bring it nearer the cylinder, and at the same time so varying the inclination of the spikes as to set the machine for threshing tough or damp grain, or short oats, and re-setting it at pleasure, for long rye or wheat, or oats in good order, or for timothy grass or clover; and all this is accomplished without stopping the machine, so simple is the process. By means of the Separator the straw, as it comes from the Thresher, is effectually separated from the grain.

The *Power, Thresher and Separator*, complete, for either one or two horses, is easily loaded on a common farm wagon; but where frequent moving is desired, the two-horse machines are placed on wheels in such a manner that when used for threshing, the forward wheels are removed, dropping that end of the power, and leaving the opposite end elevated on the other axle, ready to receive the horses. By this arrangement, (which has been made for the convenience of those who make threshing a business and for partnership machines,) two men can with ease set a two horse machine ready for work in fifteen minutes, and re-load it for moving in the same time.

W. M. & Co. also manufacture Stalk, Hay, and Straw Cutters, to be used with their horse powers; and also Circular Saws and Benches, for cutting ordinary fire wood, and locomotive and other fuel.

Every machine made or sold by W., M., & Co., or their Agents, is WARRANTED to work to the satisfaction of the purchaser, or it may be returned to them, or to the Agent of whom it may have been purchased, within sixty days, and the purchase money [if paid] will be refunded.

These machines are so light, compact, and easily handled, as to admit of transportation to any part of the country with trifling expense. The weight of the two-horse machine, complete, being less than 2 000 pounds, and of the one-horse, about 1 200.

The manufacturers are now establishing agencies in all parts of the United States and Canadas, where they are needed to facilitate the sale of these machines. Good agents are wanted in the southern and western States and the Canadas, to whom liberal commissions will be allowed.

HORACE L. EMERY, Esq., is a general agent for the sale of these machines in the State of New York, and is sole agent for the city of New York and the New England States

Our other agents, as far as definitely ascertained, are—Rapalje & Briggs, Rochester; T. C. Peters & Brother, Buffalo; Peter R. Sleight, Esq., Poughkeepsie; F. F. Packer & Brother, Detroit; ——, Chicago; W. D. Bacon, Waukesha, Wisconsin; John Melick, Trenton, N. J.

These machines may also be had of John Mayher & Co., New York city. WHEELER, MELICK, & CO.,

Hamilton st., corner of Liberty and Union sts., Albany, N.Y.

May 1, 1850.

The Thorough Bred Blood Horse Sir Henry

WILL continue to stand at the stable of the subscriber, one and a half miles northwest of Churchville, in the town of Riga, Monroe county. Terms $10 to insure a foal. Gentlemen from a distance will find good pastures and will receive such attention as they desire, and on the most reasonable terms

Sir Henry is of a beautiful unfading bay color, stands 16 hands and 1 inch high without shoes, and is a sure foal getter. He is remarkable for his vigor of constitution, his developments of bone and muscle, and his intelligent kind, and docile disposition. He is compact and short legged for a thorough bred Blood horse; yet of a rangy and majestic figure. His action is graceful but at the same time proud and commanding. But what is perhaps of more importance he is descended through all the generations that are recorded in the English turf register. There is no horse living that can boast of a more illustrious pedigree, his immediate ancestors, who are of unparalleled beauty and elegance of figure. The superiority and value of this horse is abundantly proved by the following facts:—In 1843, Sir Henry received the first premium for Blood horses at the Onondaga County Fair; in September, 1845 he took the second premium for Blood horses at the great State Fair at Utica, (see the report of the committee on Blood horses, in the Transactions of the N. Y. State Ag Society for 1845, volume 6;) and the same season the first premium at the Orleans County Fair; and in April, 1849, was brought into this county, and in the September following received the first premium at the Monroe County Agricultural Fair.

The proprietor has, at great expense, brought this horse into this county, hoping to improve its revenue by adding a valuable stock of horses for market, and supplying the harness of the county with thorough and pure blood of enduring and beautiful horses.

All accidents at the risk of the owners. Owners parting with mares before foaling time, without the consent of the subscriber, will be charged the insurance; and all mares not regularly returned to the horse once a week during the season, will be charged the insurance if not with foal.

May 1, 1850. [5-2t*] BILLING RICHMOND, Js.

A Rare Chance—Important to Wool Growers.

THE Subscriber having recently purchased of Merril Bingham, of Vermont, at a great price FIVE BUCK LAMBS, from pure blooded Spanish Merino Ewes sired by the celebrated French Merino Buck, imported at a great expense by Mr. Bingham and J. A. Tainter, of Connecticut, in 1847, offers the same for sale to farmers in this section, desirous of improving their stock of sheep. The chance is a rare one, as the pedigree of these sheep have been substantiated beyond a question, and the evidence is *in hand*.

The subscriber also purchased 30 pure blooded Spanish Merino Ewes, all in Lamb, by the old imported Buck above mentioned and now owned by Mr. Bingham, and a full blooded French Merino Ewe and Buck at $200, which will be held for service another fall. This class of imported sheep shear from 18 to 23 lbs. of pure washed wool to the head. The size of carcass exceeds any thing now known in America.

He is fully confident that the superior advantages and the opportunity for great improvement thus offered to the Wool Growers of this county and section of country, will be duly appreciated. All who wish to purchase or examin the FOREIGN BLOOD, can do so at any time by calling at his residence three miles north of Albion, and one mile north of Fair Haven.

JOHN J. McALLISTER.

Gaines, March 15, 1850. [4-3t]

The Celebrated Horse Cub Baccus,

THE best blooded and most perfect horse in this part of Michigan, will stand for the use of mares, during the present season, at Bellevue, Marshall, and Penfield.

Cub Baccus is ten years old this spring, was sired by the well known horse Baccus; his dam was sired by the old Cub Messenger, who was sired by the imported horse Golden Farmer.

Farmers wishing to breed from a good horse, will please examine the Baccus and his stock, which is superior to that of any other horse in this part of Michigan.

Terms—$2 the leap, $4 the season, and $5 to insure.

JOHN F. HINMAN.

Bellevue, Eaton co., Mich., May 1, 1850 [5-2t*]

The Morgan Horse Major Gifford

WILL stand the ensuing season, on Mondays, Tuesdays, and Wednesdays, at the stable of E. W. Sheldon, Sennett; on Thursdays and Fridays at the stable of S. B. Rowe, Camillus; and on Saturdays at the stable of John C. Munro, Bellisle.

Major Gifford is seven years old this spring; his color is a beautiful chestnut. He was sired by the Gifford Morgan, his dam a pure Morgan. Breeders of good horses are invited to call and see him.

TERMS—Ten dollars to insure. Pasturage furnished. Accidents and escapes at the risk of the owners.

April 1, 1850. [4-3t*] MASON & CO.

CONTENTS OF THIS NUMBER.

HORTICULTURAL DEPARTMENT.

ILLUSTRATIONS.

The Princess Tribe of Short Horns.

IN January, 1849, Mr Sheafe, of High Cliff, Dutchess county, N. Y., imported the young bull Exeter, bred by Mr. Stevenson, of Durham, England. Mr. Stephenson is the most celebrated breeder now living, and his herd is of the Princess tribe, one of the best and most ancient stock of Short Horns. The breeding of the Princess tribe can be traced back as pure Short Horns upward of *two hundred years*, a matter of no small consideration to those who wish to breed true stock of a reliable quality.

Exeter was selected for Mr Sheafe, by that excellent judge of Stock, Mr. A. Stevens, of New York. He was considered one of the very best bulls in England Quite a high price was paid for him. It is believed that his superior has never before been imported into this country. He is a beautiful yellow-red—which is a bright red, with a fine golden or saffron under tinge, arising from a rich yellow skin, and is the only bull of this peculiarly fine red ever imported. A few calves of his get will be for sale this season. Their dams are Herd Book Short Horns, very fine in their points, and great milkers Those who desire to improve their present stock by taking a superior fresh cross, will please to apply to

June, 1850. [6-3t] A. B. ALLEN & CO., New York.

The Celebrated Horse Morgan Eagle.

THIS truly celebrated Horse will stand for mares this season, commencing April 25th, at the American, Lima.

Morgan Eagle was purchased in the fall of 1847, in Tunbridge, Vermont, by J. Henderson, at a high price, for the express purpose of improving the stock of horses in this county. He is about sixteen hands high, and well proportioned, is a bright bay, and for symmetry and action can not be surpassed Morgan Eagle and the celebrated trotting mare, Lady Sutton of New York, were sired by old Morgan Eagle of Vermont. Breeders of horses are particularly requested to call and examine him.

Pasture will be furnished for mares sent from a distance, and good attention paid to them. Escapes at the risk of the owners.

Those parting with mares before foaling, will be held responsible for the insurance. HENDERSON & AUSTIN.

Lima, April, 1850. [6-1t*]

Miner's Bee Hive.

THIS beautiful and highly valuable practical Hive, is unsurpassed by any other in the United States. The Rights are in pamphlet form, with full engravings, and ample directions to make it Price $2 only; sent by mail to any section of the country. This is positively the only Hive of *real* merit to be had.

Also, the AMERICAN BEE-KEEPER'S MANUAL, 250 pp., 35 fine engravings; the most popular work ever published on the culture of bees. Price $1; sent by mail also. Address to this office, *post-paid*.

Gen. Farmer Office, Rochester, June, 1850 [6-tf]

Splendor.

THE Short-Horn bull known as OLD SPLENDOR, bred by Thos. Weddle, will be kept the present season on the farm of Jacob W. Page, Sennett corners, Cayuga county, N. Y.

Splendor has been owned some years in Avon and Lima, Livingston county; and the fact of his having served one hundred cows the past season, is sufficient evidence of his value as a getter.

Terms $5 a cow. JOHN R. SAGE.

Sennett, June 1, 1850. [6-1t*]

Bickford & Huffman's Grain Drill.

THIS Drill is an improvement, in several important particulars, on Bickford and Huffman's Drill manufactured and widely distributed last year, and which operated to the entire satisfaction of every purchaser. The chief points of superiority are as follows:

1. The revolutions of the Distributing Cylinder are increased or diminished at pleasure, with perfect precision, by means of cog-wheels of different sizes. By this arrangement, the quantity of seed distributed to the acre is regulated with perfect accuracy.

2. The Teeth may be elevated or dropped separately, or simultaneously, with a single motion of the hand, according to the will of the operator.

3. The Drilling Tubes, being made of iron instead of leather, are immeasurably more durable, and the seed always passes them with a clear and unimpeded current.

4. This Machine possesses great advantages in the superior regularity of distribution along the furrow—in the simplicity of its construction—in the durable and substantial style of its manufacture—and in its far greater cheapness, when all its points of usefulness are taken into consideration.

This Drill will sow all kinds of grain, if properly cleaned.

PRICES—Seven tube Drills, $65; Nine tube Drills, $75.

Orders, addressed "Bickford & Huffman, Macedon, Wayne co., N. Y.," will be faithfully and promptly attended to.

Burrall's Agricultural Foundry and Machine Shop.

THE subscriber manufactures various Agricultural Implements of the most approved kinds, which he sells at wholesale and retail. His work is all warranted to be well built and to work well.

The increasing demand for articles of his manufacture, recently rendered additions to his shops necessary, which having been completed, he has every facility for producing perfect work, and at reasonable prices.

Among the implements now sold by him, are Burrall's Clover Mills, 4 sizes, [1st premium last State Fair;] Burrall's Shell Wheel Plows, 12 sizes, highly improved the present season; Plain, Iron beam, Shovel, Subsoil, and Corn Plows; Burrall's Corn and Grain Cultivators; Improved English Drill, for seeding and manuring at a single operation; Straw Cutters, for hand and horse power; Threshing Machines and Horse-Powers, Clod Crushers, Field Rollers, Corn Shellers and Separators, &c., &c.

Orders from abroad attended to without delay. A liberal discount to the trade. Rapalje & Briggs, Rochester, agents.

Geneva, N. Y, June, 1850. E. J. BURRALL.

Threshers, Take Notice.

THE subscribers manufacture an eight-horse power that stands on a low wagon when in operation, thereby saving the trouble of loading and unloading either Horse Power or Separator. The Horse Power is double geered, yet has less than one half as many boxes and mashes of gearing as any other in use. They can be set ready for use by one man, in half the time required for other machines. The Cleaner possesses facilities for separating the grain from the straw, superior to any other, never winds, and is capable of threshing from three to six hundred bushels of wheat per day. They have been introduced into most of the grain growing States with unexampled success Those wishing machines, can have privilege of thoroughly testing them before purchasing. The price of both machines is only $225. The above machines are kept constantly on hand and for sale at Woodbury's steam works on Canal street, Rochester, N. Y.

Smaller sizes furnished, if desired. Also for sale, the right of territory on both the above machines. J. & D. WOODBURY.

WONDERFUL BOOK—NOW READY,

The Mysterious Noises in Rochester

AND WESTERN NEW YORK—A history of these remarkable sounds and of all the Strange Phenomena connected therewith, the Spiritual Communications, &c, &c. Price—single, 12½ cts; 10 copies for $1. Orders by mail will be promptly attended to.

Ten agents wanted, to sell the above work, together with other new and valuable works, to whom a fair chance to make money money will be given. A small capital of from $15 to $25 required, and the agent will be indemnified against loss

D. M. DEWEY, Arcade Hall, Rochester, N. Y.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c

VOLUME XI, FOR 1850.

DANIEL LEE & JAMES VICK, JR., EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2; Eight Copies for $3, and any larger number at the same rate.

DANIEL LEE.

December, 1849. *Rochester, New York*

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER. N. Y.—JULY, 1850. NO. 7.

WHEAT CULTURE.

Sir Humphrey Davy says: "The exportation of grain from a country which receives nothing in exchange that can be turned into manure, must exhaust the soil in the long run;" and this illustrious chemist expresses the opinion that the present sterility of various parts of northern Africa and Asia Minor, as well as Sicily, is to be ascribed to excessive cropping without manuring the land. In an instructive chapter on "Rotation of Crops," Boussingault remarks: "When a succession of crops is grown upon fertile land without renewal of manure, the produce gradually diminishes: and after a certain period, if it be grain, the quantity which at the outset was eight or nine times the amount of the seed, will be reduced to three times or even to twice the seed. Thus crops impair the soil, and ultimately exhaust it." In another place, this writer informs us that he saw fields which had borne good crops of wheat every year for two centuries, on the table lands of Peru, which were doubtless fertilized with guano. An interesting letter from Wm. G. Morehead, late U. S. Consul at Valparaiso, recently published in the Philadelphia North American, furnishes important information as to the cheapness of wheat in Chili, which is about to be sent in the shape of flour, to California and the Sandwich Islands, in great quantities. Mr. M. states that the first shipment of flour to California will take place within a few weeks, and thereafter regularly, commencing with 25,000 bbls. a month, and adds—

"The harvest that has just been secured (I am informed,) has well rewarded the husbandman, the crop being very large. The price of wheat is therefore comparatively low, 26 to 31½ cents per bushel in the interior, on delivery at the mills. I obtained from a gentleman of high character, who is perfectly conversant with the subject, the following information: At Conception and vicinity, there are ten first rate flour mills, the machinery for which was obtained in the United States, and, with the exception of two, are owned and managed by Americans and Englishmen. The average monthly product of these mills is about 30,000 bbls. of superfine flour for export, which, in quality, is regarded as being equal to the best flour manufactured in the United States. Between Conception and Santiago there are two good mills, which manufacture for export some 4000 to 5000 bbls. per month: and at the capital, Santiago, there are five or six establishments of considerable extent, engaged in manufacturing for export, which together produce from 18,000 to 20,000 bbls. monthly; besides which there are a large number of small mills engaged in manufacturing for home consumption. Thus it appears that there are produced monthly in Chili some 50,000 to 55,000 barrels of superfine flour for export, all of which must find markets in the Pacific—the principal being California.

"The great fluctuations that have so frequently occurred in that market during the past year, the price of flour varying from less than the cost of placing it there to $30, $40, and even $50 per bbl., have induced the millers to enter into the arrangement alluded to above, by which they (the millers) bind themselves to supply this company the entire product of their mills, at the price of $4,44 per bbl. delivered in the warehouse, for shipment. The company have a large and commodious warehouse at San Francisco, at which they are bound to keep a regular and constant supply of flour, adequate at all times to meet the demand, and to dispose of the same at a moderate profit—thus securing to the citizens of California a supply of the staff of life at a low price.

"The consumption of that market is estimated by these gentlemen to be not less than 25,000 bbls. per month at present, calculating an increase of say 5000 bbls. per month. I consider it important that the above facts should be generally known throughout the United States of America, that persons who may be induced (by the recent extravagant price of flour) to ship to California, can do so understandingly."

The Nicaragua treaty between England and the United States having for its object the construction of a ship canal between the Atlantic and Pacific, will secure the speedy construction of that long talked of and magnificent work, and bring the guanoed wheat fields of Chili and Peru several thousand miles nearer the ports of Mobile, Savannah, and Charleston, which import both northern flour from New York and western from New Orleans. We learn from the Journal of Commerce, that three ships laden with Egyptian wheat are on their way from Cairo to this country—the owners of this grain expecting to pay 20 cents a bushel duty on its admission. Wheat has been cheaper in England within the last six months than in one hundred and fifty years; and fair harvests this autumn in Europe, will reduce the market value of breadstuffs to a still lower figure.

Wheat growers that have a surplus to sell will doubtless act wisely to place their crop in market as

soon after harvest as practical. The price is now high, and must continue until new wheat is offered.

It is a matter of considerable importance that the most economical process of tillage, seeding, gathering, threshing, and cleaning wheat, be adopted. No operation has paid better than sub-soil plowing in England: and the use of reapers is just beginning to attract the attention of English farmers. Messrs. RAPALJE & BRIGGS, extensive dealers in agricultural implements in Rochester, have just filled an order for one of Hussey's Reapers, to go to Liverpool; and other American implements are in use both in the British Islands and on the Continent, with entire satisfaction. Our farmers are most deficient in feeding wheat plants with their natural and appropriate food. Little is thought of beyond the application of lime, gypsum, turning in clover or some other green crop. The elements of wheat contained in all the grain, meat, milk, cheese, potatoes, and other articles of human consumption, annually wasted in this country, are fully equal to the production of 12 bushels of wheat to each person in the United States. At this estimate the aggregate would be 264,000,000 bushels from the fertilizers now thrown away. More thorough culture, greater care in saving and applying manures, and better attention to the extirpation of all weeds, like red root, Canada thistles, cockle, chess, garlick, and the like pests, will improve the quality and intrinsic value of this important staple. At the present writing, wheat is backward but very promising in Western New York.

PATENT OFFICE REPORT.—Part II.

Suggestions for the Improvement of Agriculture.

SIR: Agreeably to your request, I have prepared, and have the honor herewith to submit, a report on the statistics and progress of Agriculture in the United States for the year 1849.

The communications received in answer to the circulars issued from the Patent Office in the usual form, number some four hundred. Not a few of these are extended essays, and all contain useful facts or suggestions, which have been gratuitously furnished by the contributors. To publish the whole would require two large volumes, in place of one of moderate size: and to reject three-fourths of the matter in hand seemed a poor return to the many gentlemen, in almost every State, who have kindly proffered their services to promote the most important interest of the republic.

Under these circumstances, it was thought not amiss to re-write and greatly condense three-fourths of the letters and essays intended for the report. This labor has been great, but it has saved some $10,000 in printing, and it is hoped with improvement to the document, and without doing injustice to any correspondent.

The undersigned deems it not out of place in submitting this report, to offer a few suggestions in reference to the ways and means now available for the improvement of American agriculture.

I.—AGRICULTURAL EDUCATION.

Since 1823, when Judge BUEL introduced the first bill to establish an agricultural college in the State of New York by legislative aid, constant efforts have been made to render the study of rural economy as a *science*, not less than its practice as an *art*, popular in this country. Twenty-seven years have now elapsed, a whole generation has passed off the stage, and New York, with her five hundred thousand cultivators of the soil, is still without the first agricultural school worthy of the name; nor is any other State in a better condition. Dark as this view of agricultural education really is, it is the darkness that precedes the dawn of a bright and happy day. Men who have labored for the improvement of agriculture and the elevation of agriculturists, for a quarter of a century, with little of hope and less of pecuniary reward, now realize the beginning of an auspicious change in public sentiment. Thanks to agricultural journals and societies, the people will soon discover that labor and capital devoted to tillage and husbandry are as worthy of legislative consideration as labor and capital employed in mining, commerce, and manufactures. So soon as this truth shall be fairly comprehended, the long struggles of the friends of improvement will be crowned with success, and the victory won over both ignorance and its traditions.

It is indeed wonderful how long those enlightened, reasoning farmers, who, like Washington, cherish a due respect for their high calling, have had to beg, and beg in vain, of State Legislatures and of Congress, for a little assistance to prevent the universal impoverishment of American soils. Whatever has been done to arrest the exhaustion of arated lands, has been effected not only without due aid from Government, but in spite of a mistaken policy which encouraged the removal of all the elements of bread and meat from cultivated fields, and their speedy transportation beyond the possibility of restitution. Neither the earnest recommendation of the illustrious farmer of Mount Vernon, nor the prayers of two generations of agriculturists, nor the painful fact that nearly all tilled lands were becoming less and less productive, could induce any Legislature to foster the study of agriculture as a *science*. Happily, this term, when used in connexion with rural affairs, is no longer the subject of ridicule.

Some pains have been taken in this report, to prove that one thousand millions of dollars judiciously expended, will hardly restore the one hundred millions of acres of partially exhausted lands in the Union to that richness of mold and strength of fertility for permanent cropping which they possessed in their primitive state.

The continued fruitfulness of the earth is an interest far greater and more enduring than any form of government.

If the twenty-two millions of people now in the United States may rightfully exhaust the natural fertility of one-third of the arable lands of the country, the forty-four millions who will be here twenty-five years hence may properly consume the productiveness of the remaining two-thirds of all American territory.

A great principle is involved in the science of agriculture, which reaches through indefinite generations, and forms the basis of all possible improvements and of the highest hopes of our race. All advancement is impracticable in a country that closely approximates the condition of a desert.

As a nation of farmers, is it not time that we inquire by what *means*, and on what *terms*, the fruitfulness of the earth and the health and vigor of its invaluable products may be forever maintained, if not forever improved?

These are questions of universal concernment, to the careful and rigid investigation of which no man

should refuse to lend a listening ear. A governmental policy which results in impoverishing the natural fertility of land, no matter by what popular name it is called, must have an end. It is only a question of *time*, when this truly spendthrift course, this abuse of the goodness of Providence, shall meet its inevitable punishment. To show the necessity of reform, a plain estimate has been made, in the chapter on "agricultural statistics," to prove that we annually waste enough of the elements of bread, without which not the first kernel of corn can be formed, to produce one thousand million bushels of this important staple.

The Board of Agriculture of Ohio estimates the crop of corn in 1849, within the limits of that State, at seventy million bushels; and it will hardly be extravagant to say, that the farmers of Ohio, Indiana, Michigan, Illinois, and Wisconsin, export a million tons of breadstuffs and provisions, where they import one ton of the atoms drawn from their virgin soils, to form agricultural products. Can it be said, in truth, that a million tons of bread and meat are produced from *nothing?* Will it be contended that the earth within the reach of good plowing contains an unlimited amount of the precise things consumed to make the plants, whose organic an inorganic elements are taken from the soil, and never restored? If this be true, then all fertilizers are not only unnecessary, but absolutely worthless. This cannot be so; for lands that seventy years ago produced from twenty-five to thirty-five bushels of wheat in the State of New York, now yield only from six to nine bushels per acre; and in all the old planting States the results of exhaustion are still more extensive and still more disastrous.

A lack of mental culture and discipline is the most serious impediment to the diffusion of agricultural science among the mass of farmers. Its language is to them an unknown tongue. Hence, the most sublime truths in the economy of nature are shut out from the popular understanding. It is feared that this will ever be the case until schools designed to teach those branches of learning which the practical farmer greatly needs, but does not possess, are established and maintained throughout the United States. So long as we refuse to plant the seed, it is folly to expect a rich harvest of knowledge.

We over-estimate the value of mere physical strength, like that of the ox or mule, and under-estimate the intrinsic worth of cultivated, well-developed Reason, in practical agriculture. No inconsiderable degree of mental culture must precede all scientific tillage and husbandry. An oak is not matured from an acorn in a day, nor in a year; nor is it possible to form, in a single generation, an universally educated and highly improved race of men. Such improvements, to be general, and fixed in a people as a distinguishing feature in their character, must be deeply impressed on several successive generations.

As a class, farmers have few advantages for being well informed in the rapid progress now making in the economical improvement of soils, cultivated plants, and domestic animals. This lack of opportunity is a serious misfortune, and leads to this practical result: With 5,000,000 farm laborers — 2,700,000 in the slave-holding, and 2,300,000 in the free States — American agriculturists so misdirect this immense power of production, that the injury done to 100,000,000 acres of land is nearly equal to all the apparent nett profits on the whole rural industry of the country.

To illustrate an important fact, as well as principle, let us suppose that a farmer produces crops worth $1,000, and that they cost him, including all expenses for labor, wear of implements, interest on capital, &c., $850. Nominally, he has a profit of $150: but it often happens that, if he undertakes to replace in his cultivated fields as much of potash, soda, magnesia, phosphorus, soluble silica, and other elements of crops, as both tillage and cropping had removed, it will cost him $175 or $200 to effect that purpose. It is only by *consuming the natural fertility of the land* that he has realized any profit.

In a national point of view, all labor that impoverishes the soil, is worse than thrown away. No fact in the science of political economy is more important than this. To reduce a field, which in its virgin state produced forty bushels of corn per acre, down to twenty in ten years, and then cultivate it forty years and harvest only twenty bushels per acre in place of forty, is equal to a loss of four hundred bushels of corn per acre in the aggregate, or half the diminished product, without any equivalent whatever. Thus to impoverish land is to wither the muscles of both man and beast employed in its tillage. Human toil is often praised for being highly *productive*, when, had the whole truth been known, it would have been seen to be remarkably *destructive*. Labor never creates a particle of new matter by plowing deep or shallow; but it frequently places the elements of grain, cotton, and provisions, beyond the reach of all scientific farmers who may live hereafter, and find the soil wanting in the raw material for making human food and raiment.

Is it not the duty of government to diffuse among its citizens a knowledge of the true principles of tillage, and impress upon them the obligation which every agriculturist owes to posterity, not to leave the soil he cultivates in a less fruitful condition than he found it?

II. — THE RAVAGES OF INSECTS.

Such insects as Hessian and wheat flies, curculios, weevils, army and boll worms, annually destroy crops to the amount of twenty millions of dollars. If a pirate on the high seas, or an Indian savage on land, injures the property of a citizen to the amount of a few dollars, millions are expended, if need be, to punish the offender. This is right. But when public enemies of a different name do a thousand times more injury to a whole country, are its citizens under any necessary restraint which forbids their making a common effort to protect their property from insect devastators? Parasitic plants, such as rust on wheat and many fungi, as well as injurious insects, are on the increase. To attempt to explain the reasons *why* this is so, would lead at once into questions in animal and vegetable physiology, out of place in this brief synopsis of such rural topics as are believed to be of general interest. It may not be amiss to remark, however, that many boys are, apparently, educated to kill all small birds that subsist mostly on insects, so soon as these youngsters are large enough to shoulder a gun.

Government can do much to check the ravages of insects, by collecting and diffusing useful information as to their habits, times of transformation, and the best means of destroying or avoiding them. If farmers fold their arms and say that nothing can be done by the science of entomology, nor by any other means, what but an increase of the evil is to be

expected? Not to *try* to escape the infliction, is treating one's enemies with unmanly forbearance, and evinces a belief in fatalism worthy a disciple of Mahomed.

III.—ANALYSIS OF SOILS, MARLS, AND FERTILIZERS.

Something should be done in reference to the analysis of soils, fertilizers, marls, and other minerals, constantly sent to the Patent Office for that purpose. For many years chemists and philosophers have been investigating the affinities and other peculiarities of "molecules," or ultimate indivisible particles of matter. These scientific researches have revealed many important truths and natural laws, which have a direct bearing on all the economical purposes of agriculture. Some pains should be taken to impart a knowledge of these laws to all practical farmers. When we consider how little opportunity the mass of agriculturists have to study the chemical composition of their soils and crops, it will readily be seen that information of this kind is greatly needed in all operations which aim to feed cultivated plants with their appropriate aliment.

Professor Henry, the distinguished Secretary of the Smithsonian Institution, has authorized me to say that the extensive chemical apparatus and excellent laboratory of the institution will be at the service of any reputable chemist, to make investigations for the increase and diffusion of knowledge in this branch of science.

I have compiled for this report about one hundred analyses, embracing most of the cereals, several grasses, clovers, legumes, roots, cotton, tobacco, flax, and the ash of fruit and forest trees, from the latest European and American authorities. These analyses will be found valuable for reference.

An elaborate paper on the "Study of Soils," giving the chemical composition of their parent rocks, the amount of the elements of crops in a cubic foot of earth available as food for plants, together with researches into the annual production and consumption of mold, the variation of the temperature and hygrometric properties of soils, has been deferred, to keep this document within a moderate size. For a similar reason, no space has been allowed for mere *guesses* at the quantity of grain and other crops grown in the year 1849.

IV.—THE PRESERVATION OF PROVISIONS.

The science of preserving meat, lard, butter, cheese, and other animal as well as vegetable substances used as food for man, has received very little attention in this country. This neglect causes a loss of many millions every year. To say nothing of the bad taste of eating so much frowy and rancid butter at home, full one-half of all that is sent to England and other foreign countries is sold at half the price of sweet butter, by reason of the defective manner in which it is manufactured and put up for market. American farmers have great advantages for the economical production of beef and pork, mutton and wool; and it will render them a valuable service to obtain from Europe correct information of all discoveries and improvements, either in the growing and feeding of domestic animals or in the curing of provisions.

V.—IMPROVEMENT OF DOMESTIC ANIMALS.

Few are aware how susceptible of improvement is the living machinery which elaborates *milk* for nearly every family in the Union. There is a reliable account in this report, of a dairy of forty-one cows kept in the State of New York, which yields $62 in butter, cheese, and milk, as the product of each cow a year. From the returns of the last State census, it is safe to say that 1,100,000 cows are now milked in that State, which are supposed to yield about $20 per head. To improve these up to an average annual product of $31 each, (that is, to one-half what the best large dairies in the country now yield,) would add $12,100,000 to the income of the citizens of a single State. This gain by the improvement of one kind of rural machinery would be equivalent to creating a capital of $200,000,000, and placing the money where it would yield over six per cent. interest in perpetuity. If the thirty millions of sheep in the United States gave as good returns in wool for the food consumed as the best 100,000 now do, it would add at least 60,000,000 pounds to the annual clip of this important staple.

In one of his letters to Sir John Sinclair, Gen. Washington says, in substance, "that at the time he entered the public service in the war of the Revolution, his flock (about 1,000) clipped five pounds of wool per fleece. Seven years after, when he returned to his estate, his flock had so degenerated that it gave an average of only two and a half pounds per head, which was the common yield of Virginia sheep then, as it is now."

Although the numerous importations of superior sheep, cattle, horses, and swine, have greatly benefited the country, it must be admitted that much has been lost by suffering improved animals to deteriorate. Every wool-grower should ponder well this fact. If two and a half pounds of wool will pay the whole cost of keeping a sheep a year, five pounds will pay one hundred per cent. profit on that cost. Washington was eminently a "book-farmer," and was anxious to gain knowledge from the educated agriculturists of Europe and his own country. His overseer believed in keeping sheep as his father did, and was opposed to all innovations in husbandry.

There are now not far from 6,000,000 horses and mules in the United States; and it is not too much to say that, in a few generations, these animals may be improved full $30 a head on an average. If so, the gain by this increase of muscular power, and its greater durability, will be $180,000,000. If we study critically the machinery for converting grass, roots, and grain, into beef and pork, the difference is found to be still more striking. If the facts relating to this subject were spread before the people, great improvement would soon follow, and all classes share equally in the profits of more productive labor.

VI.—THE DISTRIBUTION OF SEEDS AND CUTTINGS.

It is a law of nature now fully recognised by men of science, that all cultivated plants and fruits, as well as all animals, are subject to constitutional deterioration, and are susceptible of organic improvement. Hence, one thousand seeds of one variety of wheat, corn, cotton, or tobacco, will produce a larger crop, under equal advantages of climate, soil, and culture, than a like number of seeds of another variety.

Plants propagated by buds, like sugar-cane, potatoes, and fruit trees, are peculiarly liable to constitutional weakness, and are less able to endure rude treatment in violation of the laws of vegetable life. On many plantations, the vital force of the sugar-cane is nearly exhausted; and this office is strongly

urged to procure from countries where the plant is indigenous and grows from the seed a new stock, both of seeds and rattoons, for the use of planters. In cultivating this tropical plant in districts bounding its zone on the north, much care and some science will be found highly useful.

Both seeds and cuttings of the best figs and olives grown on the coast of the Mediterranean should be procured through American consuls resident at the different cities on the borders of that sea. Figs and grapes, "oil and wine," will some day be numbered among the staples of the southern States.

There is reason to believe that the most improved varieties of wheat grown in England and France will be a valuable acquisition to this country: and our wheat-growers would esteem it an especial favor if only a few bushels were procured for general distribution. With the small sum appropriated for the purpose, about eighty thousand packages of seeds have been put up and distributed within the last three months. With a better organization, and greater facilities for collecting seeds and cuttings, vastly more good might be done.

There are now some 200,000 copies of agricultural papers and periodicals printed, which circulate more or less in every State in the Union. These are doing an invaluable service to the country. They cannot, however, enact laws for collecting, annually, reliable statistics of the results of labor and capital employed in agriculture. Truthful statistics form the basis of all reforms—of all progress. State Legislatures must aid in this great work. If "knowledge is power," ignorance is *weakness*; and the removal of this weakness is one of the highest duties of every republican government. Either the assessors or collectors of State and county taxes should be provided with blanks to collect useful information, as well as money, from the people.

VII.—HOW CITIES EXHAUST THE FERTILITY OF LAND.

There has been enough of the elements of bread and meat, wool and cotton, drawn from the surface of the earth, sent to London and buried in the ground or washed into the Thames, to feed and clothe the entire population of the world for a century, under a wise system of agriculture and horticulture. Down to this day, great cities have ever been the worst desolaters of the earth. It is for this that they have been so frequently buried many feet beneath the rubbish of their idols of brick, stone, and mortar, to be exhumed in after ages by some antiquarian Layard. Their inhabitants violated the laws of nature, which govern the health of man and secure the enduring productiveness of the soil. How few comprehend the fact that it is only the elements of bread and meat, evolved during the decomposition of some vegetable or animal substance, that poison the air taken into human lungs, and the water that enters the human system in daily food and drink! These generate pestilence, and bring millions prematurely to their graves.

Why should the precious atoms of potash, which organized the starch in all the flour, meal, and potatoes consumed in the cities of the United States in the year 1850, be lost forever to the world? Can a man create a new atom of potash or of phosphorus when the supply fails in the soil, as fail it must under our present system of farm economy? Many a broad desert in Eastern Asia once gladdened the husbandman with golden harvests. While America is the only country on the globe where every human being has enough to eat, and millions are coming here for bread, how long shall we continue to impoverish ninety-nine acres in a hundred of all that we cultivate? Both pestilence and famine are the offspring of ignorance. Rural science is not a mere plaything for the amusement of grown-up children. It is a new revelation of the wisdom and goodness of Providence, a humanizing power which is destined to elevate man an immeasurable distance above his present condition. To achieve this result, the light of science must not be confined to colleges; it must enter and illuminate the dwelling of every farmer and mechanic. The knowledge of the few, no matter how profound, nor how brilliant, can never compensate for the loss sustained by neglecting to develop the intellects of the many.

No government should be wanting in sympathy with the people, whether the object be the prevention of disease, the improvement of land, or the education of the masses. One per cent. of the money now annually lost by reason of popular ignorance would suffice to remove that ignorance.

I have the honor to be, with great respect, your obedient servant, DANIEL LEE.

HON. THOMAS EWBANK,
Commissioner of Patents.

HINTS FOR JULY.

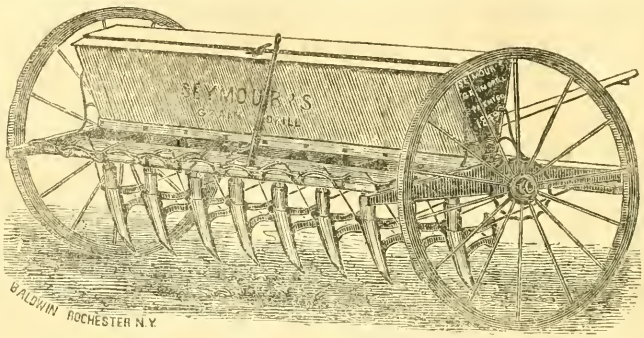
THE principal work for this month is Haying and Harvesting. It was always our delight, even in our most juvenile days, to visit the hay-field. And now, we never feel so much in love with the farmer's life as when we swing the scythe among the tall grass or rake the new mown hay. The farmer should see that his corn is hoed, garden weeded, cabbage set, and other small matters attended to, so that nothing may be in the way of haying and harvest, and then he can put all his force at the work. Now is the time to see that scythes, forks, rubbers, hay rigging, &c., are on hand and in order.

Cut your June and wild grasses early, even before clover, if you desire to have it worth anything. Clover hay must also be cut early, or when the last sets are in blossom, and the first ones a little turned; and observe one well established principle, that if that cut in the forenoon is not cured sufficiently to take in the same day, that as soon as it is fairly wilted it should be put up in cocks of 75 or 100 lbs., and left from three to four days: and on a fine sunny morning open it, and by ten o'clock it is ready to load. By this process the leaves and blossoms are preserved in a fine fragrant state—the real old hyson—and not the black, tasteless, bean-stalks and hop-vines of the old process. If you have any fears that the hay is too green when taken in, pack it away loosely and let it settle by its own weight, and finely and evenly sprinkle on four quarts of salt, and not more, while unloading.

Stacking out hay is a bad business, unless it is thatched, or made up by an artist—it should be in the barn, or under barracks. An open, rainy fall and winter destroys at least one quarter, and if it stands over one year, the mice destroy the balance.

Buckwheat should be sown early in July, about three pecks to the acre.

Sow round turneps and cut Canada thistles the last week in this month.



SEYMOUR'S GRAIN DRILL.

SEYMOUR'S GRAIN DRILL.

In the engraving above, we present another Drill claiming public favor. It is manufactured by the inventor, P. Seymour, Esq., of East Bloomfield, Ontario county, N. Y. It is not our business to praise one drill to the disparagement of others. We place before our readers the various drills and other farm implements that we have reason to believe are valuable, thereby giving all an opportunity, as far as possible, of reading and judging for themselves. Our correspondents have always freely given the results of their experience, and will continue to do so, and thus our readers have the benefit of the opinions of disinterested and practical men — experience not gained in the *machine shop*, but in the *field*, under various circumstances, on rough and smooth, hilly and level, stony and clear land.

It is generally conceded among the best farmers, we believe, that by drilling wheat and other crops, two desirable objects are gained — a saving of seed, and a better crop; and the necessities of farmers demand, and the genius of our mechanics will supply, implements well adapted to the work.

The first premium for a Grain Drill capable of depositing fine manures with the grain was awarded to Seymour's Drill, at the last State Fair at Syracuse and at the last Michigan State Fair. Our esteemed correspondent Calvin Sperry, has given his opinion of this Drill in the February number.

The person attending Seymour's Drill can readily see whether any of the teeth fail to deliver the grain regularly, as they are in plain sight. It sows wheat, oats, barley, corn, beans, peas, &c., and is also capable of sowing fine manures with grain, such as plaster, lime, and ashes. It can be changed, in a few minutes, from a drill to a broad-cast sower — an additional advantage. For further information we refer to our advertising pages.

The spirit of the Agricultural Press is abroad in the land. Wherever the cheap little monthly finds its way, it engenders thought and high expectations — and the mechanic's hammer falls to the tune of awakened ideas, and the plowman no longer "whistles from the want of thought," but he sings, "There's a good time coming, boys."— *Dr. Kennicott.*

QUINCES ON THORN, &c.

Messrs. Editors :—It may be of benefit to some of your readers, upon new farms, to know that they can raise good quinces upon the stock of the common thorn, in three years. My plan is, to take up a good thrifty thorn, from the field or some open spot, about an inch or so in diameter; set it out where I want it to stand, and graft quince into as many limbs as convenient : and they do well, growing about as much the first season as though the bush had not been removed.

I also succeed much better in raising cabbages by planting the seeds in the hills where they are to remain, scattering a good pinch of seeds in each hill, where I let them stand until large enough to transplant, when at various times I thin out and give plants to my neighbors, say from two to ten plants from each hill, until there are but two of the very best plants remaining in each, which I let stand until they are large enough to be out of the way of cut worms, &c., when the smallest remaining one is removed from each hill. The time for planting corn is about the right time for planting cabbage in this way. J. H. Andrus.—*Almont. Mich.*, 1850.

Simple Fastening for an Ox-cart. — *Messrs. Editors:* — I would like to describe a very simple fastening for an ox-cart, but none the less useful for being simple. We here give it the name of sward, although I consider it much more useful, as well as less dangerous, than most articles of that name. It consists merely of a bit of good timber one and a half by two inches, four feet in length, put through the tongue of the cart, and made fast by a small bolt passing through a mortice in the front sill, out side of the end board. If the sill is not of sufficient width to admit of a mortice, a staple driven in it will answer the same purpose. One of the greatest advantages to be derived from this fastening, consists in having several holes in the sward, so that the cart may be fastened in any position desired. I think that any one accustomed to drawing manure in a cart, will see the advantage of having it so fastened that it will not fall upon the tongue when it is not half unloaded to the great annoyance of the team. Willet Keese. — *Peru, N. Y.*, 1850.

Wheat Husbandry.

ANOTHER WORD ON THE CAUSE AND CURE OF SMUT IN WHEAT.

Messas. Editors :—I am an old Farmer, have been in the business of cultivating wheat for more than thirty years, and I have heretofore raised a large quantity of smut. At times my wheat crop would be one-third smut. I have tried all the preventives that I have seen recommended in the Farmer, without an entire cure ; but for the last ten years I have raised no smut. I will now state my former practice when I did raise smut, and my present practice, and hope other farmers will try the experiment, and I think they will give up the practice of steeping their seed wheat in any solution whatever ; neither will they need a sieve to separate the large seed from the small ; if it is ripe and sound it will not bring smut.

I will now say that I formerly harvested my wheat very green, or in other words, before it was fully ripe, and made use of the same for seed, and from that seed I always raised plenty of smut. At length my *bump* of causality whispered to me, "You cut your seed wheat too green," and from that time I have selected the part of my wheat-field that ripens the evenest, and let it stand in the field until it is dead ripe and until the heads appear weather-beaten, and I have raised no smut since I followed the above rule.

Some seasons my wheat does not ripen even, and if I find a green head when I am cutting my seed wheat, I throw it out ; for I am fully of the opinion that a small, unripe grain of wheat, if it vegetates at all, will bring smut. Such a grain contains but a very small particle of vitality, and a strong solution of salt, vitriol, or lime will sometimes destroy that vitality, so that the grain does not vegetate ; and here is where farmers are mistaken—they suppose they destroy the smut, when in fact it is the unripe, sickly grain which produces smut, that they destroy.

I say again to my brother farmers, try it, and my word for it you will not be sorry. Jacob Loop.—*Pontiac, Oak. Co., Mich., May*, 1850.

SMUT.

Several articles have appeared in the Genesee Farmer, taking opposite views as to the origin of smut. Without any endeavor to invalidate the theory of J. H. H., it may be well and profitable to examine the subject yet farther ; and for that purpose the following facts and ideas are collected for the consideration of farmers and others afflicted with smut.

There are various groups of plants too minute for notice by casual observers, possessing a degree of vitality, under the most unfavorable conditions, and for a period, which claims our surprise. Of this class are mosses, which may be dried and laid by for years, and then if exposed to moisture, will, even in the late winter months, spread out their leaves and push up the seed vessels amid frost, and rain, and snow. They are sometimes so completely dried by drouth as to escape notice ; and when in time they are moistened by rain, they appear to clothe suddenly a spot where they were never seen before. Another group of plants, more simple than the mosses, is seen in our far northern latitudes, but are noticed here to convince my brother farmers of the necessity for deeper study of our profession before we *adopt* any theory which has not the sanction of time and scientific inquiry. I allude to a greenish or reddish slime often seen on damp parts of hard surfaces, which, when examined with a microscope, is found to consist of minute cells, hardly connected, but imbedded in a sort of jelly. It is this substance which sometimes appears on the *surface of snow*, tinging extensive tracts with a deep crimson, and hence called *red snow*. This sometimes appears *so suddenly* and extensively as to induce the belief that it had fallen from the clouds ; but its *growth* and productiveness are so rapid as easily to account for its appearance. This plant exhibits probably the very simplest form of vegetation ; it obtains its nourishment by absorbing the fluid around, and grows and comes to maturity by means of the air and moisture with which it is in contact.

Now, this red snow seems but one step lower than the *Fungi*—a tribe of plants which includes mushrooms, toad-stools, puff-balls, blight, mildew, mould, and *smut*. These fungi differ, however, in their habits and characteristics, and have been heretofore too little heeded or observed by farmers. One characteristic is, that they will not grow unless fed with decaying animal or vegetable matter. And again, there are particular species which will appear only on particular substances—for instance, there is a species of mould, or fungus, which grows *only* on the surface of the dung of cats ; it is peculiar, and no where else to be found. Many others might be named, but it is only necessary to say that tribes of plants have *their peculiar* species of *mould*, or *rust*, or *smut*.

The oft repeated appearance of the most simple fungi, such as mould and smut, upon all *spots favorable to their development*, has created the belief that they were spontaneously produced ; but it is more reasonable to account for their production and diffusion by the means which nature has provided and adopted.

The fungi seem to direct all their energies to reproduction ; their size is diminutive, but the number of germs are almost beyond computation. This is strikingly the case in the puff ball when ripe ; the dust which issues consists entirely of germs for reproduction, each and all ready to develop a new fungus when meeting with a fit resting place. When the puff-ball is broken, countless numbers of these little seeds or germs are driven by the breeze or float in the air. By an attempt to count the number of germs in a ball, ten millions were computed ; but this was probably only an approximation.

Not less minute are the seeds of *smut* when examined by a powerful magnifier—the germs are distinguishable as easily as those of the puff-ball. Let farmers examine smut for themselves, and if they find the facts as above stated, is it not rational, nay *most* rational, to believe that the seed thus profusely produced is readily communicated from one plant to another by adhesion of these minute seeds to the grain when it is threshed, also entering into the growing plants by their many pores, and surely it must be brought in connexion with the seed when sown, by the water of the soil trickling through it and carrying with it the countless millions of fungi seed which may have fallen from previous infected crops.

It may be objected, that the grain we sow can not take up solid matter, such as seeds ; but when we examine water which to the eye is clear, we find it

often full of matter and living things, and who shall say that growing wheat can not absorb through its pores, or vessels, matter so minute that the unaided human eye can not detect it. Here, then, we have various ways to account for the rapid and extensive spread of smut as a fungus; and as one more illustration of its minute character, and power of finding its way into invisible pores or channels, the following fact is given:—Wasps have *often* been seen in warm climates, flying about with plants projecting from some part of the surface of their bodies. Upon examination, these plants are fungi, which, while floating in the air, have come in contact with the wasps, have entered the pores at their sides, and feeding on their moisture, develop a luxuriant vegetation. In time, this fungous growth spreads through the body, and destroys the life of the insect. Other and more curious instances might be presented; but if my brother farmers feel any interest in searching out the causes of mischief which assail them, and as among the number, SMUT, let me recommend the perusal of Carpenter's Physiology of Vegetables, and also Roget's Animal and Vegetable Physiology.
OLD FARMER.—*Seneca County.*

CHESS.

MESSRS. EDITORS:—I am aware that the press, if not the public, have become tired of the chess controversy; still, I feel as if, under existing circumstances, I had a claim for this once to be heard. Nine years since, when the subject of the transmutation of wheat to chess was under discussion in the Genesee Farmer, Mr. C., then editor, (now deceased,) called for facts—"Give us facts," he said; "we want facts." I then prepared the following statement, and handed it to him: but the facts were not such as suited his theory, and they were not permitted to be published. However true the theory may be, that "like produces like,"—and I assent to it fully—still, to the common mind, one fact is worth a thousand theories.

On a farm formerly belonging to the writer of this article, a wood lot of several acres was hastily cleared up by contract. It was heavily timbered, having many hemlocks of prodigious size. It was rolling land, with knolls and hollows; and where trees had been overturned by the wind, there were basins, in which the water stood much of the time, except in the dry portion of the year. A neighbor obtained permission to sow one acre in the corner of the field, in order to raise a particular kind of seed wheat. The seed sown was obtained on an adjoining farm, by a daughter, who picked up single heads and rubbed them out by hand in the evening, until she had obtained a bushel. Of course it was absolutely pure and clean. At harvest time, the wheat on the high and dry portions of the ground was pure and excellent. In the hollows and basins, where the water a cumulated and stood much of the year, little or no wheat appeared, but pure and abundant chess. Now, it is useless to say that chess was sown: for not a kernel was sown:—or that chess had lain dormant in the ground for years; for it had never before been tilled since the world was made;—or that birds of the air had dropped the seed; for if so, why did they deposit it in the wet places, and not on the dry ground? The inference is irresistable, that chess is *deteriorated wheat*—that it can produce its like, but can not regain the character from which it has fallen. It has not lost its vitality, or power of re-production; but it has lost some distinctive characteristic of the pure wheat, some portion of the vital principle that is necessary to re-produce the perfect grain.

But I have another fact. My men, in passing through a barley stubble with the plow a few times, carelessly turned a few furrows in spots, for a short distance. Presently some rank and luxurious tufts or bunches of barley sprung up. On examination, I found that clusters of barley heads had been collected together under the furrow, probably by the mice or small squirrel. The seed had vegetated, the small roots were abundant, the barley heads were perfect, and the green tufts sprung up from the heads. They were protected and watched by me, solely with the view of ascertaining whether barley sown in the fall would live through the winter, and thus become a winter grain. It did live, and flourished equal to wheat; but at harvest time it was all chess!

These are facts, which I submit to the advocate of first principles and fundamental laws, to be reconciled as best they may be. To the practical farmer they are satisfactory proof that wheat can degenerate into chess. The influence of this opinion, in its practical results, will be to induce farmers to sow pure wheat on dry and good ground, in the expectation of pure wheat in return, if the season and soil are faverable; and to avoid sowing chess, in the certainty, if they do sow it, of receiving chess in return, be the soil or the season what they may. Yours, &c., E.

Our readers need not fear that we are about to give them a new edition of the *Chess* question. The above article was written by an old Onondaga county farmer, now too far advanced in years to hold the plow, but who feels a lively interest in all that pertains to the improvement of the agriculture of the country. Its publication will gratify our aged friend, and we doubt not, interest our readers.—EDS.

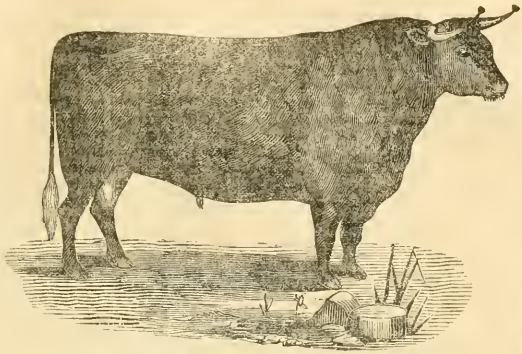
ELDER.—GAPES.

EDS. FARMER:—I would respectfully request either of you, or some of your correspondents, to advise me of the most speedy and effectual way to extirpate the common dwarf elder. I have tried frequent cutting and grubbing, (though perhaps not frequent enough,) with only partial success. I would also be very glad and thankful to receive, through the medium of the Farmer, information how to prevent the *gapes* in chickens, with which above one-half of mine die.—ISAAC CHILD.—*Indian Spring, Pa., June,* 1850.

The destruction of elder we prefer, for the present at least, to leave with our correspondents; and we hope some of them will give us the benefit of their experience in season for our next issue.

In searching for a preventive of any disease, the first and most important point is, to ascertain the *cause.* This accomplished, the preventive naturally and easily follows. The *gapes* in chickens is caused by a want of attention to cleanliness and comfort—wet or ill-ventilated fowl-houses, ill feeding, bad water, or confinement to a small spot of ground without access to gravel and fresh earth. The preventive would be, of course, the reverse of this treatment. It should be remembered that this disease is epidemic, and as soon as one is affected, it should be separated from the flock. In its first stages it may be cured by a little fresh butter and Cayenne pepper, which the subject should be compelled to swallow. If the disease is far advanced, a good plan is to force a feather saturated with turpentine, down its throat, turning it round while there. This repeated once or twice, if necessary, will generally effect a cure.

DEVON CATTLE.



DEVON BULL "HOLKHAM."

The annexed engraving is a portrait of the Devon Bull *Holkham*, bred by A. Bronson, Esq., of Oneida county, N. Y., and now owned by L. Crane, of Marshall, N. Y. He is a descendant of the *Coke Devon Bull Holkham*, from his resemblance to which he takes his name. He received the first premium of the Oneida County Agricultural Society when a calf. also at one year old, and at two and three years old. The owner gives the following description: "Head small; eye large, clear, prominent, and encircled with the yellow ring; muzzle fine; nostrils wide, high, open, and encircled with white; horns polished, pointing forward and upward, and of a medium size at the base, and tapering, tipped with black; ears small, of an orange color within, and bordered with grey hairs. Neck fine and well placed on the shoulders; chest broad, barrel hooped and deep, and well ribbed home to the hips; back straight from the withers to the setting on of the tail; tail long, slender, and set high, with the white bush; hide thin and moveable, mellow, well covered with soft and fine hair; fore-arm large and powerful; legs short and straight, swelling and full above the knee and fine below it; hind quarters long and well filled up."

It is generally admitted that this breed of cattle is very easily kept and easy to fatten. Martin, in his (English) work on the *Ox*, speaking of this point, says: "During the summer the commons and wild moorlands supply a sufficiency of food; and when in their winter sheds, chopped straw, furze, heath, and other coarse herbage, are sufficient. Hence these cattle are maintained at very little cost, and as they yield a fair quantity of milk, and when put upon moderately good fare, rapidly fatten, they will suit the small farmer, perhaps half-farmer half-fisherman, in a bleak mountain-district, over which the ocean tempest is driven so frequently."

Allen, in his *Domestic Animals*, bears evidence of the same fact: "No animal is better suited to our scanty or luxuriant hill pastures than the Devon, and none make a better return for the attention and food received. They ensure a rapid improvement when mixed with other cattle, imparting their color and characteristics in an eminent degree."

The cows invariably yield milk of great richness, and when appropriately bred, none surpass them for the quantity of butter and cheese it yields. Mr. Bloomfield, the manager of the late Lord Leicester's estate at Holkham, has, by careful attention, somewhat increased the size without impairing the beauty of their form, and so successful has he been in developing their milking properties, that his average product of butter from each cow is four pounds per week for the whole year. He has challenged England to milk an equal number of cows of any breed, against forty pure Devons, to be selected out of his own herd, without as yet having found a competitor. Although this is not a test of their merits, and by no means decides their superiority, yet it shows the great confidence reposed in them by their owner. The Devon ox, under six years old, has come up to a nett dead weight of 1,593 lbs.; and at three years and seven months, to 1,316 lbs., with 160 lbs. of rough tallow.

S. W'S NOTES FOR THE MONTH.

The Season and the Crops.—Up to the 2d of June we have not had a single warm day. On the 3d of June, for the first time this year, the thermometer rose to 85° in the shade. From that day to this (the 10th.) we have had fine, growing, summer weather, with a few very warm nights. Our champaign country is now in the full bloom of rapidly progressive vegetation. Wheat and grass look well; potatoes, which cover a large space this season, ditto; Indian corn, so long stationary or unseen, now goes ahead with recuperated powers, as though its roots had increased and extended while its leaf was sickly and yellow. In the higher and more hilly regions of New York, vegetation just now is much more homely and backward. But every dog will have his day; in July and August, when we are sun struck, dried up, our pastures hardly sufficient to afford a nibble to a flock of sheep, the higher dairy lands will be in all their glory—white clover half-leg high, springs of cold soft water from the granite hills coursing fields which are the Paradise of cows. Then the butter, so hard, compact, and yellow—what a clover perfume and flavor!—how unlike our soft, greasy compound—call it anything but butter—the product of churnings of long and warm kept, decomposed, many colored creams! Then the big cheeses—often two made in one day—too heavy for one woman to turn; but here the men turn too and help; and every girl seems to be intuitively aware that to be a graceful, expert milker, is at least to be something better than a *mal adroit*, slovenly pretender, in folly and fashion's school!

Wordsworth, the poet of Rydal, is dead. The factitious title of Poet Laureat ill-befitted either his life or character; for he was emphatically a rural poet. Eschewing both the classical heroic and Della Cruscan school of poetry, he gave himself up to the gentle yet profound influences of his own lake and mountain scenery. It is said of him, that the love of nature "was an appetite" which "haunted him like

a passion." Perhaps it might better have been said, that the love of nature was

——"born in him, with him so intense,
It was his very spirit, not a sense."

Let every farmer who would make the most of the good that surrounds him—

"Find tongues in trees, books in the running brooks,
Sermons in stones, and good in every thing"—

buy WORDSWORTH'S poems.

PRICES OF OUR AGRICULTURAL PRODUCTS.—The late rise in the price of corn and flour is stimulated by the recent demand for shipment to England; but as the late rise in England is owing to a present short supply from the Baltic and the Black sea, and to the fear of the effect of present bad weather on growing crops; a subsequent decline, on the return of fair weather and increased imports, may be anticipated. There are, however, other causes which must keep up prices in the United States until after the next harvest. The wheat crop of great wheat-growing Ohio was a failure last year, while the home demand, increased by immigration, has been unprecedented. Strange to say, the great valley of the Mississippi is now importing bread-stuffs from the lakes, through the Chicago canal and the circuitous Illinois River. The St. Louis Repub. says that they are now receiving by that route, flour, wheat, corn, oats, barley, and potatoes. This does not look as though the farmers of the great west were suffering very much just now for the want of a home market. The farmers of our country are under great obligations to Sir ROBERT PEEL, under whose ministry the British government was induced to make such a concession to free trade as to admit American provisions, butter, cheese, lard, &c., into Great Britain under very low duties. The subsequent abrogation of the sliding scale of corn law duties, which taxed foreign corn out of the market, unless its home cost approached famine prices, has created a powerful opposition to free trade in corn, by the so called "landed interest" of Great Britain. 'Tis hard for the aristocratic landlord to retrench in his great and multiform expenses and luxurious style of living; and although the farmer tenant may consent to give up his bottle of port with his dinner, he can not yet dispense with his horse and gig. Hence there is left to him no other way of paying his rent under the present prices, but to pinch his farm laborers in their wages to a stipend that has already driven them to the brink of starvation! Some benevolent writers in England and Scotland have endeavored to show the landlord how much it is to his interest to give the farmer more liberal covenants, and to teach the farmer how he may live and feed his working force under such covenants, with the adoption of better economy and a *higher* and better mode of farming. Against Mr. CAIRD, one of these writers, Blackwood, (now the landlord's exponent,) in the April number of that magazine, comes out with an elaborately furious article, entitled "Caird's high farming harrowed." I have not seen Mr. CAIRD'S pamphlet, but if we may judge from the floundering of the great Philistine, little David must have struck at his life. By a curious coincidence in the theory of political economy, we on this side the Atlantic, and Blackwood on the other, arrive at the same conclusion;—while we urge that our well paid operatives can not compete with the half paid laborers of England, Blackwood says that the "British farmer who pays taxes, can not compete with the foreign *serf* who pays no taxes at all." In both cases we have left to us the lamentable conclusion, that the argument aims an unerring shaft at God's poor, in whatever hemisphere their lot may be cast, just as though they had no right in the good things of this world of ours!

THE PROGRESS OF RURAL TASTE.—A sterling farmer, who can both say and do, writes in the Seneca Observer, that on a visit to his neighbor, last week, he was "surprised to see the ground spaded up in front of the house, and laid out in regular beds for flowers and shrubs." This space, he says, "had ever before been covered with plantains, sorrel, and other unsightly weeds." But what a wet blanket the "old farmer" throws on our imagination, now about to invest the fair inmates of that house with a true love and enthusiasm for flowers, when he tells us that the paltry dollars, the premium offered by our county society for the best boquet, gave the primary impulse to this ever to be praised reform. But, as the Methodists say, a good tune is none the worse for having originated with the devil. One word more in relation to our Seneca county premium for flowers. I have been asked by more than one of the single fair, whose ages are on the shady side of five and twenty, why the prizes are thus invidiously offered only to those girls who have the good fortune to be on the sunny side of that now climacteric number. Did the committee think that she who could pass her 25th birth-day without appropriating a husband, would be alike insensible to the beauties of that floral creation which heirs not the grossness of flesh and blood? If they do, I confess that all my experience leads to the very opposite conclusion.

A REMEDY FOR INDRANGE

MESSRS. EDITORS:—I am sorry to hear your correspondent "W. T." condemn your most valuable paper because it is too scientific, or because you use terms which he can not understand; and I hope you will not restrain your scientific analyses because a *very* few of your readers do not understand the phrases which you necessarily use; and I dare assert that those who can justly claim the proud title of a farmer, will, if they meet with a term which they can not comprehend, study out the meaning, instead of sitting down and bewailing their ignorance.

"W. T." seems to think that there are a great number of your readers who do not understand "the phrases you use in analysing soils;" and if such be the fact, it is a disease, for which I wish to propose a remedy. It is not a year since I commenced reading your paper, and at that time I was in the same dilemma which my friend seems to be in; but I was ashamed either to present my ignorance before the public as some have done, or to keep it secret, and was incited to the study of chemistry, which I set myself about with all dilligence. Now, I would say to my brother reader, and to all who do not understand their profession, "go and do likewise."

Again; "W. T." asks, "What will our grandchildren think, when looking into a volume of the Genesee Farmer they see an advertisement with bolus and bottles?" I would say, in answer, that if they should see *his* article, while perusing the Farmer, they would laugh at his folly, and rejoice in their superiority over their ancestor. B. L. N.—*Madison Co., N. Y.*

BEES — No. 1.

As the articles that I now purpose writing will be a brief exposition of the principal characteristics and proper management of the Honey Bee, and which will probably be read by many who have never seen a treatise on the subject, it will be necessary, as a preliminary elucidation, to state what most prominently pertains to the three classes of bees comprising every family, in regard to their physiology and domestic economy: yet from necessity, I must be very brief in a publication of this kind.

A family of bees consists of a *queen*, *workers*, and *drones*. The queen is the mother of all the increase of every hive. She alone produces the eggs from which some 70,000 bees emerge every season! This amazing fecundity may truly excite our surprise, yet analogy shows many parallels in the insect tribes. In strong, populous families, she seldom ceases laying during the entire year. If a hive well filled with bees be examined in the dead of winter, brood will be found to some extent. She commences her spring laying in March or April, according to the mildness of the season, and during the month of May produces 200 eggs per day! Her office is solely to deposit the eggs in the cells, which she does at the extreme end of each, where a triangular cavity receives them. At each deposit, a whitish fluid accompanies the egg to cause it to adhere to its locality. Thus the queen passes quickly from cell to cell, in the execution of her task, independent of any attention being paid to her by the workers, on account of her royalty, save a respectful opening of a free passage as she advances. These facts have been verified by the use of *observatory* hives, with glass sides, and only a single leaf of comb.

The workers are the laborers of the association. They build the combs, gather the pollen [bee-bread] and the honey, and all labor pertaining to the family devolves upon them. They learn nothing from *experience*—nothing from age: but come forth from their cells perfect in all their arts. What took ages for mathematicians to compass, by a waste of "midnight oil," the little bee was master of as she sang her song of merry contentment, while quaffing the melifluous nectar from the spontaneous profusion of the garden of Eden. The wonders of her architecture I must reserve for a separate article. It has been said that there is an especial class among the workers, for each separate duty, which class can perform no other labor, save that which nature has assigned to them. This is not the case. The workers can lend a hand at any work. The honey-gatherer of to-day may be collecting pollen to-morrow, and the next day fabricating combs, feeding the young brood, or acting as sentinels at the entrance of the hive: but their change of duties is systematic, and governed by instinctive laws among them. This is the only law that governs an association of bees, and it is a law that needs no "amendments." Their constitution is implanted in the censorium—the acme of perfection, so far as regards the operations of this insect; and while man errs in his architecture, even though master of his profession, the bee never does.

The *sex* of workers is a matter of interest. They are neither males nor females, a singularity in nature belonging to this class of insects only. They have the rudiments of ovaries, but not fully developed; yet in certain peculiar cases, fertile workers do exist, as is supposed by many apiarians; yet this fact has never been set at rest. HUBER, the German naturalist and apiarian, is the founder of this theory; yet he was blind, and trusted entirely to an assistant for his discoveries. I shall speak at length on these alleged fertile workers, probably; but let it be understood that the queen is the grand source of increase, and if rare instances of workers have been found in which some very few have been known to deposit eggs, the increase from this source is so very small that we look upon it rather as a phenomenon of nature, than as a legitimate source of fecundity.

The *drones* are a class that exist but a few weeks in the family. These are the males, and there is much mystery hanging over the duties pertaining to this class of bees. Some people consider them entirely useless—even a serious disadvantage to the association, and hives have been invented with an eye to exclude them from their tenements, while the workers can, from their diminutive size, easily enter. And when I think of the folly of such persons, who believe in ridding their hives of this class before the season allotted by nature—the God of nature, who knows as much as they do, and perhaps a little more—I feel that it is "casting pearls before swine," to endeavor to eradicate their ignorance. I shall devote my next to this highly important and interesting part of my subject.

T. B. MINER,
Author of the American Bee-Keeper's Manual.

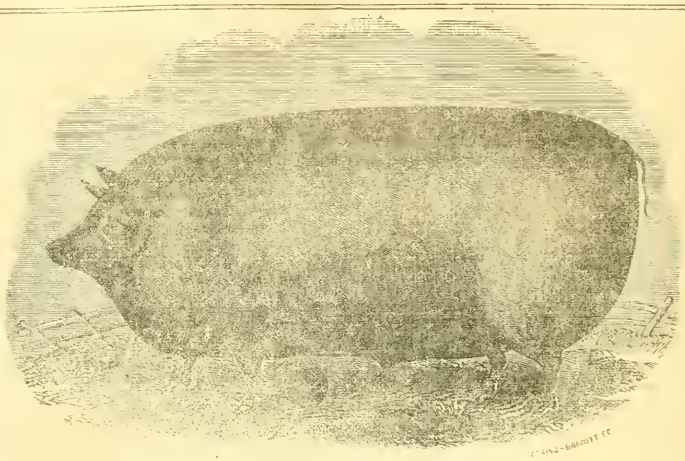
Clinton, Oneida Co., N. Y., 1850.

SWINE.

THE first swine of which we can find any reliable account, as having made much improvement in the stock of the United States, was a pair of pigs sent by the Duke of Bedford to Gen. WASHINGTON, by a Mr. PARKINSON, an English farmer, who came to this country in 179–. He leased a farm in the vicinity of Baltimore, Maryland, where he resided some time. Instead of delivering these pigs to WASHINGTON, he dishonestly sold them. They were generally called the "Woburn," or "Bedford" breed," but in some districts in this country, they were known by the name of the "Parkinson hog." They originated at Woburn, the estate of the Duke of Bedford, and were produced by a cross of the Chinese boar on the large English hog. In their perfection they were a splendid breed; being fine in their points, of deep, round carcass, short legs, and thin hair. They kept easily, and matured early. At 12 to 30 months old, they usually weighed from 300 to 600 lbs. They had light offal, and their meat was of the first quality. Their color was white, broken more or less with dark blue or ash-colored spots. The steward of the Duke of Bedford informed us, in 1841, that the true breed in England had become extinct several years before; and we believe its purity is no longer known in the United States.

The "Byfield," sometimes known as the "Grass breed," derives its first name from the circumstance of a farmer in the town of Byfield, Mass., about 30 years ago, accidentally picking up a pretty pig one day in the market, and taking it home and breeding from it. The progeny proved to be fine and quiet little animals; but in consequence of their rarely attaining over 250 to 300 lbs. weight, full grown, and being rather shy breeders, they were soon given up as too small and unprofitable for the general purposes of the farmer. Their color was pure white.

Capt. JOHN MACKAY of Boston, Mass., produced a



superior breed of swine, about the year 1825, by judiciously crossing various excellent animals, which he had the good taste and enterprise to select and bring home in his voyages from various quarters of the globe. It is said that the pigs from which he derived the greatest benefit in establishing his breed, came from China. This breed was given the name of "Mackay," in honor of its originator.

The Spanish black hogs, from the Mediterranean, brought over by Commodore CHAUNCEY and other naval officers, have been sources of considerable improvement along the Atlantic coast. Then we have had the Norfolk Thin-rind, the Leicestershire, the Lincolnshire, the Hampshire, the Yorkshire, the English and Irish Grazier, the French, the Swiss, the German, the Neapolitan, the Russian, the Calcutta, and time would fail to tell how many more breeds, if we undertook to enumerate them all.

The breed of pigs which has been more widely spread, and exercised a greater influence in giving shape and character to the swine of the United States than any other, is the Berkshire. The first was imported from England, in 1823, by the late Mr. JOHN BRENTNALL. He was an English farmer, and settled in Canterbury, Orange county, N. Y. The next importation of Berkshires was in the autumn of 1832, by Mr. SIDAY HAWES, who resided on the Three-Hills Farm (since owned by Mr. BEMENT,) in Albany, N. Y. In 1833 and '35, he made other importations; and after his return to England, in 1838, he sent out others in 1839. Subsequent to this, Messrs. BAGG & WARR of Montgomery, Orange county, N. Y., made large importations of Berkshires, both here and into the south and west. In 1841, we imported upward of forty head of this superior breed.

The Berkshires are so well known, that we need not describe them. Notwithstanding the disappointment and prejudices of some, we say emphatically, that taking them all in all, we still think those which are well bred, the best farmer's hog ever imported into, or reared in, this country. They are a particularly valuable breed for the west, as they have proved themselves better travellers than any others, when driven over the mountains to a distant market. This is an important consideration; and when Berkshires can no longer be found, they will be more highly thought of than ever, and the farmers will seek, when it is too late, to get into the breed again.

In 1841, Mr. WILLIAM STICKNEY of Boston, imported a pair of Suffolk pigs, which he has followed up by other importations, nearly every year since. His hogs are of medium size, of a white color, very fine in all their points, with deep full chests, round bodies, thick hams, and short legs. They are docile, thrifty, mature early, and are easily kept. Their pork is considered very delicate and fine. They will weigh from 200 to 450 lbs. at 12 to 18 months old. This breed of swine, some few of which occasionally come up as high as 500 pounds, is beginning to be pretty well known; and as they are of a favorite color, we think they are destined to be widely disseminated.

We now present our readers with the portraits of two pigs, which we think very perfect of their kind. The large one is a good representation of a choice hog for a farmer, weighing from 400 to 500 pounds. it is an excellent model to go by, and every farmer ought to have it before him as a guide in breeding. The best Suffolks, well fatted, nearly resemble this; so also do the Berkshires, except that they are inclined to be somewhat steeper in the rump. The small one is exactly like the improved Chinese, and would not be a bad portrait for a small, well fatted Suffolk or Berkshire.—*Am. Agriculturist.*

Horticultural Department.

EDITED BY P. BARRY.

TWO FINE FLOWERING SHRUBS.

Among the multitude of flowering shrubs that embellish so highly the months of May and June, the genus *spiræa* is worthy of a prominent place. Already our collections number some ten or twelve species that bloom at this season, and all so hardy and so easy of culture as to succeed every where, and under any sort of management. The new double flowering Japan species introduced a few years ago, and which we noticed in our volume for 1849, has proved a decided acquisition. It is hardy, forms a small compact shrub, and is increased and cultivated with the greatest ease. Its pretty, double, white flowers, resemble those of the double thorn and sloe.

We have now to notice two other species, combining so many good qualities, beauty, hardiness, &c., &c., that we can cheerfully recommend them to all who are making collections of select hardy shrubs.

Lance-leaved or Garland Spiræa. *Spiræa lanceolata.*—A shrub attaining four or five feet in height, with slender, spreading branches, and long spear-shaped leaves slightly lobed, and dentated, or toothed. The flowers are produced in clusters, or corymbs, forty or fifty in number, each nearly as large as a wood strawberry blossom, the whole cluster measuring two to three inches in diameter, according to the vigor of the plant. These corymbs are slightly globular, and are produced on lateral shoots four or five inches long, on the whole length of the branches, and so closely that every branch is a garland of snowy whiteness, showing with great effect on a lawn or border. It is propagated from layers or cuttings of the young wood; and plants not over three inches in height blossom. This season it commenced to bloom about the first of this month, and is now (18th June) in full perfection, with the appearance of lasting two or three weeks longer. The annexed figure, though imperfect, conveys some idea of a single cluster of the blossoms; but it does the plant injustice to show less than a whole branch.

Elm-leaved Spiræa. *Spiræa ulmifolia.*—This attains a larger size than the other, say eight or ten feet; said to be from Carniola, a province of Austria. The branches are stout and erect, leaves oval-oblong and toothed, or serrated, bearing some resemblance to the foliage of some species of the elm. The flowers are produced on lateral shoots six or eight inches long, on the whole length of last year's branches, and like the branches, stand erect. The flowers are a trifle larger than the lance-leaved, and are produced in pyramidal clusters of forty or fifty flowers in each. The stamens being very numerous and longer than the petals, which is not the case in *lanceolata*, dim the whiteness of the flower, which would be otherwise snowy white. When compared with the *lanceolata*, it is at once distinguished by a comparative coarseness in all its parts. The shoots are stronger and more erect; foliage larger and rounder; flower shoots not so numerous; heads of flowers larger, more pyramidal; flowers larger, more reflexed; stamens longer. In all the parts, indeed, there are very important and striking differences. Propagated in the same way as the other, and blooms exactly at the same time, but does not last quite so long. The above engraving of this is quite imperfect, not showing the pyramidal form of the cluster of flowers; the leaves also are below the natural size.

There are several other species of Spiræa, both shrubby and herbaceous, that we consider highly desirable ornamental plants, and we shall hereafter take occasion to notice them.

FRENCH MANAGEMENT OF PEAR TREES.

WE have before had occasion to remark, that the French understand the culture and management of garden fruit trees better than any other people in the world, and we have often wondered why England, so industrious, so persevering, in gleaning materials from all parts of the world for the advancement of horticulture, should so long have neglected to benefit by their beautiful and perfect system. In no other country has the subject of fruits and fruit trees received more attention than in England. Walls, borders, training, pruning, &c., have been unceasing themes of investigation and discussion among their best practical and scientific cultivators, for centuries. No pains or expense have been spared in experiments on the subject; but as yet their success is very limited. To be sure their climate, for some fruits, is very unfavorable; but at the same time their system is defective. The fruit garden at Chiswick shows this at a glance, and it seems they begin to feel conscious of it now. They would have felt it long ago, if the nurserymen and cultivators had taken a trip now and again across the channel, and examined the fruit trees of France and Belgium. It unfortunately happens with too many of the English cultivators, that they imagine whatever is not known of gardening in England, is *not worth knowing at all*. This feeling of self-sufficiency operates injuriously on nations as well as individuals, and is no doubt one of the causes why a great many nice points in continental horticulture seem quite unknown in England.

Mr. RIVERS, whose name is now quite familiar to us all in this country, having a greater share of enterprise than most of his contemporaries, commenced visiting the continent a number of years ago, and ever since, almost alone, has been urging upon his countrymen the adoption of the French mode of managing garden trees. He was at first laughed at and ridiculed by British gardeners; but his trees soon spoke for themselves, and confounded all the wise arguments of "practical" men. Mr. RIVERS has consequently, for the last seven years, done more business in fruit trees than all the other English nurserymen besides. At length the Horticultural Society of London—the greatest institution of the kind in the world—has actually condescended to consider the subject, and after mature deliberation, agreed to send the conductor of their fruit and kitchen department to inspect the French gardens, and look into their system of management. Accordingly, Mr. ROBERT THOMPSON started on the 27th of February last, crossed the channel, and made a visit to the *Jardin des Plantes* and the *Gardens of the Luxembourg*. No man could have been sent better qualified to understand and appreciate what might come under his notice, consequently he has presented the Society with a very excellent and valuable report, which has been published in the Society's Journal. We have not space now for all of the report relative to fruit trees, but give the following extract, which being mostly on summer management, seems at this time seasonable:

The pyramidial trained pear trees are from 10 to 15 feet high, or more, having a regularly tapering outline from the base to the top, where they terminate in a single shoot.—The young plant is stopped according to its strength, and so as to furnish side branches. These are not in stages at uniform distances along the stem, on the contrary, almost every shoot which breaks out from the stem is allowed to grow; but the laterals produced on these are pinched in summer, and even such of the leading shoots as appears likely to become too strong for the others are stopped.

All the cultivators from whom I had an opportunity of obtaining their opinion on the subject, admitted the advantages of summer pinching; whilst some regretted that circumstances prevented them from practicing it to the extent they could wish. It is however well followed up by M. CAPPE. He pinches all the young shoots not required to form branches, when in a very young state, when they have scarcely pushed a finger's length, they are shortened to about an inch, or from that to an inch and a half. The portion left forms the basis of one or more fruit buds, bearing fruit in the following season, or a spur on which blossom buds are formed for bearing in the second season.

The advantages consequent on properly managing fruit trees with regard to summer pinching, are so important that attention to the subject cannot be too strongly urged. On the whole, it occasions little or no loss of time; for the confusion which would otherwise accrue is prevented; and this being the case, it is only doing that in summer which, if neglected, would occasion as much loss of time in winter. I am aware that many have more time to attend to trees in winter than in summer; but let the advantages of summer pinching be experienced, and doubtless, in most cases, due provision will be made for its performance. By the operation, the shoots necessary to be retained have the great advantage of more light and air than would be the case if crowded by a multiplicity of laterals, retained till the time of winter pruning, when they must obviously be cut off, either so close as to leave no bud to push, or shortened to within a few eyes of their bases. In the former case the branch is left naked; in the latter, when the tree is sufficiently vigorous, the eyes left generally push other shoots to be again cut back in winter; and thus crops of shoots are annually produced, instead of fruit, for many years, or until the tree approaches the state of old age.

The plan which M. CAPPE pursues succeeds admirably in the climate of Paris. The fruit on the pyramid pear trees under his management is stated, on competent authority, to have been last year exceedingly abundant, large and fine.—This season the trees are healthy and vigorous, and well furnished with blossom buds. It may be said that the generally dry, clear air of Paris, is very different from the cloudy and moist climate of many parts of Britain; the one being favorable for the formation of fruit buds, whilst the other favors the growth of wood and leaves; and therefore, circumstances being different, the same practice may not be equally proper for both. There are, moreover, instances of circumstances differing so widely as to require opposite methods of culture. But this does not hold good as regards summer pinching. In England the drawback is a dull atmosphere; the shoots and foliage want more air and light. Summer pinching affords this, inasmuch as it prevents the crowding and shading of wood and leaves necessary to be retained, by that which is superfluous; and therefore it must be considered of still greater utility in dull climates than in bright, more necessary in England than in France. It is generally admitted that "where nature does most, man does least;" but with regard to the management of fruit trees an exception must rest till summer pruning receives as much attention in England as it does in the Jardin des Plantes, and elsewhere in France.

Supposing the branches of a tree are properly thinned and regulated at the winter pruning, and that so far as they extend, their number is quite sufficient for the space they occupy; presuming, also, that the tree is in good health, a number of laterals are sure to spring. They are, of course, superfluous, and every one of them should be pinched as already mentioned. If the last year's shoot has been shortened at the winter pruning, then, besides the terminal one on the part left, one, two, or three next to it are almost sure to push; and these, M. CAPPE commences to check, by pinching, when about three inches in length, but those nearer the base of the shoot he allows to grow till they attain the length of six or eight inches before he shortens them. The terminal bud is of course allowed to go on for the prolongation of the branch. It frequently happens in France, and the liability will be still greater in the climate of England, that after a shoot is pinched back, the newly-formed buds on the part left will push a secondary shoot in the same season. When this is the case with those under the care of M. CAPPE, he also pinches these secondary shoots to an inch or an inch and a half from where they originate. They rarely push again; but if they do, their growths are again reduced as before.

The *winter pruning* of pyramid pear trees is almost reduced to a mechanical operation, when the summer management has been properly attended to. Keeping the tapering form in view it consists in cutting each shoot a little shorter than the one immediately below it, taking care to cut a bud situated on the side of the shoot towards that direction in which it would be most desirable the prolongation should proceed. Shoots that are too vigorous for the rest are not cut to a bud on the upper side, but to one situated below.

PROCEEDINGS OF THE SECOND CONGRESS OF FRUIT GROWERS.

The late, unseasonable period at which the report of these proceedings has appeared, and the near approach of another meeting of the Congress, render a minute review at this time, of little use. A list of the fruits adopted, or recommended for general cultivation, has already been published in the Farmer, so that we shall at present extract only a few items of general interest to fruit growers, at all seasons. Last season was highly unfavorable throughout a great portion of the country, for the preparation of pomological reports, consequently but few were presented, and these were rather meagre in their contents. We shall notice only a few of the most interesting points.

Pennsylvania.—The committee of this State, in their report, notice six native apples and twenty native pears of merit, and some of which are already known to be first rate. Among the pears we find the *Seckel*, *Tyson*, *Washington*, and *Petre*; all the rest are new or very little known. They state that the *Gray* and *White Doyenne*, both of which *here* can not be surpassed, are utterly worthless, unless in towns, where they still do well, "maturing fruit of beautiful appearance and excellent quality." The market raspberry of Philadelphia they state to be the "*Genesee*," our *spurious Red Antwerp*. The true *Antwerp* requires protection.

New York.—The only report from this State is by B. Hodge, Esq., of Buffalo, consisting of lists of about thirty apples, thirty pears, twenty cherries, fifteen plums, and twelve peaches, which he considers the best for Western New York. Mr. Hodge says that the *Brown Beurre* and *Bezy de la Motte*, (both of which are worthless in many localities,) are superior to three-fourths of the varieties in cultivation, very productive, and of good flavor. At Philadelphia the *Bezy de la Motte* is an outcast; and at best we consider it uncertain. The *Brown Beurre* does finely here.

Massachusetts.—The committee of this State simply reported lists of fruits to be placed upon both the approved and rejected lists. The approved sorts were all added to the recommended lists of the Congress. The rejected varieties consisted of about one hundred and twenty pears and ten apples, very few of which have ever been known or cultivated to any considerable extent.

Vermont.—The report from this State is made by C. Goodrich, Esq., of Burlington. He states that the *Ribston Pippin* and English apples generally flourish well, and also the Canada sorts *St. Lawrence*, *Pomme Gris*, and *Bourassa*. The *Esopus Spitzenburg* is apt to be spotted, and for that climate is not equal to the *Baldwin*, *Hubbardson Nonsuch*, *R. I. Greening*, and *Roxbury Russet*. Among pears, the *White Doyenne* is always fine and the trees healthy. *Dearborn's Seedling* is considered the best summer pear.

Connecticut.—The report from this State is quite comprehensive, treating of all the fruits cultivated there except apples, the report on which is deferred till another year. It appears that, excepting a few drawbacks, all sorts of fruit succeed there very well. The *Antwerp* raspberries are too tender, and gooseberries are liable to mildew. Peaches are so affected with the yellows, that in many cases they do not live to a bearing age; and if they bear at all, only for one or two seasons. Mr. Downing, the chairman of the general fruit committee, adds the following note to this part of the report:

"The explanation of the great prevalence of the *yellows* in Connecticut lies, we imagine, in the fact of the large introduction, of later years, of unhealthy trees bought indiscriminately in the markets of New York. A little attention to destroying every tree already affected, and introducing those of healthy constitution from other districts, will very soon result in the production of the finest fruit again, as has been abundantly proved in many parts of the State of New York."

Much attention seems to be given to the pear culture. A large number of seedlings have been originated in New Haven and neighboring towns, among which the *Calhoun*, *Howell*, *Citron*, *Dallas*, *Henrietta*, *Elizabeth*, &c., are spoken of as being nearly first rate. The "*White Doyenne*" is noted "not good." The committee remarks that, "Quince stocks for pears, especially for the garden, are coming very much into favor. The fruit appears to be fairer, handsomer, and better than when upon pear stocks. Pear trees with us appear to be entirely exempt from disease." Apricots are in all cases trained to some building, and have been observed on the north, south and east sides, doing well in each aspect.

Maine.—According to the report of the committee, the people of this State are but beginning to turn their attention, in a general way, to fruit culture. The apple, plum, and gooseberry, succeed well, the latter particularly—better than in any other State in the Union; the cool northern climate suits its constitution. The quince has only been known to succeed on the banks of the Kennebec. The peach proves a failure in the open ground.

Ohio.—The scarcity of fruit there, as elsewhere, last season, prevented the committee of this State from making a general report; but Mr. McIntosh of Cleveland, reports on his own responsibility a list of about twenty apples, fifteen pears, fourteen cherries, a dozen peaches, half a dozen plums, &c., that succeed well. With very few exceptions, they are all on the list recommended by the Congress.

Missouri.—The committee of this State report a very destructive prevalence of the pear blight—so much so, that they fear it will not leave a tree living in the country. Our best keeping apples, such as *Greening*, *Jonathan*, *Roxbury Russet*, &c., are there fall apples, owing to the difference of climate. The three best apples, one for each season, they state to be *Early Red Margaret*, *Rambo*, and *Rawle's Janet*. The best grape they have yet tested for wine, is the *Catawba*. Peaches do well. Plums are short lived. *Duke* and *Morello* cherries succeed well, but the free-growing sorts are short lived. The quince succeeds poorly.

Iowa.—In this new State horticulture is taking root vigorously; two Horticultural Societies are already founded. Apples are grown in perfection; peaches very uncertain; only the hardiest cherries

can be produced; small fruits do well; pears and other fruits not fairly or fully tested yet.

KENTUCKY.—L. YOUNG, Esq., chairman of the fruit committee of this State, communicated to the Convention that he had succeeded in preventing the ravages of the *curculio* on smooth-skinned fruits, and of the scaly aphis on the orange and oleander trees, by the use of lime. (For an account of this, see another part of this paper.)

DISTRICT OF COLUMBIA.—This report has reference mainly to the frequent destruction of the fruit crop in that region, by late spring frosts. These are avoided by planting in elevated situations. A number of observations and facts are given, showing the difference of temperature in frosty weather between the high and low situations—a difference amounting in some cases in the same grounds, to 14½ degrees. The committee also alludes to the benefits of pruning and manuring, and thinning the fruits by hand. The improvement is stated to be so great, that Mr. GEO. W. RIGGS, one of the committee, who pursues this system, obtained in 1848 two dollars per basket for his peaches, when the market was glutted and common productions selling at twenty-five to forty cents.

VIRGINIA.—The report from this State, owing to the backward condition of fruit culture there, is not of much importance; but it is stated that more attention is now being paid to these matters, and by and by we shall learn something of Virginia fruits and fruit growing capacities.

GEORGIA.—The report from this State speaks very favorably for the successful culture of fruit there. Apples, pears, peaches, apricots, nectarines, grapes, and figs, succeed well; cherries, only the *Dukes* and *Morellos*. The *Seckel* pear is said to attain twice or three times its usual size here; the *White Doyenne* is healthy and fine; *Beurre Diel* and a large number of the best pears fully sustain, and in some cases exceed, their northern character.

These reports, imperfect as they are, can not fail to give an enlarged idea of the varied and almost boundless capacities of our country for the culture of fruits. From "Maine to Georgia" they show that a new spirit of improvement is taking thorough hold of the public mind, and the country's vast resources are but beginning to unfold themselves. Every portion of the country is so connected with the other, by so many and such rapid modes of communication, that the variations of soil, climate, and production, are a great source of interest and advantage to all, instead of being a source of regret or disadvantage to any.

THE SEASON, CROPS, &c.

THE season here is about a week or perhaps ten days later than usual, as indicated by the maturity of fruits and opening of flowers. The first strawberries were exhibited on the 15th of June, by M. G. WARNER, Esq.—*Large Early Scarlet*. Green peas of the *Early Emperor* variety, and the first of the season, were exhibited by JNO. DONNELAN of Greece. *Bauman's May* cherries are ripe, and the June roses are just beginning to open now, June 17.

The fruit crop, excepting peaches, looks well. Apples, pears, plums, cherries, and all the small fruits will be abundant. Our peach crop was injured in precisely the same way as last year, by a long period, say two or three weeks, of rainy, cold, windy weather, at the time of blossoming and setting of the fruit. On the 17th of May the wind blew a perfect hurricane, and that alone injured the blossoms much; but the cold wet weather after that had a more fatal effect; the growth of the peach was wholly suspended, the leaves became swollen and curled in appearance, and dropped off, until old trees and badly pruned ones have all but died; young trees that have been kept tolerably well pruned or shortened in, have suffered less, and in most cases are bearing a middling crop. It seems as though our climate was undergoing a change, by which peach culture will be much more difficult than formerly, and a more thorough system of management absolutely necessary.

The *curculio* is engaged in its work of destruction with as much rapacity as ever, and some people say more. Apples and pears, it is said, are considerably injured by its attacks. The new remedies have been tried, viz: *whitewashing* and *dusting with powdered lime*. We hardly dare hope to hear of their success. Our impression is, that unless the whitewash is laid over the entire surface of the young fruit as nicely as it can be done with a paint brush, (and this is quite impracticable,) that it will fail to repel this insect; but the way is, in this most desperate case, to try anything that has even a *possibility* of success.

MUNSON SWEET AND NORTHERN SWEETING APPLES.

P. BARRY:—Since the publication, in the Farmer, of thy notice of the Northern Sweet, and remarks of the probable identity of that variety with the Munson Sweet, I have taken measures for testing the matter by an exchange of scions with friend STORRS of Marathon, so that by comparison of both kinds growing and bearing *together*, both in his grounds and mine, we may hope in a short time to ascertain whether they are the same kind or not. In the mean time, I would say that J. STORRS, as well as myself, is already pretty well satisfied that they *are distinct*. He thinks they are "unlike—first, *in the form of the fruit*—the Munson Sweet being more flattened and less ribbed; second, *in the color of the flesh*—the Munson Sweet being more yellowish; third, *in the season of maturity*—that of the Munson Sweet being from October till February, and sometimes till April." He also states that "the tree is a *strong* grower, the young wood making thick, heavy, rather dark colored, and short-jointed shoots;" whereas, my Northern Sweet, though a *good*, is not a *strong* grower, the young wood making shoots rather slender than "thick and heavy," and rather light than "dark colored," and by no means "short-jointed," but rather the reverse. Judging from the scions of the Munson Sweet received from friend STORRS, I have no hesitation in believing that they *are* distinct. In fact, there is no more similarity between them and scions of the Northern Sweet as grown here, than between the Baldwin and the Porter.

Should it prove, as I have no doubt it will, that these two sorts are distinct, and that the Munson Sweet is really as good a fruit as the other, then we shall have in the two all that can be desired in the class of sweet apples, from the latter part of the ninth month till into winter. J. BATTY.—*Union Nurseries, Keeseville, N. Y., 5th mo.*, 1850.

We are much obliged to our friend for his suggestions. As we have both kinds now growing, we shall soon be able to determine, as far as growth is concerned.—ED.

WHITEWASHING A REMEDY FOR THE CURCULIO.

A GENTLEMAN near Louisville, Ky., L. YOUNG, Esq., a prominent horticulturist of that vicinity, has communicated to the Massachusetts Horticultural Society details of experiments made in 1848 and 1849, with lime on smooth-skinned fruits, to prevent the ravages of the curculio. The experiments appear to have been carefully made, and the result induces Mr. YOUNG to believe that lime, if applied to apricots, nectarines, and plums, before they are stung with the curculio, and continued during the first four weeks of their growth, will prove a more efficacious remedy than anything yet discovered. He first dusted the powdered or slaked lime over the trees, and afterwards, for the purpose of coating the fruits more effectually, syringed them with water before applying the lime, which amounts to the same as whitewashing.

Experiments of the same nature have also been communicated to the Massachusetts Horticultural Society by M. H. SIMSON of Saxonville. He says, "I shovered the trees before the bud broke, with whitewash, with my hand engine, covering the branches *entirely*." If this does not answer the purpose, he says, "I shall syringe the fruit when little larger than a common white bean. My experiments have convinced me that this latter method is a *sure preventive*."

This *whitewashing* strikes us rather favorably. We have given it a fair trial, and trust we may be able to report favorably. A lady in our neighborhood has this season dusted her trees with *ashes* every morning; and she thinks she has thus far saved her fruit, in a great measure.

THE AMERICAN POMOLOGICAL CONGRESS.

THE next session of this body is to be held in Cincinnati at the same time of the great Fair of the "Ohio State Board of Agriculture." The season is too early for the north and east to make any very important contributions; but we have no doubt, from the spirit now manifested in regard to fruits and fruit trees through the West, that they will make a grand display, and bring together at the same time a vast fund of information respecting the peculiarities of their soil, climate, and productions.

It may be well enough in this connection, to remind fruit committees, fruit growers, and pomologists, that at the last session of the Congress in New York, the following resolution was adopted:

Resolved, That all Pomologists throughout the United States and the Canadas, be invited to forward to Mr. A. J. DOWNING of Newburgh, N. Y., at any or various times during the time elapsing from the adjournment of this Congress and two weeks previous to the assembling at Cincinnati, communications respecting varieties of fruits and fruit trees, shrubs, or vines, and of diseases appertaining thereto; such communications to be collated by Mr. DOWNING, and presented to the next Congress at its sitting in 1850. All such communications to be pre-paid.

THE STANWICK NECTARINE.—The first twenty-four trees of this famous fruit, originated in the Duke of Northumberland's garden, England, were sold in lots of one tree each, at auction, on the 15th of May last, for the benefit of the Gardeners' Benevolent Institution. Some sold as high as ten guineas, and none less than two. The 24 trees brought over $800. It is said to be as much superior to all other nectarines, as the Green Gage plum is to all other plums.

PEONIES.

WE have already (June 19,) taken note of twenty varieties of this brilliant class of plants, and the Chinese species are but begining to open. We shall take an early opportunity to notice some splendid new sorts. It is nearly a month since the earliest bloomed, and to all appearances the late ones will continue to bloom for three or four weeks to come. A collection of these superb, showy flowers, blooming through a period of two months, is a matter worthy of the attention of all who are seeking really good, and easily managed, flowering plants.

Mr. DONNELLAN, of Hanford's Landing, near this city, has raised within a few years, some very fine seedlings, hybrids of Whitlejii, and some of them surpassing in size, beauty, and fragrance, that famous old sort. Mr. DONNELLAN has named two *Major Williams and Olive Williams*. The first we have never seen, being away from home last season when it bloomed, but the last one, *Olive*, we saw yesterday, and it is really a superb flower. It is larger, fuller in the centre, quite as fragrant as the Whitlejii, and is distinctly marked with stains of deep red on several of the centre petals. We visited Mr. DONNELLAN's garden a day or two ago, and find that he has a large number of seedlings coming forward, from which he will no doubt obtain some valuable and novel varieties. We found his grounds greatly improved, his crops of vegetables abundant and fine, and everything prosperous. No man is more worthy of success.

PORTRAITS OF "EMINENT HORTICULTURISTS."

DR. KENNICOTT, of Illinois, who is now well known to the Horticultural world as one of the most prominent and useful nurserymen and pomologists of the West, has been furnishing, for the "Prairie Farmer," a series of "pen and ink sketches" of the men who composed the Syracuse Pomological Convention. The subjects noticed have no reason to complain, unless it be that the Doctor, like some other *artists*, has colored a *little too high*—though we do not profess to be a critic in such matters.—The Doctor is the first public writer who has condescended to notice in this way, such *unassuming* individuals. "Eminent men" of all other professions, from the Parson to the pick-pocket, are duly noticed by the press when they happen to assemble in Convention; but up to this time Horticulturists have passed unnoticed. We begin to think they are really growing into importance, and take note of the fact with no small degree of satisfaction.

NORTHERN SPY APPLES.

MR. BARRY—*Dear Sir:* A barrel of Northern Spy apples were brought into market this week, which opened very fine. Some I have eaten of them were as good as I ever saw—perfectly fresh and juicy. These sent you were the last of the barrel, and I fear they will taste of the barrel.

Accept, from your friend, J. H. WATTS.

Rochester, June 7, 1850.

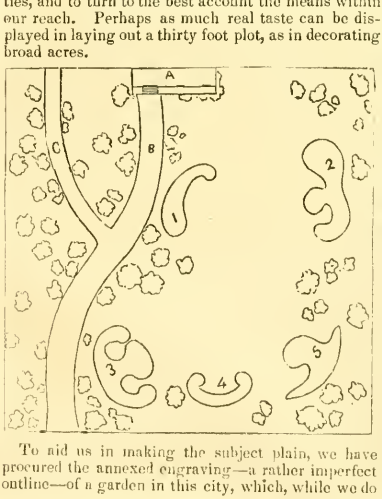
The apples sent us with the above note, were in good condition, sound and juicy, and were really a luxury at this season of the year. Many of our citizens had an opportunity of testing their good qualities.—ED.

Ladies' Department.

FLOWER GARDENS

MESSRS. EDITORS:—Although late in the season, I wish to ask a little advice of you about fixing my flower garden—the size of it is about fifteen by twenty feet. I read with much pleasure your "Ladies Department," in the May number, and your directions to make a garden; but then it didn't seem to suit my little patch, where everything has to occupy as small a space as it possibly can. Now you know that there are hundreds and thousands in our cities and large towns, that have to content themselves with just so small a space—and some even yet smaller—where the *effect* is mostly produced by the appearance of the flowers themselves, rather than by any peculiar formation of the beds and walks, and the romantic arrangement of the shrubbery. My yard contains a large oval bed in the center, occupied mostly by perennials, around which is a walk, and then a border, such as is naturally left by cutting out an oval. The border contains all the shrubbery and a few annuals, which occupy the vacant spaces. This is as good an arrangement as I know how to make; but, Messrs. Editors, if you will be so kind as to offer a few hints for further improvements, they will be gratefully received and appreciated by MIGNONETTE.—*Rochester, June*, 1850.

Building lots in our smaller cities are generally thirty to thirty-three feet front, seldom we believe smaller, and often much larger. Persons designing to build, often purchase a lot and a half, or two lots, thus giving them a front of from forty-five to sixty feet. In villages, and in the suburbs of cities, lots are seldom less than a quarter of an acre. When building on a small lot of forty or sixty feet width, the house should be set back the same distance from the front line as the width of the lot, if the depth of the lot will admit of it: thus, if the lot is thirty feet wide, you have a front yard or lawn thirty feet square; or, if sixty feet wide, a lawn of sixty feet. The latter size is large enough to give a very pretty lawn and an abundance of room for flower-beds and shrubbery; and even a square of thirty or forty feet may be made pleasing and beautiful. It is the province of correct taste to overcome natural difficulties, and to turn to the best account the means within our reach. Perhaps as much real taste can be displayed in laying out a thirty foot plot, as in decorating broad acres.



To aid us in making the subject plain, we have procured the annexed engraving—a rather imperfect outline—of a garden in this city, which, while we do not present it as a model, we consider laid out with pretty good taste. The lot is sixty feet wide, and the house, a neat little cottage, is sixty feet from the street, making the lawn, of course, sixty feet square. A, is the house; B, the main walk from the garden gate to front door; C, road leading from main walk to back door. The whole is covered with grass, except the walks, which are gravelled. Numerous flowering shrubs are scattered in little groups over the lawn, (the grouping of which the engraver has not done justice to,) and a few shade trees are planted near the outer edges. Fig. 1 is a bed of ever-blooming roses, nicely cut out in the grass; fig. 2, a bed of petunias; fig. 3, verbenas; fig. 4, scarlet geraniums; fig. 5, phloxes. Perhaps with a piece of ground of even less than thirty feet, something of the same form might be retained, with smaller beds or less in number. The form of these beds might be varied to suit taste and circumstances, always remembering to use curved lines instead of the old-fashioned sharp angles.

It will be noticed that the garden gate is near the corner of the lot. This makes an apparent necessity for a winding walk. If the front gate was near the center of the lot, and opposite the front door, a winding walk would not appear natural and graceful, —it would look too much like over-strained effort—a forced attempt at the graceful.

In so small a space as "Mignonette" has at command, truly little can be done for the picturesque; but still we think a nicely curved walk, with such a bed as our correspondent describes, cut out of a well kept carpet of grass, with a few shrubs planted in little groups, would be much cleaner in appearance and prettier every way, from the first shooting of the blades of grass in spring, until covered by the snows of winter.

TO DESTROY INSECTS ON HOUSE PLANTS, &c.

EDS. GEN. FARMER: I write, not so much to claim the "Floral Rake," (to which, however, I have a *fair* title, by the terms of your offer,) as to obtain information in regard to the best mode of destroying insects on parlor plants. I have reference more particularly to the minute red spider. My choicest plants have been totally destroyed by this pest, which feeds upon the foliage and juices, and resists all the destructive agents I have been able to employ. They thrive upon soap-suds, grow fat upon tobacco, and will not stay killed by the summary process of squeezing to death. What shall I do next?

As not only the flower-stand and the garden, but the poultry-yard, likewise, claims a share of my attention, I should like to know how to classify some new pets. I procured, from the neighborhood of Boston, the eggs of one of the large breeds of fowls, the Cochin China, as I supposed. The eggs were not "mahogany," but salmon color. The chickens, now two weeks old, are very light colored, thicker in the neck than ordinary, larger, though not conspicuously so, than others of the same age, and are feathered on the outside of the legs. Are they Shanghaes? I shall be delighted if you answer in the affirmative. M. A. F.—*Northampton, N. Y., June*, 1850.

The red spider is certainly a "pest," but when properly dealt with, can be made to surrender very promptly. While tobacco-water easily destroys the *green louse*, or *aphis*, the "spider," if he does not "*grow fat*" upon it, like some other creatures, shows no distike to "*the weed*." The best way to destroy them is to burn a little sulphur under the plant. Your enemy will soon smell brimstone and come down.

The eggs of the Cochin China fowl, although called mahogany, are more of a salmon color. The

eggs of the Shanghae are of a lighter color, though they may be very properly called a salmon. Your chickens are probably Shanghaes. The feathered leg is the most marked distinction between the Shanghae and Cochin China.

FAIR AND FLOWERS IN SENECA COUNTY.

The *Agricultural* Fair of Seneca County is to held at Ovid, on the 26th and 27th of September next. H. D. Didama, the Secretary, has furnished us a list of premiums. But what will interest the ladies more particularly, is the *special* premiums offered on flowers. There are some true lovers of the beautiful, in Seneca County. They not only possess the taste, but the zeal and activity that can not fail to accomplish good. It will be seen by the extract we give from the list of "*extra premiums*," that a "*floral fund*" is to be raised by contribution, and very liberal prizes awarded. Had not our Seneca County friends been quite so exclusive, we should like to have taken a few shares of that floral stock. However, we shall endeavor to see for ourselves the fair and flowers of Seneca County, in September.

1st. For the greatest variety, and choicest specimens of flowers, grown and cultivated from seed sown or planted in Seneca County, by any young unmarried lady, not over twenty-five, nor under sixteen years of age, Loudon's Flower garden of Ornamental Annuals—value $12.

2d. For the second greatest variety, and choicest specimens of flowers, under the same regulations, Lindley's Vegetable Kingdom, or the structure and uses of Plants, with illustrations—value $8.

3d. For the third grentest variety and choicest specimens of flowers, under the same regulations, Loudon's Gardening for Ladies, illustrated—value $2; and Popular Flowers, their cultivation and treatment, in all seasons, plates—$2.

The funds for procuring the prizes shall be contributed by gentlemen resident in Seneca County, in sums not less than one dollar each, and expressly for the above purpose; and the contributors to this "floral fund," shall be entitled to *premiums* under the following terms and regulations:

1st. For the best essay on "The influences of rural life, and pursuits upon the human mind."

The successful competitor shall be allowed to present the premium awarded for the greatest variety of flowers, and to receive from the successful lady a boquet of the choice and rare flowers cultivated by her.

2d. For the best essay on "The relation of vegetation to seasons, or the periods of growth and the periods of rest."

The successful competitor shall be allowed to present the premium awarded for the second greatest variety of flowers, and to receive from the successful lady a boquet of the choice and rare flowers cultivated by her.

3d. For the best essay "On the colors and odors of flowers."

The successful competitor shall be allowed to present the premium awarded for the third greatest variety of flowers, and to receive from the successful lady a boquet of the choice and rare flowers cultivated by her.

The committee appointed by the Society as Judges on fruits, flowers, and vegetables, shall decide upon the merits of the flowers presented under this arrangement, and shall award the premiums in their discretion.

A committee shall be appointed by the officers of the Society to examine and decide upon the merits of the several essays, and adjudge the premiums in their discretion.

All essays shall be transmitted to the President of the Society, on or before the first day of September next, signed with a fictitious name; and the writer shall enclose his proper name in an envelope, sealed and superscribed with the fictitious name, which envelope shall not be opened, unless the party presenting it proves to be the successful competitor.

All essays not entitled to a premium shall be returned to the writers as they may direct.

All persons disposed to contribute to this fund, will please to transmit their several contributions to John D. Coe, Esq., Treasurer, at Romulusville.

Youths' Department.

THE ANALOGY BETWEEN ANIMAL AND VEGETABLE LIFE.—No. 1.

The elementary materials of animal and vegetable matter are precisely identical; the organs essential to the growth and reproduction of each are similar, and they are nourished or destroyed by the same agencies. That internal, invisible power, which we call the "principle of life," forms a clear distinction and boundary between organized, or living bodies, and all inorganic, or mineral substances, in the uniuverse. But between animals and plants, no such great distinguishing trait exists. The *cabbage* is no less alive than the *cow* that feeds upon it. The superiority of the latter over the former consists chiefly in this—the existence of mind, intellect, brain, and nerves; of which the plant is deficient. In their more perfect forms, the distinction between animal and vegetable life is obvious enough—for instance, no one would be likely to confound a *horse chestnut* with a *chestnut horse;* but as we approach the extremities of the animal and vegetable kingdoms, the distinction is not so easy. There are many natural productions, such as *sponges* and some *fungi*, which were originally considered minerals, afterwards vegetables, and are now universally regarded as belonging to the animal kingdom. Plants are aptly termed the connecting link between the mineral and the animal. It is not unlikely that they existed for ages on this planet before animals appeared. From the crumbling *debris* of the granite rock, moistened by the rain, springs the moss which nourishes, or supplies with organized food, the moose and the deer. That subtle essence which we term *vitality*, or the *living principle*, is a curious subject for study and research. To endeavor to analyse or investigate it, seems penetrating into the very *arcana* of nature. In what part of the plant it chiefly exists, or to what quarter it retires during the winter, we know not; and we are just as ignorant in regard to animal life. In both it operates towards every point—it exists and resides in the whole; and the proof of its existence is drawn from its resisting those putrefactive or chemical agencies which instantly begin to operate when it becomes extinct. While life exists, the animal or vegetable thrives, and increases in bulk; the tree puts forth annually a new progeny of buds, and becomes clothed in a beautiful foliage of lungs (for every leaf is a distinct lung,) for respiration, thus absorbing from the air through its leaves, and from the earth by its roots, the food necessary for its growth and perfection; while from its decay, as from the death of animals, there is formed in rich abundance the means of new births, new buds, and new harvests.

Such is the simple, but beautiful circle of nature. That which lives, flourishes, decays, and dies, is not lost—the great principle of life only changes its form, and the destruction of one generation of plants and animals, is but the necessary preparation to the support and existence of the next. F.

To the man of *thought*, not only the elaborate works of some great author, but the simplest sentence, furnishes abundance of material. The works of nature, the starry heavens, the mighty cataract, the whirlwind and the storm, and even the woodland flower, calls forth the most elevated sentiments.

Editor's Table.

DESTRUCTIVE INSECTS.—We should judge from our correspondence and the many applications we have for the best means of destroying *cut-worms*, that these insects were very numerous and destrctive in some sections, the present season.

Cut-worm is the name applied to any caterpillar dwelling in the earth, which eats or cuts away young plants of cabbage, corn, beans, &c. They are naked, of a greasy appearance, and are only seen above ground before sunrise or in cloudy weather. They abound usually in lands which have remained for a long time in grass or clover. The *wire-worm* is probably one of the most destructive and the most difficult to get rid of, of the class. It derives its name from its slender form and hardiness. It is the grub of a small beetle, and lives in the larva state nearly five years, supporting itself upon the roots of wheat, rye, oats, and grass. The most successful mode of destroying it, has been by offering more tempting food, as laying clover covered by a stone near the plants they would be likely to destroy, examining and destroying the insects that will be collected to feed on the clover. In England they stuck slices of potato upon skewers, and bury them near the seeds sown, the worms collect upon them, and are destroyed in great numbers.

White Grub is the name generally given to the grub of the Cockchafer, or May-bug. The eggs of this devastator are white. They are deposited in the ground, where they soon change into a soft, whitish grub, with a red head, and about an inch and a half long. In this state it continues four years, during which time it committs most destructive ravages on the roots of grass and plants. Frequent plowing and hoeing annoys them. Salt and lime we have found exceedingly beneficial, though we never tried it on a large scale; and if much troubled with the *wire-worm* or the *grub*, we should certainly sow arsenic on the land, as recommended by JOHN PARK of Gates. We should like to have some of our farmers try it, and give us and our readers the benefit of their experience.

INTERESTING EXPERIMENT.—The May number of the London Farmer's Magazine gives an account of an experiment made near Glasgow, in the application of 84 pounds of saltpetre to an acre of wheat. One half of the salt was sown the 17th of April and the other the 6th of May. Unmanured wheat weighed 2552 pounds; straw, 3143 pounds. Manured wheat, 3068 pounds; straw, 4500 pounds. Difference in weight of wheat, 516 pounds; in straw, 1352 pounds.

The above figures demonstrate the interesting fact, that each pound of the salt named gave a gain of six pounds of wheat and sixteen of straw — twenty-two in all.

NORTON'S ELEMENTS OF SCIENTIFIC AGRICULTURE.—This is the work to which was awarded the premium of $100 by the N. Y. State Ag. Society. It is a small book of some 200 pages, but a great one, in its best sense, containing the elements of scientific agriculture. Its language is plain, its illustrations simple. It is a work for the farmer, and the farmer should read it, and teach it to his children. By JOHN P. NORTON, Professor of Scientific Agriculture in Yale College. Published at Albany, N. Y., by ERASTUS H. PEASE & Co. Price 50 cents.

THE POULTRY YARD.—This is the title of at *least* one of the best books ever published in this country on the subject of Poultry. Its author is Dr. J. C. BENNETT, of Plymouth, mass. Dr. B. has done more than any other man to create the interest now felt on the subject of Poultry, and he has written a good book. Published at Boston by PHILLIPS, SAMPSON, & Co. Price 75 cents.

MOWING MACHINE.—Those who have addressed us on the subject of Mowing Machines, are informed that G. W. ALLEN & Co., manufacture "Ketchum's Patent Mowing Machine," at Buffalo, N. Y. This machine is a good one. Price $100.

THE citizens of Lockport in this state, are about to establish a Horticultural Society. This is right. Our friends in Lockport could not have sustained much longer their reputation for taste and inteligence without such a society.

SEVERAL advertisements, and an engraving of Seymour & Morgan's Reaper, to accompany their advertisement, we are compelled to omit for want of room.

WE are receiving from FOWLERS & WELLS, N. Y., a number of useful publications, which we may give further notice hereafter.

THE SOUTHERN PLANTER is the name of a new agricultural paper just commenced at Glasgow, Ky. It contains some very good matter, but is so poorly printed as to be scarcely readable.

McCORMICK'S PATENT VIRGINIA REAPER.

THE undersigned respectfully informs the farmers of the wheat-growing portions of New York, New Jersey, Delaware, Pennsylvania and Maryland, that he has made arrangements for supplying them with his Reaper for the harvest of 1850, from his manufactory at Chicago, Ill., and refers them to the manufacturers, (C. H. McCormick & Co.) or to Hon. Thos. J. Paterson, of Rochester, N. Y., which is to be the general depot for the sale and delivery in Western New York. Mr. Paterson, who has recently traveled through several of the Western States and has become well acquainted with the character of the Reaper there, as their general agent to attend to the sale and delivery of the Machines, has appointed agents in the different counties, to effect sales of the same.

The undersigned deems it unnecessary through the press, to say much in offering his Reaper to the public.

Perhaps the *best evidence* of the value of the undersigned's Reaper, is the unparalleled demand for it over all other Machines, where best known—near 1,500 of which were manufactured and sold at Chicago the last year, about 100 having been sold in the West for the harvest of 1846, 450 for that of 1847, and 750 for that of 1848; and 1,600 to 2,000 are being manufactured at that place for the next harvest. And it may be added, that at the New York State Agricultural Fair, held at Auburn, for the year 1847, the first premium of the Society was awarded to this Reaper; that the Diploma of the Society with a strong recommendation to the confidence and patronage of the Farming community, was awarded to it at the last State Fair at Syracuse—a *Chicago* Reaper being present, where no premium was awarded to the Auburn Machine; and that the Gold Medal of the "American Institute" was awarded to the same machine in October last.

It has not been manufactured heretofore at Brockport, New York, with the *the recent and very great improvements* that have been made in it at Chicago.

One of the Machines, as lately improved, cut, in the last harvest, 300 acres, without a shilling's repair, and without sharpening or changing the sickle, and, without clogging in either green or wet grass, grain or weeds. Two of the Chicago Reapers were sent to the Genesee country for the last harvest, one of which was sold to Mr. Martin, of Victor, Ontario Co., who was so well pleased with it that he paid for it immediately after harvest, without waiting until December, the time upon which it was sold. The other was sold to Mr. Case, of Fowlerville, Livingston Co.—where several other Machines, manfactured at that place, without the latest improvements, were sold—and found so much superior to all other Machines, that this gave general satisfaction, to the purchasers of which he would refer.

The Reaper will be delivered in Buffalo or Rochester—$30 payable on delivery, and $80 on the 1st of December thereafter, with interest; or for $105, cash, which is $10 less than the price at Chicago.

It will be warranted to cut two acres of wheat or other small grain, in an hour, on tolerably smooth ground, with a reasonable deduction for decreased speed when the ground is uneven or hilly; and to save three-fourths of the grain lost by cradling; and it will be warranted to be well made, of good material and durable. To be returned and the advance money refunded, if, on trial by the purchaser, it fails to perform as warranted.

The undersigned need only add that, encouraged as he is by past success, and prepared as he is at Chicago with the best material and the best machinery and workmanship that can be used in the manufacture of machinery, he is now determined at once to introduce his Reaper in the territory above mentioned as suited to its operation, and on terms that *cannot fail* to give satisfaction. On those terms no one wanting a Reaper need wait "to see one operate," as no trial made by any one, and *only seen*, could be so satisfactory as the conditional one to be made by himself, as proposed. He is not asked to take any responsibility in the matter, as, by a calculation which any body can make, if the Reaper performs as warranted, it does more than pay for itself in every harvest. The undersigned has succeeded with his Reaper in superceding, to a great extent, all other means of harvesting in the West; and he hopes to merit the same success in other wheat-growing portions of the country.

In the last number of this paper, I gave notice that I had commenced a suit against Seymour & Morgan, of Brockport, for a palpable infringement of my patent, in their Machine (inferior as it is in many respects to my Reaper) got up for the purpose of evading my patent and that all who purchase it would become equally liable. Also, that purchasers of the Virginia Reaper, made at Brockport, to be used in any other than Monroe and Orleans counties, would make themselves liable—that the manufacturers did not claim the right to dispose of them to be used any where else.

The foregoing, with the following testimonials, taken in connection with the fact that you may cut a whole field, if desirable, without binding a single bundle, with my Reaper, and that it will cut green and wet grain, grass, or weeds, without choking, will, I trust, satisfy any one wanting a Machine, of the superiority of mine.

C. H. McCORMICK.

Rochester, June 22, 1850.

I found in the West that the farmers were of the opinion that the Reaper, fully employed, would more than pay for itself in a single harvest—that the expense of cutting wheat with it, and putting it into the stack, was from 60 to 70 cts. per acre, which the saving of grain scattered by the ordinary modes of cutting, nearly, if not quite, paid. Any one wanting a Reaper, who shall not be called upon by any of the agents authorized to sell them, can have one forwarded to any wheat County in this State, or to Erie County, Pennsylvania, if ordered of me, at this place, in season, by letter or otherwise, accompanied with a satisfactory reference.

THOS. J. PATERSON.

Rochester, June 22, 1850.

Letter of A. P. Dickey, Esq., brother-in-law to the Hon. George W. Paterson, Lieutenant Governor of New York, to whom reference may be had.

Messrs. McCormick, Ogden & Co., Chicago, Ill.—Gents:—I write to inform you in relation to the operation of your Reaper in Wisconsin, during the past harvest.

I sold 190 of McCormick's Improved Virginia Reapers in Wisconsin, during the spring and summer, on trial, or conditional warrantees, and now have the pleasure to inform you that they *all* have given entire satisfaction and fulfilled the guarantee given—The like circumstance is not known in any other farming implement sold in the Western States.

Every Reaper has done first rate business, and many farmers have told me on my calling on them, for the notes for the last payments during the harvest, that their Reapers had gone far beyond their expectations, especially when the hard storms had lodged the grain, and all other Machines for cutting were *useless*, —such as Esterly's Harvester, and Hussey's Reaper.

There were seven of Esterly's Harvesters in operation, for a few days, in Wisconsin at the commencement of harvest, and only one of them that succeeded in doing any business, while the other six were laid aside, and the farmers who had purchased them, hired your Improved Reaper to cut their grain, or were obliged to cut it with the cradle; and Hussey's Reaper could only cut from 7 to 8 acres per day by carrying the swath, as it has no reel. Hussey's Reaper cannot work in lodged grain, or even leaning grain, unless the Reaper be moving in an opposite direction from that to which the grain leans, while your Improved Reaper, with the Reel attached, can cut from 15 to 20 acres per day in the most perfect manner. It has cut the lodged and leaning grain as well as that which stood up fair, and has saved from one to two bushels of wheat per acre, that would otherwise not get with the ordinary way of cutting grain. This, together with the easy draught of the Machine, render it the best Machine for cutting grain ever introduced in this western country. The Reaper can be relied on in *every emergency*. The cutting is perfect, whether the grain be stout or light. I have seen them work under all of these circumstances during the past harvest, and know the Reapers to have done good business, and in no case has it disappointed a farmer during this harvest.

I sold six Reapers to farmers who had purchased, tried, and laid aside, Hussey's Reaper, two or three of these men informed me that they had saved the cost of your Reaper in repairs and horse flesh, which would have been required, had they again attempted to get through their harvest this season with Hussey's Reaper—to say nothing of the great advantage your Reaper was in taking off to the side, and not requiring so much help to accomplish their harvest.

I could have procured any amount of certificates setting forth the good qualities of your Reaper, and its durability; but knowing its unprecedented success in Wisconsin, I thought such certificates would be entirely unnecessary to further the sales for next harvest. Yours, respectfully, A. P. DICKEY.

Racine, August 15, 1849.

Letter of Hon. W. B. Ogden, late Mayor of Chicago.

This may certify that I have been acquainted with McCormick's Patent Virginia Reaper for three or four years past, and since its introduction, to any considerable extent, into the prairie States of the West. I was interested in the manufacture of 500 of them at the city of Chicago for the harvest of 1848, and of 1500 of them for the harvest of 1849. The demand greatly exceeded the supply in 1848, and was fully equal to it in 1849.

In August last I disposed of my entire interest in connection with said machines, and have now no interest or connection with them, whatever.

McCormick's Reaper, as improved and now manufactured, works perfectly, and performs all the patentee claims for it. It is peculiarly adapted to the wants of every grain-growing farmer whose lands are suited to its use, as any ordinary land free from too many stumps or large loose stones is, and it is a great labor and grain-saving Machine, as has been abundantly proved by the sale and successful use, under strong warrantees, of over 2500 of them in the North-Western States, within the last three years.

Several other harvesting Machines have been exhibited and tried, meanwhile, at the West, and often at the outset with good show of success, but as yet none have been found as free from serious practical difficulties, when thoroughly set to work in the field, as McCormick's; and many have been abandoned. None other than McCormick's has been extensively introduced there.

Mr. McCormick has exhibited to me the letters of A. P. Dickey, Esq., of Wisconsin, Isaac Pool, of Illinois, and S. S. Phelps & Co., of Oquawka, Illinois, which letters, with others, he advises me he proposes to submit to the committee of the American Institute upon agricultural implements, and it gives me pleasure to say that the statements made in the letters of Messrs. Dickey, Pool, and Phelps & Co., are entirely reliable and entitled to full credit.

W. B. OGDEN, of Chicago, Ill.

New York, October 3, 1849.

TO FARMERS AND GARDENERS!
SEYMOUR'S GRAIN DRILL.

THIS DRILL, which was patented in September, 1849, is one of the latest improvements in Drilling Machines, and better adapted to the wants of the farmer than any other now before the public. It sows or plants all kinds of grain and seeds, from peas, beans, corn and cotton, to the smallest seeds—and combines the advantages of sowing either broad-cast or in drills. It is an excellent Broad Cast Sowing Machine, when the drill teeth and conducting tubes, (which are very conveniently detached,) are taken off.

Many farmers soak their wheat in brine or other liquid, (in which the good seed sinks while the foul floats off,) for the double purpose of seperating it from foul seed and rolling it in lime, plaster, or other fertilizing substances. This has the advantage over other drills, inasmuch as it performs well in sowing grain thus prepared, while *they* utterly fail in the attempt. Wet wheat, oats or white caps, which so readily clog other machines, are not serious obstacles in this. Those who wish to soak their seed for any purpose whatever, or mix with it any fine fertilizers, such as lime, plaster, bone dust, &c., and also those who prefer threshing with a flail, to avoid the injury done to the seed by threshing with a machine, will find *this the Drill for them.*

When drilling with this Machine, the grain falls from the grain-box to the tubes, (a space of six inches,) in full view of the person attending it, so that in passing over the field, he may be constantly assured that the seed is deposited as he designs. The teeth are all raised from the ground at once, with one lever, and the seed all stopped at once; or one may be raised at a time, and the seed it discharges stopped. The convenience and simplicity with which this Machine is managed is unparalleled. No necessary expense or pains have been spared in making it as desirable, in all respects, as possible; and after *many* and the most *satisfactory experiments*—not in the winter on the floor of the machine shop merely, but *in seeding time, with the farmer*, under various circumstances, on rough and smooth, hilly and level, stony and clear land—the inventor (who was bred a practical farmer, and ought to know something of the farmer's wants) feels assured that the Machine is not only established on correct principles, but is got up in that simple and permaneat style and good taste which cannot fail to suit all.

The first premium for a Grain Drill, capable of depositing fine manures with the grain, was awarded to this Machine at the Fair of the New York State Agricultural Society, held at Syracuse, in September, 1849. It also received the first premium at the Michigan State Fair, in 1849, and the first premium of the Ontario County Society.

Seymour's Garden Drill.

Is a small Machine of suitable size to be drawn by a man. It is got up on the principles of the Grain Drill, and will plant peas, beans, beets, and even carrots, or any kind of garden seeds mixed with plaster, &c. It is very convenient for large gardeners, as it will sow five rows at once, as readily as the Garden Drill, in common use will sow one, and is much less liable to clog.

Seymour's Broad Cast Sowing Machine supplied to order.

RECOMMENDATIONS

A few certificates from the most reliable sources are subjoined:

Mr Seymour—Sir: With the Grain Drill which I purchased from you this season, my son a lad 16 years of age has put in about 50 acres of wheat for me, and with some of it, about a bushel and a half per acre of ashes and hen dung was mixed, and all to my entire satisfaction. He has also drilled in about 100 acres for others, and I believe all are well pleased with the Machine, and I must say I prefer it to any I have seen. ISA R. PECK.

East Bloomfield Sept. 17, 1849.

Mr P. Seymour—Dear Sir: You ask for my opinion with regard to the Wheat Drill I purchased of you this fall. Without specifying particulars, I would express my unqualified approbation of it over that of any other which I have seen in use. I am somewhat enthusiastic on the subject of drilling, believing it will soon be universally adopted by farmers. I would not willingly disparage the patents of other individuals.

In haste, with great respect, yours, &c.,
CALVIN SPERRY

Gates, Sept 10, 1849.

This may certify that I have used Mr. Pierpont Seymour's Wheat Drill, and I consider it just the thing for putting in wheat. WM. OTIS

Rochester, Sept 7, 1849.

Lancaster County, Pa

We, the undersigned, have seen and examined the Seed Drill of Pierpont Seymour, of New York State, in all its operations, and verily believe it to be the best we have ever seen, and will, we have no doubt, supersede all others now in use.

EDWARD LAMMEY, FREDERICK ZARRACHI,
JOHN HUGHES, DAVID ATKINS,
ROBERT W. HUDDERS, Mach., ELI ROBERTS,
WM H. MILTHOUSE, JAMES H. NORRIS

Chester County

We have also seen the operation of the above Machine, and fully concur in the utility of the Machine, and will, we have no doubt supersede all other Machines now before the public.

HENRY A. JOHNSON, REUBEN CHALFANT,
ENOCH L. TAYLOR, JOHN S. CARLILE,
CLOUD CHALFANT, EUCLIDS P. SHELTON.
JOHN M. KELTON.

Mr. Seymour—Sir: I have used the Grain Drill I purchased of you to drill spring wheat. A part of the field I sowed broad cast. The appearance of the crop is now in favor of the part put in with the Drill. I have also used the Drill to sow field beets, and am satisfied that the seed can be distributed as evenly and expeditiously as any grain, which is at the rate of about ten acres a day. The Machine, by taking off the drill teeth, makes a good Broad Cast Sowing Machine, which is valuable for sowing plaster, clover seed, and any grain a person wishes to sow broad cast. I believe the Drill and Broad Cast Sowing Machine will soon come into general use. HARLOW MUNSON

East Bloomfield, June 1, 1849.

I have examined certain certificates in the the hands of Mr. Seymour, in favor of his Grain Drill, one of them from Ira R. Peck. I am personally acquainted with Mr. Peck. His statement can be fully relied on. The other certificates, I have no doubt, are from equally reliable sources. I have myself heard the Drill spoken of in high terms of commendation, by farmers who have used it; and have also seen it in operation, and believe it to be at least one of the very best in use. I was present at the State Fair in September last where the first premium was awarded to Mr. Seymour for his Drill. I have the confidence that any statement which Mr. Seymour would be likely to make in regard to his Drill, would be strictly true. ISAAC W. MITCHELL,
East Bloomfield, Feb. 5 1850. Justice of the Peace

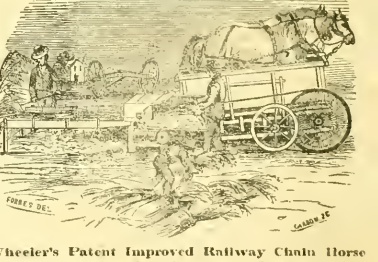
☞ Many other certificates of the same import have been received from many persons in this and other States, which are not deemed necessary to specify.

The subscriber tenders his thanks to his former friends and customers, and invites them and all others desiring anything of the kind, to examine the above described Machines.

The right of either of the above Machines can be had on such terms as to make it an object for manufacturers or dealers to purchase.

Price of Drill with 9 teeth.	$80
" " " 7 "	$70
" Garden Drill.	$50
" Broad Cast Sowing Machine.	$45

PIERPONT SEYMOUR.
East Bloomfield, Ontario County, N. Y., 1850. [7-1t]



Wheeler's Patent Improved Railway Chain Horse Power and Overshot Thresher and Seperator.

THE subscribers would respectfully say to the farmers and others of Western New York, that they have been appointed the General Agents, for the sale of the above Machines, by the manufacturers, Messrs. Wheeler, Mellick & Co., of Albany, and that they are prepared to fill all orders at Albany prices—adding only transportation.

These Machines are favorably known wherever they have been used or exhibited. They have taken premiums at many different State and County Fairs held in Massachusetts, New York, New Jersey, Pennsylvania, Ohio, and also in Canada, never having competed for premiums without success and flattering commendations.

As many as 2,000 of them are now in use, of which over 500 were sold the past season.

The accompanying cut gives a view of a two horse Machine at work, with the hands necessary to attend it. It will thresh from 125 to 200 bushels of wheat or twice the quantity of oats per day. The one horse or single Machines, thresh rather more than half as fast as the double ones. [For further particulars see advertisements of Wheeler, Mellick & Co., in previous numbers of the Genesee Farmer.]

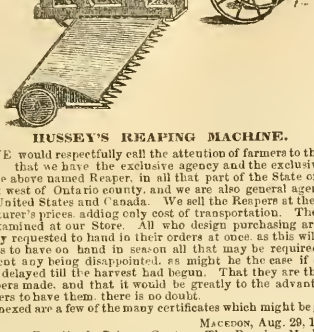
All Machines warranted to work well, or they may be returned within three months and the money refunded.

RAPALLIE & BRIGGS,
July, 1850. 65 Buffalo st., Rochester

Harvest Tools.

A great variety of Scythes and Snaths, Grain Cradles, Hand and Horse Rakes, Hay Forks, &c.

A. B. ALLEN & CO.,
[7-1t] 189 and 191 Water st., New York



HUSSEY'S REAPING MACHINE.

WE would respectfully call the attention of farmers to the fact that we have the exclusive agency and the exclusive sale of the above named Reaper, in all that part of the State of New York west of Ontario county, and we are also general agents for the United States and Canada. We sell the Reapers at the Manufacturer's prices, adding only cost of transportation. They can be examined at our Store. All who design purchasing are earnestly requested to hand in their orders at once, as this will enable us to have on hand in season all that may be required, and prevent any being disappointed, as might be the case if orders were delayed till the harvest had begun. That they are the best Reapers made, and that it would be greatly to the advantage of farmers to have them, there is no doubt.

Annexed are a few of the many certificates which might be given:

MACEDON, Aug. 29, 1849.

Messrs. Rapalje & Briggs—Gents:—The Reaping Machine I bought of you, made by Messrs. Eldred & Hussey, at Auburn, has been thoroughly tested by me the present harvest, and I am happy to say has exceeded my most sanguine expectations. I have cut with it 125 acres of wheat, besides my own crop, making some 200 acres of oats and wheat; and I can confidently recommend it to my brother farmers as just the machine they want. I have cut 12 acres of oats in half a day, and 20 acres of stout wheat in one day, with three horses abreast, and most of it was bad cutting. I think I can cut 25 acres of good wheat in a day, and do it better than can be done in any other way. My machine is now in perfect order, and I consider it full as good as when I got it of you.

Yours most respectfully, THOS. RUSHMORE.

WHEATLAND, August 20, 1849.

Messrs. Eldred & Hussey—Gents:—I have now used one of your Reaping Machines for two years, and do most cheerfully say that it has given the best satisfaction. I have cut my whole harvest and a large one too, with my ordinary farm hands. I have cut 20 acres of stout wheat a day with ease, and I would most cheerfully recommend it to my brother farmers as the best and most economical machine that is used on a farm. In fact I think so much of it, that five hundred dollars would not induce me to part with it if I could not get another. I have also two brothers, each of whom have one of your machines, which they like very much, and could not be induced to be without. I think your agents, Messrs. Rapalje & Briggs, will sell a large number of them in our county next season, as many of my acquaintances have told me they intend to purchase one of your Reapers another season. ASA HARMON.

BERGEN, Sept. 1st, 1849.

This is to certify that I have this season used one of Hussey's Reaping Machines, which I purchased of Messrs. Rapalje & Briggs, of Rochester, and that it gives perfect satisfaction. I have cut my wheat, which was very badly lodged, much faster, better, and cheaper than it could be done any other way. I have had one of McCormick's for the last three years, and it now stands in the road as a useless article, as I consider it, having tried to use it for three years without any success.

I consider Hussey's Machine just the thing for our farmers, and I could not now, after proving its merits, be induced to be without one. NOAH WILBUR.

GREECE, Sept. 7th, 1849.

Messrs. Rapalje & Briggs—Gent'n:—The Reaping Machine bought of you by Mr. Champion, for me, exceeds any thing of the kind I ever saw. You will remember that when I got it I said to you I was sure it would not work in my badly lodged wheat, as I had seen McCormick's tried repeatedly, and it was a perfect failure; but I was most agreeably disappointed. It cut any of my wheat better and faster than eight good cradlers could do, and I think it saved me from two to three dollars per acre in all my lodged wheat, in getting it clean and fast. In short, too much cannot be said in its favor. I would not sell it, if I could not get another, for one thousand dollars, for should I raise as much wheat for eight or ten years to come as I have for the last ten, it would save me more than that sum, and I think it will last me longer than that time. Yours, most respectfully, J. NORTON.

June 1, 1850. RAPALJE & BRIGGS.

Genesee Seed Store and Ag. Warehouse, Rochester, N.Y.

Burrall's Clover Mill.

FOUR sizes made and sold by the Subscriber at Geneva N. Y. warranted to be thoroughly built and to work well. Among other premiums awarded, this Machine was the first, at the late State Fair.

Orders from abroad, or inquiries in respect to it, promptly attended to [4-4t] E. J. BURRALL

Allen's Improved Portable Railroad Horse Power, Thresher, and Separator.

THE advantages of the above horse power, are—1 They occupy but little more space than a horse. 2. They can be moved by the weight of the horse only, by placing the machine at an angle of 10 or 15 degrees. 3. They are easily transported, simply constructed, not liable to get out of order, and move with little friction.

The Overshot Threshers consist of a small-spiked cylinder, with a concave top, and possesses these advantages. 1 They have a level table for feeding, thus enabling the tenders to stand erect, and control the motions of the horse and machine by means of a brake, by which accidents are avoided. 2. In consequence of the spikes lifting the straw and doing the work on the top, stones, blocks, &c., drop at the end of the table, and are not carried between the spikes. 3. The overshot cylinder does not scatter the grain but throws it within three feet of the machine. 4. This arrangement also admits of attaching a *separator* high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is long, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary threshers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder is fully made up by an increased number in the concave top, which is stationary. 7. The seperator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men with a single power, can thresh 100 to 150 bushels of grain per day; and four men with a double power, twice that quantity. All the above are compact and can be carried where wanted, complete, or they may be readily taken apart and packed for distant transportation by wagon or otherwise.

Price of single Power,		$80
" " Thresher,		$28
" Seperator and fixtures,		$7
" Bands for driving, etc.,		$5
" Wood-sawing machine, complete, and in running order,		$35.
Price of Double Power,	$100	
" with Thresher, Seperator, &c.,	$145 to $150	

All the above are sold singly or together, as desired, and are warranted to work well and give satisfaction.

Also, Taplins 20 feet circular, and the Cast Iron Sweep Powers. Enquire at the New York Agricultural Warehouse and Seed Store of A. B. ALLEN & CO., 189 and 191 Water st., New York.

WHEAT! WHEAT!!

To Wheat Growing Farmers! Save Time and do your work well!

SAGE'S BROAD-CAST SOWER AND SPRING-TOOTH HARROW, is the cheapest and most effective labor saving machine yet invented for wheat growing districts, being so simple in its construction, that any ordinary workman can fit one up to work with perfect accuracy, and so cheap as to be within the reach of all.

This Machine drew the first premium at the State Fair at Syracuse, and requires but five minutes examination, by any practical farmer or mechanic, to satisfy them that it will perform the work of sowing and harrowing accurately and effectually, and with as much dispatch as can reasonably be desired.

With a Machine that will not require more power than a common plow, one man and horse team can sow accurately, and harrow once over, 20 or 25 acres in a day, or from one to one and a half acres for every mile the team walks, according to the size of the Machine.

Letters Patent were obtained for the above article April 16, 1850. All communications, post paid, addressed to S. S. SAGE, Windsor, Broome county, N. Y., will receive prompt attention.

Windsor, May 20, 1850. [7-1t*]

Seymour & Morgan's Improved Reaping Machine.

HAVING observed in the last number of the Farmer, an advertisement by C. H. McCormick, in which he alluded to the Improved Reaping Machine, manufactured by us, we would merely say, in reply, that what he so respectfully states in regard to our Machine being inferior to his, is not worthy of notice, from the fact, that wherever the two Machines are exhibited, to those who are best calculated to judge of their merits, ours *never fails to take the preference*; and the gentleman having *learned from experience* that he cannot compete with us in a fair business-like manner in selling, has tried to frighten us from making our machine.—And now, as a last resort, he threatens the farmers, to prevent them buying of us, and at the same time (very disinterestedly of course,) offers to furnish them with his.

We will also say to purchasers, that we have but few Machines remaining unsold, and these we propose to furnish to those who wish a first rate article, and, at the same time, guaranty the right to use them, as we shall show Mr. McCormick, should he ever give us occasion, that our only *infringement is on his business*, and *not on his patent*. SEYMOUR & MORGAN.

Brockport, June 12, 1850. [7-1t]

BACK VOLUMES of the Farmer we can furnish bound. Also, all works on Agriculture and Horticulture, Poultry, Sheep, &c.

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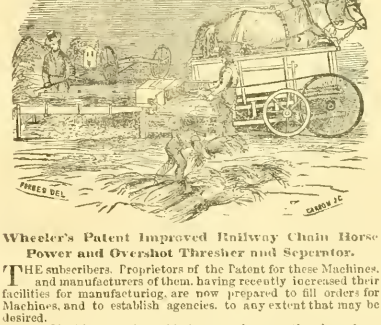


Wheeler's Patent Improved Railway Chain Horse Power and Overshot Thresher and Separator.

THE subscribers, Proprietors of the Patent for these Machines, and manufacturers of them, having recently increased their facilities for manufacturing, are now prepared to fill orders for Machines, and to establish agencies, to any extent that may be desired.

These Machines are favorably known wherever they have been used or exhibited. They have taken premiums at many different State and County Fairs held in Massachusetts, New York, New Jersey, Pennsylvania, Ohio, and also in Canada, never having competed for premiums without success and flattering commendations.

As many as 2,000 of them are now in use, of which over 500 were sold the past season.

The accompanying cut gives a view of a two horse Machine at work, with the hands necessary to attend it. It will thresh from 125 to 200 bushels of wheat, or twice the quantity of oats per day. The one horse or single Machines, thresh rather more than half as fast as the double ones.

These Horse Powers are strong and durable, and run extremely light. With one end of the power slightly elevated (as represented in the annexed cut) *the weight of the horse alone* affords sufficient power to thresh at the rate before stated, or to drive circular and upright saws, or any other machines used by farmers, requiring propelling power.

THE OVERSHOT THRESHER

takes the grain from a level feeding table or apron, (of a proper height to allow the feeder to stand erect, and feed without annoyance from dust,) and passes it through a toothed or spiked concave or bed, placed over the cylinder. A recent improvement admits of lowering the concave so as to bring it nearer the cylinder, and at the same time so varying the inclination of the spikes as to set the machine for threshing tough or damp grain, or short oats, and re-setting it at pleasure, for long rye or wheat, or oats in good order or for timothy grass or clover; and all this is accomplished without stopping the Machine, so simple is the process. By means of the Separator, the straw, as it comes from the Thresher, is effectually separated from the grain.

The *Power, Thresher and Separator*, complete, for either one or two horses, is easily loaded on a common farm wagon; but where frequent moving is desired, the two horse machines are placed on wheels in such a manner that when used for threshing, the forward wheels are removed, dropping that end of the power, and leaving the opposite end elevated on the other axle, ready to receive the horses. By this arrangement, (which has been made for the convenience of those who make threshing a business, and for partnership machines,) two men can with ease set a two horse machine ready for work in fifteen minutes, and re-load it for moving in the same time.

W. M. & Co., also manufacture Stalk, Hay, and Straw Cutters, to be used with their horse powers; and also Circular Saws, and Benches, for cutting ordinary fire wood, and locomotive and other fuel.

Every machine made or sold by W. M. & Co., or their agents, is WARRANTED to work to the satisfaction of the purchaser, or it may be returned to them, or to the Agent of whom it may have been purchased, within sixty days, and the purchase money [if paid] will be refunded.

These machines are so light, compact, and easily handled, as to admit of transportation to any part of the country with trifling expense. The weight of the two horse machine, complete, being less than 2,000 lbs., and of the one horse, about 1,200.

The manufacturers are now establishing agencies in all parts of the United States and Canada, where they are needed to facilitate the sale of these machines. Good agents are wanted in the South ern and Western States and the Canadas, to whom liberal commissions will be allowed.

Our agents, as far as definitely ascertained, are—Rapalje & Briggs, Rochester; T. C. Peters & Brother, Buffalo; Peter R. Sleight, Esq., Poughkeepsie; F. F. Parker & Brother, Detroit; John Melick, Trenton, N. J.; John Bowsfield, Kirkland, Ohio; F. R. Elliot, Cleveland, Ohio; James Williams, Bakers Town, Allegany Co., Pa.; Spears, Case & Co., Delphi, Indiana; W. B. Arnold, Franklin Centre, Iowa; Ephraim Abbott, St. Louis, Mo. W. D. Bacon, Waukesha, is general agent for Wisconsin.

These machines may also be had of John Mayher & Co., New York city.

WHEELER, MELICK & CO.,
Hamilton st., corner of Liberty and Union sts., Albany, N. Y.; and Chicago, Illinois.

May 1, 1850.

Miner's Bee Hive.

THIS beautiful and highly valuable practical Hive, is unsurpassed by any other in the United States. The Rights are in pamphlet form, with full engravings, and ample directions to make it. Price $2 only; sent by mail to any section of the country. This is positively the only Hive of *real* merit to be had.

Also the AMERICAN BEE-KEEPER'S MANUAL. 350 pp., 35 fine engravings; the most popular work ever published on the culture of bees. Price $1; sent by mail also. Address to this office, *post-paid*.

Gen. Farmer Office, Rochester, June, 1850. [6-tf]

First in Beauty and Value—Cheapest and Most Popular.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c

VOLUME XI. FOR 1850.

DANIEL LEE & JAMES VICK, JR., EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2. Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ POST-MASTERS, AGENTS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (postpaid or free,) at the risk of the Publisher. Address to

DANIEL LEE.

December, 1849. *Rochester, New York*

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—AUGUST, 1850. NO. 8.

RESUSCITATION OF WORN OUT LANDS.

UNDER the above heading the *American Artisan*, published in the city of New York, has the following remarks:

"'To repair damage already done to the soil, (of the United States,) will cost over one thousand millions of dollars.'

"Such is the conclusion of the Patent Office Report on Agriculture, on the subject of Chapter II, 'What the country has lost by impoverishing its soils.' This impoverishing is effected by the unwise mode of culture that takes off the soil all it can and puts nothing on. That there is a vast amount of such culture, statistics as well as observation abundantly show; and the waste of labor and loss of profit by such culture is immense, no doubt fully equal to what this Report states. But its conclusion that it will require millions to restore these lands, is fallacious. The Report itself refutes its own conclusion, when it states a well known fact in proof of its position, that 'this deterioration is not unavoidable, for thousands of skillful farmers have taken fields poor in point of natural productiveness, and instead of diminishing their fertility, they have added ten cents on an acre to their annual income, over and above all expenses,'—yes, and often much more. And there is not an acre of these worn out lands that can not be resuscitated by such skillful farmers, without cost and with actual profit. The startling, unfounded position which the Report put forth, that it 'will cost on an average $12.50 an acre to renovate the partially exhausted lands of this State,' is not sustained by a single proof. There is quite a penchant in the Commissioner to make startling statements. He says, 'a million tons of human food pass down the Mississippi, where one ton of the elements of such food ascend,' just as if, for the production of this food, such a return of the elements of it was necessary. There is no truth in either of the theories. The elements are in the air, water, and earth, and the process of resuscitation can be carried on not only without loss but with profit. The cost of the manure, which, as that of leaven to the bread, will be more than returned in the crop, and the land more and more enriched each year by a right cultivation, which is ever a profitable one. The productiveness will be increased or renewed each year, much on the principle that leaven produces or multiplies itself when the appropriate materials are in contact with it. And as to the vegetative power of the earth, let there be due proportions of air, moisture, and warmth on any land, be it even nothing but sand, it will be manifested. But when aided by manure, it will be with far greater rapidity and always with profit without loss, if skillfully done; and the outlay is no actual cost in the sense of this Report, when there is a profitable return over all expense of cultivation.

"The great importance of this subject to the country, is fully borne out by the statistics it gives. The yearly diminishing of production from the acre, till it becomes so little as to cause the exhausted land to be abandoned, is a wide spread process, going on over the whole country, and well may Government resort to measures to arrest it. But alarming statements of thousands of millions of cost to do it, will not promote it, but only aid to continue it. What is wanted, is the full and enforced statement, with its proof over the whole country, that the deterioration is not necessary—that it is solely the result of wrong culture—that the abandonment of an acre is an acre of condemnation of the farmer who does it—that in fact there is within the power of every farmer the means of resuscitating every acre at a cost less than it will require to subdue new land. This should be done; and may the census now to be taken be used to effect it, and every agricultural paper, report, or society in the land, give its influence to impress on the public mind the truth that there is no necessity for this deterioration—that it is the sole effect of wrong cultivation—that the right will not only prevent it, but is far the most profitable—that the single principle of leaving half the annual vegetation on the land will enrich it, and this is all the change required. The forest is enriched from its yearly fall of leaves and dead limbs. The careful use of the grape leaves has been found ample to keep the grapery productive."

The writer of the above may know what is the "right cultivation" to prevent the "deterioration" of cultivated land; if so, his light is most effectually hid under a bushel. No one not a fancy writer on agriculture would say that "the productiveness will be increased or renewed each year, much on the principle that leaven produces, or multiplies itself, when the appropriate materials are in contact with it." But, most sage critic, suppose "the appropriate materials" are lacking in the soil or in the "kneading-trough;" what then? Will your "leaven" make wheat or bread without "the appropriate materials?" Certainly not.

When we stated that there were 8,000,000 acres of land in the State of New York so much exhausted

that $12.50 an acre would no more than renovate them, calling for an outlay of $100,000,000, criticism was both expected and desired. The truth can only be elicited, and the evil corrected, by public discussion. To provoke this was the deliberate aim of the "startling statements" erroneously ascribed to the Commissioner of Patents. They were made by one who was born and reared on a farm in the State of New York, and who has devoted most of his life to the study of this and kindred topics. That partially exhausted soils may be improved with a profit, is a point for which we have long contended: but in New York the profit will be diminished from $10 to $15 an acre, before the land can be fully renovated. If so, the injury done to impoverished fields, and damage to their owners and the State, is an average of $12.50 an acre. There are 12,000,000 acres under cultivation in New York, and from our childhood up we have seen farmers extract potash and bone-earth from this soil, and send both to distant markets, never to return. Will any man of common intelligence say that this vast area of impoverished soil contains as much of the elements of *bones*, and as much *potash* and other alkalies, now, as it did seventy-five years ago? One-half of the earthy matter removed in a crop of potatoes, is potash; and one-third of that taken out of a field in the seeds of wheat, is the same alkali. Whether a farmer buys wood ashes and bones at their market price, or labors for years to draw them from his sub-soil, in either case it will cost him from $10 to $15 an acre to supply his surface soil with as much as God gave it before man began to till it, and *waste* its elements of food and clothing. Man has not the power to curse the earth with irredeemable sterility. But to say that to impoverish it does not involve an injury to the community, and the necessity of a loss of labor to renovate it, is simply to assert what every man of sense knows to be untrue. No hocus-pocus, "leaven in bread," will add lime, soda, potash, phosphorus, magnesia, chlorine, sulphur, soluble silica, or rich mold, to a worn out cotton, corn, or wheat field. "The vegetative power of the earth, with due proportions of air, moisture, and warmth, on any land, be it nothing but sand," is a very pleasant *dream*, but nothing more substantial. No amount of pure sand, air, warmth, and moisture, will form the bones in a man's little finger, nor the brain in his cranium. His daily bread and meat must contain other ingredients extracted from the earth.

To increase its natural productiveness is entirely practicable; but it will cost money or labor to achieve this desirable result. Nor can the end ever be attained by falsely asserting that "a million tons of human food" may be annually taken from as small an area as will produce it, without restitution, and not deteriorate the soil. There are scores of writers on agriculture who teach this false *theory*, and call it *science*. How much an acre of land can spare of grain, cotton, or other crops, every year, without detriment, depends mostly on its chemical and geological character, but partly on its mechanical texture. Not before farmers are willing to foster the study of agriculture as a learned and useful profession, will they ever understand the true capacity of the soil to feed and clothe the human family. It is not far from the precise truth to say that they waste as much hard work, needlessly and heedlessly, every year, as all the mechanics, merchants, doctors, lawyers, and others, perform. There are in the State of New York alone, 500,000 tillers of the soil, who in the main work very hard to make large crops out of small materials; acting on the principle that a little yeast should give an ovenful of bread, without flour or meal! The nightsoil annually wasted in the State of New York, would make thirty million bushels of wheat, if saved, properly deodorized, and drilled in with the seed. This fertilizer is the bone and muscle of the land, drawn from its surface and thrown away, to compel the next generation to give more honest sweat for their food and raiment, or emigrate to the virgin soils somewhere this side of sun-down.

PATENT OFFICE REPORT.—Part II.

AGRICULTURAL METEOROLOGY.

There are few sciences the study of which is more useful to the farmer than that of Meteorology. A soil may contain all the atoms required to form a luxuriant crop, yet, if the temperature of the ground, or of the air above it, be too low, vegetation makes no progress. Again, the earth and atmosphere may have a due degree of warmth and light, as well as abound in all the food of plants in an available form, except *water*, and the absence of this element will be fatal to the hopes of the husbandman.

Atmospheric air, light, heat, electricity, rain, dew, snow, and frost, exert a controlling influence over the growth of all cultivated plants. A knowledge of the natural laws by which these generally invisible and imponderable bodies are governed, so far as researches have revealed them, is alike valuable and interesting. The atmosphere and the numerous phenomena of which it is the theatre, should command more attention in this country than they hitherto have received, if we intend to keep pace with the progress of physical science in Europe. To encourage the study of meteorology in its application to agriculture, is the object of this chapter.

The Atmosphere is mainly composed of two distinct gases, which are invisible but not imponderable bodies, and every where surround the planet, like an ocean. It has a mean depth of some forty-five miles. The gases which form the air are called *nitrogen* and *oxygen*. According to the accurate analysis of dry, pure, air, made by MM. Dumas and Boussingault, 100 parts consist of 20.8 oxygen and 79.2 nitrogen. These chemists found from 2 to 5 parts of carbonic acid in 10,000 of atmospheric air. Dr. Fresenius has ascertained that the proportion of ammonia in the atmosphere is as 1 to 2,000,000, varying to 1 to 3,000,000. Undoubtedly there are many other volatile and gaseous bodies in the atmosphere, in a state so extremely diluted and diffused as to escape all chemical tests. Sir Robert Kane found that sulphuretted hydrogen will pass through a thin piece of India rubber into the atmosphere, against a pressure equal to fifty times the weight of common air. Gaseous compounds of phosphorus, chlorine, and sulphur, are constantly discharged from decaying animal and vegetable substances into the atmosphere. These gases fall to the earth again in rain-water. It is one of the laws peculiar to all gases, that the presence of one in any given space does not in the least prevent several others from occupying the vacancies left between atoms of gas that seem to repel each other with singular aversion. The facility with which the atmosphere takes up vapor when water evaporates, is familiar to all.

This capacity to hold immense quantities of water imbibed from the ocean, lakes, rivers, the foliage of trees, and moist earth, in a volatile condition, to be distributed over broad continents, is a wonderful provision of nature. But the filling of the air with water, like a wet sponge, is less remarkable than the contrivance for *squeezing the sponge*, so to speak, and causing the diffused moisture to fall in gentle rains, snows, and dews. The *drying* of the atmosphere, after it is saturated with water, is a phenomenon without which it would never rain; nor could there be any springs, rivers, land plants, or animals on the globe. This precipitation of water is effected by a change of temperature, which change is the result of the revolution of the earth on its axis, and of solar heat. Day and night, spring, summer, autumn, and winter, with their ever-varying temperature, varying winds, and clouds, and constantly changing humidity, are all results of fixed laws, which invite the research of every reasoning mind.

Solar Heat.—According to Professor Forbes, the rays of heat coming from the sun and passing througe the atmosphere in the shortest line, at the latitude of Paris, lose 25 per cent. of their calorific power by the time they reach the earth. Rays that strike the atmosphere at an angle of only 25°, part with half their intensity, or heat, by the time they touch the ground. The molecules of air absorb and radiate heat into space, the same as other ponderable bodies. Hence, no matter how clear the atmosphere, neither the rising nor the setting sun imparts so much light or heat to those parts of the earth so affected, as they receive when the sun is at the meridian. The effect of solar rays on the earth is still further diminished morning and evening, by the fact that fewer fall on any given area, because they impinge upon its surface obliquely. One can look at the setting sun with impunity, not because it emits less heat or light at that time, but because the rays are mostly absorbed and radiated in passing through many miles of atmosphere before they reach the eye of the observer.

The facility with which solar heat penetrates and warms the soil to the depth of six, twelve, eighteen, and twenty-four inches, and the radiation of heat from the earth, the leaves of plants, and all other substances, deserve particular notice.

A distinction must be made between the radiation of heat from the surface of any body, and the transmission of it through any substance, as iron, wood, water, mold, or soil. All these hold different relations to this peculiar element. It is not intended to take more than a popular view of this subject. At the time of seeding in spring, a single day is sufficient to warm to the depth of four inches, a mellow soil recently plowed. Two days of sun will warm the ground six inches, and six days twelve inches. The fall of warm rain on a well-drained, mellow soil, greatly hastens the heating of the earth. On the contrary, the fall of a cold rain, or much cold water in the ground, greatly retards the rise of temperature in tilled land. Heat and water should be studied together, if one would obtain a clear idea of their joint influence on vegetation. When water evaporates, it expands to 1,696 times its former volume, and renders latent, or insensible, a considerable amount of active heat. Hence, a wet piece of ground, from the surface of which a good deal of water evaporates, is always cooled by the constant loss of sensible heat which rises in vapor and departs far into the atmosphere.

The warmer the atmosphere, the greater is its capacity to hold water in the condition of a diffused, invisible vapor. The lower strata of air are heated much more by caloric radiated from the earth than by the absorption of heat from the sun in its passage to the planet. Air thus heated becomes expanded or rarified, and specifically lighter than the colder air above it. This causes the air within and near the tropics to rise high above the surface of the earth, and flow over both north and south, toward either pole, while colder and heavier air rushes in toward the equator to fill the empty space. These ærial currents are deflected in their courses by the diurnal revolution of the earth, and by mountain ranges whose summits are often covered with eternal snow: and they are still further modified by the varying temperature of the ocean and its peculiar streams.

Heat and water are the fruitful parents of winds and clouds. When aqueous vapor is precipitated in rain or snow, heat that was latent becomes again sensible, and by increasing the capacity of the air to hold water in the form of vapor, prevents a disastrous deluge of this abundant element in nature. The laws which restrain the precipitation of water from the clouds are no less curious than those which cause it to rain at all. The atmosphere must approach saturation before it can rain; and it usually happens that the quanties which will fall on a given area, one hundred feet above the ground, and on the earth, are unequal. Large drops, in falling through many feet of dry air, become smaller by constant evaporation, and may be wholly dissipated before they reach the earth. On the other hand, quite small drops formed in cold regions, high in the air, constantly condense more vapor in falling through a saturated atmosphere, and will be many times larger when they reach the ground than at their starting point.

To illustrate the production of rain, let us suppose that a current of air at 70° temperature, saturated with moisture, meets and mingles with another current, also saturated, but having a heat of 50°. Now, if the atmosphere at the mean temperature of 60° had a capacity to hold water as an invisible vapor, equal to the mean of 70° and 50°, it is obvious that no precipitation would take place. But such is not the fact. The quantity of water held in air heated from 60° to 70° can not be contained in that heated from 50° to 60°. In other words, whatever cools air saturated with moisture, causes a cloud, dew, mist, or rain.

Early and late frosts are produced by the radiation of heat, during clear nights, from the foliage of plants and other terrestrial bodies. If the temperature of the air is not very low at sundown, and is humid, vegetation will so soon reach the *dew-point*, that the latent heat, evolved by the formation of much dew, will prevent a frost. If the atmosphere is dry, clear, and still, the dew-point is lower, and all the circumstances are favorable to freeze the little vapor condensed on such substances as radiate heat with the greatest facility. Any thing which checks the radiation of heat, like a cloud, smoke-screen, or wind which agitates the atmosphere, serves to prevent frost. Every farmer should have a thermometer and rain-gauge, and know the degree of heat most favorable to all his crops. The dew temperature and moisture of the soil are as much elements of production and profit, as good manure and skillful tillage. The writer has studied the growth of corn in differ-

ent months, noting the changes from 4 o'clock a. m. to m., from noon to 8 p. m., and from 8 p. m. to 4 a. m. When the temperature is favorable, corn grows as much per hour in the night as in the day-time. No agriculturist is so far advanced in the science of climatology, as to make all that can be made of the water, solar light, and heat, which nature so bountifully supplies. There is no State in the Union where the mean temperature of summer is too low to ripen maize, or corn, as is the case in England, Scotland, and Ireland. The cutting down of too much timber in some parts of the country has operated to change, in some degree, the climate, and render large districts more subject to alternate drouths and rainy seasons. In summer, when frequent and moderate rains are greatly needed, the air is too dry to yield much more than respectable dews, for many weeks in succession.

To learn the well authenticated results of cleaning forests, in drying up natural springs, and changing climates, regularity of rains, &c., the reader is referred to the writings of Humboldt, Kaemtz, Forbes, Boussingault, and other meteorologists. Humboldt remarks: "In felling trees which cover the crowns and slopes of mountains, men in all climates seem to be bringing on future generations two calamities at once—a want of fuel and a scarcity of water."—(Humboldt, vol. v, p. 173.) The waste of valuable timber in the United States, to say nothing of firewood, will hardly begin to be appreciated until our population reaches fifty millions. Then the folly and shortsightedness of this age will meet with a degree of censure and reproach not pleasant to contemplate.

Different plants require unlike degrees of heat and light to bring them to maturity. The potato will produce an edible tuber at a mean temperature so low that neither its own seeds nor those of any cereal can be formed. Boussingault found them cultivated in South America at an elevation having a mean heat so low as 49°, requiring eleven months in which to grow, or 335 days between the planting and digging. In many parts of this country, persons begin to dig potatoes in seventy days from the planting; and potatoes planted the 1st of May will be ripe by the 1st of August. In some of the southern States they grow best in the winter season. Winter barley and rye will mature their seeds at a lower temperature than wheat. Humboldt found at Jakoustk, in high Central Asia, where the earth was constantly fozen at the depth of three feet below the surface, both rye and wheat yielding a return sometimes of 15 to 1 of seed. At that place the mercury is frozen two months in the year—the cold being over 72° below freezing. Short as the summers are, they have a mean temperature of 64°. On the northern slope of Monte Rosa, in Switzerland, barley ceases to grow at an elevation of 4,260 feet above the sea: on the southern side it continues to be cultivated at the height of about 6,560 feet. Boussingault says that the difference is ascribed to local causes.

In studying the mean temperature and annual fall of rain, including snow and dew, in the United States, and the distribution of both heat and water through the year, one can hardly escape the conviction that no other equal area on the globe has equal agricultural capabilities. Without including Delaware, there are within a fraction of 600,000,000 acres in the southern States. On two-thirds of this vast surface, wheat is harvested early enough in May and June to permit a crop of corn to mature on the same land before autumn frosts. By drawing a line from the Atlantic due west to the Rio Grande, so as to have 300,000,000 acres south of it, on every arable acre two crops of our most valuable breadstuffs can be harvested in a year. Allow one-third of this area for forests, the beds of rivers, and irreclaimable surface, and there are left 200,000,000 acres for cultivation. On the supposition that the south had a population adequate to demand such crops, 100,000,000 acres might be drilled with seed-wheat in November, after corn harvest, putting half the needful fertilizers in with the seed, and sowing the balance broad-cast in February or March, after the English and Belgian practice.

With skillful culture and feeding, an average return of twenty bushels per acre may reasonably be expected, producing an aggregate crop of 2,000,000,000 bushels. This crop would be harvested between the 15th of May and 15th of June, after which a crop of corn may be grown. With a dense population, as in Belgium, France, and many parts of China, there can never be a real lack of fertilizers, so that sixty bushels of corn can be produced on every acre of arable surface in our thirty States. By this estimate it is seen that the same land which had produced 2,000,000,000 bushels of wheat, might, so far as the *climate* is concerned, easily yield 6,000,000,000 bushels of corn in season to seed with wheat again.

Governor Hammond of South Carolina, estimates the present capacity of the slaveholding States as equal to the support of 200,000,000 of inhabitants. To give Virginia as dense a population as Belgium has, (which exports far more of human food than Virginia does,) would require all the people now in the United States to reside in the "Ancient Dominion."

Of the other 100,000,000 acres of arable soil, one-half may be planted in cotton, and enriched no more than to give an average of a bale of 400 lbs. to the acre. This will secure an annual crop twenty times larger than is now grown in the United States, and fifteen times larger than the consumption of the whole human family. There will still remain 50,000,000 acres adapted to the culture of sugar-cane, rice, tobacco, and other important staples.

The United States possess a territory embracing over 2,000,000,000 of acres, more than a moiety of which is susceptible of tillage. Taken as a whole, the country has a climate whose mean temperature and fall of rain greatly favor the production of human food and clothing.

As we are now engaged in laying the foundations of an empire such as the world has never seen, nor scarcely conceived possible, every advantage of soil, climate, natural product, and such valuable trees for timber, fruit, and fuel, as may be profitably cultivated, should command universal care and study.

The following meteorological tables and statistics are compiled from the accounts received at this office, and contain valuable information as to the temperature, fall of rain, &c., in various parts of the United States. We condense as follows:

MEAN ANNUAL DEPTH OF RAIN.

Places.	*Inches.*
Fort Constitution, New Hampshire,	28.85
Watertown Arsenal, Massachusetts	39.69
Fort Hamilton, New York,	45.71
Hancock Barracks, New York,	36.92
Watervliet Arsenal, New York,	34.22
West Point, New York,	48.70

Places.	*Inches.*
Alleghany Arsenal, Pennsylvania,	28.14
Dearbornville Arsenal, Michigan,	31.30
Fort Brady, Michigan,	31.89
" Howard, Michigan,	38.83
" Winnebago, Michigan,	31.88
" Snelling, Minnesota,	30.32
" Crawford, Wisconsin,	29.54
" Leavenworth, Missouri,	32.63
St. Louis Arsenal, Missouri,	24.12
Fort Smith, Arkansas,	35.64
Fort Gibson, Arkansas,	30.64
Fort Towson, Arkansas,	46.73
New Orleans Barracks, Louisiana,	51.85
Fort Wood, Louisiana,	47.90
Key West, Florida,	31.39
Charleston, South Carolina,	33.89
Fort Monroe, Virginia,	52.53
Fort McHenry, Maryland,	40.80
Washington, D. C.,	34.62
Baltimore, Maryland,	39.90
Boston, Massachusetts,	39.23
Hanover, New Hampshire,	38.
State of New York,	36.
State of Ohio,	36.

MEAN ANNUAL TEMPERATURE IN 1849.

Places.	*Fahrenheit.*
Cambridge, Massachusetts,	47 deg. 48 min.
New Haven, Connecticut,	49 "
Rochester, New York,	46 " 68 "
Penn Yan, New York,	45 " 46 "
Newark, New Jersey,	50 " 39 "
Delaware county, Pennsylvania,	52 " 37 "
Near Louisville, Kentucky,	53 " 8 "
Columbia, South Carolina,	61 " 62 "
Jackson, Mississippi,	65 " 64 "
Fort Madison, Iowa,	49 " 62 "

BEES —No. 2.

Drones.—The object and uses for which drones were created have been a mystery, to some extent, through all ages. The opinions of naturalists and apiarians have ever clashed on this subject. Some have thought that their duty was to incubate, or hatch the eggs, by sitting over the cells, thereby generating the necessary heat; others, that their presence in the hive, though not located to any specific duty, was requisite to generate a proper degree of animal heat to develop the young brood; others, that a seminal aura exhaled by them, and attached to the eggs, imparted the life principle. The visionary theories and vagaries of the ignorant were, and are at the present day, wild and extravagant — some ascribing to them this duty, some that duty, and some no duty at all, but simply considering them a disadvantage to the welfare of the apiary, and the sooner got rid of the better.

Of late years more light has dawned on this subject, and it is now pretty well settled that the use of drones is solely to impregnate the queens. It has ever been known that they were *males*; but the fact that 500 or 1000 of them exist in every hive, threw another cloud of mystery over the matter, since but *one* female exists. Now, the solution of this question is thus unfolded: — The impregnation of the queen takes place *on the wing*. She never leaves the hive after issuing with a swarm, but *once*, until she again issues the next season with a swarm. This solitary departure from the hive is always within three days after the hiving, and generally the next day, and only occurs with *young* queens; the old ones being impregnated on their first issue, continue operative for life. If any one will patiently watch a hive in which a swarm is placed, with a young queen, (all swarms after the first,) he may discover her issuing, first rising a few feet and taking a short circle, and then returning, as if to mark well her tenement, lest she enter a wrong hive on her final return, if there be others; then suddenly re-issuing and rising in horizontal elongated circles, until lost to the sight. This departure takes place between 12 M. and 2 P. M., at the time when the drones issue and also take an ærial flight. Hundreds of drones are flitting to and fro at this period, high on the wing, and the queen can not fail to come in contact with some of them, and thus effect the object of her flight. She is absent from the hive about an hour. That coition takes place on the wing, is evident from the well known fact that humble bees perform their amours in this way, and most, if not all other winged insects. The great apparently useless number of males in this case is only in accordance with the wisdom of Nature in providing enough to always ensure the fertility of a queen, as the prosperity of the colony depends upon her immediate fertility. Much may be said in further illustration of this subject, but my limits here forbid it. T. B. Miner,

Author of the American Bee-Keeper's Manual.

Clinton, Oneida Co., N. Y., 1850.

APPEARANCE OF THE CROPS.—GEOLOGY

Messrs. Editors:—I am about to recommence farming after the sage advice of the quaint old Richard—"either hold or drive;" and that I may drive after the most approved fashion, I must have your valuable paper. Please consider me a subscriber for the year.

I have just made a trip across the State, from the Pennsylvania line, and thinking a brief description of the appearance of crops might be interesting to your readers, I will briefly give it. In the southern section the grass appears very backward, owing to the late spring and long continuance of cold weather. Within a few weeks there has been a rapid gain; still it is quite thin, and I judge there will be a short crop of hay. Corn is coming in well. The late warm weather is the true corn weather — thermometer 84° in the shade. The early planted is not doing as well as the late — say the last of May. I planted the last day of May, taking the precaution to soak my seed in a solution of saltpetre, and not a hill failed — hardly a kernel. It is now farther advanced than that planted the tenth of the month, while the ground was yet cold. A late fall and warm summer will give a good yield of corn. Along the Genesee flats — these miniature prairies — this crop looks better than on the hills. Oats appear well, and a good quantity sowed. Of wheat I saw but a few fields until I reached Portage and Hume; in Canadea, a little. The weather of the spring has been favorable to this cereal — it has kept back the "fly," there not being sufficient warmth to hatch the eggs until the stalk was so far advanced that it could not be injured by the insect. I heard no complaint from any farmer, or in any neighborhood, from this cause. From Mount Morris north, the wheat looks well, except where winter-killed.

How beautifully, Messrs. Editors, is the theory developed, that the limestone rock, especially the Onondaga salt group, is the true source of the wheat growing soil. By traveling from the south line of the State to the north, while you are on the Chemung group, tipped with the conglomerate at and near the State line, you will hardly hear of a field of wheat in a ride of many miles. As you draw near the Ham-

ilton group, they become more frequent. Passing over this shaly region, on every side you see very good fields of wheat; but on the next series—the limestone—wheat becomes the crop. While writing of this striking fact, I am reminded of a Yankee farmer from Connecticut, who, when the "Genesee country" was far on the utmost verge of the west, becoming tired of rye and Indian, determined to find a country that would bear wheat. He had heard that on the Delaware river, in northern New Jersey, was the land of this crop. He sold his paternal acres, and emigrated to the banks of the Delaware. Experience soon showed him that only the first crop from the stump was good for this grain. The Chenango valley then had a reputation for wheat. He sold out, and reached "Chenango Forks." A few years satisfied him that although he seemed to be nearer the desired land, still he had not attained his mark. A German emigrant, returning to Pennsylvania from the "lake country," informed him that limestone land was the land for wheat, and that between the lakes he could find a good wheat soil. Pulling up his stakes for the third time, he soon reached his El Dorado, as happy as any recent gold-hunter in California. In Seneca county he became a successful grower of wheat to his heart's content. How slight a knowledge of geology, and of agricultural chemistry, would have taught this man the true spot to strike in his axe and thrust in his plow, and not be twice disappointed. A New Subscriber.

REMARKABLE FLEECES.

Messrs. Editors:—An article headed as above has appeared in the Cooperstown Freeman's Journal, stating that Mr. C. Vanhorn of that town, sheared 81½ lbs. of wool from 14 sheep, 12 of them being ewes, 10 of which had lambs; two were yearling bucks, that gave 17½ lbs.; that five of the number were full blood Merinos, and the others crossed with the English breed; that the sheep were well washed and perfectly dry when shorn; and asking if it can be beat.

If Mr. Vanhorn has sold his wool for cash, we should like to know the price, as we could tell better whether he could be beat. My sheep were shorn on the first week in June last, and from 2 bucks three years old, and 12 ewes, all full blooded Merinos, I sheared 86¾ lbs. of wool. Seven of the ewes had lambs by their sides, the other five were yearling ewes that of course had no lambs. The fleeces of the two bucks weighed just 20 lbs.—one weighed 10 lbs. 11 oz., the other 9 lbs. 5 oz. They were all well washed, and dry when shorn, and the wool done up in good order and sold at home for 37½ cents per lb., to E. Baker & Co., of Burdett, who have bought my wool every year for five years past, and are therefore well acquainted with it.

My flock consists of about 300. Four of my bucks, three of which were three years old, the other five, sheared 37½ lbs. Two of them are for sale. My stock buck "Columbus," which is three years old, and which gave the 10 lbs. 11 oz. fleece, and has sired all my lambs for two years past, is from the flock of Mr. Stephen Atwood of Connecticut. I think him the best buck I ever saw. Reed Bugaitt. —*Burdett, Tomp. Co., N. Y., July*, 1850.

A farmer should never allow his wood-house to be emptied of wood during the summer months.

IMPORTED FRENCH MERINO SHEEP.

Messrs. Editors:—I was thinking that perhaps it might be somewhat interesting to the readers of your valuable paper, to give them a brief account of my imported French Merino sheep, as there seems to be some considerable excitement in reference to them in your State. I will give you the weight of fleeces of 83 of my French imported Merino ewes, in comparison with the weight of carcass. I should have been glad to have given you the weight of carcass of each sheep separately, but it would make too long a list; I therefore give you the weight in gross. Weight of carcass, 10,458 lbs.—average weight of each sheep, 126 lbs.; this includes 27 lambs only ten months old when shorn. Gross weight of wool of 83 sheep, 1494 lbs.—average weight of fleece of each sheep, 18 lbs.; only one year's growth, except 27 lambs ten months' growth. This, I see by the figures, gives me 2 2-7 ounces for every pound of flesh. I raise from these ewes three crops of lambs in two years, which I think retards the growth of wool in a measure, particularly for the first four weeks after dropping their lambs, and for two weeks after weaning time. The smallest fleece was from a ewe lamb ten months old—13½ lbs.; the heaviest from a ewe three years old—25¼ lbs. of one year's growth, unwashed. Manufacturers and other men tell me that it is full enough to deduct one pound in five for river washing, so that it would give each sheep 14 2-5 lbs. of washed wool, long, fine, and soft. These are the sheep that I am now breeding. I have 105 ewes, old and young. I have recently purchased of Mr. John A. Taintor his entire flock, so that I have in my possession all of the ewes of this blood in the United States, except 27 which are owned by other individuals scattered over the country. I have made three crosses with the French bucks on my old flock of American Merinos, with the utmost satisfaction—it has proved the best cross I ever made, by all odds. My half-bloods are selling from $5 to $10 more per head than I used to sell my old stamp of Merinos, and shear from 1 to 2 lbs. more wool per head, and of finer quality. I have sheared 100 of my American Merino sheep, to compare with my French Merinos. I find the gross weight to be, in the same condition of flesh and age, 9000 lbs.—the average weight of carcass for each sheep, 90 lbs.; the gross weight of fleece, 650 lbs., unwashed—average weight of fleece, 6½ lbs.; giving me 1 1-6 oz. for every pound of flesh, making a difference in favor of the French Merinos of over 1 oz. for every pound of live weight. This is a very great difference, while the difference in weight of carcass is only about one-third. The French Merinos must be *the sheep*. I have also kept a little track, the past winter, of the relative value and difference in the consumption of food between the two breeds. I find that the Frenchmen will consume only from one-fourth to one-third more food than my old flock.

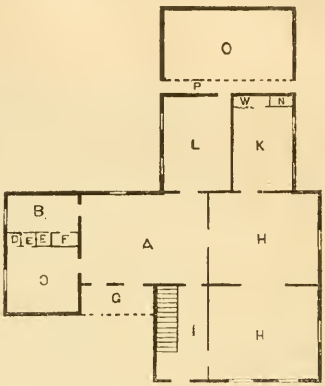
I have noticed one very peculiar characteristic in the French sheep—their quietness, and aptness to take on flesh. I have turned 41 ewes into a pasture of not more than eight acres; they have been in the pasture three weeks, and I will venture to say that they have not traveled over one-half of it yet, while my other sheep would have traveled it over a thousand times. This one thing is one great reason why they take on flesh so easily; they eat and then lie down. The more easily an animal fattens, the less

food will it take to support them. To say that all animals of its kind will consume food in proportion to its live weight, is erroneous in the extreme.—This trait in a sheep has been too much overlooked and disregarded. Men have considered this feature in a sheep hardly worth noticing, while the same thing in a horse or an ox would be regarded with peculiar care. I have thought for years that this was one of the essentials in a good sheep. If a man regards expense at all, he would value any animal higher that has this trait fully developed. Too many men, who pretend to be celebrated breeders of all kinds of stock, are too much carried away with one prominent trait of an animal, to the covering up of almost all the rest. Fancy goes a great way with too many men, to the exclusion of many valuable points. There are many fancy animals which would sell for high prices, that are perfectly worthless as breeders. I go for an animal that combines the greatest number of good points, and those points finely developed, whether in sheep, cattle, or horses. This ought to be a grand governing principle in a thorough breeder of either. To breed animals that have the intrinsic value engendered in them, that will be productive of some good to himself and his country, ought to be the aim of every man. Too many men go for a cheap thing; and it oftentimes proves itself to be cheap both in the pocket and out. I think as many as two-thirds of the men who breed sheep, would use a buck to their ewes bought for $5, because it is cheap, rather than pay $50 or a $100 for an extra animal; and it proves to such men, in nine cases out of ten, prodigious cheap. I go for the value in the animal — the more the better, — and I contend that a man gets a greater return for his money expended, by far. We will take, for illustration, Black Hawk colts. There are many men here who have most excellent breeding mares, who have actually disgraced them by putting to a horse to warrant a colt for $5 — the colts, when four months old, you could hardly raise a bid for at $15 — while other men have gone to Mr. Hill, the owner of Black Hawk, and paid him $20 for a colt that will sell, when four months old, for $100 to $200, and even $500.

There is a man living a few rods from me who has a Black Hawk colt two weeks old; he has refused $200 for him. Another man, a few rods farther, has one three weeks old, and has positively sold him for $500 when four months old. Where is the comparison between the two? The one pays $5 for a colt, and sells for $15; the other pays $20, and sells for $500. This is no unusual occurrence. There never has been a single Black Hawk colt sold, to my knowledge, for less than $100, and from that up to $1500. I say again, where is the comparison? Eternity will close in upon many a man before he gets his eyes open to these things, or the opportunity of breeding from valuable animals may be gone by. The same thing holds good in reference to sheep and cattle — it is far the cheapest to breed from the best animals, regardless of expense. I am, for one, in for improvement regardless of expense and the cackling and barking of men. *Taintor* sheep, *Black Hawk* colts, *Hereford* and *Durham* cattle, — this is the true doctrine, together with the improvements in agriculture, commerce, and manufactures. These are the step-stones to our own wealth and happiness, as well as that of our country. A. L. Bingham.—*Cornwall, Vt., June*, 1850.

PLAN OF A FARM-HOUSE.

A, Front Kitchen, 18 by 14. B, Bed-room, 8 by 10. C, Pantry. F, Closet. E, E, small Cupboards from Pantry. D, Meal-chest. G, Piazza. I, Hall. H, H, Parlors with folding doors, each 16 by 14, or both 28 by 16. K, Bed-room. L, Back Kitchen. P, P. Passage. O, Wood-house.



Messrs. Editors:—I herewith send you the ground plan of a farm-house, which I think meets the wants of a very large class of your readers better than any I have noticed among the many excellent ones presented in your valuable paper. First, I think a farm-house should be convenient: for convenience saves time, and time is money. Second, It should be substantial, and exhibit architectural beauty, to some extent at least; yet the expense should be graduated by one's available means. The great objection to most of the plans offered, is, they are too expensive. A majority of your readers are men of small resources; very many are largely in debt; yet many of these must have houses to shelter them, who can ill afford to expend $1500 or $2000 in a house. Right glad am I, Messrs. Editors, that you inculcate upon our farmers the *duty* of keeping clear of debt as far as possible. The idea is a good one, and our minds need often to be stirred "up by way of remembrance," on this subject.

Thinking my house combines convenience, economy, and good taste, to some little extent, I place the within plan at your disposal. It is built one and a half stories in height, and very nearly upon the within plan. I am now erecting the wood-house, &c. The main building is 28 by 24 feet; wing, 20 by 18; wood-house, &c., 20 by 26. It is bricked between the studs, lined with inch boards, and clapboarded. The wood-house and back kitchen are to be boarded up and down, and battened with inch stuff. Walls of the lower rooms are mostly hard-finished. Painted inside and out. The cellar extends under the whole house. A very large cistern in the cellar, directly under the pantry and bed-room, with a stop-cock to draw water into the cellar, which, being filtered, is used for dairy purposes. The cellar bottom is plastered with water-lime. The house is well and substantially built, and cost, including board and team work, about $625. The

wood-house will cost something over $100. It was built by the job, and I think it was done at a low rate. But a similar house can be built here, with good management, for from $800 to $900. Some will say it is too small; but to this I reply, *room* often depends more upon *arrangement* than *actual size*. A small house is easier cleaned, easier taken care of, easier warmed, and furnished with less expense than a large one. Rusticus.—*Rutland, Jeff. Co., N. Y.*, 1850.

SUB-SOILING.

Messrs. Editors:—Did you ever hear of *skinned* land? If not, I will explain the term, this wise: Land that has been cropped for a long succession of years skin deep, i. e., worked four or five inches deep; the manures made upon the place sold each spring to the neighbor paying the best price for it. Just such a place of twenty-five acres, beautifully located near our city, I have recently purchased, intending to ride my hobby *Horticulture* to my heart's content. My first step was to doom to the dung cart a pair of horses, who ply steadily their three cords per day, consisting of stable manures, leached ashes, limed hair, charcoal from the rectifyer's, sweepings from the smith's shops, bones, old plaster, lime rubbish, and last though not least, street dirt. These ingredients are carefully spread over the land, preparatory to the *stirring* of the soil, to which particularly I wished to draw your attention. Having purchased from your townsmen Messrs. Rapalje & Briggs a No. 2 Nourse & Mason sub-soil plow, the novelty of the tool excited so great an interest that I extended invitations to some twenty practical and amateur farmers to be present at the trial, not one of whom had ever seen the oper tion of sub-soiling. Having fully examined the nature of the soil, I determined to run the first furrow with the common plow nine inches deep, turning over a fine and mellow loamy soil. This was followed by the sub-soil plow, drawn by four oxen, eight inches deeper, crumbling and rendering permeable and light without bringing to the surface *gravel pan* or other dead and inert matter, but comminuting earths rich in organic materials, that have lain dormant doubtless for ages. Here was the charm! Our friends looked with delighted astonishment—conviction flashed upon the mind—perfectly satisfied of the great and important results that must follow the act, in giving depth for roots to penetrate—in placing a check upon the usual destruction by summer drouth, and the assurance of moisture at those times by capillary attraction, the greater amount of heat and atmospheric influences earlier in the season, with all those chemical effects nature calls to her aid to produce vegetable growth when relieved by the incubus she has been weighed down by.

The land was left as light as a feather bed—indeed, equal to a well trenched garden, the surface being raised some ten or twelve inches above the former level, a stick easily penetrating to the full depth of seventeen inches! Is not this the great and fundamental step towards rejuvinating my poor skinned land?

My farm operations are, for the season, principally experimental, such as ordinary plowing of seven inches and sub-soiling seventeen inches alternate strips, each having the same manures, and seeding to oats, corn, potatoes, &c.; also, top dressing new grass land in sections, with charcoal, domestic poudrette, plaster, stable manure, lime rubbish, guano; besides which, I am planting some 1000 additional fruit trees, &c., &c. The results of these various experiments I hope to detail for the *Farmer* at a future time.

In the draft of the sub-soil plow, we exchanged the oxen for a three horse team, and again to a single pair, which, by the by, were fine ones, and with the exception of hard gravel pan, or plastic clay, two horses worked it without severe fatigue. Three horses abreast or a heavy yoke of oxen, however, make the most desirable team.

Our friends retired with the full conviction of the utility of sub-soiling, and the determination of troubling Messrs. R. & B. for what they may have on hand of that pattern. W. R. Coppock.—*Longsight, Buffalo, June*, 1850.

We thank our correspondent for the excellent example which he has set not only to the farmers in the vicinity of Buffalo, but to the many thousands who will read his valuable communication in this journal. The experiments of one of the most enterprising and skillful horticulturists in the "Queen city of the Lakes" will be more than welcome to our columns.

A HALF DAY IN EAST WAYNE COUNTY.

A few hours of unexpected leisure in the village of Clyde, town of Galen, on the 9th inst., were employed in the following agreeable manner. First, I visited the farm of Joseph Watson, Esq., the President of our County Agricultural Society, adjoining the village. He has at his homestead fifty acres of land, including five acres covered by a cemetery and river. The balance, except an ash swamp reclaimed into a pasture lot, and an adjoining lot of six or eight acres of similar kind this spring put into broom corn, has been raised, mostly by Mr. Watson's personal labors, to the highest state of cultivation, so that an accurate account kept proves the proceeds of this little place last year to have been about $900, and two years preceding about $800 each year. This year the yield promises greater than last, owing to that muck swamp now covered with broom corn having been reclaimed, giving promise of extraordinary crops. A good share of the farm has been reclaimed from sunken swamp-holes, by means of numerous ditches and careful cultivation. His ditches, and fences particularly, are the best I have ever seen on any farm, and many of them are peculiar to this farm. Some of the fences in a conical form cover deep open ditches, and many others are moveable and are kept in their position in the most economical and durable manner. His crops embrace the choicest varieties of all kinds; some of his acres are covered with kinds raised in a series of years from a single head of grain picked up two or three years ago at an agricultural exhibition. I need hardly say that Mr. Watson's crops are enormous, and his stock is such as we should expect to find on such a farm, while his fruit trees exhibit not only scientific cultivation, but also *pruning*. His barn and out-houses, mostly erected by Mr. Watson in his leisure hours, combine more homemade economy and convenience than I have ever found in the possession of any one farmer. His horse-power attached to his threshing machine and fanning mill, is so perfect that with one horse it will also turn a circular saw for sawing his wood and making the

repairs and improvements to his buildings, a small grist mill which grinds all his corn and coarse grains, a cider mill, and various other conveniences. Truly this is a "gem" of a farm.

I next spent an hour on the farm of Mr. B. H. STREETER, one mile east of the village. He has a noble farm of three hundred and twenty acres, which he purchased not a year ago; but he already exhibits abundant evidence that not many years hence it will be one of the best farms in this or any other county. A barn is on the place, erected at a cost of $1500, which combines more excellence and convenience than I have ever met with. Mr. STREETER has already a variety of full blooded stock from the best herds of our State, and among which I noticed with high gratification a pair of twin three years old steers of native breed, so perfectly alike in size, color, and every mark, that the owner himself can only tell them apart by the slightest possible turning in of the broad spreading horns of one of them. They are of bright red, except about one foot of the tail of each being white. The combined weight last winter was over 3,200 lbs., and they are considerably heavier now, although neither is 10 lbs. heavier than the other. I was much pleased to learn that Mr. S. regards with favor the proposal to take them to England to the World's Fair next year, for I am confident our whole country can not produce a handsomer specimen of our common stock.

I spent the next hour or two on another "gem" of a farm of fifty acres, owned by Mr. MATHEW MACKIE, one mile north of Clyde, and I will only take the time needed to refer to the trees, fruits, and flowers, on Mr. M.'s beautiful place. He has a few of the best trained evergreens in his front yard I have ever seen, and he has among them the choicest new kinds also. His fruit trees numbering thousands, label an assortment including those new and rare seldom to be found in our established nurseries, and all in the highest pitch of cultivation. The same may be said with reference to his multitude of roses and other flowers, some of which are very rare, among which I noticed the finest standard by far, of the Chromatella, or Cloth of Gold rose, I have ever seen in any collection. His vegetables and smaller fruits, such as strawberries, raspberries, &c., showed the same extensive assortment and extraordinary cultivation. And what interested me particularly, was Mr. MACKIE's numerous and careful *experiments* now in progress. His assortment is now so large that he can hardly avoid propagating considerably for the benefit of his neighbors and others. I have thought that the western part of Wayne county could exhibit rare collections of fruits, flowers, &c.; but I much doubt if any hard working farmer in this or any other county, can exhibit so much skill, judgment, and taste, around their domicil, as does Mr. MACKIE.

On my return I saw a very fine hedge started, composed of the common thorn of the country.—Time did not permit me to visit the splendid farm of Mr. BRIGGS, five miles north, which Galen intends shall prove to be the premium farm of Wayne county. The initiatory steps have been taken by the spirited citizens of Galen, towards establishing an agricultural school at Clyde. Mr. WATSON has made a very liberal offer of his farm in fee simple, free, excepting a small yearly annuity to himself and wife during their life, and a committee has been appointed to carry the matter forward.

Now, Messrs. Editors, after such a development of some of the hidden resources of the retired town of Galen in the quiet county of Wayne, can you wonder that this very town has obtained your premium of the $30 Agricultural Library by the largest list of subscribers (some 389) to the Genesee Farmer? This fact has suggested to me my apology for the length of this communication. R. G. P.—*Palmyra, N. Y., July*, 1850.

SALT AS A MANURE—AGAIN.

THE PRESS, no doubt, is the greatest blessing human ingenuity has conferred upon our race. Man is, or ought to be a social being, and through the medium of your cheap and useful publication, Messrs. Editors, we can quickly convey to each other our ideas and sentiments. In the January number of this year, I gave my views, which are original, on *Salt, &c.* In the March number I am called upon to give a little more light on the subject. I think friend JEWETT does not read me correct, as he says I commenced by "putting on a small quantity of manure." I had not manured the land for four years, and then but very little. Again, I am called upon in the April number, by R. H. J. of Lockport, to give some further information on this subject. This friend has also mistaken the reading of the second article. I meant a peck of soaked corn over a two or three acre field, not a peck of arsenic. I am not a chemist; but, like R. H. J., wanted to know what effect mother earth would have on arsenic. I inquired of Professor DEWEY, who informed me that the earth would not destroy its poisonous qualities.

Since I published my views on salt and insects, I have met with two paragraphs which coincide with my views to a tittle. The first is the opinion of Professor AGASSIZ, on the multitudes of insects that infest the earth:

INSECT LIFE.—Professor AGASSIZ says, more than a life time would be necessary to enumerate the various species of insects, and describe their appearance. MEIGER, a German, collected and described 600 species of flies, which he collected in a district of ten miles circumference. There have been collected in Europe 27,000 species of insects preying on wheat. In Berlin two professors are engaged in collecting, observing, and describing insects and their habits, and already they have published five large volumes upon the insects which attack forest trees.

Only think of that, brother farmers, 27,000 different species of insects preying on wheat. This is a startling fact, and calls for the consideration of the best means for their destruction.

The following, on the use of *salt*, is from Bell's Messenger, (a London paper,) of May last:

The application of common salt as a manure produces this effect, in one mode, which is evidently double advantageous to the farmer. We allude to the destruction of insects, and the conversion of the substances of which they are composed into the food of vegetation. It is needless to enlarge upon the countless tribes of insects of all kinds, which tenant the farmers' lands, and prey upon their crops. It will be more useful on this occasion to direct our attention to the powerful action of common salt in effecting their destruction. In producing some fresh evidence of this fact, it will be well to remember that this important use of salt is not a recent discovery, for it is now sixteen years since we find inserted in a work on the uses of salt in agriculture, (Johnson on Salt,) reports from different counties, amply proving its powerful effect in the destruction, among other insects, of slugs and worms. There were, for instance, those of Mr. JACOB BUSK, of Ponsbourn Park, in Hertfordshire. His valuable experiments extended over some hundreds of acres of wheat. To use his own words—"In every situation, and at every time, the effect appeared equally beneficial."—The quantity per acre—"about four or five bushels, sown

out of a common seed shuttle." The period—"in the evening." The effect—"in the morning each throw may be distinguished by the quantity of slime and number of dead slugs lying on the ground. In some fields it has certainly been the means of preventing the destruction of the whole crop." In Oxfordshire again, "six bushels of salt per acre were applied by hand, in April, to a field of oats attacked by the slugs and worms, on the farm of Mr. John Slatter, of Draycote, near Oxford. The crop was completely saved by this application, although an adjoining field, not salted, was completely destroyed by this sort of vermin." It is ascertained that the salt readily penetrates sufficiently into the soil to destroy many of the insects in their cells. "Common salt," Professor Way observed some time since, "may be advantageously employed as a manure directly to the soil or it may be mixed with the dung heap. In the latter application of it, it must be borne in mind that, in large quantities, it is capable of suspending fermentation altogether, so that if the farmer wants his dung to heat well, he must be careful in the use of salt, but, in small quantity, during the fermentation, or in full supply to the manure a short time before its application to the land, salt is likely to be of great service. Not only does it render the ammoniacal compounds less volatile, but it is capable of destroying the germs of both vegetable and animal life, for there is little doubt that we too often introduce into the soil, with the manure, the weeds which choke and the insects which devour our crops. Salt will prevent all seeds from germinating when they are sufficiently saturated with a solution of it. No fear, however, need be entertained of its effect when the manure has been properly mixed with the soil; it is then too diluted to interfere with the germination of the turnip seed."

I am satisfied of the benefit of salt, and strongly recommend it to destroy insects; and I also believe in its fertilizing qualities. On fallow it should be used. I intend to try a single acre with three barrels. If I am spared, I intend, in a future number, to give some farther views on the efficacy of salt. The busy season coming on, at present forbids it. John Park.—*Gates, 7th mo.*, 1850.

Having observed in the Rochester American, last year, a statement, by John Park of Gates, of the favorable result of using salt on his land for wheat, and being favorably impressed by the beautiful brightness of the straw as well as the plumpness of the grain raised by him, I was induced to apply salt to a part of a field, on which I intended to sow wheat. The result is, you can discern to a shade where it was applied, by the superior brightness of the straw, as well as the larger sized heads, over the part of the field not salted. J. Chappell.—*New York Mills, Rochester, July* 18, 1850.

S. W.'S NOTES FOR THE MONTH.

Paine's Hydro-Electric Light.—Throw a pail of water on the glowing coals discharged from a cupola furnace, and a dull green flame will flash up from the decomposed water. I trust Paine can do no more than this towards illuminating the world with the elements of water alone. From his own tardy admission, it now appears that his *bright light* was only made by the aid of carbonaceous matter in the form of *spirits of turpentine*. All those who believe in God's provident wisdom, may now return to, if they have been jostled from, their faith, and believe that he has not placed so much carbonaceous matter in this world of ours, to remain unused,—fossil coal is still to be made a necessary article of fuel—the great cetaceous leviathan is still to give employment to our whaling fleets—the southron is to continue to convert his long leaved pine into spirits of turpentine—and the maker of alcohol may yet abstract from beverage, for the benefit of flame and Doctor Townsend's Sarsaparilla, as much corn whiskey as he pleases.

The Weather and the Crops.—Never, perhaps, in our rural annals, did vegetation ever progress faster than it has in Seneca county, since the 3d of June last. It would seem that heat and moisture has done the utmost to produce the greatest vegetable growth in a given time. It is now the 16th of July. A heavy crop of clover has already been secured. Our farmers are now cutting wheat; and all agree that this cereal will be an average crop in spite of the worm; Mediteranean wheat has invariably escaped the insect, and much of the early sowed bald, on warm and well tilled land, has got ahead of the fly, although much wheat in low places has been injured by it, and in some cases entirely destroyed. Indian corn, that great, unfailing *indigene* of our country, was hardly out of the ground on the 3d of June; now it is forming its green ears, in the full promise of early, luxuriant maturity.

Tile and Pipe Under-draining.—The advantage of under-draining, in enabling the wheat plant to outstrip its enemies, was never more apparent than it is this season; as every crop about to be taken from well drained fields, will suffer little diminution from either winter-killing or the *C. tritici;* while the weak rooted plants of wet places, give a stinted yield that will hardly remunerate the farmer for the seed and culture. B. F. Whartenby makes, at Waterloo, about 40,000,000 tile and pipes monthly, with the machine imported by President Delafield. For the benefit of distant farmers, I will here say, that machines from the same pattern, with improvements, are about to be made here at Purdie's foundry.

The great increase of our Agricultural Exports.—The export of our cotton has about doubled in the last eight years. In 1842 the total export of Indian corn from the United States to Great Britain, amounted only to 123,665 bushels; whereas, our export of the same article last year, to that kingdom alone, amounted to above twelve millions of bushels. Our export of provisions, including hams, lard, cheese, butter, &c., has increased in a much greater ratio. In 1842 our export of hams to England was only 160,271 lbs.; in 1849 the export of that article to Great Britain alone, was rising of fifty-three millions of pounds. British agriculture has been so long pampered and enervated by corn laws and protective duties, that the present competition from without causes loud complaint from both landlord and tenant. John Bull can beat Brother Jonathan at grumbling. Jonathan, instead of employing his time entirely in such an expedient for his bad luck, goes to work manfully with renewed energy, employs labor-saving tools and machinery, instead of supernumerary hands, sells off a part of his stud, and reduces his farm expenses. But John does nothing like this; he looks to a new ministry, and with it a return of that bounty on his products, or rather a tax on his neighbors, which he considers as his indefeasible right.

How to cure sick Peach Trees.—Dig away the soil from the tree, remove all excrescences, dead bark, &c., near the root, and destroy the worms; then fill the trench around the tree with water well saturated with hen dung or other nitrogenous manure: the liquid should be as warm as the atmosphere. Two or three applications of this kind in a week, will bring a healthy appearance to the foliage, almost immediately. *Waterloo, N. Y., July*, 1850.

PIGEON WEED, OR RED ROOT.

MESSRS. EDITORS:—I improve a moment to inquire of you what can be done with the destructive and noxious weed called the "Pigeon Weed," which is running us out in this section of the country. Some crops of our wheat are almost entirely run out by the weed. Some are on the eve of consideration, while others have come to the conclusion that they can not raise wheat unless there can be some remedy resorted to, which we are as yet unaware of. If the Editors of the Farmer can give us any information in regard to the above inquiry, it will be thankfully received through the Farmer. CHAS. W. HOBART.—*Yatesville, July*, 1850.

An excellent essay on Pigeon Weed, or Red Root, was written by CHAS. M. STARK of Yates county, and published in the N. Y. State Transactions for 1846. It was published in the February number of the Farmer of 1848. We think we could not better answer our correspondent than by copying a part of this essay:

"The first thing to be considered, is the fact that red root is a biennial plant that will not germinate to any great extent in the spring, it being its nature to come up in autumn, and can not therefore be eradicated without fall plowing. I would recommend the following practice: The first crop, wheat; the ground to be plowed but once, at least eight inches deep, which should be done in July, after which it should be thoroughly pulverized with a cultivator, to the depth of four inches. My reason for preparing the ground in this way, is this: the most of our land is seeded down after wheat, and of course receives its red root seeding at the same time; consequently a very large proportion of the seed lies near the surface. If this be turned under to the depth of eight inches, but a very small portion will germinate, and the wheat will be to a certain extent free from its pernicious presence; if plowed twice, the seeds are mostly thrown back to the surface, which is admirably adapted to the increase of the pigeon weed, while once plowing is found to be at least as good, and I believe decidedly better for the wheat. If it be possible, the red root should be pulled out of the wheat; but if the quantity be too great for this purpose, a more protracted effort must be made to destroy it.

"The wheat stubble should be plowed in the fall, just as deep as it was for the wheat, and well harrowed. In the spring the ground may be plowed, (as shallow as possible;) but I deem it decidedly better to use the large cultivator with steel teeth, as not one spear can escape if it is thoroughly cultivated, and the ground will be in better order for the crop, which may be barley, oats, or spring wheat; but in my opinion, should be peas. The ground should be again plowed and harrowed in the fall. In the spring let the operation with the cultivator be repeated, and the ground planted to corn. If this be placed three feet apart each way, and tilled with a cultivator, no weed of any kind need be grown among it. This crop should be planted as early as the season will admit, to give time for another plowing in the fall, when the ground should be harrowed as before. In the spring the same thorough use of the cultivator is necessary, and the land may be sown to barley, peas, or oats, which must be decided by the crop raised the second year. If peas, then barley or oats may follow; but in no case should the same crop be grown in the rotation. I think it the better way to sow flax for the seed, because I consider it as profitable as any other summer crop; and as the ground should now be seeded with timothy or clover, I believe flax is the best summer crop that grass seed can be sown with. Flax should be sown early; twelve quarts to the acre. I think this rotation must destroy the seed in the ground, as all that germinates in three successive years dies, without the possibility of leaving seed. If any yet remains in the earth, the quantity must be so small that it may be easily pulled. We might now sing a requiem over departed pigeon weed, and read the burial service over red root, were it not that, Phœnix like, there is vitality in its very ashes. Though death and decay may surround it, yet in its stone tenement it is safe, and with patience it awaits the day of its resurrection, which will as surely come as the manure is removed from the barn-yard to the field.

"The destruction of the seeds carried to the barn with the wheat, is the most difficult part of the subject; and in order to effect it, no pigeon weed must go into the barn; for if it be carried there, it will be taken back again, and no system of rotation or anything else will ever subdue it. I feel very diffident about advising any farmer to burn his straw; but in this case I think the benefit derived from the destruction of the seeds of this weed, would be at least an equivalent for the straw destroyed, (or rather decomposed; for nothing *can* be destroyed.) It is the decision of agricultural chemists, that a large proportion of wheat straw is taken from the atmosphere, and that every particle derived from the soil may be found in its ashes. As this has been proved by actual experiment, there can be no real loss by such a conflagration. The proper method is, to stack the wheat in the field, and as it is threshed burn the straw on as small a space as possible, as all the heat that can be obtained from it is necessary to destroy the vitality of the seeds of the pigeon weed. I believe it would be profitable in many cases, to mow the stubble and burn this also. The ashes should be gathered up and housed until they can be used in the compost heap, or otherwise returned to the soil. It may be thought that this system is too great a tax upon the land, there being no return made in manure; but this is a groundless objection: for any farmer, following the rotation, may apply artificial or barn-yard manure to either or all the crops raised, as his judgment may dictate. The soil will receive the manure made from the peas, oats, barley, and corn; and clover seed may be sown with either of these crops, except the last, and the clover plowed under in the fall, (a practice, by the bye, I would by no means recommend.)

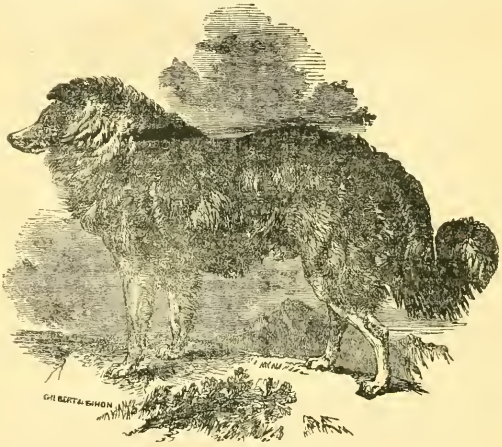
"The manure that has already accumulated in the barn-yard should be drawn out upon a sward, and the ground planted to corn, with the following rotation: 1st, corn; 2d, peas, barley, or oats; 3d, flax; 4th, wheat. The pigeon weed should be pulled from the wheat, if possible; if not, the first rotation may be applied after the ground has lain two years in clover.

"It should be borne in mind, that the presence of pigeon weed is a positive tax upon the farmer, and that every dollar successfully expended in its removal is to him an absolute gain."

In speaking of his efforts to destroy pigeon weed, CARLES HANFORD of Genesee county, writes—"I should be well paid for my trouble, if all farmers would either pull their red root at the time of blowing, or burn all they pull up, instead of placing it in the wagon-track of the road. When muddy, the the seed and mud cling to the wheels, shake off in the barn-yard, get with the manure, and then into the wheat-fields. It requires more labor to rid a farm of this weed than of Canada thistles."

THE SHEPHERD'S DOG, &c.

Years have passed over our head since in youthful glee we wandered among green pastures, admiring the flocks of sheep quietly feeding on the gentle slope, watching the gambols of the playful lambs, and the faithful dog obeying even the slightest motion of his master, and gently turning the flock when disposed to wander. It is "long, long ago," that under the shade of some white-thorn hedge or ancient oak, we listened to the shepherd's wonderful story of the sagacity of his favorite dog,—more pleasing than fairy tale, or even shepherd's lute. And yet these scenes have left their impress. The shepherd, with his dog quietly dozing by his side, and the flock peacefully grazing or listlessly reposing on the green, is to us the brightest, most beautiful picture of rural life. It is a picture of peace, and contentment, and affection. When the interest of the flock requires it, the shepherd makes known his wishes, and the dog is ever delighted to obey—ever ready to do his work with zeal and fidelity, and when done, lays himself down with evident and well expressed satisfaction, at his master's feet. The sheep obey the dog almost as readily as the dog obeys the shepherd, and seem to look to him as a protector. The shepherd loves his dog and his sheep, and the dog is equally attached to his master and his flock. The Almighty has chosen this beautiful scene to illustrate his love for his creatures, and his care over them. Modern customs and modern improvements may, in some respects, have changed the shepherd's life; but in our imagination, we must ever hold this picture of our early days as the POETRY of rural life.



THE SCOTCH SHEEP-DOG.

We might tell many facts illustrating the more than human sagacity of the shepherd's dog, but one or two will suffice, and we think will not fail to be interesting:

Mr. James Hogg, the Ettrick Shepherd, living in his early days among the sheep and their quadruped attendants, and an accurate observer of nature, as well as an exquisite poet, gives some anecdotes of the colley, (the Highland term for sheep dog,) with which the reader will not be displeased. "My dog, Sirrah," says he, in a letter to the Editor of Blackwood's Edinburgh Magazine, "was, beyond all comparison, the best dog I ever saw. He had a somewhat surly and unsocial temper, disdaining all flattery, and refusing to be caressed; but his attention to my commands and interest will never again be equalled by any of the canine race. When I first saw him a drover was leading him with a rope. He was both lean and hungry, and far from being a beautiful animal; for he was almost black, and had a grim face, striped with dark brown. I thought I perceived a sort of sullen intelligence in his countenance, notwithstanding his dejected and forlorn appearance, and I bought him. He was scarcely a year old, and knew so little of herding that he had never turned a sheep in his life; but, as soon as he discovered it was his duty to do so, and that it obliged me, I can never forget with what anxiety and eagerness he learned his different evolutions, and when I once made him understand a direction he never forgot or mistook it."

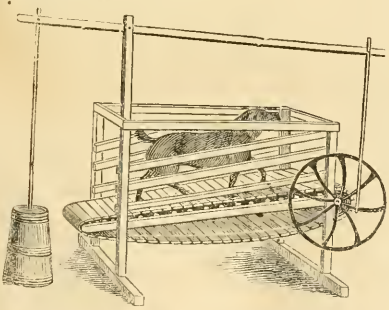
On one night, a large flock of lambs that were under the Ettrick Shepherd's care, frightened by something, scampered away in three different directions across the hills, in spite of all he could do to keep them together. "Sirrah," said the shepherd, "they 're a' awa!"

It was too dark for the dog and his master to see each other at any considerable distance, but Sirrah understood him, and set off after the fugitives. The night passed on, and Hogg and his assistant traversed every neighboring hill in anxious but fruitless search for the lambs; but he could hear nothing of them nor of the dog, and he was returning to his master with the doleful intelligence that he had lost all his lambs. "On our way home, however," says he, "we

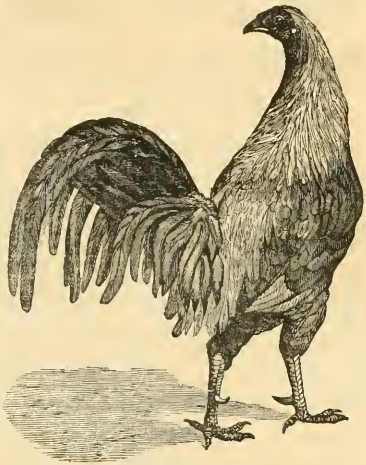
discovered a lot of lambs at the bottom of a deep ravine called the Flesh Cleuch, and the indefatigable Sirrah standing in front of them, looking round for some relief, but still true to his charge. We concluded that it was one of the divisions which Sirrah had been unable to manage, until he came to that commanding situation. But what was our astonishment when we discovered that not one lamb of the flock was missing! How he had got all the divisions collected in the dark, is beyond my comprehension. The charge was left entirely to himself from midnight until the rising sun; and if all the shepherds in the forest had been there to have assisted him, they could not have effected it with greater promptitude. All that I can say is, that I never felt so grateful to any creature under the sun as I did to my honest Sirrah that morning."

The New York State Agricultural Society offer a premium on the best well trained dog, at the next State Fair, and our reference to the subject now will be in season.

Mr. A. L. Bingham of Vermont, passed through this city with a drove of sheep last winter, and had a fine dog with him as an assistant, who [the dog] honored us with a call. We certainly appreciate the compliment, as we have a great respect for the useful portion of the race. But we have no regard for the hosts of lazy, worthless curs, that infest our cities and villages, eating up food that many half-starved children would consider a luxury, and making the night hideous with their yelping. We have a perfect hatred of all such. We have no particular love, either, for those little watery-eyed fellows that seem to be so peculiarly the favorites of some ladies. We know of nothing more disgusting than to see a lady carrying in her arms a little cur, wiping its eyes with her handkerchief, or purchasing cake from the stores and feeding it. Better had she take care of some poor woman's child, if she must have a pet, and give her pennies to brighten the eye and gladden the heart of the first bare-footed, disconsolate looking child she might meet in the street. Or, indeed, if the pet must be something other than human, why not take a nice little grunter of a week or so old?—what could make a prettier pet to be led by a riband or carried in a lady's arms?



We are glad to learn that Horace L. Emery of Albany, has devised a plan for giving useful employment to dogs, and of making many now useless of some advantage on the farm or the dairy. It consists of a dog-power for churning, as seen in the above engraving. This is constructed on the endless chain principle, with India rubber bands, instead of links, and is said to work admirably—some fifty having already been sold and tested this season. The manufacturer states that it is easily operated by a dog, sheep, or goat, and can be applied to any size or kind of churn. Attached to a Thermometer Compressing Churn, it makes a very complete and perfect churning apparatus. The power can be instantly applied to any size of the ordinary dash churn.



GAME FOWLS.

Messrs. Editors:—I have been much pleased with your remarks on fowls; but I have a kind that I think you have never described. They [a pair] were sent to me by a brother in New Jersey, some two years ago, as Game fowls. I didn't prize them much at first, as I supposed the Game fowls were principally valued for their fighting qualities; and as I love peace, and can not bear to see suffering, even in the meanest creature, I found it difficult to overcome my prejudice against what I had supposed to be the bullies of the poultry yard. But my prejudice is somewhat giving way. They are a very neat, pretty fowl, and not half so quarrelsome as I had supposed them to be. They show a disposition to fight when quite small chickens; but with a little care I manage them so that they seldom injure each other. The hens lay about as many eggs as our common breed, and they are the best mothers I ever saw. The old hen will defy man or beast that attempts to interfere with her brood. Some of my neighbors think my fowls are too peaceable for Game. What is your opinion? J. W.—*Erie Co., July*, 1850.

We give at the head of this article a portrait of a Game cock, from Browne's American Poultry Yard, which our correspondent can compare with his fowls. We have no doubt, from J. W.'s description, that he has the Game fowls—perhaps not in their purity,—but they show strong characteristics of the breed.

Horticultural Department.

EDITED BY P. BARRY.

STRAWBERRIES.

In the vicinity of all our large towns, at least, the cultivation of the strawberry is destined to be a most important branch of horticulture. Around this city, the crop of the past season has been immense. The number of varieties grown, and grown in perfection, has never been equalled here before, and perhaps never excelled anywhere. At our June exhibition, upwards of twenty-five varieties were exhibited, including all the best known sorts.

Burr's New Pine maintains its supremacy in flavor, and is beside a most abundant bearer — indeed, we consider it, taking all together, the best strawberry.

The *Swainstone Seedling* is equal in flavor, and quite as large, but is a poor bearer, and can not be recommended for general cultivation.

Burr's Columbus and *Rival Hudson* are both highly productive and fair sized varieties, but somewhat acid. On this account, however, they are not at all objectional to many people.

Burr's Scarlet Melting proves a most prolific bearer. We saw a bed of this variety in Bissell & Hooker's grounds, surpassing in fruitfulness any we have seen this season; but the fruit is so tender that it can not be cultivated for market.

Burr's Old Seedling is a good, productive, staminate sort.

Hovey's Seedling holds its place as the largest, and the crops here this season, in all the gardens, have been quite satisfactory—much better than they have ever been before. The flavor is but middling.

Boston Pine is exceedingly prolific, and of fine size, but flavor poor.

Black Prince has yielded most abundant crops of large, fine looking fruit, but in all cases exceedingly insipid. We see it stated to be the same thing at Cincinnati. At the Buffalo exhibition we found the specimens shown to be no better. We have heretofore found it much better; but it certainly can not be relied upon in this respect.

The *Crimson Cone* is a most abundant bearer every year here, and in appearance one of the most beautiful of all—of a regular conical, pine apple shape, and rich, shining, crimson color; distinguishable at a glance, among all other sorts. The flavor is medium —about the same as the *Large Early Scarlet*. We consider this a valuable variety.

British Queen is a most superb fruit, and the plant extremely rich and luxuriant in foliage; but the yield is quite inconsiderable, and it deserves a place only in the amateur's collection.

Jenny's Seedling is very large, and the plant of a vigorous and luxuriant habit. We have not seen enough of it to speak decidedly of its bearing qualities, but should think it will produce very moderately, and the flavor is but medium, or hardly that.

Princess Alice Maude has produced a good crop of large, fine looking, but very insipid and worthless fruit.

Deptford Pine the same.

Prolific Hautbois is a large, conical, pale colored, sweet and musky fruit that many people like, and an immense bearer. The plant is quite distinct in its appearance, and when in blossom, is highly ornamental. We consider that its distinct peculiarities of growth, flavor, &c., added to its productiveness, render it well worthy of cultivation.

The *Large Early Scarlet* and the *Red and White Monthly Alpines* are unfailing good bearers, and the latter especially fine flavored. There is no other variety we would recommend in preference to the *Large Early Scarlet*, as a staminate to fertilize the pistillate varieties, as it not only possesses an abundance of pollen, but is itself an excellent fruit.

The *Bishop's Orange* is also a good bearer, and a good fruit.

We give these brief notes, made from a careful examination of the fruits in various plantations. The attention that has been given the strawberry culture here for a few years past, by several zealous and well informed cultivators, has not only awakened the community to the importance of the subject, but has really given them such information—such examples — as can not fail to convince them that to raise strawberries with success, requires but the plainest and simplest course of management. There is no difficulty now in selecting varieties that, with good soil and good culture, will yield an ample return.

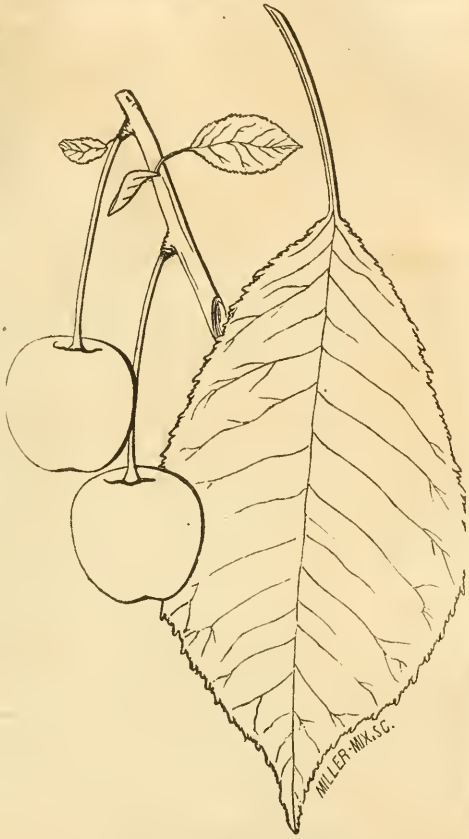
Good soil is a soil made deep by trenching or plowing. It should be at least a foot and a half deep, and so enriched with manures as to be in as good condition as a vegetable garden ought to be. *Good culture* consists in keeping the plants free from weeds and runners, and the ground mellow about the plants. *Showery weather* during this and next month, will be a good time for planting. The best way is in rows three feet apart, and the plants a foot apart in the rows. The preceding notes will be some guide to the inexperienced, in making selections. For a small collection, giving a reasonable variety, we can not do wrong, we think, in pointing out the following: *Staminates* — Large Early Scarlet, Boston Pine, Burr's Seedling, Swainstone Seedling. *Pistillates* — Burr's New Pine, Hovey's Seedling, Crimson Cone, Rival Hudson, Black Prince. And in addition to these, the *Prolific Hautbois* and the *Alpines*: both having perfect flowers, and not mixing with other varieties. For a very small collection, the two first of each staminate and pistillate. The *Alpines* we would cultivate, if none else, on account of their bearing so long and possessing such delicious flavor. But, few will agree with us, on account of their small size.

A correspondent writes us: "I have made up my mind this season, from my own observation and experience, that *Burr's New Pine Early Scarlet*, and *Hovey's Seedling*, are the three varieties for those who wish to cultivate but three sorts."

DUKE AND MORELLO CHERRIES.

These classes of cherries, as a general thing, are not cultivated in this country to any considerable extent The *May Duke* and *Belle de Choisy* are about the only sorts that seem to be considered worthy of cultivation, judging from the demand. The taste of our planters seems to run almost exclusively for rapid growers and large, sweet fruit. A large portion of the cherry trees that are planted through the country, are placed in door-yards, where they are made to serve the double purpose of shade and fruit trees. For such purposes, the rapid growing sorts, such as the *Hearts* and *Bigarreaus*, are alone suitable.

We apprehend, however, that in a short time these hardy sorts will receive much more attention, and be planted to a much greater extent than at present. Throughout nearly all the western and southwestern States, the free growers, or Heart cherries, are quite short lived; they are too delicate — their wood is too soft to endure the vicissitudes of the climate and seasons. So it is in the northern portions of this State, the eastern States, and Canada. The free growing cherries are too tender; and the consequence is, that in traveling through these regions, you will find nothing but the common *red*, or *pie* cherry; which is very late, and only fit for cooking. If we ask why the fine varieties are not cultivated, we are told that they will not endure the climate — Mr. So-and-so has tried them, without success. It is true that this *pie* cherry, as it is called, will bear the most abundant crops in all seasons, where such as the *Black Tartarian* or *Elton* could not survive a single season. But we must tell the people of these localities, that there are really fine sorts, to our taste superior even to the *Black Tartarian*, equally as hardy as the common red. Of such are the *May Duke*, *Belle de Choisy*, the *Carnation*, the *Belle Magnifique*, the *Morello*, and many others we might name. For small garden trees, these slow growers are much better adapted than the others — much easier managed; they are naturally more compact, may be planted close, and are easily protected from birds or insects. The two varieties noticed below, of recent introduction, may be added to the finest of these hardy, slow growing sorts.



REINE HORTENSE.

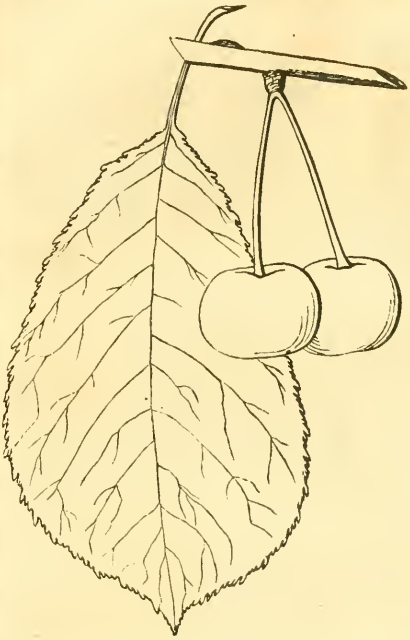
THE REINE HORTENSE CHERRY.

Synonyms — Monstreuse de Bavay. Lemercier, Belle de Bavay. &c.

This is an excellent French cherry of the Duke class, imported by us some three or four years ago. Mr. Bavay says it was found at his old residence at Vilvorde, in Belgium, and introduced by him in 1826, under the name of "*Monstreuse de Bavay*." The "*Bon Jardinier*" states that it was introduced in 1838, as *Reine Hortense*, by Mr. La Rose, a nurseryman of Neuilly, in France. The *Lemercier*, which we have imported, has also proved identical with it. The fruit is large, long, heart shaped, and bright red at maturity. Stalk an inch and a half to two inches long, rather slender. Flesh tender, juicy, sweet, and rich. The tree is a vigorous and handsome grower of the kind, resembling the *May Duke*, and it bears early. It is one of the very best for dwarfs or pyramids, that we know of, in the whole list cultivated. It appears to us that, if left entirely to themselves, they would make handsome pyramids, if worked on the mahaleb stock. Mr. Rivers, and indeed all who have tested it, pronounce it a *first rate variety*. We recommend it especially to those who are desirous of procuring small, garden cherry trees, that are easily managed.

DONNA MARIA CHERRY.

This is another French variety of recent introduction. Fruit medium size, round, flattened at both ends, light red until mature, when it is quite dark. Flesh soft, juicy, and acid; fit only for confectionary



DONNA MARIA.

purposes and preserving. Ripe middle of July. The tree is similar in growth and wood to the Morello—makes a nice prolific bush on the Mahaleb stock. We should not recommend it unless for a pretty large collection of this class of fruits, as it is inferior to several others ripening at the same time.

THE FIRE BLIGHT IN PEAR, APPLE, AND QUINCE.

A friend has favored us with a copy of the "Cayuga New Era," in which we find a communication stating that "it has been ascertained to a certainty, by a close observation and actual discovery, that what is usually termed the '*fire blight*' in these kind of trees, is caused by a very small white worm, about a quarter of an inch in length and not larger than a cambric needle. This, at least, is about the size of their growth at the present time. It commences at the tip ends of the branches and proceeds, generally, on one side of them only, between the outer bark and the wood, till, in the course of the season, it passes quite through the whole extent of the tree into the earth. The smaller branches soon wither and die, and the larger ones and the body of the tree become so despoiled of their bark as to fail sooner or later by decay, from exposure of the wood to the weather. The only effectual remedy is to cut off the tips of the branches as soon as any dry leaves appear."

We can only say that we have strong doubts about the correctness of the discovery. The blight seldom affects more than the ends of apple and quince shoots.

DR. KIRTLAND'S CHERRIES.—CLEVELAND.

During a recent visit to Cleveland, we had the pleasure of spending a few hours with the Doctor and Mr. Elliott, among the seedling cherries. It was on the 4th of July, and many were out of season; still, we found much that was new and interesting. To examine all the seedling cherries which the Doctor has already in bearing, would require a whole day. We observed *Kirtland's May* and *Rockport Biggareau* very fine; No. 10, a variety not yet named, rather better than any—a superb and delicious fruit; several black seedlings, from their season of maturity, texture, and flavor, promise to be valuable. The Doctor's grounds show that he is prosecuting his favorite pursuits with increased ardor; they are greatly improved since we last visited them, three years ago. We noted a great number of interesting and important experiments going forward, in hybridizing, manuring, &c., the results of which can not fail to subserve the interests of fruit culture in that region and elsewhere.

We have to thank Mr. Elliott for his company and kind attention. We found him in his new house, (for the design of which he was awarded the premium of our State Society,) his office filled with cherries, of which he was making notes and comparisons that we shall one day hear from, no doubt.

Cleveland is a charming city. In tasteful and beautiful dwellings and gardens, she eclipses any city of the same size we know of. The Horticultural Society holds weekly exhibitions during all the fruit and flower season, and is quite well attended and doing great good. No premiums are awarded, and therefore they create no jealousy, as among certain small hearted people elsewhere. We suggest this mode to young societies with small means. Dispense *totally* with premiums; they are only "bones of contention."

We forgot to add, in speaking of Dr. Kirtland's cherries, that we have had the *Cleveland Biggareau* and *Rockport* bear here, and they fully meet our expectations. No. 10 has also borne, and is by far the best cherry. All who have seen it here or at Cleveland, pronounce it one of the best, if not *the best* of all.

CHERRIES.

The cherry crop in this vicinity has been remarkably abundant. We have noticed a remarkable partiality among people generally, for black cherries. The dealers say that they can sell a bushell of *Black Tartarians* at two shillings per quart, before they could sell a quart of such as *Belle de Choisey*, or *Downer's*, or any other light cherry, at six pence. The bulk of our city people know so little about cherries, that they imagine all *red* cherries to be unripe and sour.

Burr's Seedling Cherry.—We are indebted to Zera Burr, Esq., of Perrinton, for fine specimens of this variety, on the branch—both beautiful and excellent. We have had it in bearing on our own grounds, and it even exceeds our expectations. It is not surpassed in all fine qualities of growth, bearing, and delicacy of flavor, by any of the light colored, tender cherries. It is truly an acquisition. Mr. Burr exhibited an early black cherry, that promises well.

HORTICULTURAL EXHIBITIONS.

The Society of the Genesee Valley held its first exhibition of the season on the 26th of June. Strawberries and roses were the great leading articles that absorbed all attention. The collections of strawberries comprised over twenty-five varieties, all well grown and fine of the sorts. We have never seen an exhibition of the kind to equal it. In roses the exhibition was equally fine — over two hundred varieties were shown, many rare and new, and including about fifty varieties of the Hybrid Perpetuals. Beside the roses, there was a fair display of other flowers of the season, boquets, &c., making in all a very pretty exhibition, highly creditable to those at least who took a part in it.

BUFFALO HORTICULTURAL SOCIETY.

This Society held its first exhibition of the season at McArthur's Garden, on the 2d of July, Lewis Eaton, Esq., President. We spent an hour in the room, and was delighted as well with the active and persevering spirit of the officers and a few members of the Society, as by the display of articles on the tables. There was a very creditable display of strawberries and flowers, arranged in the best taste. Mr. Tyler and Mr. Westfall, florists, contributed largely to the interest of the show, with their collections of fine pot plants. Mr. Westfall had some charming spotted seedling calceolaries, the greatest novelty in the room.

The ladies had so intermingled the dishes of strawberries with the boquets, for the purpose of effect, that we found it difficult to make such note of them as we wished. On such occasions the fruits should always be arranged by themselves, to facilitate that examination and comparison which it is the object of the Society to afford.

ALBANY AND RENSSELAER HORT. SOCIETY.

This Society has already held three exhibitions this season — the first, June 18; the second, June 27; and the third, July 10. We have not seen a report of the first, but the other two have been kindly sent us by B. P. Johnson, Esq.

At the meeting of the 25th June there was a fine show of strawberries; the report says it embraced "nearly every variety considered by pomologists as worthy of cultivation." Luther Tucker, Esq., presented twenty-three varieties. A premium was awarded to *Burr's New Pine* as the *best and finest flavored variety*, and to *Hovey's Seedling* as the second best.

At the meeting of July 10th, cherries, gooseberries, and currants, were the main objects. *Black Tartarian* was awarded the premium as the best cherry, *Sheba Queen* the best gooseberry, *Knight's Sweet Red* the best currant, *Fastolff* the best raspberry. Of flowers there appears to have been a fine display at all the meetings. At the last the following gentlemen were chosen delegates to represent the Society in the American Pomological Congress, the next session of which is to convene in Cincinnati in September next, viz:

From the county of Albany, Joel Rathbone, Dr. Herman Wendell, B. P. Johnson, Ezra P. Prentice, James Wilson, Sanford Howard, and E. H. St. John. From the county of Rensselaer, V. P. Douw, D. Thomas Vail, B. B. Kirtlandt, S. E. Warren, Amos Briggs, William Newcomb, and William Buswell.

OSWEGO HORTICULTURAL SOCIETY.

An exhibition was given by this Society on the 10th of June. We should judge from the reports of the Committees, that the display was quite creditable. A large variety of Cherries were shown, as well as Gooseberries Currants, and Strawberries. The premiums are awarded to individuals without stating which variety of fruit entitled the exhibitor to the premium. This destroys one of the benefits of horticultural exhibitions, and deprives us of the opinions of our Oswego friends of the comparative value of the different varieties. The display of flowers must have been very fine. We count over forty contributors of flowers, mostly ladies.

NIAGARA COUNTY HORTICULTURAL SOCIETY.

We note the organization of this neighboring Society with much pleasure. Niagara is one of the finest counties in the State for horticultural purposes, and this Society, if liberally sustained, can not fail to be eminently useful in diffusing knowledge and taste. Its first exhibition, on the 7th of July, has passed off, according to all accounts, much to its credit and to the gratification of those who witnessed it. N. B. Rogers, Esq., is the President.

AMERICAN POMOLOGICAL CONGRESS.

We solicit the attention of all Societies and individuals interested in pomology, to the following circular, issued by the officers of the Pomological Congress:

In conformity with the Resolutions passed at the last session of this National Institution, its next meeting will be held in the city of Cincinnati, Ohio, on the 11th, 12th, and 13th days of September next, A. D. 1850.

The Ohio State Board of Agriculture, and the Cincinnati Horticultural Society will also hold their annual exhibitions at the same time and place, and the latter have generously offered to provide for the accommodation of the Congress.

All *Agricultural, Horticultural, Pomological,* and *kindred societies* in the United States and the Canadas, are hereby respectfully invited to send such number of Delegates as they may deem expedient.

In order to facilitate the objects of this Association, to promote Pomology and the sciences on which it depends, to collect and diffuse a knowledge of researches and discoveries in this important department, delegates are requested to bring with them specimens of the fruits of their respective districts, with lists of the same, and also papers descriptive of their art of cultivation, of diseases and insects injurious to vegetation, of remedies for the same, and whatever will add to the interest and utility of the Convention.

Packages of Fruit not accompanied by their proprietors, may be addressed to the care of Messrs. John F. Dair & Co., Lower Market street, Cincinnati, Ohio. These should be very distinctly marked, "For the American Pomological Congress."

All Societies to be represented in this Congress, will please forward certificates of the election of their several Delegations, to J. B. Russell, Esq., Corresponding Secretary of the Cincinnati Horticultural Society. Delegates will also report themselves at the Burnet House, on the morning of the 11th, where a Committee will be in attendance to take charge of their Fruits, and whence the Congress will proceed to the hall assigned for its meetings.

MARSALL P. WILDER, *President.*

S. B. Parsons, P. Barry, Geo. W. Deacon, } *Secretaries.*

July 4, 1850.

New Potatoes.—Fine ones were exibited in the Horticultural Society's show-case in Rochester, on the 13th of July, by John Donnellan, of Hanford's Landing.

ANSWERS TO CORRESPONDENTS.

P. Barry—*Dear Sir:*—Being an admirer of the Spiræa family of shrubs, I take an interest in every word said in their praise. I am confident few genuses of hardy plants add more to the sublimity of our lawns, shrubberies, and borders. I am familiar with all the most esteemed species, and with *lanceolata*, of which you gave an engraving in the July number of the Farmer. I also know *ulmifolia* as an herbaceous perennial variety, the description of which corresponds with yours, except being an herbaceous perennial instead of a *shrub*. I will describe the herbaceous *ulmifolia*, and give you the year of introduction :—Color of flower, white ; time of flowering, 6th month ; native of Caniola ; introduced the year 1790. I have searched all botanical works of the latest dates, and got up by the first authors, for a shrubby *Spiræa ulmifolia*, and can not find anything said or quoted of such a shrub. Please inform me, through the pages you edit, if the *ulmifolia* of which you gave an engraving, is new, and where it came from, and when. I am desirous of knowing, having nearly all the most desirable *Spiræas* under cultivation, and will have the *ulmifolia* you describe, if *distinct*. C. J. Ryan. —*Rochester and Charlotte Plank Road Nurseries, July*, 1850.

We are quite astonished at you, friend Ryan. Why didn't you search among other "botanical works of the latest date," Loudon's *Encyclopedia of Plants*, his "*Arboretum Brittanicum*," or the *Bon Jardinier*; any, or all of them, will tell you about the *Spiræa ulmifolia*. But, pray, in what work have you seen the account of the herbaceous species ? or have you seen the plant ?

.....

Mr. Editor :—In reading your excellent paper, I found a recommendation to raise dwarf fruit trees, especially pears. Do you dwarf apple trees also ? If so, will you please give some of your friends in a new country, where quince tress and fruit of all kinds are scarce, some information as to the manner of obtaining them ? In so doing, you will very much oblige a number of the readers of your paper. D. Woods.—*Woods' Corners, Hills. Co., Mich., June*, 1850.

The quince stocks suitable for dwarfing the pear on, can be obtained from the nurseries. The apple, for *pyramids*, is worked on a species of apple called the *Doucain;* and for *dwarfs*, on the *Paradise:* both of which can be procured at nurseries where trees of this character are grown. These stocks are mostly imported from Europe, by our nurserymen ; but when a stock is once obtained, they may be increased by layering.

.....

(A Young Subscriber.) The time for grafting is March and April. You can bud through August and part of September. You can dwarf the *apple* by grafting or budding on the *Paradise* stock, the *pear* on the *quince* stock, the *cherry* on the *mahaleb* stock, the *apricot* and *peach* on a slow growing *plum* stock. Clear fruit trees from moss, as recommended by Mr. Stone, in this paper — lice, by washing with a solution of soft soap and tobacco ; either dip the ends of the shoots mostly affected in the wash, or throw it on in the morning or evening, with a syringe. The *birch* can not be used as a stock for fruit trees. Use free stocks for standards and those above named for dwarfs. Cut out the black spots on apple trees. to the sound wood and bark, and the parts will soon heal over at this season.

.....

(A Young Gardener.) To destroy the aphis, or green louse — pour boiling water on tobacco ; when the strength of the tobacco is extracted, add soft soap, and treat your trees as recommended in the above article The black slug that is doing your pear and cherry trees ao much injury, you might have very easily destroyed by sprinkling dry ashes or lime on them.

MOSS AND ROUGH BARK ON TREES

All are perhaps ready to agree with me, that moss and rough bark are heavy drawbacks on the apple tree. We will first consider the cause, second the effect, and then the remedy. The center of vitality in the stem or trunk of a tree, is in the line of demarkation between the bark and wood ; and it recedes from that point both to the center of the wood and to the surface of the bark, until in old trees dead wood can be found in the center, and dead bark on the surface. By a law of nature, when life ceases to hold organized matter, dissolution and decay follows. It then becomes food for other organizations, and thus never ending changes are going on. Moss is a kind of parasite that grows from the dead bark, and is supported by the decayed matter of the dead bark and also by drafts of sap from the live bark. Thus the moss steals, as it were the *life blood* of the tree, and it loses its healthy appearance, and its fruit is lessened both in quality and quantity. Moss and rough bark are also places of deposit for insects, in which their eggs are deposited. They also hold water for days after rainy weather, and by its gradual evaporation keep the temperature of the tree too low for a cold climate.

As a remedy, use a scraper first, and then, on young trees whose heads are not sufficiently developed to shade the stem or trunk, use whitewash, which will reflect the heat and relieve it from the extreme heat of a summer sun ; but on large trees. soad suds, ashes and water, or lye, is preferable. In washing young trees, lye should not be too strong ; otherwise, unless it is washed off or put on immediately before a brisk shower, there is danger of injuring them.

In order that these hints may be put in practice, and that good may be the sequel, I will cite the reader to his own observation. Show me a mossy, rough barked orchard, that yields a fair return of good fruit, and I will show you a *phenomenon*. Archibald Stone.—*Hinmanville, April*, 1850.

A CURIOSITY

Messrs. Editors :—As I was gathering apples in the fall of 1848, I came to a large Greening tree, and the next tree south of it was a Russet. I put my ladder against a large limb of the Greening, that projected toward the Russet, and ascended, and found a branch containing eight or ten Greenings, large and fair, and one apple about two-thirds as large, covered with russet. I cut the branch off and showed it to two men who were present. Had it fallen to the ground before discovered, every one would have said it grew upon the other tree. I did not taste it, as one present said he would carry it home as a curiosity. If it was not fertilized by the other tree, what was the cause ? I saw several others that had round spots of russet, some as large as a ten cent piece. A. W.—*Marcellus, N. Y.*, 1850.

Were it not for the confidence with which A. W. makes his statement, we should be inclined to think the russet apple came from the russet tree, or that this apple had only the russety appearance common to a greening grown in the sun..—Ed.

Remove the surface of the ground before watering trees or plants, then water thoroughly, and when the water has disappeared, return the earth.

Ladies' Department.

We really don't know what we should do without our Ladies' Department. It is our flower garden — a summer-house in a shady nook. Here we retire from our cares and labors to hold converse with the fairest and best, for our mutual benefit Here we are confined by no arbitrary rules — to no particular subject. We gossip about matters and things in general, always, however, aiming to unite pleasure and profit. Within the border of this page we allow no critics or grumblers to enter; they may look in, if they choose, and admire our fine gardens, inhale the fragrance of our flowers, listen to our conversation about equestrian excursions at sun-rise, but they can go no farther. It is sacred to ourselves and the ladies. We always give the ladies an opportunity to talk first, having something to say ourselves to fill up time, and make things pass off pleasantly. "Mignonette" has a word to say on Early Rising:

Messrs. Editors:—Will you be so kind as to allow me the privilege of saying a few words about early rising, to the young ladies who read your columns. From my own experience I consider early rising to be almost a virtue. Nearly every person of remarkable longevity on record has testified to the habitual observance of this practice; and it was no doubt designed by God himself, as one of the preventives of disease and mortality. Then there is so much pleasure to be enjoyed in the morning—pleasure of the truest kind, peculiar to this season of the day, whether we employ our time either in bodily or mental recreation. During these beautiful summer mornings, while the leaves are glistening with dew, and the flowers are emitting their delicious fragrance, and the sweet little birds are making the air vocal with their delightful music, the very consciousness of life seems a luxury. I have a cousin, Emma, who had formerly not been guilty of rising till the sun had made quite a respectable angle with the horizon. After some teasing, I persuaded her to rise one morning at four o'clock, and take a jaunt upon horseback. At a quarter past four we started up Main street. It was as lovely a morning as I ever beheld.

"From fleecy clouds of pearly hue
Had dropt a short but balmy shower
That hung like gems of morning dew
On ev'ry tree and ev'ry flower."

The air seemed to be actually filled with music, issuing from little tiny throats; the new mown clover sent up a sweet fragrance like incense to the skies — indeed, it seemed as if the whole earth was one magnificent temple, where God's creation were praising him for his beneficence. "Well, really, this is the most lovely ride I ever enjoyed," cried Emma, her eyes as bright as two diamonds, and her cheeks glowing from exercise. "I am sure, now I have found out how to enjoy so much pleasure, Prince will have to trot out oftener than usual." I will say here that this resolution has been kept pretty well ever since. We trotted along by Clover street seminary, our tongues in the mean time keeping up quite a lively rattle about this bird and that, this pretty wild flower and yonder towering tree, till we came to the road that leads to the city by Monroe street, where we turned about and began to beat a retreat. Before this time people were moving about quite briskly—milk-maids carrying into the house pails almost overflowing with their snow-white treasure — boys were turning the grindstones while the men held the scythes, sharpening them before commencing their daily toil — children feeding the hens and chickens, — and the whole together forming a peaceful, picturesque scene, worthy of a painter's genius or a poet's verse. Thus we jaunted along until we reached the city's limits, passing along Monroe street, and just as we turned into Clinton street the bell tolled seven from St. Paul's tower, waking many, I have no doubt, from their protracted slumbers, who had thus lost the loveliest portion of the day. It has been said that "man is a bundle of habits," and we have it in our own power to establish such habits as shall promote our happiness and well being, or such as shall tend to sorrow and disease. Young persons may so accustom themselves to early rising as to cause it to become a practice which they will follow down to the latest period of their life. Mignonette.—*Rochester, July*, 1850.

Early rising would destroy about one-half the ills that flesh is heir to, and exercise in the open air nearly the other half. Both are connected. Many are so situated, that unless they rise early they have no opportunity for out-door exercise. In the summer season the noon-day sun is oppressive, and often injurious to those unused to bear the intensity of its direct rays. The birds then retire to the shady grove — they are not in your garden to welcome you with their songs. We rather think Mignonette and Emma had a good appetite for their breakfast. Too many get up at seven or eight o'clock, take breakfast almost immediately, and then wonder that they have no appetite.

There are some foolish men in the world, that prize women in proportion to their uselessness and ignorance. The less they know and the less they do — the nearer they arrive at the perfection of a doll — the better they are pleased. If a woman reads useful books, cultivates her mind, reasons and thinks for herself, she is a *blue-stocking*; if she takes an interest in the cultivation of fruits and flowers, and the products of the farm, the orchard, and the garden generally, she is unwomanly. But the number of such men is growing less, and their good or bad opinion was never worth a straw. We rejoice that there are hosts of women not afraid or ashamed to be useful. We have the names of many such on our books. The following is an extract of a letter from one in Michigan:

I will here say, as an apology for not enclosing subscription money as soon as it may be expected, that I receive but very little money on subscriptions; but being under the necessity of supplying my domestic affairs, indoors and out, I can get chopping or hoeing done in payment for the Farmer, and thus get subscribers when, if I required them to pay the money, I could not. R. E. P.

Our fair friend need make no excuses, as we feel proud of having her name on our books. We know of more than one lady taking active measures to increase the circulation of our journal; but taking pay for the Farmer in "hoeing" and "chopping," and sending us the cash, is something we were hardly expecting, and entitles the lady to our warmest thanks. It is facts like these, almost daily occurring, that render our duty pleasant. We have twenty thousand names on our books, that for intelligence — in short, for all that makes man great—we would place against any twenty thousand that could be selected in the universe. As we pass over their names month after month, and have communication with them through our paper and otherwise, they become associated with us as friends and acquaintances, from whom we hope never to part.

The following, though delayed a little, would never be out of season. It is just such a production as we might expect to originate at *Floral Cottage*, from one surrounded by "blossoming wreaths":

Messrs. Editors: — Summer has come. June, delightful June, with her blossoming wreath, is now the queen of the season; and her regal step, as she advances to resume her empire, is greeted by all. Walking out this morning in our "flower garden," my mind involuntarily recurred to your pithy sentiments, relative to your "*Floral Rake*," and I thought if you, in your liberality, would only favor me with one of those valuable appendages to a flower garden, I could certainly cultivate flowers with more ease, and to better advantage. Should you favor me with one of those rakes, I will esteem it as a token of generous friendship, to be prized by me as an appendage to my garden. I will use it with proper "intellectual" care, and pledge you a tasteful boquet in return. A Farmer's Wife.—*Floral Cottage, N. Y., June*, 1850.

Youths' Department.

DEATH OF THE PRESIDENT.

"I may have erred—but I have endeavored to do my duty."

It is not our duty to talk of politics or presidents. We have our sphere — to enlighten the minds of the agriculturists of the country — to teach them their high destiny — to teach them to love their profession as one of honor, a profession in which may be employed all the intellect, all the knowledge, that God has given or man acquired, — to teach this particularly to the young, too many of whom have been inclined to look with contempt upon what they call the "plodding" life of a farmer, and to rush into our cities, there to meet with difficulties they had not dreamed of, and temptations they are unprepared to meet. We endeavor to enforce the idea that it is fully as honorable—as intellectual—to cultivate the soil, and cause it to bring forth abundantly, as to measure calico, sell molasses, peddle pills and calomel, or superintend the quarrels and law suits of others. This we believe to be *our duty.*

But, the death of President Taylor, which has cast a gloom over our country, and caused even those unused to serious thought to think solemnly for once, furnishes a not unfitting occasion to say a word to the youth, on the proper aim of man. It is contained in the last words of our lamented President, at the head of this article — "I have endeavored to do my duty." It is not a lofty position, the posession of great power, the applaudits of millions, or the flattery of friends, that makes man *great*; but the *honest performance of duty,* in the sphere in which he moves, no matter how elevated or how humble that sphere. This it may be difficult for us now fully to realize; but when we stand, as did President Taylor when he uttered these words, upon the edge of an opening grave — the last spark of life almost extinguished—the last struggle almost over—we shall see the world, its duties, and objects, in a proper light — in a light reflected from the invisible world. If at that trying moment we derive consolation from a review of our past lives, it will not be from wealth or honors—not from great battles fought or glorious victories won,—but from the fact that we have faithfully and untiringly endeavored to do our duty.

THE ANALOGY BETWEEN ANIMAL AND VEGETABLE LIFE.—No. 2.

Carbonic acid, ammonia, and *water,* yield the elements from which are formed all the *organic* parts in the structure both of animals and plants. Certain *inorganic,* or *mineral* substances, are also required in both cases; as lime, to give solidity to the bones of an ox; and silica, or flint, to the stem of wheat. The process of digestion in an animal is analogous to that of appropriation and nourishment in a plant. To draw the comparison still closer and fix it in the mind, let us glance briefly at the organic substances found in vegetables, as *albumen, gum, sugar, gluten, woody fibre, fixed and volatile oils,* &c., and their corresponding substances in the animal economy:

1st. *Albumen,* which exists in nearly a pure form in the white of an egg, is found also in the almond and in the kernel of nuts. The juice of a West India plant *(Hibiscus esculentis)* contains liquid albumen in such quantities, that it is used as a substitute for the white of eggs in clarifying the juice of the sugar-cane. This substance is common in both animal and vegetable kingdoms, and may easily be distinguished by its property of coagulating, or becoming hard and permanently solid, by the action of moderate heat or of acids. It forms a constituent of the serum of blood, of several of the animal secretions, and, in a solid form, of some of the organized structure of the body. Its composition, from whatever source it is obtained, is carbon 52, hydrogen 7, oxygen 23, and nitrogen 15 parts, in every 100.

2d. Vegetable *gum* is analogous to animal *mucus.* Gum is the substance which exudes from certain trees. It appears in the form of a thick fluid, but soon hardens in the air, when it becomes nearly white and somewhat brittle. Its characteristic properties are, easy solubility in water and insolubility in alcohol. Its composition is, carbon 43, oxygen 51, hydrogen 6, in 100 parts; and all varieties are nutritious as food. *Mucus,* or the animal counterpart of gum, is a secretion found on the surface of the lining membrane of the intestines, and possesses the same characteristics and nearly the same composition. It may be obtained by evaporating the saliva to dryness, and is then similar to gum-arabic in appearance, but rather more opaque. The fluid found in the shell of an oyster, when evaporated, produces this substance.

3d. *Sugar* is essentially the same, whether derived from the maple tree, the cane, the beet, or the milk of animals. In the last named substance it constitutes about one-third of the whole solid matter. Its composition is nearly identical with that of gum.

4th. Let us compare vegetable *gluten* with animal *gelatin.* Gluten is one of the most nutritious of vegetable substances; and wheat owes its superiority to all other grains, in a great degree, to its containing this substance in larger proportion. It has a gray color, is elastic, ductile, and tenacious; soon decomposing when kept in contact with air, and emitting an offensive odor, similar to that of putrid animal matter. It is readily obtained from wheat or flour, through the agency of cold water and pressing out the starch. Gelatin is an animal substance nearly identical with gluten, which enters largely into the composition of bones, horns, hoofs, &c. Isinglass and glue are forms of gelatin: and when the lime is dissolved out of bones by means of sulphuric acid, this substance remains in nearly a pure state.

5th. *Woody fibre* is the substance remaining after a plant has been exhausted of all its soluble materials, by repeated boilings in water and alcohol. It resembles the animal substance called *fibrin,* which is the principal constituent of the muscular, red, or fleshy part of animals, and of blood. Fibrin is white and inodorus; and when dry, is hard, brittle, and slightly transparent. It may be procured by digesting small pieces of lean meat in repeated portions of water.

6th. The *fixed oils,* whether of animal or vegetable origin, have essentially the same composition.

The above are a few of the many organic substances, having a striking similarity in composition and properties, which are found in both the animal and vegetable kingdoms. The analogy might be carried to any extent, were it necessary to establish the identity of matter, the elements of which are chiefly furnished by air and water, and are so arranged, or *organized,* as to form in the one case the root, sap vessels, bark, and leaves, of a tree; and in another the bones, blood vessels, skin, lungs, and muscles, of a man. F.

Editor's Table

We have many more articles on hand from correspondents than we can at present find room for. Our friends, however, must not be impatient, as we shall give them a place as soon and as fast as possible.

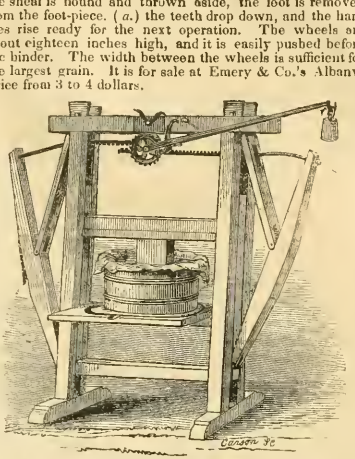
Mr. Sheafe's Sale of Short-Horns.—This stock is advertised on page 199 of this number, and also on this page, and the sale is to take place on Thursday, the 29th day of August. Mr. Sheafe has bred his stock with reference to their milking qualities. The editor of the Agriculturist says: "Cream Pot, one of the founders of this herd, gave, in her prime, and in the best of the season, 36 quarts of milk per day, which made at the rate of 18 lbs. 6 oz. of butter per week. Lucilla gave 29 quarts per day, and made 15 lbs. 3 oz. of butter per week. Celeste, Venus, Beauty, Phœbe, and Dahlia, gave from 25 to 33 quarts of milk per day; and their descendants, now principally forming the herd, are nearly as promising. The heifers and cows, from three years old and up, now give from 15 to 27 quarts of milk per day, in the best of their season. These quantities have not been guessed at, but were made subject to actual measurement in our presence." Mr. Allen, of New York, who has charge of the sale, in the absence of Mr. Sheafe, has furnished us in a letter with the following particulars, which will be interesting to many of our readers:

The stock will be tied up and arranged according to the numbers in the Catalogue the day before the sale, and on sale's day. Thus, every one will be able to examine them to their entire satisfaction. When the sale commences an ample ring will be staked out and roped. Into this circle each animal will be brought when it is put up for sale and walked round for inspection. As all persons will be kept outside of the ropes, this again will give every one present an opportunity of close examination. If there be any unsoundness or vice in any animal, on sale's day the public will be informed of it. It is my intention that every thing shall be conducted in the most honorable manner; and in doing this, I am happy to add, I shall be only carrying out the express wishes of the owner of the herd.

New Hamburgh is on the east side of the Hudson River, eight miles above Newburgh, and about the same distance below Poughkeepsie. It can be reached by railroad from opposite the former place, or directly from the latter, in fifteen minutes. It is only two or three hours distant from New York by railroad, and four to five hours from Albany by steamboat and railroad. Several trips per day are made to each at from 85 cts. to $1.

Improved Implements.—Nothing is of more importance to the farmer, than a knowledge of the improvements constantly making in implements, by which his labor is lessened, and his work better done. We present a few of the latest.

Grain Binder's Wheel Rake.—The above cut represents a labor and time-saving implement, used extensively in several States where it has been introduced. It is light, weighing about fifteen pounds. As represented in the engraving, the binder takes the handles and pushes it before him, with the points of the teeth or fingers close upon the ground, and when he has gathered on the fingers a sufficient quantity for binding into a sheaf, he places his foot upon the foot piece (*a.*) and by a slight pressure, and by letting go the handles, the fingers and grain are raised above the stubble, when it is readily bound, the binder being required to stoop much less than in the old way of reaching to the ground. When the sheaf is bound and thrown aside, the foot is removed from the foot-piece. (*a.*) the teeth drop down, and the handles rise ready for the next operation. The wheels are about eighteen inches high, and it is easily pushed before the binder. The width between the wheels is sufficient for the largest grain. It is for sale at Emery & Co.'s Albany. Price from 3 to 4 dollars.

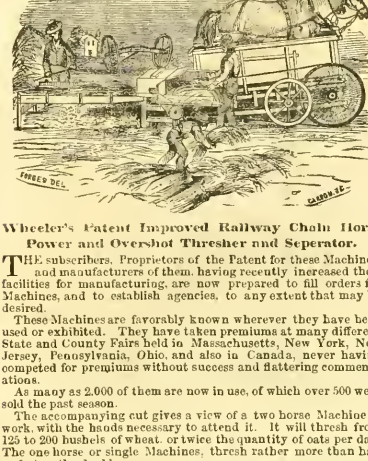


Kendall's Cheese Press.—The above cut represents an approved Cheese Press for which the New York State Ag. Society awarded the first premium in 1847, and is, we learn, generally used in the counties of Oneida, Herkimer, &c., in this State. Its construction is a combination of levers working together, and so arranged as to give any desired amount of pressure. A suspended weight of twenty pounds being sufficient to give a pressure of ten tons. They can be had of Emery & Co., of Albany. Price $15.

Milking Machine.—The papers at the east are talking about a Gutta Percha Milking Machine, which is applied to the cow's teat without pain or injury to the animal, and causes the milk to flow in a steady stream, until all is drawn from the bag.

State Fairs for 1850.—State Fairs for the present year will be held as follows

New York—at Albany, Sept. 3, 4, 5, and 6.
Maryland—at Baltimore, Oct. 23, 24, and 25.
Ohio—at Cincinnati, Sept. 11, 12, and 13.
Michigan—at Ann Arbor, Sept. 25, 26, and 27.
New Hampshire—first week in October.
Upper Canada—at Niagara, Sept. 18, 19, 20.



Wheeler's Patent Improved Railway Chain Horse Power and Overshot Thresher and Seperator.

THE subscribers, Proprietors of the Patent for these Machines, and manufacturers of them, having recently increased their facilities for manufacturing, are now prepared to fill orders for Machines, and to establish agencies, to any extent that may be desired.

These Machines are favorably known wherever they have been used or exhibited. They have taken premiums at many different State and County Fairs held in Massachusetts, New York, New Jersey, Pennsylvania, Ohio, and also in Canada, never having competed for premiums without success and flattering commendations.

As many as 2,000 of them are now in use, of which over 500 were sold the past season.

The accompanying cut gives a view of a two horse Machine at work, with the hands necessary to attend it. It will thresh from 125 to 200 bushels of wheat, or twice the quantity of oats per day. The one horse or single Machines, thresh rather more than half as fast as the double ones.

These Horse Powers are strong and durable, and run extremely light. With one end of the power slightly elevated (as represented in the annexed cut) *the weight of the horse alone* affords sufficient power to thresh at the rate before stated or to drive circular and upright saws, or any other machines used by farmers, requiring propelling power.

THE OVERSHOT THRESHER

takes the grain from a level feeding table or apron of a proper height to allow the feeder to stand erect and feed without annoyance from dust,) and passes it through a toothed or spiked concave or bed, placed over the cylinder. A recent improvement admits of lowering the concave so as to bring it nearer the cylinder, and at the same time so varying the inclination of the spikes as to set the machine for threshing tough or damp grain or short oats, and re-setting it at pleasure, for long rye or wheat or oats in good order or for timothy grass or clover; and all this is accomplished without stopping the Machine, so simple is the process. By means of the Separator, the straw, as it comes from the Thresher, is effectually separated from the grain.

The *Power, Thresher and Separator*, complete, for either one or two horses, is easily loaded on a common farm wagon; but where frequent moving is desired, the two horse machines are placed on wheels in such a manner that when used for threshing, the forward wheels are removed, dropping that end of the power, and leaving the opposite end elevated on the other axle, ready to receive the horses. By this arrangement, (which has been made for the convenience of those who make threshing a business, and for partnership machines,) two men can with ease set a two horse machine ready for work in fifteen minutes, and re-load it for moving in the same time.

W. M. & Co., also manufacture Stalk, Hay, and Straw Cutters, to be used with their horse powers; and also Circular Saws, and Benches, for cutting ordinary fire wood, and locomotive and other fuel.

Every machine made or sold by W. M. & Co., or their agents, is WARRANTED to work to the satisfaction of the purchaser, or it may be returned to them, or to the Agent of whom it may have been purchased, within sixty days, and the purchase money [if paid] will be refunded.

These machines are so light, compact, and easily handled, as to admit of transportation to any part of the country with trifling expense. The weight of the two horse machine, complete, being less than 2,000 lbs., and of the one horse, about 1,200.

The manufacturers are now establishing agencies in all parts of the United States and Canada, where they are needed to facilitate the sale of these machines. Good agents are wanted in the South ern and Western States and the Canadas, to whom liberal commissions will be allowed.

Our agents, as far as definitely ascertained, are—Rapalje & Briggs, Rochester; T. C. Peters & Brother, Buffalo; Peter R. Sleight, Esq., Poughkeepsie; F. F. Parker & Brother, Detroit; John Melick, Trenton, N. J.; John Bowsfield, Kirkland, Ohio; F. R. Elliot, Cleveland, Ohio; Janes Williams, Bakers Town, Allegany Co., Pa.; Spears, Case & Co., Delphi, Indiana; W. B. Arnold, Franklin Centre, Iowa; Ephraim Abbott, St. Louis, Mo. W. D. Bacon, Waukesha, is general agent for Wisconsin.

These machines may also be had of John Mayher & Co., New York city.

WHEELER, MELICK & CO.,
Hamilton st., corner of Liberty and Union sts., Albany, N. Y.; and Chicago, Illinois.
May 1, 1850.

Allen's Improved Portable Railroad Horse Power, Thresher, and Separator.

THE advantages of the above horse power, are—1. They occupy but little more space than a horse. 2. They can be moved by the weight of the horse only, by placing the machine at an angle of 10 or 15 degrees. 3 They are easily transported, simply constructed, not liable to get out of order, and move with little friction.

The Overshot Threshers consist of a small-spiked cylinder, with a concave top, and possesses these advantages. 1 They have a level table for feeding, thus enabling the tenders to stand erect, and control the motions of the horse and machine by means of a brake, by which accidents are avoided. 2 In consequence of the spikes lifting the straw and doing the work on the top, stones, blocks, &c., drop at the end of the table, and are not carried between the spikes. 3. The overshot cylinder does not scatter the grain but throws it within three feet of the machine. 4. This arrangement also admits of attaching a *separator* high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is long, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary threshers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder is fully made up by an increased number in the concave top, which is stationary. 7. The separator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men with a single power, can thresh 100 to 150 bushels of grain per day; and four men with a double power, twice that quantity. All the above are compact and can be carried where wanted, complete, or they may be readily taken apart and packed for distant transportation by wagon or otherwise.

Price of single Power,	$80
" " Thresher,	$28
" Seperator and fixtures,	$7
" Bands for driving, etc.,	$5
" Wood-sawing machine, complete, and in running order,	$35.
Price of Double Power,	$100
" with Thresher, Seperator, &c.,	$145 to $150

All the above are sold singly or together, as desired, and are warranted to work well and give satisfaction.

Also, Taplins 20 feet circular, and the Cast Iron Sweep Powers. Enquire at the New York Agricultural Warehouse and Seed Store of A. B. ALLEN & CO., 189 and 191 Water st., New York.

New Laws relating to Pensions and Bounty Lands,

OFFICERS and soldiers, their widows and children, of the Revolutionary war, war of 1812, and Mexican war, entitled to pensions, bounty lands, arrears of military pay, and extra pay, in certain cases.

The subscriber having devoted much of his time and attention for seven years past, to the investigation of claims before Congress and the several Departments at Washington, and having in his possession, and access to, a vast amount of old pay rolls, books, and documents, preserved from the service, affording proofs no where else to be found, he is prepared to aid vigorously and promptly, all persons who have claims against the General Government. Having a list of the names of all persons pensioned by the United States previous to 1824, he can give much information relating to such persons, which in many cases will enable their widows and children to obtain an increase of pension. Particular attention given to widows' claims which have been rejected.

He has also a list of the names of several thousand persons entitled to Bounty Lands, an object for many.

Children are entitled to both Pension and Land, where their father or mother was entitled, but omitted to establish their claims.

The subscriber has all the new laws, forms, and regulations from the Pension Office, and is enabled to prosecute claims without delay.

☞ No charge for Information or services, unless the claimant is benefitted.

All letters of application and inquiry will be promptly attended to, if addressed, post paid, to WILLIS G. WADE,
August, 1850. Rose, Wayne co., N Y

Miner's Bee Hive.

THIS beautiful and highly valuable practical Hive, is unsurpassed by any other in the United States. The Rights are in pamphlet form, with full engravings, and ample directions to make it. Price $2 only; sent by mail to any section of the country. This is positively the only Hive of *real* merit to be had.

Also, the AMERICAN BEE-KEEPER'S MANUAL, 350 pp., 35 fine engravings; the most popular work ever published on the culture of bees. Price $1; sent by mail also. Address to this office, *post-paid*.

Gen. Farmer Office, Rochester, June, 1850 [6-tf]

EMERY & CO.'S LATEST IMPROVED RAILROAD HORSE-POWER, OVERSHOT THRESHING MACHINES AND SEPARATORS.

THE above cut represents this most useful Machine,

☞ FOR WHICH PATENT HAS BEEN SECURED. ☜

with the *latest improvements*, embracing some of great importance, which have suggested themselves from time to time, as the various kinds made and sold by us have become used, worn, or failed.

The most important of these consists principally in the new mode of applying the power and motion from the endless platform to the shaft of the main driving pulley, and obtaining the necessary motion for the Overshot Threshing Machine without crossing of bands or intermediate gearing, and at the same time dispensing with the small pinions and cogs upon the links of the endless platform thereby combining *greater strength* and *durability* with *lighter friction*, without the liability of breakage of links, or the wearing of links and pinions, (no small item in the expense of repairs in most other kinds of powers in use.) The farmer or mechanic is enabled to perform a greater amount of work, and to operate them with less expense of power or elevation, as best suits his wishes.

Having been long engaged in the manufacture, introduction, sale, and use of various kinds of Horse-Powers for different purposes, and at all times adopted such improvements as from observation and experiments have seemed desirable and necessary, we feel confident that in this Power, as now manufactured, all that can be desired is found to a greater extent than any other heretofore sold by us, or with which we are acquainted.

They were introduced to some considerable extent last season, and wherever used side by side with the most approved Powers of other kinds, have given unqualified satisfaction and been preferred.

The overshot Thresher and vibrating Separator with improvements, have been sold with like success as the Powers. They admit of a level feeding table, thus avoiding accidents, which often occur with the inclined feeding board, by preventing hard substances, sticks, and stones, from getting into the machine and breaking spikes, endangering those engaged with them. The cylinder shaft (of cast steel) runs in bronze boxes, which are so made of two parts as easily to be adjusted when worn loose, and can with little trouble always be kept tight. The speed of the power is such that a larger pulley is used on the Thresher than on most others—driving stronger with less liability of slipping of bands, which are made of vulcanized India rubber. The Separator makes a complete separation of grain from straw, leaving it in best condition for Fan-mill, saving the labor of several men, and doing the work better

Fan-mills of various sizes, for hand, or fitted to be driven by the Power at same time of threshing. Also, Saw-mills in complete order.

The double Horse-Power is capable, with three or four men, of threshing from 125 to 200 bushels of wheat or rye, and the single one from 75 to 100 bushels, or double that quantity of oats, per day. They are warranted to perform as above, or may be returned to us, or our agents of whom purchased, within three months, and money refunded. They may be had in Rochester, Buffalo, or any of the principal ports on the lower and upper lakes, by adding transportation. Good agents will attend to the sale of them in those places The prices will be

For Single Power	$85
" Thresher and Separator	35
" Bands, Wrench, Oil Can, extra pieces	5—125
Sett Double Machines, complete,	150
Fan-mills, from	22 to 28
Saw-mill complete	35

We will also furnish "Wheeler's" Machines, latest improved—

Single sett complete	$120
Double Sett do.	145

Terms cash, or approved notes, or acceptances with interest. To good agents in new locations, liberal terms will be given. For further particulars, see new issue of Catalogue, or apply personally, or by letter, at the Albany Agricultural Works Warehouse & Seed Store, 369 and 371 Broadway, Albany, N. Y.

EMERY & CO.

CONTENTS OF THIS NUMBER.

HORTICULTURAL DEPARTMENT.

ILLUSTRATIONS.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE.

VOLUME XI. FOR 1850.

Fifty Cents a Year, in Advance.

FIVE Copies for $2. Eight Copies for $3, and any larger number at the same rate.

DANIEL LEE.
December, 1849. *Rochester, New York*

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—SEPTEMBER, 1850. NO. 9.

VIRGINIA LANDS AND FARMING

Every one who aspires to be an intelligent cultivator of the soil, should know something of the climate and agricultural capabilities of all of the great farming States of the Union. Among these—from its central position, its noble rivers, fine harbors, and being on the Atlantic — Virginia, which has been the mother of so many States, has peculiar claims to the study of every American. It contains 61,352 square miles, or within a fraction of 40,000,000 acres. Vessels drawing fifteen feet of water, come up the Potomac to Washington and Georgetown. Vessels of considerable tonnage are seen at the cities of Richmond and Petersburgh. The canals up the James and Potomac rivers are already completed far into the interior, and are still being extended. From steamboat navigation on the Ohio to Norfolk, through the James River canal, will be about 500 miles. Every body knows that Virginia lies in the valley of the Ohio, as well as on the Atlantic ocean. A loaded canal boat at Portsmouth, which is the southern terminus of the Ohio canal, is over 1000 miles from the city of New York, via Cleveland, Buffalo, and the Erie canal; and its cargo must be reshipped twice in crossing lake Erie. By ascending the Kanawha and descending the James rivers, in Virginia, the ocean is reached in half the distance, and without breaking bulk. This canal is not yet completed. The canal from Cumberland to Alexandria, in the District of Columbia, will be in operation all the way by the first of August.

There are several important lines of railway now being constructed in Virginia, to facilitate travel and the transportation of agricultural produce to tide water; but we need not stop to name them. It may not be amiss, however, to remark that Norfolk has one of the finest harbors in the world; and that the Potomac, up to Washington city, is more of a *bay* or arm of the Chesapeake, than a *river*. Tide rises and falls some four feet, and the river above the bridge is two miles wide. On the Virginia side of the Potomac is the farm of George Washington Parke Custis, the step-son and adopted child of the illustrious Pater Patriæ. This farm contains 1100 acres. We shall take another occasion to describe this fine estate and its farming operations. Its extensive meadows yield two tons of hay to the acre, an article which sells in Washington at from $15 to $20. Think of land within a few miles of the metropolis of the United States, (which is growing rapidly and must soon contain 100,000 inhabitants,) selling at from $7 to $12 an acre! Every acre of this land, with northern husbandry, will yield $30 worth of hay a year. The question may be asked why farming lands are so low in the "Ancient Dominion." This we will answer without fear or favor. according to our own views of the subject.

Forty years ago slaveholders in the State of New York had learned that negroes were worth more to grow tobacco in Virginia and Maryland, than to raise grain in the now Empire State. Obeying the laws of trade, thousands of slaves were carried south, and slaveholding ceased in New York and New Jersey. Now, two-thirds of the slaveholders of Virginia have learned that negroes are worth more to grow cotton, rice, and sugar, at the south, than tobacco and grain farther north. Obeying still the law of demand and supply, thousands of slaves are annually leaving Virginia, and migrating south to grow cotton, sugar, and rice, for the civilized world. Constantly hearing of the fortunes made in Georgia, Alabama, Mississippi, Louisiana, Florida, and Texas, the most enterprising planters of Virginia are leaving their partially exhausted estates for the El Dorado of a warmer climate, where slave labor is worth *two prices*. Can it be otherwise than that the millions of deserted acres in the Old Dominion should be offered to the enterprize of free labor at mere nominal prices?

If all the women in the world insist on having twice as many yards in each calico dress as formerly, and twice as many dresses in the course of a year, who, pray, but Virginia slaves, are to raise cotton enough to supply this incalculable demand? The cotton mills of England alone exported over thirteen hundred million yards of cotton cloth last year, and one hundred and fifty million pounds of cotton yarn. Let the men of fifty who read this article, call to mind how sparingly sugar was used when they were boys, and then reflect a moment on the way in which poor people, as well as rich, now consume this product of slave labor. So rapid has been the extension of commerce, and so great the improvements in the machinery for ginning and the manufacture of cotton, that the world wants, or affects to want a world of cotton fabrics. In short, the day is near at hand when all the slaves in this Republic will either cease to be bondmen, or be employed in the culture of the three great southern staples, cotton, sugar, and rice. Who, then, are to cultivate the northern slave-holding States? Who plant thousands of

wealth-giving orchards? Who grow wool and hemp, mules and horses, cattle and hogs, and make butter and cheese, wheat and corn, in the best climate in America? It will be freemen, happily exempt from all the peculiar cares and untold vexations incident to, and inseparable from, the relation of master and slave.

It is a great mistake to suppose that a farmer is thought the less of at the south, in any State, if perchance he tills his fields with his own hands. Mr. TOOMBS, a member of Congress from Georgia, and himself a wealthy planter, says that one-fourth of all the cotton grown in that State is planted, hoed, picked, ginned, and put up for market, by free white laborers. It is a law of Providence, and one not easily evaded anywhere, that man, whether bond or free, "shall eat bread in the sweat of his face." Citizens that care not to own slaves, but seek to realize an independent living by their own industry, or by hiring help, may do so in Virginia quite as well as in New York. As a general thing, the soil in the former State is not rich, but it is susceptible of easy improvement. It lacks lime more than any other element of crops. There are, however, extensive districts of fair wheat lands, and corn is grown in all parts of the State. Rotation of crops and the art of making money by the dairy business and wool-growing, are little thought of, and less practiced. The climate and the almost spontaneous growth of the best grasses, favor sheep-husbandry and stock-growing of all kinds. The finest sheep that we have ever seen are brought into Washington from Virginia. Col. WARE, of Clarke county, has left with the writer, in the Patent Office, samples of wool from an imported ram, which clips 18 lbs. of wool a year, and weighs 420 pounds. His fat wethers sell readily at from $25 to $35 a head. Being a gentleman of fortune, he buys, regardless of price, the prize rams and ewes at the Royal Agricultural Fair in England, nearly every year; and seeks mutton sheep and long, combing wool.

The demand for good roadsters, not race-horses, is most encouraging to the breeders of this noble animal.

To the man of small means, *fruit culture* promises the largest and surest profit. From the Potomac to the Rio Grande, the consumption of good apples will be limited only by the supply. Pears, peaches, grapes, quinces, plums, cherries, and berries of all kinds, are scarce and high.

The annual expenditure of several millions in this District, (Columbia) by the general government, and the drawing to a focus of so many gentlemen of wealth, and their families, from so vast an empire, operate greatly in favor of skilful farmers and gardners in this neighborhood. Both land and manure are cheap and abundant. It is said, (we know not with what truth,) that the one hundred square miles, or ten miles square, do not contain over one thousand slaves, and these are nearly all house-servants.

Instead of migrating to the far off outskirts of the Republic, her enterprising sons had better come and settle down near her pulsating heart, and reap all the advantages of the best markets on the continent. A thousand dairies can not supply butter and cheese to the cities of Baltimore, Washington, Alexandria, Georgetown, and to the planters engaged in growing tobacco and other crops. Why bring butter five hundred miles south, when it can be better made within an hour's drive of the consumer? We have seen better butter sold in Ohio at six cents a pound, than sells for thirty-one cents in Washington. On the 4th of July potatoes sell at a dollar and a half a bushel. In this climate they should be abundant at a third of the money, at this season of the year.—Garden vegetables are abundant, and generally good; but the supply does not last as skill in the keeping of them would effect, provided skill was possessed by the growers of these perishable commodities. How to keep potatoes, cabbage, beets, carrots, turnips, onions, apples and other fruit, is a science of great importance to all house-keepers. The warmer the climate, the greater the difficulty, and the larger the profit to those that study and master the art. It is knowledge, more than land, that we all lack; although we are apt to crave many acres, while we begrudge the appropriation of a few dollars to purchase the most useful books.

In Virginia, agricultural skill and rural science may command a liberal reward, because the field is large and the laborers few. Prejudice alone keeps honest, enterprising farmers of small means, from growing hay at fifteen dollars a ton on land worth from five to ten dollars an acre, which is now vacant. Potatoes and butter sell at three prices, because it is two small business for planters to produce them. Such defective tillage and husbandry can not long endure, and those that make judicous selections of land in Virginia now, may do better than the best did in New York forty years ago. Negroes are going where their labor is most profitable.

PATENT OFFICE REPORT. Part II.

CULTURE OF INDIAN CORN.—(ZEA MAYS.)

OF the whole family of cereals, *Zea Mays* is unquestionably the most valuable for cultivation in the United States. When the time shall come that population presses closely on the highest capabilities of American soil, this plant, which is a native of the New World, will be found greatly to excel all others in the quantity of bread, meat, milk, and butter which it will yield from an acre of land. With proper culture, it has no equal for the production of hay, in all cases where it is desirable to grow a large crop on a small surface.

The report of the Ohio Board of Agriculture for 1849, for a copy of which we are indebted to M. B. BATEHAM, Esq., editor of the Ohio Cultivator, contains many interesting statements in reference to corn culture, made by the officers of numerous county agricultural societies. In Miami county 2,030,670 bushels were grown, at an average yield of fifty-five bushels per acre. Three varieties are cultivated: the common gourd seed, for cattle; the yellow Kentucky, for hogs and distilling; and the white, for grinding and exportation. According to the returns from Greene county, which produced 1,250,000 bushels of corn in 1849, "a regular rotation of clover, corn, wheat, and clover again, is best for corn: and no crop pays better for extra culture." The Harrison County Agricultural Society reports the pork crop at 4,800,000 pounds; and it gave its first premium for corn to Mr. S. B. LUKENS, whose statement is as follows:

"The ground had been in meadow ten years; was plowed six inches deep about the middle of April: was harrowed twice over on the 9th May, and planted on the 11th, four feet by two feet. It came up well: was cultivated and thinned when ten inches high: three stalks were left in a hill. About two weeks

afterwards it was again cultivated, and the suckers pulled off. About the last of June it was again cultivated, making three times the same way, as it was laid off but one way.

Expense of culture, gathering, and cribbing, was	$17 10
Product 374¾ bushels, at 31½ cents	117 10
Profit on three acres,	$100 00"

The evidence on which a premium was awarded was such as should satisfy any one that three hundred and seventy-four bushels were grown on three acres of land, and at a cost not exceeding $17.10, delivered in the crib. This is producing corn at less than five cents a bushel.

Whether the statement be true to the letter or not it shows conclusively the great value of a *rich soil* for making cheap corn. The Board of Agriculture estimate the crop of Ohio last year at 70.000,000 of bushels. Taking the United States as a whole, probably the crop of corn was never better than in the year 1849. One that has rich land needs only to plow it deep and well, plant in season, and cultivate the earth properly with the plow or cultivator, to secure the growth of a generous crop. On poor soils the case is very different.

To raise a good crop of corn on poor land, and at the least possible expense, requires some science and much skill in the art of tillage. Take the same field to operate in. and one farmer will grow one hundred bushels of corn at half the cost per bushel that another will expend in labor, which is money. It unfortunately happens that very skillful farmers are few in number, in comparison with those who have failed to study and practice all attainable improvements. Men who can grow maize on common soil, place the crop in a crib at from six to ten cents a bushel, and pay a fair price for the labor, need not go to school to learn the practical part of corn culture. There are, however, five or six States in the Union in which this is done. Mr. LUKENS, of Ohio, has told how they do it in that State; and the practice is very similar elsewhere. To produce cheap corn on poor land, one needs a clear understanding of what elements of the crop air and water will furnish, and what they can not supply. It should be remembered that the atmosphere is precisely the same over ground which yields one hundred bushels of corn per acre that it is over that which produces only five bushels per acre. Now, the whole matter which forms the stems, leaves, roots, cobs, and seeds of corn, where the crop is one hundred bushels per acre, is not part and parcel of the soil. A harvest equal to fifty bushels per acre can be obtained without consuming over ten per cent. of earth, as compared with the weight of the crop. No plant can imbibe more of the substance of the soil in which it grows, than is dissolved in water or rendered gaseous by the decomposition of mold.

The quantity of matter dissolved, whether organic or inorganic, during the few weeks in which corn plants organize the bulk of their solids, is small. From 93 to 97 parts in 100 of the dry matter in a mature, perfect plant, including its seeds, cobs, stem, leaves, and roots, are carbon (charcoal) and the elements of water. It is not only an important, but an exceedingly instructive fact, that the most effective fertilizers known in agriculture are those that least abound in the elements of water and carbon. The unleached, dry excrements of dunghill fowls and pigeons have five times the fertilizing power on all cereal plants that the dry dung of a grass-fed cow has, although the latter has five times more carbon, oxygen, and hydrogen,* per 100 pounds, than the former. Although it is desirable to apply to the soil in which corn is to grow as much of organized carbon and water as one conveniently can; yet, where fertilizers have to be transported many miles, it is important to know that so much of the manure as would form *coal*, if carefully burnt, can best be spared. The same is true of those elements in manure which form vapor or water, when the fertilizer decomposes in the ground.

Carbonic acid and nascent hydrogen evolved in rotting stable manure are truly valuable food for plants, and perform important chemical offices in the soil; but they are, nevertheless, not so indispensable to the economical production of crops, as *available nitrogen, potash, silica, magnesia, sulphur, and phosphorus.* These elements of plants being less abundant in nature, and quite indispensable in forming corn, cotton, and every other product of the soil, their artificial supply in guano, nightsoil, and other highly concentrated fertilizers, adds immensely to the harvest, through the aid of a small weight of matter. If a moiety of the elements of bread and meat, milk, fruit, and garden vegetables, annually consumed by the twenty-two millions of people in the United States, and then thrown away, were judiciously applied to the produce of grain crops, the yearly profits accruing would be many millions. In all sections where corn is worth thirty cents, and over, a bushel, great benefits may be realized by the skillful manufacture and use of poudrette. This article is an inodorous compound of the most valuable constituents of human food and clothing. It is the raw material of crops.

It is not necessary to restore to a corn field all the matter removed in the crop to maintain its fertility. A part of each seed, however, ought to be carried back and replaced in the soil, to make good its loss by the harvest.

In every barrel of meal or flour sent to market (196 pounds) there are not far from 186 pounds of carbon (coal) and the elements of water. When a bird eats wheat or corn, I have reason to believe, from several experiments, that over 80 per cent. of the food escapes into the air through its capacious lungs in the process of respiration; and yet, the 20 per cent. of guano left will re-produce as much wheat or corn as was consumed. Imported guano which has been exposed to the weather for ages, often gives an increase in the crop of wheat equal to three pounds of seed to one of fertilizer; while it has given a gain of seven to one of corn, and fifty to one of green turneps.

Chemists have ascertained that the air expelled from the lungs of man and his domestic animals in breathing, contains 100 times more carbonic acid than it possessed when it entered the organs of respiration.

While carbon or coal in bread, meat, potatoes, grass, hay, and straw, consumed by warm-blooded animals, is constantly passing out of the system as carbonic acid gas, the elements of water (oxygen and hydrogen) are also escaping from the lungs in the form of vapor, which in cold weather is often visible. Over 50 per cent. of the solids consumed by

* Oxygen and hydrogen form water, or are its elements.

man and boast is thus thrown into the atmosphere by a slow, continuous combustion, which generates animal heat. These elements of the farmer's crops fall upon his cultivated fields in rain and dew. Hence, when a pig, or any other animal, eats 100 pounds of corn, and voids by the bowels and kidneys 40 pounds of the matter consumed, these 40 pounds will reproduce, and generally more than reproduce, 100 pounds of corn again. Even this 40 per cent. of the elements of corn may be reduced one-half by skillful fermentation, by which carbon and the elements of water are still further removed, and then reproduce an amount of grain equal to the original. The art and science of feeding cultivated plants being discussed at length in another place, the subject will not be pursued in this connexion.

I am indebted to the valuable work of Professor Emmons, published in two quarto volumes, entitled "Agriculture of New York," for the following and many other analyses contained in this report. The researches into the chemical composition of maize were performed by Mr. J. H. Salisbury, in the laboratory of Professor E., and were so thorough and extensive as to induce the New York State Agricultural Society to award a premium of $300 to Mr. S. His investigations fill two hundred pages in the transactions of that society for the year 1848.

A corn plant fifteen days after the seed was planted, cut on the 3d of June, close to the ground, gave of

Water,	89.626
Dry matter,	10.374
Ash,	1.354
Ash calculated dry,	13.053

By the above figures it will be seen that nearly 90 per cent. of the young plant is water; and that, in proportion to the dry matter, the amount of earthy minerals which remain as ash when the plant is burnt, is large. This excess of water continues for many weeks. Thus, on the 5th of July, thirty-three days from planting, the relations stood thus:

Water,	90.513
Dry matter,	9.482
Ash,	1.333
Ash calculated dry,	14.101

(Ash very saline.)

Before green, succulent food of this character is fit to give to cows, oxen, mules, or horses, it should be partly dried. Plants that contain from 70 to 75 per cent. of water need no curing before eaten. The young stalk, cut July 12, gave over 94 per cent. of water. Such food used for soiling without drying, would be likely to scour an animal, and give it the cholic. The root at this time (uly 12) gaJve of

Water,	81.026
Dry matter,	18.974
Ash,	2.222
Ash calculated dry,	11.711

(Ash tastes of caustic potash.)

Ash of the whole plant above ground, 6.77 grains. Amount of ash in all below ground, 3.93 grains.

So late as July 26, the proportion of water in the stalk was ninety-four per cent.; and the ash calculated dry, 17.66 per cent. The plant gained 2136.98 grains in weight in a week preceding the 6th of September. This was equal to a gain of 12.72 grains per hour.

The rapid growth of corn plants, when the heat, light, and moisture, as well as the soil, are favorable, is truly wonderful. A deep, rich, mellow soil, in which the roots can freely extend to a great distance in depth and laterally, is what the corn-grower should provide for this crop. The perviousness of river bottoms contributes largely to their productiveness of this cereal. A compact clay, which excludes alike air, water, and roots—forbidding all chemical changes—is not the soil for corn.

When farmers sell corn soon after it is ripe, there is considerable gain in not keeping it long to dry and shrink in weight. Corn grown by Mr. Salisbury, which was ripe by the 18th of October, then contained 37 per cent. of water, which is 25 per cent. more than old corn from the crib will yield. The mean of many experiments tried by the writer has been a loss of twenty per cent. in moisture between new and old corn. The butts of cornstalks contain the most water, and husks or shucks the least, when fully matured and not dried. The latter have about thirty per cent. of dry matter when chemically desiccated.

COMPOSITION OF THE ASH OF THE LEAVES AT DIFFERENT STAGES.

	July 19.	Aug. 2.	Aug. 23.	Aug. 30.	Oct. 18.
Carbonic acid,	5.40	2.850	0.65	3.50	4.050
Silica,	13.50	19.850	34.90	36.27	58.650
Sulphuric acid	2.16	1.995	4.92	5.84	4.881
Phosphates,	21.60	16.250	17.00	13.50	5.850
Lime,	.69	4.035	2.00	3.38	4.510
Magnesia,	.37	2.980	1.59	2.30	0.865
Potash,	9.98	11.675	10.85	9.15	7.333
Soda,	34.39	29.590	21.23	22.13	8.520
Chlorine,	4.55	6.020	3.06	1.63	2.664
Organic acids,	5.50	2.400	3.38	2.05	2.200
	98.14	97.750	98.187	99.83	99.334

The above figures disclose several interesting facts. It will be seen that the increase of silica or flint in the leaf is steadily progressive from 13.50 per cent. at July 19th, to 58.65 at October 18th.

Flint is substantially the *bone-earth* of all grasses. If one were to analyze the bones of a calf when a day old, again when thirty days of age, and when a year old, the increase of phosphate of lime in its skeleton would be similar to that witnessed in the leaves and stems of maize. In the early stages of the growth of corn, its leaves abound in phosphates; but after the seeds begin to form, the phosphates leave the tissues of the plant in other parts, and concentrate in and around the germs in the seeds. On the 23d of August, the ash of the whole stalk contained 19.50 per cent. of phosphates; and on the 18th of October, only 15.15 per cent. In forming the cobs of this plant, considerable potash is drawn from the stalk; as it decreases from 35.54 per cent. August 16, to 24.69 October 18. When the plant is growing fastest, its roots yield an ash which contains less than one per cent. of lime; but after this development is nearly completed, the roots retain, or perhaps regain from the plant above, over 4½ per cent. of this mineral. Soda figures as high as from 20 to 31 per cent. in the ash obtained from corn roots. Ripe seeds gave the following results on the analysis of their ash:

Silica,	0.850
Phosphoric acid,	49.210
Lime,	0.075
Magnesia,	17.600
Potash,	23.175
Soda	3.605
Sodium,	0.160
Chlorine,	0.295
Sulphuric acid,	0.515
Organic acids,	5.700
	99.175

The above table shows a smaller quantity of lime

than is usually found in the ash of this grain. It is, however, never so abundant as magnesia; and Prof. Emmons has shown that the best corn lands in the State of New York contain a considerable quantity of magnesia. All experience, as well as all chemical researches, go to prove that *potash* and phosphoric acid are important elements in the organization of maize. Corn yields more pounds of straw and grain on poor land than either wheat, rye, barley, or oats; and it does infinitely better on rich than on sterile soils. To make the earth fertile, it is better economy to plant thick than to have the rows five feet apart each way, as is customary in some of the southern States, and only one stalk in a hill. This gives but one plant to twenty-five square feet of ground. Instead of this, three square feet are sufficient for a single plant; and from that up to six, for the largest varieties of this crop.

Much has been written in the agricultural journals of the country on the propriety of thin and thick planting. Among the advocates of the latter system Dr. M. W. Philips, of Mississippi, has become conspicuous and is understood to be a successful grower of this great American staple. If one has not a deep, mellow soil on which to grow corn, it will pay well to form such a soil by deep plowing, turning in green crops, and draining, if necessary. Few farmers have ever made themselves rich by raising corn on poor land. There is vastly too much of unproductive soils plowed and hoed in the United States. This practice is bad economy; for it impoverishes the earth, without enriching either the agriculturist or the community. It is so much cheaper to grow 100 bushels of corn on two than on ten acres, that a general effort should be made to bring all corn lands up to the average of 50 bushels per acre.

A writer in the Maine Farmer estimates the quantity of southern and western corn annually imported into that State, for home consumption, at 3,000,000 of bushels. No other population three times as large out of the United States consumes an equal amount of American corn. Maine is a great ship-building and lumber-producing State, which makes her an excellent customer for the grain and meat-growing districts of the Union. The demand for ships, breadstuffs, provisions, ready-made houses, farm implements, and wearing apparel of every kind, for the California trade and market, is operating very sensibly on the agricultural interests of the country. The more its labor becomes diversified, the less danger there is of over-producing any one important crop like that of corn, cotton, or wheat. It will not do for the productive industry of five millions of agriculturists to be constantly employed on a few leading crops, unless the design is to give a great deal of work for a very little pay, and impoverish the land at the same time.

Calf Story again. — *Eds. Gen. Farmer:*—The calf noticed in your April number, weighing 150 lbs. when twelve hours old, was found to weigh, when two months old, 310 lbs. At four months old, his weight and measure were again taken, as follows: Weight, five hundred and eight pounds; height, four feet; girt, four feet seven inches; length from the horns to the root of the tail, five feet seven inches. He has the milk of one cow only, with pasture. His form as well as his size has been admired by numerous visitors, excelling any steer they have seen. M. Hutchinson.—*King's Ferry, N. Y.*, 1850.

SMUT IN WHEAT, AND THE CAUSE OF IT.

Messrs. Editors:—As you and your correspondents have all "spoken pretty freely" in regard to my theory as to the cause of smut in wheat, it may be expected that I would at least take a passing notice of your objections and theirs, and as my "Old Farmer" friend, of "Oaklands," comes first to bat, "fresh" with me, I will first pay my respects to his article, which being dated in March, must, I infer, have been written before the publication of the last part of my communication, which was not published until your April number came out. Not having seen the last or concluding part, I presume he had not an opportunity of drawing any fair "inferences" respecting the "soundness" of my philosophy in regard to this matter. Besides, as he says he has "never seen smut on his farm, except occasional ears of corn, or a few among his barley"—never in his wheat—I am at a loss how to account for his, as I think, rather positive assertions that smut in wheat "is a fungus, of the same nature as the mushroom"—that it "feeds on the juices of the plant, and destroys the structure of the grain to which it is attached." Has my friend had opportunities of examining it, personally, "under the lens of a microscope," by means of which he could fully ascertain and determine its vegetable character as a fungus plant? or has he based his assertions upon the phantastical imaginings of others, who, not having been practical farmers, probably had not even the limited opportunities and advantages possessed by my "Old Farmer" friend? But it appears to me that notwithstanding all his "sound philosophy" in regard to this matter, he is even doubtful as to the fact that "smut is a fungus;" for he says, "whatever may be the origin of this disease," &c. Now, if "we know it to be a fungus," it strikes me that there is really no propriety in saving "whatever" (or "be it this, or that," origin,) about it.

But let that pass; and allow me to ask my friend how he knows that this supposed "fungus" feeds on the juices of the plant? And if it does, how, or in what manner, (by simply "feeding on the juices," and only thereby diminishing the quantity,) it "destroys the structure of the grain, and changes it to smut?" My friend also says that "we can readily detect it as soon as it breaks forth from the sheath." I have examined a great number of heads immediately before, as well as immediately after, they "broke forth from the sheath;" but I was never able to detect smut until some time (several days) had elapsed after the head "broke forth"—sufficient time, at least, for *my bugs* (if you please) to have produced the effect which I charge upon them. In regard to some of my "Old Farmer" friend's "infallible remedies," he or I must be egregiously mistaken. I have tried very strong lime water as a remedy, by steeping my seed wheat in it twelve hours or more; and I know by experience, which I believe to be the best of teachers, that it did not prevent smut in the produce: nor did wetting the seed wheat and mixing it thoroughly with quick lime—having also tried that experiment. But if common salt brine is all-sufficient to destroy the seed of this villainous "fungus," why does my friend advise to "wash the seed first in pure water," and then "soak it in the brine?" These supposed remedial means may sometimes be serviceable by destroying the egg or maggot of the insect, contained in the smut grains in the seed, and thus (in cases where the insect does not come from

some other field or farm,) preventing, in whole or in part, the evil which would probably have occurred if the undestroyed eggs or maggots had been sown in the smut grains with the seed wheat. But, after the experience which I have had, it is not possible for me to believe that any remedial means, by washing, steeping, or other mode of preparing the seed wheat, will be found to be *infallible*.

Since the above was written, I have seen a second article from the pen of my "Old Farmer" friend, in which he appears to have made an attempt to account for the smut in wheat in a different manner from that contained in his first article. He now appears to be halting in a state of betweenity, or rather in a state of plurality, as not knowing which one of the many absurd theories published by the scores of very "scientific" authors who have *supposed* and *conjectured* in regard to this matter of smut in wheat. Sometimes appearing to be inclined to adopt one, and sometimes another, of those unfounded hypotheses, does he not involve himself in some degree of inconsistency when he says that "one characteristic (of the smut, as well as his other fungi plants,) is, that "they will not grow unless fed with *decaying animal* or *vegetable* matter." and afterwards gravely asks, "who shall say that *growing wheat* can not absorb through its pores or vessels, matter so minute that the unaided human eye can not detect it"? I understand him to say that "smut will not grow unless fed upon decaying matter." Does he mean to have it understood that he believes that smut finds "*decaying matter*" in "*growing wheat*," and that, too, as soon as the head breaks forth from the sheath? I should be much pleased if my "Old Farmer" friend would "define his position" more clearly, and let us know what he really believes to be the cause of smut in wheat.

In regard to the communication of "E. T.," of Batavia, I should not probably have thought the "game worth the candle," had he not, as I think, misrepresented me by saying that I "virtually admit that the grain has formed its shape" before it is changed to smut. If I understand myself rightly — and I think I do—no such admission can be found in my communication. In my third article I stated that the puncture by the insect "*probably* injures the small vessels which would otherwise supply the grains with their proper nourishment, (in whole or in part,) and causes an entire change in the substance of the grain." Also, that "my observations have convinced me that the change in the grain is produced after the earing or heading out, and *while the germ is expanding*," &c. I contend that even this language, fairly construed, would not lead one to suppose that I intended to convey the idea that the grain had "formed its shape," and that afterwards its substance was transmuted into something else; but that the puncture caused the change during the process of the formation of the substance of the grain. But if this language admits of doubt, yet in the latter part of my communication I stated the particular manner in which I supposed the insect produced the smut, as I thought, in perfectly clear and intelligent language. I refer him to that part, and request him to ferret out its meaning, if it is not so plain that "he that runs may read." "E. T." also objects to my theory because "he has never known the pea bug nor his [my] bug to change the pea or berry," &c. Is Mr. E. T. so conceited as to suppose that it is demonstrative proof that a thing is not done, or does not exist, because *he* did not know the fact? He asserts that "we farmers know that the grain of smut is globular." Now "I, for one," have not discovered that it is so; and, upon inquiry, I find that other farmers are as ignorant as I am in regard to the *globular* form of smut grains.

I confess, Messrs. Editors, that *after*, as well as before, I discovered the cause of smut, I did, in the simplicity of my heart, use means as preventive remedies; and it seems that "E. T.," after he supposed he had discovered the cause, was also green enough to use a preventive remedy in sowing only his first quality wheat. And I can not avoid the inference, that he must have been not a little verdant in forming and adopting the conclusion that the "*vitality*, not of the roots particularly, but of the *seed*, to be wanting sufficient to produce good wheat." Until I saw "E. T.'s" communication, I was not aware that seed which had lost, or was wanting in, its vitality, would grow at all; but we can not all see that a thing "looks very like a whale," although our friend may insist that it does. "E. T.," it would seem, was easily satisfied, having tried a single experiment only. But in his account of that, he has, I think, furnished almost irresistable proofs, corroborative of my theory. His third quality wheat being the latest sown, (for he says he "reserved an eighth of an acre to experiment on,") produced "nearly all smut and chess," with some heads with part smut and part wheat.

Now, if his theory be correct, this result seems to be (to say the least of it,) most marvelous, if not miraculous. His seed, which was "wanting in vitality sufficient to produce good wheat," did, however, *grow*, and produce good wheat, though of small size. But the want of vitality in the seed also produced heads with "part smut and part wheat!" This certainly appears to me to be one of the strangest freaks which nature ever indulged in. It surprises me to learn that seed "wanting *vitality* sufficient to produce good wheat," should *grow*, so as to produce smut or anything else. But I confess I should be much more astonished to learn that it would not only *grow*, but, by some "hocus pocus" operation, the sap, which I had always supposed circulated through the whole plant, like the blood in the human body, should so separate itself into parts as to make one grain *good* and another *bad*, in the same head! and that, too, in consequence of want of vitality *(life)* in the seed! is not all this theory an absurdity? I must conclude that it is, and rest upon my own, which I think rationally accounts for the difference in the produce of the same heads, as well as for the formation of good flour and smut in the same grain, or kernel.

Messrs. Editors, I do not wish you to "regret the necessity"(!) which required you to notice and dissent from my views. I have too long been searching for the *truth* in this matter, to be now afraid of finding it. If I am in error, I shall certainly be much pleased to be convinced of it. You admit that there are numerous instances where insects produce remarkable changes in the growth and appearance of plants. You also say that "smut is so well known to be a parasitic fungus, which will grow as well without a bug as peas and wheat—that it is as philosophical to say that a skipper in a cheese made the cheese, as to say that the egg or maggot of a weevil or 'beetle' produces the food on which it subsists." Now, gentlemen, will you be so kind as to enlighten

my benighted understanding, by informing me what relation all this parade of words of "a skipper in a cheese making the cheese," &c., has to anything *fairly* deducible from the premises laid down in my communication? Allow me to request that you will again, more carefully, read that part of my communication relating to this matter, on page 84, in your April number, and then I think you will not again be so mistaken as to accuse me of the absurdity of asserting, or even supposing, that the egg or maggot of any weevil or "beetle" produced the food on which it subsisted.

Now, gentlemen, allow me to ask by what means you know that "smut is well known to be a parasitic fungus"? Did you ever see it as a vegetable seed, even "through a glass, darkly"? Did you ever properly test its vegetative power by planting it with or without wheat? Have you ever *personally* known of an instance in which a "parasitic fungus" plant grew out of the *living matter* of another plant or tree? Or have you not relied on what others, like HENSLOW, have *supposed* and *conjectured?* If the latter, excuse me for disbelieving the correctness of the authorities.

Well, gentlemen, I admit that "man (sometimes) feeds on (filthy?) mushrooms;" but does he eat them raw, as nature made them? or does he not, like my smut bug, first prepare them for his use? But because "man feeds on mushrooms, and many insects devour parasitic plants, without being suspected of producing them," is it any, the least possible proof, that no insect prepares a nest for its young, and food for itself and offspring, by producing a change in the structure or organization of part of a plant, or tree? Do not the "oak-gall" insect, the "black-knot" insect (of the plum tree,) the honey bee, and many others, "too numerous to mention," by their "operations" produce changes in natural productions, to suit them to their uses and purposes? Indeed, I think you concede the point in admitting that "the instances are numerous where insects produce remarkable changes," &c. I ask, for what purpose do they do these things? For the mere pleasure of doing something remarkable? Or is it not more "philosophical" to suppose that they do these things to fit those natural productions for their uses as nests for their young, and food for their offspring and themselves? What inference do you draw from the facts admitted by you? If the same with myself, as I must suppose you do, why not permit my smut bug, which not only feeds on smut, but makes use of it as a nest and food for its offspring, to come in with those which you admit as "producing remarkable changes," &c.? If, however, my theory is unphilosophical, it appears to me to be infinitely less absurd than that which teaches that "a single smut ball contains some four millions of sporules, [seeds,] each one of which will doubtless grow and produce other millions, under favorable circumstances"!—Why, gentlemen, have you considered the fearful consequences of such a state of things—truly "important, if true"?. At this frightful rate of production, it appears to me that this terrific "parasitical fungus" would, in a very few years, smut all the wheat in creation; and totally deprive us of the largest and best portion of our natural bread food!—nay, it must long ago, inevitably, have produced that destructive result; not only in regard to wheat, but as to all the other grains which we use in making bread: for, as I understand the theory, each and every kind of those grains is liable to its attacks, in some form or other. No, no, gentlemen; there is quite too much of the marvelous about this fanciful scheme of nature's mysterious workings in extremely small things; and I can not but be surprised that any sensible, reflecting, practical man, should long believe in the truth of such fantastical freaks of the imagination; unless, indeed, like him who gave as a reason why he believed the story of Robinson Crusoe's adventures to be a true relation of facts, he supposes that "if it had not been *true*, it would not have been printed"!

To your correspondent JACOB LOOP, I will take the liberty of saying that I have been engaged in raising wheat as a staple crop nearly fifty years, and have tried many experiments with my seed wheat, by steeping and liming it; sowing very badly shrunk seed, (little heavier than chess;) and also as good, ripe, large, plump, and beautiful wheat as I think man ever saw: and yet the produce of the latter, as well as of the former, was smutty. I believe that if a grain of wheat has vitality sufficient to enable it to grow, it is probable that it will produce good wheat, though perhaps not as much in quantity as the largest, best, and ripest grain. My shrunk wheat grew; and I did not discover that there was any material difference in the product of that and the large, plump, and ripe seed. I have never used seed wheat that was not fully, or dead ripe; believing it to be more certain to grow than that which is unripe. J. H. H.

ELDER

IT is generally admitted, that leaves are to plants what lungs are to animals. I believe also they serve the purpose of organs of digestion. The analogy then, between plants and animals, would lead us to this conclusion, viz: that whatever mode of treatment would be fatal to one, would be fatal also to the other, and vice versa. As the vital energies of an animal are more active than those of a plant, the effect would be more immediate but not more certain. To destroy an animal it is only necessary to destroy the organs of respiration, or to prevent their action; to destroy a plant, do the same, and let the operation be continued inasmuch as the effect is more slow.

The following would be my method of killing "elders:" I would allow them to grow till about midsummer, but not later than till after flowering, or till the berries are partially grown. I consider the root to be at this time in its most enfeebled state, as the plant is now nearly done growing. Now let the bushes be mowed close to the ground; let them dry, and burn them on the spot where they grew. If any new shoots make their appearance, pull them up or cut them off. If any appear on the following spring, repeat the process, but remove them earlier, otherwise the root will acquire strength. I have little experience with elder, but I have some with other plants, and I know that there are few plants to which this treatment would not be fatal, if followed up. I am now experimenting on three of the most difficult subjects of the vegetable kingdom, and have little doubt of success. For a time the destruction of one shoot seemed only to prepare the way for a score of others; but they begin to hold up a little, and I expect soon to see them come up *weak and sickly*, as the root appears to be exhausting itself. If I succeed, I will give you the result. H.—*Down East, July*, 1850.

BEES.—No. 3.

HIVES, &c.—I have concluded to take up the *practical* part of my subject without further delay, as this part is of the most importance to the majority of bee-keepers; and if my remarks on this branch of bee-culture are not from necessity considerably extended, I shall resume my essays on the most interesting portions of the natural history of this insect, in a brief manner.

There is no greater error into which bee-keepers generally have fallen, than that of erroneous sized hives. Look where you will, you will in most cases find hives from the size of a box ten inches by twelve to three or four times that size. Again, the *shape* of hives is a matter of great importance. Long, narrow hives, never produce as much box, or surplus honey in the supers, or chambers, as those of a more shallow form: for the reason, that in long hives the bees meet with more obstructions in ascending, and they are often discouraged by the difficulties of forcing their way through some two feet of solid masses of bees, and refuse to work in the chambers at all. On the contrary, hives of about twelve inches in height, with a suitable breadth, give greater facilities for ascending; and more honey is generally stored in the chambers of such hives, than in longer ones. Hives without a *super*, (an upper section to receive surplus honey, free from bee-bread and brood, which being removed produces an annual profit without the loss of the bees,) I consider not worth discussing, and straw hives the worst of all. Bees will do very well frequently in such hives; but if one wishes to obtain a profit and save the lives of his bees, he must discard straw hives and those with no chambers. These hives are as much behind the age as the *wooden* plows of Mexico are behind our most improved patent ones now in use.

After we obtain hives of the right *size* and *shape*, the communication to the chamber is also most grossly mismanaged. Some people make a *single* hole in the center, about *one* inch in diameter! This is the extreme of folly. What man in his right mind, if he had several thousand men employed on a work extending one hundred rods, would cause them to pass through a single passage in the enclosure, with burdens from without, and then disperse to their respective locations of duty? Would he not open numerous ways of access along the whole front, that no hindrance may occur one to another in the pressure of the passage? Most certainly he would.—Now, bees are laborers in miniature, and in their labors require the aid of philosophy and reason to facilitate their operations. Instead of *one* hole, a half a dozen or more should always be made, of at least an inch and a quarter in diameter, or a single large round or square aperture, several inches in width, should be made. I recommend *nine* (inch and a quarter) holes, three in a row.

It may be said, without any fear of being in error, that a hive, the *lower* section of which shall contain more than two thousand cubic inches *in the clear*, is too large: and one with less than fifteen hundred, too small. About eighteen hundred cubic inches I consider should be the solid contents of hives; that is, the lower section, designed as the permanent abode of the bees. I have made them twelve inches square, and I have made them thirteen inches in diameter by eleven inches in height—*inside*, recollect; and for a northern latitude above the city of New York, the latter size is preferable. If you add an inch to these latter dimensions, you might not readily perceive the difference in your success; but in the long run there would be a considerable difference. The object of keeping bees generally, I take for granted, is for *profit*; and the hive that produces the most *swarms* and the most *surplus honey* in the supers, taking a series of years together, is the best without doubt. A hive of large dimensions will not throw off as many swarms as a smaller one, nor will there be as much honey stored in the super. This is a *settled* point; hence we must discard such hives. The queen requires a certain area to deposit her eggs in, and a hive of eighteen hundred solid inches is as near her requirements as can be set down as a general rule, always allowing for the few thick combs that may in some cases be used simply as *store combs*. These store combs, however, are not always constructed; and it would be better if we could adopt some plan to cause the bees to adhere wholly to the supers, as a depository of such combs: but we can not do this in all cases. If the hives be too small, the queen is limited in her labors—there is not so great an increase—not so many swarms—and not so much honey stored.

It is natural for an inexperienced bee-keeper to suppose that a large swarm requires a large hive, and a small one a small hive. This is erroneous. If we merely look to the first season only, it is partially correct; but we should take subsequent seasons into our calculation: and if we do this, we shall never vary the size of our hives, let our swarms be what they may. Even a double swarm, if I could not easily divide them, I should put into a usual sized hive; and if the bees found difficulty in laboring there, I would place a *nadir* under them: that is, a temporary box open at both ends. In the fall, the nadir may be removed by severing the combs with a fine wire drawn through them, when all the bees will be able to enter the hive proper. Supers may be as high as you please, and not interfere with any principle detrimental to the prosperity of the bees; but they should not contain more than one-half or two-thirds the number of cubic inches that the lower section does. If they do, the extra space will be useless. If your hives be from twelve to fifteen inches in diameter, nine or ten inches in height is enough, and of the same diameter as the lower section. Most chamber hives are made in one box the full length, the chamber being formed by a division at the proper distance from the top. One side of the chamber being open, it is closed by a door hung on small butts, with a hook or button to secure it when shut. One or two boxes are then placed in the chamber, with a pane of glass in front, or a small piece of glass only, say enough to cover a hole two inches in diameter, for the purpose of seeing when the boxes are filled. This kind of hive, if made of the proper dimensions, does very well: but they are not as convenient as those made in two distinct sections. The various styles and kinds of hives in use are numerous, and I shall endeavor to give the most of them as extended a notice as my limits will allow.

T. B. MINER,
Author of the American Bee-Keeper's Manual.

Clinton, Oneida Co., N. Y., 1850.

A FARMER should never be so immersed in political matters, as to forget to sow his wheat, dig his potatoes, and bank up his cellar.

DESTRUCTION OF INSECTS.—MOLES

MESSRS. EDITORS:—One of the greatest misfortunes to which mankind are subject, is the aversion to study and observation—an unwillingness to abandon old notions, and to learn from the experience of others. We cleave to our prejudices even when our judgment is convinced that we are wrong. It is true, a spirit of inquiry is awakened in some quarters, which augurs a better state of things; but it is equally true that the spirit of prejudice is dominant throughout the land, and is likely to continue, since those who most need light are least willing to receive it.

I have been led to these reflections from reading, in the Rural New-Yorker, an article on the subject of "Birds, Insects, &c.," (to which I propose to reply as soon as I shall have learned the fate of this,) and in the last number of the Farmer a few lines on the subject of "Destructive Insects." The *mole* I have always considered an inoffensive animal. I know he is sometimes accused of doing mischief, but I have no positive evidence of it, although I have been acquainted with him more or less, even from my boyhood. My father never encouraged the killing of the little *black coats*, although they sometimes "plowed his meadows;" for he observed that the meadows did not appear to be injured by the operation, but rather benefited.

I have read two short articles on the habits of the mole. The one was in an English publication, and is now mislaid. I will, however, give you the substance of it as I now recollect it. The writer remarks, that having a small piece of ground very much infested by moles, he was induced to investigate their habits. In the course of the investigation, while digging up the ground, he discovered their store-house. It consisted of a smooth cavity in the earth, filled mostly with *cut-worms* which had been stunned, but not killed, by being slightly wounded in the back of the neck. Whether this was their winter's store, or a supply for their young family, I do not now recollect. I only remember the fact.

The other article is also from an English writer, and being rather longer than I wish, I will abridge it, retaining the author's statements and, as far as possible, his language. "Some ten years ago," says the writer, "when I commenced cultivating the little land I now hold, it was full of wire-worms. My crops were greatly injured by them, and in some places entirely ruined. To remedy the evil, I encouraged *moles* and partridges on my land. Instead of killing the moles, I bought all I could and turned them out in my fields, which were soon, one after another, full of mole-hills, to the great amusement of my neighbors. My fields became like a honeycomb, even among my standing and ripening crops. The worms in my grounds are now all destroyed, and the moles, having nothing to eat, are obliged to emigrate to other lands, and thus get bowstringed by savage men whom they come to serve. The wire-worm is the chief food of the mole. If you doubt it, open the stomach of one, and see. It is a vulgar error to suppose that they root up young corn—they do not trouble it till the worm has first attacked it, and then are blamed for the crime of another. All summer partridges live upon insects, wire-worms, &c.; and consider how many millions a covey of them will destroy in a single summer." The inference from such facts is, that in consequence of our prejudices we are often unjust to animals, at our own cost. H.

Answers to Inquiries.

SCIENTIFIC FARMING.

MESSRS. EDITORS:—While perusing an article in your interesting and useful paper, headed, "A few Facts about Plants, Soils, and Animals," an idea occurred to my mind, by which you would confer an incalculable benefit on *one* of your readers, if not on all, by presenting in the columns of your paper, a table showing the *food* necessary to the production of the different grains, grasses, and vegetables, cultivated by farmers generally in this latitude. By food I mean the different elementary bodies used by the Creator in feeding and forming vegetable and animal substances. The time has arrived when it is as much a sin and disgrace for a farmer to grow poor, sickly, spindling crops, as it is to have his animals in such a deplorable condition; and, for one, I want to know what to feed my crops as well as I know how to feed my horses, cows, and sheep. It is but lately that I became a reader of your valuable sheet; but I would not do without the monthly feast that I draw from its pages for ten times its cost. If you consider this request (for I will present it as one) worthy of your attention, you will satisfy the desire of an inquirer after scientific knowledge, by preparing a table as above spoken of. HENRY D. HOBBS.—*Carlton, Orl. Co., N. Y., July*, 1850.

THE varied and profound science of agriculture is not to be communicated, nor learned so readily, as our esteemed correspondent appears to believe quite practicable. If he is familiar with the principles of chemistry in its application to tillage and farm economy, he possesses great advantages for making rapid progress in the useful art of feeding cultivated plants. But if the language of chemistry, geology, vegetable and animal physiology, is to him an unknown tongue, it will be difficult for us to make him understand the science of rural economy by any short-hand tables which can be published. We will, however, do our best to facilitate his study of a noble profession, which embraces the most sublime truths in the mineral, vegetable, and animal kingdoms. These kingdoms, in the providence of God, meet, mingle, and blend harmoniously together, on the surface of our planet, and not elsewhere above or below its surface.

The matter which forms all rocks, soils, mold, plants, animals, air, and water, is ever governed by immutable laws. As our knowledge of these wise and never-changing laws extends, our control over the material elements that surround us, and feed and clothe our bodies, increases in a geometrical ratio.

Has HENRY D. fully considered the fact that the same sunshine, atmosphere, frost, rain, dew, and snow, fall upon an acre of land that yields but six bushels of corn per acre, as fall upon one which produces a crop of sixty bushels? This is a fact of great significance in the science of agriculture. It admonishes the husbandman not to depend too much on the resources of air, water, solar heat, and light; while he should carefully avoid the opposite extreme, in studying the pasture of cultivated plants. The economical improvement of this pasture will be promoted by investigating the origin of a rich vegetable mold, the consumption of which is the first labor of a thoughtless farmer. A good mold is one that abounds in the elements of wheat, oats, peas, and beans. It differs from poor mold in containing more nitrogen, potash, phosphorus, and sulphur, than the latter possesses. The cheap production of a deep, rich soil, on a surface naturally sterile, is the point aimed at by our correspondent, when he talks about "the food of grain, grass, roots," &c. He delights in seeing fat crops and generous harvests; and the growing of such is the true road to agricultural independence.

We have said that a rich mold abounds in nitrogen, which is the base of ammonia, and an important element in both bread and meat. One hundred pounds of dry, lean meat, in the carcass of a dead horse, will yield fifteen pounds of nitrogen, and of course form an exceedingly rich mold. A like weight of wheat will yield two and a half pounds of nitrogen; and therefore, in comparison with the stems, leaves, roots, and solid wood of most plants, will also form a rich mold. One hundred pounds of wheat straw contains but a third of a pound of nitrogen: hence, if it could all be transformed, it would take seven pounds of straw to make one of wheat, and forty-five to form one of horse flesh. But there are worse plants for making rich mold, or the flesh of animals, than wheat straw. Dry water-rotted hemp stalks, and pine saw dust will form poor mold and poorer horse feed.

Clover, peas, and corn, are among the best plants for producing a valuable mass of organic matter in the soil for future use. But suppose one's land is "clover sick:" what then is his remedy? If plaster fails to bring clover, and wood ashes and bones are not to be had, he must try timothy, rye, peas, or buckwheat. With the aid of lime he may probably grow grass and make manure, which will give him corn and other grain. Deep and thorough tillage increases the available food of plants, more than any other one thing of equal expense. The sub-soil is full of genuine manure, if you only make it as fine as the earth in an onion-bed. Deep plowing and liming have cured many a clover sick field in England; and they will do as much in this country. Making meat and saving manure have done much to renovate poor lands. We know several large farmers who grow peas and oats to be eaten by hogs in the field just before they are fairly ripe. All the straw and manure being left on the ground, it is enriched and prepared for wheat, corn or clover. Many injure their farms by making haste to become rich — running their fields closer than their stock of fertilizers will warrant. Such men should read more and labor less. A person is seldom worse employed than when impoverishing the earth.

DRAINING.—PROFITS OF POULTRY, &c.

Eds. Gen. Farmer:—I became a subscriber to your valuable paper at the commencement of the present volume, and seeing your manifest willingness to answer questions, I venture to ask a few. I have only a small farm — about thirty acres improved, or rather worn out. It lies across a ridge, the southern extremity reaching into a deep swamp. The soil is gravelly. The water from this swamp reservoir, which has a very imperfect outlet, leeches its way through this ridge, and bubbles up clear and cold through all the land below the ridge. You know the effect of this.

I can content myself no longer to go upon the old principle — do as father did, — but intend to make my few acres produce as much as the same amount of labor I perform can draw from double the number of acres, and by so doing recommend your paper to my neighbors. But to the question—whether to ditch this land below the ridge, by cutting a ditch below and parallel to it, and thence convey it away through covered channels; or cut through the ridge, and drain the swamp. In order to do the latter, the ditch would require to be only about six feet deep for a distance of about fifty rods, to bring it where the ditch would be run across by the former plan, the remainder of the distance would require a depth sufficient to make the land dry below the reach of roots. To me the draining of the swamp would be of little advantage, as I have but two or three acres of the land, and that I do not wish to clear; neither does the swamp make it sickly, as might be expected.

Another question, with regard to keeping hens. I am tired of having hens run at large; they scratch up the seeds I sow, unless I cover them with brush; and they eat up my strawberries, to say nothing of the damage done to field crops. I want a supply of eggs for a large family. Now, the question is, whether I can afford to build a suitable place for them, barely to supply my own family, better than to pay 8 to 12½ cents per dozen for eggs. If so, will a space 12 by 70 feet, on the west side of barn and sheds, with the upper part of sheds for roosts and nests, be sufficient room for fifteen or twenty? And is there any way to keep them from eating their eggs but by being too spry for them?

If you will have patience to read and answer these inquiries, you will oblige a subscriber; if not, I shall not be disheartened, but experiment for myself.

I will say a few words here, about what I have done and intend to do on my farm. The first step I took in the way of reform, was to build good, substantial fences. Compared with the generality of farms, mine is well fenced — corners staked. This relieves me entirely from anxiety about intruders. I have nearly cleared my fields, and now I am ready to lay my ditches straight, and my furrows straight, and double their former depth. This last is necessary through all this section.

I anticipate being able to send you a respectable list of names for your next volume, and prove myself yours, truly. George T. Cook.—*Madison, Ohio, July*, 1851.

We should think it very advisable to drain the swamp, as you last propose; and as you own but a part of it, perhaps you could get your neighbor or neighbors whose land would be benefitted, by it, to assist in the work. Individuals whose farms adjoin, might often engage together in the work of draining, to their mutual advantage. But we doubt whether this would entirely remedy the evil you complain of, and we would advise you, by all means, to drain directly that part of your land where the water "bubbles up clear and cold." This should be done by covered drains. Various plans of forming covered drains we have given in previous volumes of the Farmer; but if Mr. C., or any of our readers need more information than they now possess, on the various modes of forming under-drains, we will give it with pleasure.

We don't wonder that our correspondent is tired of having his hens run at large, scratching up his seeds and eating his strawberries. We got tired of it a long time ago. There is no doubt but every farmer can afford to build a suitable house and yard for his chickens. (We gave a very good plan for a cheap house, in the April number.) To be sure, if he should charge the hens every quart of grain they eat, and credit them with the eggs at about eight cents a dozen, the account might not show much of a balance in their favor; but then there is a satisfaction in having every thing around you, needed for family use. You are always sure of having your eggs fresh, and never have the unpleasant query arise in your mind, as you break an egg at the breakfast table, whether you are to have an egg or a chicken for breakfast. On a farm, too, there is always refuse grain, not marketable, that will keep the chickens needed to furnish eggs for a family. There is another consideration, too, of importance, and we fear generally forgotten; and that is, the value of the manure. It is the most valuable manure — almost equal to guano. We always think the manure pays us for the grain consumed, to be used in our flower and vegetable garden; and we get the eggs for the trouble of taking care of the fowls. This is the way we reckon the profit and loss.

The yard you speak of will be large enough; but if you could build it on the east or south end of your sheds, it would be less exposed to storms. If you are "*spry*" enough to keep your hens from eating their eggs, you will have to be "*spry*" indeed.

Hens often eat their eggs before they leave the nest. We were much troubled with this in the spring, and tried various remedies. We took what we supposed to be the guilty ones and shut them up by themselves; but those left went on eating eggs, as before. We then extracted the inside from several eggs, and filled the shells with Cayenne pepper, and placed them in the nests and on the hen-house floor; but they eat the shells with evident satisfaction, and only laughed at us for our pains. We then procured several *china* eggs; and the hens, after pecking at them till they were satisfied, gave up egg-eating as an unprofitable business. Since that time we have kept these china eggs as nest eggs, and we have no reason to believe that we have had one eaten since. These china eggs can be procured at most of the Agricultural Warehouses; but any one could form them well enough out of any hard substance. We have made them of chalk; and another mode is to fill an egg shell with plaster of paris, which soon becomes hard. The plaster must be mixed with water, and be about the consistence of cream when poured into the shell. We think it a bad plan to give fowls egg shells, unless they are broken very fine, and even then we would rather supply them with lime in some other form.

GUANO AND LIME.

MESSRS. EDITORS:—With your permission I should like to propose a few queries for solution. Is it profitable for farmers in this vicinity to pay from forty to fifty dollars per ton for guano, to be used in preparing land to seed with wheat? What quantity ought to be put upon an acre? And what is the best mode of applying it? I have a piece of ground that is well seeded to June and blue grass, and some clover, but not enough to do any harm, upon which I design to sow lime. Had I better sow lime before plowing, or afterwards? Or would it be better to sow some before plowing, to assist in the fermentation of the sod, and some after it has been plowed and cultivated so as to mellow it and prepare it for seed? Please answer these inquiries, as soon as convenient, in the Genesee Farmer, and you will much oblige A SUBSCRIBER AND CONSTANT READER.—*Orleans Co., N. Y.*, 1850.

If one was sure of getting a first rate article of Peruvian guano at $40 or $50 a ton, it will doubtless pay to apply 250 lbs. per acre in Western New York in growing wheat. Its whole strength is not exhausted in one year, but the second crop will be considerably benefitted by this powerful fertilizer. Large quantities are used in Delaware, New Jersey, Maryland, and Eastern Virginia; and generally with satisfactory results. Some cover it with the plow, others with the harrow or drill. It matters little what implement buries it in a mellow soil; but it should be covered a few inches to prevent the loss of ammonia by solar influence. In England it is found best to apply one half of the guano at or near the time of seeding, and the other half in the spring. In the latter case the manure is covered with a hand or horse-hoe, harrow, or cultivator. In regard to the application of lime, if only a small dose is to be used, spread it all on the grass before plowing. If forty or fifty bushels per acre are to be applied, put a moiety on the grass, and the other half on the inverted sod, which should be well harrowed soon after the lime is spread. The object is to incorporate it well with the soil.

MESSRS. EDITORS:—Is there any remedy for pork after the brine has begun to sour, except boiling the brine. H.—*Bowen East, July*, 1850.

There is none which is safe.

REVIEW OF THE TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY.—No. I.

WE have been favored with a copy of the Transactions of the State Agricultural Society. It is a large volume of 944 pages, got up with great care by the Society's efficient Secretary, B. P. JOHNSON. The printing of the volume hardly does justice to the matter, and compares unfavorably with the Transactions of some County Societies now before us. It is, however, as well, perhaps better, done than public printing generally. We have long thought the annual volume of Transactions not only very creditable to the Society, the State and the Nation, but superior to any similar European publication. This opinion is corroborated by Prof. JOHNSTON, who, in his address at the last State Fair said, "I have been both interested and instructed by the volumes of the Transactions of your Society, and I have heard them in a public meeting in Scotland most highly spoken of, and favorably contrasted with the published proceedings even of the Highland and Agricultural Society of Scotland." The present volume we consider superior to any of its predecessors; and as but a very few of the many thousands that read the Farmer will ever see this volume, we shall endeavor, in the review we intend to make of the book, to give some knowledge of its contents.

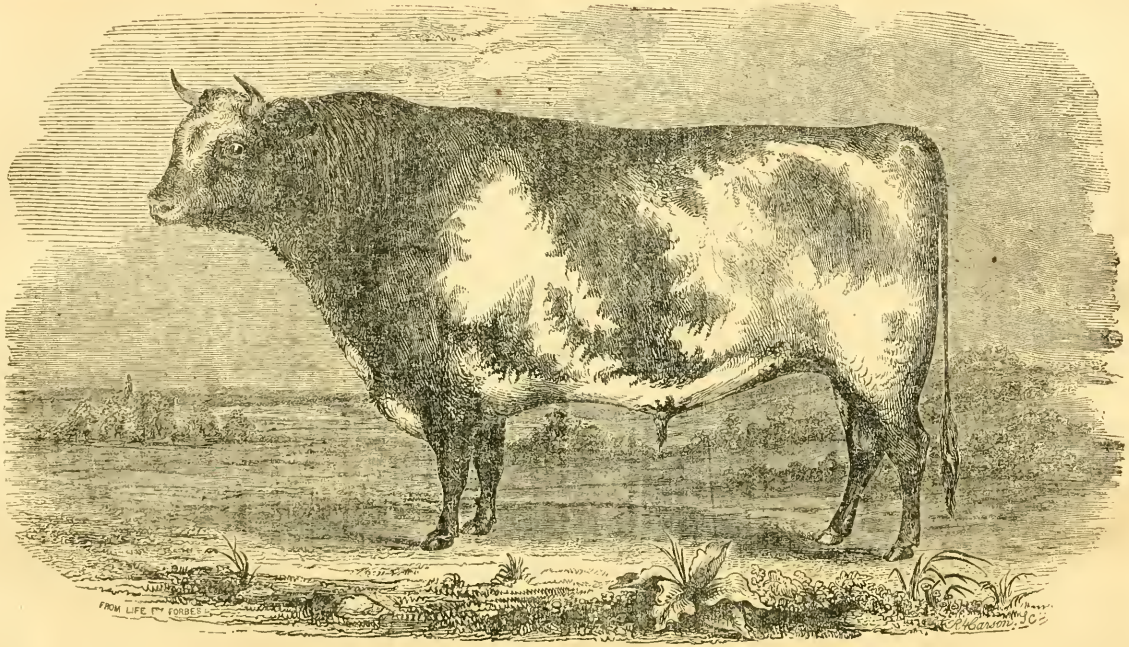
The work commences with the Report of the Executive Committee for 1849. The Committee express their gratification, not only at the successful operations of the State Society, but also of the County Societies in all parts of the State, showing "an increased attention on the part of farmers to the improvement of their farms, and much more regard to economy in their management than heretofore: and also, an adaptation of their crops to the soil so as to secure the best returns which the land is capable of yielding." Although the committee announced the same improvement, in their report last year, and almost in the same words: yet, it is not a stereotyped unmeaning array of words, nor an opinion expressed by them for effect, but it is the words of truth and soberness, as all must be aware who have paid any attention to the present and past condition of agriculture in the State of New York. Houses and lands, sheep and oxen, give evidence of the fact—its truth is proclaimed by abundant crops and well filled barns. The work is progressing. The light of science is scattering the darkness of ignorance—common sense is gaining the mastery over prejudice.

In speaking of the PROFITS OF FARMING, and its ADVANTAGES, the committee make the following truthful remarks:

> Though it may not lead to sudden and enormous wealth, (and it is far from desirable that it should,) still is a remunerative business, and gives, in a pecuniary point of view, a liberal return for capital judiciously invested. That it is an employment best calculated for real enjoyment, best designed for permanent prosperity and security, as well as for the cultivation and enjoyment of all those moral and social qualities that give zest to this world's intercourse, is so apparent, that no argument is necessary to establish it.

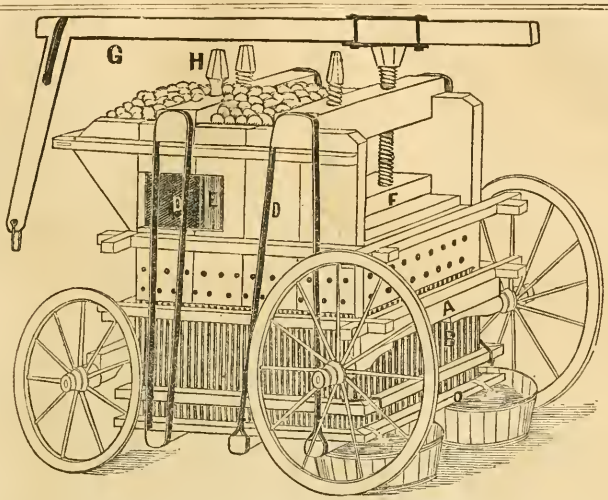
If farming brings not sudden wealth, it brings not sudden poverty. There is not perhaps one year in a life-time in which the intelligent and industrious farmer can not make his farm produce enough to supply himself and family with all the necessaries of life, and all the luxuries good for man.

The engraving of Devon Bull on the following page is copied from the Transactions. We shall resume the subject in next number.



AYRSHIRE BULL, DANDY.

THE PROPERTY OF E. P. PRENTICE, MOUNT HOPE, NEAR ALBANY. WINNER OF THE FIRST PRIZE FOR AGED BULLS, IN AYRSHIRE CLASS, AT LAST STATE FAIR.



CHAPIN'S PORTABLE CIDER-MILL AND PRESS.

CHAPIN'S PORTABLE CIDER-MILL AND PRESS.

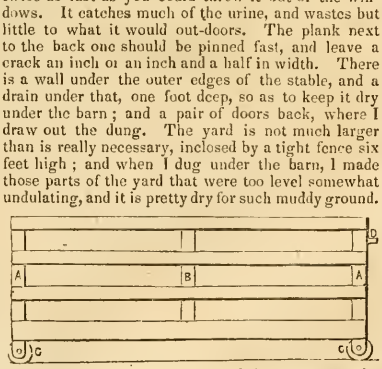
This machine was patented in 1848, but since that time some alterations have been made in the grinding apparatus, with a view of rendering it as perfect as possible. It may be drawn from one orchard to another, and with a man and stout boy will make fifteen barrels of cider a day. The apples are handled but once, the pumice falling into the press crib B, thus forming the cheese, while the apples are being ground. By the action of the screws the cider is forced through the openings in the sides of the crib, and conducted to the tubs by a channel in the margin of the platform, O. When the pressing is finished, the tubs and rear grate B are removed, the platform O is let to the ground, the cheese is drawn out in a body, upon a seperate side platform, under the rear axletree A, and left clear from the mill The sweep G, after turning the screws, is placed upon the center shaft of the grinding machinery H, and the process again commences.

A correspondent in Onondaga Co. writes: "This machine is really an excellent thing of the kind—I truly believe the very best. A man and boy with a horse can easily earn $5 per day (making 15 bbls. at 37½ cents each—$5.62,) for two months."

It is manufactured by N. Chapin, of Syracuse, N. Y. Price for single mills, with a town right, $100.

BARNS AND FARM-GATES.

Messrs. Editors:—I have long been in favor of a large, deep bay to a barn, preferring to *pitch up* more in winter and less in summer, and then it seems as though that side of the barn held about twice as much for it. For a few years I have used one eight feet deep, with logs and pieces of rails, &c., in the bottom, so as to allow the cats room to carry on their useful avocations under it; and my love for the thing does not yet cool by familiarity. The barn is built on ground descending one foot in twelve or fifteen, which answers my purpose better than I supposed so gradual a descent would. The end opposite the bay is raised three feet or more, and has a stable in it. It is dug out under the stable and threshing floor, which is now used for a shed. I have seen such a place used for a stable, the fodder being put into the rack under the bay girt; and when the hay was low, direct from the bay to the rack—a little of the bay being appropriated for the rack and the cattles' heads. But what I value above a good bay, is a good place to put the manure; and I have finally got such a place, under the stable. The stable is so wide, but little dung gets on the the back plank, and with something like a handle to a door-latch and a lever, I turn up the plank and put down the manure about twice as fast as you could throw it out of the windows. It catches much of the urine, and wastes but little to what it would out-doors. The plank next to the back one should be pinned fast, and leave a crack an inch or an inch and a half in width. There is a wall under the outer edges of the stable, and a drain under that, one foot deep, so as to keep it dry under the barn; and a pair of doors back, where I draw out the dung. The yard is not much larger than is really necessary, inclosed by a tight fence six feet high; and when I dug under the barn, I made those parts of the yard that were too level somewhat undulating, and it is pretty dry for such muddy ground.



The above engraving is intended to represent the

best substitute for bars that I know of. A, A, scantling, 3 by 4. B, strip of board nailed tight. C, C, wheels, six inches in diameter. To be made mainly of fence boards, and run on narrow plank six or eight inches wide; and the one the gate runs on when opened, should have strips an inch thick fastened on each side of where the wheels run, to guide it. Two stakes firmly set and pinned at the top will keep the gate upright, and two more at the other end may serve to keep it firm without any other fastening than having the pin D run between them. A narrow strip, the thickness of the board D, should be nailed on the upper board its whole length.

This is called a snowy region; but I have not known the snow to offer any very serious obstacle to this gate. I have used three for two or three years, and have sometimes shoved them into a snow drift to get them open. The farmers here prefer this gate to any other, as far as I know. N. N.—*Oswego Co., N. Y.*, 1850.

S. W.'S NOTES FOR THE MONTH.

SUCKERING CORN.—The last Rural New Yorker says: "We find some persons still adhering to the exploded doctrine of the necessity of pulling off the suckers from Indian corn." I would as soon accuse that pomologist of pursuing an exploded practice, who takes from a tree a part of its redundant fruit, that the remainder may improve in size and quality. I have found from repeated experiments, that corn deprived of its suckers will be some ten days earlier than the unsuckered corn, and the main ears will be larger and better filled. 'Tis true that the suckers bear a "beggarly account" of nubbins, which may help out the bulk of ears; but methinks the suckered stalks will yield enough more in weight of sound shelled corn to make up for the nubbins. I am yet to be convinced that the pollen from the suckers is of other use than to fructify the ears produced by the suckers themselves. So far as fodder is taken into the account, the advantage is undoubtedly with the unsuckered corn: hence I take it, that farmers with large fields and little help will find it to their account to let suckers mature; while he who grows corn for the early green ears, will never fail to cut off the suckers, and remove every barren stalk from his corn patch. Before July had passed away, I had plenty of plump ears of eight rowed, large kernel, white corn, more than six inches in length. This variety has been improved by cultivation from a very short ear to one of fair length; the stalk also increases in size and height; but it also matures later, maugre the precaution of saving the earliest ears for seed.

FREE TRADE IN BREAD.—In the death of Sir ROB'T PEEL the yet struggling friends of commercial freedom in Great Britain have lost an able advocate. Let every American farmer bless his memory, since it was under his ministry, and mainly owing to his unanswerable arguments, that the most odious restrictions on our agricultural productions were removed. While in England every loaf of bread made of imported flour paid a tax to the landlord and the farmer, in these United States the farmer is almost the only great producer who has never yet clamored for a bounty on his industry, by a tax on the other classes. Hence it is that the farmers of these United States are the most self-relying of men. God grant that they may never know the effect of that luxury which is compassed only by selling dear bread to the poor and hungry million!

THE WHEAT CROP AND THE COMING PRICE.—All accounts agree that the present yield of wheat in the United States is above the average of former years; add to this the increased culture of this cereal, and the quantity for sale will be unprecedented. Hence it may be inferred that without an increased demand for export, prices must rule very low the coming year. Let me then enumerate some of the causes which will keep up the price of wheat to an average of former years. In the first place, foreign emigration is steadily increasing, and most of the emigrants of former years, as well as all of the present, will have to buy bread; then the failure of the wheat crop last year in Ohio, the greatest wheat growing State in the Union, led to the exhaustion of every granary, many of which contained the wheat of former crops; then the great increase of villages and cities throughout young America; the great and increasing demand for bread-stuffs induced by our manufacturing industry—not as of old, in New England alone; but all over the length and breadth of our land, from Maine to New Orleans, and the great west. No country on this globe ever had a home trade so rapidly, not to say magically, increasing, as ours. No country so young in years can boast, or ever could boast, of a manufacturing industry so great, extended, varied, and increasing as ours.—Even those cotton lords in New England, who of late have closed some of their mills, confess that the competition from within has become more formidable than it ever was from without. Then the great increase in public works of every kind and fashion—the multiplicity of rail-roads and plank-roads, which employ so many in the construction, and so many in tending and repairing. And then there is the extra trade induced by these facilities.

THE SEASON AND THE CROPS.—The wheat harvest is now over; the crop is large, and it has been generally well secured in spite of the hot weather.—Such a growth of grass, oats, barley, Indian corn, &c., few other seasons ever produced. Those who aver that vegetation within the tropics during the rainy season far surpasses ours, had not observed the rank growth of this season in Western New York. Go into a well tended garden, and see how the vegetables jostle each other: no line of demarkation is observable just now (12th of August) between the beds. Every thing vegetable has not only exceeded its wonted altitude, but both bush and vine have gone entirely over every prescribed limit assigned to them by the best practical experience.—Although we have had much and frequent rains, the present has been everything but a cold, wet summer. All our wet summers before this have been invariably accompanied by cool, cloudy weather. We have had no cool weather this season since the 3d of June.

STATE AGRICULTURAL FAIRS.—It behooves the Executive Committees of our Empire State Fair to look well to its interests this year, as the Cincinnati papers promise that the coming Ohio State Fair *shall not be eclipsed*. There is a rife spirit of rural progress in great wheat-growing Ohio, if we may judge from the number and ability of the farmer correspondents of BATEHAM's Ohio Cultivator. If they do invoke the aid of their State Legislature, they put their own shoulders to the wheel nevertheless, as if determined not to be behind their earlier endowed sister, the Empire State.—*Waterloo, Aug.*, 1850.

Horticultural Department.

EDITED BY P. BARRY.

SELECTION OF VARIETIES OF FRUITS.

There are yet in the country a very large number of persons in total ignorance of the quality of the different varieties of fruit, who, if they had made up their minds to plant one hundred apple trees, would not be able to select by name half a dozen really good sorts. The leading idea with such people, when they do think of planting, is, to get *large* trees; and large trees they must have. This class of people are not in the habit of reading this or any any other journal of the sort, and therefore any advice we might offer them on this subject would be lost.

Then there is another class, who, by reading on the subject, have learned to appreciate the importance of having good varieties—the *best varieties*—nothing short of that; and when they sit down to make their selections, they are too apt to forget all considerations but *quality:* and this is an error—a great error; but still not half so bad as the first mentioned. There is but one class of persons in this country, and that decidedly the least numerous, who can allow the single matter of quality to govern them in making selections of fruits; and that is the wealthy, who can afford to make extensive plantations for their own consumption. Nothing in the world is easier than for such people to make their choice of sorts. They are not restricted by limited means, or limited grounds. They are at liberty to select those of *every season* and of *every desirable quality*, however inconsiderable it may be.

But not so with those who plant orchards for the supply of the market. No matter how good a variety may be, if it cost as much to raise the fruit as it can be sold for, or if its peculiar texture or short duration render it impossible to carry it to market, of course it would be unwise to plant it. The orchardist wants hardy, vigorous trees, good bearers, and as far as possible, large and showy fruit that, whether early or late, keep well and bear transportation. Hence, for instance, in planting a cherry orchard for marketing, instead of planting the *Belle de Choisy*, which is one of the most delicate and finest flavored varieties, but a small tree and shy bearer; or *Downer's Late Red, Amber*, or *Honey*, most delicious sweet cherries, but too tender fleshed to bear carriage: such varieties as *Black Tartarian* and *Napoleon Bigarreau*, though quite inferior in flavor, are preferred; because they are large, showy, productive, firm fleshed, and popular in market. So in the case of strawberries—*Swainstone Seedling* and *British Queen* are the two varieties we should choose first of all, if we had extensive grounds and were growing for our own use. The one is the most magnificent strawberry in the world, and the other large and of the highest flavor. But no man who knows the bearing qualities of these two fruits, would think of cultivating them for market; for neither of them will produce enough to pay for their raising and picking. So again in pears—the *Rostiezer, Tyson, Seckel, Gansel's Bergamot*, and *Winter Nelis*, five of the very finest flavored of all pears, will never be, in this country, profitable market fruits, compared with the *Bartlett, Swan's Orange, Beurre Diel, Duchess d'Angouleme*, and *Vicar of Winkfield*, all inferior in flavor to the first mentioned, but large, showy, productive, of good quality withal, and the trees strong, rapid growers, and early bearers. The *Moorpark* and *Peach* are the best apricots cultivated, not only in size and beauty, but in flavor; yet among several apricot orchards that we know of, having been recently planted for the supply of the market, small inferior sorts, such as the *Breda* and *Early Golden*, have been preferred, simply because they are more certain and abundant bearers. The *Crawford's Early* peach, from its large and showy appearance, has become one of the most popular market varieties. Among the mass of purchasers, in any of our markets, it would command a greater price than the finest and most delicate white flesh variety, every way superior to it. So in plums—the *Green Gage* stands without an equal in flavor; but a single tree of *Bolmar's Washington, Smith's Orleans*, or *Imperial Gage*, would yield, if the fruit be carried to market, more than four of the *Green Gage*. The former are all vigorous, rapid growing trees, with large, showy fruit of fair quality, produced in abundance; while the latter is a very slow growing tree, with small fruit of the most delicious flavor.

In the neighborhood of such markets as Covent Garden, in London, (where a *Newtown Pippin* would sell for one shilling, and a *Baldwin*, much larger and finer in appearance, only for three or four cents,) *Green Gage* plums, *Seckel* and *Gansel's Bergamot* pears, *Swainstone Seedling* and *British Queen* strawberries, might be grown to advantage; for there the best articles sell for their value, whatever it may be. If one variety be, from the difficulty of raising it, and its superior flavor besides, worth even three or five times as much as another, it will surely obtain it. Not so in most of our markets. Here, for instance, any one of the men and boys who sell cherries might stand a whole day with *Belle de Choisy* without selling a single measure, while in the same time he would probably sell a bushel of *Black Tartarian*. Now a quart of *Belle de Choisy*, from its high flavor and delicacy of texture, and from the comparative small size and produce of the tree, is worth three times as much as *Black Tartarian*.

We remember hearing a gentleman in one of the Pomological Conventions declaim, indignantly and vehemently, against the practice of growing and selling varieties anything short of *first rate in flavor*, no matter what their other peculiar excellences may be, or however popular in market. He said if public taste was so bad as to create and sustain a demand for second rate flavored fruits "it ought to be corrected," &c., &c. Now this undertaking to correct the public taste would not be a small affair. If the fruit grower is bound to correct the tastes of

his customers, so may every other man engaged in furnishing other necessaries and luxuries of life.—The wine merchant must utterly refuse to sell such trash as port and sherry, telling his customers they must drink only the best champagne and burgundy; the grocer must insist on his patrons using only the best refined loaf sugar; the butcher, the baker, and the confectioner, too, must all wage hostilities against mediocre articles. Thus we should have everybody busy correcting other people's tastes — making fools of themselves, and damaging, very materially, the interests of their pockets.

It seems to us a tolerable good plan for those who grow fruits for market, to select such varieties as promise to yield the greatest profits — to consult the tastes and circumstances of the fruit buying portion of the community as they are, and not as some people might think they ought to be. The *season of ripening*, too, must be well considered by the orchardist who plants for profit. In some localities, early summer varieties find such ready sale and good prices as to be highly profitable, while in others they are comparatively worthless. The value will be the greater the nearer they are to a large town, as early fruits can not be carried a very great distance. Land in the vicinity of New York, for instance, might be much more profitably occupied in producing summer crops that require to be immediately consumed, than such as ripen in the winter, and may be transported thousands of miles. The people of Western New York can send their fall and winter apples and pears to New York, and offer them in market in as good condition as those grown within a dozen miles of that city; but we can not so well send our strawberries, cherries, currants, gooseberries, apricots, early plums, and peaches. The sale of such fruits must always depend on markets comparatively local. Such matters as these are worthy of attention by those who are about planting extensive orchards for marketing.

Those who grow fruit for their own use alone, must be guided by very different considerations from the orchardist. His fruits are to be carried to market — they have to go through the processes of packing, transportation, &c.; while the fruit grown for home use has only to be gathered and placed on the table or in the fruit-room. In one case, a barrel of second rate fruit, of large size and showy appearance, will be more desirable than a bushel of first rate quality; while in the other case it would be just the reverse. In one case, tender, rich, delicate fruits, would be quite unsuitable; while in the other they would be precisely what would be wanted. The selection the most suitable for a profitable orchard would be a very improper one for an amateur, or one cultivating solely for his own use. Many people do not appreciate the differences; and on hearing of a certain orchardist having planted a few select varieties, they at once jump to the conclusion that they are the best, and so must get them.

The different circumstances in which different persons are situated, should have a great influence on their selection of the varieties of fruits. As we remarked in the beginning of this article, the man of wealth, with extensive grounds and facilities of all sorts, may indulge in the culture of whatever is curious or novel, or that may possess any one desirable quality. Then there are those with limited grounds, who care little for the actual value of the fruits they may grow, looking more to the interest and amusement their trees may afford them. In such a case, a great variety will be most wanted. Those who have small gardens, and wish to turn them to the best account in the way of fruits, will merely look to a variety sufficient to fill up the various seasons, taking care to have the best and most profitable of each. The most difficult selection of all to be made, is that for a small garden; and it depends so much on local and personal circumstances, that no definite advice can be given on the subject. One man's taste will run more for one species of fruit than for another. In one place apples, for instance, may be so cheap as to make it no object to occupy a small garden with them; in other places it may be different. In all cases the value of a fruit garden or collection of fruit trees depends greatly on the selection of varieties. The two extremes of having too few and too many varieties, must be equally avoided, and all the qualities that are combined in a good and profitable garden fruit, be taken into careful account.

THE CURRANT.

It would appear almost unnecessary to offer any suggestions on the culture of the currant. It is so exceedingly simple, that everybody is supposed to understand it thoroughly — and we will grant that they do; but how many put their knowledge into actual practice? The appearance of the currants usually sold in our markets, and the appearance of them on the bushes in gardens, generally answers this question satisfactorily.

A neighbor of ours, a few years ago, had a dozen or two of currant bushes in his garden, of the Red and White Dutch varieties, and by a proper system of management, his fruit attained an extraordinary size, and were much finer flavored than people generally had ever seen currants before. Indeed, they were to many quite wonderful, and "slips" of them were begged by those who had the very same varieties in their own gardens, in a starved, neglected state.

A few years ago, Col. STODDARD's Alpine strawberries set the whole strawberry-growing community crazy, they were so enormously large and productive. Hundreds, and even thousands, of persons who had the very same varieties in their own gardens, paid the most exhorbitant prices for them. A year or two of experience taught people that *good culture* was the whole secret.

The culture of the currant is simple, beyond a doubt; and so is the culture of Indian corn: but its simplicity is no reason why it should be neglected or badly done. On the contrary, it is a very good and sufficient reason why it should be well done.

The currant bush should have a clean stem of eight inches to a foot from the ground, on which no shoot or sucker should at any time be permitted. Then the head should be kept open, so that the sun and air may have full access to every part. Currant bushes left to themselves have, as will be observed by looking at neglected specimens, the center of the head crowded with small, weak shoots. These produce small, miserable fruit themselves, and injure that upon all other plants. The true way is to keep every branch at a respectable distance from its neighbor, and the center quite open. The main branches should be shortened, too, a few inches at every winter pruning, and this keeps the head of the bush compact, and augments its vigor and productiveness.

Then as to the soil. It is quite useless to expect a currant bush that has stood in the same spot for two, three, or four years, without manure, to produce anything but small, unpalatable productions. A dressing of manure must be given *every season*, either in fall or spring. This and the pruning above mentioned should be as regular as the return of the seasons. The distance between the bushes is worthy of note. Many people plant their currant bushes in a sort of *hedge row*, in some place "unfit for anything else"—perhaps under the shade of some other trees. It is very well to have all the corners of a garden filled up—we like to see it so; but a fruit so useful as the currant, should not be crowded into dark corners. The plants should have an open border, and not be closer than four feet, unless in very small gardens, where they might be kept in a dwarf form. The fruit at best is acid enough—in the shade it is particularly so. It is only where it enjoys unobstructed the heat and light of the sun, that it attains perfection in size and flavor.

VICTORIA. CHERRY.

In the production of new, improved varieties of currants, very little has yet been done: but the subject seems to attract some attention now. In small fruits, *size* is a most important consideration. A great deal has been effected in the production of large gooseberries, and we know of no reason why the currant may not be equally improved. The fact that new large varieties have been already produced, shows it to be susceptible of improvement. The large Red and White Dutch are as large again, almost, as the old common sorts. Some other recent varieties are still much larger than they. But to those who cultivate badly, all are alike—the worst will prove just as satisfactory in the end as the best.

The following new varieties have fruited with us two years, and we can therefore speak of them from actual experience:

The Cherry Currant.—This is a variety introduced a few years ago from France, very distinct in fruit and foliage from all others, and decidedly the largest of all currants yet known here. The bunches are very short, the number of fruit in each bunch seldom exceeding ten or twelve. Fruit very large—often over an inch in circumference. The outlines annexed were made with great accuracy from an average sized bunch, taken from plants under ordinary nursery culture, quite inferior to that which it would receive in a well managed private garden. It is of a deep red, and ripens about the same time, and are similar in quality to, the Red Dutch. The plant is remarkably vigorous. Shoots stout, short-jointed, and stiff, with large, thick, deep green, slightly folded leaves. Cole says: "It is a poor bearer, not worth cultivating." We apprehend he has passed a hasty verdict. We call it a good bearer—an abundant bearer. The bunches are not so long, nor the fruit so numerous, as in the Red Dutch and some others, but this is easily accounted for in the size.

Victoria.—This is also a new and very distinct variety, both in fruit and foliage. The bunches are remarkable for their length, frequently measuring six inches, and numbering thirty fruit and upwards in a bunch. The annexed outline is accurately made from an average bush—size in all respects mathematically correct. The plants under ordinary nursery culture. The fruit is in size between the Dutch and the Cherry. The color is a very light, beautiful red; and in season it is later than any other—in fact, they are now in fine condition on the bushes, (August 20th,) and to all appearances will remain much longer. The wood is stout, but less so than the Cherry. The foliage is dark colored, thick, and flat, or a little reflexed or turned backwards at the edges.

White Grape.—This differs from the White Dutch in being very much larger. The bush is more spreading in its habit, has thicker, darker, and flatter foliage. It bears in the greatest profusion.

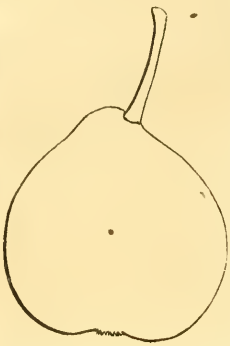
Knight's Sweet Red is a degree milder than the Dutch; in other respects it seems little better.

"Red Astracan" and "Northern Spy" Apples.—Mr. Barry:—I thank you for the "Red Astracan" apples you were so kind as to give me, and am delighted to find them so fine a fruit. They are beautiful in color, very delicate, crisp, and juicy; and being early, are a most desirable variety. I am pleased to tell you that I have made my annual visit to the twenty-three "Northern Spy" trees of Mr. Hand, and found them well laden with fruit. The apples are about half grown now, and are looking fine. I have engaged one hundred barrels of the fruit. I wish all the doubters, as regards the thriftiness of the growth of the tree, its productive qualities, beautiful form and quality of the apple, could see them. One nurseryman who went with me, exclaimed that the growth of the tree was greater by one-third, than that of any other apple trees he had seen. *He* is a "convert" at least.

The fruit generally will not equal the crop of 1848; but Western New York will produce a fair quantity, and of excellent quality, this year. J. H. Watts.—*Rochester*, 1850.

MUSCAT ROBERT PEAR

This nice little early pear, though an old variety, is very little known. We do not propose to commend it for general cultivation ; but in large or moderately large collections, it is certainly desirable. It is decidedly superior to *St. John's* or *Little Musk*, that precede it, and nearly equal to the *Madelaine*, which ripens about the same time.—Downing says "it might be called first rate, if we had not the *Bloodgood* to compare with it;" but it is quite over with us before the *Bloodgood* begins to ripen. The tree is a strong, handsome grower, one of those so distinct in appearance as to be easily recognized among a thousand others by its wood and foliage. The shoots are stout and quite yellowish. Leaves flat, broad, and coarsely serrated. Fruit small, about an inch and a half long, and the same in diameter at the widest part. Form obovate, or top shaped, regular, tapering to a point at the stem. Skin greenish yellow. Stalk moderately stout, an inch long. Calyx large, open, not sunk. Flesh white, crisp, juicy, and sweet, with a slight musky flavor. Tree very vigorous and productive ; succeeds well on the quince. Beginning of August.



TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY, FOR 1849.

We are indebted to B. P. Johnson, Esq., the Secretary, for a copy of this great volume. It numbers nearly one thousand pages ; being, in fact, an agricultural library in itself. It gives us the proceedings of all the meetings of the Society ; full and detailed reports of all committees ; transactions of forty-six county societies; discussions and communications on various subjects ; Prof. Johnston's Lectures ; and Prof. Norton's work, The Elements of Agriculture, complete : the whole arranged in the best manner for reference, and illustrated with ten or twelve beautiful engravings, including the Show Grounds at Syracuse, Floral Hall, various animals, besides outlines of fruits, implements, &c.

This is by far the most important volume the Society has yet published, and affords most ample proof of the great influence it is exerting on the agriculture of our State. Mr. Johnson is entitled to the highest credit for the industry, taste, and judgment which he has brought to bear in the collection and arrangement of such a vast amount of material. The contents will be reviewed at length in the Agricultural Department, and it will, therefore, be unnecessary for us to say more.

The committee on Fruits, of which Doct. Herman Wendell is chairman, suggests the following varieties as worthy of being added to those heretofore recommended for general cultivation :

Apples—Domine, Wine Apple, and Peck's Pleasant.

Pears—Doyenne d'Ete, Andrews, Flemish Beauty, and Urbaniste.

Plums—Madison.

Cherries—Knight's Early Black, Graffion, Black Eagle, and Downer's Late.

Peaches—Oldmixon Freestone, Bergen Yellow, and Crawford's Late.

Gooseberries—Woodward's Whitesmith, Crown Bob, and Green Walnut.

Currants—Knight's Sweet Red, White Grape, and May's Victoria.

Raspberries—Fastolff, Franconia, and White Antwerp.

HOVEY'S SEEDLING STRAWBERRY.

Mr. Editor :—I procured twenty-five small plants of *Hovey's Seedling* strawberry, from the garden of Col. Young, of Ballston, four years ago. From a bed of these plants, 25½ by 18½ feet, I have this season picked 47½ quarts of most delicious berries. Their size varied from 1½ to 3⅝ inches in circumference. The vines in my bed were of two and three years growth. They were first planted in rows about 18 inches apart each way. The runners were permitted to catch and grow, until the vines covered the ground. They were then thinned, so that the plants stood about four inches apart. They were hoed once in the spring, the ground loosened pretty deep with the fork end of the garden hoe, and a coat of compost made of fine barn-yard manure and lime, was spread on the ground around the plants, half an inch thick. This is all the care they require. I do not cover them in the winter.

From their flavor, ease of cultivation, hardihood, and yield, I would recommend *Hovey's Seedling* as the best strawberry that can be raised in our country, as far as my experience goes. Henry Palmer.—*Groom's Corners, Sar. Co., N. Y., Aug.*, 1850.

DOUBLE BALSAMS—"LADY'S SLIPPERS."

Very few people know how really perfect and beautiful these flowers may be grown. On the 11th of August we noticed a dish of them from Prof. Hill, of Rose Cottage, in this city, the best we have ever seen—large, perfectly double as the finest rose, and of almost every shade of color—striped, mottled, and marked with endless variation. Whatever Mr. Hill does, he does it not only *well*, but in the *very best manner*. His melons and tomatoes are always unrivalled ; and his rose pillars, his trellises of morning-glory and cypress vine, and the lawn about his cottage, are all models so well managed in all respects, that the first conclusion we arrive at in seeing them, is, that they can be no better.

We know of no such small place as Mr. Hill's ; and we advise those who wish to know how many beautiful and excellent things can be produced, and how much taste displayed on a small city lot, to visit Rose Cottage, on Bowery-st., Rochester.

Answers to Correspondents.—Mr. Joseph Pennington, of Macon, Mich., writes us that in the fall of 1847 he was in Rochester, and saw a large red apple "similar in shape to the *Yellow Bellflower*, but two or three times as large." It was said to have been brought from the town of Greece. Mr. P. wishes to know its name and qualities.

We know of no apple two or three times the size of the *Bellflower*, of any shape or color. The largest apples that usually make their appearance here in the fall, are the *Cabashea* and *Twenty Ounce*, both magnificent, showy, red apples. The former is coarse and of poor flavor ; the latter is of good quality, excellent for baking, and keeps through January. Both are very productive.

Ladies' Department.

TREATMENT OF CLIMBING ROSES.

There is now "a rose tree in full bearing" at Whitestown, Oneida county, which measures 42 feet in height, and bears upon its branches 700 roses and 200 half developed buds. So says the Utica Gazette, and challenges the world to equal this floral wonder.

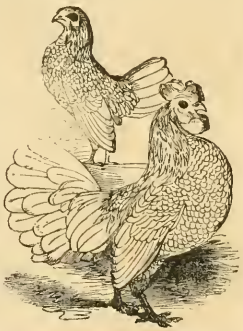
The above we have seen in several papers. We have no disposition to beat anybody, but we think we have some roses that are fine for their age. Running up the front of our cottage we have three Creeping or Running Roses, that during their season were much admired by all who saw them. Passers by would stop and wonder, and many were the inquiries made "where such roses could be had."—Many applications have we had for "*slips*" and "*roots*," as though they were some peculiar and rare sorts. Our answer invariably was, "You can get them at any of the nurseries for *two* or *three* shillings each." Persons who undoubtedly had seen the same kinds a thousand times, and perhaps had them in their own garden, would often exclaim, "I never saw such roses." One of them is the common *Red Boursault*, or *Multiflora*, as it is commonly called; one the *Queen of the Belgians*, a white Ayrshire Rose; and the other the *Queen of the Prairies*. They were planted in the spring of 1848, though so late as to make but very little growth that summer. In the spring of 1849, strong shoots started from the roots, when we cut away all the old wood and preserved four or five of the strongest shoots, carefully training them to the house. The growth of these young shoots was from twenty to twenty-five feet—the shortest growth was twenty feet—some of them going to the roof of the house, and hanging pendant from the cornice, appearing like drooping roses.—Thus the house was nearly covered with strong, straight shoots, which blossomed this year very abundantly. The idea of counting them would have been almost a hopeless task. As fast as the flowers faded they were cut away, and now vigorous shoots are being thrown out, some of which we shall preserve, to extend to the cornice those shoots that did not reach it last year. Some of the side shoots we shall train where they are required to cover the entire front, when they will be shortened; others we shall cut away altogether. There was nothing remarkable about the treatment of these roses. When they were planted, we made a large hole and filled up the greater part below and around the roots with turf from an old pasture, which we intended should rot and form a good mold for the roots by the time they extended to it. We then placed the roots in the hole and filled up with fine garden mold. Since that time we have supplied them with manure from the henhouse. In the spring, when we saw the buds putting out so liberally, fearing they would tax the strength of the plant too much and not liking to thin them, feeling it would be the worst of sacrilege to destroy so beautiful a flower in the bud, we manured them liberally with liquid manure, made by putting something like a peck of hen manure in a barrel, about the size of a flour barrel, and filling up with water. This stood about twenty-four hours, being several times stirred, when it was freely applied to the roots. This was in just the condition to be taken up by the roots, and the plants were thus enabled to bear thousands of beautiful blossoms without overtaxing their energies and injuring their growth.

ENGLISH LADIES' SPORTS

We have occasionally spoken of the advantages of out-door exercise in securing health and happiness, and endeavored to excite in our fair readers a love of nature. Those who really love nature will often be found in her temple—they will worship her there. We have often, too, spoken of the custom of English ladies, who pride themselves on their skill in cultivating fruits and flowers, rearing poultry, &c. We have recently met with an article in an English paper which we thought we might copy to advantage, as illustrating the facts stated. But we have not spoken from the opinions of others, nor from newspaper reports, as we have told only what we have seen for ourselves.

Bantams—*Sport in the Drawing Room.*—On Saturday, the 1st of December, Beacon Lodge, the residence of Mr. and Mrs. Berkeley, was opened for the reception of visitors to witness a show of beautiful bantams, the property of the Marchioness of Hastings and the Hon. Mrs. Berkeley, for a prize. The smallest bird to be adjudged the winner. Three two years old hens to be shown by each lady. A diminutive hen, weighing only nine ounces and three quarters, the property of Hon. Mrs. Berkeley was adjudged the winner. Among the guests who partook of the hospitalities of the table, were the Marchioness of Hastings, and Capt. Yelverton, Col. and Mrs. Clinton, Maj. and Miss York, &c.

The variety of Bantams exhibited is not stated, but we suppose it to be the *Sebright*, as we believe it is the smallest and most beautiful yet known, a very fair representation of which is given in the engraving.—They are named after Sir J. Sebright who is said to have originated the variety. Dixon gives the following musical description: "pretty, certainly, and very smart, but shamefully forward in his ways. His coat is of a rich brownish yellow; almost every feather is edged with a border of darker hue, approaching to black. His neat, slim legs are of a light lead color; his ample tail is carried well over his back. He is upright as a drill serjeant."



Manners of American Ladies.—At the late great Fair of the Royal Agricultural Society, held at Exeter, England, as is usual on such occasions, a number of of shows and exhibitions of various kinds were present, to take advantage of the facilities afforded to make a little money by the gathering of so great a crowd. Among the rest was a *Troupe* of *American lady Equestrians*. Some of the editors, it appears, gathered from the exhibition some new ideas of the manners and customs of American ladies, not yet in the books. The following extract is from the *Western Times:*

We hope that these fair equestrians are not a sample of the riding habits of the fair ladies of America, for it would be very alarming to see a lady spring upon the back of a horse and gallop, all standing, through the streets of New York—and yet a traveller endeavored to assure us that that was the general custom of the American ladies.

Editor's Table.

NEW YORK STATE FAIR.—Though the New York State Fair is only a *State Fair*, yet the fact that the New York State Agricultural Society, under whose direction the Fair is held, is the most efficient society in the Union, has given the Fair of this State something of a national character. Individuals from all parts of our own, and from other countries, come to this great festival as the great *American Agricultural Fair*. Other States may ere long rival it, and take away this national character. In the mean time we are happy that its lofty position is well sustained, and that the SOCIETY and its FAIR is an honor to our whole country. The next exhibition is to be held at Albany, on the 3d, 4th, 5th, and 6th of September. The grounds belonging to the Bull's Head Tavern, on the Albany and Troy road, have been selected. The buildings and other arrangements are completed or in progress, and they are on an extensive scale. Everything possible will be done by the officers of the Society for the accommodation of articles exhibited, and for the comfort and convenience of those attending the Fair. We have every reason to suppose that it will be equal, if not superior, to any previous one.

Persons attending the Fair will be carried on all the railroads, we believe, at half price; and stock, implements, &c., free. Persons in this section desiring information in regard to the starting time of different trains, &c., can correspond with JAMES P. FOGG, of this city, who will do all in his power to facilitate the forwarding of articles designed for the Fair. Hay, litter, and water for the stock will be furnished on the Fair ground without charge. The following is the order of arrangements as published by the Society:

Monday. Sept. 2d. Entries to be made at the business office on the show grounds at the Bull's Head, between Albany and Troy, and articles arranged.

Tuesday, 3d. Stock, implements and articles received at the show grounds from 8 o'clock until 5 P. M.

Wednesday, 4th. The grounds *to be open* to the *Judges, Exhibitors, and members* only, from 9 o'clock until 5 P. M.; admission fee $1. The Judges will be called at the Society's Tent at 12, and proceed immediately to the discharge of their duties.

Thursday, 5th. The grounds *will be open to the public* from 8 o'clock until 5 P. M. Single admissions *one shilling*. Members' tickets $1, which allows the member, his wife and family under 21 years of age, admission during the show. The Judges will deliver their report to the Secretary at the business office by 12 o'clock this day.

Friday, 6th. Grounds open to the public from 8 o'clock until 5 P. M. The Address will be delivered on the grounds at 2 o'clock, P. M., by Prof. AMOS DEAN, of Albany. The awards will be immediately announced after the Address, and premiums paid at the business office as far as practicable, and on Saturday, at the Agricultural Rooms in the city

The Rooms of the Executive Committee will be at the Delavan House where guests of the Society, and visitors and delegates, are requested to call.

COMMITTEE OF RECEPTION AND ARRANGEMENTS AT THE FAIR IN SYRACUSE.—E. P. Prentice, President; J. P. Beekman, Geo. Vail. John A. King, Ex-Presidents

SUPERINTENDENTS UPON THE GROUNDS—*Cattle Department*.—Lewis G. Morris, William H. Sotham.

Horses.—J. B. Burnet, Gen. J. T. Blanchard.

Sheep.—J. McD. McIntyre, H. Blanchard.

Swine and Poultry.—Z. C. Platt and T. C. Abrams.

Floral Hall.—A. Thompson, M. D., Herman Wendell, M. D., W. A. McCulloch.

Domestic Hall.—Oliver Phelps, E. C. Frost, D. D. T. Moore.

Dairy Hall.—Nelson Van Ness, Joseph Cary.

Implement Hall and Grounds.—A. Van Bergen, H. L. Emery, N. B. Starbuck.

Entrances and General Superintendence of Grounds—H. Wager B. B. Kirtland and Gen. J. J. Viele.

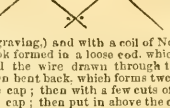
Machinery, &c.—C. C. Dennis and L. B. Langworthy.

Musical Exhibition.—The Albany Harmonia Society will perform on the evenings of the 3d, 4th, 5th, and 6th, HAYDN'S celebrated "*Oratorio of the Seasons*"—the most appropriate that could be selected for the occasion. THOMPSON'S SEASONS is truly the *Farmer's Song*, and we anticipate a rich treat. We understand the best musical talent of the country has already been engaged for the occasion. The officers will accept our thanks for their complimentary invitation.

THE UPPER CANADA AGRICULTURAL FAIR for the present year being held at Niagara, the 18th, 19th, and 20th of September, in the neighborhood of Niagara Falls, will undoubtedly attract a large concourse of people. Those who have been waiting for a convenient opportunity to see the great falls, should embrace this occasion to attend the Fair, and see this great natural wonder.

A HALF DAY IN EAST WAYNE COUNTY.—MR. WATSON'S FARM.—Our readers will recollect an article in the last number, headed, "A Half Day in East Wayne County," in which mention is made of the farm of JOSEPH WATSON, of Clyde. We have received the following from friend W.:

MESSRS. EDITORS:—Allow me to speak of *one* item "peculiar to this farm," alluded to in a communication of R. G. P., of Palmyra, in the August number of the Genesee Farmer. I took the hint of *this peculiarity* from a communication in a back volume, page 45, February number, 1848, from S. H., of Batavia, which is worth more to me than all the Farmer has ever cost me. Upon his way of making fence with *wooden* caps, I claim an improvement. I lay my rail fence in the usual way, four or five rails high, then set a pair of stakes, of any kind of timber, perpendicular, on the same side of the fence, on the ground close in the corners, (see dots in engraving,) and with a coil of No. 10, annealed wire at my feet, a hook formed in a loose end, which is passed around said stakes and the wire drawn through this hook until *just* tight enough, then bent back, which forms two hooks connected, and completes the cap; then with a few cuts of a file, the coil is separated from the cap; then put in above the cap three or four rails, and a good fence is the result. Expense of wire, at 7 to 7½ cts. per lb., is a fraction over one cent per corner, which is less than the cost of timber, and saves boring holes and shaving stakes. Brother farmers, try it, and if it don't pay, charge the loss to your humble servant. JOSEPH WATSON.—*Clyde, N. Y., Aug.*, 1850.



FAIR OF THE ROYAL AGRICULTURAL SOCIETY, ENGLAND.—We are indebted to Col. L. G. MORRIS, of Mt. Fordhams, N. Y., now sojourning in England, for English papers containing an account of the great Fair of the Royal Agricultural Society, held at Exeter during the week ending on the 20th of July. The show is represented as being the very best ever given by the Society. A great dinner was given in the pavilion on the last day of the Fair, at which an immense multitude partook of the good things Englishmen know how to provide and appreciate. Englishmen can't do anything of importance without a good dinner. The American minister to England, Mr. LAWRENCE, and WM. C. RIVES, the American ambassador to France, took part in this festival, together with most of the foreign ministers. Both the American ministers made very fine speeches. At the conclusion of Mr. LAWRENCE'S address, a loud call was made for Col. MORRIS; but a programme of the speakers having been previously prepared by those having the management of the festival, it was adhered to, although there was a general anxiety to hear Mr. MORRIS.

MONROE COUNTY FAIR.—It is the intention of the officers to make the coming Fair of this Society both interesting and profitable. It is to be held in Rochester on the 24th, 25th, and 26th of September. The last day is for the sale of articles. Many have complained that there has been no such opportunity at our previous Fairs. The Society, therefore, concluded to hold the Fair *three days*, instead of *two* as usual, affording a good opportunity on the third for the purchase and sale of any articles that may be offered. Many of our citizens, who have *taste* to distinguish between *butter* and *grease*, are making calculations to supply themselves with their winter stock of butter and cheese at our County Fair. We have no doubt this arrangement will be a mutual benefit to both buyer and seller. Mr. JAMES P. FOGG will, at any time previous to the Fair, take charge of articles designed for exhibition or sale.

OHIO STATE FAIR.—The Ohio State Board of Agriculture are determined to make their next exhibition in Cincinnati every way creditable. It is to be held on the 11th, 12th, and 13th days of September. The Ohio Mechanics' Institute gives an exhibition, and the American Pomological Congress hold their annual meeting in Cincinnati at the same time. The Board have made arrangements with the railroads to carry articles to and from the Fair free, and passengers at half the usual price.

WE are indebted to friends for many valuable pamphlets, premium lists, &c. The *Transactions of the Michigan State Agricultural Society* is quite an interesting volume of 234 pages, containing the Constitution of the Society, a list of the officers, the Address delivered at the last State Fair, the Report of the Executive Committee, Reports of the County Societies, and other valuable matter. The State Society was organized on the 17th of March, 1849, and this volume speaks well for its efficiency.

WHEAT CULTURE.—We have taken particular pains the present season to ascertain the condition and yield of the wheat crop, and the effects of different modes of culture. The crop in Western New York we should think is more than an average one, and though the weather during a part of the harvest was quite unfavorable, owing to continual showers, yet much less loss resulted than was at the time anticipated. We hear of but very little wheat materially injured. Less wheat, probably, was planted by drilling in this neighborhood, than the previous year. This was caused, undoubtedly, by the imperfect operation of some of the drills used. We saw one piece of wheat in this county that yielded but fifteen bushels to the acre. The owner assured us he had every reason to believe the yield would have been twenty-five if it had been sown by hand. It was in irregular clumps, and much of the ground bare. In the same town we examined a field of wheat, one half of which had been drilled in by our friend SPERRY, with Seymour's Drill. It was done by Mr. S. for the owner of the farm, as an experiment, and those who saw the field expressed the opinion, and it seemed justified by the appearance of the wheat on the ground, that the drilled portion of the field would yield one third more than that sown broadcast. Farmers, therefore, should not permit themselves to become prejudiced against the *system*, on account of defects in any particular machine.

The accompanying cuts represent the appearance of wheat sown both by the drill and broadcast, at the time of ripening. It will be noticed that the height of that sown broadcast is very uneven, while the upright position of many of the heads, indicates that they are light, not being well filled. This is not, however, a fair representation of the ground at harvest; the drill leaves the ground in ridges, as seen in the engraving, but these ridges are worn down by freezing and washing, and at harvest the ground appears nearly level. It is this filling up of the hollows that to so great an extent prevents the freezing of drilled wheat.

The Exeter (English) Times says—"Prof. JOHNSTON said in a lecture, last week, before the East of Berwickshire Farmers' Club, 'in New Brunswick, New England, Vermont, New Hampshire, Connecticut and New York, the growth of wheat has almost ceased, and it is now gradually receding farther and farther westward. Now, when I tell you this, you will see that it will not be very long before America is unable to supply us with wheat in any large quantity. If we could bring Indian corn into general use we might get plenty of it.'"

We hardly think New York is prepared to give up raising wheat, nor do we think the quantity grown in the least diminishing. The Lockport Courier estimates the present wheat crop of Niagara County at one million bushels, which considering that it is one of the smallest counties in the state, is certainly a very large yield. The estimate may not be correct, but it shows, at least, the opinion of one having good opportunities to judge, and that the farmers of Niagara Co. have little thoughts of relinquishing wheat culture.

The Editor of the Albany Journal, who has been on a trip through the State, speaks thus of what he saw:

"Never has the teeming earth yielded her treasures with a more bountiful hand. Never did 'seed time and harvest' promise more abundant reward to the husbandman. Onondaga, Cayuga, Seneca, Ontario and Monroe, are in a truly palmy condition. Ontario and Monroe resemble the richest and best cultivated portions of England and Belgium. We have never seen in that portion of our State, so many acres promising a larger yield or better wheat."

The Editor of the Rochester American says:

"The quantity of wheat raised in Western New York this year is very great. There was a very large number of acres sown last fall, and the seasons have been as favorable as could be desired for the growth and ripening of the grain. The quality of the wheat is rarely better than it is this year."

We hope, and we have good reason to believe, that those who prophesy the abandonment of wheat growing in this State are false prophets, and those who are making calculations on such a state of things are doomed to disappointment.

Samples of new varieties of wheat have been distributed through the Patent Office to our farmers, and many thus favored have grown and preserved it with care, and now are prepared to furnish their neighbors with the new kinds, for seed. E. CORNELL, of Ithaca, N. Y., writes us that he has the *Etrurian* Wheat, procured from Mr. ELLSWORTH, while Commissioner of Patents, some six years since. Mr. C. says: "It has grown entirely free from chess, smut, rust, and weevil. The straw is stiff and not subject to crinkle; just previous to ripening it assumes a beautiful purple color which changes in ripening to a golden yellow. It is the bald variety, a white or very light yellow berry, which is enclosed sufficiently firm by the husk to prevent waste in harvesting, and not so tightly set as to thresh hard. It is very hardy, stands the winter well, and grows as well in the wet and low grounds, apparently, as on the more elevated and dry. For flouring it is unsurpassed. It yields more pounds per bushel measure than any other variety I know of, and the yield of flour is proportionably large." It is offered for sale by Mr. C. at Ithaca, for $2 per bushel.

TIMOTHY JUDSON, of Salem Cross Roads, Chenango Co., N. Y., has the *White Blue Stem* wheat, also obtained at the Patent Office. Mr. J. says: "I do not know how it has succeeded in other regions, but I am satisfied that it is the best variety raised here, the quantity produced being greater, and the quality superior to any other. It has been said that it will not rust, and that the Hessian fly will not injure it. I can say that since I have raised it, neither the rust or fly have troubled it and one season the fly injured the flint wheat very much, while the blue stem was untouched."

Mr. Judson was awarded the first premium for specimen of this wheat, exhibited at the last State Fair. Mr. J. offers this wheat to farmers, for seed, at $2 per bushel, at his residence, and if a barrel or more is ordered, he will deliver it at Dunkirk.

We have received from the author the following communication, with a request for insertion in the Farmer previous to the State Fair:

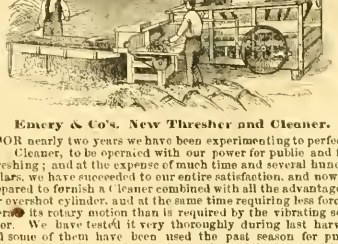
"Having been forced into a discussion as to the relative merits of 3d Duke of Cambridge and Mr. Vail's Duke of Wellington, and Mr. Vail still insisting that Wellington is the better bull, because Mr. Bates so wrote him, I invite Mr. V. to show both his bulls, Duke of Wellington and Meteor, at Albany at our next great State Show, along side of Cambridge, that the public may there compare them and see the character of each. A. STEVENS."

BY a list of the books in the State Agricultural Library, published in the Transactions, we perceive that it consists of more than 600 volumes, about 100 of which have been added during the last year, principally by donations.

STATE FAIRS FOR 1850.—State Fairs for the present year will be held as follows:

New York—at Albany, Sept. 3, 4, 5, and 6.
Maryland—at Baltimore, Oct. 23, 24, and 25.
Ohio—at Cincinnati, Sept. 11, 12, and 13.
Michigan—at Ann Arbor, Sept. 25, 26, and 27.
New Hampshire—first week in October.
Rhode Island Imp. Society—at Providence, Sept. 18th, 19th, and 20th.
Georgia—at Atlanta, August 15.
Upper Canada—at Niagara, Sept. 13, 19, 20.

THE cultivation of the heart should be like that of a garden, where we prune and weed before we begin to plant.



Emery & Co's. New Thresher and Cleaner.

FOR nearly two years we have been experimenting to perfect a Cleaner, to be operated with our power for public and field threshing; and at the expense of much time and several hundred dollars, we have succeeded to our entire satisfaction, and now are prepared to furnish a Cleaner combined with all the advantages of our overshot cylinder, and at the same time requiring less force to operate its rotary motion than is required by the vibrating separator. We have tested it very thoroughly during last harvest, and some of them have been used the past season for public threshing in the best grain growing sections of the State, with the best success, threshing months together an equal amount, and at less expense, than the common threshers with the vibrating separators.

The Cleaner has all the advantages of a good fanning mill, cleaning the grain fit for market, and wasting none. The additional cost being not more than an ordinary fanning mill, or about *thirty dollars*,—making the whole Thresher and Cleaner cost $75 to the farmer. The Cleaner can be detached, and the Thresher used alone when desired.

N. B. The above Threshers and Cleaners, as also an improved Railroad Horse Power, will be supplied by J. P. Fogg, No. 14 Front st., who is our only agent for them in Rochester, and of whom only can they be obtained there. The prices will be—

For Single Power	$85
" Thresher and Separator	35
" Bands, Wrench, Oil Can, extra pieces	5—125
" Two Horse Power	110
" " Thresher and Separator	35
" Bands, oiler, wrench &c	5—150
Also, Wheeler's one Horse Power, Thresher and Separator, complete, (improved this season.)	120
Wheeler's two Horse Power, Thresher and Separator, complete	145
Emery's Thresher & Cleaner, with bands, wrenches, &c.	75
" Saw Mill, complete for use	35
Grant's Fan Mills, adapted for hand or power, from	$22 to $28

Manufactured and for sale at their Agricultural Warehouse & Seed Store, 369 and 371 Broadway, Albany, N. Y.

Sept. 1850. EMERY & CO.

GREAT SALE OF FRUIT AT AUCTION.

THE WHOLE STOCK OF A NURSERY TO BE SOLD AT AUCTION, SEPTEMBER 20th, 1850.

THE Proprietors of the Lake Erie Nursery, Cleveland, Ohio, being about to make a change in their business, will sell their entire stock of Fruit and Ornamental Trees, Shrubs, Roses, &c &c., at Public Auction, and without reserve, on Wednesday, the 20th September next.

The collection embraces all the choice leading, and new varieties of Fruits; rare Ornamental Trees, Shrubs, &c., and in extent of variety and correctness to name, is probably surpassed by no Nursery at the West.

The stock of Pears on free stocks, and dwarfed on Quince, is very good, and also Cherries, Apples, Peaches, Plums, Grapes Quinces, Currants, Raspberries, &c. &c.

Among the Ornamental Trees and Shrubs, there are plants from one year's growth to an extra size, and the stocks of Mountain Ash, Scotch Larch, Deciduous Cypress, Norway and Silver Maples, European Linden, Horse Chestnuts, Kentucky Coffee Trees, Garland Deutzia, Daphne Megereon, Monthly Chinese Evergreens, and Tree Honeysuckles, &c. &c., are especially good

The stock of Evergreens is large, and most of them having been twice transplanted, they are in excellent condition to be removed.

The sale will be made in lots of 10 to 100 trees or plants in each lot. The correctness of varieties may be relied upon, and purchasers can have the privilege of removing their trees at any time previous to the 20th May, 1851.

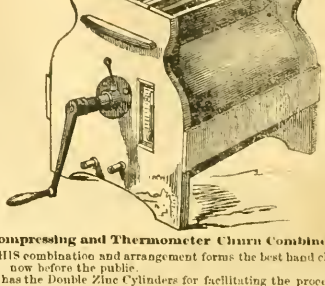
The purchaser can dig and remove his trees himself, or the proprietors will do it for him, charging him the usual price of packing, &c.

The terms of sale, unless otherwise agreed upon with individuals, will be as follows:

For all sums under Twenty Dollars, cash
Over Twenty and under Fifty, 30 days.
Over Fifty and under One Hundred, 4 months.
Over One Hundred, six months, approved Notes payable at Bank

Catalogues will be issued about the 15th of August, which we shall take pleasure in forwarding to any persons who may desire. All communications of inquiry, &c., addressed to the subscribers, will meet prompt attention. ELLIOTT & CO.,

Sept., 1850. Lake Erie Nursery, Cleveland, O.



Compressing and Thermometer Churn Combined.

THIS combination and arrangement forms the best hand churn now before the public.

It has the Double Zinc Cylinders for facilitating the process of obtaining the proper temperature by means of hot or cold water, without mingling it with the milk and cream. A Thermometer is neatly set in one end to enable the operator to know the proper degree of temperature at which to commence churning. The bevel floats which have been before described, are used without any shaft through the churn, by having a dowel at one end, and a square socket at the other, which receives the end of the short crank when it is suspended and propelled. The crank has a groove turned in its round part to receive a pin, which pin drops into the groove when the crank is in its place. To wash and take out the butter, all that is necessary is to raise the pin and withdraw the crank far enough to relieve the dasher, when it is readily taken out.

They are manufactured and sold wholesale and retail, at the lowest prices, (the cost being but trifling above Kendall's, of corresponding sizes,) by EMERY & CO.

At the Agricultural Works, Warehouse, &c.

Sept. 1850. Nos. 369 & 371 Broadway, Albany, N. Y.

Allen's Improved Portable Railroad Horse Power, Thresher, and Separator.

THE advantages of the above horse power are—1. They occupy but little more space than a horse. 2. They can be moved by the weight of the horse only, by placing the machine at an angle of 10 or 15 degrees. 3. They are easily transported, simply constructed not liable to get out of order, and move with little friction.

The Overshot Threshers consist of a small-spiked cylinder, with a concave top, and possesses these advantages. 1. They have a level table for feeding, thus enabling the tenders to stand erect, and control the motions of the horse and machine by means of a brake, by which accidents are avoided. 2. In consequence of the spikes lifting the straw and doing the work on the top, stones, blocks, &c., drop at the end of the table, and are not carried between the spikes. 3. The overshot cylinder does not scatter the grain but throws it within three feet of the machine. 4. This arrangement also admits of attaching a *separator* high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is long, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary threshers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder is fully made up by an increased number in the concave top, which is stationary. 7. The seperator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men with a single power, can thresh 100 to 150 bushels of grain per day; and four men with a double power, twice that quantity. All the above are compact and can be carried where wanted, complete, or they may be readily taken apart and packed for distant transportation by wagon or otherwise.

Price of single Power	$80
" " Thresher	$28
" Seperator and fixtures	$7
" Bands for driving, etc	$5
" Wood-sawing machine, complete, and in running order	$35
Price of Double Power	$100
" with Thresher, Seperator, &c.	$145 to $150

All the above are sold singly or together, as desired, and are warranted to work well and give satisfaction.

Also, Taplins 20 feet circular, and the Cast Iron Sweep Powers Enquire at the New York Agricultural Warehouse and Seed Store of A. B. ALLEN & CO., 189 and 191 Water st., New York

BACK VOLUMES of the Farmer we can furnish bound. Also, all works on Agriculture and Horticulture Poultry Sheep, &c.

CONTENTS OF THIS NUMBER.

SOME of our friends have thought they could not make additions to their clubs at the club price, and consequently have sent on the full price for single subscribers. This we do not ask. Additions can be made to any club during the year, at the club price.

First in Beauty and Value—Cheapest and Most Popular.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XI, FOR 1850.

DANIEL LEE & JAMES VICK, JR., EDITORS.

P. BARRY, Conductor of Horticultural Department.

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DANIEL LEE.
December, 1849. *Rochester, New York*

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—OCTOBER, 1850. NO. 10.

AMERICAN AG. STATISTICS IN GREAT BRITAIN.

We have just received from Edinburgh the "Second Edition, with Additions," of Macqueen's "Statistics of Agriculture, Manufactures and Commerce" of the British Nation, in which frequent reference is made to the Agricultural statistics of this country, as published in the Patent Office Reports. Some of the statements thus honored abroad, are so wide of the truth that they deserve public notice and correction. In a note at the foot of page 10, it is said that "The United States Patent Office Report for 1848, states that the value of milk produced in the States of New York, Pennsylvania and Ohio, is $100,000,000 yearly."

This estimate is too high by more than $50,000,000. The number of cows actually milked in any one year, has never been ascertained in Ohio or Pennsylvania. In New York, at the State census of 1845, they were counted, in obedience to a law which was drawn by the writer, as Chairman of the Committee on Agriculture in the Legislature. The number was 999,490. In the Patent Office Report for 1849, we have estimated a gain of 100,510 in four years, being an aggregate of 1,100,000. The dairy business has been greatly extended in New York since 1845. Increased railroad facilities for conveying milk into the city of New York, and all others in the State, have largely augmented the consumption of the article. Two-thirds of the cows in the State, yield a return of less than $20 a year; while a third produce milk worth $20 and over. The highest reported to the Patent Office, yield over $60 to the cow, taking the dairy together. We have estimated the whole as equal to $20 a head, or $22,000,000 for the 1,100,000 in the State.

In Ohio, the cows on the Western Reserve are equal to any in New York; but farther south, where little or no attention is paid to the manufacture of cheese, and where neat cattle are reared mainly for their meat, and cows and calves often run together, it is not common for the milk of a cow to be worth over $10 a season. Nor will Pennsylvania compare favorably with New York for the extent of its dairy business. While the number of Cows milked in Ohio and Pennsylvania is perhaps 30 per cent. larger than in New York, yet, owing to many causes which will suggest themselves to the mind of the intelligent reader, the product of New York in milk is nearly equal to that of both the other States. We trust that the farmers of Ohio and Pennsylvania, and of all the other States in the Union, will have spirit enough to induce the accurate counting of the cows known to be milked. We give Ohio and Pennsylvania credit for producing $23,000,000 in milk a year. This estimate gives to the three States an aggregate of $45,000,000.

On page 12, Macqueen says: "The Patent Office Report of the United States, after minute inquiry over the Union, says that each cow produces *thirteen tons of dung yearly*, exclusive of what is dropped on the land." The quantity dropped on the land is estimated in England at three tons. This is a most extravagant calculation for this country, unless the water contained in the dung is excessive.

Under ordinary circumstances, in eating 100 lbs. of hay, or its equivalent in grass or other food, a cow voids 40 lbs. of the matter consumed by the bowels and kidneys, and 60 by respiration, as vapor, carbonic acid, and insensible perspiration. Boussingault (see Rural Economy, page 377,) gives an account of an experiment made by him, in which a cow consumed in 24 hours as her ration, 40 lbs. 2 oz. 5 dwts. of potatoes and 20 lbs. 1 oz. 5 dwts. of after-math hay. In the potatoes there was of dry matter, 11 lbs. 2 oz. 1 dwt., and in the hay, 16 lbs. 11 oz., making the dry food consumed daily, 27 lbs. 13 oz. 1 dwt. When equally dried, the matter voided was as follows: In the excrement, 10 lbs. 8 oz. 12 dwts.; in the urine, 2 lbs. 6 oz. 17 dwts.; in the milk, 3 lbs. 1 oz. Now, as 10 lbs. 8 oz. 12 dwts. are to 27 lbs. 13 oz. 1 dwt., so is the dung of a cow giving milk, to the dry food consumed. The dung and urine together are equal to about 40 per cent. of the food. The milk added to the other excretions, makes the aggregate over 50 per cent.

How much hay will a cow consume in a year, or its equivalent in grass? A ton a month? We think not. But suppose she did. Would it be possible to get from it over 50 per cent. of its weight in good manure, unless we count pure water as such? Cows require food according to their weight, and the quantity and quality of milk which they give. It is a fair American cow that eats 25 lbs. of good hay a day, which is equal to 9,125 lbs. a year, or over 4½ tons. Few cows eat so much, and if they did, *two tons* of manure, in place of "thirteen," to each cow would be the result of "a minute inquiry over the United States."

There are other statements in the Patent Office Report, and extensively copied and believed at home and abroad, which are clearly wrong to the amount

of hundreds of millions of dollars. These errors in statistics lead directly to errors in legislation, and the whole community suffers serious injury in consequence of official misstatements in matters of fact.

Thus, all the millers and dealers in wheat were assured that 10,000,000 bushels of this grain were grown in the State of Michigan in the year 1848.—It is claimed, on page 121 of Patent Office Report for 1848, that the census of 1849 would show 10,000,000 bushels to be rather "too low an estimate." The census of 1849 was taken, and instead of sustaining the guessing of the preceding year, it established an over estimate of more than 100 per cent.—There were less than 5,000,000 bushels (4,739,299.) In other wheat growing States, there was also great exaggeration, which operated to depress the market price of this staple, to the great damage of farmers. Corn-growers sustained equal injury by the extravagant report that 200,000,000 bushels of surplus could be spared for foreign consumption, and of course was in the market. All extravagant calculations of this kind, benefit the *buyer*, to the prejudice of the *producer* of breadstuffs. One year with another, the latter will be the gainer by having the truth generally known. Correct information is always valuable; while false information is always injurious, in the long run. To show at a glance how rapidly this system of over estimates has advanced within the last ten years, we copy from the New York *Dry Goods Reporter* of August 31st, the estimates (official) of the productive industry of the United States in 1840, and in the Patent Office Report for 1848:

Annual Products of United States Industry, with the Export to England and the Rest of the World.

	Annual Product.	Exports— Total from United States.	Of which to England.
Agriculture	654,387,597	111,059,378	73,495,849
Manufactures	239,836,224	11,809,501	541,546
Mining	42,388,761	375,154	194
Forest	16,835,060	5,917,994	1,649,369
Fisheries	11,996,008	2,547,654	843,053
Total	$965,413,650	$131,710,081	$76,530,205

More than one-half of the whole export of American industry is to England, and of the remainder, $12,043,358, is to her dependencies, leaving but $43,136,000 as the value of exports to all the rest of the world. Nearly the whole of these exports to England, it will be observed, are raw products, which go to the direct consumption, as food, which amounted to $11,732,927, and raw material for manufactures, that is to say, articles indispensible to feed and employ the operatives of Great Britain. The British returns give the annual production at £217,000,000, and the exports to the United States £9,561,902—reducing them to dollars, at $4 80 per £, and comparing them with the aggregate United States returns, we have the following results. It is to be remarked that this valuation for the United States is, as compared with England, very large, but the valuation for 1848, per Patent Office Reports, 2,300,000,000.

The reader will see that ten years ago the productive industry of the country was estimated at $965,413,650. In the short space of eight years, the figures stand, on page 720 of Patent Office Report, at $2,323,564,756. Here is an apparent gain in eight years, of over thirteen hundred million of dollars!—When the Official Tables were made up and published as the results of the census of 1840, we took occasion to demonstrate (as we believe most conclusively,) that the products of agriculture were overestimated at least $100,000,000. Thus, New York was credited $28,143,423 for 3,127,047 tons of hay, or at the rate of nine dollars a ton. The hay crop of Pennsylvania was estimated at the same price, and in some other States. Hay, as every body knows, is mainly consumed on the farms where it is cut, and is generally worth to the farmer from four to five dollars a ton. Farmers are glad to winter the 20,000 canal horses in the State of New York on hay, at five dollars a ton. No man can rear a three year old steer, worth $18, without his consuming six tons of hay, or its equivalent in grass, straw, or other feed. Even the milk the calf consumes during the first six weeks of its existence, requires for its production more than a dollar's worth of hay or grass, at twenty-five cents per 100 lbs., dry weight.

Last Autumn, while making an agricultural tour through the Western States, we saw many tons of good timothy hay which had been purchased, delivered at a railroad depot north of Springfield, Ohio, at three dollars a ton. The purchaser kept three presses at work, and sent the article to New Orleans, Texas, Mobile and the West Indies. What folly to estimate the hay crop of the United States at eight dollars a ton, when to the agriculturists who raise and consume it, it is worth only about half that sum!—But this forage which is set down at two prices, reappears in dairy products, in wool, in neat cattle, and in horses and mules.

To illustrate the errors perpetrated in 1840, and still continued in an aggravated form, it is sufficient to state that the 583,150,000 bushels of corn said to have been grown in the United States in 1848, were estimated at *fifty-nine cents a bushel*, making $344,058,500. The "Butcher's meat, including mutton, beef and pork," made from corn and other food estimated at equally extravagant prices, is set down as worth $146,597,360. "Straw, chaff and manure," are estimated at $160,000,000. A Tennessee planter who raised 10,000 bushels of corn worth 20 cts. a bushel or $2,000, which he converts into fat hogs and sells at that sum, is credited, first with $5,900 for his corn, then with a like sum for the meat which the corn makes, and then with some $2,000 for the manure of his hogs! The figures are these:

10,000 bu. of Corn, at 59 cts. per bu.	$5,900
Meat	5,900
Manure	2,000
	$13,800

Here is an error of over 600 per cent. The American people are induced to over-trade and run extravagantly into debt to England, by this over-estimate of their resources, which in the aggregate exceeds one thousand millions of dollars.

Mr. Walker, late Secretary of the Treasury, estimated the productive industry of the country as equal to three thousand millions of dollars a year; and Mr. Meredith, his successor, alludes to this estimate in a way that leads the reader to infer that he regarded it as correct and trust-worthy. Of all the products of American soil, what passes for *statesmanship* is the cheapest commodity. A love of truth for the sake of it, and years of patient research to attain it, characterize but few of the great men so abundantly manufactured by the patent, short-hand process of our day. The science of industrial statistics is a profound study, and no branch of it is so complicated as that which treats of the transformation of certain elements in earth, air and water, into cultivated plants, and these again into meat fat, wool, milk, and the flesh of horses and mules. The whole operation is in a circle; and the quantity of potash and phosphorus which may safely be extracted from the soil and exported to foreign countries, never to return, is not so large as American farmers

seem to believe. From MACQUEEN's work, it appears that a given amount of farm labor in England yields twice as much gold as in this country. If our readers wish to know why this is so, it will be explained hereafter.

THOUGHTS ON THE PRESENT SYSTEM OF AMERICAN AGRICULTURE,

With a few suggestions as to the means which will probably be necessary to improve it.

BEING an English farmer, recently arrived in this country, and now engaged in cultivating a portion of its partially exhausted soil, I feel disappointed that you did not, in your late excellent article on "The present position of American Agriculture," state what you consider would be the best means to be adopted to repair the grievous injuries already done to the land; and also, that you gave us no advice as to the future management of our farms, in order to prevent the impoverishment of the soil by the removal of crops, which are necessarily sold off it.

I am aware that to correct the present errors, and fix agriculture on a rational and scientific foundation, will be the work of years; requiring a perfect knowledge of the constitution of the soil and the elements removed from it by the growth of cultivated plants, enabling us to fix a judicious rotation of crops, so that the substances not required by one class of plants may be converted into food by those of an opposite character. Till this is known—and it will require many years of laborious chemical investigation and expensive systematic field experiments—we must go blindly on till legislation sees fit to use proper methods to attain so great a desideratum.

In the mean time it may not be utterly useless to endeavor to ascertain what knowledge we do at present possess, of the requirements of cultivated plants. The most valuable and important of these is the cereal *wheat*—systematic and accurate experiments on which, in the field and the laboratory, have been carried on by Mr. LAWES, on his estate at Rothamsted, Herts, England, which demonstrably proves that on ordinary soils the chief substance which need be supplied to grow large crops of wheat, is ammonia, (a combination of nitrogen with hydrogen.) It is a volatile alkali, which, when neutralized and fixed by sulphuric acid, is used to a large extent by the farmers of England, at a cost of $60 per ton, 2 cwt. being sown to the acre; and it was found that when nitrogen was employed in this form, or as muriate or carbonate of ammonia, it requires about *five times as much to grow wheat as is contained in the grain when grown.* Hence, wheat may be called a *nitrogen consuming or destroying* plant. Barley, oats, Indian corn, timothy, &c., belonging to the same botanical genus, may be considered, in the absence of direct experiment, as *nitrogen consumers also.* Thus it will be seen, *that nearly all the plants grown by the American farmer, tend to exhaust the soil of nitrogen.*

Now, if nitrogen, in some form or other, be not present, the soil is not exhausted of the mineral elements; for, in such a case, the wheat will not thrive: but it always gets sufficient to produce a few bushels of wheat to the acre, from the atmosphere; for all animal and vegetable substances, during decomposition, give off carbonate of ammonia, which is brought down to the earth by every shower of rain, and absorbed by the roots of plants. The beneficial effects of "plaster," (sulphate of lime,) according to LIEBIG, is owing to its property of fixing the ammonia thus brought to the land, till it is required by the plant. Be this as it may, it is certain that a sufficient quantity can not be obtained from the atmosphere, to meet this immense destruction of nitrogen by the almost uninterrupted growth of cereals; and thus it is, that the crops are so small when all the organized nitrogen originally in the soil is removed. Is there not something defective in such a course of tillage? Ought we not to lessen this destruction, by growing plants which contain more nitrogen than they have derived from the soil, obtaining it in some form from the atmosphere? Turnips, clover, and green vetches are good crops for this purpose, and on what is called in England the "Norfolk," or "four course system"—one-fourth of the arable land is in wheat, one-fourth turneps, one-fourth barley, and one-fourth clover, following each other in the order I have named them. In this manner, if a good system of fattening stock is adopted, the land is kept in good condition and large crops are obtained.

The climate of this country is probably too hot to grow turneps on a large scale; but it is very favorable for the growth of clover, and for its conversion into hay for the use of cattle in winter. Thus, instead of growing the cereal *timothy*, large crops of clover should be grown, and thereby a considerable amount of *nitrogen* would be collected from the atmosphere. But I would by no means plow under the crop, as by so doing a large amount of valuable food is destroyed, which does not in the least benefit the succeeding wheat crop, but rather injures it by causing an unnatural development of straw. Whereas, if the clover was made into hay, and used along with oil-cake to fatten sheep or cattle in the winter, using plenty of straw for litter, a very large quantity of *valuable manure* would be the result; for the composition of the manure depends on the food, and the more *nitrogen* the food contains, the more valuable will be the manure produced by its consumption.

The composition of the following substances will give a correct representation of their value as food for cattle:

TABLE showing the amount of dry matter, nitrogen, mineral matter, phosphoric acid, and potash and soda, in 100 parts of such substance, from analyses made at Rothamsted, England.—That of Indian corn obtained by calculation from the proximate analyses of Mr. J. H. SALISBURY.

Description of food.	Water.	Dry substance.	Nitrogen.	Gross Mineral matter.	Phosph'ic acid.	Alkalies, (potash and soda.)
Oil-Cake,	13	87	5.00	5.50	2 00	1.40
Linseed,	12	88	3 75	4 25	1 60	1 10
Beans, Peas, or Tares	16	84	4 00	2 50	0 80	1.10
Wheat	16	84	1.80	1 60	0 75	0 50
Oats,	16	84	2 00	3 00	0 50	0.50
Barley,	16	84	1.60	2 50	0 75	0 66
Malt	7	93	1 60	2.25	0 75	0.50
Malt Dust,	7	93	4.00	8 00		
Indian Corn,	8	92	1 00	1 34	0.70	0 25

It will be seen that oil-cake contains more of the essentially important elements of nutrition and manure than any other food generally used for cattle. Mr. LAWES' experiments on sheep and cattle fully confirm the chemical evidence of its value as food. It being granted, then, that oil-cake is the best food for feeding purposes, the important question is, will it pay to convert it into flesh, fat, wool, and manure? clover being valued at $5, oil-cake $18, and flesh $100 per ton.

My conclusions are drawn from the careful and extensive experiments of Mr. Lawes. Having been for two years chemical assistant to Dr. J. H. Gilbert, the gentleman who has the superintendence of the experiments, I have had full opportunity of forming a correct opinion of the results obtained. Speaking, then, from actual experiment, it will take 4 tons 360 lbs. of oil-cake, and 13 tons 780 lbs. of clover, to produce *one ton* of increase of animal—say fat and flesh.

Leaving the wool to pay for labor and other incidental expenses, I will endeavor to estimate the value of the manure by the quantity of nitrogen it contains and the effect it will produce on the wheat crop—namely, an extra bushel of grain for each 5 lbs. of nitrogen. Thus, with wheat at one dollar per bushel, the nitrogen would be worth *twenty cents per pound.*

In fattening animals, the carbon and hydrogen of the food combining with oxygen in the lungs, is respired in the form of carbonic acid and water, producing as much heat as though they had been burnt in a stove. In this way more than *one-half the entire dry matter of the food is consumed,* and more in cold than in warm weather. But the loss of it is of no detriment to the farm for if the wheat crop is supplied with sufficient *nitrogen,* it will obtain all that it requires from the atmosphere. It will be seen, then, how important it is that *wheat-growing* and *stock-feeding* should be adopted on the same farm, from the fact that though there is such an immense destruction of the useless elements carbon and hydrogen, yet there is comparatively no loss of the vitally important one—*nitrogen.*

There is, it is ture, about 3 per cent. of nitrogen retained in the increase of animal; and there always will, in practial farming, be some loss from evaporation and drainage: so that we will suppose there is *one-third* less nitrogen in the manure than in the food consumed by the animals making it.

Table, showing the quantity and value of the food consumed; the amount of nitrogen it contained; the quantity of nitrogen in manure, after allowing one-third for loss; its value as manure at 20 cts. per lb, and the nett profit of producing one ton of flesh.

	Total weight of food in lbs.	Value of the food consumed, in dollars.	Quantity of nitrogen in food, in lbs.	Quantity of nitrogen in manure, in lbs.	Value of the manure in dollars.	Value of one ton of flesh.	Total returns.	Cost of food	Profit in producing one ton of flesh.
Oil-cake	8720	75.24	436						
Clover.	27560	66.95	581						
Totals.	36280	142.19	1017	678	135.60	100.00	235.60	142.19	93.41

Fifty *well bred* sheep would give such a result in twenty weeks—equal to 2 lbs. increase each sheep per week.

I leave it for practical men, and those more acquainted with the prices of lean and fat stock, to say whether such a profit will remunerate them for their capital and trouble; but certain I am, that *some* such method must be adopted, to prevent the present fertile lands of this district from becoming absolutely sterile and incapable of profitably producing wheat at present prices.

Good tillage, under-draining, &c., (by *increasing* the crops for a few years,) only so much the sooner impoverish the land of those elements without which it will not grow wheat, though of the *greatest advantage* if a judicious system of rotation is adopted, so as to restore the elements removed by the crops, back to the soil. The system I have advocated would to a great extent enable the agriculturist to do this: for, besides the nitrogen, there would be 174 lbs. of phosphoric acid, and 122 lbs. potash and soda, *imported* on to the farm in the oil-cake, of which a small portion only would be retained in the animals: for though, in *rearing* stock, a considerable amount of phosphoric acid is removed from the soil in the bones in the animals, it does not affect this question, as we are now speaking of fattening *full grown* animals. The phosphoric acid thus *imported* would be equal to that *exported* from the farm in 386 bushels of wheat. The potash and soda would be sufficient for 403 bushels; so that a farmer may easily calculate how much of these important substances he exports from his farm, and also how much oil-cake or other substances he must import, to keep his soil in its proper condition.

I trust that chemical knowledge will advance with such rapidity that in a few years every farmer will keep an exact account of the elements removed in and by the growth of crops from each of his respective lots, and also know how to replace them again. Is not such knowledge desirable? Is it not worth a mighty effort to attain it? I hope, for the honor and happiness of the country of my adoption, that effort will be made—and success is certain. Joseph Harris.—*Ogden, N. Y., Aug.,* 1850.

LARGE FLEECES.

Messrs. Editors:—There have appeared in the Farmer, and other public journals, statements of large fleeces taken from Merino sheep. If those who tell of having sheep superior in quantity of wool, would also give a statement of the manner of keeping them, it would be more satisfactory; for it is a well known fact, that extra keeping gives an extra amount of wool. I have a flock of grade Merinos, numbering 111, from which I sheared 520 lbs. of wool, all well washed. 54 were ewes, 38 yearlings, 3 bucks, and 16 wethers. My stock buck gave a fleece of 10 lbs. 12 oz. I purchased him of J. D. Patterson, Westfield, Chautauque co. I sheared from the buck, one wether, one ewe, and two yearlings, 37½ lbs. of wool; from 14, including the 5 above, 89 lbs. I gave no grain to my sheep the past year—they were wintered on clover hay. My stock sheep was fed extra after he was taken from the ewes, he being very much reduced in flesh. Sam'l Embree.—*West Dresden, N. Y., Aug.,* 1850.

WOOL IN ORLEANS COUNTY

Messrs. Editors:—Thinking that my neighbors, at least, would like to know the *average* weight of the wool grown and sheared this season, I will say to them publicly, (with your consent,) that in this town and vicinity I purchased 3,578 fleeces, and by average I find the weight just 60 oz. each—3¾ lbs. Considering the quality, this is a heavy clip. About three-eights of the amount was five-eights to three-fourths Merino, the ballance was from five-eights and three-fourths to pure blood Merino. By a pretty close calculation, I am led to believe that the above enumerated fleeces are about the amount that was grown in this town. The average price paid per fleece was about $1.16. X.—*Yates, N. Y.,* 1850.

BEES.—No. 4

Hives, &c.—I will now give my views in brief on sundry hives in use.

Kelsey's Hive.—This is a hive constructed in an oblong shape, with a door extending the whole length of the hive. The interior is composed of *three* separate boxes, with a pane of glass in the front of each. If I am rightly informed, the inventor claims that in this hive all the advantages of obtaining box, or surplus honey, are derived; and at the same time, by a transposition of the different boxes, the bees can always be kept with new combs, or at least with combs of such age as shall be conducive to their prosperity.

It is true that the bees may thus be transferred to boxes in which they will build new combs, but it is at the expense of subverting the domestic economy of this insect; and this process can never be effected but at the peril, sooner or later, of losing every family of bees that is thus operated on. The reason is this: Where bees are afforded a sett of boxes to work in, the lower one is generally selected as a permanent abode, in which they construct mostly *brood* combs; that is, the combs in which their young are matured. The upper box or boxes are used as store-houses, in which *store* combs alone are generally built. Now, if we take the lower box when filled with bees and combs, built on the foregoing principles, and place it in the position of the second, or next upper box, and put the second box below in the full one's position, the bees will, where they have become numerous, commence working therein, and will fill the same with new combs: and in the fall of the year, if the then *upper* box be taken out and the bees dispersed, they will return to the hive, and finding the lower section only, they will all enter it; thus effecting the transfer from old to new combs, upon which the inventor (there is nothing about it worthy of being called an *invention*,) places so much importance. If one wished to destroy an apiary gradually, he could not adopt a better plan. The bees in working below their permanent residence, act to a great extent on the same principles as they do when laboring above it; and instead of thin sheets of brood comb, many store combs would be built, generally, which could never be used for breeding purposes: hence, when a family of bees is transferred from their original combs to such as are thus fabricated, they can not prosper for the want of a proper proportion of brood combs. If all the bees of a lower box be *driven* into another empty box, they will, in such case, build suitable combs, since there home is *there*, and not in a box above or below them; but while the *queen* is in a separate box, the workers will never construct combs with the same regularity and for the same uses that they do where the queen is present among them. This is very reasonable. Why should they? In their permanent dwelling they already have enough brood combs, and consequently they have no use for more, and brood combs not being suitable to store honey in to the best advantage, store combs are built.

There is another serious objection to this manner of transferring bees. The queen is most always in that section of the hive where the brood is raised, perhaps never entering a storage section, unless temporarily driven out during the height of breeding, for the want of room to deposit her eggs, which sometimes occurs when the honey harvest is very abundant, and when much of her legitimate room is filled with honey. When the season of transferring on the foregoing plan arrives, she will be in the *removed* section; and though the workers may return to the other section, she will not, for the reason that she is unacquainted with the locality, being always at home within her tenement. In such case the safety of the colony or stock is greatly endangered, since they can do nothing without a queen. At certain seasons the bees can produce a queen in the place of one lost; but this can not be done in the fall of the year so as to proceed with spring laying in the usual way. If, then, the queen be lost in the transfer, the family of bees is in a very critical condition; and even if she be not lost, the form of the combs preclude the possibility of the greatest degree of prosperity in the family, and they must sooner or later become extinct.

I believe the foregoing statements to be so firmly based on *facts*, that my position is not susceptible of being overthrown, or even assailed with any tangible argument; yet I hope that apiarians who are skilled in bee-culture will inform the public wherein I err, if I shall state ought but truth. That any written exposition of this subject can tally with *every* man's experience in all cases, is out of the question; but general facts can be given, involving general principles, and that is all I can expect to do.

T. B. Miner,
Author of the American Bee-Keeper's Manual.

Clinton, Oneida Co., N. Y., 1850.

ON BEES.—QUERY.

In the August number of the Genesee Farmer, page 181, friend Miner has advanced a theory which is new to me, in relation to queen bees taking an aerial flight, and that while on the wing coition takes place, and a future race is propagated. This theory conflicts somewhat with some things that have come under my observation, which I will relate.

Some few years since I had a swarm of bees come out, (it being a second swarm,) and after alighting as usual, remained but a short time, when they returned to the old hive. On examining to ascertain the cause, I found the queen on the ground in front of the old hive, totally disqualified for flying, having but one wing, and that a mere semblance of a wing, I returned it to the old hive. On the second day they did nearly the same as on the first. On the third day I put the queen (it being in all respects as it was when I first caught it,) in a hive, and succeeded in getting a few bees in the hive—a bunch nearly as large as a goose's egg—and they stayed. I placed them away from the other bees, and noted their progress; and about the usual time the bees began to increase, though very slow for want of comb. In the fall I took them up. The hive then contained about the usual number of bees, with about a dozen pounds of honey.

And further, for a number of years past, when my bees show signs of disquiet, on hiving them I catch the queen (or queens, if more than one,) and cut one wing, and then return it to its swarm. This I have practiced with good effect. How is this to be reconciled with friend Miner's theory J. D. C.—*Locke, N. Y., Aug.*, 1850.

Every man should strive to be a creator rather than an inheritor—to forge his own weapons rather than rely on the rusty sword of his forefathers.

N. Y. State Agricultural Society.

FAIR FOR 1850.

Our columns are too much occupied with the list of premiums awarded on articles exhibited at the late State Fair, to allow of any extended remarks of our own. We can not, however, refrain from a word or two. The fair was held about one and a half miles from Albany, on the Troy road. It was of easy access both from Troy and Albany, and persons were carried to the grounds for a shilling. In this work was engaged horses and vehicles of every description, from the fine carriage and omnibus to the one-horse lumber wagon The road was continually thronged with these vehicles, making the journey on foot unpleasant if not dangerous. About thirty acres of meadow was enclosed by a good fence, for the exhibition. We first made a visit to the grounds on Wednesday morning. In consequence of previous heavy rains, the ground was in a very wet condition, making it unpleasant to get about, particularly for ladies. This evil was partially remedied by laying boards in the principal halls. We rather think that a little previous attention to draining would have been advisable, and that a little money spent in that way would have been very profitably expended. The first thing done by the officers of the Royal Agricultural Society of England, in preparing for their exhibition, is to well drain the ground. The display on the whole was good — perhaps never exceeded. The show of Stock surpassed anything we ever saw.

The exhibition of Fruits, Flowers, and Vegetables, in Floral Hall, was hardly what we expected, and with the exception of *Foreign Grapes*, we shall be much disappointed if it is not far surpassed by the exhibition of our County Society and the Horticultural Society of the Valley of the Genesee, to be held on the 26th of September. The display of Foreign Grapes was very fine. We noticed twenty-two varieties from Van Rensselaer's Clinton Point Vinery, among them the Black Prince, Victoria Hamburgh, White Muscat of Alexandria, and Palestine; twelve varieties from L. R. Colt, of Patterson, N. J., among them Muscat Blanche, Victoria Hamburgh, and Brown Damascus. Also, several varieties by H. Vail, of Mt. Ida, Troy, and a fine young plant of Black Hamburgh, in a box, about six feet high, bearing seven large bunches. The Floral Ornaments were superb—a Gothic Arbor, by Herman Wendell; a Chinese Temple, principally of verbenas, by J. Dingwell, of Albany; a Floral Peacock, by Mrs. J. Van Nama, of Pitstown; and a Floral Harp, by Mrs. Marbett, of Mechanicsville, were particularly worthy of praise.

In Manufacturer's Hall there was a fine collection of manufactured articles — chairs, bedsteads, quilts, locks, patent milkers, &c. But this hall was not half large enough to accommodate the articles exhibited, much less the crowd of visitors. There should have been two halls — one for the exhibition of articles of ladies' manufacture. With proper room for display, this would have been the most brilliant exhibition on the ground.

In Mechanic's Hall was a great collection of stoves, planing and sawing machines, &c. But the great point of attraction was the steam press, on which was worked the *State Fair Hourly Bulletin*, a little paper set up and printed on the grounds.

The exhibition in Dairy Hall was meagre, although we noticed some very fine cheese, mostly from Herkimer county.

Emery & Co.'s Implement Hall was the prettiest building on the ground — indeed, it was the only building laying any claim to taste in construction. Perhaps those having charge of the business might learn a lesson from Mr. E., and in future exercise a little taste in the erection of the buildings, without adding materially to the expense. This hall was filled with a collection of implements that for beauty of workmanship, and utility of design, it would be very difficult to surpass. In front of this hall was a fountain and water ram in operation, adding much to the beauty and interest of the place.

In the open ground was a good collection of Seed Drills, Horse Powers, Threshers, &c. Ketchum's Mowing Machine, as it passed over ground, nicely clipping the short grass, attracted a crowd.

There was a fair collection of Sheep and Hogs. The Poultry Show was small. We noticed only *two* lots of Polands and a pair or two of Shanghaes, with several chickens, and *only one* lot of Dorkings. There was quite a variety of the more curious, such as Bantams, Silver Pheasants, &c.

We would suggest that in future no *refreshment tents* be permitted upon the grounds, unless under the control of some person of *honor*, who is both willing and competent to do the fair thing. Allowing persons to come within the enclosure and erect tents ostensibly for the purpose of *feeding the hungry crowd*, while the real object appears to be to rid them of their money without a fair return, is dishonorable to all concerned.

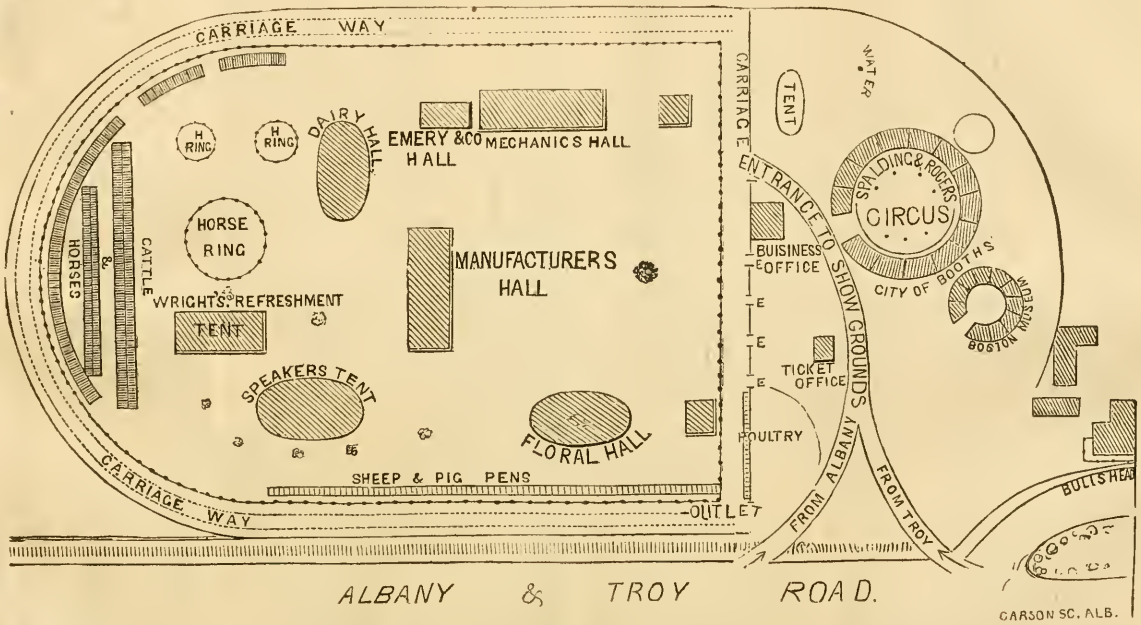
Haydn's Oratorio of the Seasons was performed by the Albany Harmonia Society, on the several evenings of the Fair. We only had the opportunity of hearing it once. The execution of the piece was all that we expected — all that could be desired — worthy of the great composition and its great author. But we regret that the audience was so small. We fear the circus had more attraction for the mass than the sublime, soul-stirring conceptions of Haydn, The following, representing the clearing up of a thunder-storm on a summer's evening, we thought peculiarly beautiful; and the latter part, after the fatigue of traveling and attendance at the fair, we could fully appreciate:

> "Now cease the conflict of the winds
> And fast the gloomy clouds retire;
> The sky sublimer swells.
> Pure azure spreads around,
> And o'er the fields the setting sun
> Displays the sparkling robe of joy.
> His flock secure, the shepherd hies
> Light-hearted to his home;
> The quail repeated calls her mate,
> Around the cot the crickets chirp;
> While croak the frogs within the pool,
> And tolls the evening bell.
> Now shines the glitt'ring host of stars,
> The hour of sweet repose is near.
> Welcome, welcome, gentle sleep!
> Soothing balm of every care!
> O, thou that in the cot of toil
> Delight'st to close the lids of health;
> Welcome, welcome, gentle sleep
> To rest, to rest, away!"

The number of people in attendance was immense, and the receipts for admission to the grounds over $12,000, far exceeding that of any previous year.

The view of the show grounds, on next page, will give those not fortunate enough to be present a pretty correct idea of the arrangement.

VIEW OF THE SHOW-GROUND.



PREMIUMS AWARDED AT THE N. Y. STATE FAIR, Held at Albany, September, 1850.

SHORT HORNED CATTLE.

Extra stock. Bulls over 3 years, Sherwood and Stevens, Auburn, certificate for "3d Duke of Cambridge," who received the 1st premium in 1849; 2d, none; 3d, J D Thorpe, "Dama," $5. Bulls 2 years old. best, Sherwood and Stevens, Auburn, imported Bull "Earl Scaham," 20; 2d do., P P Chapman, Clockville, "Fortune," 10; 3d, do., George Vail, Troy, "Eclipse," 5. Bulls 1 year old, 2d, Lorillard Spencer, Williams Bridge, imported Bull "Waldeman," 10. Bull calf, best, J M Sherwood, Auburn, "Vane Tempest," 10; 2d, do., Francis M Rotch, Butternuts, "Prophet," transactions and 3.

Cows over 3 years—1st, to George Vail, Troy, Esterville, 25; 2d, Col. Campbell, Rotterdam, Rosa, 15; 3d, Thomas Hillhouse, Watervliet, Daisy, 5.

Heifers 2 years old—1st, Ambrose Stevens, New York, Princess 2d, 20; 2d, George Vail, Troy, Hilpa 2d, 10; 3d, George Vail, do., Eunice 4th, 5

Heifers 1 year old—1st, George Vail, Troy, Lady Barrington 5th, 15; 2d, S P Chapman, Clockville, Duchess, 10; 3d, F M Rotch, Butternuts, 5.

Heifer calves—1st, George Vail, Troy, Hilpa 3d, 10; 2d, J M Sherwood, Auburn, 3

Extra stock—S P Chapman, for his cow Charlotte, which received the first premium last year, a Diploma.

DEVONS.

Bulls over 3 years—Best, R H Van Rensselaer, Butternuts, $25; 2d, John Muir, sen., Hamilton, 15; 3d, Andrew Woodruff, Wyoming, 5. Mr. Van Rensselaer's bull, Bishop, ruled out, having received the prize last year.

Bulls 2 years old—Best, John Freemyre, Schoharie county, 20; 2d, H N Washburn, Butternuts, 5.

Bulls 1 year old—Best, H N Washburn, Butternuts, 15; 2d, Le Roy Mowry, Washington co., 10; 3d, Lewis G Collins, Dutchess county, 5.

Bull calf—Best, Lewis G Collins, Dutchess co., 10; 2d, H N Washburn, Butternuts, 3.

Cows over 3 years—Best, H N Washburn, Butternuts, 25; 2d, Lewis G Collins, Dutchess co., 15.

Heifers 2 years old—Best, E P Beck, Wyoming co., 20; 2d, H N Washburn, Butternuts, 10; 3d, M C Remington, Cayuga, 5.

Heifers 1 year old—Best, Le Roy Mowry, Washington co., 15; 2d, Lewis G Collins, Dutchess, co., 10; 3d, H N Washburn, Butternuts, 5

Heifer calves—Best, E P Beck, Sheldon, Wyoming, 10; 2d, Do., Transactions and 3.

HEREFORDS.

Bulls over 3 years old—Best, William A Keese, Panic, Peru, $25; 2d, Erastus Corning jr., Albany, Young Major, 15.

Bulls 1 year old—2d best, W A Keese, Peru, Clinton, Noble, $10.

Bull calf—Best, Erastus Corning jr., Albany, Prince Albert, 10.

Cows over 3 years—Best, Erastus Corning, jr., Albany, Victoria, 25; 2d, do., do., Young Victoria, 15; 3d, W A Keese, Peru, Matilda, 5.

Heifers 2 years old—2d, William A Keese, Peru, Adelaide, 10.

Heifer calf—2d best, Wm. A Keese, Peru, Trans. and 3.

AYRSHIRES.

Bull over 3 years old—Best, E. P. Prentice, Albany, Dandy, $25.

Bull calf—Best, E P Prentice, Albany, 10; 2d, the same, Dandy 3d, Trans. and 3.

Cows over 3 years old—Best, E P Prentice, Daisy, 25; 2d, do., Maida 2d, 15.

Heifer 2 years old—Best, J McD McIntyre, Albany, Norna, 20; 2d, E P Prentice, Ayr 4th, 10.

Heifer calf—Best, E P Prentice, Redlady, 10; 2d, do., do., Jessie Deans, Trans. and 3.

NATIVE AND CROSSES.

Cows over 3 years old—Best, D H Albertson, Lima, N. Y., $20; 2d Thomas Bell, Morrisiana, 12; 3d, Isaac Sheldon, Sennett, 4

Heifers 2 years old—Best, Thomas Bell, Morrisiana, 15; 2d, Isaac Sheldon, Sennett, 10; 3d, Joseph Haswell, Hoosick, 3. John Townsend, of Albany, exhibited a very fine heifer of a cross breed

Heifers 1 year old—Best, F B Leonard, Rensselaer co., 10; 2d Joseph Haswell, Hoosick, 8; 3d, Thomas Bell, Morrisiana, 3. John M Nott, of Lansingburgh, exhibited a fine heifer.

Heifer calf—Best, John Lossing, Albany, 3; 2d, Milton Knickerbacker, Schodack, Trans

Bulls—Fine grade bulls and bull calves were exhibited by John Cross, of Oneida co., and by Silas Sweetland, Clifton Park, Saratoga.

WORKING OXEN—OVER FOUR YEARS.

Best team from any town, not less than ten yoke, William Strever, Kinderhook, $25; Best yoke of oxen, James Wadsworth, Geneseo, 20; 2d, Elon Sheldon, Sennett, Cayuga, 15; 3d, John P Beekman, Kinderhook, 5.

Discretionary.—Lemuel Hurlburt, Winchester, Conn., 25; Wm Cowles, Farmington, Conn., 15; R Mesick, Kinderhook, 5; J H B Church, Vernon, Oneida co., 5; Arden Woodruff, Wyoming co., 5; James H Sherill, New Hartford, 5; John Drydon Westmoreland, 5; Henry B Bartlett, Paris, 5; Joseph Haswell, Hoosick, 5.

STEERS—THREE YEARS OLD.

Best single yoke, John Muir, sen., Hamilton, Madison co., $10; 2d, do., B H Streeter, Clyde, Wayne co., 8; 3d, James S Wadsworth, Geneseo, Trans. and 3. A premium of $5 is awarded to the steers of Elon Sheldon, Sennett, Cayuga co.

STEERS—TWO YEARS OLD.

Single yoke—Best, S A Gilbert, Hamilton, Madison co., $10; 2d, B. Benedict, Greene co., 8; 3d, James H Sherrill, New Hartford, Trans. and 3. Boys under 16 for training—Best, John N Benedict, Greene co., silver medal; 2d, Luther Comstock, Clinton, Oneida co., Trans and 3. To S A Gilbert an award of 2 for training is recommended.

STEERS—ONE YEAR OLD.

Single yoke—Best, John H Sherrill, New Hartford, 8; 2d S A Gilbert, Gilbertsville, Otsego co., 5; 3d, James D Van Vechten, Schodack, Trans. and 3; Lewis E Smith, Half-moon, Trans.; H B Bartlett, Paris, do. Farming steers—1st, S A Gilbert, sil. med; 2d, John H Sherrill, Trans. and 3.

MILCH COWS.

Best milch cow, S P Chapman, Clocksville, Madison co., 20.

FAT CATTLE—STALL FED.

Fat oxen, 4 years old—Best, Edward Munson, Sennett, Cayuga, weigh 5,347 lbs., 25; 2d, A Rose, Preston, Chautauque, weigh 4,112 ½ lbs., 15; 3d, John H Boyd, weigh 4,017 ½ lbs., 10. Single ox, over 4 years old—Best, James S Wadsworth, Geneseo, weight 2,247 lbs., 15; 2d, Jas. S Wadsworth, Geneseo, wt. 2,147 ½ lbs., 10. A Osborn, of Watervliet, had an ox 13 years old that is commended for notice. Fat cows, over 4 years old—Best, J M Sherwood, Auburn, wt. 1,765 lbs., 15; 2d, Aaron Taylor, Arden, Erie co., wt 1,555 lbs., 10. Fat steers, 4 years or under—Best, Elon Sheldon, Sennett, Cayuga co., 10; 2d, Milton Knickerbacker, Schodack, 6.

FAT CATTLE—ON GRASS.

Oxen, over 4 years old—Best, Elon Sheldon, Sennett, Cayuga, 20; 2d, James H Sherrell, New Hartford, 12; 3d, Hiram Sheldon, Sennett, 8. Cows, over 4 years—1st, Luke Putnam, Warsaw, Wyoming, 10; 2d, George Vail, Troy, 6; 3d, G Lee, Cambridge, Washington 4. Fat steers, 4 years or under—Best, Jas S Wadsworth, Geneseo, 12. Heifers—Best, Joseph Haswell, Hoosick, 8; 2d, Elon Sheldon, Sennett, 3.

FAT SHEEP.

Long Wooled, over 2 years old—2d best, Richard Gypson, Oneida co., 3. Middle Wooles, 2 years and over—Best, J M Sherwood, Auburn, 5; 2d, T B Wakeman, Herkimer, 3; 3d, J McD McIntyre, Albany, Morcell's Shepherd. Middle Wooled Lamb—Richard Gypson, a discretionary premium; Fat Sheep, D R Dix, Vernon, Oneida co., do.

FOREIGN CATTLE.

To Roswell L Colt, of N. J., for his specimen of Hungarian Cattle, as a commendation for his enterprise, a diploma; also, the Society's thanks to J. Watson Webb, who sent them out. A diploma to J. Baldwin, Vt., for specimens. Working oxen—1st, Wm. L Cowles, Ct., 20; 2d, Lemuel Hurlburt, Ct., 15. Short Horns—Best Bull, George Miller, Canada West, 25; 2d best, P Lathrop, S Hadley, Mass., dip. and 10. Cows—2d premium, George Miller, C. W., 15. For a bull calf, same, dip. Devons—1st, Samuel Hurlburt, Winchester, Ct., "Bloomfield," dip. and 25; 2d, Wm R Sandford, Orwell, Vt., 15; 3d, Wm. L Cowles, Ct., 15. Yearling Bulls—1st, same, 15. Bull Calves—Wm. R Sandford, Vt., 10.—Devon Cows—1st, Wm L Cowles, dip and 25; 2d, Lemuel Hurlburt, Ct., 15; 3d, Wm L Cowles, 5. Yearling Heifers—Best, same, 15. Heifer Calves—1st, Samuel Hurlburt, discretionary; 2d, W L Cowles, Trans. Ayrshire Bulls—1st, R L Colt, N. J., dip. and 25; 2d, E W Woodford, Ct., Trans and 8. Cows—1st, R L Colt, N. J., dip and 25. Also, a dip. for 2 yr. heifer. Aldernay Bull—Best, R L Colt, 25. Cow, same, 25. Also a diploma and thanks for bull and heifer.

HORSES OF ALL WORK.

Stallions of all work—Best, J T Grant, Junction, Morses Gray; 2d do., John L Bennett, Montgomery co., Sir Henry; 3d do., C Canfield, Poughkeepsie, Young Andrew; 4th do., Foster Breed, Crown Point, young Black Hawk. Brood Mares—Best, E Corning, Albany, bay mare, Brown Colt; 2d do., G Van Olinda, Watervliet, gray mare, Bay Colt; 3d do., P F Mesick, Columbia co., sorrel mare, Sorrel Colt.

A special premium of $20 was awarded to William M Bullock, of New Scotland, for his very superior brood mare and foal

THOROUGH BRED HORSES.

Best, Mortimer De Mott, of New York, for imported "Trustee," 20; 2d, O K Lapham, of Keesville, Essex co., for imported "Leopard" 12. J B Burnett of Syracuse, for imported "Consternation," a special premium is recommended for his superior merit, he having received the Society's first premium already. Wm M Huff, of Buffalo, for his imported horse "Lance," which received the first premium of the Society at the fair of last year, a special premium is recommended.

THREE YEARS OLD, STALLIONS AND MARES.

1st best stallion 3 years old, Philip Hoornbeck, of Rochester, Ulster co., 15; 2d, A H Jaqueth, Fonda, Mont co., 10; 3d, Harvey Kimberlee, Columbia co., Youatt; 4th, Wm Hunter Watervliet, Albany co., Trans. 1st best mare, J D Kingsland, Clinton co., 15; 2d, Peleg Cross, jr., Columbia co., 10; 3d, John M Taylor, Otsego co., Youatt; 4th, John McCormick Bethlehem, Albany co., Trans

TWO YEARS OLD, STALLIONS AND MARES.

1st best stallion, 2 years old, Garret Van Olinda, Watervliet, Albany co., 10; 2d, John Muir, sen., Hamilton, Madison co., Yon-

att; 3d. Isaac Bink, Greenbush, Rens. co., Trans. 1st best mare, Isaac T Grant, Junction, Rens. co., 10; 2d, S A Gilbert, Hamilton, Madison co., Youatt; 3d, Daniel J Day, Granville, Wash. co., Trans.

ONE YEAR OLD COLT.

1st best stallion, Wm. Stuver, Kinderhook, 5; 2d, Isaac Hoag, Easton, Wash. co., Youatt; 3d, Abraham Oliver, New Scotland, Trans.

MATCHED HORSES FOR CARRIAGES.

1st best pair matched horses, J B Plumb, Albany, dip. and 15; 2d, Wm. C Durant, Albany, 10; 3d, Theodore S Faxton, Utica, 8; 4th, John B Borst, Montgomery, 5.

MATCHED HORSES FOR DRAUGHT.

Best pair of matched horses, John Butterfield, Utica, 10; 2d, Jagger, Treadwell & Perry, Albany, 8; 3d, Mr. Truax, Albany, 5.

GELDINGS.

Best Gelding, Lewis S Smith, Mechanicsville, Soc. dip. and 10; 2d, Theo. S Faxton, Utica, 8; 3d Nathan Morgan, Victor, Mad. co., 6; 4th, Silas W Toby, Hudson, 4.

FOREIGN HORSES.

Best Blood Stallion, over 4 years—Thomas Leach, Canada West, Reindeer, dip. and 20. Best Stallion of all work—Wm. Walker, Vt., Morgan, 14 years old, dip. and 20; 2d, Amos Bigelow, Bridgport, Vt., 10. Best draught stallion—Elisha Norton, Chelsea, Vt, dip. and 20; 2d, David Lawrant, Canada, 10. Best brood mare—Wm. L Cowles, Farmington, Ct., dip and 20. Best pair matched horses—Andrew Holmes, Addison, Vt., 10; 2d, B B Foss, Kelsey, Vt, pair of Morgan matched horses, 10. S D Harlan, of Hartland, Vt., having received the premium last year on his horse "Gray Hawk," receives the Society's certificate at this exhibition.

A discretionary premium of a silver medal is also recommended to Messrs. Reynolds & Ness, of New York, for a pair of 2 year old mules.

SHEEP, LONG WOOLED.

1st best Bucks over 2 years—Winants Younghans, Rensselaer co., 10; 2d, John A Rathbun, of Otsego co., 8; 3d, John C Collins, Columbia co., 5. Best buck, 2 years or under—B J Hays, Montgomery co., 10; 2d, Richard Gibson, Oneida co., 8; 3d, B J Hays, Mont. co., 5. Best pen 5 ewes over 2 years—John A Rathbun, Otsego co, 10; 2d, Winants Younghans, Rens. co, 8; 3d, Wm Rathbun, Springfield, Otsego co., 5. Best pen 5 ewes, 2 years or under—John A Rathbun, Otsego co, 10; 2d, J C Rathbun, Otsego co., 8; 3d, E Scace, Watervliet, Albany co., 5. Best pen 5 Buck lambs—Winants Younghans, Rens. co., 8; 2d, Wm Rathbun, Otsego co., 3 and Morrell's Shepherd. Best pen 5 Ewe lambs—Winants Younghans, Rens. co., 8; 2d, John A Rathbone, Otsego co., 3 and Morrell's Shepherd.

MIDDLE WOOLED SHEEP.

Bucks over 2 years old—Best, J M Sherwood, Auburn, 10; 2d and 3d to be divided between F M Roteh, of Butternuts, and J McD McIntyre, of Albany, 13. Bucks under 2 years—Best, Z B Wakeman, Herkimer, 10. Pen of 5 Buck lambs—Best, Z B Wakeman, 8; 2d, J McD McIntyre, Morrell's Shepherd's book and 3. Ewes over 2 years—1st, J M Sherwood, 10; 2d, F M Roteh, 8; 3d, Z B Wakeman, 5. Ewes under 2 years—Best, Z B Wakeman; 2d do., do., J McD McIntyre. Ewe lambs—Best, Z B Wakeman, J McD McIntyre, Morrell's Shepherd's book and 3. All the sheep of this class, to which premiums were awarded, are full blood South Downs.

MERINOS.

Best Buck over 2 years—M N Dart, Harpersfield, 10; 2d, Owen Lathrop, Darien, 8; 3d, Joseph Haswell, Hoosick, 5. Best Buck 2 years or under—L H Yates, Darien, 10; 2d, Lewis G Collins, Dutchess co., 8; 3d, J M Sherwood, Auburn, 5. Best pen 5 ewes over 2 years—R E Keese, Ausable, Clinton co., 10; 2d, L H Yates, Darien, 8; 3d, Francis M Roth, Otsego co., 5. Best pen 5 ewes, 2 years or under—Lewis G Collins, Dutchess co., 10; 2d, Robert E Keese, Clinton co., 8; 3d, L M Dart, Harpersfield, 5. Best pen 5 Buck lambs—L G Collins, Dutchess co., 8; 2d, R E Keese, Clinton co., 3 and Morrell's Shepherd. Best pen 5 Ewe lambs—R E Keese, Clinton co., 8; 2d, L G Collins, Dutchess co., 3 and Morrell's Shepherd.

SAXONS.

Best Buck over 2 years—S H Church, Oneida co., 10; 2d, Ransom & Baker, Hoosick, 8; 3d, Joseph Haswell, Hoosick, 5. Best Buck 2 years or under—S H Church, Vernon, Oneida co., 10; 2d, Ransom & Baker, Hoosick, 8. Best pen 5 ewes over 2 years—S H Church, Vernon, Oneida co., 10; 2d, Joseph Haswell, Hoosick, 8. Best pen ewes 2 years or under—S H Church, Oneida co., 10; 2d, Ransom & Baker, Hoosick, 8; 3d, Frederick Phelps, Schodack, 5. Best pen 5 Buck lambs—Ransom & Baker, Hoosick, 8; 2d, Joseph Haswell, Hoosick, 3 and Morrell's Sheperd. Best pen 5 Ewe lambs—Joseph Haswell, Hoosick, 8; 2d, Ransom & Baker, Hoosick, 3 and Morrell's Shepherd. Best sample of Wool, not less than ten fleeces, (as in Merino Class)—J P Beckman, Columbia co., Sil. Med.

Best Shepherd Dog—John Campbell, Middlebury, Vt, 5; 2d, Robert Middlemost, West Meredith, Delaware co., Morrell's Shep.

NATIVE AND GRADES.

Best Buck over 2 years old—Daniel Curtiss, Canaan, Col. co., 8. Best Buck under 2 years—1st, Daniel S Curtis, Canaan, Col. co., 10; 2d, R C Derrick, New Brunswick, 8. Best pen 5 Ewes, over 2 years—1st, Daniel S Curtis, Canaan, Col. co., 10; 2d, E R Div, Vernon, Oneida co., 8. Best pen 5 Ewes under 2 years—2d, Daniel S Curtis, Canaan, Col. co., 8. Best pen 5 Buck lambs—2d, Daniel S Curtis, 3 and Morrell's Shepherd. Best pen of 5 Ewe lambs—1st, Richard Gypson, Westmoreland, 8; 2d, Daniel S Curtis, 3 and Morrell's Shepperd.

FOREIGN SHEEP—LONG AND MIDDLE WOOLED.

Long Wooled—Best Buck, Markham, C. W., 10. Best pen of 5 Ewes, same, 10. Middle Wooled—Best Buck, same, 10. Best pen of 5 Ewes, same, 10. Best pen of 5 Buck lambs, same, 5

MERINO AND SAXONS.

Merino—Best Buck, John Campbell, Middlebury, Vt., 10. Best pen of 5 Ewes, Jesse Hinds, Rutland, Vt, 10. Best pen 5 Buck lambs, Geo. Campbell, Westminster, Vt., 5. Best pen 5 Ewe lambs, same, 5.

Saxons—Best Buck, C B Smith, Walworth Ct., 10. Best pen 5 Ewes, same, 10. Best pen 5 Buck lambs, George Campbell, Westminster, Vt., 5.

SWINE.

Best Boar, 1 year old—Winant Younghans, Rens. co, 10; 2d, James P Noxon, White Creek, Wash. co., 5. Best Boar under 1 year—Wm. Webb, Darien, 8; 2d, Wm. Comstock, Lawrence, Otsego co., 3. Jacob Taylor, Rens. co., a boar 4 years old, highly recommended. Best breeding sow over 2 years—Wm Comstock, Otsego, 10; 2d, Wm Hurst, Albany, 5. 2d best breeding sow, 1 yr. old, Lawreuce Salisbury, Lansinghurgh, 5. Best sow under 1 year, Wm Hurst, Albany, 8. Best lot of pigs, not less than 5 and under 10 months, R C Derrick, New Brunswick, 10. Samuel Morgan, Watervliet, pair Suffolk pigs, very fine, 3.

PLOWS.

Best sod plow for stiff soil, not less than 7 inches—Prouty and Mears, No. 30, Boston, dip. and 15; 2d, Miner & Horton, Peekskill plow No. 21, 10. Best sod plow, for light soil, furrows 6 by 12 inches—Prouty & Mears, Boston, No. 23, dip. and 15; 2d, W U Chase, Amsterdam, Amsterdam Plow, No. 7, 10. Best plow for fallows or old land—Prouty & Mears, Boston, No. 5 1-2, dip. and 10; 2d, Miner & Horton, Peekskill Plow, No 21, 8. Best subsoil plow, Prouty & Mears, Boston, dip. and 8. Best side hill plow, Bosworth, Rich & Co, Troy, dip. and 8.

FARM IMPLEMENTS, NO. I.

Best farm wagon, Chris. Snyder, W. Sand Lake, Rens co, 8. best harrow, J & R Downer, Castleton, Rens., 5; best sown cultivator, Emery & Co, Albany, 5; best fanning mill, I G Grant, Junction Port, Ohio, 5; best corn stalk cutter, Reuben Daniels, Woodstock, Vt, 5; best straw cutter, Wm Henry, Worcester, Mass., 3; best corn and cob crusher, by horse power, Emery & Co, Albany, 5; best horse rake, R H Chase, F Livermore, Me., 2; best ox yoke, Emery & Co, Albany, 2; best roller for general use, same, 5.

Discretionary.—S Hosack Mix, large plank road car with "oscillating roller axle," sil med. One or two seat carriage, Long & Silsbee, Albany, large sil. med. One horse sleigh, Muller & Skinner, Fort Ann, Wash co., small sil med Barouch and open buggy, Lown & Bunker, Troy, sil. med Lawrence coach, covered sleigh, two seated sleigh and a one horse sleigh, square, sil med and dip; Omnibus, Eaton, Gilbert & Co., Troy, small sil med—Miscellaneous articles, for general garden purposes, Emery & Co, Albany, large sil med

FARM IMPLEMENTS, NO. II.

Best carriage harness, Lyman J Loyd, Albany, 3; best churn, Emery & Co, Albany, 2; best cheese press, Hezekiah Rogers, Clifton Park, Saratoga co., 2; best grain cradle, Nichols & Boles, Van Buren Centre, Onondaga, 2; for a lady's saddle, L J Loyd, dis. prem.; patent Shefto saddle, E B Slason, Albany, do; best six hand rakes, David Ray, Chatham, Col. co., 2; best garden rakes, S C Blair, Farmington, Ct., dip; best hay fork, D J Millard, Paris, Oneida co., 2; best straw forks, same, 2; best grass scythes, same, 2; best manure forks, same, 2; best hay rigging Wm. F Coonrads, Brunswick, Rens. co., 2

Discretionary.—Grass scyths, and snaths, Draper, Brown & Chadsey, Troy, 2; butter ladles and prints St Paul Seeley Morris, Otsego, 2; shovels and spades, Emery & Co, Albany, 2; largest assortment of useful farm implements same dip; potato diggers, Henry Patridge & Son, Medfield, Mass., 2; hoes, S P Reynolds, Unadilla Forks, 2.

FARM IMPLEMENTS, NO. III.

Best horse power, on endless chain principle, Emery & Co, dip, and 3; best thresher Eddy & Co., dip and 5; best seed planter, for hand or horse power, J P Groshen dip and 3; best grain drill, F Seymour, dip.; best portable saw mill Emery & Co, dip; best corn sheller, horse power, same dip; best do. hand, same dip; best vegetable cutter, V H & N Hallock, dip; best and most numerous collection of agricultural implements, Emery & Co., dip and 20; best do., made in New York, same, dip, and 20.

MACHINERY AND IMPLEMENTS, NO. IV.

Steam engine for agricultural purposes on the farm, Hoard & Bradford, Watertown, Jefferson co., silver medal, on condition that the proprietor furnishes a description of machine, accompanied by a model to be deposited in the Society's Museum; sliding cut-off valves for steam engine, S P Winne Albany sil. med; patent rotary sewing machine, Lerowe & Blodget New York sil med; buck moulding machine Baker & Gifford Troy, dip; dairy steamer, Harry Bushnell Utica dip; two cornstalk and straw cutters, E & T Burrell, Seneca sil. med; three cylinders of knives for straw cutters Wm Hoag Mass., sil. med; two King's railway washing machines, Van Zuyle & Coons Lansinghurgh dip.; spring tooth harrow, attached to broad cast sower, S S Sage

Broome co., dip. Grain and seed sower, with plow attached, Samuel Davidson, Greece, Mon co., dip. B D Saunder's winnowing machine, Albert Bates, Shanesville, Ohio. sil. med. Quack rake and sod cutter, S Cheever, Bemis Heights, Sar. co., small sil med. Wm Crossdale's plow and seed drill, W H Kerr, Philadelphia, small sil. med, and dip. Myers' patent water filterer, Gideon Myers, Little Falls. dip. Patent dog power, for churn, Bosworth, Rich & Co., Troy, small sil med. Patent for connecting and disconnecting wheel hubs and axles, Billings & Ambrose, Claremont, N. H., sil med.

GRAIN, FLOUR AND SEEDS.

Best winter wheat, Samuel Davidson Greece, Mon. co., 5; 2d. Obadiah Howland, Owasco, Cayuga co., 3. Best spring wheat, George H Ells, Clinton, Oneida co., 5; 2d. H B Bartlett, Paris Hill, Oneida co., 3. A sample of Australia wheat, Scatucket, Suffolk co., vol. Trans. Best sample of peas, Obadiah Howland, Owasco, Cayuga co., Norton's Ag. Best oats, H B Bartlett, (Purdy's oats) Paris Hill, Oneida co., 5; 2d. do., 3. Best barley, E R Dix, Vernon, Oneida co., 5; 2d. Obadiah Howland, Owasco, 3. Best barrel of Indian corn, Obadiah Howland, there being no other and that not superior, Norton's Ag. Best sample of 12 ears of corn, Rawson Harmon, Wheatland, Mon. co., Trans.; 2d. Wm. Baker, Lima, Liv co., Trans. Best buck wheat, Wm. F. Conradt, Brunswick, Rens. co., 3; 2d. do., Hamilton Morrison, Montgomery, Orange co., 2. Flaxseed, a sample by Luman Shepard, Skaneatlas, there was no competition, Norton's Ag. Best Timothy seed, Robert Ellis, Clinton, Oneida co., 3; 2d. Luman Shepard, Skaneatlas, 2. A sample of Teazers, Luman Shepard, Skaneatlas, Norton's Ag.—Best barrel of flour, C P Willis, Dresden, Yates co., sil. med.; 2d, R H Morris, Geneva, Ont. co., vol. Trans. Forty varieties of wheat, R Harmon, Wheatland, Mon. co., sil. med. Case of wheat grits, pearled barley, &c., C N Bement, Albany, vol. Trans.

APPLES AND PEARS.

For the largest and best varieties of good table apples, 3 of each variety, named and labelled by exhibitors, Ellwanger & Barry, Rochester, Diploma and Hovey's colored Fruits; 2d. Jonathan Battey, Keesville, Clinton co., 5; 3d. Henry Vail, Troy, Trans.—For the best 12 varieties of table apples—1st, to Jonathan Battey, of Keesville, 5; 2d, E P Prentice, Albany, Trans. and 2. Best basket of standard fruits, to Henry Vail, Troy, sil. med. For the largest number of varieties of good pears—1st, Ellwanger & Barry, Rochester, dip. and Hovey's colored fruits; 2d. Henry Vail, Troy, 5; 3d Wilson, Thorburn and Teller, Albany, Trans. For the best and largest collection of Autumn pears, named and labelled—1st, Ellwanger & Barry, Rochester dip. and 5; 2d. Dr Herman Wendell, Albany, Trans and 2.

PEACHES, PLUMS AND NECTARINES.

Best 6 varieties, named and labelled, Alden Marsh, Albany, dip. and 5. Best 12 do., H G Dickerson, Lyons, 2. Best seedling variety, 6 specimens, Elisha Dorr, Albany, 3. Plums—Best collection, 6 bl each, Isaac Denniston, Albany, dip. and 5; 2d. A Marks, Durham, Greene co., 3. Best 4 varieties of good, 6 each, Elisha Dorr, Albany, 3; 2d. A Marsh, Albany 2. Best 12 plums, choice variety, Wilson, Thorburn & Teller, 2. Seedling plums, I Denniston, Albany, 5.

QUINCES, GRAPES, &c.

Grapes—Best native, grown in open air, Daniel Ayres, Amsterdam; 2d. Elisha Dorr, Albany. Native and foreign—Best 2 varieties, under glass, H Vail, Troy; 2d S P Van Rensselaer, Clinton Point. Best dish of native grapes, James Goold, Albany. Quinces—Best 12, Elisha Dorr, Albany; 2d. John S Goold, do. Currants—Elisha Dorr, Thomas' Fruit Culture. Watermelons—Best specimen of any variety, H Vail, Troy. Muskmelons—Best, John Dingwell, Albany; 2d. G F Crossman, Rochester. Best collections, E P Prentice; 2d. W A McCulloch, Greenbush, Thomas' Fruit Culture. Cranberries—Best peck, domestic culture, James Cantine, Westchester, Trans.

FLOWERS.

Greatest variety and quantity of flowers, James Wilson, Albany, 5; 2d do., Ellwanger & Barry Rochester, 3. Dahlias—Greatest variety, Jas. Wilson, Albany, 5. Best 24 dissimilar blooms, Ellwanger & Barry Rochester 3; do. single dahlia, L Menand, Albany 2. Roses—Greatest variety, L Menand, Albany, 5. Best 24 dis blooms Jas Wilson, 3; 2d do., Ellwanger & Barry Rochester, 2. Phloxes—Best six, varieties, Jas Wilson Albany, 3; do. seedling do., 2. Verbenas—Greatest variety, Ellwanger & Barry, Rochester, sil. med.; best 12 varieties, Jas. Wilson, Albany 2; do. seedling, Ellwanger & Barry, Rochester, 2. German Asters—Best col., Jas Wilson, Albany, sil. med.; 2d do., Ellwanger & Barry, Rochester 2. Pansies—Best and greatest variety, Ellwanger & Barry, Rochester 3; 24 varieties, 2. Greatest variety and show of flowers, John Dingwell Albany, sil. med; 2d do., Mrs. Newcomb, Pittstown, 3. Dahlias—Greatest variety, Norman Briggs, Schenectady sil med; best 12 dis blooms, 3; 6 varieties, Edward Van Alstyne, Greenbush, 2; single variety, Norman Briggs, sil med. Roses—Greatest variety, Mrs Henry Morgan, Aurora, Cayuga co., sil med.; 2d, S S Martin, Willow Brook, 2; best 6 distinct blooms, Dr. Alx. Thompson, Aurora, 3. Phloxes—Best 6 varieties, Dr. H Wendell, Albany, 3; 3 varieties, do. do., 2; seedling, do., 2. Verbenas—Greatest variety, John Dingwell, Albany, sil med; best seedling, Mrs. E S S Martin, Willow Brook, Cay. co., 2; do. 6 varieties, D T Vail, Troy, 3; do 3 do. do., 2. German Asters—Best col., Wm Newcomb, Pittstown, sil. med.; 2d do, John Dingwell, Albany, 2. Pansies—Best and greatest variety, Wm Newcomb, Pittstown, sil. med.; do. 6 varieties, Dr. H Wendell, Albany, 2.

General List, open to all competitors.—Best col. of green-house plants, owned by one person, L Menand, Albany, sil. med; 2d, Jas. Wilson, Albany, 3. Best floral design, Dr. H. Wendell, Albany, sil. med; 2d, John Dingwell, Albany, 3. Best floral ornament, Mrs. Jas. T. Van Namee, Pittstown sil. med; 2d. Mrs Wm. Newcomb, Pittstown, 3. Best hand bouquet, flat, Jas. Wilson, Albany, 3; 2d, do. do., 2. Best hand boquet, round, Jas. Wilson, Albany, 3; 2d, do do., 2. Best basket with handle, Mrs. Wm. Newcomb, Pittstown, sil. med. Flowers—Beautifully arranged basket of flowers, D T Vail, Troy, sil med. Best floral exhibition of any Horticultural Society, L Menand, Albany, sil med. A col of dried plants and flowers, Mary M Chase, large sil. med. Two vols. of Floral Treasures, Eliza E Carey, small sil. med. Collection of 400 dried plants, Eliza Ellen Eble, Canajoharie, small sil. med. Herbarium of the Fine Grove from Albany county, Alex Kirkwood, small sil med.

PREMIUMS ON FOREIGN FRUIT.

Grapes—R S Colt, Patterson, N. J. 1st premium, a sil. med. and vol. of Trans.; 2d. J W Hayes, Newark, N. J., Downing's Fruits. Apples—C Goodrich, Burlington, Vt. 1st premium, a sil. med and Society's Trans. Canada crab apple—Benj. Brewster, Mootreal, a vol of Trans. Pears—J W Hayes, Newark, N. J., 1st premium and sil. med., and a copy of Thomas; C Goodrich, Burlington, Vt., 2d do., and a copy of Downing's Fruits. Peaches—Dr. J M Ward, Newark, N. J., a vol. of Thomas. A complimentary premium, a vol. of Society's Trans., to Jasper Curtis, of St. Albans, Vt., for seedling apples and pears.

PLOWING MATCH.

1st, S G Smith, owner and plowman, team and Trojan plow, 10; 2d, John Randerson, of Schodack, with the Randerson plow, 8; 3d, N French, Rome, Oneida co., double plow, Thos. Williams plowman, 5; 4th, Eddy & Co., Union Village, Wash. co., wrought iron beam plow, Jas. McDougall plowman, vol. Trans.

THE COW AGAIN.

MESSRS. EDITORS:—In the June number of the Farmer is an article of mine, asking Mr. WRIGHT to travel to Covert, and see a cow of mine that can fill two ten quart pails at one milking, which he has not even noticed; but "S. W." says that JOSEPH WRIGHT must have some better evidence of a forty quart cow, before he goes to Covert with his $500.

Now, Messrs. Editors, all I asked was for him to come and see for himself, and not take any statements of mine. As he is a man of so much travel and practice, I supposed that he would have taken that little trouble. But no; all his attention is paid to Mr. JOHNSON's dry cow—offering to bet one hundred dollars that his Waterloo cow will out-milk her. Now, sirs, I am not a betting man; but I will "stump" the county, Waterloo and all, and the State too, to out-milk my cow. As he has not noticed my article, we think him inclined to back out of the $500 operation. I now inform Mr. W. that I am not anxious to part with my cow, as she still sustains the facts stated. One of the pails that I milk her in holds ten and the other thirteen quarts, by actual measurement. I should have been happy to have seen Mr. WRIGHT at my house, and would have welcomed him while he stayed. WM. HENRY SMITH.—*Covert, Sen. Co., N. Y., Sept.*, 1850.

WINTERING STOCK.—*Messrs. Editors*—It is now a good time to provide for wintering calves and colts. The way I do is to build a small stack of hay, about one and a half tons, around a small tree or large pole set firmly in the ground. In this way the stack can not fall over on them. It affords a good shelter from storms and cold, and they will waste but very a little or none. Winter before last I had one colt and one calf. I put them to a small stack when winter set in. They agreed very well; and in the spring they came out in good condition, without grain. There should always be open or running water at hand. NATHANIEL SMITH.—*Gorham, Ontario Co., N. Y., August*, 1850.

GREEN muskmelon fried like egg plant is fine.

MR. SHEAFE'S SALE OF IMPROVED STOCK.

A FRIEND who was present has kindly furnished the following particulars of MR. SHEAFE's sale. It will be interesting to our readers to know the prices at which the different animals sold.

This great sale came off at the High Cliff Farm, Dutchess county, N. Y., as advertised, on the 29th of August.

At 12 o'clock, M., upwards of 300 persons had assembled upon the ground, many of whom were opulent farmers of the neighborhood, and gentlemen from distant parts of the country. The stock was tied in a row six feet apart, in the same order they were numbered in the catalogue, in a fine grass pasture, just west of the farmhouse. They presented a front of upwards of 200 feet length, and made a superb show. Though merely grass fed, the animals were in excellent condition, and reflected no little credit on the herdsman, Mr. Lawson, for his superior care in bringing them to the post. The whole thing was admirably arranged, and a gentleman present said it reminded him of the great sale of shorthorn cattle, which took place at Castle Howard, seat of the Earl of Carlisle, in England, in 1839.

A bountiful collation was provided under a large awning, of which the company were invited to partake, as they came on the ground. This finished and fifteen minutes grace allowed for laggers behind time, Mr. A. B. Allen — to whose care Mr. Sheafe had left the stock and farm—called the company to order at a quarter past one P. M., and proceeded to address them for about ten minutes, on the value of this stock to the dairymen and graziers of the country, and also as an additional ornament to the grounds of country gentlemen.

Mr. J. M. Miller, the auctioneer, now commenced sale. The bidding was highly spirited, and the 33 animals in the catalogue together with two others dropped since it was published, making 35 in all, were struck off within an hour. He then proceeded to the working cattle, sheep, and swine, which took nearly another hour. The pair of working cattle brought $142.50; the sheep and swine sold comparatively low. A few grade shorthorns, not advertised or put into the catalogue, were disposed of afterwards, at private sale. The sum total of the stock sales on that day, was a little over $5,000.

Although the prices obtained for this herd were not what they ought to be, to remunerate a careful breeder, still, they are so much higher than the same quality of animals would have brought at any time for the past seven years, that it looks more encouraging to the producers of improved stock. We trust that the farmers of America will yet have spirit and intelligence enough to arouse themselves to equal their English brethren on the other side of the Atlantic, who have long been, and still are annually reaping a rich harvest in the production of superior domestic animals.

No. 1. Dahlia 1st, calved June, 1836. A. L. Allen. Poughkeepsie, N. Y., $47.50.*

No. 2. Dahlia 3d, calved April, 1846. S. B. Parsons, Flushing, N. Y., $65.†

No. 3. Dahlia 4th, calved April, 1847. J. T. Moore, Rahway, N. J., $105.

No. 4. Dahlia 5th, calved April, 1849. George Vail, Troy, N. Y., 60 dollars.‡

No. 5. Beauty 3d, calved March 1845. Lorillard Spencer, Westchester, N. Y., 180 dollars.

No. 6. Beauty 4th, calved April, 1846. S. B. Parsons, Flushing, N. Y., 125 dollars.

No. 7. Beauty 5th, calved April, 1849. S. B. Parsons, Flushing, N. Y., 80 dollars.

No. 8. Phœbe 2d, calved April, 1844. William Kelly, Red Hook, N. Y., 145 dollars.

No. 9. Phœbe 3d, calved March, 1845. Lorillard Spencer, Westchester, N. Y., 160 dollars.

No. 10. Phœbe 4th, calved June, 1847. H. & J. Carpenter, Poughkeepsie, N. Y., 100 dollars.

No. 11. Phœbe 5th, calved March, 1848. George Vail, Troy, N. Y., $125.

No. 12. Phœbe 6th, calved March, 1850. S. B Parsons, Flushing, N. Y., $75.

No. 13. Phœbe 7th, calved April, 1850. Lorillard Spencer, Westchester, N. Y., $80.

No. 14. Lucilla 1st, calved June, 1837. Sick, and withdrawn.

No. 15. Lucilla 2d, calved April, 1846. S. B. Parsons, Flushing, N. Y., $125.

No. 16. Lucilla 3d, calved December, 1848. George Vail, Troy, N. Y., 125 dollars.

No. 17. Lucilla 4th, calved April, 1850. J. T. Moore, Rahway, N. J., 80 dollars.

No. 18. Cream Pot 2d, calved March, 1845. Lorillard Spencer, Westchester, N. Y., 175 dollars.

No. 19. Cream Pot 5th, calved April, 1846. Lorillard Spencer, Westchester, N. Y., 140 dollars.

No. 20. Cream Pot 6th, calved March, 1848. Phillip Burrows, Staten Island, N. Y., 125 dollars.

No. 21 Cream Pot 7th, calved April, 1848. H. & J. Carpenter, Poughkeepsie, N. Y., 145 dollars.

No. 22 Cream Pot 8th, calved March, 1850. J. C. Jackson, Astoria, N. Y., 50 dollars.

No. 23. Cream Pot 9th, calved March, 1850. J. B. Holmes, Croton, N. Y., 70 dollars.

No. 24. Seraphina 2d, calved March, 1845. S. B. Parsons, Flushing, N. Y., 105 dollars.

No. 25. Celeste 2d, calved March, 1848. J Dickinson. Fordham, N. Y., 185 dollars.

No. 26. Daisy 1st, calved August 1843. S. B. Parsons, Flushing, N. Y., 90 dollars.

No. 27. Daisy 2d, calved April. 1850. S. B. Parsons, Flushing, N. Y., 50 dollars.

No. 28. Fun, calved September, 1844. Geo. Vail, Troy, N. Y., 170 dollars.

No. 29. Violet 1st, calved April, 1847. J. C. Jackson. Astoria, N. Y., 100 dollars.

No. 30. Violet 2d, calved April, 1850. —— Ellison, $55.

No. 31. Bull calf, dropped March, 1850. J. B. Holmes. Croton, N. Y., 105 dollars.

No. 32. Bull calf, dropped March. 1850. —— Margit, Long Island, N. Y., 105 dollars.

No. 33. Exeter, (imported,) calved June, 1848. L. F. Allen, Black Rock, N. Y. 500 dollars

No. 34 Seraphina 3d, calved May, 1850. J. C. Jackson. Astoria, N. Y. 65 dollars.

No. 35. Bull calf, dropped by No. 20, Cream Pot 6th. August 25th, 1850. Phillip Burrows, Staten Island, N. Y.

The sale being finished, the company dispersed, seemingly highly gratified at the proceedings; though a few were somewhat disappointed that they had not been able to purchase within their limits. We understand an advance has been offered on several of the animals since their sale. We hope this may be an encouragement for larger and better sales hereafter, and that they may be got up in different parts of the country; for it is quite an advantage for the farmers to meet in this manner, to examine stock, and exchange ideas on various subjects connected with their calling.

* Being fourteen years old, she was considered a doubtful breeder.

† Had lost one teat.

‡ Two gentlemen present informed us after the sale, that they had marked on their catalogues to bid $100 and $105 for this heifer, but by some unaccountable mistake had let her go.

DURHAM CATTLE, &c.

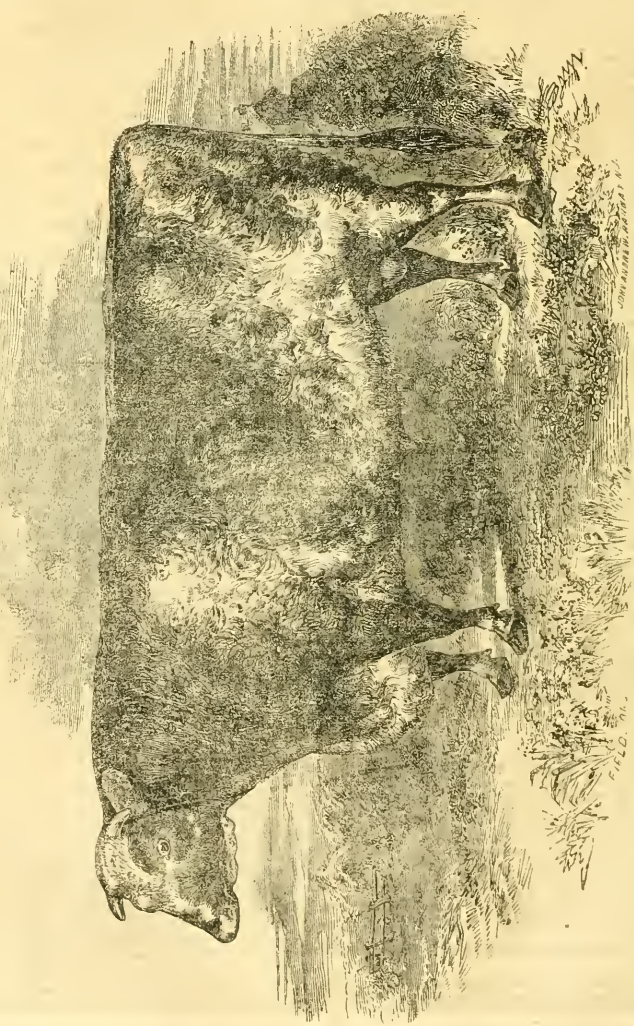
MESSRS. EDITORS:— While at Auburn, a few days since, I called at Col. SHERWOOD, and viewed his fine stock of Durham cattle, his Southdown and fine wooled sheep, &c., &c., which I found in fine condition. The celebrated imported bull, 3d Duke of Cambridge, [we give a portrait of this animal on the next page,] has improved wonderfully since I saw him at the State Fair at Syracuse, although kept without grain together with the three heifers of same importation, which have done remarkably well. I think they effect a great improvement in the Durhams, for milking purposes. For a further description of this stock, the reader is referred to the August number of the Genesee Farmer, page 183, vol. 10.

The imported cow "Red Rose 2d," owned by Col. SHERWOOD, is remarkable in her *figure* and *handling* qualities, giving this winter, from 18 to 20 quarts of milk daily, of superior quality. She was bred by JOHN STEPHENSON, Durham, England, and descended from the celebrated stock of Durhams known as the "Princess Tribe," remarkable for their milking properties, as well as their other good qualities. She was got by the celebrated bull Napier, her dam the famous cow Tuberose, by South Durham. Her grand

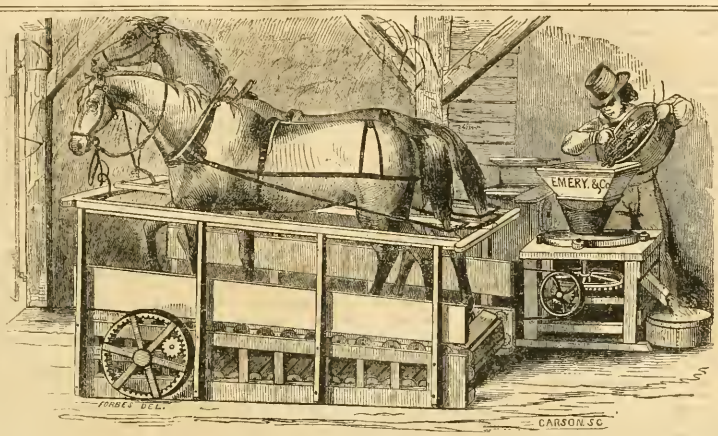
dam is Rose Ann, by Bellerophon; g. grand dam, Rosette, by Belvidere; g. g. grand dam, Red Rose, by Waterloo; g. g. g. grand dam, Moss Rose, by Barron; and this might be extended for six generations; but enough is shown to satisfy any person of her superior blood. Her calf has the appearance of making her equal in all respects—both are nearly deep red—a great improvement, to my fancy.

The barns, stables, yards, sheds, their arrangement, with the several penstocks of running water, brought by *water rams* from a neighboring brook, make it well worth a farmer's attention to call while passing that way.

And now, Messrs. Editors, while writing upon this subject, I will just say that the county of Wayne never was so much waked up to the importance of thorough farming, and the agricultural spirit is spreading. E. N. Thomas.—*Rose, N. Y.*, 1850.



THIRD DUKE OF CAMBRIDGE



NEW RAILROAD HORSE POWER AND FEED MILL.

The above cut represents a new Horse Power recently brought into notice by Messrs. Emery & Co., of the Albany Agricultural Works. By reference to the premium list, in another part of the paper, it will be seen that it obtained the first premium at the State Fair, as the best horse power on the endless chain principle. It is on the general plan of the approved endless chain powers sold by them for several years past. The principal difference is the manner of obtaining and applying the power and motion from the revolving platform to the shaft of the driving pulley. The following description is from the Albany Cultivator:

"This power, as will be readily seen in the cut, has the revolving plank platform, traversing upon its own friction wheels and iron railroad track. At the forward end, this platform is supported by its small shafts upon an iron reel about sixteen inches in diameter—the shaft of this reel extending beyond the sides of the frame work sufficiently to receive a strong converge or internal gear, about twenty-four inches in diameter, as seen in the cut.

"The shaft of the driving pulley, (which pulley is three feet in diameter,) is hung in like manner, with the small gear upon one end, operating inside the converge gear before described, and consequently receives an increased motion in the same direction, and carries the driving pulley on the opposite side of the power for driving the overshot thresher, without crossing of bands or intermediate gearing. The converge wheel is so arranged as to work on either side of the power, as may be desirable.

"This arrangement entirely removes all liability of breakage and wear of links and pinions (beretofore unavoidable,) as the direct stress upon the links working over small pinions is wholly avoided; and they are acknowledged by those using them to run with lighter friction, which it is said enables the power to be operated at a less elevation than by the former mode. The arrangement for tightening the endless platform by means of a joint bolt connecting with the bearings of the reel shaft, is new, and is a very simple and effectual mode of effecting this object, as it may be instantly done by a common wrench without stopping the machine. The platform is considerably longer than usual, avoiding the liability of large or unsteady horses stepping over or off at either end."

The cut also represents a valuable mill, capable of being driven with this power to good advantage, for grinding food for stock. A considerable number have been sold for several years past, and answer a good purpose. They are cheap, costing but $35, with one extra set of grinding plates, (new plates costing $2 per set,) and are capable of grinding 600 to 800 bushels per set, according to the fineness to which it is ground. This mill also obtained the first premium as the best corn and cob crusher. These are also made and sold by Emery & Co.

Remedy for Split Hoof.—*Eds. Gen. Farmer:* I send you a remedy for split hoof, which may perhaps be useful to some of your readers, if you choose to publish it. I had a valuable young mare calked in both fore feet the first time she was shod. In a few weeks, and after her hoofs had grown down about an inch, they cracked from the calks to the hair, rendering her very lame and almost useless. I tried the old practice of cutting across the top of the split, using round shoes, &c., without avail. The round shoes contracted her feet and increased the lameness. At length I went to a blacksmith and ordered a pair of thin iron plates, about six inches long and one and a half inches in width, (tapering towards the ends,) to fit the surface of the hoof, which I fastened on with very short screws, the upper edge of the plate just covering the upper point of the cleft. These I kept on, occasionally removing them when the mare was shod, and using meanwhile the "green ointment," to increase the growth and pliancy of the hoofs, until they were grown out. The experiment was successful, and I had no farther trouble. D.—*Castle Creek*, 1850.

It is fully as important to take good care of animals as it is to procure those which are good. If you can not attend to them yourself, see that those who have to do with them are humane and intelligent.

The Farmer's Guide — *Stephen's Book of the Farm.*—This is an English work, now published in numbers at two shillings each, by Leonard Scott & Co., of New York. It is a large work, and goes thoroughly into farm management, as practiced by the best farmers in England and Scotland. We have been unwilling to recommend it to our readers, as more than two-thirds of its plans and recommendations are not adapted to American farming. Still, it is a work that farmers may read with profit — giving them not only a knowledge of English agriculture, but many useful hints that any judicious farmer might avail himself of. We have just received the eighth number, which contains very valuable notes by Prof. Norton, pointing out such things in the body of the work as the Prof. thinks might be adopted with advantage by the American farmer. The following is Mr. Norton's remarks on the preservation of liquid manure :

The liquid manure tank is as yet a rare appendage to American farm-yards : it is, however, one of such absolute necessity, that its general introduction will not be delayed, when our farmers begin to appreciate the true value of manure. As too many of our yards are now managed, a very considerable portion of the liquid manure, including washings from the solid matter, as well as the urine, is lost. When conducted immediately upon the land through a small ditch, as is frequently the case, it does harm rather than good, by rendering the small portion of land which it reaches quite too rich.

One chief objection that I have heard urged against these tanks is, that they would be liable to fill up and overflow, with the large quantity of water which would be poured into them from the roofs, &c. It will be noticed that Mr. Stephens only intends them to receive the drainings of the yard, and of the manure itself; as he arranges to conduct away all water from the roof and spouts, by means of seperate drains. The tank would thus be able to contain all that might run in from the yard alone. The liquid could be pumped out as described in 1115, or mixed with peat, ashes, &c. &c., in the tank itself. An excellent pump would be that consisting of an endless chain, with metallic plates attached regular distances, revolving in a wooden tube. — This would draw well, and not be easily choked. Urine, and liquid manure generally, soon begins to ferment, and then a loss of ammonia ensues. As the retention of this is very important, it is best to mix frequently in warm weather, a little sulphate of lime (gypsum), or a small quantity of sulphuric acid. In both cases sulphate of ammonia is formed, a salt which is not readily volatilized nor decomposed. A tank may be built in a very cheap way to answer every necessary purpose, and will soon pay for itself in the quality of the manure it will furnish. Professor Johnston states, that in Flanders the urine of a single cow is worth about $10 a year for manure. If we take half only of this sum, what an immense aggregate value in each year, is for the greater part entirely lost.

The plan usually pursued, is to build the tank in some convenient situation, either in one corner, or just outside of the yard. The ground in the yard is so sloped that all of the liquid runs to a common centre, where a drain receives it, and carries it under ground to the tank. This may be built of brick or stone laid in cement with a smooth floor, or for temporary purposes of plank, lined at the back with clay. A tank can be made very cheaply in this latter way from old refuse lumber, and by the time that it has worn out, the farmer will be quite willing to build a permanent one of stone or brick, from experience of its benefits. In some cases drains are laid under the stables, where large stocks are kept for the purpose of conducting the urine to the main drain, and finaly, into the tank. Considerable quantites may be collected in this way if the floors are tight. A few pailfuls of water occasionally dashed through these drains for manure, would sweep away the thick deposit which might accumulate and gradually threaten to choke them. They should all be defended at their entrances by grating, so that straw, and manure of a solid kind, cannot wash in. All of these precautions may seem like unnecessary trouble; but in reality there are few things which pay so well and so soon, as same extra labor in collecting and preserving manure of every description, whether liquid or solid. Well protected, and well kept manure, is worth the double of that which has been soaked with rain, and bleached by the sun, during an entire season. In situations where it is not desirable to build a tank, it might be found a good plan to pave a shallow excavation in the centre of the yard, into which the drainings might flow, and be absorbed by long straw, chaff, &c., thrown in for that purpose. In this case also the rain water should be carried away in another direction, as otherwise there would be a stagnant pond formed. Such ought to be walled around for the purpose of preventing cattle from getting into them.

I have seen receptacles of this kind in Scotland, and found that they seemed to answer the intended purpose very well.

S. W.'S NOTES FOR THE MONTH.

Jenny Lind.—Such is the blindness of enthusiasm when the name of this fair songstress is uttered, that its heart is soft only on one side — the best emotions of the heart hold criticism in abeyance. We doubt not for a moment that she is Nature's prodigy ; and we feel that she has all the moral perfections, without any of the failings that flesh is heir to. Rising from a low estate to wealth and honor, she forgets not for a moment those she left behind her who had not the power to rise. She is not a creature to be spoiled by prosperity or the world's laudation ; for we are told that her sympathies are as kind, and pure, and simple, and ethereal, as the matchless tones of her voice. The *furor* to hear her sing is not by any means confined to the great Babylon, it extends throughout the length and breadth of the land.— What the consequences would be if railroad traveling was as cheap and certain as that on the steamers, none can tell. Suffice it to say the New York publicans would have to *colonize* the coming host of men and women.

Our Railroads.—The number of accidents on our railroads of late, involving broken bones and loss of life, occur so often, that, like deaths by cholera, they "fall upon the sense," &c. — begin to be considered as things in course. On board of a man-of-war, besides the officer of the deck and the whole gang of petties, there is a man whose especial business it is to watch over the helmsmen, lest they should get asleep and fall under the wheel. If these poor sailors sometimes get asleep without grog, how much more likely is Pat, the switch-tender on a railroad, to get asleep or to be overcome and stupefied when he has a *sup* of the *cratur*e hid in the woodpile, or in his shanty hard by. But or railroad directors, determined on large and speedy dividends, eschew petty officers and extra expense, hoping doubtless to realize profits before they incur damages. It was promised that after the first of last May the fare should be reduced on all but the Express trains. This has not been done ; and in order to compel the traveling public to go on the slow night trains, the express, which runs by daylight, passes at full speed through many large villages of some 4000 inhabitants, leaving passengers there to come on the slow or dirty emigrant trains as they can, at full fare. Such bad faith on the part of an individual not rich enough to give a sop to the press, or to conciliate legislation, would be thought sufficiently disgraceful to jeopardise his *locomotive* safety ; but a corporation has the advantage of an ubiquitous body, and no soul.

Tile Machine.—At Purdie's Foundry, in Waterloo, may be seen a beautifully wrought tile and pipe machine, made entirely of iron, after the plan of Whartenby's machine, imported by J. Delafield. This machine is an improvement on the imported one, whose ways were of wood instead of cast iron.

The dies are also improved. It is double acting—turning out tile or pipe at each end as fast as two men can take them away. This machine is sold for $275, to go to Summerville, New Jersey. It may be worked by hand, horse, or steam power, and is capable of moulding 5000 pieces a day.

In this age of agricultural progress and improvement, experiment has proved that under-draining is indispensable to the economical cultivation of at least half the earth's arable surface: hence the importance of every mechanical invention which goes to reduce the expense of under-draining.

POTATOES.—One short month ago it was suppesed that our potato crop had escaped disease; since that time the vines in many fields have been prematurely dying—an unfailing symptom of disease in its worst form. Our amateur farmer, JOS. WRIGHT, says that his English whites, planted last of April, ripened in fine order; but that his Mercers, and all other varieties planted later, are very much diseased. His soil is sandy loam, well drained and manured.—*Waterloo, N. Y., Sept.*, 1850.

REMARKS.—We have felt compelled to withhold some remarks of S. W., on the subject of the *New Free School Law* of this State, much as we dislike to materially curtail or alter articles furnished by our friends for publication in the Farmer. Not half the readers of the Farmer reside in the State of New York, and we therefore thought it unwise to occupy our very limited space with a full discussion of *our* School Law. For this reason we have refused communications in relation to it. There are two sides to this question, and unless we were willing to open our columns to a full and fair discussion of the subject in all its important bearings, which we could not well do, the course we have pursued, to leave the subject to the local papers, appeared to us the only wise one. We have our own opinion, but as we have never expressed it in the pages of the Farmer, correspondents cannot complain, as we only impose the same restraint on them that we bear ourselves.

PEAT CHARCOAL MANURE.

THE following interesting correspondence we take from the Mark Lane (London) Express:

To the Editor of the Mark Lane Express:—Sir—You challenged me to give public proof that *peat charcoal* possessed the power of deodorizing excretory matter, the admixture to produce "an inoffensive manure capable of being transported by any conveyance, and of being used with the drill." I met the challenge; and in your paper of Oct. 8, 1849, you obligingly stated that I had "fairly won the thanks and honor of my fellow men."

Permit me to say, I now challenge you. Your position gives you the power of having tested, in a manner perhaps beyond the reach of others, the real value of this combination as a manure. Neither you nor the world will, nor perhaps should, believe my *individual* statement, that *peat charcoal manure* is the most valuable that has yet been produced. Still I aver that it is, and I seek for proof to the contrary. I now place at your disposal twelve sacks (3 cwt. each,) of this manure.

The charcoal to produce this combination, has been manufactured under my direction for "the Irish Amelioration Society," the admixture made in London: six sacks contain equal parts in weight of excretory matter and charcoal, the remaining six, equal parts of peat, charcoal, and urine.

Pray place this in the hands of six different persons to test each kind against guano or any other manure they please.

First, I seek comparison for one season; next, that the test be extended to *three* or even *four* without renewal.

I feel assured you will select those of eminence in agriculture, who will take the trouble of making the test fairly, and who will fully report the results.—JASPER W. ROGERS.

(We entirely concur in the view taken by Mr. ROGERS in his letter, that the peat charcoal and nightsoil manure should be carefully and accurately tested by experienced and competent practical farmers. We accept his challenge, and have no doubt shall readily obtain the assistance of able, trustworthy parties, to test the merits of his proffered quantities of the manure.—*Ed. Mark Lane Express.*)

FATTENING STOCK

MESSRS. EDITORS:—Having often enjoyed the benefit of other men's experience, in the pages of your valuable paper, I will give, with your permission, some items of my own. What I have at present to offer, relates to the manner and result of fattening a small framed cow, eight years old, of my own raising, kept farrow last winter, and milked until the first of August. Then, being in fair condition, I placed her in good pasture until the 12th of September, at which time she was turned into a wheat-stubble and kept without water, and fed about one bushel of pumpkins cut in pieces morning and night, and during most of the time half that quantity at noon. I gave her no water because I thought her food contained sufficient moisture, and she would be the more inclined to eat. For this reason the pumpkins should be cut so fine as to be eaten without breaking them with the front teeth, which also prevents waste, and the teeth from becoming sore. I gave her salt freely—two or three times a week, but think it would have been better to have kept it always within her reach.

After thus feeding until the 10th December, (about three months,) she was slaughtered, and her whole weight was 815 lbs. The leaf and rough tallow, and a small portion from that part of the flank which always runs to tallow in *fat* cattle, with some slight trimmings from the drying pieces, (these two last not exceeding five or six pounds,) amounted to 200 lbs. She would have brought, at $3.50 per cwt. and 8 cts. per lb. for the tallow, $37.50. And valuing the cow at $16, which she would have brought, and the seven loads of pumpkins fed her at $7, with an allowance of $2 for pasturing, &c., I am left $12.25 for my labor. JONATHAN SILSBY.—*Royalton, N. Y.*, 1850.

HOW MUCH PORK WILL A BUSHEL OF CORN MAKE?—By some experiments tried, it is believed that a bushel of corn, fed to a thrifty hog, will make 12 lbs. of pork. So that corn at 24 cts. is equal to pork at 2 cts., and corn at 75 cts. a bushel is equal to pork at 6 cts. a pound. The manure will more than pay for the labor of feeding and killing the hogs.

A SOUND economy is a good understanding brought into action.

Horticultural Department.

EDITED BY P. BARRY.

How it comes that country people adhere so rigidly to the practice of building their dwellings close to the roadside, we can not very well understand. We do not mean to say that all do so; but the instances where a different course is adopted are so few and far between as to be mere exceptions. The man who builds on a city or village lot, is compelled by circumstances to build close to the street — his contracted plot of ground affords him little scope to gratify his taste, even if he has any; but the farmer who possesses his fifty or five hundred acres, is controlled by no such circumstances, and when he plants his house in the midst of the noise, dust, and intrusiveness of a public highway, we are forced to the conclusion that he does so from *choice!* We do not, of course, dispute any and every man's right to build his house in such a style and on such a site as he may think fit and proper. A man who builds a house for himself and family to live in, has the first and best right to be suited. Admitting all this to the fullest extent, we nevertheless think it may not be amiss to call attention to some points connected with the subject, that seem to be very generally overlooked.

Supposing Mr. A., whose city lot is 50 by 100 feet, builds his house within a few paces of, or even close up to the side-walk, for the sake of having room enough in the rear for his barn and other offices, and for a small garden; is that any reason why Mr. B. in the country, with a farm of one hundred acres, should build himself a house precisely similar, on the very roadside, leaving just space enough for a row of maples between his door and the highway? We could point to scores of instances where this very unwise thing has been done within ten miles of the city of Rochester, where some of the most delightful situations have been actually deformed and ruined by this copying of city plans. We do not deny that a man may build himself a very convenient house on the roadside—it may be very easy getting out and in, and he may avoid all cost of keeping grounds in order — he may eat and drink as well, wear as good clothing, grow rich as fast, and in all other ways gratify his animal nature as well in such a situation as any other; but surely there are other things to live for besides these. What is it that constitutes the real charms of a country life? Is it fine houses, fine furniture, fine horses and carriages, &c.? No. When we imagine a pleasant country home, we figure to ourselves a *plain and simple dwelling surrounded by trees, green turf, and flowers.* It is charming even to think of such a home as this. How many thousands have worn themselves out, and are at this moment toiling like galley slaves, in the harrassing pursuits of cities, that they may be able to procure such a home and close their lives quietly? How cold and forbidding is the finest house that human hands can rear in the country, without trees! and how inviting and how beautiful is the plainest cottage, with its trees and lawn! Who is there, with a spark of love for nature's beauties, that has not a thousand times made the contrast, in passing over the country? When a dwelling is built close to the highway, it is placed in a position where it is utterly impossible to give it a true rural aspect. There can be no lawn in front, no groups of trees, no beds of flowers — nothing that can make up a scene that the inmates can love to look out upon. The street, the public highway with its noise and dirt, against which blinds and curtains must continually be drawn tight, is the scene that presents itself, and one that no mortal man or woman, whatever may be their tastes, can admire. This is surely a hard destiny for people to fix upon themselves by choice. There are very many so situated from necessity, having come into the possession of places already laid out, and which it may not be convenient for them to alter. Our remarks do not apply to them, but to those who have entire control of all the circumstances connected with the location of their dwelling. We do not wish to be understood as recommending to farmers to erect their houses at any unreasonable or inconvenient distance from the main road, or that they shall lay out extensive pleasure grounds. We are very far from suggesting any such absurd or impracticable notions, or anything not in perfect accordance with the best farm economy, and quite within the reach of every farmer in the country. A house erected twenty rods from the street costs no more than it would within one rod.

What we would suggest is, that every farm house be built so far back from the highway that half an acre, or an acre, of ground may separate them: that this be kept in grass and interspersed with groups of trees and shrubs. There is hardly any section of the country, except the prairie, but trees enough of native growth can be found in to make a beautiful plantation. Our native *oaks, elms, lindens, tulip tree, maples, white pines, hemlocks, cedars, &c.,* are all beautiful trees. Those who object to the appropriation of so much ground to ornament, may turn it all to profitable account by planting fruit instead of ornamental trees; they may be grouped to equal advantage, and by cultivating around them, will produce as well as in an orchard. The grass plat, by being kept in good order, may produce good crops of hay, and thus every inch of the ornamental ground may be as productive and profitable as any part of the farm. Those who might wish to give a higher polish to their grounds, could introduce among their groups of trees, some exotic species, keep their lawn closely mowed and embellished with groups and figures of flowering shrubs, roses, &c.

Our object is not, at this time, to enter into any detail, but simply to suggest a principle that every man can adopt, with such modification as may suit his taste and circumstances. At a future time, we will return to this subject and offer some detailed plans in illustration of the suggestion now given.— The modern style of laying out grounds is simple,

natural, and beautiful. It discards all such antiquated, puerile practices, as cutting up ground into squares, with hearts, triangles, hexagons, and other unmentionable figures in the centre. If grounds were to be so laid out and ornamented, plain farmers might well be deterred from attempting it. But such is not the case. Lawn and trees are the principal materials for a landscape, and with these, any man with a spark of taste, and a few simple suggestions, can make himself an interesting and beautiful home.

THE COBEA SCANDENS, OR CLIMBING COBEA.

One of the most rapid growing and at the same time very beautiful summer climbers, is the Cobea, a native of Mexico. It is cultivated as a green-house plant, and can either be raised from seeds or cuttings early in the spring, and turned out into the border in May or June. It may be trained over a wall by means of strings or wires, to which it clings by tendrils like those of the grape vine. The flowers are two inches long and three inches in diameter, bell shaped, and the prevailing color is a dark bluish purple; many are quite greenish when they first open. A young plant turned out of a six inch pot on the first of June here, covers at this time a wall twelve feet long and twelve feet in height, and since the last of July has been continually in blossom, and will continue to be until frost comes. Young plants are always to be had at a very low price in the spring.

Now is the time to select flower seed for next season. Mark the finest blossoms, so that when the seed is ripe you can readily select the best.

SUMMER PEARS.

Dr. Kirtland, in the Family Visitor of September 5th, gives some interesting "Notes on Fruits of the Season." He says:

The Bloodgood, when at maturity this season, has proved to be a more valuable fruit with us, than in any former year. Still it was not equal to the Madeleine and ripens two weeks later.

The Dearborn's Seedling maintains its high character for fine flavor, but it does not surpass the Zoar Beauty and is one-third less in size. The latter we must place in our list of number ones.

The Belle of Brussels, in Mr. Elliot's grounds has, this season, equalled its highest recommendations. With us, it once attained to that standard, but in subsequent years proved so poor that we discarded it.

The Rostiezer is ripening with us—but its small size will operate unfavorably to it, however valuable its other qualities may prove.

The Tyson is decidedly the finest flavored pear we have tasted this season. In size, color, and form, it bears some resemblance to the Zoar Beauty—in flavor it excels—and we must place it among the number ones.

The best and most beautiful summer pear we have had, was the *Osband's Summer*, ripe the middle of August. The *Bloodgood* has produced a good crop, and in quality was really number one; but it is by no means an attractive looking fruit, like the *Osband's*. It ripened here from the 10th to the last of August. The *Dearborn's Seedling* is always fine, though small. The *Belle of Brussels* is occasionally fine, but so often insipid as to be, notwithstanding its beauty, size, and productiveness, unworthy of being classed with good fruits. A warm soil, season, and exposure, must all be combined to make it good. The *Summer Francreal* is a prodigious bearer. The tree is robust and a beautiful grower. When picked in season and ripened in the house, it is really good—not so buttery as the *Bloodgood*, but vinous and refreshing. We gathered our crop this season on the 20th of August, and they ripened in the house for a fortnight.

RHUBARB, GOOSEBERRIES, &c

Mr. Editor:—My father, in August, 1848, imported a few rhubarb roots. This year the stalks, from the base to the lower part of the leaf, measured 3 feet 7 inches in length. He has some plants which he raised from seed sown in April, 1849, and transplanted in April, 1850, which are now 2 feet long in stalk and upwards of 6 inches in circumference. He had gooseberries this year measuring 3⅞ by 4¼ inches in circumference. Several of our neighbors have them quite as large. Mr. Barker, Mr. Vary, and others, have them very fine. One from the garden of Mrs. Strachan measured 3¾ by 4 inches. They are very thin skinned and fine flavored.

If you have anything in Rochester that beats the above, please let us know in your next number.

Plums are almost a failure. Peaches will be very scarce. Quince trees all blighted early in the season. If you can give any preventive for mildew on grapes, you will oblige. I have tried sulphur this year without any effect. Alex. Swinton.—*Niagara, C. W., Aug.*, 1850.

We can not recommend any certain preventive of mildew in grapes. We have heard of ashes being successfully applied as a top dressing around the roots in fall or spring.

We have seen nothing here to surpass your gooseberries.

PEACHES.

There has been a great cry of cheap peaches in the eastern markets; but we have it from the best authority, that really fine peaches have been selling, even when the supply was at high water, for $2 to $3 per basket in New York. The trash that has been sent into the interior for sale, never ought to have been picked up, being the produce of unhealthy trees, prematurely ripened, and every way inferior. Notwithstanding the quantities brought in here and offered at 75 cts. to $1 per basket, our growers have found no difficulty in obtaining $2 to $3 per basket for *Crawford's Early* and other good kinds. Our friends here who visited the State Fair at Albany, informed us that they did not find a good eatable specimen in the best hotels at Albany, or for sale in the streets. The crop here, although a comparative failure, has been much better than we anticipated. *Crawford's Early* in most cases has borne a full crop. We visited a large orchard on the 14th inst., and found every tree of this variety loaded, while no other variety had the tenth part of an ordinary crop. We are perfectly satisfied that this is one of the most profitable varieties for our climate. The *Early York* has also borne pretty well.

TRANSPLANTING.

The transplanting season commences here usually about the 10th of October, or from that to the 15th. We have no hesitation in recommending fall planting for all hardy deciduous trees and shrubs. The ground should be dry and well prepared, and a few inches of manure or litter be placed around every tree or shrub before winter sets in. Bulbous flower roots, such as tulips, hyacinths, lilies, &c., &c., should be planted early in the month, and the beds covered with two or three inches of rough manure, that may be raked off in spring as soon as the ground thaws — leaves or straw will answer. Hardy herbaceous perennial plants should all be planted early in the fall, to ensure a good bloom next season. For details concerning pruning and planting, we must refer to back numbers of the Farmer.

Horticultural Show at the State Fair.—Sickness prevented us from attending this exhibition, but all who were present, that we have conversed with, concur in pronouncing the display of fruits and flowers quite inferior to what was expected, and hardly equal to that of previous years. The earliness of the season alone is sufficient to account for this. Summer fruits were gone, and autumn and winter fruits not mature enough to make any attractive display. It will be seen by the notice of the agricultural editor, who was present, that the only noticeable contributions were *Foreign Grapes*, and *Floral Ornaments*, both of which were unusually fine. The Horticultural part of the State Fair can never amount to anything, if held any time before the middle of September. We might add that the greatest display of fruits was from Rochester.

The Ohio State Fair and Pomological Congress will be held at Cincinnati, on the the 1st, 2d and 3d of October. The original time designated, was the 11th, 12th and 13th of September, but a postponement was deemed necessary on account of the existence of cholera in the West.

ANSWERS TO CORRESPONDENTS.

The conductor of the Horticultural department will cheerfully answer the questions of correspondents, as far as he is able, through the Farmer, but cannot spare time to answer by mail, except in particular cases.

Plums.—(Judge Pomeroy, Plymouth, Ind.) The specimen sent came quite safely to hand. It is identical with a variety we cultivate as "Large Black Imperial." We procured it from Kenrick ten years ago. The same variety is also known as the *Bradshaw*, about Boston. It is a superb and excellent variety.

Pear Trees.—(A subscriber.) By referring to the back numbers of the Farmer, you will find more satisfactory answers to your enquiries than we can give at present. An orchard of pear trees on quince stocks (varieties that succeed well,) will no doubt be profitable. They will pay for themselves, and the ground too, before standards begin to bear. A very good way is to plant standards, say twenty feet apart, and a dwarf between.

Apples.—(P. Fredric Bill, Seneca.) No. 2, as near as we can judge from a single specimen, is *Pomme Royal* or *Dyer*; No. 4, probably *William's Favorite*; No. 5, *Fall Pippin*; Nos. 1 and 3, we don't know. Pears.—No. 1, *Bartlett*; No. 2, *White Doyenne*; Nos. 3 and 4, *Summer Bonchretien*; No. 5, *Gansel's Bergamot*.

(S. Stroger, Penfield.) *Stroger's Favorite*—seedling raised by S. Stroger, of Penfield. A very pretty fruit, but quite inferior to the *American Summer Pearmain* or *Pomme Royal*, of the same season.

(W. Andrews, Webster.) The branch of a tree left at our office, is of the *Large Spined Gleditschia*, a variety of the Honey Locust.

We are indebted to our friend W. R. Prince, Esq., of Flushing, now in California, for a Sacramento paper containing an interesting account of a visit made by him, in company with other gentlemen, to the residence of the celebrated Capt. Sutter. The Botanical and Horticultural part of the notes is much less interesting than we should have expected, and convey rather an unfavorable idea of either the natural or cultivated vegetable productions of that portion of this golden land. We hope soon to hear of our friend Prince's return with gold enough, and rare trees and plants, to create a sensation in the horticultural world.

We call attention, of all who are interested, to the auction sale of the entire nursery stock of Messrs. Elliot & Co., of Cleveland, Ohio. It was postponed on account of the postponement of the assemblage at Cincinnati.

Dahlias. — As soon as the frost has completely killed the tops, the roots may be taken up, thoroughly dried in the sun and air, labelled, and put away on shelves in a dry cellar or room where they will not freeze.

Mr. Barry:—*Dear Sir*—You will find *Spiræa Ulmifolia* classed as a hardy *herbaceous* plant in Paxton's Botanical Dictionary, compiled by Joseph Paxton and Dr. Lindley, and their associates — a work of known accuracy — dated June, 1840. C. J. Ryan.

The above should have appeared in our last number, but was accidentally mislaid.

THE SEASON. FRUIT CROP, BLIGHT, &c., IN THE ERIE DISTRICT OF PENNSYLVANIA.

Our correspondent, A. Huidekoper, Esq., of Meadville, Pa., in a business letter dated Sept. 9th, gives us the following information, which we take the liberty of extracting:

"Our summer has been a very beautiful one, and vegetation has been stimulated to its utmost capacity of growth by the warm weather and frequent showers. Crops of all kinds have been very good, except the hay crop, which was but moderate, and the potato crop, which, since August, has suffered badly with the blight.

Apples are very abundant, and a few Yellow and Red Rareripe peaches have found their way to market. Our farmers have not yet paid sufficient attention to having an abundance of the better varieties. A few illustrations of what can be done, however, will soon stimulate others to follow the example.—I have had a fine crop of Dearborne and Bloodgood pears this year, and have also some of the Winter Nelis, which are now maturing.

The insect blight has touched a good many apple trees this year, but my pear trees have been entirely exempt. I cannot help believing that much of the blight is owing to vitiated sap from the winter frosts. A due attention to trees will frequently disclose incipient blight in the spring, which only becomes fully apparent during the heat of summer. I do not think the blighting of new wood, of the season's growth, any objection to this cause, for we frequently find new shoots made from the limbs, the bark of which is either dead or entirely diseased. The death of the shoot, or final development of the disease in that part of the tree, seems to be owing to some change in the direction of the sap, or some law in the organization of the plant which requires a supply of healthy sap, which the diseased limb cannot furnish.

The fruit convention in Cincinnati, I see has been postponed until the 1st October. This will be too late for peaches, but will afford a better opportunity for pears and winter apples, which are perhaps of more consequence. Peaches we have now as fine as any body need wish to eat; but the better kinds of apples and pears should be more extensively known, and many kinds now cultivated, rejected; great allowance, however, will always have to be made for that great fact which cannot be altered, viz., a variety of tastes."

CARRYING FRUITS TO MARKET.

Not a day passes during this season of the year, but we witness the effects of carelessness in carrying fruits to market. A farmer has early apples for sale—he shakes them from the trees, throws them into the box of a lumber wagon, places his half bushel measure and a dozen other things on the top of them, and drives off at a good round trot eight, ten, or perhaps twenty miles, over a rough road, to the market town. When he arrives there, his apples are all bruised and blackened—entirely unfit for human use. He tries to sell them—he passes up and down the streets—calls at all the groceries, and after spending most of a day, succeeds in bargaining them off for a mere nominal price, say a shilling or two a bushel. Another farmer has the same sort of fruit—he picks them carefully, puts them in baskets or barrels, and drives them carefully to market. If he succeeds in reaching the centre of the town before he sells, he is instantly surrounded by a multitude of eager purchasers, who will not hesitate at giving him fifty cents or more a bushel, and feel well pleased with their bargain. This man has had some satisfaction as well as profit in disposing of his fruit, and he goes home well pleased with his orchard and determined to take good care of his trees; while the former goes home grumbling at every body, declaring that "fruit aint worth growing—they wont pay for carrying to market," &c., and determined to give himself very little concern in future about his trees.

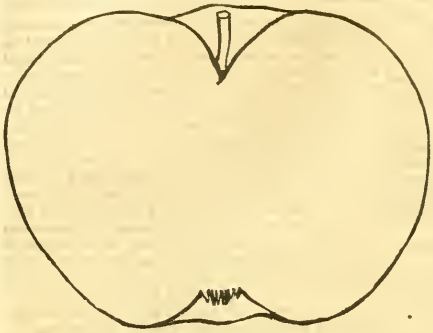
In all branches of trade, the articles that are presented in the best condition in market will command the quickest sale and best prices. If an animal is driven to market, starved, goaded, abused and worn out with fatigue by the way, it will not sell for half its value. Hay that is cut at the proper time, well saved, and sweet, will sell for twice as much as the same hay would improperly cured We have seen a salesman in a dry goods store, that had the faculty of showing articles to such advantage that he could sell more than half a dozen others, and at better prices. An old friend of ours, who always gets the highest price for his fruit, told us that he was once in the wine trade, and by simply sealing up bottles tastefully with wax, he had been able to double their price. So it is in everything, and above all things such a perishable commodity as ripe fruit.

ENGLISH AND AMERICAN LANDSCAPES.

Mr. Downing, in his letters from England, makes the following remarks on the difference between English and American landscapes:

The chief difference, after all, between an English rural landscape and one in the older and better cultivated parts of of the United States, is almost wholly in the universality of verdant hedges, and the total absence of all other fences. The hedges (for the most part of hawthorn) divide all the farm-fields, and line all the roadsides—and even the borders of the railways, in all parts of the country. I was quite satisfied with the truth of this conjecture, when I came, accidentally, in my drive yesterday, upon a little spot of a few rods—where the hedges had been destroyed, and a temporary post and rail fence, like those at home, put in their place. The whole thing was lowered at once to the harshness and rickety aspect of a farm at home. The majority of the farm hedges are only trimmed once a year—in winter—and therefore have, perhaps, a more natural and picturesque look than the more carefully trimmed hedges of the gardens. Hence, for a farm hedge, a plant should be chosen that will grow thick of itself, with only this single annual clipping, and which will adapt itself to all soils. I am therefore confirmed in my belief, that the buckthorn is the farmer's hedge plant for America, and I am also satisfied that it will make a better and far more durable hedge than the hawthorn does, even here.

Though England is beautifully wooded, yet the great preponderance of the English elm—a tree wanting in grace, and only grand when very old, renders an English roadside landscape in this respect, one of less sylvan beauty than our finest scenery of like character at home. The American elm, with its fine drooping branches, is rarely or never seen here, and there is none of that *variety* of foliage which we have in the United States. For this reason (leaving out of sight rail fences,) I do not think even the drives through Warwickshire so full of rural beauty as those in the valley of the Connecticut—which they most resemble. In June our meadows there are as verdant, and our trees incomparably more varied and beautiful. On the other hand, you must remember that here, wealth and long civilization have so refined and perfected the details, that in this respect there is no comparison—nothing in short to be done but to admire and enjoy. For instance, for a circuit of eight or ten miles or more here, between Leamington and Warwick and Stratfort-on-Avon, the roads, which are admirable, are regularly sprinkled every dry day in summer, while along the railroads the sides are cultivated with grass, or farm crops, or flowers, almost to the very rails.



THE ROUGH AND READY APPLE

Chas. P. Cowles, of Syracuse, sent us specimens of this apple in 1848, with which we were much pleased. He has also sent us a box this season, which confirms our opinion of its being a very beautiful and excellent fruit. In appearance and quality it more nearly resembles the *Summer Rose* than any other variety — smooth skinned, clear colored, fine grained, and pleasant flavored. Mr. Cowles thinks it is a seedling, as he has sent it to various parts of the country, and has not been able to identify it with any known variety. We do not approve of the name given it. Names of fruits should, if possible, convey some idea of quality, appearance, or place of origin. Such hackneyed terms as "Rough and Ready" seem quite inappropriate; but we have nothing to do with this. Mr. C. describes it as follows: "Fruit above medium size, large, oblong, broadest at the base, gradually narrowing to the eye, distinctly ribbed. Color green; when fully ripe, of a beautiful straw color, tinged with bright blush on the sunny side. Flesh tender and excellent, fine grained, somewhat melting, like a pear, of yellowish color, abundant in juice of an agreeable sub-acid flavor. Stalk large and stout, inclining to one side, from an inch to an inch and a half in length, deeply inserted in an irregular cavity. Eye small and closed, segments reflexed, distinctly plaited. An abundant bearer, with the remarkable character of ripening a long time, as wanted. It commences to ripen the first of August and lasts into September. Tree of vigorous growth, making a fine head. Wood of light brown color, resembling the *Porter*; of stocky growth in the nursery, like the *Gravenstein*. Leaves glabrous above, downy beneath. Owing to its great productiveness, it makes but little annual growth. The ends of all the twigs are very stout and blunt, of nearly the same size at the end as at the joint.

"I propose to call it '*Rough and Ready*,' from the fact of its being first tested during that campaign and as the name is a familiar one through the country. I have sent specimens to numerous friends, with grafts to test its qualities in different localities, with this name."

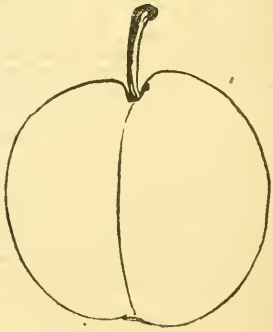
Who ever anticipated boorish rudeness, or met with incivility, among the enthusiastic votaries of Flora? Was it ever known that a rural residence, tastefully planned and appropriately adorned with rural beauties, was not the abode of refinement and intelligence.

A NEW PEAR.

Mr. Editor: — Permit me, through the pages of your paper, to bring to the notice of pomologists and all lovers of good fruit, a new seedling pear of very high promise.

In the spring of 1843, Dr. John Pulsifer, of Hennepin, planted in his garden a pear seed, (kind unknown,) which sprung up, grew, and the present season bore a crop of fruit of great merit in different respects. Growth of tree upright and vigorous. Shoots dark olive. Buds round, full, and prominent. Leaves dark green, ovate, reflexed. Size of fruit, hardly medium. Shape pyriform. Stem short and curved. Calyx small, open, set in a shallow depression. Skin dull golden yellow, covered with an open network of slight russet. Flesh white, melting, juicy, sweet, and delicious — much like, but superior to, the *Louise Bonne de Jersey*. The time of ripening, the present backward season, was the first half of August.

That its merits may be fully tested in different circumstances, grafts will be sent the coming season to pomologists in different parts of the Union; so that when generally approved, it may take its rank and place under the title of the "*Pulsifer Pear*."
S. S.—*Hennepin, Ill., Aug.*, 1850.



LUSCOMBE'S NONSUCH PLUM

This is an English variety, raised by Luscombe, Prince, & Co., nurserymen of Exeter, England.— We had it bear here for three years past, and consider it a valuable excellent variety. It is large — five to six inches in circumference — round, with a deep suture on one side. Stalk about half an inch long, inserted in a small cavity. Color, greenish yellow; and when ripe, melting, juicy, and rich. Adheres to the stone. Branches smooth, moderately vigorous. A regular and good bearer. This season they began to ripen on the 1st of September, and some that we ripened in the house are in fine condition now, (Sept. 16th.) In ordinary seasons it ripens here the latter end of August. It was pronounced "*nearly first rate*" at the Syracuse Pomological Convention last season. Mr. Saul, of Newburgh, who seemed better acquainted with it than any one else, considered it first rate in quality, but not so profuse a bearer as some others.

Editor's Table.

Two numbers more will complete the present volume of the Farmer. Those who have read our monthly visitor with pleasure and profit—those who have expressed their indebtedness to us for valuable information—for improved crops and profits—have now an opportunity to pay that debt, by a little exertion among their neighbors to increase our circulation in their respective localities. It is on the efforts of our friends we depend for increased circulation and usefulness. We have no paid agents, and intend to have none. There are some towns in which we have three or four hundred subscribers, obtained and forwarded by one or two individuals in each place; there are other towns where we should have as many, yet, because no person took the responsibility of urging the matter upon the attention farmers, we have few or none. We ask all who feel an interest in the Genesee Farmer, and are willing to aid in its circulation, to appoint themselves agents, show the paper to their neighbors, and obtain and forward subscriptions for the next volume. Any persons losing or damaging numbers in this way we will willingly supply with others. We can furnish all the numbers of the present volume to those who may wish them.

Large Yield of Wheat.—We have noticed somewhat of a discussion between the Macombe (Mich.) Gazette, and the Rochester Democrat, in regard to a large yield of wheat—the former stating that Ira Philips, of Armada, Michigan, raised *one hundred and twenty-four bushels on two acres*; and the latter thinking it too large a story to believe. Perhaps we can lessen the improbability of this yield of wheat, by telling a story of our own. Romanta Hart, of Brighton, in this county, says that a field of twelve acres which he harvested this fall, averaged 50 bushels to the acre. On three acres, and what he considered the poorest piece of the field, the yield, carefully and accurately measured, was over *sixty* bushels to the acre. This three acres being the lightest and poorest of the field, Mr. H. liberally manured it with lime and ashes, and the consequence was, it proved the best. Previous to sowing the wheat, a fine growth of clover was turned under. Mr. Hart intends to try for the State premium. We shall endeavor to obtain a full statement of culture of this crop for the next number.

While at Albany, at the State Fair, we had the pleasure of visiting the Agricultural Works of Wheeler, Melick, & Co., where are made Wheeler's Railroad Horse Powers and Threshers. Mr. W. informed us that he regularly employs about eighty men in making his machine, and that he is hardly able to fill orders as fast as they are received. Mr. Wheeler passed through this city on his way to the Provincial Fair, with a very superior machine. We can recommend these Threshing Machines to the favorable notice of our Canadian readers.

The space occupied by matters connected with the State Fair compels us to omit many things which should have received attention in this number.

Be particular in saving good seed. If you have anything growing on your farm particularly fine, save the seed, and plant it next year. You will soon see the benefit of this course.

CIRCULAR FROM THE PATENT OFFICE.

We have received a Circular from the Commissioner of Patents, soliciting information on the following, and any other points connected with agriculture. Farmers would be doing a public service by furnishing the desired information.

Wheat.—Varieties in use—average product per acre—time of seeding and of harvesting—preparation of seed, and quantity used per acre—how many times and how deep do you plow—is the yeild per acre increasing or diminishing—your system of rotation in crops—best remedies for Hessian flies and weevils—average price at your nearest market in 1850.

Corn.—The most esteemed varieties—average product per acre—cost of production per bushel—state the best system of culture—best method of feeding, whether whole or ground, cooked or raw; state, if you can, how much grain the manure formed by ten or twenty bushels of corn consumed by hogs will add to an acre, if carefully saved and skilfully applied, at or before the time of planting.

Oats, Barley, Rye, Peas and Beans.—Average yield of these several crops per acre—quantity of seed used—which crop least exhausting to land—are peas cultivated as a renovating crop, and if so, with what succes?

Clover and Grasses.—Quantity of hay cut per acre—best fertilizers for meadows and pastures—the grass seeds preferred in laying down meadows—quantity sown per acre—cost of growing hay per ton.

Dairy Husbandry.—Average yearly produce of butter or cheese per cow—comparative cost per lb. of making butter and cheese—treatment of milk and cream—mode of churning—of putting down butter for market—average price of butter and of cheese.

Neat Cattle.—Cost of rearing till 3 years old—usual price at that age—value of good dairy cows in spring and in fall—how many pounds of beef will 100 lbs. of corn produce—will a given amount of food yield more meat in a Durham, Devon, or Hereford, than in a native animal?

Sheep and Wool.—Is wool-growing profitable—cost per lb. of growing coarse or fine wool—how many pounds of wool will a ton of hay produce—are large or small sheep more profitable either for mutton or for their fleeces—how much more does it cost to produce a pound of fine Merino than of ordinary coarse wool—the proportion of lambs annually reared to the number of ewes.

Hogs.—What the best breeds—the cheapest method of producing pork and bacon—how many lbs. of meat will 100 lbs. of corn yield—the best method of putting up pork, and curing bacon and hams.

Cotton.—Average yeild of clean cotton per acre—cost of production per lb.—what crops best grown in rotation with cotton—best preventives against rust, army and bell worms—how deep do you usually plow for this crop; have you any experience in subsoiling or deep tillage for cotton—your experience in the use of cotton seed as a fertilizer—how can cotton lands best be improved without resting them.

Sugar Cane.—Is the cane losing its vital force and becoming more subject to premature decay than formerly—should not the seeds in place of ratoons be occasionally planted to produce new and healthier varieties—can you suggest any improvement in cultivation of the cane, or the manufacture of sugar—cost of producing sugar per lb.

Rice.—Can rice be successfully cultivated on upland—do you know of any varieties decidedly superior to others which deserve increased attention—can you suggest any improvement in the management of rice plantations?

Tobacco.—Average yield per acre—cost of production per cwt. or hhd.—describe any new process of cultivation or curing—crops best grown in rotation to maintain the fertility of tobacco land.

Hemp.—Is the culture of hemp on the increase or decrease—describe any new process of culture or preparation for market—average yield per acre—cost of production per lb.

Root Crops, (*Turnips. Carrots. Beets, &c.*)—Is the cultivation of these roots, as a field crop, on the increase—can you suggest any improvement in preparing land, seeding, after tillage and feeding—average product per acre.

Potatoes, (*Irish and sweet.*)—Average yield per acre—cost of production per bushel—most prolific and profitable varieties—best system of planting, tillage, and manuring.

Fruit Culture.—Is the culture of fruit receiving increased attention—cannot apples enough be grown on an acre to render the crop a very profitable one to the farmer—comparative value of apples and potatoes for feeding hogs and cattle—what varieties best to keep for winter use and for exportation—do you know any preventive or remedy for the "blight" on pear and apple trees, "yellows" on peach trees—the best method of transplanting, budding, grafting, &c.—Make any suggestions on the culture of *Grapes*, and other fruit—the manufacture of *Wine*, &c.

Manure.—What is regarded as the best plan of making and preserving manures from waste—are *Lime* and *Plaster* used as fertilizers—if so, in what quantity, and how often applied—is *Guano* used, and with what success—quantity usually applied per acre.

Meteorology.—Time and degree of highest and lowest range of thermometer—mean temperature of each month and of the year—fall of rain in each month, and aggregate for the year.

Note.—Please forward replies as early as convenient—if possible, before the 1st of January—giving the name, post office, county and State. A copy of the Report will, when printed, be mailed to each address.

All communications will be duly acknowledged in the Report.

GREAT SALE OF FRUIT AT AUCTION.

THE WHOLE STOCK OF A NURSERY TO BE SOLD AT AUCTION, OCTOBER 9th, 1850.

THE Proprietors of the Lake Erie Nursery, Cleveland, Ohio, being about to make a change in their business, will sell their entire stock of Fruit and Ornamental Trees, Shrubs, Roses, &c. &c., at Public Auction, and without reserve, on Wednesday, the 9th October next.

The collection embraces all the choice leading, and new varieties of Fruits; rare Ornamental Trees, Shrubs, &c., and in extent of variety and correctness to name, is probably surpassed by no Nursery at the West.

The stock of Pears on free stocks, and dwarfed on Quince, is very good, and also Cherries, Apples, Peaches, Plums, Grapes Quinces, Currants, Raspberries, &c. &c.

Among the Ornamental Trees and Shrubs, there are plants from one year's growth to an extra size, and the stocks of Mountain Ash, Scotch Larch, Deciduous Cypress, Norway and Silver Maples, European Lindens, Horse Chestnuts, Kentucky Coffee Trees, Garland Deutzin, Daphne Megereon, Monthly Chinese Evergreens, and Tree Honeysuckles, &c. &c., are especially good.

The stock of Evergreens is large, and most of them having been twice transplanted, they are in excellent condition to be removed.

The sale will be made in lots of 10 to 100 trees or plants in each lot. The correctness of varieties may be relied upon, and purchasers can have the privilege of removing their trees at any time previous to the 20th May, 1851.

The purchaser can dig and remove his trees himself, or the proprietors will do it for him, charging him the usual price of packing, &c.

The terms of sale, unless otherwise agreed upon with individuals, will be as follows:

For all sums under Twenty Dollars, cash.
Over Twenty and under Fifty, 30 days.
Over Fifty and under One Hundred, 4 months.
Over One Hundred, six months, approved Notes payable at Bank.

Catalogues will be issued about the 15th of August, which we shall take pleasure in forwarding to any persons who may desire. All communications of inquiry, &c., addressed to the subscribers, will meet prompt attention. ELLIOTT & CO.,

Sept, 1850. Lake Erie Nursery, Cleveland, O.

LINNÆAN BOTANIC GARDEN & NURSERIES.

WM. R. PRINCE & CO., FLUSHING, L. I.

WM. R. PRINCE & CO., sole proprietors of this ancient establishment, would respectfully invite the attention of Amateurs, Nurserymen, and others, to their fine and extensive collection of *Fruit and Ornamental Trees, Plants, Shrubs, Roses, and Green House Plants, &c. &c.*, which are offered for sale on terms much below former prices. Their Fruit being propagated from bearing trees on their extensive specimen grounds, enables them to guarantee the varieties to be genuine and true to name. Their trees are well formed and thrifty, and such as will give complete satisfaction. To Nurserymen wishing trees in quantity, by the hundred or thousand, they are enabled to offer very liberal discount. Their extensive collection of Standard and Dwarf Pears, their new varieties of Italian and French Peaches, and many new and superior fruits of other kinds, are well worthy the attention of all lovers of fine fruit. Their collection of Roses is the most extensive of any Nursery in the country, and many new varieties have been added to their collection.

Orders for Trees from any part of the country will meet with prompt attention, and goods be packed so as to insure their safety to any distance.

Catalogues with a detailed list of prices, will be sent to all *post-paid* applicants, or can be had of our city Agents, CLARK, AUSTIN & SMITH, 205 Broadway, New York.

N. B. The public will please not confound this with the Nursery of Winter & Co., who have taken the title of this establishment, but who are selling out and closing their business.

October, 1850. [10-1t*]

A NEW HARDY CLIMBER.

THE NEW AND BEAUTIFUL CLIMBER, Calestigia pubescens, recently introduced from China by Mr. Fortune, proves perfectly hardy in New England, having stood in the grounds here the past winter without the slightest protection. Trained to a single pillar, say 10 feet in height, it is a very striking and beautiful object, from the middle of June till cold weather, during which time it is covered with a profusion of its large double flowers, of a delicate rose color. It is very ornamental planted in patches like verbenas; makes an admirable screen, and is very effective in young plantations, belts or shrubberies, trailing prettily on the surface, and running up among the lower branches of trees in a very picturesque manner. It is, therefore, particularly suited for ornamenting Cemeteries and Public Gardens. Its culture is very simple, and it thrives in any good garden soil. When required in considerable quantities, it is best to start them under glass in February or March, but the tubers may also be planted in the open ground in May. The subscriber will send to order by mail or express, October 20th, tubers sufficient for 100 plants at $5.00, for 50 plants $3.00, with directions for propagation and culture

Strong plants in pots in April, $1.00 per pair.

B. M. WATSON.

Old Colony Nurseries, Plymouth, Mass., Oct., 1850.

To Fruit Growers and Nurserymen.

ELLWANGER AND BARRY solicit the attention of all tree planters, Nurserymen and Dealers to their present stock, which is much larger and better than they have ever before had the pleasure of offering.

It embraces, among other things, in large quantities.

Standard Fruit Trees, of all sorts.
Dwarf and Pyramidal Fruit Trees, for Gardens.
Gooseberries, Strawberries, Raspberries, Currants, &c., all the newest and best kinds.
Ornamental Trees, Shrubs, Roses, &c., including all new, rare and desirable articles.
Buckthorn, Osage Orange and other Hedge Plants.
Stocks of all sorts for Nurseries.
Green House, Border and Bedding Plants.
Double Dahlias, &c., in immense quantities.

Wholesale prices furnished when desired.

A new edition of the general descriptive Catalogue is now ready and will be sent gratis to those who apply post paid.

Mount Hope Garden and Nurseries.
Rochester, N. Y., Sept. 1, 1850.

Fruit and Ornamental Trees,

At the Nursery of J. J. THOMAS, Macedon, N. Y.

MOST of the Trees are of large, handsome, and thrifty growth, and they embrace careful selections of the best sorts of Apples, Peaches, Pears, Cherries, Apricots, &c., with the smaller fruits

When purchasers desire, selections will be made by the proprietor, so as to afford a regular succession of the best varieties throughout the season, and all may be relied on as strictly true to their names, the proprietor having for the past fifteen years invariably adhered to the rule of selling none but THOROUGHLY PROVED sorts.

A carefully assorted collection of hardy Ornamental Trees, Shrubs, and Herbaceous Perennial Plants, furnished at moderate prices

Trees for canal and railroad well packed in bundles, enclosed in strong mats, with roots mudded and encased in wet moss, so as to preclude all danger of injury.

All communications, *post-paid*, to be directed Macedon, Wayne Co., N. Y.

October, 1850. [10-1t]

Apple Trees for Orchards.

MANY thousand fine Trees, mostly 7 to 8 feet high, *propagated in all cases from thoroughly proved or bearing trees* for sale at the Nursery of J. J. THOMAS, Macedon, Wayne Co., N. Y.

They embrace the best standard varieties, with nearly all the valuable new sorts; among them are Early Harvest, Sine Qua Non, Sweet Bough, Early Joe, Summer Sweet Paradise, Autumn Strawberry, Gravenstein, Dutch Mignonne, Rambo, Fall Pippin, Yellow Bellflower, Rhode Island Greening, Esopus Spitzenburgh, Northern Spy, Swaar, &c., &c.

Price, varying with selections, from $16 to $18 per hundred. A first rate selection of summer, autumn, and winter fruit, of fifteen to thirty varieties, if made by the proprietor, furnished at $16 per hundred, or $17 if well packed in matted bundles, and delivered at canal or railway. All orders to be accompanied with remittances.

October, 1850. [10-1t]

Fruit Trees.—Genesee County Nursery.

THOSE wishing to supply themselves with Fruit Trees, may find at the above Nursery a choice variety, of large size and thrifty growth. He has over twenty varieties of cherries, among which may be found May Biggareau, Knight's Early Black, Early Purple, Yellow Spanish, Black Tartarian, Black Eagle, &c. He has a well selected variety of Pears.—twenty varieties were selected by Col. Wilder, of Boston—among which may be found Madelaine, Bloodgood, Bartlett, Virgalieu, Onondaga Seedling, Duemore, Passe Colmar, Vicar of Winkfield, Winter Nelis, &c. Also, a large quantity of Apple and Peach trees, of well selected varieties: as well as grapes, strawberries, &c. He will sell trees at reduced prices, and pack them free of charge.

Orders must be addressed to the subscriber at Stafford, Genesee Co., N. Y., A. H. NORRIS.

October, 1850. [10-1t*]

T. C. MAXWELL & CO.,

GENEVA, N. Y.

Offer for sale, this fall,

100,000	Buckthorn seedlings,	2 y'rs old,	and nice,	at $5	per 1000
80,000	Cherry	" 1 & 2	"	at 7	"
40,000	Apple	" 2	"	at 5	"
20,000	Plum	" 2	"	at 10	"

Also, a choice assortment of Fruit and Ornamental Trees, at wholesale or retail. Planters and dealers are invited to call and see. A liberal commission will be given to good agents in new locations. All orders will be promptly attended to, and trees packed safely for transportation to any distance.

Geneva, Sept. 1, 1850. T. C. MAXWELL & CO

BACK VOLUMES of the Farmer we can furnish bound. Also, all works on Agriculture and Horticulture, Poultry, Sheep, &c.

The First Premium of the New York State Agricultural Society was awarded to

EMERY & CO.'S IMPROVED RAILROAD HORSE POWER.

THE subscribers are gratified to be enabled to present the public with the best possible testimonial of the superiority of their *Recently Improved Railroad Horse Power*, in the form of the *First Premium* of the N. Y. State Agricultural Society, at their annual Fair, held near Albany on the 3d, 4th, 5th, and 6th of September, 1850, where they were exhibited each day in operation, in competition with Wheeler's Latest improved (still made and sold by us,) Allen & Co.'s Improved, made in New York by A. B. Allen & Co., Ham's Approved Powers, from Rensselaer co., Badger's Patent, from Otsego co., and other approved Powers on the Endless Chain principle.

They were all thoroughly examined by a competent Committee of practical Farmers and Mechanics, unbiased by former awards of the Society to some of the kinds on exhibition, they unanimously awarded the Society's *First Premium, of Money and Diploma, to Emery & Co., for superiority of mechanical construction, strength, durability and power.*

Having been long engaged in the manufacture and sale of Agricultural Machinery and Implements, we are pleased to know our exertions to introduce improved implements of husbandry are being appreciated by the agricultural public, the best testimonial of which we find in the rapidly increasing and unprecedented demand for every article of our manufacture and trade. In no article have we met with greater success than our Farmers' Threshing machinery, improved, manufactured and introduced by us; and notwithstanding the strong and growing competion of other manufacturers, we have thus far fully sustained the superior character of our machinery. Whenever alterations or improvements are suggested, we invariably test, thoroughly, their utility before offering them to the public, and no new article or alteration introduced by us has thus far failed to give increased satisfaction.

The attention of Farmers and Dealers in Agricultural Implements is respectfully requested to our Powers, before purchasing elsewhere.

Descriptive Catalogues, containing minute delineations, descriptions, terms, prices, &c., &c., of Horse Powers, also all the leading articles in our trade, are furnished gratis on application by mail or otherwise.

Efficient local agents in each county are wanted, to introduce and sell our Implements, to whom liberal commissions will be allowed, varying according to location, exertions made, and amount of sales.

For further particulars apply to EMERY & CO.,
Proprietors of the Albany Agricultural Works, Warehouse and Seed Store, Nos. 369 and 371, Broadway, Albany, N. Y.
October, 1850.

Pure White Lead.

THE Rochester White Lead Manufacturing Company beg to offer their brands of PURE LEAD to the attention of agriculturists and horticulturists, for painting permanent structures of every description.

This article has been thoroughly tested by the best judges in this city, and pronounced a genuine article. Persons desiring to test the purity of the lead, may have it analyzed by a chemist; and if in any case it should be found impure, we will pay the price of analyzing it, and refund the money for the lead.

Be particular about the brand: "Moulson's, 36 Front street, Rochester," is marked on every keg. Purchasers of lead have occasionally been deceived in buying lead branded as Rochester lead. Mark, *we are the only manufacturers of lead here.* There is, however, a large quantity of lead "fixed over" here. Nevertheless, we wish our lead not to be confounded with that or any other, and therefore desire all consumers to give us a trial.

SAMUEL MOULSON, No. 36 Front st.
Rochester, August 1, 1850. [8-tf]

Miner's Bee Hive.

THIS beautiful and highly valuable practical Hive, is unsurpassed by any other in the United States. The Rights are in pamphlet form, with full engravings, and simple directions to make it. Price $2 only; sent by mail to any section of the country. This is positively the only Hive of *real* merit to be had.

Also, the AMERICAN BEE-KEEPER'S MANUAL, 350 pp, 35 fine engravings; the most popular work ever published on the culture of bees. Price $1; sent by mail also. Address to this office, *post-paid.*

Gen. Farmer Office, Rochester, June, 1850 [6-tf]

BOOKS ON AGRICULTURE, &c., &c.,

For Sale at the Office of the Farmer.

The Publisher of the FARMER keeps constantly on hand a large assortment of the most popular and valuable works pertaining to Agriculture, Horticulture, and Rural and Domestic Economy, which will be sold at the lowest cash prices. The names and prices of a portion of the books are annexed:—

American Agriculture, by Allen $1.
American Farm Book. $1.
American Poultry Yard by Browne. $1.
American Shepherd, by Morrell. $1.
American Veterinarian, by Cole. 50 cents
Buel's Farmer's Companion. 75 cents
Buist's Kitchen Gardener. 75 cents.
Chaptal's Agricultural Chemistry. 50 cents.
Coleman's Continental Agriculture $1.
Complete Farmer. $1.
Cole's American Fruit Book. 50 cents.
Domestic Animals, by R. L. Allen. Cloth, 75 cts.; paper, 50 cts.
Downing's Fruits and Fruit Trees of America $1 50
Downing's Landscape Gardening. $3 50
Essay on Manures. 25 cents.
Farmer's and Emigrant's Hand-Book. $1
Farmer's Manual.
Gardener's Farmer's Dictionary. $1 50.
Home Doctor. 25 cents.
Horse Doctor. 25 cents.
Horse's Foot—and how to keep it sound. 25 cents.
Johnson's Agricultural Chemistry. $1 25.
Johnson's Dictionary of Gardening.
Kirby & Spencer's Entomology. $2.
Knowlson's Complete Farrier, or Horse Doctor. 25 cents.
Ladies' Companion to the Flower Garden. $1 25.
Liebgig's Agricultural Chemistry, (new edit on) $1—paper, 75 cts
Liebgig's Agricultural and Animal Chemistry (pamphlet editions.) 25 cents each
Loudon's Ladies' Flower Garden $1 25.
Mason's Farrier and Stud Book. $1.
Miner's Bee-Keeper's Manual. $1.
Norton's Elements of Scientific Agriculture. 50 cents
Poultry Book, by Bennett. 75 cents.
Rural Economy, by Boussingault. $1 25.
Scientific Agriculture, by Rodgers 75 cents.
Stable Economy, by Stewart. $1.
The Bird Fancier. 50 cents.
Treatise on Milch Cows. 38 cts.
Trees of America $4
Youatt on the Pig. 75 cents.

ALSO,

2 setts Chamber's Miscellany. $8 per sett.

*** These books can be safely forwarded by mail, to any part of the country.

☞ Orders from a distance will receive prompt attention, and the books forwarded by mail or Express as desired

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Monroe Nursery.

TO THE PUBLIC.—I have a few thousand trees left over and above my contracts, which I offer at fair prices. They consist of all the best and late varieties and of the most thrifty and fine growth.

What is purchased at my nursery can be relied on with the greatest confidence, for I give my individual attention to the cultivation.

I want, this Fall, about 100 bushels of peach stones.
September, 1850. CHARLES POWIS.

TO FARMERS.

CASH PAID FOR RED ROOT SEED AT MY OIL MILL.

M. F. REYNOLDS, manufacturer of Linseed Oil, White Lead in Oil, Sash Doors, and Blinds, Stained and enamelled Glass;
AND DEALER IN
Paints, Oils, Varnish, Glue, Brushes, &c; French, English, and American Plate, Crown, and Sheet Glass, French White Looking Glass Plates, &c, 17 Buffalo street, Rochester, N. Y.

Wheeler's Patent Horse Power—Price Reduced!

FOR SALE at the store of JAMES P. FOGG, No 14 Front street, Rochester, N. Y.

Price of one Horse Power, Thresher, Separator and Bands.	$110
" two " " " "	135

Also, EMERY & CO.'S LATEST IMPROVED ONE AND TWO HORSE POWERS, at Manufacturers home prices.
October, 1850.

Agricultural and Horticultural Implements, and Field and Garden Seeds.

UPWARDS of *one hundred* kinds of Plows, and a corresponding variety of all other implements for the farmer, planter, and gardner; embracing the largest and most complete assortment to be found in the United States. Also, Field and Garden Seeds, a large and varied assortment. A. B. ALLEN & CO.
August, 1850. [8-tf-o] 189 and 191 Water st., New York

Timothy and Clover Seed for Sale

AT the Rochester Seed Store, Nos. 12 and 14 Front street
Sept. 1. [9-2t] JAMES P. FOGG.

CONTENTS OF THIS NUMBER.

Rochester Wholesale Prices Current.

Flour, bbl.	$4.75 a 4 88	HIDES	
Pork, (mess.)	$11 00	Slaughter,	3½ cts
Beef, cwt.	$4 00	Calf,	10 cts
Do. bbl. (mess.)	$7 a 8	Sheep pelts,	25 a 43
Lard, (tried.)	7 cts	SEEDS.	
Do. (leaf)	7 cts	Clover, bush.	$4 25 a 5.25
Hams, (smoked.)	7 cts	Timothy,	$1.50 a 2 25
Shoulders, do.	4½ a 5 cts	SUNDRIES.	
Potatoes, bush.	31 cts	Butter, lb.	12½ a 14 cts
Corn Meal,	50 cts	Cheese, lb.	5 a 7½ cts
GRAIN.		Salt, bbl.	92 cts
Wheat, bush.,	$1.00	Eggs, doz.	9 cts
Corn,	56 cts	Beans, bush.	$1.25
Rye,	53 cts	Hay, ton	$10 a 11
Oats,	34 cts	Hard Wood,	$3 a 4
Barley,	58 cts		

Rochester, Sept. 20, 1850.

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—NOVEMBER, 1850. NO. 11.

AGRICULTURAL SOCIETIES AND EXHIBITIONS.

If any one had doubts as to the fact whether agriculture was advancing in the United States or not, they would soon be removed by attending a few such rural exhibitions as have been recently witnessed at at Atlanta in Georgia, Cincinnati, Albany, Baltimore, in Michigan, Massachusetts, and other States.—County Societies have everywhere evinced the spirit of progress and improvement. The number of farmers in attendance has been large beyond all precedent, and the receipts from the free contributions of the public, such as to impart renewed strength and interest to the premiums awarded by these useful associations. Speaking of the Fair in Seneca county, the Ovid Bee says that it "not only surpassed all former exhibitions, but exceeded the expectations of its most zealous friends. The address of Prof. Norton was a perfect gem, and worth thousands of dollars to this county—*provided* its practical truths are heeded. When we first read the 'Prize Essay' of Prof. Norton, we never dreamed that he *could* be less than forty years of age, and the Address he delivered here has not lessened our estimation of his good sense, and industry, and talent. The fact that he is a *young* man, adds wonder to our increased admiration. The race of scholars and gentlemen such as he—may it never become extinct."

The addresses of this gentleman in Ontario and other counties in Western New York, have elicited applause from all that heard them; and no one is more competent to scatter broad-cast over the land the good seed of agricultural science.

In Livingston county the number attending the Fair was variously estimated at from five to seven thousand, and the show of domestic animals worthy of so large a gathering of the people. In Chautauque the receipts for membership and admittance were several hundred dollars larger than ever before. Tney were also unusually large in Monroe county. In Erie, Niagara, Genesee, and Orleans, our accounts are equally favorable. Thirty thousand persons attended the Provincial Fair held at Niagara in Canada West. Forty thousand attended the State Fair held near Cincinnati, and the receipts were some $10,000. This is starting, not from the ground, but high up the ladder, in the Buck-Eye State. May her enterprising farmers continue to improve for a thousand years at each annual exhibition!

It is pertinent to inquire in this connection, in what way these rapidly increasing Societies can confer the greatest amount of good on the community at large. Usefulness should be blended with amusement, and we ought to increase in knowledge with the advancement of years. To attain this desirable result in an eminent degree, more care must be taken to establish and maintain a system of experiments in practical farming, with a view to disclose new and valuable truths. Thus, suppose twenty bushels of corn be fed to hogs, sheep, or neat cattle, and all the manure formed from the grain, both solid and liquid, be saved; how much corn at the next harvest, more than would grow without the manure, will the fertilizers derived from twenty bushels produce? We have searched all the works on rural affairs written in this country, of any note, to find a satisfactory answer to the above question; but without success. No one appears to know how many pounds of corn the manure derived from 100 or 1000 will add to a crop, under common treatment and circumstances. Obviously, the manure is as much the food of growing plants as the corn is the food of growing pigs. If, then, four or five hundred pounds of corn will make 100 of pork, how much manure, estimating it by the quantity and quality of the substances consumed to form it, will it take to yield 100 or 500 pounds of corn?

Again; who can say on what kind of soil the fertilizers derived from a ton of clover or timothy hay, a ton of potatoes, oats, or corn, will give the best return to the husbandman? What County or State Society has fairly tested by experiments duly authenticated, the exact returns realized from a given quantity of know fertilizers? Who can say, from evidence satisfactory to a knowledge-seeking mind, how much wheat the fertilizers contained in a barrel of flour consumed by the genus homo, (man,) will add to the harvest of an acre of that grain? Will 100 pounds of wheat produce a like weight again? Will it give more? and if so, how much?

Why should not our numerous agricultural associations use a part of their funds to determine the economical value of the different kinds of manure produced, or producible on the farm? If that obtained from 20 bushels of oats and 1000 pounds of timothy, clover, or mixed hay, is worth something; why not let the millions of cultivators in the country know how much it is worth, and under what circumstances? How is it possible to advance the art or science of rural economy, unless we labor to develop now and useful facts pertaining to the same? How few of these have been elicited by all the agricultural soci-

eties in America within the last twelve months! Who can say from actual experiments, that 1000 pounds of green grass or feed of any kind, will yield more milk, butter, cheese, or good beef, in the living machinery of a Durham, Devon, Ayrshire, Hereford, or native cow? What breed of sheep will elaborate most pounds of fine wool (not animal grease nor dirt,), from any given quantity of food? If a farmer has ten tons of hay and twenty of grass to be transformed into wool and mutton, who will furnish him with the best machines for the purpose indicated, with *proof* that his machines will yield a larger return in money, than those of others? When or where in this country, were several flocks of sheep fed equal weights of food for a year, to determine the exact productive value of each flock? Are we to go on guessing at these things forever, without increasing our knowledge in the least?

Has not the time arrived when the New York State Agricultural Society should have an experimental farm of its own? The truth, the whole truth, and nothing but the truth, is what the 500,000 agriculturists in the Empire State both need and greatly desire. How is this truth to be revealed? By what agency, and at whose expense? We have humbly urged the Legislatures of more States than one, as well as Congress, to assist the friends of agriculture a little, in developing the laws of nature which govern the growth of every cultivated plant and of every animal product called into existence by the farm labor of the United States. From these we expect next to nothing; but from agricultural societies we do hope for better things. They embody tens of thousands of the true men of the nation — men who are both able and willing to do *something* to leave the world wiser and better than they found it. The slavery of heaping up riches may be pleasant enough to those trained to bear the yoke from their infancy; but it is true slavery nevertheless. The Creator of all good, the Fountain of all knowledge, has placed a higher destiny than that of either physical or mental slavery, within our reach. Shall we make a common effort to attain it? That is the question. Our faith is strong that a united and successful effort will be made. The emancipation of our race from the bondage of ignorance and superstition in agricultural matters, is an achievement as certain as it will be glorious. In a few years, carefully conducted experiments in the science of agriculture will be encouraged and read with interest by millions in this Republic. Popular intelligence and opinion are coming up to this. Nor shall we have to wait more than another quarter of a century to see the first permanent agricultural school established in the State of New York. Slowly, silently, but with perfect certainty, knowledge and the pursuit of it will overcome every obstacle. The study of soils, of rocks, of climates, of plants and animals, will command the care and patronage not only of agricultural societies, but of governments. It can not be otherwise in this free and prosperous land, where the majority rule and the tillers of the earth constitute that majority. Bread and meat, fruit and potatoes, and the best means of producing them, are things, and the subjects of research, never to be dispensed with. Several county societies have given premiums to good housewives, for the best loaves of bread exhibited. These were tasted, with delicious butter, by hundreds at the Horticultural Show in Rochester. It is no mean art to be able to make superb wheat, corn, or rye bread, from the proper materials; and we allude to the example of the Rochester ladies as worthy of imitation in other societies. Let farmers furnish good flour and meal, produced with the greatest skill and economy, and their daughters be taught to make every pound into edible food to the best possible advantage. Domestic economy has its science, not less than field, garden, or political economy.

We rejoice at the good already done by means of agricultural associations. Some are providing their members with all the advantages of good professional libraries. This is a movement in the right direction. Do not forget the several valuable periodicals devoted to rural affairs, published in this country. They deserve better encouragement than they generally receive; and county societies will find agricultural journals their most efficient supporters. Keep the subject of improvement fresh in the popular mind by frequent meetings and public discussions or lectures. There is a vast difference between a living and a dead body. Vitality is a power quite as essential to a society as to an individual. See to it, then, that the noble cause of continued advancement in husbandry suffers no damage from the luke-warm support of its friends.

ANALYSIS OF THE APPLE.

A CRITICAL and elaborate anaysis of the apple has recently been made by Dr. SALISBURY, of Albany, the results of which are of deep interest to farmers, as throwing light upon the composition of this most important of all fruits. Much attention has within a few years been directed to the subject of feeding apples to stock, and although many well authenticated instances are given, where this fruit has proved exceedingly valuable, especialy for fattening hogs, yet many are incredulous as to its possesing sufficient nutritive properties to render it a profitable crop to cultivate expressly for that purpose. The facts elicited by Dr. SALISBURY, go to show that while apples contain about 3 per cent. more of water than the potato, yet in the aggregate amount of fat producing products, they do not materially differ.

Six varieties were submitted for analysis the *Tallman Sweeting, Swaar, Kilham Hill, Roxbury Russet, English Russet,* and *R. Island Greening.* Of the five last named, the mean of the analyses of the ash is as follows:

	With Carbonic acid.	Without Carbonic acid.
Carbonic acid,	15.219	
Silica,	1.362	1.637
Phosphate of iron,	1.336	1.593
Phosphoric acid,	11.252	13.267
Lime,	3.442	4.129
Magnesia,	1.400	1.669
Potash,	31.310	37.610
Soda,	20.810	24.799
Chlorine,	1.822	2.189
Sulphuric acid,	6.062	7.229
Organic matter thrown down by nitrate of silver,	4.890	5.823
	99.396	100.000

"The percentage of ash in the apple is small yet rich in phosphoric and sulphuric acids, potash, and soda. 1000 lbs. of fresh apple contain about 827, lbs. of water, 170.4 lbs. of organic matter, destroyed by heat, and 2.6 lbs. of inorganic matter, or ash. 1000 lbs. of dry apple contain between 17 and 18 lbs. of ash. 100 lbs. of apple ashes contain, when deprived of carbonic acid, about 13 lbs. of phosphoric

acid, 7 lbs. of sulphuric acid, 38 lbs. of potash, and 25 lbs. of soda: these four bodies forming about 83 per cent. of the whole ash."

The mean of the proximate organic analyses of the six varieties is as follows:

	1000 parts of fresh apple.	1000 parts of dry apple.
Cellular fibre,	32.03	190.379
Glutinous matter, with a little fat and wax,	1.94	11.463
Dextrine,	31.44	186.895
Sugar and extract,	83.25	497.627
Malic acid,	3.17	19.585
Albumen,	13.79	83.720
Casein,	1.64	9.921
Dry matter,	167.26	1000.000
Water,	826.64	
Loss,	6.10	
	1000.00	1000.000

"The ripe apple is rich in sugar and a body analogous to gum, called *dextrine*, which has the same composition as starch, but differs from it in being soluble in cold water, and not colored blue with iodine. Dextrine and gum should not be confounded with each other. They differ very materially in many respects. Dextrine belongs to a class of bodies which are susceptible of nourishing the animal body. All the starch taken as food is converted into dextrine before it is assimilated by the system. The acids of the stomach possess the property of converting starch into this body.

"In the fresh apple, 100 lbs. contain about 3.2 lbs. of fibre; 0.2 of a lb. of gluten, fat, and wax; 3.1 lbs. of dextrine; 8.3 lbs. of sugar and extract; 0.3 of a lb. of malic acid; 1.4 lbs. of albumen; 0.16 of a lb. of casein; and 82.66 lbs. of water.

In the fresh potato, 100 lbs. contain about 9.7 lbs. of starch; 5.8 lbs. of fibre; 0.2 of a lb. of gluten; 0.08 of a lb. of albumen; 0.45 of lb. casein; 1.27 lbs. of dextrine; 2.6 lbs. of sugar and extract; and 79.7 lbs. of water.

By comparing the composition of the apple with that of the potato, it will be noticed—first, that the former contains, according to the analysis, about 3 per cent. more of water than the latter.

Second, that dextrine and sugar in the apple take the place of starch, dextrine, and sugar, in the potato. Of the former, 100 lbs. of good fruit contain of dextrine, sugar, and extract, 11.4 lbs.; the latter has, in the same amount of tubers, 13.61 lbs. of starch, dextrine, sugar, and extract. The above proximate principles are the main bodies in the apple and potato which go to form fat. In the aggregate amount of fat producing products, it will be seen that the apple and potato do not materially differ. It would be natural, however, to infer that 50 lbs. of dextrine and sugar would, if taken into the system, be more likely to make a greater quantity of fat in a given time, or at least, to make the same amount in a shorter period, than an equal weight of starch; for the reason, that the two former bodies, although nearly the same in composition with the latter, yet are physically farther advanced in organization, and hence probably approximate nearer the constitution of fat. If this view be taken, then the apple, if of good quality, may be regarded equally if not more rich in fat producing products than the potato.

Thirdly, that the apple is richer in nitrogenous compound than the potato. 100 lbs. of fresh apple contain of albumen, 1.38 lbs. The same amount of fresh potato has one-fourth of a pound. 100 lbs. of dry apple contain 8.37 lbs. of albumen, and an equal weight of dry tubers has 1¼ lbs. 100 lbs. of fresh fruit contain of casein, 0.16 of a lb.; and an equal weight of fresh tubers, 0.45 of a lb. Hence it will be observed that 100 lbs. of fresh apple contain of albumen and casein, 1.54 lbs.; and the same quantity of fresh potato, 0.7 of a lb.

From the above it will be seen that in albumen the apple is richer than the potato while, in casein the reverse is the case—that the aggregate amount of albumen, casein, and gluten, in good varieties of the apple, is more than double that of the same bodies in the potato. Hence, the former may be regarded richer than the latter in those bodies which strictly nourish the system; or, in other words, to form muscle, brain, nerve, and in short, assist in building up and sustaining the organic part of all the tissues of the body.

The juice of the apple forms what was regarded not long ago a favorite and almost necessary appendage to the farmers stock of winter luxuries. It is now, however, looked upon by him with comparative indifferance as a beverage, he having found a far better and more profitable use for his apples, that of converting them into fat instead of alcohol. The juice of the apple after being fermented, is called cider, and contains much of the nutritive matter of the fruit. Cider contains alcohol, sugar, gum or dextrine, malic acid and the phosphates and sulphates of the alkalies, with a little tannic and gallic acids. The juice before being fermented, has in addition to the above ingredients, albumen and casein." F.

THE EXPERIENCE OF A YOUNG FARMER.

MESSRS. EDITORS:—I have been brought up to the occupation of farming in our poor way. My father was a hard working man of good moral habits, and was called a very observing man, but rather prejudiced against what he termed "book farming." He said he thought any intelligent farmer knew better how to till his own soil than a man who had never seen it could tell him, as different soils required different management, and more than one-half of those who wrote on the subject had no practical knowledge of farming whatever. But of late I have taken a little different view of the subject, especially since I have become a subscriber to the Genesee Farmer. I had to commence for myself with a very limited education and small capital, have had to dig for the support of a large family, and consequently my opportunities for reading have likewise been limited. I think, however, that there is some improvement in agricultural works as well as practical knowledge: and your idea of urging every one to communicate every item of practical knowledge which he thinks is not universally known and practiced, I like first rate. But I know that I am very far behind the times, and feel very reluctant to expose my ignorance, especially to the editor of a periodical as well patronized and widely circulated as yours.

I think I have some little practical knowledge in the use of plaster; but what should I have known had I not been told? I commenced experimenting on a small scale some sixteen years ago, plaster at that time coming rather high, viz: $9 or $10 per ton, and sixteen miles to haul it, over hilly road. No one could have made me believe that the little dusting would have such an astonishing effect on the

clover, had I not seen it. I have used it constantly, every year more or less, since I commenced. I do not pretend to raise a crop of grass without it; and I am well satisfied that I have been more than twice paid for the outlay, even at the highest price.

I was told that in the end plaster would impoverish the land—that it merely acted as a stimulus, and would eventally leave the land much poorer than when the use of it was commenced. Of this I am convinced, that I have not much to fear if I use a little discretion; but we must not be too greedy, or we shall be like the man in the fable, who wished to become suddenly rich. He could not be content to trace the rivulet to the big pond, but must have the golden stream come like a mighty rushing torrent. But he looks around, and his torrent has become dry and dusty. So if we apply the plaster, it starts the clover as if by magic, the big crop rolls out, we grasp the scythe, cut it off and take it away from the land, and perhaps repeat it the next season. We then plow, and put on a crop of corn. The effect of the powerful fertilizer, or stimulator, whichever you may be pleased to term it, is still on hand; we get a fair crop, and perhaps follow it with one or two of wheat or oats: then seed again, and anticipate the same round. But behold! all has become dry and dusty — our land is a barren waste. We have been robbing the land, and have returned nothing. But let us be content with one large crop of clover, if our land is in low condition, and give the land the next. Let it grow as large as it will, then put in the plow instead of the scythe—let it go deep—have a boy along with a forked stick, if necessary, to keep it clear and roll the clover under; and mark my word, we shall find the plaster has done the land no injury. I am sensible that plastering and turning in clover is the cheapest way of manuring a soil like mine which I have yet tried, except what I can obtain from the barn-yard and stables.

I have different views on the application of barn-yard manure, from many farmers within the circle of my acquaintance, and from some publications which I have seen on the subject. I have seen one or two articles in the Farmer, which correspond with my views on the subject, or I would not say anything, as I should not be able to defend my position by analyses or a learned article on the subject; but if I am correct, I know many of my neighbors are losing a great deal of the benefit of their manure, by their practice of rotting before they apply it to the soil. My plan is to apply it as soon as I can, and plow it in, no matter how coarse. I never put straw in a pile to rot, but bed the cattle and horses well with it, and pitch it out on the pile during the winter; then take it out and plow it in. If I have more straw than I can use in this way, I take it along and plow it under. I will venture that the soil will fix the gases without any farther trouble.

As I have before stated, I am a firm believer in the plan of manuring with plaster and clover; but buckwheat — unless you can prescribe some means whereby it may be made, or the soil may be made, to retain the fertilizing properties, if there are any to the buckwheat — I can assure you that I have no faith at all in. Plaster will make buckwheat grow as well as clover; but I have bushed it down when it stood mid-sides to my horses, and plowed it under, when I was fully satisfied that it did not benefit the crop or the land in the least. I have tried the experiment repeatedly, and had now rather go with a team in the morning and turn in a good dew, than the stoutest crop of buckwheat I could raise.

We use a composition here, which answers a good purpose on corn. It is plaster, lime, and unleached ashes, about equal quantities on sandy land. If the soil is more clay, use less plaster; and if the soil contains more lime, of course less would be needed in the compound. Apply it after the corn is up — either before or after hoeing. Throw about a table-spoonful on each hill. PLOUGHER.

WE thank the writer of the above, for his valuable hints to his brother farmers. Buckwheat is worth a little more than he supposes; but it is considerably less valuable than clover, to plow in as a fertilizer.

A SINGULAR FREAK OF NATURE.

IN the winter of 1839, I saw, in the hands of a freind at Waterloo, a number of grains of what he called "Egyptian corn." It was to me a new variety, and I begged of him several grains of it for the purpose of ascertaining whether it could be successfully cultivated in our country. I had five grains, on a piece of the original cob: each grain being separately enveloped in a husk about an inch long, having the appearance of a very small ear growing out of the cob. I gave three of the grains to two of my friends, to experiment with; but I understand that they were lost. The remaining two grains I planted with particular care, about six inches apart, as early as the season would admit, in a well cultivated bed, on the south side of my wood-house. The grains grew well, and I attentively watched their growth during the summer and fall. It soon became evident that the corn was a larger and later variety than that usually raised in this climate. The stalks resembled those of the corn raised in the south part of the State of Ohio, being large, and ten or more feet in height. The ears did not set until about the last of August, and the silk did not appear until about the middle of September. One stalk produced two ears, the other (and larger one) produced but one ear. After the ears commenced growing they grew rapidly, and their growth seemed to be more and more accelerated as the warm season advanced towards its termination. After the weather became so cold as to entirely stop its growth, (about the 23d of October,) I pulled the corn, and examined it. The larger stalk, bearing one ear, produced "after its kind," with husks for every grain, although some of the grains were not fully formed within them. The two ears borne by the smallest stalk being the most forward, or earliest, were fit for "roasting ears;" but to my astonishment, neither of them had the least appearance of husks enveloping the grains, as was the case with the original grain which I planted! Here was a "poser." And the grains, too, instead of growing some five-eighths of an inch in length, as was the seed corn, were short, and nearly globular. They were white, and appeared to be all of the same kind —not the least intermixture could be detected. Indeed, intermixture by the pollen would have been about impossible, inasmuch as all the tassels of the corn in the neighborhood had been dead and dried up a month or more before this variety showed its silk. There was no corn within six rods of the latter, and none, but that which is called "sweet corn," in my garden.

To test the fact in regard to intermixture more

perfectly, I roasted and ate the corn of one of the ears. It had not the least flavor of the sweet corn. If there had been impregration by the pollen, (which I verily believe to have been impossible,) I cannot conceive how it could possibly have been so perfect and complete, as totally to change every grain of both ears on the smaller stock; and that, too, to a variety which was not raised in the neighborhood, if at all in the country. And what renders the case more extraordinary, if impregration was the cause of the change, was, that the one ear of the larger stalk had a regular full sized husk for every grain, formed or unformed. It may, perhaps, be supposed that by some accident another grain had got there, and grew up, the one which I planted having failed to grow, &c. But I put a stake by the side of each grain when I planted them; they each grew up by the side of their respective stakes; the stalks appeared alike, excepting that one was somewhat larger than the other; no other corn grew up within six rods of the two stalks upon which I experimented; and the whole affair was carefully conducted for the express purpose of trying an experiment. I am perfectly satisfied that no such, nor any other accident happened, by which I was deceived in regard to this matter. I am also satisfied that the grains which I planted, grew; and that one of them, without impregration, by the pollen of any other variety, produced metamorphosed (transmuted?) corn, every grain being entirely different from the seed, and different from any corn grown in the neighborhood. How nature managed the matter, I can not understand. J. H. H.

HOW TO KILL ELDERS, AND IMPROVE THE FARM.

Messrs. Editors:—In looking over the Genesee Farmer of 7th month last, I saw a request that some of its many readers would furnish a plan by which elders might be killed. These bushes are a pest to the farmer; and in thinking about it, I have hit on a plan that will destroy them, and make a second rate farm in a few years yield twice the quantity of produce it does at present, which will be something.

Well, the first thing to do, is to make a reservoir where the wash runs out of the barn-yard. Make it as near the yard as possible, and as large or larger than the yard. "Well!" says one, "what has this to do with killing elders?" "O!" says another, "I see what he is at—he is going to fill this pond with water and then throw a pinch of Homeopathic medicine in it, and sprinkle it on the elders, and kill them with doctor-stuff." Well, now, I am going to do no such thing; but we will put something in it better than doctor-stuff. I will not say what that is just now, but I will by and by, when it comes in course. The next thing to do, where there are elders growing along a fence, (for they mostly grow there,) is to cut them close to the ground; then take away the fence, trunnels and all, and put it up clear of the old bed; then throw the tops over to one side, and take a good plow with a sharp share and cutter, and turn up the roots; then harrow it four or five times with a heavy harrow having long sharp teeth. This will bring most of the roots to the surface. Let them lay in the sun one week; then heap the elder tops on the bed and set fire to them. When they are fairly ignited, throw on the roots. This will burn them up root and branch; and instead of having rank, green elder, we will have a fertilizer in the form of ashes. Repeat this process once a week for four weeks, and by that time the bed will be in a nice state for the shovel.

Now for the Reservoir. Take a cart and haul it full from this bed, then level down with a plow, leaving the clear-up furrow in the middle. This will leave a convenient ditch to take the wash of the next rain, after which plow it again. Turn the ridge this time in the middle, and gather-in. This will throw the wash of the next rain to the sides. Plow it alternately in this way once after every heavy rain, and by seed-time it will be ready to haul out for wheat. Spread on after the last plowing, and harrow it in with the wheat.

I have found that a load of this compost will make as much wheat grow as a load of barn-yard manure of equal bulk. Now, instead of manuring one field for wheat, the farmer can manure two, and raise double the quantity he formerly did. This reservoir is the farmer's friend. Do not let it lay long idle; but after it is emptied for wheat, fill it again for corn, from the remainder of the old bed, and work it as the first. Let it lay during the winter, and the next spring, at planting time, when the corn is dropped, cover each hill with a shovel full of this compost. It will cause it to come up rank and green, and grow right up from the start, so that the worms will not like it; and in a good season, even on thin land, it will average forty bushels per acre; whereas, in planting in the old way, there will be but ten or fifteen bushels. There are twenty-five bushels of corn for every acre, to pay for the labor, besides enriching the soil for succeeding crops.—"Well," say half a dozen at once, "but this is too much trouble; I am weak handed, and my farm produces light crops; therefore I cannot afford to hire. I can't do it." Stop, my brave, hearty young farmers, don't say "can't"—that word should not be spoken here. It is true that here is a difficulty to start with; but something can be done, for you as well as for the rest. Follow out my plan, from beginning to end, and then your reservoirs will soon be full without paying one dollar, or missing the time either. Rise in the morning as soon as the first ray of light shoots up from the eastern horizon, and go at it and work until sunrise; then you can go at your other work. By following this practice regularly, you will have this work completed, and have as much time to do your other work as the man has who indulges himself in lying a-bed till sunrise. There are so many advantages that would arise from this plan, that space will not admit of even naming them all here. I will only mention one or two, viz: It will enable the farmer "to plow in hope," and learn him to "plow deep while sluggard sleep;" and by the time he gets all of his fence rows cleared out in this way, if his farm, with good culture, does not yield double the produce it did before he commenced, I will give him leave to set me down for a

Green Farmer.

Information Wanted.—I should like to have some person who is familiar with the rise and progress of Durham and Devon cattle, publish the pedigree descent in your columns, and oblige, J. H. Swetland.—*Saratoga Co., Sept.*, 1850.

Even the scanty display of blossoms in a window, or the careful training of a honeysuckle around a cottage door, is an unmistakable evidence of gentle spirits and an improved humanity within

Wheat Husbandry.

CHESS AND WHEAT.

All have perhaps heard and read enough of the vexed question, whether *wheat* will or will not produce *chess*. Men of science universally reject the idea that *wheat* turns to *chess*, as they are of a different *genus*. New *varieties* of the same species and genus are produced by the admixture of pollen.—Thus, the different varieties of corn will readily mix; but wheat will not produce oats, nor oats rye. If wheat turns to chess, it presents a solitary exception to the laws which govern the vegetable kingdom—an anomaly in the vegetable world. On the other hand, many farmers present facts, which certainly look rather *stubborn*, as facts are apt to do when they stand in the way of a favorite theory. Of course, if chess could be found growing from the same root, and on the same stalk with wheat, theory would have to surrender. Large sums of money have at various times been offered for a specimen of wheat and chess thus connected; and though we do not recollect that the reward was ever claimed, yet scores of men are to be found, who are willing to testify that they have seen wheat and chess growing together.

A few weeks since, a head of wheat and chess, (an exact copy of which is seen in the engraving,) was left at our office by a farmer of Williamson, Wayne co., who thought himself entitled to the prize. The appearance, at first sight, favored the idea; but on close examination, and on removing one grain near the dotted line, and bending down the hull, we could readily perceive the ends of the two chess stems, and by moving them the heads were moved, showing that there was not the least connection between the chess and wheat. Had not this specimenn been subjected to a close examination, our friend of Williamson, and all who happened to see it, would have been willing to have testified years hence, that they had seen wheat and chess growing from the same straw. The chess must have become entwined around the wheat while the head was forming, and been secured there by the growth of the grain and chaff. When ripe, of course the stem, being very slender, was easily broken off in reaping, or in some other way. We presume this is about a fair specimen of the many heads of wheat and chess that have been seen growing together in various parts of the country.

SMUT.

Messrs. Editors:—With your permission I will tell you what I know of the growth of smut. I commenced harvesting a good piece of wheat, and when we came to the side next the woods, my cradler called me to him. I there found a spot, about two feet square, on which there was no wheat; and for some distance around, the wheat had grown up six, ten, and twenty inches, and died without heading. Then for one or two feet more, it was all smut. A little further, about one-half was good; and a little further still, all was good wheat. To ascertain the cause I examined the spot, and where there was no wheat I found a skunk that I had killed early in the spring; that is, the bones and hair. The stench was about as strong as ever.

I have lived on a farm in this county, over half a century. When farming was first commenced here, it was in small patches in a heavy forest, and we were all troubled with smut in our wheat, till we brined and limed our seed. I once failed to prepare seed enough for a lot, and I sowed dry wheat to finish. The result was, the dry seed did not produce over three quarters as much as the prepared seed did, and was very smutty. It was all sown in one day, and on the same quality of ground.

I once saw a piece of wheat growing in a sugar orchard, and at least one-half was smut. I then thought, and still think, that the impurity of the atmosphere, caused by maple trees, produced the smut. Since our wheat-growing lands have become older, we are not troubled with smut as formerly. I consider it of great importance to change seed wheat from oak to maple lands as often as every three or four years. I believe wheat sown ten years on one farm, without brining and liming, will not produce much over one-half as much as it would if the seed had been changed two or three times, from ten to twenty miles, and also from a different soil. D. K. K.—*Port Byron, N. Y.*, 1850.

SMUT IN WHEAT, AND THE CAUSE OF IT, AND PREVENTION.

Messrs. Editors:—I have read, in the Genesee Farmer, several articles concerning smut in wheat, written by J. H. H. I suppose him to be one of what I call the "never-sweats"—that he is rich, and has nothing to do but to hunt up bugs and bottle them, and has thereby made the great discovery that a certain bug will eat smut in wheat. I have hogs that will eat corn; but they do not produce any. This great discovery is so foolish, that I am constrained to write an easy and simple remedy for smut in wheat, and will tell the cause of it. The practice I have followed over twenty years, and it has never failed. First, select your seed wheat standing in the field, that is clear of smut; let it stand till it is pretty ripe; cut it in the middle of the day, when it is perfectly dry; shock it up and let it stand till it is thoroughly cured; then draw it into the barn and put it on a scaffold over the floor, or where it can not

ossibly heat; thresh it when you please, clean it ell, and screen out all the little kernels—save none ut the best: and I will warrant you will have no mut. You may sow early or late, wet or dry, on ny land you please, and J. H. H.'s bug will starve.

Now, THE CAUSE OF SMUT. Farmers generally are n a hurry when mowing commences, and will try to et as much of the clover and lodged grass mowed s they can before harvest, and put it into the mow, nany times too damp. Then when harvest comes n, they are in a hurry to get their grain cut and rawn in, and very often draw it in rather damp, and now it right on the hay. Then it becomes heated, nd the top of the mow is heated as much, perhaps, s any part. Most likely they will then take off of he top of the mow, and thresh for seed. This wheat, r any that has been heated, will produce smut according to the amount that it has been heated. If here is any smut in the mow, you are sure to have ome smut. A certain man in my neighborhood, bout ten years ago, had a fallow of about seven cres. He saved his seed, and stacked it when pretty green, and it heated. He sowed the whole piece with the wheat that had been heated, except a small portion which he sowed with one and a half bushels hat he got of me. When the wheat was grown, hat part sown with his seed was at least one-third smut, while not a head of smut could be found on hat sown with the seed procured of me. It was all sown the same day. C. C.—*Starkey, N. Y.*, 1850.

WANTED, A LITTLE MORE EXPLANATION ABOUT "SMUT BUGS."

MESSRS. EDITORS:—I have been highly pleased and interested in perusing the various arguments adduced in regard to smut in wheat and the cause of it. The *truth* is, or ought to be, what all are searching for: and can the true cause be found, and satisfactorily explained to the world, a very important mystery (to wheat-growers, at least,) will be solved. It is a subject upon which I have bestowed much thought, and made considerable search and much inqury for the cause; but I am as yet in total darkness in regard to it, so far as my own personal views are concerned. Neither do I believe any of your correspondents who have spoken on this subject, to be on the right track. Mr. J. H. H. has considerable to say; and as I believe him to be a matter-of-fact sort of a man, and *his* argument the only one worth examining, I am sorry to disagree with it: but notwithstanding his veracity, and firm belief in his own theory, I am, from the following facts, compelled to believe it all a "hum-bug," instead of smut bug.

In 1845, my spring wheat was very smutty, and was getting worse every year. In 1846, I thought I would, for experiment, get a new kind of seed; and accordingly I obtained a bushel of the Italian, as that was said to produce well. I sowed three acres—two and a quarter acres with the old kind, after washing it with strong brine, (as that was the last prevention I had then heard of,) and three quarters of an acre with unwashed Italian. When ripe, I found, as usual, the old kind about one-tenth smut: while the Italian, though standing side by side, and the adjoining edges intermingled by dragging, was *entirely free* from it. I could find smut heads of the old kind, several feet from the line, among the Italian. I could also find heads of the latter among the old kind; but, after a long and close examination, was compelled to give up, without finding a single head of the Italian smutted. Since then, I have, in two different fields, sowed the Black Sea wheat beside another kind, on the same day, and harvested them the same day, finding the Black Sea free from smut, while the other was scarcely more than three-fourths good wheat.

One more fact, and I will leave the "ground." A friend of mine, three or four years ago, prepared a piece of eight acres for winter wheat. He sowed and dragged in four acres. It then commenced raining, which prevented sowing the other four acres until two weeks later, when it was also sowed with the same kind of wheat, threshed and cleaned at the same time. When harvested, the part of the field first sowed was found to be very clean, nice wheat; while the last was shrunken and very smutty.

Now, if smut is caused by a bug, I should like to have Mr. J. H. H. explain why they were not, in the first cases, as likely to crawl up the stalks of the Italian or the Black Sea, as of the other; and in the last case, I would respectfully ask what possessed all the "bugs" to leave that part of the field first sowed, and attack the other half so voraciously?

As I know not the cause of smut, (as I stated before,) I know of no preventive that is sure in all cases. All I can say, therefore, is that the most successful course with me, is to sow seed that is as free from smut as possible, if not entirely, and change the seed as often as every third year; that is, change with some of your neighbors or friends, for some that grew on a different soil from that you intend to crop. D. A. C.—*Dryden Hill, N. Y., Sept.*, 1850.

TO PREVENT SMUT.

MESSRS. EDITORS:—I will give you my experience in preventing smut. About twelve years ago, on my farm in Brighton, I raised a field of wheat of about five acres, which was so smutty that I thought it would not pay for threshing; so I fed it out. But, as a matter of experiment, I threshed enough to sow the same field again. I soaked it all night in water strong with salt, and stirred it up and skimmed off all the smut and shrunk wheat that rose to the top. In the morning I rolled it in fresh slaked lime, and sowed it on the same field where it had grown; and I did not discover a head of smut in the field. I was much troubled with smut before this, having to wash most of my wheat before grinding; but since I have pursued this course, I scarcely ever see a head of smut in my fields. My neighbor, MATHEW DRYER, was troubled in the same way—pursued the same course for two or three years—and got rid of the smut. These are facts, and important facts for the farmer. The question whether smut is caused by a "*bug*," or by some other cause, although a very interesting subject of inquiry to the curious, is of very little practical consequence as long as we know an effectual remedy, easily applied, and within the reach of all. I should of course prefer to sow clean wheat, if I could procure it readily; but I should sow smutty wheat that had been limed and brined in the way I have mentioned, with perfect confidence that the vitality of the smut had been destroyed, and that its effects would not be seen in the next crop. This confidence has been gained by my own experience, and my observation of its success among my neighbors. I had tried various remedies previous to this. HIRAM ROBBINS.—*Brighton, N. Y.*, 1850.

Answers to Inquiries.

TO RAISE WATER BY THE SYPHON.

Eds. Gen. Farmer:—I have on my farm a well twenty-seven feet deep, supplied by a large fountain of water, from which I wish to take water in a lead pipe syphon to a point about three feet below the bottom of the well, where I wish a small stream to run; to do which, I shall have to raise the water in the syphon about twenty feet above the surface of the water in the well. Can you tell me whether it will continue to run as long as the syphon is in order and the supply of water good, or will the syphon after a time fill with gas and stop running? If so, by what means can it be best prevented, and what size and how heavy pipe will it require? Joseph Briggs.—*Willet, N. Y., Sept.*, 1850.

The quantity of water that may be drawn from a well in a continuous stream, as whiskey is sometimes drawn from a barrel through the bung, depends entirely on the size of the springs or streams flowing into it. Only a small lead pipe should be employed, unless you are certain that the fountain is abundant. If this is the case, little apprehension need be felt that gas will interfere with the flow of water after it once begins. Fill the pipe with water before it is put in, having one end in the water of the well and the other lower, for delivering the water where needed. If from any cause the running should cease, an air pump would start it again, or the pipe must be filled with water.

BEST MODE OF FEEDING BRAN.

Messrs. Editors:—There are many persons, and some of them your patrons, who have been looking for an article in the Genesee Farmer, on the best plan (or one that you would recommend,) for feeding wheat or rye bran—whether it should be given to hogs, horses, cattle, &c., dry, or wet with water just before being fed, or soured, &c. We hope to hear from you in the September number of your paper. Thomas F. Watts.—*Russellville, Ill., Aug.*, 1850.

We think it better to wet bran before feeding, than to give it to hogs, horses, or cattle, dry. The addition of a little salt (as much as would suffice for bran bread,) is an improvement. The souring of bread, milk, meal, or bran, may possibly increase the nutritive properties of these articles of food; but we never saw any satisfactory evidence of the fact. The difference, however, between ten pounds of sweet bran, meal, or milk, and same sour, can not be great in the readiness with which the aliment is digested. Habit has much to do in this matter—some preferring sour, and others sweet food.

TO DESTROY THE WIRE-WORM.

Messrs. Editors:—I have been a reader of your paper for a few months past, and have observed that inqures are frequently made on various subjects, and answers solicited from you or some of your numerous readers; consequently I thought it would not be improper to solicit information on a point on which I have as yet seen nothing. It is, whether there is any practical way of destroying wire-worms, which for two years past have very much troubled, and in some cases entirely destroyed, our crops. Last season their ravages were wholly confined to low, wet, black loam soils; but this season they are much more numerous, and many of our dry hill lands have been filled with them, to the entire destruction of all vegetation in some cases. If you can give us any practical method of destroying them, you will confer a great favor; not only on me, but many others in Chenango county. J. S. B.—*Luckleau, N. Y., July*, 1850.

We respectfully ask for information on the above interesting subject. Can the worm be killed by freezing and late fall plowing? Some of our readers are well satisfied with the effects of salt.

LAME HOGS.

Messrs. Editors:—Can you or any of your correspondents give me, through your Farmer, a remedy for lame hogs? Several times this summer my hogs have been so lame that they could scarcely get up or walk. It is mostly in their hind parts, and apparently much like rheumatism. They have nothing to eat but sour milk and grass, and of that a plenty. On washing days, however, there is a pail or two of soap suds thrown into the swill barrel, and now they begin to get a few fallen apples.

I am not alone in this difficulty, and a remedy would much oblige my father, several neighbors, and your humble patron. J. Dunham.—*Etna, N. Y., Aug.*, 1850.

At the south and southwest the affection above briefly described is not very uncommon. It is generally attributed to inflammation in the kidneys, which occasionally are found to contain worms, on a post mortem dissection. Examinations of this kind have been too few to enable one to speak with confidence on the subject. Probably, different causes conspire to produce the lumbar weakness and affection of the nerves that extend to the hind legs, and induced inability to walk, if not to stand on the feet. The disease is most prevalent on low, rich bottoms.

Wood ashes, salt, and pounded roll sulphur, using only a little of the latter, are the most popular and successful remedies. By placing salt and ashes in troughs to which hogs have access, they will eat enough to keep their blood in good order. To this compound many large hog-raisers add sulphur, and regard it as a decided improvement. Sulphur alone, given in the salt eaten by cattle, is found by experience to free them of lice and ticks—the latter being very troublesome in Georgia in the summer season. Swine are subject to liver complaints, and need a plenty of salt, either in their feed or as cattle and sheep are salted. They are too often neglected in this particular.

Poultry Statistics.—In the first chapter, or Introduction, of his "Poultry Book," Dr. Bennett makes the following statement: "From this table it appears that the value of poultry in the single State of New York, in 1840, was $2,373,029; which, on comparison with other tables procured by the same census, shows that this sum exceeds the value of the sheep raised in the same State, *the entire value of her neat cattle, and is nearly five times the value of horses and mules raised within her borders.*" This monstrous absurdity was hatched at the big chicken convention held in Boston something like a year ago; and after traveling in newspapers and other prints twelve months without exposure, is now bound in cloth in a very fair duodecimo volume.

The State of New York has over a million of cows, nearly as many more of young cattle and oxen, six millions and over of sheep, and horses and mules to match, and the whole are worth less than $2,373,029 invested in poultry! A "rooster" must sell for more than a horse, before what Dr. B. calls "the gallinacious order of poultry" will be worth "five times the value of the horses and mules" in the State.

Fraud in Guano.—The London Gardener's Chronicle says that three times as much Peruvian guano is sold in England, as is imported; and that the names of ten firms in London alone are known, who are engaged in preparing *loam*, and selling it for Peruvian guano. One of these firms disposes of thirty tons a week.

PREPARATION FOR WINTER—ITS IMPROVEMENT.

The *great work* for the season is now over, and the winter, the time of rest for the farmer and his fields, is fast approaching. The seed has been sown, the crops cultivated, and gathered into the storehouse for future use, or sold to replenish the farmer's purse. Few, we think, can look back upon the past season without noticing something which might be improved another year. Dull must be the intellect of the man who has passed through the summer without learning some useful lesson of importance in his profession. The season has been remarkably favorable for the perfection of vegetation, for which we ought to be grateful to him who "tempers the wind to the shorn lamb." But, we will venture the assertion that, extraordinaries excepted, the success of each has been in proportion to the amount of *intelligent* labor expended. It is not him who works the *hardest* that does the *most* work. It is not always him who expends the most labor and toil and sweat on his land, that works the most *successfully*. The horse or the ox has strength — the power to labor — far beyond man; yet how useless is it, unless directed by *man's intelligence*.

The farmer may now calculate his profits for the year; but we fear there is one matter too often forgotten in such estimates. The farm is the farmer's capital—his stock in trade. The profits over paying cost of labor, &c., is the interest on this capital. If, in making the crop of the present year, the land has been made poorer — less able to produce a good crop next year—you have been taking from your capital, and dreaming that you were only drawing the interest—you have been lessening the value of your stock in trade, and calling the proceeds the legitimate profit of your business. You have been foolishly killing the hen to get a hat full of eggs at once.

There is much to be done in the fall by every farmer, to render all comfortable through the winter. Sheds need repairing, or new ones should be built. Apples, potatoes, and garden vegetables need attention. If not already secured from frost, no time ought to be lost in protecting them from the same. Bank up the cellar, have a good supply of fire wood under cover, and see that all stables and yards are ready for use. Remember that to a considerable degree, warm shelter for domestic animals is equivalent to food. If exposed to storms and severe cold, they will need thirty per cent more forage to carry them well through till May than they will if properly housed and fed. In addition to this, their manure can be all saved and turned to a valuable account next season. By attending to the comfort of the animals over whom the Almighty has given man control, therefore, by a wise provision of Providence, he advances his own *interest*; and not only his own *interest*, but his *comfort*. Who can sit *comfortably* by the blazing fire of a freezing winter's night, and enjoy themselves, while they know that their animals are exposed to the peltings of the pittiless storm. Duty and interest go hand in hand.

Keep your dung heaps under shelter, that they may lose nothing by leaching. Make provision for watering stock conveniently, if your premises lack in that regard.

While preparing for winter, forget not to add a few choice books to your agricultural library, for the whole family to read and improve in useful knowledge.

The following remarks are from Prof. Norton:

"Although the northern farmer is precluded from plowing and sowing during the winter months, and although his time for actual field operations is thus materially shortened, his condition during the cold season is by no means tedious or unpleasant. He is able to give his undivided attention to the feeding and well-being of his stock, and *ought* to study their nature thoroughly, as well as observe carefully the effects of various kinds or preparations of food upon them. His reduced force may thresh out the grain at their leisure; all tools should be put in the best possible order for the coming campaign, also carts, wagons, and harnesses repaired, so that they will not be likely to fail at any critical juncture. It is the time, too, for making out and ballancing farm accounts, writing up records from notes of past experiments, and devising new or confirmatory ones for the coming season. These are fit occupations for the long evenings. But, more than this, he has abundant time for study and reading. It is a common complaint among practical men, that they can not understand scientific books, or what scientific men say. This is certainly their own fault, for there are few farmers who could not, by a little study and perseverance, get enough instruction to be of very great advantage to them in these respects. It is the improvement of leisure hours, by reading and reflection, that produces the clear-headed, sound-thinking men, a few of whom are to be found taking the lead in nearly all of our country villages. Their aim, hower, has hitherto been chiefly to increase their stock of historical and political knowledge, or of general information. They ought now, in addition to these, to devote attention seriously to sciene in connection with agriculture. The mechanic, the manufacturer, the engineer, who could not tell why he employed such and such machinery, or invented certain new arrangements, or point out with distinctness the results to be arrived at by certain combinations, with the reasons therefor, would be considered but poorly acquainted with his business; and yet, how many farmers are to be seen every day, who do not even know what one of their crops contains, what their land is made of, or what is the necessity of applying manure, so far as to explain its effects. Let us hope that this state of things will not long continue; that farmers as a body will rapidly improve under the spirit which now begins to prevail among them; that they will soon understand their own profession, both practically and theoretically, as do those who engage in other pursuits."

Permit me for the benefit of those who read your paper, to bring to notice through its pages a recipe for making a mixture called *rat gas*. There are some individuals in this place making the sale of recipes a matter of self interest, and I therefore propose giving it to the farmers on a cheap scale.

Recipe.—1 oz. phosphorus, 2 oz. Curcume, 1¼ lbs. lard, 3¾ lbs. wheat flour, 3½ qts. water. First put in the water and lard, let it warm so you can hold your hand in it; then put in the flour and curcume, and stir it till well mixed; then put in the phosphorus and stir it till it is done sparkling. When it is cool it is fit for use. It explodes in the stomach and causes death. It can be given on bread, with a little lard over it, or in meal. G.—*Spafford, N. Y., Oct.* 1850.

P. S. I hope T. B. Miner will tell us how to remedy moth in Bees.

S. W.'S NOTES FOR THE MONTH.

Typographical Errors.—The compositor, in my notice of Jenny Lind, last month, set up an erasure which spoiled my English. Furthermore, and for his own benefit, I advise him to read Shakspeare over again; so that when he has a bad manuscript quotation, he may correct it from memory, and not set up "fall" for "pall."

Improved System of Manuring and Feeding.—Joseph Harris, in the last Farmer, gives an article which should be read by every farmer. He has the rare good fortune to unite scientific knowledge and experiment with practical skill and experience. Mr. H. contends, without undervaluing carbonic acid or the inorganic manures, that nitrogen or its equivalent, ammonia, is required in much larger quantity than any other simple substance, to all grain-bearing soils; and that without its liberal distribution in the soil, the presence of all the other grain-bearing elements in sufficient quantity for the maximum yield, can not compensate for a deficiency of nitrogen. He sets it down as a fixed fact, that if a cereal crop is fed all the nitrogen it requires, in the shape of barn-yard manure, the inorganic part of such manure is amply sufficient for the crop; and that any deficiency there may be of carbonic acid, will be supplied by the atmosphere. Hence he urges every grain-growing farmer, by all manner of means, to keep stock enough to work up all his straw into manure; and that instead of continuing the practice of plowing in green clover, it should rather be converted into hay, and fed to stock in preference to timothy hay, which he classes among the nitrogen-consuming cereals; while, on the other hand, clover collects more nitrogen from the atmosphere than it takes from the soil. Some of our best wheat-growing farmers have long since found that the plowing in of green clover alone, without the addition of animal manures, was insufficient to keep up, from year to year, the wheat-bearing pabulum in the soil; but, strange as it may seem, the system is still persisted in with steadily increasing dimunition of crop, without any attempt on the part of many farmers, to save, increase, and apply, barn-yard manure. Mr. Harris, having been two years chemical assistant on the experimenial farm of Mr. Lawes, in England, gives tables to show the relative flesh-forming capacity of different articles of vegetable food, in which he sets down oil-cake as containing five times as much nitrogen as Indian corn. This seems almost incredible, as corn contains much oil; and oil-cake, after being subjected to hydraulic pressure, is supposed to contain very little. At any rate, it is certain that no herbiferous animal excrement is so rich in nitrogen as that of the corn-fed hog. But in relation to the flesh-forming capacity of food, no one article alone, no matter how nutricious it may be, can be economical food. Such is nature's mysterious laws of nutrition, that it has been found when roots have been supplied to the fatting animal, that a very small portion of corn or oil meal was necessary to put on the most rapid accumulation of both fat and flesh.

Seneca County Fair.—It is said that the late Fair at Ovid was more than creditable to the rural progress of our all-arable, semper-fertile, unromantic, yet truly picturesque, little county of Seneca. For the details of the exhibition, I refer to the Waterloo Observer. Suffice it to say, that more than 100 fine horses, and 130 head of cattle, were there shown; carriages and farm implements of the most recent and approved construction, and household products of great excellence and variety, were there; and as if to crown all the outward display, the spacious new court-house was decorated with wreaths, boquets, cornucopias, and ornamental plateaus, containing more than eighty varieties of flowers, the perfume of which filled the surrounding atmosphere.

> "And what a wilderness of flowers!
> It seem'd as tho' from all the bow'rs
> And fairest fields of all the year,
> The mingled spoil were scattered here.'

So much for the tasteful floral contributions of "Araby's fair daughters." Two essays were read the first evening—one by Mr. Wykoff, on the influence of rural pursuits. Besides being interesting and creditable, it was delivered with that modesty which in a young man gives evidence of progressive ability. May his example be followed by other of our farmers' sons at the coming Fairs. Let them remember that a great school-master has averred that he had never thoroughly commenced learning until he began to teach. President Delafield read an essay on "the relation of vegetation to the season." My word for it, it was not like Goldsmith's animated nature elaborated in a garret, but in nature's own laboratory. I hope to see it in print.

On the second day, after the very animated plowing match, Professor Norton addressed the assembled host in the great square, on the subject of that great staff in life's pilgrimage, "Wheat." It has been said that the matter, although practical, exceeded the appreciating powers of the auditory. Be this as it may, the address is to be printed, when every farmer who had not the quick ear and practiced perception of a newspaper reporter, can "read, mark, learn, and inwardly digest" it at his leisure: may none neglect it.

It is now evident to the most obtuse and limited observer, that the establishment of our agricultural fairs has already done much for rural progress. The spirit of emulation among farmers has increased, to the manifest social elevation of both the farmer and his calling; and the day has at length arrived when the title of farmer gives to the imagination something better than the figure of a man of mere plodding, unintellectual labor, whose animal comforts and pleasures are unrelieved by one single ray of that intellectual light which enables him to see and investigate those laws, and that *modus operandi*, by which nature gives him his corn and his cattle. 'Tis true that there are still among us many *book-hating*, impracticable farmers, some of whom not many years ago reluctantly tolerated Jethro Wood's "pot metal" plow. I well remember when the bare mention of Clinton's big ditch aroused their indignation. Now, in the era of plank roads coming up to their thresholds, they are in a state of continual litigating disquietude. But the example of such men (call them not farmers) is no longer a misfortune—they will soon be gone, and the age of better things will toll their requiem.

Free Schools.—The editors of the Genesee Farmer have decided wisely, to keep the exciting discussion of the Free School question out of its columns. That the law will be affirmed by the people, the signs of the times but too plainly indicate. If every voter was subjected to a conditional poll tax, the result might be different.—*Waterloo, Sen. Co., N. Y., Oct.*, 1850.

Rural Architecture.

COUNTRY HOUSES.

We have long been of the opinion that a book was needed on country houses—a book so cheap as to be accessible to all, and containing plans for houses—not for the benefit of the rich, who can afford to employ an architect, and spend any amount of money in their construction,—but a book combining economy with taste—one that would furnish the poor man struggling to gain a "sweet home" for himself and loved ones, plans at once cheap and tasteful; or that would give him, from the study of the models furnished, such a knowledge of rural architecture and the requirements of correct taste, as to enable him to form his own plans to suit his own circumstances. One of the present editors, before his editorial connection with the Farmer, furnished the following article for its pages:

It has been said that "true taste is a good economist." Now taste, when kept within proper bounds, may be economy; but we often see TASTE get the upper hand of REASON, and drive rampant, regardless alike of utility or economy, of means or ends. I was lead to these perhaps rather crude reflections on an examination of "Downing's Landscape Gardening," and "Cottage Residences," in which I find the above quotation. The beauty of Mr. DOWNING's works no one will doubt—the taste and genius displayed by the admired author no one will call in question; yet, how illy are they adapted to the wants of the American people—how poorly calculated to refine the tastes of the masses, or to give a touch of beauty to the thousands of buildings that are "going up" around us. Of how little service to the Farmer or Mechanic—the man of small means and refined taste, who wishes to make his home pleasant and attractive.

From these works the man of wealth may learn how to expend his thousands in building beautiful and costly mansions. They may encourage a taste for display—for princely residences and retinues. They may cause aristocratic "*establishments*" to spring up over our land. The ghost of some ancient castle, or the effigy of some lordly manor-house, with its "*lodges*" and "*liveried*" attendants, may be made to supplant the plain republican "homestead"—European indolence and luxury to encroach upon American industry and simplicity; but, I doubt whether this will improve the taste or the morals, or add much to the peace and happiness of the American people. I doubt whether it will promote that EQUALITY of which we boast, or make us more worthy the respect and imitation of the world.

In this country, thanks to our republican institutions and the smiles of a kind Providence, we have but few very rich, and few extremely poor. Here, with slight exceptions, all labor in some sphere, and all alike enjoy the necessaries and luxuries of life. And I regret, that under a plea of improving the "TASTE" of our people, Americans should be taught a love of pomp and show, and costly establishments. Taste may be purchased at too great an expense.

That the taste of our people needs improving in respect to building and beautifying their homes, and that such improvement might be made consistent with simplicity and economy, no one can doubt. But a work to aid in its accomplishment, must, as far as possible, be within the means, and meet the wants of all, so that the man with four or five hundred dollars may find assistance in enabling him to make a home at once convenient and tastefol. I long for the time when not only the mansions of the rich, but the cottages of the poor, shall have the benefit of that "true taste which is good economy."

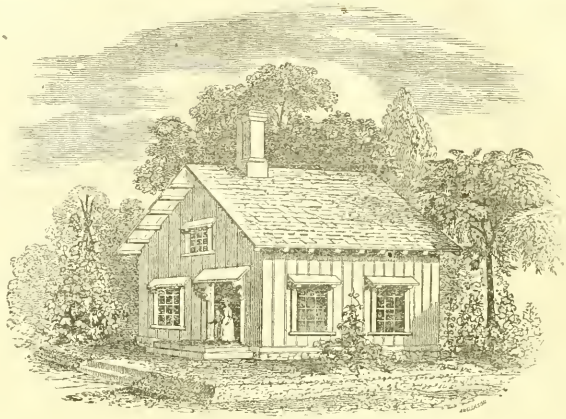
The traveller in many parts of Europe, particularly in the agricultural districts of England, is enchanted with the beauty of its rural residences. And this delight is not caused by the elegance and splendor of the palaces of the "*gentry*" occasionally met with, but by the beautiful, though humble cottages of the poor, which, with the flowering hedges so common in England, gives to it the appearance of a vast garden, with here and there a summer-house, shaded by a cluster of overspreading trees, and covered with roses and honeysuckles.

We need another work on COTTAGE RESIDENCES—a work for the million.

This was published in the September number for 1848. Mr. BARRY, on his way to Europe, called on Mr. DOWNING early the ensuing winter, and wrote us at the time, stating that Mr. D. was preparing a work on cheap cottage residences. We have since that time been anxiously awaiting the announcement of the book. A month or two since it was advertised in the eastern papers, and most of the agricultural papers acknowledged its receipt. Although the publishers did not furnish us with a copy, we took the first opportunity to procure one of the agent in this city, Mr. D. M. DEWEY. It is a large work of nearly 500 pages, beautifully printed on fine paper, and illustrated with over 300 engravings. It is divided into two parts. The *first* part, of about 250 pages, contains many useful suggestions on rural architecture, and about 20 designs for cottages and farm-houses—the lowest estimate $300, and the highest $5,000. It also contains various plans for barns, stables, yards, &c. There are over 100 engravings in this part.

The *second* part contains thirteen designs for a more expensive class of country houses, or what the author calls *villas*. The estimate for the cheapest plan is $3,500, and the highest $14,000.—And unless some of our readers may not know the difference between a *villa* and a *cottage*, we must give the author's own definitions. A cottage is "a dwelling so small that the household duties may all be performed by the family, or with the assistance of not more than one or two domestics." "A *villa* is a country house of larger accommodation, requiring the care of at least three or more servants." We think after this the all-important distinction will be perfectly understood, and settled beyond the reach of cavil; so if the daughters residing in the *villa*, with a due regard to their own health, and a desire to understand thoroughly the mysteries of housekeeping, undertake to do the work, and dispense with one or two of the servants, the house must no longer be called a *villa*, but a *cottage*. This part also contains various suggestions, enforced by illustrations, for decorating and furnishing the interior of houses to correspond with the style of the exterior. Also, plans for ventilating and warming.

The price of the book is $4: and this is so high that many, we fear, will be deterred from purchasing it, who might read it with great benefit. The publishers, however, Messrs. APPLETON & Co., of New York, in a note, inform us that they intend to publish the *first part* separate, which will reduce the price about one-half, we suppose. And this is the part most needed, and most useful. We hope the publishers will get up a fair readable edition which they can afford to sell for about $1.50, and then we have no doubt thousands of them will find their way into the hands of farmers and mechanics, who would never purchase the more expensive work. We would at all events urge those who have the least idea of building, to procure it; and we can assure them that it will in all probability save them more than ten-fold its cost. No one who passes through this section of country, can fail to witness the improvements of the last few years in the style of buildings. For this we are indebted in a very great degree to Mr. DOWNING. The publishers have kindly furnished us with several designs of cottages, one of which, with the author's description, will be found on the next page. We shall make further extracts from the book, in future numbers.



A DESIGN FOR A SMALL COTTAGE.

This simple design is given to show how a very small cottage, built of wood, may be made to look well at very trifling cost. In form, it is a mere parallelogram, and while it is devoid of very strongly-marked architectural character, it combines something of home-like or domestic expression.

The picturesque character is partly owing to the bold shadows thrown by the projecting roof, and partly to rafter brackets and window hoods.

Let any one imagine this little cottage, with its roof cut off close to the eves, with the rafter brackets that support the projecting eves omitted, with the windows and door mere bare frames, and he has an example of how this same cottage would look as we commonly see it built; that is to say, without the the picturesqueness of wood clearly expressed by using it *boldly* (not neatly and carefully;) by a sense of something beyond mere utility, evinced in the pains taken to extend the roof more than is absolutely needful; and by raising the character of the windows and doors by placing hoods over their tops.

GROUND PLAN.

Accommodation.—The single apartment called the *living-room*, twelve by eighteen feet, is the common apartment, the kitchen, sitting-room, and parlor of this family; for it is intended for a family which "takes care of itself."

Opening the front door of this cottage, we see an entry six feet wide, which contains the stairs to the second floor. Underneath this stairs, another flight descends to the cellar.

On the left of the entry is a small bed-room twelve feet square. If this bedroom is used constantly, it would be better to have it communicate with the living-room by the door on the left of the chimney flue, which is now the closet door; and the arrangement, supposing this the bed-room in constant use, will give greater convenience and greater warmth in winter, since one fire will keep both rooms warm. If, on the contrary, it is only to be used occasionally, it would be better not to make it communicate. Indeed, with a little nicety of construction, there is space enough to retain a small closet for the living-room, and still have these two rooms connected.

The living-room is twelve by eighteen feet, a convenient size for daily use. It is lighted by a window on each side, and the chimney being nearly in the center of the house, no heat will be lost in winter. Near one corner of the opposite side of this room is a door opening into a small pantry which is lighted by a window, and at the opposite corner is another door opening into a narrow porch. We have cut off the passage, to form this small porch, in order to protect the back door, which opens into the main apartment of the family, from sudden draughts and cold blasts, a point most important in a northern climate, but too often neglected, to the serious discomfort of the inmates of small cottages. From this back porch another door will be seen opening into a small wood-house, so that fuel may be had without going into the open air. This wood-house is represented of small size, but it may be extended in depth several feet, if more room is wanted.

The second floor of this cottage contains two good sleeping rooms and two large closets. There are no fire places, but openings are left for stove-pipes in the flues, so that one or both rooms can be warmed.

There is a cellar under this cottage, and the outer cellar door should be provided just beneath the pantry window, if no more convenient position is found for it.

Cottages of this size usually have the stairs placed in the living-room, while the front door opens directly into one of the apartments. We think, in this respect, our plan has much greater comfort and convenience to recommend it.

CONSTRUCTION. — This cottage is to be built of wood, and the weather-boarding is to be put on in the *vertical manner*, with battens nailed over the joints.

In many parts of the country, where lumber planed by machinery is not easily obtained, we would use inch boards rough, or without planing, and put them on with square edges (not matched.) The batten completely covers the joint. This will cheapen the cottage considerably, if planing is to be done by hand; and for all outbuildings and cheap cottages, rough boarding, either painted and sanded, or washed over by the cottager himself with a cheap wash,* produces an effect even more satisfactory to the eye, because more rustic and picturesque than planed boards.

But steam-planed boards and plank are now offered so cheaply (that is to say, at only three or four dollars per thousand feet additional cost, being at the same time matched or tongued and grooved,) that they are now almost universally used for covering houses with verticle boarding.

Planed-and-matched flooring boards, one inch thick, and of good quality, can be had here for about seventeen dollars per thousand feet, or at Rochester or Bangor for fourteen dollars. The same boards *rough*, are worth on the Hudson fourteen dollars, and at Rochester eleven dollars; and as this cottage would require about fourteen hundred feet of weather-boarding, the economy in either of these localities by using rough boards, would be only about five dollars in the cost of the whole cottage; so that, under these circumstances, we should prefer the planed boards, because there is some additional warmth in the closer joints made by having the edges matched.

To make the cottage comfortable for the north, it should be *filled-in* with soft bricks, placed on edge, so as to allow the inside wall to be plastered on the bricks, as described in page 53. In the milder parts of the Union this will not be necessary, and, if omitted, the cost of the cottage will be lessened about twenty-five dollars — counting the price of soft bricks at three dollars per thousand.

The hood over the front door, as shown in the engraving, is a foot wide, and is supported by brackets more ornamental than those under the windows, to denote the greater importance of the principal entrance.

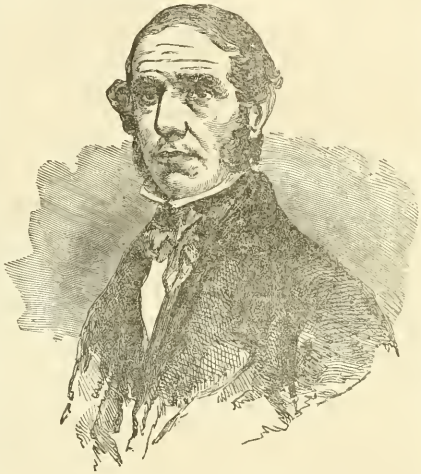
The roof of this cottage projects two feet, and, like all cheap cottages in this country, is covered with shingles. On the sides, the rafters are continued out to support the eves, and on the gables short pieces of joist are fitted in to support the sheathing of the roof, and to give unity of effect.

ESTIMATE.—On the Hudson, this cottage, with a cellar under the whole building, and filled-in with bricks on edge, will cost $400. An estimate from an experienced builder at Rochester places the cost there at $330.

* CHEAP WASH FOR COTTAGES OF WOOD. — Take a clean barrel that will hold water. Put in it half a bushel of fresh quick-lime, and slake it by pouring over it boiling water sufficient to cover it 4 or 5 inches deep, and stirring it till slaked. When quite slaked, dissolve in water and add 2 lbs. of sulphate of zinc (white vitriol,) which in a few weeks will cause the white-wash to harden on the wood work. Add sufficient water to bring it to the consistence of thick white-wash. To make the above wash a pleasing cream color, add 4 lbs. yellow ochre. For a fawn color, take 4 lbs umber, 1 lb. Indian red, and ½ lb. lampblack. (Lampblack, when mixed with water colors, should first be thoroughly dissolved in alcohol.) To make the wash grey or stone color, add 1 lb raw umber and 2 lbs. lampblack. The color may be put on with a white-wash brush

PROF. JOHNSTON'S LECTURES.

WE have received from C. M. SAXTON, of New York, Publisher of Agricultural Books, a copy of Prof. Johnston's Lectures, delivered before the N. Y. State Agricultural Society, and the members of the Legislature. They are well printed and nicely bound, making a book of about 220 pages, which sells for seventy-five cents, bound in cloth, and fifty cents in paper. We are indebted to the publisher for the accompanying portrait.



James F. W. Johnston

The following facts were furnished by B. P. JOHNSON, Corresponding Secretary of the New York State Agricultural Society:

"Prof. JOHNSTON is a native, I understand, of Kilmarnock, in the east of Scotland, and was educated, it is believed, at the University of Glasgow. He pursued the study of chemistry with Berzelius, a distinguished Swedish chemist, and travelled very extensively, at an early period of his life, in the northern regions of Europe — in Sweden, Norway, Finland, and Russia — traversing the whole breadth of European Russia to the Wolga. Subsequently, he made himself familiar with the agriculture of other portions of Europe, by personal examination. At the foundation of Durham University, in England, he was appointed one of its teachers, and is now reader in chemistry and mineralogy in that distinguished institution. He was appointed Professor of the Agricultural Chemical Association, of the Highland and Agricultural Society of Scotland, in November, 1843, for five years, and during that period, his labors were productive of great good to the agricultural interests of Scotland.

"Professor JOHNSTON published his lectures on Agricultural Chemistry and Geology, in 1841, and

an enlarged edition was published in 1847. In this country this work has passed through more than twenty editions, and it has also been republished on the continent of Europe, in French and German, and has secured the confidence of the farmers of this country more than any work published, so far as I am informed. He has published 'Contributions to Scientific Agriculture,' being a summary account of the proceedings and operations of the Agricultural Chemistry Association of Scotland, during his connection with it. This is a very valuable work, and deserving of extensive circulation in this country.

"Professor JOHNSTON prepared, for schools, a Catechism on Chemistry and Geology, which has been very extensively introduced into the primary schools in England, Scotland, and Ireland, and has passed through twenty-two editions there. It has been republished in France, and, it is believed, in several other countries of Europe. An edition has been published in this country, with an introduction by Prof. JOHN P. NORTON, of Yale College, who pursued his studies a portion of his time with Prof. JOHNSTON, while engaged in the Agricultural Chemical Association of Scotland. This is a work of great merit, and has been productive of the most favorable results wherever introduced.

"Professor JOHNSTON was invited by the New York State Agricultural Society, in 1848, to visit this country, and deliver a course of lectures before the Society, and such other associations as he might be enabled to address. His connection with the Chemical Association not being concluded, the invitation was then declined. In 1849 the invitation was renewed, and he appeared before an American audience, for the first time, at the Annual Fair of the Society, at Syracuse, in September. His address upon that occasion was upon the agriculture of Europe, and was listened to with great interest by an immense auditory. In January, 1850, he delivered the course of lectures which are now presented, in separate form, before the Society and members of the Legislature. He subsequently delivered a course of lectures before the Lowell Institute, Boston; also before the Smithsonian Institute, at Washington, and two lectures before the American Institute of New York. He made an agricultural examination and survey of the Province of New Brunswick, which has been published by the Provincial Legislature, and which is very highly commended by gentlemen of that province.

"Professor JOHNSTON is in the meridian of life and of usefulness; and, should his life be spared, as we trust it may be for years, from his acknowledged industry, his habits of thorough investigation, his ardent desire to contribute to the advancement of science, his labors will yet, we doubt not, result in great good to the cause to which he devotes the entire energies of his vigorous intellect.

"The agriculturists of America are under great obligations to him for the course of lectures which are about to be presented to them, and we feel assured that they will prove of unspeakable advantage to the entire agricultural interest of our country.

"Professor JOHNSTON is a Fellow of the Royal Society of England, Honorary Member of the Royal Agricultural Society of England, Honorary Member of the New York State Agricultural Society, and of several of the European scientific agricultural associations."

BEES.—No. 5.

THE various styles of hives being too numerous for an extended notice on each, I will merely say, that all hives not conforming in size to such as I have previously stated to be of the proper dimensions, (containing about 1800 cubic inches in the clear,) are unsuited for the most successful bee-culture; and any shape, except such as are as much or more in breadth as in depth, are not susceptible of producing the greatest quantity of surplus, or box honey. No man can ever, in my opinion, invent or construct a hive in which bees will store up more honey than in ordinary hives, only so far as he approximates to the true natural *size* of the hive, and its proper *shape*, whereby the bees labor to the best advantage. Hives can be *simplified*, and new and important modes of *ventilation* adapted, rendering them highly valuable over common boxes: and this is all that I claim to have done in that of my own construction.

There is, however, one pretended discovery in the management of bees, that I can not suffer to pass without a notice. I refer to *Gilmore's* plan of placing the whole apiary into one domicil in common; then feeding them on some compound that only costs, as he says, about *three* cents per pound; from which the bees rapidly make the most pure honey, even to the extent of "1200 pounds of *box* honey by only *six* original stocks"! I consider this the *ne plus ultra* of humbugs, and it deserves an extended notice for the public good, and in my next I will try and do it justice.

In answer to "J. D. C.," who asks how my theory of the queen's taking ærial flights for the purpose of coition with the drones, can be reconciled with his statements, I would observe, that I think he can not be *positive*, at this late day, whether the queen referred to as being found on the ground, was with a *first* or a *second* swarm. He says, "it being a second swarm;" but how is it possible that he can now recollect a circumstance of so trivial and unimportant (at that time) a matter? It was, he says, "*some few years ago*," and my theory appears to be entirely new to him now. The query is, how does he happen to recollect that it was a *second* swarm? What cause would he have for noticing whether it was a first or a second swarm, even at the time it happened? I do not wish to discredit his statements: but it is really very singular that he should know that it was a *second* swarm at the present time. It is no easy thing to be *positive* in such things, even at the time of swarming. How many swarms issue and return to the parent stock, unknown to the apiarian.

He says further: "When my bees show signs of *disquiet* on hiving them, I catch the queen, (or queens, if more than one,) and cut one wing, and then return it to its swarm." He does not say whether his "disquiet" bees were first or after swarms, which is important in this case. My experience in bee-culture has always shown that it is the *quiet* swarms that need attention, as there is always danger where the bees refuse to labor, and where they remain inactive; but never from an active swarm. If "J. D. C." will cut the wing of a *young, virgin* queen, and find the result he speaks of, then I will admit that my theory (not mine alone,) is unsound. Let us have a fair trial next season, friend "J. D. C.," and please be very particular that you do not operate on *old* queens instead of *young* ones.

T. B. MINER,
Author of the American Bee-Keeper's Manual.

Clinton, Oneida Co., N. Y., 1850.

Horticultural Department.

EDITED BY P. BARRY.

HORTIOULTURAL EXHIBITIONS

We have to devote a large portion of our space, this month, to a notice of the numerous interesting exhibitions that have been held in various parts of the country. Those who are interested in the progress of horticulture will not regret this; for it is both profitable and interesting to know what fine things and what improvements these annual displays have brought out, and what are the particular products or varieties in which different sections of the country excel. The extent of our country, and the variety of its soils and productions, are truly wonderful. We have never so fully realized these matters as we have this season. Our visit to Cincinnati, and meeting there fellow laborers from the most distant regions, thousands of miles apart—the facts we have gathered from them, and an examination of their productions, have opened our eyes to many points that before we had either considered lightly or not considered at all. To be able to say what varieties of fruit will or will not succeed in this or that section of this extensive country, requires such a thorough knowledge of soil, climate, &c., as no individual yet possesses, and which must be gathered from actual experience. These great exhibitions that bring together people and productions from all parts, will afford the best means of acquiring this knowledge.

THE ALBANY AND RENSSELAER HORT. SOCIETY.

We are indebted to the Secretary of this Society, for a copy of the report of its annual exhibition, held on the 18th of September. This Society is one of the most efficient and successful of any in our State. Every succeeding show is an improvement on its predecessor; and this speaks well for the horticultural skill and zeal, and particularly the *public spiritedness*, of the citizens of Albany and Troy, and their respective neighborhoods. Of fruits, the display appears to have been varied and fine. Messrs. Wilson & Co., nurserymen, exhibited 53 varieties of Pears; Dr. H. Wendell, 34; and V. P. Douw, Esq., 18. Isaac Dennison, Esq., presented 22 varieties of plums. Robt. Manning, Esq., of Salem, Mass., exhibited specimens of the *Wendell* pear, a new seedling of the late Dr. Van Mons.

We extract, below, the premiums awarded for fruits and flowers, in order to show the best articles in these departments. The committees very properly in most cases give the names of the varieties to which they gave premiums.

FRUITS.

Apples.—For the best and most extensive collection, 32 varieties, E. P. Prentice, $3.

For the 2d best and most extensive collection, 21 varieties, Wilson, Thorburn & Teller, $2.

For the best one variety exhibited, Rhode Island Greening, M. V. B. Schryver, of Schodac, 1.

Pears.—For the best and most extensive collection, 53 varieties, Wilson, Thorburn & Teller, 3.

For the 2d best and 2d most extensive collection, 34 varieties, Dr. Herman Wendell, 2.

For the best six varieties—White Doyenne, Seckell, Flemish Beauty, Beurre Bosc, Louise Bonne de Jersey, and Beurre D'Aremburgh—to V. P. Douw, 2.

For the best one variety, to Wilson, Thorburn & Teller—White Doyenne—1.

[The rule required that six specimens should be shown; many others exhibited very fine specimens of this variety, but not in sufficient numbers to enable them to compete.]

Peaches.—For the best and most extensive collection, to Dr. Alden March, for 12 varieties. 3.

For 2d best and 2d most extensive collection, to Wilson, Thorburn & Teller, for 8 varieties. 2

For best 3 varieties, to E. Dorr, for President, Morris Red Rareripe, and Crawford's Late, 1.

For best one variety, to L. Menand for George IV., 1.

Plums.—For the best and most extensive collection, to Isaac Denniston, 23 varieties. 3.

For the 2d best and 2d most extensive collection, to E. Dorr, 12 varieties, 2

For the best one variety—six specimens exhibited—to Isaac Dennieton, for Reine Claude, 1.

Nectarines.—For the best one variety—six specimens to be exhibited—to V. P. Douw, for Newington, 1.

[The other premiums offered were not competed for.]

Grapes.—*Foreign*—For the best two varieties exhibited—three of each variety—to V. P. Douw, for Golden Chassellae and Miller's Burgundy.

[The other premiums offered were not competed for.]

Grapes.—*Native*—For the best collection, to E. Dorr, for 4 varieties, 3.

For the best two varieties, to Erastus Pease, for Catawbas and Isabellas. 2.

Water Melons.—For the best two varieties, to V. P. Douw, for Jeppa and Spanish, 2.

The others offered, were not considered worthy of premium.

Musk Melons.—For the best one variety, L. Menand, for Green Citrous, 1.

The other varieties offered were not deemed worthy of premiums.

HERMAN WENDELL, Chairman.

FLOWERS.

Dahlias.—For the best display, to Norman Briggs, of Schaghticoke, $3.

For the best 12 dissimilar blooms, to Norman Briggs, for Constantia, Lady Sale, Viscount Ressigneur, Admiral Stopford, McKenzie's Perfection, Miss Chaplin, Bragg's Arethusa, Caleb Cope, Rainbow, Ultimatum, Madam Zahler, and Teison D'Or, 2.

For the best six dissimilar blooms, to Norman Briggs, for Teison D'Or, Arethusa, Madam Zahler, Rainbow, Lady Sale, and Princess Radzville, 1.

For the best flower, specimen bloom, to James Wilson, for Princess Radzville, 1.

Roses.—For the best ten varieties, the premium is awarded to L. Menand, for La Reine, Souvenier de Malmaison, Bougere, Eugene Beauharnois, Aimee Vibert, Geanie des Batailles, Devoniensis, Marquis Bocella, Hermosa and Chromatella, 2.

Verbenas.—For the best 12 varieties, the premium was awarded to Norman Briggs, of Schaghticoke, for Robinson's Defiance, Eclipse, Roseum Superbum, Queen, Folkii, Beauty Supreme, Susette, Buist's New Blue, Fire Ball, Variegatta, Monk's Purple, and Virgioal, 2.

For the best six varieties, the premium is awarded to D. Thos. Vail, for Robinson's Defiance, Beauty Supreme, Folkii, Queen, Eclipse and Susette, 1.

For the best seedling, never before exhibited, the premium is awarded to N. Tillman, from Dr. Wendell's Garden. 1.

Petunias.—For the best ten varieties, the premium is awarded to N. Tillman, from Dr. Wendell's garden, for Reine de Jour, Princess Marianne, Anais Chauviere, Blanc de Neuilly, Dedoniac, Mazeppa, Fleur de Marie, Rosea Superba, Auguste, and Almerm. 2.

For the best seedling, never before exhibited, to James Wilson. 1.

Asters.—For the best display, the premium is awarded to Wm. Newcomb, of Pittstown, 2.

For the 2d best, to James Wilson, of Albany, 1.

The committee beg leave to add, that great praise is due to the several gentlemen who brought their flowers in such perfection to the exhibition, from distant places, as they added largely to the splendor of the display.

They also wish to suggest to contributors that hereafter, correct lists of all articles entered for exhibition, be handed in early to the clerks, and too, that it be minutely specified in each list, and on the several articles exhibited, what particular class of prizes they are to compete for; attention to these matters on the part of exhibitors, will materially lessen the duties of committees and enable them to give satisfaction to all.

SANFORD HOWARD, Chairman.

EXHIBITION OF THE GENESEE VALLEY HORTICULTURAL SOCIETY.

This exhibition was held in Corinthian Hall, on the 26th of September, in connection with the Horticultural, Dairy, and Domestic Manufacture departments of the Monroe County Agricultural Fair. The display of fruits, flowers, and vegetables, was very good—superior to any similar show we have seen in Rochester. The fruits were remarkably select, the specimens fine, and, with a few exceptions, correctly named. It is very gratifying to see so much attention given to this latter point. This is one of the results of our Society and its exhibitions. Mr. HAYWARD, of Brighton; Mr. LAY, of Greece; Mr. H. N. LANGWORTHY, of Irondequoit; L. B. LANGWORTHY, of Greece; JOHN DONNELAN, of Greece; and several others, presented beautiful collections of apples—Mr. DONNELAN'S, in particular, was remarkably fine. S. H. AINSWORTH, of West Bloomfield, presented a large collection of apples, pears, and plums. Messrs. BISSEL & HOOKER presented a collection of choice pears, including some rare varieties; and some four or five varieties of foreign grapes, from their vinery. The Black Hamburgs were especially good—bunches large, well colored and ripened. They attracted much attention. Mr. H. N. LANGWORTHY exhibited good specimens of Seckel, Swan's Orange, and White Doyenne pears, and fine specimens of the Melon apple. CHAS. POWIS, of Greece, presented a handsome collection of apples and pears; ELLWANGER & BARRY, select varieties of apples and pears. Of peaches, nothing worth naming was presented, and Grapes were not as fine as usual.

In the Floral department, dahlias were the most attractive articles. Of these the display was decidedly superior to any we have before seen here. It imparted whatever of brilliancy there was in the exhibition, and will no doubt be the means of drawing increased attention to this beautiful autumn flower. Messrs. C. J. RYAN & Co., of Charlotte, made an extensive and beautiful display—their varieties were good, and the specimens tastefully shown. Messrs. KING & DAWE, and S. MOULSON, of Rochester; CHAS. POWIS, of Greece; and ELLWANGER & BARRY, contributed handsome collections. A few amateurs, young ladies in particular, made some pretty contributions in the way of dahlias and other cut flowers.

The vegetables were exceedingly fine. We noticed several fine samples of Lima beans; and table beets, onions, cauliflowers, &c., grown in perfection. Mr. CROSMAN, and Mr. KEM, and Mr. MULHOLLAND of Brighton, and Mr. DONNELAN of Greece, were the principal contributors in this department, and deserve great credit for their excellent productions. We annex a list of the premiums awarded:

FRUITS.—AMATEURS' LIST.

PREMIUM LIST OF APPLES.—Robert H. Brown, Greece, for greatest number (39) of varieties, 1st premium, $3; N. Hayward, Brighton, (35 varieties) 2d do., 2; F. W. Lay, (38 varieties) 3d do., 1.—For best six varieties—Baldwin, Golden Russet, Northern Spy, Esopus Spitzenburg, Norton's Melon, Green Sweeting—H. N. Langworthy, 1st premium, 2; L. B. Langworthy, six varieties—Newtown Pippin, Fameuse, Green Sweeting, Rhode Island Greening, Baldwin, St. Lawrence—2d premium, 1.

PEACHES.—N. Hayward, Brighton, 1st premium, $2; Mr. Armitage, 2d do., 50c.

QUINCES.—J. Bunker, 1st premium, $1; N. Hayward, 2d do., 50c.

GRAPES.—Isaiah Bunker, best Isabella, $2; M. G. Warner, 2d do., 1. M. G. Warner, best Catawba, 2.

NECTARINES.—Jas. Vick, jr., all exhibited, premium, 50c.

PEARS.—H. N. Langworthy, best pears, 2. Beautiful Virgalieu and Steven's Genesee Pears were presented by J. D. Robertson.

FRUITS.—NURSERYMEN'S LIST.

APPLES.—Mr. H. Ainsworth, greatest variety, 51, 1st premium; John Donnelan, 2d do.; Chas. Powis, 3d do.

PEARS.—Bissell & Hooker, best pears, 1st premium; Mr. Ainsworth, 2d do.; Chas. Powis, 3d do.

GRAPES.—Bissell & Hooker, [grown under glass] Black Hamburgh and White Golden Chassellas, premium, 3. Greatest number, Mr. Ainsworth, 2d premium.

PLUMS.—Mr. Ainsworth, only exhibitor, 14 varieties, premium

QUINCES.—Zera Burr, 1st premium.

Ellwanger & Barry, and Messrs. Ryan & Co., presented apples and pears in abundance for exhibition, but not for competition.

The amount of premiums for the above list will be declared hereafter. P. BARRY, Chairman.

FLOWERS.

AMATEURS.—Miss Sarah M. Hayward, one very large table bouquet, $1. Miss C. W. Cheney, best display of dahlias, 5. Miss C. W. Cheney, best round hand bouquet, 1. Mrs. A. Fitch, Riga, 2 baskets of flowers, 1. James Vick, floral ornament of German Asters, 1. Priscilla P. Chappel, 2 flat bouquets, 1. Mrs. S. G. Crane, 2 best round bouquets, 2. John Rapalje exhibited 2 fine varieties of flowers, and Mrs. Alfred Fitch some very fine balsams.

NURSERYMEN.—King & Dawe, greenhouse plants—2d best display during the season, $5. Roses, best display, 3; Verbenas, do. do., Diploma; Pansies, do. do. do.; Phloxes, do. do. do.; Dahlias, best 12 varities, do. Besides the above, Messrs. K. & D. exhibited 4 very fine bouquets, and a variety of other flowers. C. J. Ryan & Co., Dahlias, best display, diploma; bouquets, 2d best, table, 2; do. do., round hand, 1; do., best flat, 2. S. Moulson exhibited a fine collection of Dahlias. Chas. Powis, Dahlias, 12 very fine varieties. Ellwanger & Barry, Dahlias, 44 of the best and newest varieties; Roses, 20 var., mostly Hybrid Perpetual. A fine collection of Pansies; do. of Verbenas; do. of Phloxes; do. of Asters; do. of German Stocks; do. of Altheas; Bouquets, 2 round hand.

Note.—Mr. Ellwanger being chairman, Messrs. E. & B. did not offer anything for competition. None of the premiums awarded to E. & B. at the last June exhibition, will be drawn from the Society. GEO. ELLWANGER, Chairman.

THE ANNUAL EXHIBITION OF THE HORTICULTURAL SOCIETY OF CINCINNATI.

The brilliancy of this exhibition took us quite by surprize. We expected something fine—we were aware that the most liberal arrangements had been made, and that there was abundant material in that city and vicinity, for a grand display; still, as we have already said, it took us completely by surprise, so admirable was it in all its parts. We felt fully compensated for our journey, with the gratification it alone afforded us. We have seen some of the best shows that Philadelphia or Boston has produced; and although this was defective in the display of pears and foreign grapes, yet, as a whole, considering the articles exhibited, the arrangement, &c., we consider Cincinnati up to, if not a little ahead of, either; and this is saying a good deal.

The Show was held in a splendid hall nearly one hundred feet long and fifty feet wide. On either side was a table, the whole length covered with fruits—not *little, shabby, half grown specimens, one of a kind*—but superb dishes of those magnificent golden and crimson fruits of the west—Fall Pippins as large as a man's head, and peaches that would almost weigh a pound. What a display of fruits! The "Queen City" and the "Mighty West" might well be proud of it. Then, in the center of the room were three tables, with a walk between each, filled with flowers, flowering plants, and floral designs. The center table was appropriated to the design and taller plants. At the end of this table, just opposite the entrance, was a decorated arch, supported by two columns, mossed and ornamented with flowers, and with nuts of the Buckeye. The words "Buckeye welcome" were tastefully wrought on the arch, with the nuts, and on the top was the American eagle. This tasteful object was the handiwork of the Misses ORANGE, and sold, we understood, for the sum of $50, at the close of the exhibition. There were many other very beautiful designs, by Mrs. WM. HEAVER and others. At the farther end of the room we noticed a villa residence in miniature, the grounds all laid out and planted with much skill and taste; and, just opposite, a very pretty design of a flower garden, laid

out and planted. The two side tables wers occupied with smaller plants, dahlias, &c. Messrs. Jackson, Heaver, Sayers, and others, exhibited pot plants, many of which were new and rare, grown in the best manner. Indeed, we think they would do credit even to a Chiswick fete. A better collection of pot plants, and better specimens, have, we are very confident, never been exhibited together before in this country.

The liberal management of the Society brought out this grand display, and it was well rewarded. We were glad to see the great hall filled — thronged — evening after evening, and every visiter go away delighted. *One thousand dollars* were received at the door, and six hundred dollars received at the sale, making $1,600 receipts. We congratulate the officers and members of this very excellent Society on the success which has crowned their efforts on this occasion. It affords them great encouragement for the future.

THE POMOLOGICAL CONGRESS AT CINCINNATI.

This meeting was held in connection with the Ohio State Fair, on the 3d and 4th of October. Its sittings were held in one of the tents on the show grounds. Dr. W. D. Brinke, of Philadelphia, presided. The meeting was pretty well attended by the fruit-growers and nurserymen of the west. Ohio, Indiana, Kentucky, Missouri, Illinois, Iowa, &c., were all represented to some extent. New York was represented by Messrs. Chas. Downing and A. Saul, of Newburgh, and a very respectable delegation from Buffalo, consisting of Col. Hodge, Lewis F. Allen, Prof. Coppock, Messrs. Eaton, McArthur, and some others. The Eastern States had not a delegate present. We regretted very much the absence of such men as Col. Wilder, Samuel Walker, C. M. Hovey, and others, who have always so ably represented New England at these meetings. A. J. Downing, Esq., the chairman of the general fruit committee, was also absent; so that, with a dozen exceptions, the meeting was composed of western men who had not previously attended the meetings of the Congress. Notwithstanding these drawbacks, the meeting was interesting, at least it was so to us. We had the pleasure of making the acquaintance of the most intelligent cultivators, and the best fruits of the west; and this was more particularly what we wanted. We had also an opportunity of learning many important facts, in regard to western and south-western soils, climate, and culture, that we were before ignorant of. The western people benefitted in the same way, no doubt. A committee on synonyms was appointed at an early stage of the proceedings, and spent a whole day in examining and comparing specimens, and correcting errors. This committee was appointed at the suggestion of the President, and the labor it performed was, we think, quite as important to the cause of pomology as anything else that was done. Col. Wilder sent a fine collection of specimens of pears, and a letter apologizing for his unavoidable absence.

The Congress was called to be held in connection with the Horticultural Society of Cincinnati, and Mr. Ernst, the President of that Society, had provided a suitable room in town for its use, but at a preliminary meeting it was decided to assemble out on the show ground, in a tent, in connection with the Agricultural Society. This step, we believe, though well meant by its advocates, had a decidedly injurious effect on the proceedings of the pomological meeting. The show grounds were three or four miles from town, and the day was consequently far advanced before people could get out there. Then there were no seats, table, or other other suitable arrangements for displaying fruit and transacting business—these matters were all to be prepared, and when prepared, were far from being convenient or suitable. Then the evenings that might have been profitably spent in a room in town, were lost. The Cincinnati Horticultural Society was holding its exibition at the same time, and most of the gentlemen of Cincinnati, who are interested in pomology, and would have been of great service in the convention, could not leave their posts in town at the exibition room, to go out four miles to the show grounds. Their services were therefore lost entirely. We shall, by and by, as we get leisure, refer in a more minute way to the proceedings of the Convention.

A FEW HINTS FOR NOVEMBER.

Trees transplanted recently should be carefully staked if likely, from size or exposure, to be blown around by the winds; and all should be carefully mulched. Common rough manure from the barn-yard, is as good as anything. Staking and mulching are the great preservatives of newly planted trees, either in summer or autumn. Trees planted last spring even, would be greatly benefitted by a mulching, and especially where they have not grown freely, and taken deep root in the ground. Soft-wooded trees, such as the Pawlonia, some Magnolias, &c., which, though perfectly hardy after one or two seasons' growth, are likely to be winter-killed, if quite exposed, should have a thin sheathing of straw for the first winter; and that, even if planted last spring. This remark applies to both deciduous and evergreen trees. Rare evergreens, even the perfectly hardy ones, should invariably have a slight protection the first winter.

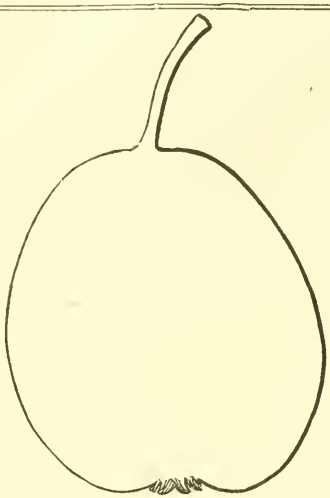
Raspberries, to ensure a certain crop next season, should be protected. The practice of the great market-growers near New-York, is to lay down the canes and cover very lightly with earth. Straw or boughs of trees will answer; but there is a standing objection to all such things, and that is, they attract vermin.

Strawberry beds, and particularly those recently planted, should be protected to prevent being drawn out, as they certainly will be if left exposed, unless the ground should be covered with snow all winter, which can not be expected, in many places.

Half hardy plants, such as monthly roses, carnations, &c., may be wintered well by planting them compactly in a bed, and enclosing them with a frame like that for a hot-bed, and covering it with boards. These can be removed at mild intervals during winter, and air be given, to prevent mold, &c.

Dahlia roots are frequently lost by being put away in a cellar, *green* and *wet*. The roots should be well dried in the sun, until there is no apparent moisture about them, and then be placed on dry shelves or be put away in sand, where they will not freeze. With this precaution, the roots are as easily wintered as potatoes.

Field Mice are often very destructive to orchard and garden trees. One of the greatest preventives, is to clear up thoroughly all brush and rubbish that may have accumulated during summer, remove all grass, weeds, &c., that the mice might burrow and work under during winter.



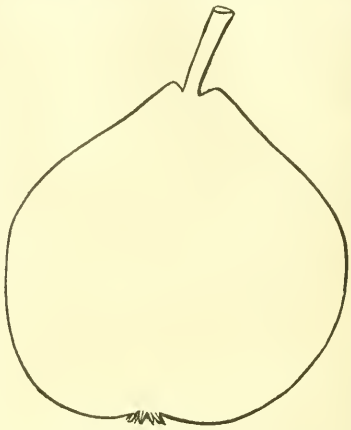
THE BLOODGOOD PEAR.

This is one of the most popular of all our summer pears, and is, on the whole, perhaps one of the best. We bring it forward at this time, because we have this season had a full crop for the first time, on a standard tree about twelve years old; and we have also had a crop from a top-grafted tree of five years growth. In both cases the fruit has been fine, buttery, melting, and rich—approaching more nearly, in texture and flavor, a fine autumn variety, than any of the summer pears we have had, excepting *Osband's Summer*. In appearance it is not attractive — dull, and somewhat russety. If it had the clear colors of the *Osband's Summer*, or the *Madeline*, it would tell greatly in its favor in the markets, where the eye must be pleased. The tree is erect and regular in its habit, of moderate vigor, with reddish brown shoots. It succeeds finely on the quince, making fine branchy trees three to five feet in height the first season from bud. It will make a fine garden pyramid.

It is unnecessary to give a minute description of it. The outline conveys a fair idea of its average size and shape.

Nicholas Longworth, of Cincinnati.—To this gentleman more than to any other, is this country indebted for whatever progress it has made in the vineyard culture of the grape; and it is pleasant to see that the people of his own city and State appreciate his labor. During the State Fair, the Board of Agriculture presented him with "a beautiful and highly finished silver goblet, for his successful culture of the grape;" and at the same time, Mr. Ernst, President of the Horticultural Society, presented him with an elaborate and elegantly wrought silver vase, engraved with the following inscription: "Presented through the Cincinnati Horticultural Society, to Nicholas Longwoath, for his eminent exertions in Horticulture, by a friend of the cause."

The horticultural doings of Cincinnati, this season, have been every way worthy of the Queen City.



THE SUMMER FRANCREAL PEAR.

We think that this pear is by no means so popular as it ought to be. Without being decidedly *first rate* in flavor, it has many properties that entitle it to a place among the most valuable of our summer varieties. The tree is remarkably hardy and vigorous. During all the blight prevalence in this region, we do not remember having seen a tree or limb affected by it. It is upright, stout, branching, and regular in habit. On either pear or quince it will make a beautiful pyramid, with very little care. Then it bears quite young, and most abundantly. A small tree, about four feet high, on our grounds, on quince stock, bore full half a bushel this year. The outline here given is the average size on pear stock; but on quince stocks, if the trees be not overloaded, they will be fully twice as large. Like all other summer pears, it requires house-ripening. Indeed, if allowed to ripen on the tree, it is worthless. We pick them when fully grown, and as they begin to change color. They then become melting, juicy, and fine, with a refreshing vinous flavor. The fruit is very distinct in shape — roundish, tapering to the stalk and eye, and of a greenish yellow color. The tree also is very distinct, so as easily to be recognized among hundreds of sorts, either with or without foliage. The leaves are cottony and gray, folded back, and have a large, light colored midrib. The wood is stout, brown colored, with gray specks, and the young shoots are quite woolly and gray.

A Fruit Ladder.—*Mr. Barry:*—I will give you a description of a ladder for gathering fruit, which I saw in Beaver county four years since, and which I have not seen in my travels in any other place. Get a straight pole of the desired length, say 25 feet for a long ladder, and 4 or 4½ inches at the butt end after the bark is off, (basswood I prefer, as combining lightness and strength;) saw it up through the center 7 or 8 feet; spread it equally to each side, to a sufficient distance; bore with a seven-eighths auger, for rungs or pins, which should be of tough, durable timber. Such a ladder will stand steady on almost any position of the ground or tree. Thos. McClelland.—*Mill Creek, Erie Co., Pa.*, 1850.

THE NORTHERN SPY APPLE.

A few days ago we were invited to ride out to Mr. Hand's, of Mendon, in this county. to see his Northern Spy apple trees before the crops were gathered, and we can safely say that we have never been more gratified with any thing in the way of bearing fruit trees. A great deal has been said about the peculiar tendency of this variety to produce a large proportion of small, inferior, or unmarketable fruit, and we only wish that those who entertain such an opinion of it, could have been with us and seen Mr. Hand's, trees. A more abundant, uniform, and *perfect* crop, we have never seen, of *any* variety. Twenty-four trees, we believe, in one row, some sixteen years old, with straight trunks sixteen feet high and perhaps a foot in diameter, with lofty symmetrical heads loaded in every part, the boughs bending almost to the ground, with large and beautiful crimson fruit, is surely a pleasing sight. Of small, unmarketable fruit we could see *none*. Mr. Hand has probably one hundred and fifty barrels, and has sold most of them at $2.50 per barrel, while other varieties sell for $1.25 to $1.50.

It has been said that the Northern Spy requires free pruning and high culture; and there is no doubt that it will be much better with such treatment, than if neglected. So will all other varieties, and especially those that mature so late in the season. We notice that Mr. Hand's trees are in excellent condition. He has pruned out the centre, so that it is quite open, thus giving the sunlight free access to all parts of the trees; but the trees stand too close — the lower branches of the adjoining trees are already meeting and coming in contact with each other, so that the fruit on them are considerably shaded, and consequently less highly colored than those on the top branches, and they will not be so finely flavored. Mr. Hand pointed out a tree that stood in an open space, and on this every specimen was highly colored. It is false economy to plant apple trees too closely. We allude to this fruit now, for the benefit of distant cultivators who remain in doubt as to its value as an orchard variety.

ACKNOWLEDGEMENTS.

We have the pleasure of acknowledging the receipt of the following articles:

— From Jesse Storrs, Esq., of Marathon, N. Y., a basket of the *Manson Sweet* apple—very beautiful and fine. We shall take an early opportunity of saying something of the merits of this fruit.

— From A. Mackie, Esq., of Clyde, N. Y., fine specimens of his *Clyde Beauty* apple, and other varieties.

— From Jas. H. Watts, Esq., specimens of the *Father* apple, with an account of its origin, &c., from S. H. Ainsworth, Esq., of West Bloomfield, N. Y. This is a most delicious fruit, but small and indifferent in appearance.— Also, *Swan's Orange* pear.

— From M. A. Norton, Esq., of Victor, N. Y., for specimens of the "Honey Sweet" apple, ripening from Sept. to Nov., and a most profuse bearer. A fair showy apple, but of inferior flavor. This is not the *Honey Sweet* of the east.

— From W. B. Pratt, of Prattsburgh, N. Y., specimens of the *Dyer*, or *Pomme Royal* apple, under the name of "Pratt's Fall apple." This we consider decidedly *the best apple of its season*. Sept.

— From Jesse Wilbur, of Avon, *White Doyenne* pears, and several varieties of apples.

— From Thomas Roe, Gates, a small seedling russet apple of fair quality; and a large, showy, redapple, also said to be a seedling — rather inferior in flavor.

EXHIBITION OF WINTER FRUITS.

It is the intention of the Genesee Valley Hort. Society to hold a grand exibition of winter fruits, in the month of December or January next, of which due notice will be given in the next number of the Farmer. We now request fruit-growers, amateurs, nurserymen, &c., to prepare specimens of apples, pears, grapes, &c., for presentation. Our autumn shows afford little opportunity for comparing the merits of winter fruits, and this show may be of great value to all engaged more or less in fruit culture. If cultivators would take the trouble to accompany their specimens with notes respecting the soil and situation of the ground on which the fruits have been grown, it would greatly enhance the value of the exhibition; for every day's experience teaches us that in certain soils some varieties will attain their highest perfection, while others will fail entirely. Facts on such points as these must be industriously collected.

The Season.—The first frost that left its blackening marks on vegetation, occurred here on the night of the 8th of October, and then only the most tender leaves were killed in low situations. On high grounds, our dahlias are yet (Oct. 14) in perfection, and roses in bloom have not been affected in any part of our grounds; but the weather has been cool enough since the middle of September, to arrest vegetation, so that we have been able to transplant trees since the 6th of October.

We are happy to note a growing disposition, in the community generally, to take advantage of our fine autumns for forwarding the improvements in their gardens and grounds. We have glorious autumns here, when it is pleasant to be out of doors; and labor then is much more abundant and cheap than in spring.

THE ANALOGY BETWEEN ANIMAL AND VEGETABLE LIFE.—No. 2.

Plants derive all their sustenance from the earth and the air, on the spot where they are placed; and for this reason are not provided, like animals, with a set of moveable levers or bones with muscles attached thereto, to carry them from place to place in search of food. And yet there are some plants, familiarly called *runners*, as the *strawberry* for instance, which seem fairly entitled to the character of locomotive or migratory. If a person were to plant the *orchis* or *devil's-bit* in his garden, and search for it in the same place six or eight years after, he would probably find it several hundred yards from the spot where he had planted it. Such plants grow from a new bulb or radicle while the old root dies away. Thus we may conclude the living principle has quitted an old, ruined, and decayed mansion, and taken possession of a new one.

The fluid that circulates in the vessels of a tree, or the *sap*, is the blood of plants, and is like that of animals, of an extremely compound character. In both instances, from this common current of vitality are secreted a variety of substances of different and often opposite powers and qualities — substances nutritive, medicinal, or destructive. The flesh of the viper is healthful, while his poison is deadly; the leaves of the Indian *cassava* are poisoneus, but its root is eaten as ordinary food. Every one is familiar with the fact that some of our domesticated animals eat with impunity vegetables that would be poisonous to others. F.

Ladies' Department.

A GOOD GARDEN ESSENTIAL TO GOOD LIVING.

In the Genesee Farmer of last year, I noticed an article in relation to the advantages of a good garden, that particularly attracted my attention. The first paragraph was as follows :

No one can be truly said to LIVE who has not a GARDEN. None but those who have enjoyed it can appreciate the satisfaction—the luxury—of sitting down to a table spread with the fruit of one's own planting and culture. A bunch of radishes—a few heads of lettuce—taken from the garden of a summer's morning for breakfast; or a mess of green peas or sweet corn, is quite a different affair from the same articles brought in large quantites from market in a *dying condition*, to be put away in the cellar for use. And a plate of strawberries or raspberries lose none of their peculiar flavor by passing directly from the *border* to the *cream* without being jolted about in baskets until they have lost all form and coneliness. And yet, how many in the smaller cities and villages of our country, possessing every facility for a good garden, either through indolence or ignorance are deprived of this source of comfort? And how many farmers, with enough land lying waste to furnish them with most of the luxuries of life, are content to plod on in the even tenor of their way, never raising their tastes above the "*pork and beans*" of their fathers.

I had long suffered the inconvenience of living without a garden, and I had often observed, when on a visit to a friend, how different — how much nicer every thing tasted, than when the same articles were served up on my own table. My husband endeavored to persuade me that the difference was only imaginary — that exercise gave me a good appetite, and that made all the difference. I could hardly believe this ; and when I saw the article mentioned above, I exclaimed, "There it is." My husband, who thought I had discovered something wonderful, said, "What is it?" I replied that I had now found out the secret why my friend Jane W. can furnish her table so much nicer than myself, with less expense, and without possessing any more skill ; and I was bound to have a garden. Previous to this, our garden, which was rather small, (yet large enough, we found, when taken care of,) had a few fruit trees, a neglected strawberry bed, a few raspberry bushes, &c. But my husband always argued that such things could be bought cheaper than they could be raised, and this was the excuse for neglecting the garden. The article referred to, appeared in the January number for 1849. As soon as the frost was out of the ground, I went to work. When my husband saw I was in earnest, and ready to do the work "single handed and alone," if necessary, he was ready to help me. So we had the ground manured, took the ashes from my leaches, and spread them. Then it was well spaded up. I then had the strawberry bed thinned out by digging about two-thirds under, leaving them in rows, and placing manure and ashes between the rows. Next, I made a new bed of strawberries, and trimmed and staked the raspberry bushes, pruned and dug around the currants, trees, rhubarb, &c. After this, I sowed peas, beans, flowers, and so on.

Now for the result — the reward for all this labor. Last summer (1849) we had a good garden ; but I kept improving, and it is of the present (or rather, past,) summer that I wish to speak, as it was not till this year that things came to perfection. In the first place, I had rhubarb large and fine, while before my rhubarb stalks, from the very same roots, were so small and worthless, that I usually preferred buying to using my own. Then lettuce, and radishes, and early peas. A little later, the Tall Sugar Peas, and other peas, as much finer than the marrowfat as the marrowfat is finer than the common field pea. Following in quick succession, came cucumbers and summer squashes and beets, and sweet corn and Lima beans. The excellence of these Lima beans I had no idea of before. I have now quite a store of vegetables to put in the cellar, for winter use, such as winter squashes, &c. All this, and a good deal more I have not mentioned, in the vegetable line.

Now, a word for the fruits. The first fruit was the early strawberries. I had *enough* of this fruit during the whole season. Next followed White and Red Antwerp raspberries, and then currants. The White Dutch were large and sweet — very different from the small sour things I have usually bought. I like the English Black very much for cooking. Gooseberries I used for cooking, from the time they were about half grown until they ripened. The larger fruits have done well, with the exception of plums. I have had plenty of fine grapes from an old Isabella vine pruned as recommended in the March number of the Farmer.

And now, having told my experience in gardening, I can say I am well paid for all my trouble. I now possess more knowledge of the proper way of cultivating fruits, &c., than I ever expected to possess ; and though I did not learn it all from the Genesee Farmer, yet, as it was your paper that first set me at work in my garden—that first induced me to observe the nature of plants, and the practice of those who cultivate them the best — that first gave me a taste for reading on the subject, that opened to my view a new creation, and showed me the wonders and mysterys and beauties of the vegetable world,—I can say that I would not be dep ived of the benefit I have gained from it, for the pri e of a hundred years' subscription.— EMILY.—*Buffa o, N. Y., Oct.*, 1850.

THE article quoted by o ir correspondent EMILY, was written by the writer of this, and since that time has appeared in nine-tenths of the papers in the country—sometimes credited to an "*English Paper*," sometimes to a paper that stole it bodily from the Farmer, and sometimes without any credit. But if one of every ten thousand who have read it, has derived as much benefit from its perusal as EMILY, we care but little for the credit. We hope our fair correspondent will continue to give us her experience in gardening, that others may be induced to participate in the pleasures which a well kept garden afford.

Nothing shows want of care as quickly and as unmistakably as the garden, or so promptly rewards intelligent labor. In other things we may perhaps conceal, or in some way atone for want of care ; but, in the garden, every plant — every shrub and tree — every fruit, leaf, and blossom — preclaim to all who beheld, in unmistakable language, the ignorance or negligence of the owner — or else unite to sound his praise in songs of grat'tude. We love the praise, as we deprecate the censure of such faithful friends.

SWEET HOME.

How dear are the blossoms that cluster round
The home that our childhood knew;
How sweet is the incense that spriageth up
From the plat where the wild-flowers grew.

Each silver crowned bell, each roseate cup,
Brings back to the heart some tone,
That memory hushed in the inmost cell
To wake by their call alone!

Editor's Table.

AGRICULTURAL SCHOOL IN WAYNE COUNTY.—We have received a Circular from a Committee of the friends of Agricultural Improvement in Wayne County, containing a proposition for the establishment of an *Agricultural School* at Clyde. By the following proposition, which we extract from the Circular, it will be seen that our old friend JOSEPH WATSON, is now, as ever, at the head of every good movement:

"MR. WATSON proposes to give a farm of about fifty acres, to any association which shall erect upon it suitable buildings and fixtures of the value of $5000, with proper arrangements for the future support of the school. The condition of this proposition is, that the Association shall pay to him or to his assigns, during the natural lives of himself and wife, the sum of $300 annually; and after the death of either, the sum of $150; and upon the death of both, the premises to become the property of the association.

The farm is situated within the bounds of the corporation of the village of Clyde. It last year yielded produce of the value of $900, and received the highest premium of the Wayne Co. Agricultural Society. The committee deem it worth $100 per acre.

It is proposed to raise the sum of $5000, in shares of $100 each; and that each share shall entitle its holder to one vote in the election of officers, and the management of the monetary affairs of the Institution; to the tuition of one pupil in perpetuity in the Institution; and to an equitable share of the profits.

It is proposed that the course of instruction shall embrace all the branches of education usually pursued in academies and higher seminaries of learning, with Practical and Scientific Agriculture, and Domestic Economy as the leading features of the Institution.

Subscriptions to be paid to a Treasurer chosen by Trustees, who are to be elected by the share-holders, and to be paid at such times and in such portions, (not exceeding 25 per cent. at one time,) as shall be required by the Trustees after perfecting the organization."

We regret very much that, for some unaccountable reason, the Circular did not come into our hands until after the October number was issued, though it is dated previous to that time, and now, we fear, from our knowledge of the public spirit of the people of Wayne County, that all the shares are taken up. The enterprise we hope is so far advanced as to secure the establishment of the School, as proposed by its friends. But, as we consider the stock better than bank or railroad stock, we hope we have friends in Wayne who will intercede for us, and secure the editors of the Genesee Farmer at lest one share. The Treasurer may draw on us for the funds when needed. If there are other shares to spare, we hope our friends STREETER or WATSON will inform us of the fact immediately.

WE invite the attention of young men to the advertisement of Prof. NORTON, of Yale College. We know of no more honorable or more useful study, in which a young man could engage, than Agricultural Chemistry.

THE SARATOGA COUNTY FAIR, which was held on the 16th and 17th of the present month, was one of deep interest to the agriculturist. The exhibition of stock of all descriptions was far more numerous than, and superior to, that of any preceeding year, the number of single horses entered being upwards of fifty. The Floral Department was in comparison with the last State Fair—a decidedly exemplary one. The Vegetable Hall was at least 20 per cent. in her advance. The funds received during the show amounted to nearly $600. The premiums were somewhat controlled by kissess and favors which tend greatly to annoy her prosperity. S. H. SWETLAND.

The greatest difficulty we apprehend is, that the regularly appointed committees, for some reason or other, fail to attend to their duties, and others have to be appointed in their places, on the spur of the moment, from those that happen to be on the ground. It cannot be expected that proper persons will in all cases be appointed in this way. At the Monroe County Fair, on the first day, we should judge two-thirds of the committees never appeared on the ground.

THE editors of the Genesee Farmer want to purchase ten or fifteen acres of land, near the city of Rochester, *for experimental purposes*. Persons having such for sale, will notify us.

THE EFFECTS OF WHITEWASH IN PRESERVING PLUMS FROM CURCULIO.—Several correspondents of the Horticulturist are recommending lime as the best means of saving Plums and Apricots from the Curculio. C. L. YOUNG, of Bricksville, Cuy. Co., Ohio, gives us his experience in the following note:

"One thing I would wish to observe in regard to the insect that destroys our plums. When the article in the Farmer appeared, recommending dusting the trees with lime when they were wet, so as to form a whitewash on the plum, I had quite a large number of the *brats* in a large glass jar, trying experiments with them. I immediately gave a few plums a good coat of whitewash, and put them in the jar with those not coated, and I could see no difference, as they stung all alike, indiscriminately. So my faith burst and left me musing on the *mortal enemy*."

AMERICAN MUSICAL REVIEW.—This monthly periodical, devoted to the advancement of the art of music, is edited by Mr. WOODBURY, and published by HUNTINGTON & SAVAGE, New York. It is replete with valuable musical compositions both sacred and secular, and should be patronized by every friend of this divine art. Price only 50 cents a year.

SPIRITS OF TURPENTINE A CURE FOR POISON.—If any person should be stung by a bee or other insect, rub some spirits of turpentine on the place, and the pain will be nearly ceased in one minute. It is said the pain arising from the bite of a copperhead snake may be arrested in a few minutes, by the continued application of this article, and from my own knowledge of its effects in other cases, I have not the least doubt of it. The effect of all poisons is to contract the blood vessels and prevent a free circulation; the natural consequence is pain and inflammation immediately. Spirits of turpentine by their penetrating and expanding qualities, soon overcome the difficulty.

We give the above, which has been going the rounds of the papers, for what it is worth. Those who have been stung can try it, and then, perhaps, they will be bitten as well as stung.

THE GOOD OLD PLOW.—A few evenings since we accepted an invitation from the HUTCHINSONS, and attended one of their Concerts. We were so well pleased with one of the songs, that we solicited a copy of the words. It contains truthful sentiment beautifully expressed, and it was enough to make any one in love with the "Good old Plow," to hear it sung by the farmer's boys of the "Old Granite State."

Let them sing who may of the battle fray,
And the deeds that have long since passed;
Let them chant in praise of the tar whose days,
Are spent on the ocean vast.
I would render to these all the worship you please,
I would honor them even now;
But I'd give far more from my heart's full store
To the cause of the Good Old Plow.

Let them laud the notes that in music float,
Through the bright and glittering halls;
While the amorous twirl of the hair's bright curl,
Round the shoulder of beauty falls;
But dearer to me is the song from the tree,
And the rich and blossoming bough,
O, these are the sweets which the rustic greets
As he follows the Good Old Plow.

Full many there be that we daily see,
With a selfish and hollow pride,
Who the plowman's lot, in his humble cot,
With a scornful look deride;
But I'd rather take, aye a hearty shake,
From his hand than to wealth I'd bow;
For the honest grasp of his hand's rough clasp,
Has stood by the Good Old Plow.

All honor be then to these gray old men,
When at last they are bowed with toil,
Their warfare then o'er, they battle no more,
For they've conquered the stubborn soil;
And the chaplet each wears, is his silver hairs,
And ne'er shall the victor's brow,
With a laurel crown to the grave go down
Like the sons of the Good Old Plow.

PREMIUMS FOR 1851!

THE editors of the Genesee Farmer have circulated in premiums, and in other ways, during the past year, over Five Hundred Dollars worth of the best Agricultural Books published in this country. These works, on *Agricultural Chemistry, Geology, Botany, Horticulture, Gardening, Rural Architecture, Farm Economy, the Management of Sheep, Horses, &c., The Treatment of Diseased Animals*, &c., we believe have exerted, and will continue to exert a very beneficial influence. Their influence is not confined to those who receive them, but is felt by their children, their friends and neighbors. They must increase the knowledge, and consequently the power, the influence, and the wealth of those for whose especial benefit we labor. The coming year it is not our intention to decrease, but rather to increase the circulation of these works.—With a view, therefore, to this object, and to extend the circulation and increase the usefulness of the Genesee Farmer, we offer the following liberal premiums to the friends of Rural Improvement who may interest themselves in obtaining us subscribers.

Premiums to Individuals.

1st. TWENTY Dollars, in Agricultural Books, to the person who shall send us the largest number of subscribers, at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May number.

2d. FIFTEEN Dollars, in Agricultural Books, to the person who shall send us the second highest list, as above.

3d. TEN Dollars, in Agricultural Books, to the person who shall send us the third highest list, as above.

In order to make the circulation of the books more general, and to reward *every one* of the friends of the Farmer for their exertions in its behalf, we will give to those not entitled to any of the above premiums,

1st. To every person who sends us SIXTEEN subscribers, at our club terms of *three shillings each*, Johnston's Lectures on Practical Agriculture, (paper cover) Cole's Disease of Animals, American Fruit Book, or any other good Agricultural work valued at Fifty cents.

2d. To every person sending us TWENTY-FOUR subscribers, as above, Norton's Elements of Scientific Agriculture, Allen's Domestic Animals, Buist's Kitchen Gardener, Johnston's Lectures on Practical Agriculture, (nicely bound) or any other Agricultural work valued at Seventy-five cents.

3d. To any person ordering THIRTY-Two copies of the Farmer, The American Farm Book, Thomas' Fruit Culturist, The American Shepherd, or any other good Agricultural work which sells at One Dollar.

4th. For FORTY, Johnston's Agricultural Chemistry, Boussingault's Rural Economy, Downing's Fruits & Fruit Trees of America, or any other book or books valued at One Dollar and Fifty cents.

For larger numbers, books given at about the same proportion.

County and Town Premiums.

To aid as much as possible in establishing County and Town Agricultural Libraries, we offer the following premiums, which we hope will aid in the more general establishment of Agricultural Libraries in the Towns and Counties.

1st. We will give an Agricultural Library worth FIFTY DOLLARS, to the County in which the greatest number of copies of the Genesee Farmer is taken by the 10th of April next. This Library to be kept as a County Agricultural Library, under the care of the Agricultural Society.

2d. To the Town in which the greatest number of copies is taken, an Agricultural Library worth THIRTY DOLLARS, to be kept as a Town Agricultural Library, under the care of the Town Agricultural Society, if one is established, if not, under the care of some person or persons appointed by the subscribers themselves.

As the above premiums will probably be taken in the State of New York, and as we wish to give our friends in other States an equal chance in the competition, we offer the same premiums to the Counties and Towns OUT OF THE STATE OF NEW YORK, thus:

1st. To the *County out of the State of New York* in which the greatest number of copies of our paper is taken, an Agricultural Library worth FIFTY DOLLARS.

2d. To the *Town out of the State of New York* in which the greatest number is taken, an Agricultural Library worth THIRTY DOLLARS.

INDIVIDUALS will receive the premiums to which they may be entitled, for their individual benefit, as a compensation for their personal exertions, and the numbers they send will be credited to the Towns and Counties where the papers are sent, so that the premiums to Individuals will not at all interfere with the Town and County premiums.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers.

☞ That all Post-Masters, Local Agents, and Subscribers, wherever the Farmer circulates, may have a fair and equal chance to obtain the Premiums, *traveling agents, post-riders, residents of Rochester, and all city booksellers* are not included in our offer, except the offer of books for a definite number. (16, 24, 32, &c.)

We shall keep a correct account of the subscribers sent by each person, county and town. In the March and April numbers of the Farmer we will publish a statement, so that all may know the prospect of success, and act accordingly. In the May number we shall announce the premiums.

Libraries and *Books* will be forwarded per order, immediately after the announcement, and persons or societies can select their own books, or leave the selection to us.

☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at the risk of the publisher.

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ILLUSTRATIONS.

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XII, FOR 1851.

DANIEL LEE & JAMES VICK, JR., EDITORS.

P. BARRY, Conductor of Horticultural Department.

IN issuing a Prospectus for the TWELFTH Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state at length the design of the work. Those who read the Farmer are the best judges of its value, and those unacquainted with it are requested to examine its pages.

We number among our Contributors, hundreds of the best Practical Farmers in the country, and our readers have through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The GENESEE FARMER is by far the cheapest Agricultural Journal published in America. Our TWENTY THOUSAND SUBSCRIBERS places us ahead of all other Agricultural Journals, and enables us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in *value* and *beauty*. That we have done this thus far, our friends and readers will bear us witness. But we intend more fully to accomplish this in the volume for 1851. The GENESEE FARMER is truly the *Practical and Scientific Farmer's Own Paper!* It will continue to be edited by the old Editors, assisted by a host of the best practical Farmers, Gardeners and Horticulturists in the country.

The new volume will commence on the 1st of January, 1851. It will be published in the best style, as heretofore—on HANDSOME and CLEAR TYPE and *superior paper*. The volume will be APPROPRIATELY ILLUSTRATED—containing numerous and expensive Engravings of *Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Flowers, Shrubs, &c.* ☞ Each number will contain TWENTY-FOUR ROYAL OCTAVO PAGES! making a large and handsome volume of about 300 pages, (with Title Page, Index, &c., suitable for binding,) at the close of the year.

An earnest advocate of improvement of both the *Mind* and the *Soil*, the FARMER seeks to advance the Rural interests of the country, and elevate the profession of Agriculture to its proper position. To accomplish this, it has labored long and faithfully, and not without some success. Its position as the *cheapest*, and, at least, one of the BEST AGRICULTURAL JOURNALS in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners and Fruit Culturists of the U. States. Grateful for the unexampled patronage already extended to the Farmer, we solicit the aid and co-operation of all its friends and readers to increase the circulation and thus augment the usefulness of the *cheapest Agricultural Magazine* ever offered to the American Public. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but introduce it to the patronage of their friends.

Fifty Cents a Year, In Advance.

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☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ POST-MASTERS, AGENTS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (postpaid or free,) at the risk of the Publisher. Address to

DANIEL LEE,

December, 18 9. *Rochester, New York*

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STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XI. ROCHESTER, N. Y.—DECEMBER, 1850. NO. 12.

POTASH AS A FERTILIZER.

From our boyhood to the present time, we have noticed that soils which abounded in *potash*, as demonstrated by their producing large forest trees rich in this mineral — the accumulation of centuries — were always distinguished for their fertility. If there are any exceptions to this rule, where the land is properly cultivated and drained, they have escaped our observation. Taking a similar view of this interesting subject, M. Burger, a German author, gives the following table of the amount of ashes in 100 parts of dry wood, and a few other products of the earth, as found by him on analysis :

100 lbs. of Elm or Maple gave	2.400	ashes—	0.390	lbs.	potash.
" Oak,	1.350	"	0.155	"	"
" Poplar,	1.230	"	0.075	"	"
" Box,	0.534	"	0.145	"	"
" Fir, (Pine,)	0.341	"	—	"	"
" Vine,	3.379	"	0.550	"	"
" Fern,	5.000	"	0.626	"	"
" Maize stalks,	8.300	"	3.600	"	"
" Wheat straw,	4.300	"	0.390	"	"
" Oat straw,	5.600	"	0.870	"	"

By copying from Schwertz, Sprengel, Liebig, Will, Boussingault, and other continental analysts, researches of this kind might be indefinitely extended; but it is thought more useful to invite attention to the facts above stated, than to multiply figures the purport of which might not be fully seen by many readers. As 100 lbs. of maple wood consume 2.4 lbs. of earthy minerals in which there are .39 lbs. of pure potash, it is obvious that for every 1000 lbs. a tree of this kind, or an elm, adds to its solid weight, 3.9 lbs. of this alkali are extracted from the soil, to say nothing of the potash in its leaves and bark, which contain more ashes than the wood. Oak forests will grow on poorer land than elm and maple ; for 1000 lbs. of its wood contain only .155 lbs. of this alkali. In 100 lbs. of fir (pine,) the ash is only a third of a pound, and the potash too small for the chemist to state the amount. In 100 lbs. of the wood of the vine, there is over a half pound of potash. The fruit of the vine is remarkable for the quantity of potash it contains. Fern is also rich in this element ; but corn-stalks and cobs are among the largest known consumers of this alkali. We are, however, inclined to suspect some typographical error in the figures that indicate the existence of over three and a half pounds of potash in one hundred of corn-stalks. They have a large amount of silica (flint) in their hard, glassy stems, which is rendered soluble in water before it enters their roots, by combining with a still larger quantity of potash. But all this alkali does not remain in the plant : for most of the soluble silicates of potash are finally left as *insoluble salts* in and near the cuticle.

Corn plants are large consumers of incombustible minerals ; and all their stalks, cobs, and seeds, should be husbanded with care as manure. Straw, hay, pea-vines, and even forest leaves, are less appreciated as fertilizers than they deserve. Leached ashes composted with rotting corn-stalks, straw, or other manure, are much improved by the action of carbonic acid and ammonia on their insoluble salts. These are decomposed and rendered available at once, as food for plants. To show the importance of husbanding potash as a fertilizer, it is sufficient to state that a good soil rarely contains more than 1 part in 1000, while poor soils often have less than 1 in 10,000. A sample taken from near the Ohio river, "distinguished for extraordinary fertility," gave Dr. Sprengel only 12 parts of potash, combined mostly with silica in an insoluble condition, in 10,000.

In the "Geological Survey of Canada—Report of Progress for the year 1849–50," we find several analyses of soils, which are full of interest. A sample from "the fine alluvial flats on the Grand river, below Brantford, which, owing to their richness, are scarcely adapted to wheat," gave the following results :

Alumina,	2,090
Oxide of iron,	2,520
Lime,	310
Magnesia,	456
Potash,	105
Soda,	060
Phosphoric acid,	330
Sulphuric acid,	008
Soluble silica,	006

It will be seen that 100,000 parts of this soil gave only 6 of soluble silica. The insoluble silica and organic matter are not estimated. In this exceedingly rich bottom, there is but a small fraction more than 1 part of potash in 1000 ; and of sulphuric acid, only 8 parts in 100,000.

As soda in common salt is much cheaper than potash, it is highly desirable to determine by careful experiments, how far the former alkali can serve as a substitute for the latter in the growth of potatoes, wheat, corn, and grass. One half of the ash obtained in burning potatoes, is potash ; and about a third of that of wheat is the same mineral. By mixing slaked lime and salt together in loam or manure,

salt is decomposed, its soda is converted into a carbonate, and the lime into a chloride. If this soda can act as a substitute of potash in the organization of cultivated plants, the fact is of vast economical importance in husbandry. To our mind, nothing is plainer than the necessity of an experimental farm, to develop new truths in practical and scientific agriculture.

THE PRODUCTION OF MUTTON.—HERDWICK SHEEP.

We have noticed with much satisfaction the increased consumption of good mutton in several cities, within the last few years. In no market is the proportion of this kind of meat larger, than in that of Washington. The flesh of mountain sheep, reared in Virginia, is superior, perhaps, to any other in the United States. It partakes largely of the flavor and liberal development of muscle (lean meat,) peculiar to venison. Like southern swine, these sheep travel a great deal, and acquire, as do deer and race horses, uncommonly fine muscles, with small weight of fat and bone. Indeed, the advantage of rearing sheep, as compared with neat cattle, for food, is very considerable in the saving of *bone*, which is not valuable in meat, but decidedly so in manure. The Duke of Bedford slaughtered four sheep, keeping an accurate account of the different parts of each animal, with a view to decide their relative proportions and value, with the following results:

	Southdown.		Leicester.		Worcester.		Wiltshire.	
	lbs.	oz	lbs	oz.	lbs.	oz.	lbs	oz.
Weight of each sheep.	155	0	152	0	161	0	175	0
Skin	17	8	20	0	23	0	23	0
Fat. (tallow.)	13	2	11	8	12	8	13	8
Head and Pluck,	10	8	9	6	12	0	14	0
Entrails	13	4	11	2	15	0	17	10
Blood	5	14	6	0	8	0	8	2
Four quarters	92	6	92	0	89	0	97	0
Waste in urine and evaporation	2	6	2	0	1	8	1	12
Bones, clean	6	5¾	5	9	6	0	9	8

It will be seen that the weight of the bones is small, when compared with that of the animal, in the four breeds of English sheep. The skin, including the wool on it, is worth far more per pound than meat; while in estimating the weight of the entrails, their contents should not be taken into the account as organized matter formed at the same expense as flesh. The fat or tallow is also valuable above the price of meat.

We have long regarded the annual importation of millions of pounds of wool into this country, as discreditable to our agricultural enterprise, when considered in connection with our unlimited facilities for producing the article in all its grades. An increased demand for mutton in our rapidly growing cities and villages, must operate favorably on the wool-growing interests.

Some of our readers may wish to know what breed of sheep now extant, approaches nearest venison in flesh, and consequently are most valuable for the butcher. They are known in Cumberland, England, as the "Herdwick" Breed. A writer in a late number of the Journal of the Royal Agricultural Society, says that the origin of this family of sheep, is involved in some obscurity; but the traditional history is as follows: "Early in the last century, a ship was stranded on the coast of Cumberland, which had on board some sheep stated to have come from Scotland. They were got on shore, driven up the country and purchased by farmers living at Wasdale Head.—They were small, active, polled, and their faces and legs were speckled. They were at once turned upon the neighboring hills: they had not been there long before they evinced a peculiar sagacity in foreseeing the approach of a snow storm, as it was invariably seen that a little before its coming, *they clustered together on the most exposed side of the mountain, where the violence of the wind usually prevented the snow from lodging.*" This instinct caused them to be regarded with a degree of interest amounting to superstition: and the race is now fast displacing the old black-faced sheep in all that part of the island.

Interesting as is the story of the Herdwicks, (some regarding them as natives of the mountains of Wales,) we have not space to trace their history. At the West Cumberland Fell Dale Association Sheep Show, for the year 1848, there were *ninety-four* competitors for prizes exclusively devoted to this description of sheep, all of whom have their flocks within a very limited extent of country. Their wool is in great request with the Keswick manufacturers, and they are wisely distributing liberal premiums for the best white-fleeced sheep of the genuine Herdwick Breed. A singular anatomical peculiarity is found in many of these sheep, viz., that of having a rib more than any other breed, *fourteen* instead of *thirteen*. The wethers are sent to market directly from their mountain pastures; feeding them on turnips, clover, and other artificial food, impairs the wild or venison quality of their flesh. When in good condition, they weigh from ten to twelve pounds per quarter.

Railroads have become so numerous in the United States, that little inconvenience exists in sending fat sheep from the best grazing districts to any of the large cities; and we cannot but believe that the importation of some of the Mountain Sheep above noticed, so valuable for their flesh and shawl-making fleeces, would be at once a profitable and highly useful operation. In the mountainous districts of Pennsylvania, Virginia, North and South Carolina, Georgia, Tennessee, Ohio and Kentucky, they would find a congenial climate and range. No hay is given to Herdwicks during the winter; they support themselves as well as wild deer, in deepest snow, by scratching down to the herbage, and if any part is blown bare, they are sure to discover it. The lambs are dropped in the cold regions where these flocks subsist, not before the 12th of May, and they are well covered with wool when dropped. To increase the size of the breed, ewes are not allowed to run with rams till two and a half or three and a half years old. They are good nurses, and differ from black-faced sheep in being less inclined to ramble about, and remarkably attached to any spot on the sides of the mountains in which the shepherd has domesticated them.

There are many millions of acres of un-enclosed grazing land, in this extended republic, that might be turned to a most useful purpose in producing both wool and mutton. The hams of Herdwicks, cured like venison, are much sought in London market. If provision dealers were to turn their attention to packing in salt and barrels choice mutton, and thereby create a market for fat sheep, as well as hogs and cattle, no reasonable doubt can well exist that the farmers of the country would meet the same with a liberal supply. That salted mutton is not inferior to pork or beef, when a good article is properly cured, thousands of our readers can bear witness. Two pounds of mutton can be made for about the cost of

one of pork; and for our eating, we much prefer the former to the latter. Sheep ought to have quite a variety in their daily food. When fed exclusiveiy on one plant, like clover or turnips, their flesh always lacks its finest flavor. English mutton-growers cultivate many kinds of grasses in the same field or sheep walk, for the benefit of their flocks.

LETTER FROM HOLLAND.

Agricultural Colonies for Paupers.—A system for giving employment to persons who are willing, but unable to obtain work, has for several years been in successful practice at Fredericksvord and Willemsvord, in Holland. A description of the practical operation of this plan will, I think, be new and interesting to your readers. These colonies were established when, after two years of great scarcity, a large proportion of the population were reduced to absolute starvation, and were dependent entirely for subsistence on the charities of their more fortunate countrymen. So prevalent did the practice of begging become, that it was found necessary to do something to relieve these unfortunate men, and a Society was formed by a few benevolent individuals, the object of which was to find employment for such persons as were disposed to work. In carrying out their purpose, they not only conferred an immediate and lasting benefit upon these unfortunate men, but effected great national advantages by stemming the spread of vice, which would have been the natural consequence of such destitution, and also increased the resources of the country by converting into available land a waste upon which not even a sprig of heath could be met with before.

Such was the origin of these colonies about eight years ago. And no one can now travel the road along which they are situated, without noticing the great change that has been effected on the face of the country by their establishment; and this change is doubly observed as we pass from the unimproved waste to the neat cottages which line the road.—From a wild, barren country we enter at once upon a little *oasis*, which bears every mark of prosperity: neat cottages betraying the *Dutchman's* taste in their clean appearance; crops as luxuriant as if nurtured by a better soil, and gardens stocked with useful vegetables and adorned with a variety of flowers.—Each house is placed by the roadside, in the middle of the tract of land belonging to it, which consists of about seven acres. These cottages contain two rooms; one of them large, which answers the purpose of kitchen, dining-room, and bed-room for some of the family; the other small, with a bed at one end, and at the other a roomy closet, anwering the purpose of a milk room or dairy. The colonists are all supplied with implements, on entering upon their plats, and also with a cow and pig. The only crops grown are rye, potatoes, and grass. All the produce of their lands are taken to the general magazine, and a regular debtor and creditor account is kept with each colonist from the time of his first entering the colony. Everything they receive on entering is set down against them, and whenever they are enabled to pay off their debts, from economy in living, they are allowed to become tenants and to rent their land as independent farmers. The wages and rations allowed them, are as follows:—Suppose a family of eight persons, husband, wife, and eight children, three of them with their father work, the other three go to school, and the wife stays at home. The sums set down as wages, &c., when reduced to our currency, amount to about the following:

Man at 25 cts. per day,	$1 50
Son at 20 cts. per day, and the other two at 60 cts. per week,	1 80
Wages earned by the whole family, per week,	$3 30
From which is deducted—	
Winkel geld, $1 25	
Bread, potatoes, and clothing for eight 1 85	3 10
	$0 20

Which is put down to their credit for future emergencies.

By *winkel geld* is meant money for buying little necessaries, such as coffee, tobacco, &c, and the allowance for each person is about 15 cts. per week. The allowance for bread, potatoes, and clothing, is about 23 cts per week to each. There are several overseers who superintend the work done in the colonies. There are also schools for the gratuitous education of the children, and workshops in which they are taught some useful trade. At Willemsvord, which is the smaller of the two colonies, there are 170 seperate cottages and tracts of land, all of which are occupied by families who were once paupers, begging their bread from door to door. This scheme was never looked upon as a matter of speculation, for as such it was never designed. But it has succeeded in the object for which it was intended, viz.: the relieving of the poor and destitute, who have only the strong arms that God has given them, and are ready to sell their labor, but can find no man to buy.

Is the establishment of such colonies impracticable in our own country? Are there not thousands of unimproved acres, that have been condemned as useless, many of which exceed in fertility the barren wastes in which the Dutch colonies are situated? Are there not hundreds of unemployed hands who crowd our poor houses, haunt the streets and lanes of our large cities, who furnish three-fourths of the inmates of our jails and prisons, and who plead *poverty* in palliation of their vices and crimes? Money is raised to relieve the destitute, and it cannot be denied that many benevolent individuals, by the injudicious bestowment of their charities, encourage idleness and foster vice. Let some generous individual, who, like Gerrett Smith, has the means and the disposition to help the honest and deserving poor, or let a society of men, less able but equally benevolent, set the example, and put in operation an establishment like that which I have described, and if it succeeds, as I think it would, the benefits resulting would be incalculable. F.—*Amsterdam, Holland, August*, 1850.

THE DUNG OF SEA BIRDS.

The following is the analysis, by Coindet, of the dung of a sea-eagle:

Uric acid,	84.65
Ammonia,	9.21
Phosphate of lime,	6.13
	99.99

The 84.6 per cent. of uric acid is equal to 36.3 of ammonia. It is remarkable that this guano contains no carbon, except the little in uric acid. Recently formed guano, at the island of Ichaboe, is found to be richer in ammonia or uric acid, than the old stock which was exhausted a few years ago.

Inquiries and Answers.

FOWLS, PIGEON-WEED, &c.

Messrs. Editors:—Since I became a subscriber to your valuable periodical, I have been very much interested, and richly repaid by the perusal of its pages. And though unaccustomed to writing for a public journal, I have been induced, since reading the article and editorial remarks on page 210, in the September number of the current volume, to give a brief statement of my experience in keeping fowls.

I live in the village, and cannot have my fowls run at large during the season for gardening, without much inconvenience to myself and annoyance to my neighbors; and consequently have to adopt the plan, respecting the expediency of which your correspondent asks for information, and am fully convinced that the advantages to be derived from keeping fowls in this way, are not overrated in your remarks.

About the middle of February, I procured seven hens and a rooster, and added three to the number of hens, about the last of April. At different periods I set five hens, which unfortunately brought off but three broods of chickens, as some of the eggs which I procured for Poland Top Knots, failed to produce. Through losses in various ways, the chickens were reduced to about twenty-six; and what I have killed at different times this fall, leaves the whole number of old and young, at this date, twenty-four. None of the young ones have yet begun to lay.

I have fed them principally with screenings from wheat, bought at the mill, at from 1s. 6d. to 2s. per bushel, together with some barley, corn, and oats; but they prefer the screenings, and will not eat oats when they can get the former. I have given them occasionally some fresh meat, of which I have made no account, as lights and refuse pieces can at any time be had when purchasing meat for family use.—They have had a constant supply of pounded oyster shells, to form shells for their eggs, and also wood ashes in tubs for them to wallow in. I have kept an accurate account of all expenses for feed, and find that I have paid out $4.14, including about two bushels of screenings now on hand. My account at this date, Oct. 18th, shows the number of eggs produced, 795, and I believe I have in a few instances omitted to set them down. The number of chickens, about twelve, furnished for the table, may be estimated at one shilling each; besides I have now fourteen young fowls in addition to the old ones. And here I would say, that after considerable effort to procure the Poland Top Knot variety, I obtained a batch of eggs from some fowls purchased in Rochester several years since; they are about the size of the common fowl, rather short legged, with large top knot; some of them black body, and others pure white. Are they the pure Polands, or (as I have been informed) a French variety? I wished to procure the top knots, not only for their beauty, but to avoid the inconvenience arising from the frequent inclination of the common kind to sit.

I have used the Poultry Feeding Hopper, described in the February number of volume 10, Genesee Farmer, the plan of which I consider worth one year's subscription.

In reference to the value of the manure, I would solicit a word of information. In feeding refuse grain on a farm, or screenings in a village, there will be considerable chess, and other foul seeds which the fowls will not consume. If you will name the best method of destroying the vitality of those seeds in the manure, before using it on the garden, you will oblige not only the writer, but others of your subscribers.

There is another subject on which I would request to be informed, by yourself or some of your experienced correspondents. A little more than a year ago I purchased a farm, and was greatly disappointed last spring to find some fields much infested with *pigeon weed*; and being desirous to subdue it, at any necessary sacrifice, I looked with interest to the Genesee Farmer, and other sources, for information, but could learn nothing satisfactory, and was about to address you, when the valuable article on that subject, appeared in the August number of the present volume. But as those fields on which this pest was most prolific, had already been run down by constant improper tillage, without any regard to a judicious rotation of crops, I had previously arranged with the present occupant to have them seeded with grass or clover, and let them rest awhile. I wish to know whether it would be best to carry out my original plan, or will the *pigeon weed* still increase in spite of the clover, and thereby render it more difficult to be got rid of when the ground is broken up again.—Any information on this subject will be thankfully received. R. W. B.—*Lockport, Oct.*, 1850.

We give the facts of our correspondent as to the profits of his fowls, so that they can be seen at a glance:

66 dozen eggs, say at 8 cts.,	$5 28
26 chickens at one shilling,	3 25
	$8 53
Cost of 11 fowls, say at 1s. 6d.,	$2 06
Paid for feed,	4 14—$6 20

It will be seen that notwithstanding the bad luck complained of, R. W. B.'s fowls have paid their first cost and $2.33 besides. This, in addition to the manure, which will be found very valuable, and also very convenient, in the garden.

The Polands can be obtained in Rochester now, as pure and as pretty as we ever saw any where, and at reasonable prices. There is some talk of the Poland producing white occasionally, but we have never had such a case among our own. We have kept about fifteen Poland hens this summer, and but two has shown any disposition to sit. These two were very old. While young, we think the Polands are more tender and more liable to disease than some other kinds, though not more so than our common fowls.

To get rid of chess and other seeds in the manure, we always throw it into a barrel of water kept standing near the hen house for the purpose. The chess, &c., will rise to the top, and can be removed. We have been trying some experiments on the effect of salt in destroying vitality of seeds in manure, and may say something hereafter.

The Pigeon Weed will not stand much of a chance to thrive if the ground is well occupied with grass and clover, and a little care used. Three years since we had a small piece sown with red-top and white clover for a lawn. The red-top, instead of being pure seed, proved to be the cleanings from a lot of Timothy, and consequently contained any quantity of foul weeds. We should judge that the greater part was pigeon weed, as the ground was literally covered with it, and scarcely anything else to be seen. As soon as it was high enough we mowed it as close as pos-

sible, and continued to do so as often as high enough to be clipped with the scythe. The consequence was that not a head was permitted to seed. The grass and clover now form a very pretty turf, and only an occasional plant of pigeon weed is to be seen.

THE WIRE-WORM.

MESSRS. EDITORS:—Having been benefitted by the agricultural experience of others, communicated through the Genesee Farmer, and feeling it a duty to reciprocate such favors, and as I have had some experience by way of losing several crops of grain and potatoes by the worms; therefore this communication in answer to an article in the November number of the Genesee Farmer, asking for information on the method of destroying wire-worms.

Four years ago last fall, I sowed an old meadow to wheat. The following spring it appeared thin and feeble, gradually disappeared, and I thought it had winter-killed. I then planted the field to corn, and the worms destroyed the entire field; some hills were destroyed before the corn had time to germinate. They also destroyed half an acre of potatoes. I tried lime and unleached ashes without any good effect, and gave up the field as lost for the season, until I was told by Mr. WILKS DURKEE, an old farmer, that buckwheat would effectually destroy them.—At the proper time I sowed the field to buckwheat, and had a first rate crop; I have not been troubled with them in that field since. I have tried other fields, with like result. I hardly dare venture a reason in regard to the cause, as some of your correspondents are keen-sighted and sharp shooters; but have stated the simple facts, as they occurred. Z. SWAN.—*Bloomfield, Mich., Nov.*, 1850.

MESSRS. EDITORS:—As there is some inquiry *how to destroy the wire-worm*, I would say that, some years since I lost one-third of my wheat crop by sowing it on a piece of meadow land. Since that time, I have plowed my meadow or pasture land, where it has been seeded any time, in the fall—the last half of November or December is the best time. I have for some years planted my corn on grass land plowed late, and I loose but very few hills by worms; and I think it decidedly the cheapest way to raise corn. In the spring, harrow it lightly with the furrow, plant level with the surface, and it will need no hilling. E. F.—*Wayne Co., N. Y.*, 1850.

ICE HOUSES.

MESSRS. EDITORS:—Will you permit me to ask the favor of you to inform me, at the soonest time you can, how to construct the bottom floor of an Ice House built above ground. They are common in your country, built above ground, I am told, and I would be very glad to learn how to construct one to answer well, especially the bottom floor, as I have built one, the floor of which seems not to be well done. Your attention to this, I will take as a favor. M. COOPER, *Sperryville, Va., Oct.*, 2850.

Mr. WYETH, of Cambridge, Mass., whose practical information on this subject is probably fuller and more complete than that of any other person in the country, says: "The bottom of the ice vault should be filled about a foot deep with small blocks of wood; these are leveled and covered with wood shavings, over which a strong plank floor should be laid to receive the ice."

HOW TO APPLY MANURE, &c.

MESSRS. EDITORS:—Having become disgusted with store-keeping, and turned farmer, I would feel greatly obliged if you would answer my few questions. I have always been in the habit of plowing in manure as deep as possible. An old farmer, a neighbor of mine, says I am wrong—that it is better to spread it on the surface—the Genesee Farmer is a humbug if it says anything to the contrary. I told him that the ammonia and other valuable properties escaped into the atmosphere. "Don't believe it," said he, "it is to the interest of all such editors to talk so, for the sake of selling their paper. Plow it in, and that will be the last of it; my neighbor plows his in beam deep, and never derives any advantage from it." Am I right in plowing it in?

Is it more advantageous to plant small potatoes than large ones? My neighbor says that he planted some small potatoes in the same field with large ones, and that the small ones nearly doubled the large ones. I believe he told me they were the same kind of potato. (It might have been through the influence of the moon; I know he is a convert to that humbug.)

I have a field that had been cropped prior to my coming, until they could get nothing from it. During the three years I have been on the place, I have used it for a pasture, as water runs through it. Would it not be better to plow it up and seed it down, in preference to the wild June grass that now occupies it? My father believes that wild grass is the best for pasture, and *the longer it is pastured the better it will become.*

A lady friend of mine wishes to know why some of her tulips have not flowered for three years.

I would suggest a plan for the removal of water-melons, and all other plants that are difficult of transplanting; I have found it to succeed very well. I take a tight sod, about the size of my hand, which I turn upside down, place five melon seeds on each piece, and put them in a hot-bed; then cover with rich earth or rotten manure. The roots will strike into the sod, and may be easily removed. One sod will be found sufficient for one hill. I have sometimes raised them so in boxes in the house. I do not know that it is an original idea, but it may be useful to some of your numerous subscribers. A YOUNG FARMER.—*Wolcot, N. Y.*, 1850.

There is a difference of opinion among farmers, as well as among men who make the science of farming their entire study, as to the best mode of applying manure. If the object in manuring is to benefit a single crop, without any reference to the improvement of the land, the better way, of course, is to put the manure as near the roots as possible, so that all its fertilizing qualities may be taken up by the crop. If the permanent improvement of the land is intended, it is of course needful to manure deep and thoroughly. Manure which contains a large proportion of ammonia, and which exhales a strong smell of alkali, will infallibly lose in value by exposure to the air. The loss is much less, and indeed very small, when the manure contains but a small portion of volatile ammoniacal salts, as is the case when gypsum has been mixed with it and spread over the surface. As a general rule, the safest way, we think, is to cover the manure with the soil.

Medium sized, uncut potatoes, we think the best for planting—two in the hill; or if in drills, singly, ten inches apart. When seed is scarce, it may be good economy to divide them.

It is a very good way to improve land suited to grass, to "lay it down to grass;" particularly if used as pasture. The manure left on the ground, and the large amount of roots which decay in the soil, increase its fertility. On the relative value of the grasses, we prefer for the present to let our correspondents speak.

The *tulips* spoken of must have deen very young bulbs when planted, or very old and worn out. We know of no contingences of soil or climate that would prevent the blossoming of the tulip.

SNAPDRAGON.

Messrs. Editors :—It is now going on two years since I first subscribed for your valuable paper, and seeing you manifest willingness to answer questions, I venture to ask a few. There are a few spots on my farm covered with a weed which is called, in this part of the country, *Snapdragon.*—Some people have it in their garden for a flower. It has a yellow blossom, and a very bad smell. I can content myself no longer to have it grow, if there is any way in which it can be killed. I have endeavored to destroy it in several ways. If you can give me any information concerning this weed, how, and at what time of the year to destroy it, you will much oblige a Faithful Reader.—*Half Moon, Saratoga Co., N. Y., Oct.*, 1850.

If any of our readers can give the desired information, we hope they will do so. The small yellow snapdragon we once introduced into our garden, but it had such a disposition to ramble and encroach upon the rights of its neighbors, that we exterminated it. We never noticed that it had a bad smell. We have never seen it in fields. The mulleins are of the snapdragon family, and perhaps it is to these our correspondent refers, though we never knew the mullein cultivated as a flower.

WILD MUSTARD.

Messrs. Editors :—Observing that you manifest a commendable willingness to answer inquiries through the medium of the Farmer, I embrace the present opportunity to solicit any information that you, or any of your numerous and able correspondents, may be so kind as to give, in relation to that noxious and troublesome weed, *Wild Mustard.* It is but a short time since its yellow blossoms were first seen waving over the fields in this vicinity, but it is already spreading with great rapidity. Is it destined to become the bane of our summer, as pigeon-weed is of our winter crops? If it is, I think it should be met with at least a vigorous resistance. Any information relative to the best mode of its destruction, will be thankfully received by a young farmer. I. W. Shepherd.—*Penn Yan, N. Y., Nov.*, 1850.

A NEW STRAW CUTTER.

Messrs. Editors :—The frequent notices in your valuable journal, connected with the interest of the Agriculturists, induces me to ask a place in your columns. Every intelligent farmer has tested and learned the value of cut feed for his cattle, and within a few years past, quite a large variety of machines, of different degrees of excellence, have been invented and constructed for the purpose of cutting straw for feed. Indeed, so great has been the variety produced, that it would seem as though no higher degree of excellence was attainable in this kind of implement; yet none of those have possessed the high requisites sought, as to be claimed or held the favorite. Some are too difficult to keep in order for use, others too laborious, and all cut with so little facility, that the time and labor expended in cutting, is quite equal to the value of the feed when cut. At least this seems to be the opinion of most farmers in reference to straw, for this is usually thrown into the yard and considered valuable only as manure. But there is one recently invented by J. C. Baker, of North Street, from its simplicity of construction, the ease and rapidity with which it cuts, and the ease with which it can be kept in order for use, (for any person who can grind a butcher knife will find no difficulty in keeping the knives sharp,) is destined, I think, to supercede all other machines of the kind. I had been aware that an attempt was being made to get up a new kind of machine, but had not expected one of so much merit, till I called on Mr. Baker, a while since, and was shown his machine. It is but an imperfect, rudely constructed model, but its working far exceeded anything extant, one man, with this machine, cutting as much straw in a given time, as two or three men with as many machines of the best construction that I have ever seen either at the County or State Fairs. The principle on which the cutting is done, is entirely new. The straw is placed in a kind of box or hopper, below which it is cut in its entire length at once against some thirty or forty knives. The straw is taken hold of by hooks inserted through a rolating rod or shaft. The hooks are of a peculiar construction, seizing hold of the straw and carrying it inward toward the center of the shaft, pressing it firmly together and whirling around dashes it against the edge of the knives. When cut, it is liberated from the grasp of the hooks in passing the knife. It would be well for all those desirous of escaping the evils experienced the last winter and spring, to give this machine a passing notice. I have called attention to this machine, believing that in doing so I shall have rendered the farmers good service. J. M. Cleavland.—*Adams, Jeff. Co., N. Y.*, 1850.

AN INTERESTING LETTER FROM LAKE CO., OHIO.

Messrs. Editors :—I send you three dollars for eight copies of the Genesee Farmer, and I will add a few thoughts. Your valuable paper has given satisfaction, so far as I am informed, to all those who have been privileged with the reading of it. I have but little to communicate that will be interesting or useful, as regards the cultivators of the soil in this vicinity. The labors are probably as well directed and performed as in any section of the western country. One fact I think is worthy of record, and that is, that mother Earth, ever kind and always unalterably just, has again the past year fully compensated all for the labor bestowed. How few seem to realize the fact, that although thus kind, she is always inflexibly *just*—"As you sow so shall ye also reap."

I deeply deplore the almost universal ignorance of the cultivators of the soil in reference to their peculiar and responsible calling. None of us for a moment think of employing any mechanic to work in wood, who is not qualified, by education and practice, to judge of the adaptedness of the different kinds of wood, to determine at once whether it is suited for the uses required. Neither do we employ a mechanic to work in the different metals, without his possessing the like requisite knowledge of them. Few are willing to employ a surgeon or physician unless he possesses an accurate knowledge of the human system, and also of the remedial properties of the medicine necessary to be prescribed. Or to engage any lawyer who has not the requisite acquaintance with the various laws enacted for the benefit of society. Few are esteemed learned who cannot so arrange the letters of the alphabet as to express the simplest truths in the simplest language, but also so to arrange them as to convey the mightiest facts and truths in such a manner as to possess both light and power. What great and momentous results have been produced by the suitable arrangement of the simple letters. Nations have been controlled and swayed, as the mind of one man. And shall the cultivators of the soil be less learned? They are the honored foundation upon which the whole magnificent structure of human society is built. They are

the Egypt of the whole world. By the right disposal of the simple elements placed in their hands, they can supply with food and every comfort, many times more inhabitants than now dwell upon the earth.—They can transform the wilderness and the desert into the luxuriant and beautiful garden, multiplying continually those products that make life a blessing, and their enjoyment by the millions equal. Or, by the misuse and abuse of their ample means, convert the rich and luxuriant earth into a waste and barren desert, bringing misery, want, wretchedness, and depopulation upon the world. Few, comparatively few, of those professing to be the tillers of the earth, know much of the constituents of the soil they try to cultivate—of its wants, capabilities or adaptation to produce the different grains and grasses, profitably, they wish to cultivate. Consequently much of their labor is unprofitably directed. The proper tillage of the earth with all its attendants, is the most useful, important and ennobling that occupies the mind and energies of man. Who that has a heart to appreciate the varied beauties of the ever teeming earth, rich in all that renders life a blessing, but that will prefer to wisely and judiciously multiply the needed products of earth. Brother farmers, if we have chosen this healthful and useful employment, let us strive to obtain the requisite knowledge that shall enable us fully to understand our whole duties. Let us call in the aid of the arts and sciences and tax every faculty until we can understand the nature and properties of our various soils, and daily pursue our labors with as much intelligence and skill as any mechanics or professional men. Then shall we make our calling honorable and useful. He who hath made the earth with all its alternations of light and darkness, rain and dews, cold and heat, beauty and apparent sterility, has mercifully promised to crown our labors with blessings that no other calling or profession can claim. He says to us: "He that tilleth his land shall be satisfied with bread." I witness with pleasure the improvements that have been made and that are being made in the various useful implements we need to perform our labors. No class of men have better opportunities to improve their minds and hearts than the farmer. Let us improve them. ORANGE H. WAIT—*Willoughby, Lake Co., O.*, 1850.

MANAGEMENT OF MANURE.

THE following remarks on the management of manure are from Prof. NORTON's notes, in the Farmers' Guide:

There are comparatively few farmers in this country, who are aware how great is the loss of substance, during unchecked fermentation. Nitrogen in the form of ammonia, may be detected passing off in large quantities; besides this, carbonic acid, and other products, are continually liberated. The directions given for the prevention of such a loss, under these various paragraphs, are so particular that no farmer need suffer it any longer. It is not necessary for him to build a shed in every field, or over the whole of his yards, but he can introduce more careful management. Mr. STEPHENS omits to mention here, one of the best methods of arresting the escape of ammonia during fermentation; it is to sprinkle gypsum occasionally over the surface of the heaps or yards. The quantity used need not be more than a few handfuls at a time.

The subject of making composts, is one which attracts a great and increasing degree of attention among American farmers. Nearly all good farmers are now convinced, that this is one of the most advantageous modes of applying manure. By making a compost of absorbent materials, scarcely any of the valuable parts of the manure can escape. Large quantities of refuse too, that would otherwise decay very slowly, and produce little effect, are decomposed in composts, and thus brought into forms valuable for assisting the growth of plants. All of the materials mentioned in these paragraphs, should be carefully preserved, and even sought after. Many of them are totally neglected in most districts, and can be had for the merest trifle, in many cases for the mere expense of carting. The fish refuse, the dung of pigeons and other birds, the woollen waste, and the animal flesh; are among the most powerful and concentrated manures known. The farmer who systematically collects every species of refuse, and every available vegetable substance, can increase his stock of manure to a very considerable extent and without material expense.

The subject of liquid manure tanks, is also one that is beginning to attract much notice in this country. Farmers find that they cannot afford to let a large part of their manure wash away, either into the road, or upon a small part of some one field. The consequence of this is, that the construction of tanks has been commenced, and has, I believe, been attended with the happiest results. It need not be large nor expensive. The only object is to have a tight receptacle, which shall receive and retain the liquid, till it can be applied to some useful purpose. For a temporary end, and to try the value of tanks, one could be made from old boards, or plank, packed with clay behind, so as to be tight. By the time that it should fail, the farmer would probably be ready to build a stone or brick one. The liquid may be pumped out and used with a water cart, or pumped upon a compost heap. Others prefer to throw ashes, plaster, peat, &c., into the tank, to soak up the liquid. If too much water runs into the tank, so as to overflow it, drains must be made in such a manner that all water falling from the eaves of the farm buildings, may be conducted away in another direction. A tank 10 feet long, and 6 feet wide, would be quite large enough for the majority of farms in the country. They should always be covered over, as much less is then lost by evaporation. It is an excellent practice to add occasionally a small quantity of sulphuric acid (oil of vitriol,) to the liquid in the tank; this prevents the escape of ammonia almost entirely, and forms with it a fertilizing compound. Sulphuric acid is not an expensive article, being from 2½ to 3 cts. per lb. when purchased by the carboy.

I doubt the entire correctness of the statements, as to the loss of fertilizing substance by washing away from manure heaps. If the heaps are of good size, and properly made, so that rain water may soak into them instead of immediately running off; and if placed in a proper situation, then it is probably correct that little is lost by leakage; but if piled up in a scattered, heedless manner, and located on a slope near a ditch or brook, the loss is inevitably quite large. I have seen the water of ditches colored nearly black, for a distance of many feet, by the oozing from a manure heap. A very good plan to prevent all possible loss, would be to cut a small ditch round the lower sides of the heap, conducting the drainings to the lowest point, and discharging them there into a sunk barrel, from which they could be pumped up, and used as might be most advantageous.

The leakage of valuable manure, from improperly located, or badly constructed yards, is, in this country, a most important item of loss. In many cases that I have seen, nearly everything soluble is washed away into the nearest road or stream; the manure is left in a bleached condition, having lost in some instances at least half of its value. Some farmers attempt to save these drainings from their yards, by conducting them upon their meadow land. The usual result of this is, that but a small portion of the grass is reached, and that is so much over manured, that it is a coarse unpalatable food. The only economical way to avoid this loss, is to be found in the construction of tanks as recommended in preceding paragraphs.

The sea coast of this country is so extensive, that sea weed becomes a manure of much importance. There are, however, many long stretches of coast, where very little, or none, is cast up by the sea. This is because there are in the neighborhood of these beaches, more of the reefs and rocks upon which the weed delights to grow. The composition of ash from sea weed, shows that this part abounds in substances that are exceedingly important to all of our crops; and likely to be particularly beneficial to those crops that are rich in alkaline compounds. The proportion of this ash in the dry weed, is greater than in dry straw. Sea weed decays very readily, from the large proportion of water which it contains; for this reason, and also from the soluble quality of its ash, it cannot be considered a very lasting manure. If allowed to dry thoroughly, it will remain unchanged for a long time, even when buried in the soil.

CULTURE OF THE SWEET POTATO.

Messrs. Editors:—I have noticed two or three articles in the Genesee Farmer, on sweet potato culture in this State. I have raised sweet potatoes several years past, with good success and very little trouble, as a luxury for my own table.

Four years ago I purchased in Cincinnati some dozen potatoes of the red variety, grown in Louisiana. Near the last of May I cut them open lengthwise and covered them about an inch and a half deep in a hot-bed, the flesh side, or raw part of the potato, downward. At evening I poured boiling water over them, and repeated it again the next evening. In a few days the shoots appeared, and when from four to six inches in length, I pulled them off, (by placing one hand on the potato, and using the thumb of the other to pull them off,) and planted them in hills in my garden. I proceeded in the same way with every new set of shoots, until near the last of June.

The season was remarkably warm, and my handful of seed yielded an abundant increase. I never saw finer or larger potatoes in Mississippi, and they far exceeded any I ever saw in Tennessee or the south part of Ohio. Some of them were enormously large. I sold some of them for one dollar per bushel; but they were mostly used in my own family and given to my friends. I would here remark that the vines do not die, like the common potato, but remain green and apparently growing, until frost comes; and whenever the vines are touched with frost, the roots are affected, and soon rot. I lost a part of my first crop from not knowing this fact—letting them remain too long in the ground.

The next spring a friend sent me, from Cincinnatti, a box of sweet potatoes of the yellow variety, which I treated in the same way, and had a fine crop of large potatoes, some of which were exhibited at our County Fair. The next spring I procured seed from a gentleman near Erie, Pa., who has cultivated them for many years, and keeps the seed through the winter. I had a fair crop, as regards quantity, but they were inferior, both in size and quality, to those grown from seed brought from the south. They were hard and stringy, while the others were exceedingly farinaceous. I am induced to believe that when raised long from seed grown at the north, they will run out, or so nearly as to be hardly like sweet potatoes.

In the spring of 1849 I got seed from Pittsburgh—red, yellow, and white varieties. They all grew well and produced abundantly. The red ones were much the largest, and next in size were the yellow ones.

All persons in the western part of the State, who own a garden of rich, warm soil, may have their patch of sweet potatoes if they choose. They should never be planted until there is no danger from frost—from the middle until the last of May is quite early enough. The hills should be about three feet apart, and care should be taken to prevent the *vines from taking root*, the consequence of which will be a quantity of small fibrous roots, not fit to eat. A good way is to collect them in a cluster on the top of the hill. One shoot is sufficient for a hill. John B. Dinsmore.—*Ripley, N. Y.* 1850.

Jerked Beef is the lean parts of the carcass of beef or venison, cut into fine shreds and thoroughly dried in the sun; or, if the weather proves bad, sometimes by the fire and smoke.

CANADA THISTLES, DITCHES, &c.

Messrs. Editors.—I am now on the second year with your invaluable paper. I took it at first merely because it was cheap; I now continue it, because I consider it the most practical and best conducted paper for this part of the State, being situated right in the center of the Genesee wheat growing part of the Empire State. The editors understand and tell us in their paper, the materials of which wheat is made. In regard to the Canada Thistle, I agree with what has been said, that any good wheat land can be freed of them by the plow. About two years ago I purchased a piece of land of ten acres, entirely devoted to Canada Thistles, not a part of it but was full. I concluded to try the plow. I began in good season in the spring, and as soon as the thistles were fairly up, I plowed them under, and repeated the operation five times. The result was that I completely used up the thistles. The same practice may not always be alike successful, but I think it will.

In regard to Ditching, I am firmly of the opinion that the cheapest and most durable drain is made by digging a ditch about three feet deep, and then fill it up two feet with small sized round stones, then cover over the stones with shavings, and then fill up the ditch. Such a ditch if well made, will stand longer, in my estimation, than any other kind. In the first place, it is cheaper than a ditch with a throat laid in it, and the throat is liable to be filled up by rats and mice digging dirt into it: whereas, in the ditch I refer to, nothing can trouble it. The water washes the stones clean and keeps the drain in good order. There are drains of thirty years standing, in this vicinity, that work as well as when first completed. C. W.—*Lake Grove*, 1850.

SPAYING COWS.

Messrs. Editors:—Finding that the subject of spaying cows is exciting considerable interest among the milkmen around and near our large towns and cities, where milk is the object, I thought a few remarks might not be out of place upon the benefits derived from the operation, which is the continuing in milk any length of time, until old age prevents. To all engaged in the milk business, and to the many inquiries relative to the best time for the operation, I would say, not less than twenty days after calving, and any time between the first of April and the middle of June. As it is not altogether from theory, but a practical knowledge gained by many years' experience both in spaying and milking spayed cows, I think I can judge very correctly of the benefits to be derived from the operation. Any further information requested, either by letter or through the Farmer, will be promptly answered. Wm. Carter.—*East Bloomfield, N. Y.*, 1850.

To Measure Hay in Stacks.—"More than twenty years since," says an old farmer, "I copied the following method of measuring hay, from some publication, and having verified its accuracy, I have both bought and sold by it, and believe it may be useful to many farmers, where the means of weighing are not at hand. Multiply the length, breadth, and height into each other, and if the hay is somewhat settled, ten solid yards will make a ton. Clover will take from ten to twelve yards per ton."

IMPROVEMENT OF FARMERS AND FARMING.

MESSRS. EDITORS :—Having by observation and reading, (the Genesee Farmer most particularly,) noticed the many improvements which are constantly being made in farms, farming, and the tools we do it with, it seems to me that a man comes short of his duty, if, by experience, or any other means, he has learned anything by which he can benefit his neighbors, if he withhold that information from them. When we consider how much the welfare and prosperity of our country depends upon the farming class of community, and the little attention that is generally paid to this branch of business—when we consider that the produce of one acre of land may support a small family, and how many families are falling in the rear with the use of fifty, or even five hundred acres, by poor management and bad calculation—it is time that we had something to wake us up to a sense of our interest. And if we are annually squandering the use of three or four hundred acres by our ignorance of our business, let us either quit our business and try something else, or begin farming as we would any other trade—by first learning it.

In my opinion there is not one farm out of fifty, taking our country through, that is managed with that degree of skill and economy that is manifested in all other avocations in which we see our countrymen engaged. Now why this disregard for this one branch of busiuess—this branch which furnishes the very necessary articles of food and clothing for the one thousand millions? It seems to arise from the idea generally afloat, that any one is capable of farming. Any one who can hold a plow, drive a team, or lay up fence, is considered duly qualified to manage a farm. Hence, how frequently we see young men at the age of twenty or twenty-five years commence this business, who never spent one year in actual service on a farm in their lives; consequently they know but little of the nature of the soils they are about to cultivate, whether they are best adapted to the growth of wheat or grass, whether they have been completely exhausted by continual cropping without the needful manure. He knows nothing of the requisite qualities of a good team, good cows, sheep, &c.—nothing of the kind of tools he wants, nor of the timber of which they should be composed, neither does he know the value of these articles.

Set a blacksmith at building a shop, or a doctor at making boots, or a lawyer at telling the truth, and you will see just about as much perfection in their business, as is exhibited in the face of our country by two-thirds of that class of people called farmers. Farming is a business that requires more judgment, more skill, and more experience, than almost any other, by reason of its being so varied. Each successive day brings with it a change of business. A new leaf is turned over in the farmer's book every morning. Many are the ways and means of performing each part of this business, and after all there is but one right way. Now where is the man that has the right way of doing each and every part that the year rolls before him? Nor is this all; the farmer is required to have at least five years of futurity in his mind's eye, in order that each succession of crops may replenish his pocket, and at the same time, work an improvement in his farm, for if he allows his farm to run down, he himself is down. Now number the men who have attained perfection in each and every part of this business, and you have numbered the farmers. All the rest need instruction.

Now, then, would it be advisable for all those who are not adepts at this, to try something else, even if it would be more profitable for the present? I think not; for our places would not be supplied with others who would do as well as we are doing: but I think this would be the best plan—to do as well as we can, and learn to do better by attending the fairs and improving by the lessons we are constantly receiving of those who have the advantage of us in age or opportunities, and are generous enough to impart their knowledge to their fellow creatures, through the press, thereby rendering themselves useful citizens, and interesting others in that which is for the good of all.
JOHN WATSON.—*East Java, N. Y.*, 1840.

A SMALL BRACKETED COTTAGE.

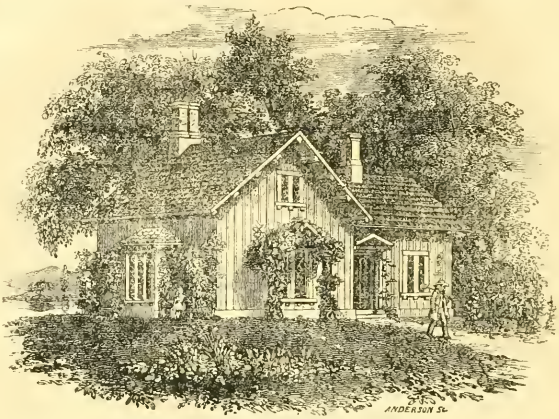
IN the last number we gave a plan of a very cheap cottage (from DOWNING's new work on *Country Houses,*) which could be built here for about $300. We now present our readers with another, and a very pretty design, from the same source, the cost of which will be from *four to five hundred dollars*, according to the cost of material where it is built. We shall continue to give plans for cottages and farm-houses, many of which will be of more value to any person designing to build, than ten years' subscription of the Farmer:

This little cottage, with about the same number of square feet as the one given in our last number, is mose picturesque, from its irregular form. It would, on this account, be selected by all those who prefer irregular to regular symmetry.

There is also a good deal more *feeling* shown in this cottage than in the last. The features which express this are the bay window, the rustic trellises covered with vines, and the bracketed vine-canopy over the end window in the principal apartment.

Now, every cottage may not display *science* or knowledge, because science demands architectural education in its builder or designer, as well as, in many cases, some additional expense. But *feeling* may be evinced by every one possessing it, and there is no more striking or successful way of manifesting it in a cottage, than by the employment of permanent vines to embellish it. Something of a love for the beautiful, in the inmates, is always suggested by a vine-covered cottage, because mere utility would never lead any person to plant flowering vines; and much of positive beauty is always conferred upon simple cottage forms, by the graceful growth of vines, through the rural and domestic expression they give to the cottage. We say domestic expression, because, as vines are never planted by architects, masons, carpenters, or those who build the cottage, but always by those who live in it, and make it truly a home, and generally by the mother or daughter, whose very planting of vines is a labor of love offered up on the domestic altar, it follows, by the most direct and natural associations, that vines on a rural cottage always express domesticity and the presence of heart.

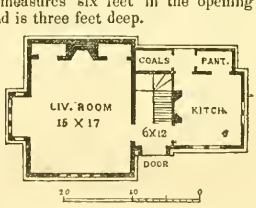
The little rustic arbors or covered seats on the outside of the bay window, may be supposed to answer in some measure in the place of a veranda, and convey at the first glance, an impression of refinement



DESIGN FOR A SMALL BRACKETED COTTAGE.

and taste attained in that simple manner so appropriate to a small cottage.

Accommodation.—The plan of the first floor of this cottage shows an entry, six by twelve feet, containing a flight of stairs to the chamber floor, under which are stairs to the cellar. On the left is the living-room of the family, fifteen by seventeen feet. The deep chimney-breast at the end of the room gives space for two large closets. The bay-window measures six feet in the opening (in the clear) and is three feet deep.



GROUND PLAN.

On the right of the entry is the kitchen, a small room, ten by twelve feet. As the living-room of the family will, in a great measure, be also the kitchen, this small kitchen will in fact be used as a *back*-kitchen for the rough work, washing, etc., so that in summer, and, indeed, at at any time, the living-room can be made to have the comfortable aspect of a cottage parlor, by confining the rough work to the kitchen proper. Back of this kitchen is a small lean-to addition, containing a small pantry, four by six feet, and a place for coals. There is a small passage between this closet or pantry and the coal-hole, and opposite the door opening from the kitchen into this passage, is a door which serves as a back door to enter the kitchen without going in the front entrance.

The chamber floor has two bed rooms each nine by fifteen feet, and one bed room ten by twelve feet.

Variation of the Plan.—This plan may be easily varied, so as to give a more agreeable and symmetrical effect, with little additional cost. To do this, lessen the depth of the chimney-breast at the end of the room, and reject the two closets there. This would make the living-room two and a half feet longer, or fifteen by nineteen feet six inches. Next place the bay-window exactly in the centre of the wall, which would add to the external symmetry. By turning the place for coals into a closet, with a door opening into the living-room, and having a wood-house or coal-house detached, space would be gained and the arrangement would be more pleasing, though, perhaps, not quite so convenient.

Construction.—The construction of this cottage is the same as that in last number. Planed-and-matched or rough boards may be used for the vertical weather-boarding; we should prefer to have them rough (if the cottage is filled-in,) and painted and sanded.

We have shown in this cottage the simplest form of cottage window—that is, the casement window opening in two parts from top to bottom. These sashes are less expensive than rising sashes with weights, but more so than those without weights.—The latticed sash with diamond panes we have introduced as more significant of a cottage. Indeed, there is something in the associations connected with latticed windows so essentially rural and cottage-like, that the mere introduction of them gives an air of poetry to a house in the country.

The chimney-tops are built of brick, in a very simple, but, at the same time, more tasteful manner than the heavy brick stacks usually seen.

The front door is merely covered with a hood on brackets. Its beauty would be enhanced by making this canopy or hood holder and extending it five feet, making the sides of lattice work and covering the whole with vines.

Estimate.—The whole cost of this cottage, on the Hudson river, would be $512. In the interior, where wood is cheaper, it may be built for $400. In this, we include a cellar under the kitchen and entry, but not under the living-room. The foundation walls of the latter should be laid three and a half feet below the level of the ground.

THE TURKEY.

Perhaps we could not choose a better time to give a picture of a good looking Turkey than the present, when so many are looking forward to the Christmas and New Year's dinner in which he is to act a conspicuous part. The following remarks are from *The American Poultry Yard:*

"The domestic turkey can scarcely be said to be divided, like the common fowl, into distinct breeds; although there is considerable variation in color, as well as in size, but no Bantam, or dwarf race, exists, unless we except the small delicate-fleshed turkeys of Hempstead Plains, near New York, which often weigh, when dressed, not more than 4 or 5 lbs. The finest and strongest birds are those of a bronzed black, resembling, as closely as possible, the original stock. These are not only reared the most easily, but are generally the largest, and fatten the most rapidly. Some turkeys are of a coppery tint, some of a delicate fawn color, while others are parti-colored, grey, and white, and some few of a pure snow-white. All of the latter are regarded as inferior to the black, their color indicating something like degeneracy of constitution, if not actual disease. A variety is said to exist in the aviary of Madam Backer, at the Hague, with a topknot springing from the crown of the head, resembling that of the plumed Poland fowls.

Incubation.—The turkey hen is a steady sitter, and in this respect resembles the wild bird—nothing will induce her to leave the nest; indeed she often requires to be removed to her food, so overpowering is her instinctive affection; she must be well supplied with water within her reach; should she lay any eggs after she has commenced incubation, these should be removed—it is proper, therefore to mark those which were given to her to sit upon. The hen should on no account be rashly disturbed; no one except the person to whom she is accustomed, and from whom she receives her food, should be allowed to go near her, and the eggs, unless circumstances imperatively require it, should not be meddled with.

On or about the thirty-first day, the chicks leave the eggs. Now, in a state of nature, the wild hen always manages far better than she whould do if interfered with by man, were his interference possible, and so we believe with the domestic turkey hen, if her nest be placed (and it might in a certain degree,) as it is in nature; this we know, that turkeys which have laid their eggs in out-of-the-way places, and have been allowed to incubate there, have brought their troop of downy younglings into the farmyard with evident pleasure and satisfaction—no extra attention having been paid to them. It is usual, however, in Europe and the northern parts of the United States, to remove the young chicks, one by one, as they make their exit, and place them in a basket of warm flannel, tow, or feathers, until all are out, and then restore them to the hen; this is done as a precautionary measure, lest any accident should happen to them.

In a state of nature, the turkey only rears one brood during the season, unless her eggs have been destroyed or removed, nor will the domestic hen incubate twice, if allowed to rear her own brood; some, however, which like, as the common phrase is, "to work a free horse to death," recommend that the turkey be induced to hatch a second time in the season. This is effected by taking her young brood from her as soon as possible, and mixing it with another brood of the same age, as nearly as may be; her cares being no longer required for her young, and her instincts unsatisfied, she seeks for the company of the male, and in about three weeks commences laying until the number of eggs is complete, when she re-engages in the task of incubation. But I object to this practice in *toto.* It is cruel and it taxes the system; she has already sat patiently for thirty days, that is four weeks and two days, and surely that is quite enough. Besides, the brood thus hatched will be late in the season, and late broods of turkeys cannot be reared without very great care; they cannot stand the chilly mornings of autumn nor the frosty nights.

Horticultural Department.

EDITED BY P. BARRY.

There can be no such thing as complete, satisfactory success, in the culture of the orchard or the garden, with a poor, shallow, ill prepared soil; and very few people, who are not familiar with gardening, or who have had no opportunity of seeing good garden management, have a correct idea of what good garden culture is, or ought to be. About this time of the year, in passing around the country, we find in the neighborhood of most farm houses, a small plot of ground usually called the garden; but of all other places on the premises, it looks decidedly the least like one—during the last three months grass and weeds have been allowed to grow unrestrained until they have completely covered everything, and are actually rearing their heads above the garden fence. It seems to be the settled opinion, that such labor as hoeing and weeding, though well enough and perhaps necessary for the first three months of the season, while the crops are working their way through the ground, are quite superflous in the autumn months. Some of the crops have been gathered, the others are nearly full grown; and what good could hoeing or weeding do? These weeds remain, therefore, and all dry stems, rubbish, &c., that have accumulated in the garden during the season, are left in heaps, so that field mice are attracted there, to occupy themselves during winter gnawing the bark of the trees, if there be any. Next spring—say in the latter end of April, when the weather has become warm and pleasent, birds are singing and trees preparing to expand their blossoms, the temptation to do a little gardening can no longer be resisted—something *must* be done; and what is it? Why, if manure be quite handy, a sprinkling is thrown over the surface, and the plow is introduced, a part of the ground scored up until it has a fresh surface; perhaps half the trees in the garden have been bruised or broken with the whiffle-trees, or the tops eaten off by the horses; but it could not be helped. This is, as near as we can describe it, the routine of gardening practiced among a very large portion of our agriculturists, even in some of the oldest and wealthiest districts. We never ride a dozen miles in the country, in any direction, without coming upon many such gardens, the property of wealthy farmers, with large, well tilled, and profitable farms *paid for*, and money, more or less, let out on interest besides. The poor farmer who is struggling under a heavy debt, with small stock and small means every way, is excusable, if any body be, for owning a garden of weeds; but for those who are in easy and even affluent circumstances, there is no excuse whatever, and we always feel inclined in passing their premises, to stop and lecture them a little on the subject; but as that would not do, we take this means of bringing it to the attention of some of them at least.

We ask these farmers to take a look into some of the little gardens in the nearest village, and see what is going on there. At this season the ground will be as clean of weeds as in July; the crops will all be gathered; all the bean poles, pea sticks, &c., will be carefully put away; dry stems of plants, heaps of weeds and rubbish, will be snugly deposited where they ought to be, in the manure or compost heap, and preparations for another season, such as manuring and trenching, will be already in progress. A garden will be there next season, worthy of looking at, and fruits and vegetables will be grown in it, that will be the talk and wonder of the neighborhood.

We have spoken of trenching, and it might perhaps be well enough at this time and in this connection, to give a brief description of what we mean by trenching. In the first place, the object of trenching is to *deepen the soil*, to enable the roots of plants to penetrate it, and to increase its capacity for retaining and furnishing the necessary food of plants that grow on it. A *shallow* soil, however rich it may be made with manure, is unfit for gardening. The roots of plants in it are kept near the surface, and always suffer in a time of drouth. In dry, mid-summer weather, the crops on a thin, untrenched soil, will be completely scorched; their stems will droop, turn brown, and if the drouth should continue a month or six weeks, as is frequently the case, they die or become a total loss; while in a deep trenched garden, where the roots can penetrate freely, in search of food and moisture, the drouth is scarcely felt at all. Tap-rooted plants, such as beets, carrots, parsneps, &c., can only be grown smooth and fine for the table, on a deep soil. The highest culture that can be given on a thin, hard soil, will only produce knotty, forked, deformed things, neither fit to be seen nor eaten. There can be no good gardening without a good, mellow soil, fit for the roots of plants to enter to the depth of full eighteen inches—two feet would be still better. Very few people are fortunate enough to have a garden soil naturally fit for roots to this depth; hence the necessity for trenching.

The proper implement for trenching with, is one that some how or other seems to be very unpopular, but one quite indispensable in the garden—the *spade*. A plot of ground is trenched by commencing on one side and opening a trench two feet wide, and as deep as you wish to make your soil — say two depths of a common spade. The earth taken out of this first trench, or opening, is carried on a cart or wheelbarrow, to the rear of the plot where the trenching is to terminate. The first trench being opened, another space of two feet is marked off, and the surface spadeful of this thrown into the bottom of the trench. If manure be needed, a layer of manure is thrown on, and then the bottom spadeful is thrown on top of that. Where this second course is hard, bad soil, it should only be loosened up with the spade, or pick-axe if necessary. To throw such earth on the surface, would be ruinous to the ground for a year or two, until it would be mellowed and enriched by amalgamation with the other soil and with manures.

Where a garden is new, or even large, the subsoil plow might be used, and will no doubt be much cheaper than the spade; but where a garden is small,

or encumbered with trees, the spade is the thing. If taken at the proper season, an ordinary sized garden may be trenched at very trifling expense. It may be done when nearly all other out-door work upon land has ceased. We have kept trenching going on all winter, by covering the ground with leaves a few inches deep. There is no farmer but could find, if disposed, time enough with his men to prepare his garden in this way, and then when spring comes, the labor of preparing and seeding would be comparatively light—it could be done much earlier in the season, and the crops would be of some value, and creditable besides.

The manure used in gardens should be old and well decayed, so that it can be cut easily with a spade. You may then depend upon its not filling the garden with weeds, as fresh manures always do. This trenching has a wonderful influence on the soil. We know little about it in this country. In Europe it is as common a process in garden, orchard, and vineyard culture as plowing is here for grain crops. In the wine-making districts of France and Germany, the soil has been made by trenching out of hard, gravelly, slaty hills, that in the natural state would appear about as fertile as the rocky banks of the Hudson. The beautiful and famous vineyards of Cincinnati occupy barren looking bluffs around the city, that have been trenched by Germans in their own style, and brought into their present productive and polished state.

It is not dry, hard, and thin soils alone, that are benefited by trenching, but heavy, cold, and damp soils; loosening of the sub-soil renders them porous, allows superflous water to pass off, and warms and sweetens the ground. We recommend this subject to the immediate attention of all who have gardens; and if any farther information be required on the subject, we will cheerfully impart it if we can. We are so fully convinced that this thorough preparation of the ground is at the bottom of all good and successful gardening, and so fully aware, too, of the extent to which it is neglected, that we cannot press it too strongly.

TWENTY-SECOND ANNUAL EXHIBITION OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.

The display of fruit at this exhibition, is reported as far surpassing any previous show of the Society. As might be expected, the Pear display was exceedingly rich. A multitude of new and rare sorts, besides most of the well known and popular ones, were exhibited in various collections, and no doubt in great perfection. The members of this Society, combined, could probably beat the world in a show of pears. The President of the Society, Mr. Walker, exhibited 112 varieties, Col. Wilder 210, Robt. Manning 110, Hovey & Co. 100, J. S. Cabot 86, B. V. French 85, and many others from 20 to 40 varieties each. We notice that the *Swan's Orange* appears in all the principal collections, and it is only about four years, this autumn, since the first trees were sent east from Rochester, and we believe that was the first of its introduction there.

The Society offered a premium of the Lyman Plate, worth $20, for the best 12 varieties of 12 specimens each; for the second best, $12; and for the third, $8.

We learn from Hovey's Magazine that these premiums were awarded to the following collections:

The best twelve varieties of twelve specimens each, which obtained the first premium, were Van Mons Leon le Clerc, Dunmore, Beurre d'Anjou, Beurre d'Amalis, Golden Beurre of Bilboa, Beurre Diel, Duchesse of Angouleme, Columbia, Urbaniste, Glout Morceau, Le Cure and Catillac, in Mr. Wilder's collection.

The second best twelve were: Knight's Monarch, Hull, Swan's Orange, Beurre d'Anjou, Le Cure, Louise Bonne of Jersey, Beurre d'Amalis, White Doyenne, Beurre Diel, Wiliams' Bon Chretien, Dunmore, and Beurre Sentin, in the lection of Messrs. Hovey & Co.

The third best twelve were: Brown Beurre, Beurre Bose, Queen of the Low Countries, Van Mons Leon le Clerc, Winter Nelis, Duchesse of Angouleme, Louise Bonne of Jersey, Beurre d'Amalis, Glout Morceau, Beurre Diel, Buffom and Marie Louise, in the collection of Mr. Gordon.

These were all finely grown, large, fair, and every way splendid, giving evidence of what the several kinds will do when under good management.

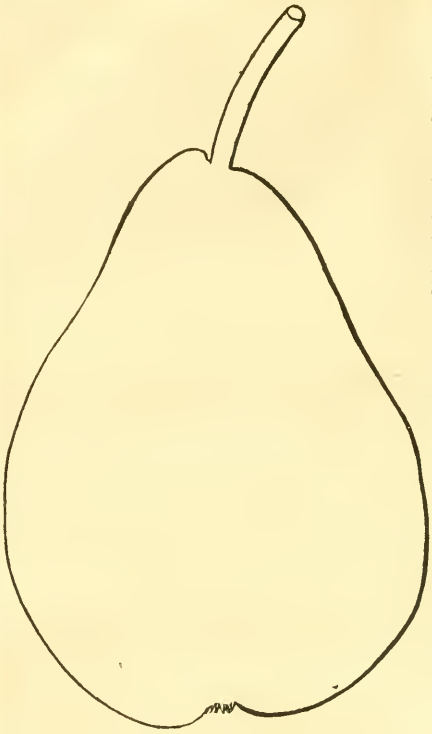
Here then we have twenty-five varieties. We think it a little remarkable that neither the *Seckel*, *Flemish Beauty*, or *Belle Lucrative* were included. We are glad to see premiums offered in this way. It concentrates the cream of the collections, so that those who were not present may benefit by the decisions of the judges. Out of the hundreds of varieties exhibited, we have here twenty-five chosen from the largest collections. There is still a consideration to be kept in view. Twelve specimens of each were required, and it may have been the case that some other varieties would have been preferred if the requisite number had been exhibited. The *Beurre Diel*, and *Beurre d'Amalis* are the only two exhibited in all the collections. Seven other varieties it will be seen were in two collections, and the remainder were all different. We are glad to see this great Society improving in its plans of usefulness, and growing more and more brilliant in its exhibitions.

ROOT PRUNING.

In rich, deep, alluvial soils, certain varieties of fruit will make a rank, vigorous growth, year after year, without becoming fruitful within any reasonable period. The remedy is to curtail the supply of food by cutting off a large portion of the feeding root, to be replaced by fine fibres. The proper mode of doing it is to strip the earth off the ends of the large roots by digging a trench around the tree, deep enough to go below the roots, then with a sharp knife cut off the ends. The cut should be made on the under side and sloping outwards. It may be done much more quickly by having a spade ground to a sharp edge, so that it will cut a root, an inch in diameter, clean through at a single stroke. The effect of transplanting on trees is well known. If we take a vigorous growing tree of bearing size, but showing no signs of fruitfulness, and transplant it, fruit buds are almost invariably formed the next season. This root pruning is similar in its effects and results to transplanting. It checks the superabundant vigor and brings the tree into a fruitful condition.

Nearly all fruit trees may be thus treated, but we advise it to be done cautiously. If a tree has a large head, and the main roots are cut too short, the tree is liable to be blown down. We have heard of trees being successfully root-pruned in August, and we have this season tried it, but we think the safest time to do it is in the fall, when the growth is suspended, or even in the winter, if not convenient before that time.

A beautiful Oriental proverb runs thus: "With patience, the mulberry leaf becomes satin.



THE DIX PEAR.

This is undoubtedly one of the finest of American pears, combining large size, beauty of form and color, with excellent quality. The tree is hardy, erect, and thrifty, and bears abundantly. Mr. Walker, now President of the Massachusetts Horticultural Society, once said, in noticing it in Hovey's Magazine, that the time would come when it would be as popular and as well known as the *Bartlett*; and we are inclined to believe that he was nearly right. All agree in saying that it is long in coming into bearing.—This is somewhat of a drawback; for few people have patience to wait ten or twelve years for a tree to bear. This peculiarity is till more objectionable, as it does not succeed on the quince. But we find that it succeeds when *double worked* on it. In 1848 we grafted it on a *Jargonelle* on quince, and this year it produced a fine crop of large, handsome, and fine flavored fruit. So here is a way to fruit the *Dix* in a very short time. Get a good tree of some sort that grows freely on the quince, such as *Duchesse d'Angouleme, Beurre Diel, Jargonelle*, &c., and graft the *Dix* into it, and you will have it in two, or three years at most, instead of ten or twelve—a great gain, surely.

Mr. Cole, in his fruit book, says it is "one of the most splendid and excellent of all pears, when perfect, selling at the enormous price of two dollars per dozen, and one tree produced $47 worth at one crop; yet one of the most uncertain of all pears. In light soils it usually cracks and blasts, and often on strong, moist soils." Mr. Downing pronounces it "a fruit of the highest excellence." Mr. Thomas says it is "one of the most valuable of autumn pears." Mr. Hovey gives a colored drawing and an account of it in his "Fruits of America," No. 9, recently published. He says:

"Few, if any, of our native pears hold a higher rank than the *Dix*. The large size, beautiful appearance, and exquisite flavor of its fruit, added to the vigor and hardiness of the tree, its productiveness, constant bearing, and period of maturity, give it a combination of qualities which but few varieties possess. When originally brought into notice, in 1829, it was pronounced 'one of the very best autumn pears, which might, with the greatest safety, be introduced into our gardens;' and twenty years experience has fully confirmed the correctness of that opinion. The *Dix* originated in Boston, in the garden of Madam Dix, in compliment to whom it was named, about thirty-five years ago. The tree sprung from seed, near the house, and grew so rapidly, that in 1829 it had attained the height of twenty-three feet, with a stem ten inches in diameter. It still stands in the same spot, and has now become a very large tree. It first began to bear in 1825, but did not produce a full crop till 1829, since which time it has continued to bear abundant crops of fine fruit. The *Dix* is very late in coming into bearing, and, on this account, cultivators have often rejected it in making a selection of fine pears. The average period of its fruiting is eight or ten years, occasionally in four or five, but oftener twelve and upwards. It has, however, the good quality of constant bearing after it has obtained a fruiting state, and the pears ripen off as fully as the *Baldwin* apple. It does not succeed upon the quince unless double worked."

It is large, oblong pyriform, of a greenish yellow color, slightly russetted, and occasionally a slight tinge of red. Flesh rich, melting, and juicy. The tree is quite remarkable for its slender, erect growth, yellowish bark, and light foliage. Like the *Summer Francreal, Glout Morceau*, and some others, it has such a distinctness of appearance as not to be confounded with any other. We do not recommend it for extensive culture, but as eminently worthy of a place among every choice collection.

Bureau of Architecture.—Since Mr. Downing's return from Europe, he has established a "Bureau of Architecture" at his residence, and proposes to give it special attention. He will furnish plans of buildings of all sorts, dwellings, churches, horticultural buildings, &c., in the various styles best adapted to this country. He will also furnish sketches and plans for laying out the grounds of country residences.—Such a "bureau" is greatly wanted in this country, at the present moment, and Mr. Downing, from the attention he has given these subjects, is undoubtedly the most competent man in America to preside over it. Persons wishing information in regard to the matter, can procure his circulars by applying to him.

THE SEASON.

We have had in this region an autumn of remarkable mildness and beauty. It is fine at this writing, the 12th of November, and we have scarcely had frost enough to injure autumn flowers. On high ground, dahlias are yet, in many places, in blossom; monthly roses, stocks, phloxes, pansies, scarlet geraniums, salvias, valerians, and many other bedding plants, are as fine as on the 1st of September; and lophospermums and cobeas, on the south wall of our office, are quite as gay as at any time this season. The ground and the roads are quite dry. In a month or more we have had but one rainy day that interrupted out-door work. Lawns where the dry fallen leaves have been raked off, have a spring verdure, and the foliage of many deciduous trees and shrubs is as fresh, fully, as in midsummer. Really, there is not in our memory such a mild, clear, dry, and beautiful an autumn season. Everybody is delighted with it; but those only who have had a great deal of farm, garden, or nursery work to perform, can fully appreciate it. Winter may come now at any moment, without causing a regret or grumble.

The Diana Grape.—Mr. Longworth of Cincinnati, sent to Boston for some branches of the Diana Grape, and presented it for comparison with the Catawba, to the fruit committee and other horticulturists, and they all decided the Diana to be quite inferior—"skin thicker, pulp harder and more acid, and more of the flavor and aroma of the Fox."

Mr. Downing, remarks in reply to this and very properly too, that the comparison is not a fair one, owing to the difference between the climate of Boston and Cincinnati, and that the Diana can only be judged fairly at Cincinnati when it has ripened there; and adds, that having had the best possible opportunity of judging of the comparative merits of the two grapes, in the garden of Mr. Sargent, where six year old vines of both are growing side by side, that the Diana is earlier, handsomer, and of superior quality for the table.

A Peach Tree that is a Peach Tree.—Mr. Downing, in noticing Chatsworth, the magnificent residence of the Duke of Devonshire, mentions a *Royal George* peach tree occupying a glass house, and extending over a trellis one hundred feet long. It bore, the past season, (1850,) 8729 peaches—7801 of which were thinned out at various times before maturity, and 926 left to ripen.

ANSWERS TO CORRESPONDENTS.

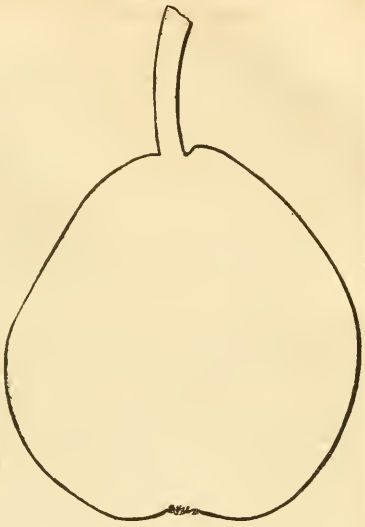
Mr. Barry:—I have two pear trees, procured from your city last spring, that have made numerous fruit spurs the past summer, and I am anxious to preserve them from a very hard freezing. Will it do to enclose them with boards in the shape of a small house, made tight. A. F. Per Lee.—*North Norwich, N. Y., Nov., 1850.*

There is no necessity for protecting your pear trees, unless perhaps when the blossoms have opened. They will take no harm in winter.

J. H., *Darien, N. Y.*, seven specimens of apples. Number 1, Black Detroit; 2, Esopus Spitzenburg; 3, Baldwin; 7, Talman Sweeting. Nos. 4, 5, and 6, don't know—number 6 is a fine sweet apple, in season now.

D. A. Barker, *North Bergen*, eight specimens of apples. No. 1, Golden Russet; 2, Esopus Spitzenburg; 4, Twenty Ounce; 5, Fall Pippin; 6, Winter Pearmain; 8, probably Baldwin. The others had lost the numbers.

J. H. Osborn, *Henrietta*, two specimens of apples. One is the Baldwin, the other we don't know.



THE BEZY DE MONTIGNY PEAR.

Some five or six years ago we imported this variety from France, under the name *Doyenne d'Ete*, which is a smaller and earlier fruit. For five years we have had it bear regularly and it has never been otherwise than first rate. We think it strange that it has not acquired greater celebrity. It resembles very much the *White Doyenne* in appearance. It is equally buttery, melting, and fine, with a muskiness of flavor like the *Bartlett*, which the *Doyenne* has not, and we consider this the principal point of difference between the two fruits. Noisette, in *Le Jardin Fruitier*, says they are so much alike that to distinguish one from the other it is necessary to have them together. He says: "The flesh of this is more melting, and of a quality incontestibly superior to the *Doyenne*." In French nurseries it is grown variously under the names of *Doyenne d'Ete*, *Doyenne Musque*, *Doyenne d'Ore*, *Countess de Lunay*, *&c.* The tree is a vigorous and erect grower, both on pear and quince stock, equaling in this respect the *Louise Bonne de Jersey*, and it is productive to a fault. On the quince stock you can reckon on a certain and abundant crop from the third or fourth year. We can recommend it as a pear of great excellence, and one that can hardly fail to give satisfaction.

Autumn Foliage.—Some one has suggested that a collection of the foliage of American trees, in their beautiful autumn tints, be woven together and presented at the great exibition in 1851, in London.

Grapes.—It is said that Dr. Underhill has realized seven thousand dollars, this season, by the sale of grapes from his celebrated Croton Point Vineyard, on the Hudson.

Ladies' Department.

THE CLOSING WORDS FOR 1860.

A year has nearly passed away since, in our remarks in the January number, we used the following language: "We shall urge upon our fair readers the necessity of devoting a portion of their time to gardening. It will not only afford pleasure, but health. It will furnish the luxuries—the poetry of life, and the health essential to their enjoyment. Work among your flowers and plants every day during the season; it is the best cosmetic in the world—it will drive away that sallow billious look—it will give you a color more beautiful, more lasting than rose or carmine—it will send the glow of health to the cheek, and joy to the heart." We have endeavored faithfully to redeem our pledge. We have presented the garden in its most attractive colors—in its most fragrant perfumes. We have taken our fair readers by the hand, and led them from the kitchen, from the parlor, into the garden; and there we have talked of the beauties of the rose—the fragrance of the honeysuckle—the modesty of the lily—the sweetness of the mignonette. We have grown eloquent as we have discoursed of the sweet music of the feathered songsters and heaven's balmy breezes. We have urged the young lady to close the novel, and take hold of the floral rake—to leave the rocking chair, and saddle the horse, or ramble through the woods and fields. We have promised health and happiness, glowing cheeks and glad hearts, as the reward. And, lest any might be discouraged at their first attempts at gardening, we have given plain and good advice—to do little and do it well. We have told what to do, and how to do it.

We have spoken a word, too, for the children. We have asked the mother to encourage in her child a love for nature—a love for trees and flowers; and we have asked for the little one a patch of ground for his "*own garden*."

But, our work for the year is done—would we could say well done. We hope the little good seed sown, has not been cast entirely by the way-side. We have good reason to believe that we have thousands among our lady readers, who sympathise with us in the work. All who correspond with us express their sympathy; and this repays us for our labor. Such letters as we published last month and the one below, make our work easy—our heart light. On looking over the *Ladies' Department*, we notice many good things said; but we have much yet to say. We hope to continue our acquantance another year with all our readers, and we shall try to make our monthly visits acceptable. We ask all to review this department for the past year—read it from January to December, and see if you have not received in this department alone, the cost of the whole volume.

Messrs. Editors:—I do not intend to follow the worthy example of Emily, in the last number of the Farmer, and give my experience in gardening; neither shall I tell you how much I am indebted to your paper, and particularly your *Ladies Department*, for pleasure and instruction. Your attempt to blend the pleasant and useful has been very successful, and I have no doubt is as well appreciated by your numerous readers as by myself and family. I say family, because all read the Farmer, from oldest to youngest. My children have their fowls, and though I exercise a little oversight, yet they are proud to call them their own, and count up their eggs and chickens with as much satisfaction as the miser counts his dollars. The greatest trouble we have, is to save the young chickens—they appear so tender, and so many of them die while young; some of them with diseases that we know something of, and can cure in its first stages; others with diseases that I can find no description of, and consequently no remedy for, in any of the poultry books. If you can give us any information, it will no doubt prove beneficial to others as well as to M. S.

Wayne Co., Nov., 1850.

Our correspondent, if she is not treating her chickens in the best possible manner, is doing what is of far more consequence, training up her children to habits of industry—not by making them unwilling slaves to toil—working with their hands for fear of reproach, or punishment; but working with a *will*—with smiling faces, eager hands, and joyful hearts. The mother or father that *compels* a child to labor, may get a little work done in a slovenly manner; but, little is done to establish habits of industry in the child; indeed, the aversion to labor may be increased. Give the child a little patch of ground to cultivate as his own—furnish him with a few attractive implements—assist a little occasionally, as you see assistance is needed—encourage the child to seek inforaiton—and you do much; yea, can hardly fail to establish industrious, persevering, careful habits in the child. A few chickens, if the child appears to have a fancy that way, and most children do, will answer just as well. Anything to interest the mind, and make children feel that they have a responsibility resting upon them—that their acts are of some account in the world, and tend to some good result. The work of the child should be noticed occasionally, and commendations bestowed, moderately, when deserved; for he will soon think his labors are of very little consequence, unless father or mother shows some interest in them. It is better to praise than blame; and the parent should seek for something that he can commend, instead of seeking for something of which he can find fault. Improvement should be suggested occasionally, though not too fast, or it will discourage the child, and destroy his self-reliance, while an occasional suggestion will teach the child that he has not arrived at perfection, and will assist him in improving for himself. In suggesting improvements, appeal to the judgement: you will thus strengthen the mind, and learn the child to think for himself.

The following remarks, on interesting children in what they have to do, is from *The Student:* "If you try to teach children who are not interested, it is like a blacksmith trying to make nails out of cold iron. There is too much hammering of cold iron in our schools; too much *hard* work, that does little good, because not rightly employed. Ask interesting questions—and thus wake up ideas, and make dull eyes bright by developing thought."

Adulteration of Coffee.—At one of the recent meetings of the Botanical Society of London, a paper was read by Dr. Arthur Hassall, "on the adulteration of coffee." He proceeded to detail, in a tabular form, the results of 34 examinations of coffee of all prices. From these, it appeared that the whole of the coffees, with two exceptions only, were adulterated—the quantity of coffee present was very small in most cases, not more than a fifth, fourth, half, and so on. The paper concluded with a hint addressed to coffee drinkers, that the coffee should be ground fine, in order to facilitate the liberation of the essential oils contained in the cells of the berry, and that an infusion, and not a decoction of it should be made, in order that the perfect flavor may be obtained.

Editor's Table.

THE PRESENT NUMBER completes the volume for 1850. We think we have fulfilled the promises made at the commencement of the year, and we know we have earnestly endeavored to make our paper the medium of useful information to farmers of the country. Every number of the Farmer contains communications from some twenty practical farmers, giving their experience on all matters connected with farming, and it would be strange, indeed, if new and important facts are not brought to light, sufficent at least to compensate for the cost of the paper. On the subject of fruit growing, we think Mr. BARRY has presented a mass of information of the highest importance—that should be known and practiced. Our Horticultural Department will compare favorably with that of any paper in any country.

We issue this number earlier than usual, in order to give our friends an opportunity to make up their clubs in time for the January number; and we hope they will make an effort at once, to increase our lists in their respective neighborhoods. We have no paid agents—and we desire to have none. We are willing to depend upon the voluntary labors of the friends of agricultural improvement. By this course we have succeeded thus far, and we are willing to depend on it for the future. There is scarcely a district in which our circulation might not be doubled by a little exertion. We look upon each subscriber as a friend, and the one to make this exertion. We refer all to the books we offer as premiums. In this way we are attempting to reward those who are laboring to increase our circulation—but the greater reward must be the satisfaction of benefiting neighbors and neighborheods. We are under many obligations for favors bestowed, the present year—and we hope not one who forwarded us subscribers for the present, will be satisfied to send a smaller list the coming year. To post-masters we are particularly indebted, and we are certainly willing to increase that indebtedness, though it is our intention the coming year to endeavor to make some small return to those who labor for us—or rather for the cause in which we are engaged.

We use no idle words when we say that we have increased facilites for making the GENESEE FARMER superior to what it has been, and equal at least, to any agricultural paper published in this country. Although the Farmer has given satisfaction, we believe, in every case, and papers and patrons have spoken in the most flattering terms, *onward* is our motto. We have to thank our numerous correspondents, for interesting and valuable articles. We have some favors yet on hand, which will be published as early as possible.

We would urge upon our friends the importance of making out their lists of subscribers early. There is no danger but you will get a large number if you commence in season. In a town in the southern part of the state, where we have never before had more than eight subscribers a correspondent writes—

MESSRS. EDITORS:—On election day, while all around me were electioneering for their favorite candidates, I was presenting the claims of the Genesee Farmer upon their patronage, and my success was beyond a parallel for this town, and I think for the State. This town polls a vote of 260, and I got *fifty names* for the Farmer.

This shows what may be done by a little effort.

OUR CANADIAN SUBSCRIBERS.—We have long been waiting for an arrangement between this country and Canada, by which our subscribers across the lake would be relieved from the unjust tax of double postage. Our patience has at last become exhausted, and we have resolved to take the matter into our own hands. Hereafter we will furnish the Farmer to our Canadian subscribers on the same terms as to subscribers in the States—50 cents single copies; 5 copies for $2; 8 copies for $3, and any greater number at this rate. As we have done this at the solicitation and for the benefit of our readers in Canada, we think we have some claim on their favor. Shall we not receive a host of subscribers from Canada for the new volume, to commence on the first of January?

NEW CHURN.—Our attention has been called to a new churn, manufactured by C. E. CLARK, of Dansville. It is on the principle of the Thermometer Churn, but is said to be superior in several particulars. We have not had time to examine it, but may do so hereafter.

WE issue this number so early that some matters designed for this month, were not received in season. The index, &c., also prevent our giving the usual variety.

THE GREAT INDUSTRIAL EXHIBITION OF 1851.—The London papers contain an engraving of the building now erecting for this, the World's Great Show. It is to be composed, principally, of glass and iron, and will be 1848 feet long, and 408 feet broad, covering 18 acres of ground. The the roof will be supported by 3,230 hollow cast-iron pillars, from 14 to 20 feet long, each of which is a water conductor from the peculiar-shaped roof, which is composed of a succession of low ridges of glazed sash, which conduct the falling water into numerous wooden gutters, which discharge through the supporting pillars. The center of the immense structure is crossed by a transept 108 feet high, enclosing a row of large elm trees that stand in the way, but are two large to be removed, and must not be destroyed. The glass used will weigh 400 tons, and covers 900,000 superficial feet. The roof and south side will be covered with canvass to break the glare of the sun, which would otherwise be intolerable, even in smoky London. The cubic contents of this largest room ever built in the world, will be 33,000,000 feet.

TOWN AND COUNTY LIBRARIES.—The opportunity afforded to establish town and county agricultural libraries, we hope will not be forgotten. Although *fifty dollars* is but a small sum for a library, yet it will furnish most of the good agricultural works published in this country, and form a neucleus, to which additions can be made as found necessary.

THE OLD FARMER'S ELEGY.—Reading the lines below, called to our remembrance several who were numbered among our subscribers at the commencement of the year, who now sleep the long sleep. One, in particular, who sent us many names, and who remarked on receiving the books to which he was entitled as a premium, that his object was to get his sons interested in the cause—that his work was almost done. How *nearly* done, we little thought. May the sons in whose welfare he felt such an interest, be worthy of the father. He was a good farmer—a good citizen—a kind husband and father—a benevolent man—a christian. Is the best anything better—the greatest, greater.

On a green grassy knoll, by the bank of the brook
That so long and so often had watered his flock,
The old farmer rests in his long and last sleep,
While the waters a low, lisping lullaby keep;
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

The blue-bird sings sweet on the gay maple bough,
Her warbling oft cheered him while holding the plow,
And the robins above him hop light on the mold,
For he fed them with crumbs when the season was cold.
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

Yon tree that with fragrance is filling the air,
So rich with its blossoms, so thrifty and fair,
By his own hand was planted, and well did he say,
It would live when its planter had moulded away.
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

There's the well that he dug, with its water so cold,
With its wet-dripping bucket, so mossy and old—
No more from its depths by the patriarch drawn,
For the "pitcher is broken," the old man is gone!
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

And the seat where he sat by his own cottage door,
In the still summer eves, when his labors were o'er,
With his eye on the moon, and his pipe in his hand,
Dispensing his truths like a sage of the land.
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

'Twas a gloom-giving day when the old farmer died,
The stout hearted mourned, the affectionate cried,
And the prayers of the just for his rest did ascend;
For they all lost a Brother, a Man, and a Friend.
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

For upright and honest the old farmer was;
His God he revered, he respected the laws;
Tho' fameless he lived, he has gone where his worth
Will outshine, like pure gold, all the dross of this earth.
He has plowed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

PREMIUMS FOR 1851!

The editors of the Genesee Farmer have circulated in premiums, and in other ways, during the past year, over Five Hundred Dollars worth of the best Agricultural Books published in this country. These works, on *Agricultural Chemistry, Geology, Botany, Horticulture, Gardening, Rural Architecture, Farm Economy, the Management of Sheep, Horses, &c., The Treatment of Diseased Animals, &c.*, we believe have exerted, and will continue to exert a very beneficial influence. Their influence is not confined to these who receive them, but is felt by their children, their friends and neighbers. They must increase the knowledge, and consequently the power, the influence and the wealth of those for whose especial benefit we labor. The coming year it is not our intention to decrease, but rather to increase the circulation of these works.—With a view, therefore, to this object, and to extend the circulation and increase the usefulness of the Genesee Farmer, we offer the following liberal premiums to the friends of Rural Improvement who may interest themselves in obtaining us subscribers.

Premiums to Individuals.

1st. TWENTY Dollars, in Agricultural Books, to the person who shall send us the largest number of subscribers, at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May number.

2d. FIFTEEN Dollars, in Agricultural Books, to the person who shall send us the second highest list, as above.

3d. TEN Dollars, in Agricultural Books, to the person who shall send us the third highest list, as above.

In order to make the circulation of the books more general, and to reward *every one* of the friends of the Farmer for their exertions in its behalf, we will give to those not entitled to any of the above premiums,

1st. To every person who sends us Sixteen subscribers, at our club terms of *three shillings each*, Johnston's Lectures on Practical Agriculture, (paper cover) Cole's Disease of Animals, American Fruit Book, or any other good Agricultural work valued at Fifty cents.

2d. To every person sending us Twenty-Four subscribers, as above Norton's Elements of Scientific Agriculture, Allen's Domestic Animals, Buist's Kitchen Gardener, Johnston's Lectures on Practical Agriculture, (nicely bound,) or any other Agricultural work valued at Seventy-five cents.

3d. To any person ordering Thirty-Two copies of the Farmer, The American Farm Book, Thomas' Fruit Culturist, The American Shepherd, or any other good Agricultural work which sells at One Dollar.

4th. For Forty, Johnston's Agricultural Chemistry, Boussingault's Rural Economy, Downing's Fruits & Fruit Trees of America, or any other book or books valued at One Dollar and Fifty cents.

For larger numbers, books given at about the same proportion

County and Town Premiums.

To aid as much as possible in establishing County and Town Agricultural Libraries, we offer the following premiums, which we hope will aid in the more general establishment of Agricultural Libraries in the Towns and Counties.

1st. We will give an Agricultural Library worth FIFTY DOLLARS, to the County in which the greatest number of copies of the Genesee Farmer is taken by the 16th of April next. This Library to be kept as a County Agricultural Library under the care of the Agricultural Society.

2d. To the Town in which the greatest number of copies is taken, an Agricultural Library worth THIRTY DOLLARS, to be kept as a Town Agricultural Library, under the care of the Town Agricultural Society, if one is established, if not, under the care of some person or persons appointed by the subscribers themselves.

As the above premiums will probably be taken in the State of New York, and as we wish to give our friends in other States an equal chance in the competition, we offer the same premiums to the Counties and Towns OUT OF THE STATE OF NEW YORK, thus:

1st. To the *County out of the State of New York* in which the greatest number of copies of our paper is taken, an Agricultural Library worth FIFTY DOLLARS.

2d. To the *Town out of the State of New York* in which the greatest number is taken, an Agricultural Library worth THIRTY DOLLARS.

Individuals will receive the premiums to which they may be entitled, for their individual benefit, as a compensation for their personal exertions, and the number they send will be credited to the Towns and Counties where the papers are sent, so that the premiums to individuals will not at all interfere with the Town and County premiums.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers.

☞ That all Post-Masters, Local Agents, and Subscribers, wherever the Farmer circulates, may have a fair and equal chance to obtain the Premiums, *traveling agents, post-riders, residents of Rochester, and all city booksellers* are not included in our offer, except the offer of books for a definite number, (16, 24, 32, &c.)

We shall keep a correct account of the subscribers sent by each person, county and town. In the March and April numbers of the Farmer we will publish a statement, so that all may know the prospect of success, and act accordingly. In the May number we shall announce the premiums.

Libraries and *Books* will be forwarded per order, immediately after the announcement, and persons or societies can select their own books, or leave the selection to us.

☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at the risk of the publisher.

CONTENTS OF THIS NUMBER.

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XII, FOR 1851.

DANIEL LEE & JAMES VICK, Jr., Editors.

P. BARRY, Conductor of Horticultural Department.

In issuing a Prospectus for the Twelfth Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state at length the design of the work. Those who read the Farmer are the best judges of its value, and those unacquainted with it are requested to examine its pages.

We number among our Contributors, hundreds of the best Practical Farmers in the country, and our readers have through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The Genesee Farmer is by far the cheapest Agricultural Journal published in America. Our TWENTY THOUSAND SUBSCRIBERS place us ahead of all other Agricultural Journals, and enables us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in *value* and *beauty*. That we have done this thus far, our friends and readers will bear us witness. But we intend more fully to accomplish this in the volume for 1851. The Genesee Farmer is truly the *Practical and Scientific Farmer's Own Paper!* It will continue to be edited by the old Editors, assisted by a host of the best practical Farmers, Gardeners and Horticulturists in the country.

The new volume will commence on the 1st of January, 1851. It will be published in the best style, as heretofore—on handsome and clear type and *superior paper*. The volume will be appropriately illustrated—containing numerous and expensive Engravings of *Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Flowers, Shrubs, &c* ☞ Each number will contain TWENTY-FOUR ROYAL OCTAVO PAGES! making a large and handsome volume of about 300 pages, (with Title Page, Index, &c., suitable for binding,) at the close of the year.

An earnest advocate of improvement of both the *Mind* and the *Soil*, the Farmer seeks to advance the Rural interests of the country, and elevate the profession of Agriculture to its proper position. To accomplish this, it has labored long and faithfully, and not without some success. Its position as the *cheapest*, and, at least, one of the best agricultural journals in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners and Fruit Culturists of the U. States. Grateful for the unexampled patronage already extended to the Farmer, we solicit the aid and co-operation of all its friends and readers to increase the circulation and thus augment the usefulness of the *cheapest Agricultural Magazine* ever offered to the American Public. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but introduce it to the patronage of their friends.

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Five Copies for $2; Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ Post-Masters, Agents, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (postpaid or free,) at the risk of the Publisher. Address to

DANIEL LEE,

December, 1849. *Rochester, New York*

O. B. SCOTT,

Local and Travelling Newspaper and Periodical Agent.

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☞ Mr. Scott will take subscriptions for the Genesee Farmer.

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