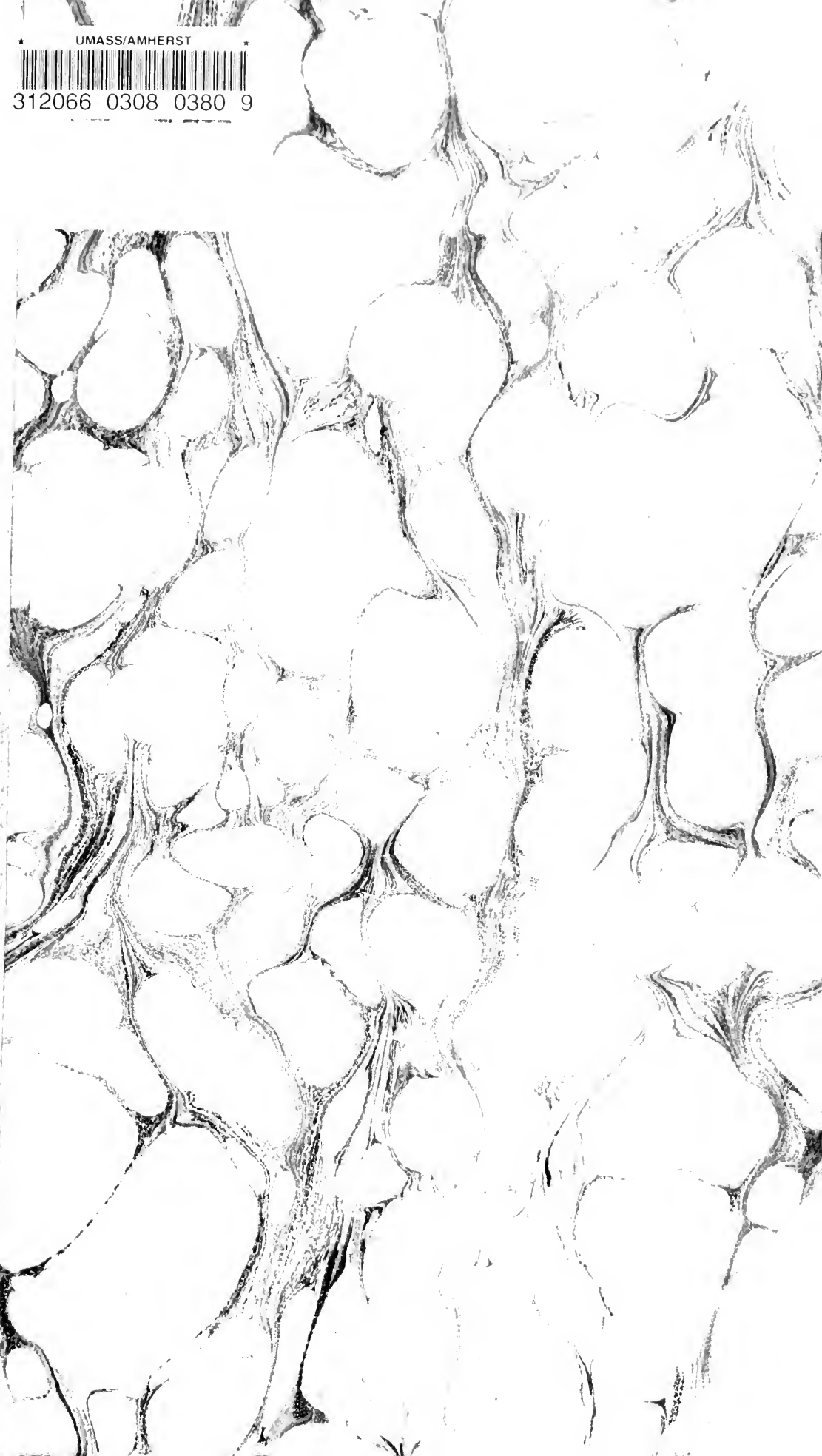

Z Pratt

THE

GENESEE FARMER,

A MONTHLY JOURNAL DEVOTED TO

AGRICULTURE & HORTICULTURE,

DOMESTIC AND RURAL ECONOMY.

ILLUSTRATED WITH ENGRANINGS OF

FARM BUILDINGS, IMPLEMENTS, DOMESTIC ANIMALS,

FRUITS, FLOWERS, SHRUBS, &c.

EDITED BY

DANIEL LEE AND D. D. T. MOORE.

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VOLUME X.—1849.

ROCHESTER, N. Y.

D. D. T. MOORE, PUBLISHER AND PROPRIETOR,

TALMAN BLOCK, BUFFALO-STREET.

1849.

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ILLUSTRATIONS.

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

VOL. X. ROCHESTER, N. Y.—JANUARY, 1849. NO. 1.

THE FARMER TO ITS PATRONS AND FRIENDS.

In presenting the first number of our TENTH volume, dressed in a New Year's suit, we extend the congratulations of the season to all who have contributed toward furnishing us with an outfit so elegant and becoming. Gratefully appreciating the favor bestowed upon our labors during the past year, we enter upon the duties of the present with increased means and facilities, and a firm determination to render the GENESEE FARMER sufficiently valuable to MERIT an augmentation of its already unparalleled patronage. We desire to render it USEFUL to all who may make its acquaintance—and to extend its usefulness by increasing the number of its patrons and readers. With this object in view, we have been more liberal in our expenditures than many deem prudent, in order to present a volume eminently worthy of support. The reader can best decide whether we have succeeded, after examining the appearance and contents of this issue, which however is not so complete as we intend to make future numbers of the volume.

Relying upon the generosity of that shrewd and well informed portion of the Rural Population of America who read and think as well as work for themselves, we present the Farmer to its friends at the East and West, North and South—not unmindful of the fact that, whatever merit it may possess, or however worthy the cause it seeks to advance, its mission will be comparatively useless without the approval and influence of those who possess clear heads and energetic spirits. It has heretofore been our good fortune to receive substantial assistance from almost every section of our widely extended country—and may we not bespeak a continuance of the kind offices of our friends, at home and abroad, now that we are using every proper effort to enhance the interest and value of this journal? We respectfully solicit all into whose hands this number may fall,—whether subscribers, casual readers or borrowers,—to lend us their aid in behalf of its objects, either by extending its circulation or furnishing appropriate matter for publication in its pages.

THIS No. of the Farmer is sent to many persons who are not subscribers. May we not confidently ask those who approve of the character and objects of the work, to lend their kind offices toward giving it a general circulation in their respective localities?

OUR COUNTRY—ITS AREA AND RESOURCES.

As a New Year's Salutation to thee, kind Reader, we desire to hold a little pleasant talk touching the present area, resources and prospects of our common Country: and indicate some of the interests of American Farmers, in shaping and controlling the destiny of this young and magnificent Republic.

A wise and good Providence has imposed on the Freeholders of the United States responsibilities and duties, and conferred corresponding blessings and advantages, which stand out in this the latest age of the world, wholly without a parallel in its long history. We can not rightly judge of the future by the past; because Human Progress and ever Expanding Intellect have made discoveries and inventions, infused into Society a thousand new elements and potent influences, the like of which were never before felt or known. New agents and new causes, as subtile as thought, as diffusive as steam and electricity, must work out results alike unknown and incomprehensible, to our defective knowledge of men and things. Blind and ignorant as we are, and incapable of looking far into futurity, yet God has made us not only the parents, but the guardians of all woman-born, who are to succeed us on this planet.

It is a great thought, a happy discovery that a two legged, talking animal has *any duty* to perform.—But having made the discovery, no matter by what means, its solemn requirements will permit no evasion. It is a wonderful and curious fact, that every year's advancement of civilized, christian nations, increases the power of Morality to punish wrong-doers. Witness what is transpiring in the most cultivated nations of Europe. Below all these popular upheavings—this vast intellectual volcano—there is an unseen Providence silently evolving some mighty problem in which the tillers of American soil are destined to perform a most honorable and distinguished part.

Including Texas, New Mexico, California and Oregon, the United States now cover an area of 3,252,574 square miles. Estimated in *acres*, our freehold estate measures, according to the most careful estimates at the General Land Office in Washington, 2,081,647,360. Allow one half for forests and waste lands, and the other moiety will, with skilful tillage, feed and clothe a population two or three times larger than the whole number of human beings now on the globe. What a platform for a republican theatre!

Is it too much to say that the great Husbandman above has planted us here, as christian, moral, reasoning beings, from whose government and good seed a glorious harvest may be reaped in the coming autumn of this Western Nation? Call it weakness or what you please; such is our faith. Hence our cheerful labor to encourage the wise culture of the farmers, whom Providence has so recently located on American soil. If these come to nought, where is the hope of the world? Heaven has kindled a vestal fire on our hills and mountains. It has appointed, not Roman Virgins, but iron-palmed husbandmen to protect, keep alive and ever glowing, the sacred flame. Farmers! you have great and most responsible public duties to discharge. It has long seemed to us that your sterling good sense and honesty of purpose were too little *felt* in directing aright the affairs of your State and Federal Governments. Your Educational, Agricultural and Economical Interests are not so strictly attended to, nor so faithfully studied and promoted as they ought to be, if you would impart to your whole country the highest attainable prosperity. We advocate no untried utopian schemes. We preach not a disorganizing war of class against class. But, we do urge the importance of thoroughly educating, in the largest and best sense of the term, the whole Mind of the nation. From a lamentable defect in mental culture, more than half the hands employed in rural pursuits in the United States, not only misdirect and lose much hard work; but, they render the soil which is tilled, less and less productive, less and less capable, (without long delay or large expense,) of feeding and clothing a population which is ever adding to the number of hungry stomachs and naked backs, by an abiding law of Nature. This exhausting system of planting and farming, is truly a national calamity. Very few good farmers at the North, have any knowledge of the extent and depopulating influence of this abuse of the bounties of God, in large districts of our country.

If the reader attributes this impoverishment of cultivated lands to a "peculiar institution" in that portion of the Union, where the desolating effects of ignorant husbandry are most conspicuous, he will be mistaken in his opinion. Well-educated, scientific planters find no difficulty in improving their estates with such laborers as till cotton, rice and sugar plantations. Educate properly the Minds that direct rural industry, and all the rich resources of American soils, whether north, south, east or west, will be husbanded and turned to the best possible account for the Union as a whole. This is what we most desire; and we are pained to know that so many politicians, who enjoy an ephemeral reputation as statesmen, enact our laws and control all educational institutions, do not understand and care not to investigate this momentous subject.

Suppose the vast public domain of the United States were wisely managed, and the whole of its nett proceeds sacredly devoted, in all coming time, to the wise development of the great Soul and Heart of the American people? What a mine of moral and intellectual wealth lies unsurveyed, unexplored, in the heads of the toiling millions of this land, where the People rule! What is the value of California gold to a Nation of Freemen, compared with sound morality, cultivated reason, true science in every head, and social contentment in every heart? If Heaven had withheld our present known capacity to improve our race, and denied every sense to enjoy all other pleasures than those we share in common with the meanest brutes, then we should be justified in regarding the *animal* man as everything, and the *spiritual* man as nothing. Let each be estimated at its true value. First, deal justly by American Mind, and its power over the physical elements of nature, to consolidate, enrich and elevate our whole population, whether on the shores of the Pacific or Atlantic — whether on the great Gulf of the South, or the great Lakes of the North—will be all that the most ardent patriot could desire.

Our agricultural, mineral, manufacturing and commercial resources, are altogether beyond computation. The danger is, that we shall prove unworthy of blessings, so numerous and transcendant. Unmerited wealth and undeserved prosperity have ruined millions of individuals, and induced the speedy downfall of many powerful nations. As our form of government makes every voter a minister of state, he should study to inform himself in all matters of public policy. A sovereign that reads little and studies less, might do well in some parts of Africa or Asia, but he is out of his *kingdom* in the United States.

The larger the number of immigrants that flock to our happy shores, from disturbed and bleeding Europe, the more urgent is our duty to watch closely all demagogues, and provide ways and means for the settlement and improvement of all new comers. We confidently expect soon the annual arrival of a million of foreigners to reside permanently, and multiply rapidly in this country. It is indeed a land worth coming to; and not a few of the two hundred and fifty millions in Europe have already found it out. Wake up, young man! — prepare yourself to act well *your* part in this wonderful drama. Tell us what can poor, limping Ignorance do, in a race with Science, with its locomotives, its steam-ships and its telegraph wires? Common people fail to appreciate the value of Science, although not a year or month passes in which it does not double the productive power of human muscles, either in the field or the workshop. Study, then, the uniform and unerring laws of nature; which, if well understood, will add four fold to thy happiness as a rational being, and place thy name among the honored of the land.

LIME, ASHES AND GYPSUM.

WINTER is a favorable season, when there is good sleighing to procure such fertilizers as lime, gypsum and ashes from a distance, if it be necessary to go far to find them. As a general thing, when a farmer lives some distance from lime rock and kilns, there is a lack of this mineral in his soil. He does not reside in a large wheat-growing section. Next to good stable manure and the contents of the vaults of privies, ashes, bones, gypsum, common salt and lime are the most valuable food of cultivated plants. Procure and husband these with all reasonable care.

Much as has been written on the subject of saving manure, particularly the liquid excretions of all domestic animals, the matter is still sadly neglected, as well as that of collecting lime, ashes, and other mineral elements of corps. Such neglect is not creditable to those that practice it. At the South, good farmers take great pains to collect forest leaves, as bedding for horses, mules, cattle and hogs. They form a valuable material to absorb urine and add much to the manure heap.

AGRICULTURAL METEOROLOGY

Having discussed in former volumes of this work many subjects, particularly the nature and properties of the organic and inorganic elements of plants, as they exist in soils and the atmosphere, we shall advance a step or two in the volume for 1849; and endeavor to explain more fully than we have hitherto done, several meteorological phenomena, which are of equal importance in the practice and the study of Rural Economy.

Rain and snow-water, dews, and the hygrometric condition of the air, have an important and controlling influence on the growth of all vegetables. The clearing of forests, tillage, drainage and other operations of civilized man, affect the humidity, dryness and temperature of well settled and cultivated regions far more than is generally supposed. The most careful measurements of the volume and velocity of the Mississippi have resulted in establishing the interesting fact, that it now annually discharges from twenty to twenty-five per cent less water into the Gulf than it did twenty-five years ago.

At the meeting of scientific men in Philadelphia last September, Professors Dickerson and Brow of Mississippi read an elaborate report on the Sediment and Water of the Mississippi: giving the results of *daily observations for eighteen years.*

The Mississippi Valley is found to contain a superficial area of very little short of fourteen hundred thousand square miles. The inquiry therefore here suggests itself, what may be the relative difference between the annual quantity of water falling into this valley and the annual quantity discharged out of it by the river Mississippi? It is found by examination of the meteorological register of the late Dr. H. Tooley, of Natchez, that the mean annual quantity of water which falls at Natchez is between fifty-five and fifty-six inches; but as such has been taken at the southern extremity of the valley it may be regarded as an over estimate for the whole area. The mean quantity is therefore assumed to be fifty-two inches, and then by calculation we will have 169,128,960,000,000 cubic feet as the quantity which falls annually in the whole valley, which is within a fraction of being twelve times the quantity which is discharged by the river.

Our own opinion is, that "fifty-two inches" is too high an estimate for the whole area drained by the father of waters. It cannot, however, be less than an average of forty-two inches; so that nine-tenths of all this water evaporates where it falls, in the course of the year, and on the surface of the streams before they reach the lower valley of the Mississippi. Millions of acres of low lands, once long submerged every season, are now dry and cultivated with but comparatively slight assistance from art in the way of embankments: and these such as would not have at all been available against the overflowing effects of former floods and the length of time of their continuance. The river seldom rises to the same elevation as formerly, and when it does it is of much shorter duration, and the waters are almost exclusively confined to the channel of the river, in place of being spread over almost all the bottom lands the whole spring and early part of the summer. All these advantages are progressively but rapidly extending themselves, while the causes remain unsuspected or overlooked, but none the less secure. As a further evidence of the altered condition of this river, we may mention the circumstances, that, in former times, the steamboats, ascending or descending the river, were detained about half their time by dense fogs, while now hardly any such obstructions pervade, so that packets succeed in making their trips to an hour, with no fears of such a retardation. Assuming that the diminution of the waters will continue in somewhat the ratio they have recently done, the time cannot be far distant when all apprehension from inundation will in a great measure pass away. We further remark, as an evidence of change, that the quantity of floating timber or drift wood passing annually down the river has diminished in a far greater ratio than that of the water, so that the aggregate quantity cannot now be over fifty per cent. of that which formerly passed down.

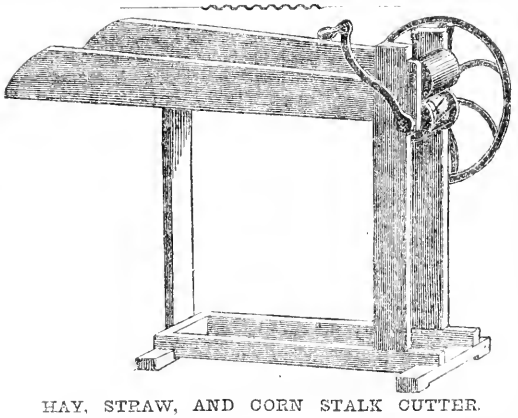
Let us suppose that Europe shall soon send a million of hardy emigrants a year into this magnificent country; and that we shall so deeply and thoroughly till the earth as to make it absorb and retain for the nourishment of plants nineteen-twentieths of all water, to escape into the atmosphere, whence it descended, by solar evaporation through their leaves. What wonderful changes must follow, in the drying and shrinkage of all creeks and rivers in the United States! In its feeble infancy, American Agriculture thousands of miles above Louisiana and Mississippi, is now conferring blessings of incalculable value on those States. Nor will the great Lakes escape the effects of increased evaporation from the felling of forests, deep plowing, and other new influences around all their borders and tributary streams.

In connection with this subject we desire the reader to bear in mind that, any broad vessel set out to catch and hold all the water which falls in rain and snow, and exposed to sun and wind, will be dry from solar evaporation much of the fifty-two weeks in a year. This we regard as an interesting meteorological fact. Another fact of equal importance is, that all or nearly all cultivated plants, like grasses, grains, tubers and roots, contain while growing an average of some seventy-five per cent of their whole weight of water. To supply one's crops with this abundant and indispensable element, and in a way to avoid an excess at any time, is a matter that should be *studied* with the utmost care and diligence. A good husbandman should know how to husband the fertilizing rains, snows and dews of heaven, as they fall on his fields. The water that runs off from plowed land on its surface, is apt to carry with it more or less of the soil. That which sinks deep into the earth and comes out in springs, takes with it, not only salts of lime, potash, soda, magnesia and iron held in solution, but carbonic, crenic, apocrenic, nitric and other acids, and ammonia. In other words, rain-water in passing through soils dissolves out of them both the organic and inorganic (so called) food of plants. *Krene* is the Greek word for a spring; and Berzelius finding two organic acids in spring water, gave them the names "crenic" and "apocrenic," as indicative of their origin.

It is no bad test of the fertility of a soil, to fill a clean barrel with it and see how much of bone earth (phosphate of lime,) gypsum, common salt, epsom salts, potash, and what we call dissolved mold, it will yield to warm rain-water. These being the constituent elements with which Nature builds up all vegetables we deprecate their waste as a national calamity. No matter how deeply they sink into the earth, if they remain in one's field, and rise again to

deep, pervious soil can only be formed by nature or man, in which a great deal of water may be stored up for use in seasons of drouth, by a peculiar mechanical condition of the earth, that permits the atmosphere with its oxygen and carbonic acid, to penetrate the same. Fertility can only result from chemical action and changes in the several substances in the surface of the earth. Without change, sand, clay, iron, lime, mold and plants are alike insoluble, and worthless to feed and nourish a new generation of vegetables. Man must study nature and imitate her example if he will make in a cheap and economical way, a rich soil that can endure protracted dry weather with little injury. On this head we shall have more to say. In closing this article we desire to admonish our readers, that the felling of natural forests has already been carried too far in many portions of the United States; and that excessive tillage in growing cotton, tobacco, corn and wheat for export, is fast *leaching*, *wasting* and *consuming* millions of acres of the best lands in the Union. There is neither wisdom, moderation, nor present benefit in this popular system of agriculture.

We will talk about DEWS and the DEW POINT in our next.



HAY, STRAW, AND CORN STALK CUTTER.

THE above is a figure of Ruggles, Nourse, & Mason's Straw Cutter, to which was awarded the first premium at the State Fair at Buffalo, in September last. Though we are not prepared to say it is the best cutting machine extant, we believe it to be one of the most perfect and durable. The knives are set upon the circumference of the cylinder, and cut against a roller of raw-hide, as represented in the engraving. The manufacturers claim that this machine possesses the following named advantages:

"*First*—The knives being straight, are readily ground or sharpened by the purchaser or operator. *Second*—They can be replaced by a common blacksmith when worn out or broken. *Third*—The knives are made heavier, and attached to the cylinder without gloats or screws; confined at both ends, and supported in the middle in a manner much stronger and less complicated, thus leaving the strength of the knives unimpaired, and avoiding the great liability to twist, cripple, and break. *Fourth*—The manner of attaching the knives to the cylinder admits of their being placed near each other, so as to cut as short as is desirable. *Fifth*—The hide roller, when used with straight knives properly set, will last much longer than when used with the spiral knife."

Some of the machines are made large and strong, and rigged to go by horse power. They vary in price from $10 to $28, according to size — and may be obtained at most of the Agricultural Warehouses. RAPALJE & BRIGGS, of this city, have recently received a very large and superior assortment.

A FABLE, AND ITS APPLICATION.

BY T. C. PETERS.

A RAIN DROP during a shower crept under the cornice, and stood looking very demurely at his fellows, who went laughing and dancing along in the gutter, as full of frolic as a flock of lambs in June. "Why don't you join us?" said a gay fellow, as he went leaping past. "Can't do any good," said the drop; "besides, there are enough of you without me, and I don't see how I can make myself useful in that great black cistern you are all tumbling into. I shall get along by myself and can do a great deal more alone than mixed up and lost as I should be in this great stream."

While thus musing the shower ceased, the bright warm sun came out and in a moment drank up our little drop.

Gentle reader, you and I are but drops in the shower of human life. If we mingle in the great stream, and contribute our mite to add strength and force to the current, to swell the brimming banks until they are overflown, and the fertilizing properties of thought, experience, and observation are spread upon the surrounding country, we are useful, and thus fulfill a portion of our duty to ourselves and to our fellow beings. But, if we stand aloof, unwilling to be lost amid the flood—that ceaseless flood that ever pours on, and can never cease — doing nothing, because we do not at the moment see the good that may come of it—saying, as is so often said by you and others, "somebody else will do it better than I can, therefore I will not bother with these things," we do but represent the little drop, and evaporate, leaving no trace behind.

In agriculture more than in any other pursuit, improvement is only to be made by slowly and patiently gathering facts, and these facts are only to be obtained over a large extent of country.

The experience of every farmer has something that is important to some other farmer, and if each could have the benefit of the experience and judgment of all, the sum of knowledge would be great beyond all that is now known, and greater and better improvements would be the result. For, as you increase knowledge you increase man's capacity for greater knowledge, greater improvement.

Alone, my friend, we are but solitary drops; but if we would do good, we must mingle together and make a strong force. I do not intend to be found under the cornice, and you see me now already mixed up in our friend MOORE'S great cistern, with a great many other and better drops than myself. The sun, when he comes out, will not find me alone. I shall, life and health permitted, tumble into this cistern through the year, carrying therein whatever I may gather up that I think can be of the slightest interest to you. And I shall expect to meet you here also. And I must ask you further to do me the favor to introduce me to all your friends and neighbors. Let us do all we can to make the Genesee Farmer worthy of the farmers of Western New York; and if we do that, it will be worthy of any body. "*You will write as much as I do.*" Agreed. Better I know you can if you will only try; so keep your word, and until we meet next month may you be deservedly prosperous. *Darien, N. Y., Dec.*, 1848.

Those who like the *application* of the above, are earnestly invited to comply with its appropriate suggestions, by furnishing facts, results of experiments, observations, &c., to add to the value of the Farmer.

MEMOIR OF ZADOCK PRATT.

One of the objects to which this journal is devoted, is the preservation of memorials of eminent farmers, as well as of improvements and discoveries in agriculture and the domestic arts. The example of intelligent industry, courage and integrity, and of perseverance overcoming the disadvantages of time and place, can never be without its use to the rising generation. The best and most useful men are by no means necessarily found among the learned professions, or in the field, or the cabinet; but are quite as often seen working their way in the world among the patient sons of toil. Unambitious of popular applause—anxious only to discharge honorably and faithfully the duties of the citizen, the patriot, and christian—such men are found always at the post of duty—improving and renovating society instead of demoralizing or corrupting it, and by examples of enterprise, integrity and perseverance, ever pointing onward to success—scattering blessings all around them. Those whom the world, in its heedlessness, calls great, may and do for the most part occupy the vantage ground of public station, perhaps as often from the force of circumstances, as real merit, and too many are pronounced honorable and worthy, merely from the reflected honor which that station may happen to confer. But there is many a plain farmer and mechanic, in his quiet and serene home, among his neighbors and friends, who, if brought out by opportunity, is as truly a great man, in all the elements of real worth, as the proudest politician or statesman in the land. He is always a reliable man, because less liable to be deceived, or to deceive others. Go any where among an intelligent farming community, in any well cultivated region of our country, and you will find this to be true. They produce—they create—they add to the national wealth, instead of diminishing its resources—and are in fact the conservators of our political and social system.

There are few of our readers who have not heard of the great tanner, Zadock Pratt—distinguished for his enterprise and success in establishing and conducting for twenty years the largest tanning establishment in the world. We have more than once alluded to this gentleman in our pages, and propose now to speak of him principally as a Farmer, in which occupation he has been equally successful, as in every enterprise he has ever undertaken. Of his career as a legislator, though it has been honorable and eminently useful, and attended with practical results of which any public man might well be proud, we have not space to give a particular account; but we trust the time is not far distant when a full biography will be written. For the present we must content ourselves with the following brief summary.

Col. Pratt was born on the 30th of October, 1790, at Stephentown, Rensselaer county, New York. In selecting him as the subject of this notice, we have been actuated by a desire to do honor to that enterprising spirit which has marked his whole history, and which shines forth as an illustrious example, worthy of being adopted by the rising generation. The life of one practical man, like Franklin, Whitney, or Fulton, it has been well said, is of more real value than all the mere heroes the world has ever produced. These men rose from the masses, and as you trace their history you see how, by indomitable energy and perseverance they attained that celebrity which the world admired. Tribute has been paid in every land to their names, where the light of improvement and science has found its way.

Col. Pratt has evinced from his very youth, a spirit of industry and energy of character, that to all who watched his early history, gave evidence of the success which finally crowned his efforts. The establishment and successful prosecution of his extensive tannery among the mountains of Greene, have spread far and wide his fame, as one of the most intelligent and successful mechanics this country has ever produced. The delightful and prosperous village in which he lives, bears evidence of his judgment, liberality, and public spirit, which few other villages in our country can boast of. But we have not space to extend our remarks in relation to his successful prosecution of his mechanical pursuits.

We would allude briefly to him in the capacity of a farmer. He has often been heard to remark that he owes his early love of industrious occupation to the counsels and example of his mother. And how seldom is it that any man has risen to great distinction in this world who has not owed that elevation to a kind and faithful mother, who, at the first dawn of the intellect, seized the favorable moment to impress upon it those all-important truths which were matured with the growth, and decided, under the blessing of Heaven, the destiny of the child. But to return—this mother was a woman of remarkable energy, and early taught her son the importance of industry and integrity—the duty of active exertion in life—the necessity of economy to those who would be successful, and to those who would achieve the great aim of living, which is to do good and be useful. He was also enjoined by her to observe the Sabbath steadily, and avoid the odious vice of gambling, which he has through life been ever careful to do, as well as to impress the same great moral lessons upon others—requiring from all in his employ, rest for man and beast on the Sabbath.

Every one acquainted with the manner of conducting mechanical business in the country forty years ago, knows that the mechanic relied almost as much upon the products of his little farm, as upon the income of his shop; and where the population was not large, and capital not abundant, many of the most successful men were those who steadily pursued this two-fold occupation. Col. Pratt, while yet a lad, was thus initiated by his father into all the mysteries of farming, and learned the use of the axe, the scythe and the sickle, and to love the pursuit as congenial to health and independence, and the one which, in all countries, must be the great calling of the masses. When twelve years of age, he helped his father clear ten acres of new land, and in the following year enjoyed the pleasure of aiding in gathering the welcome harvest of wheat. This was in Middleburgh, Schoharie county, upon what was called the Scotch Patent; but the improvements they made were of little permanent advantage to the hard working tenants, for their landlord (Livingston,) some two years afterwards ejected them, taking away the farm and consuming all their little substance in

* In relation to this it may be sufficient to say, that in about twenty years, at his tannery in Prattsville, the most extensive in the world, about 1,000,000 sides of sole leather were manufactured—the yearly expenses of which were about $300,000, and the total expenses about $6,000,000. This immense business has been conducted we understand, without a single instance of litigation. Colonel Pratt, a few years since, established in the village of Prattsville a Bank with a capital of $100,000, which has proved of great service to the community, doing a business annually of one million of dollars.

costs of litigation:—and this incident with its hardships determined Col. PRATT never to have any thing to do with leaseholds and litigation. Removing in 1803 to Windham, (now Lexington,) he helped his father clear six acres of land for a crop, where there has since grown up a fine grove of young timber. Here during the proper season he was employed in that pleasant occupation, now well understood and successfully practiced, in many parts of the country, of making *maple sugar*: an article then used in the new settlements, and almost the only sugar used in the majority of families. There is still upon the old homestead a stone wall of some fifty rods in length, which Col. P. feels a little pride in having assisted his father to build when quite a boy.

In a newly settled country, the advantages of of schooling were very few, and Col. PRATT gained part of his education by working out of school for his board. Beginning life by working out upon the farm and in the shop, or tannery — for several seasons in the summer months engaged in mowing at seventy-five cents per day, and in the harvest-field at $1 a day—he had few of the advantages which young men of the present generation have; but he mastered enough of the English branches to be thorough in business, and his success in life is the best possible commentary upon the value of his judgment and acquirements.

From the commencement of his tanning operations in the village which now bears his name, all his energies were necessarily directed to the success of that great enterprise. He saw, however, the importance, in a pecuniary view of using none but the best teams in his multifarious operations of hauling bark and transport of hides and leather to and from the Hudson; and very soon commenced and steadily improved a fine farm in the outskirts of his village. Here he gave great attention to rearing and improving the best breeds of cattle, and introducing into that region of country the very best bloods of that noble animal, the horse. He has had during some years upon his farm nearly a hundred head of cattle, and has taken a deep interest in all the improvements in the business of farming, believing that upon its success depends in a great degree our national prosperity. In one single season he erected upon his farm in Greene county, nearly five miles of substantial stone wall. On one of his farms, by a judicious system of draining and manuring, lands which yielded when he took possession of them, only one ton of hay per acre, were brought to an average yield of three tons. This, too, under his own personal labor and direction. Many other improvements of a like character have been the results of his labor as a farmer. And it may be said that in his extensive tanning and building operations he has been indirectly the greatest clearer of lands in this country—having consumed the bark from 10,000 acres of forest land, which caused some 7,000 acres to be cleared.

As success crowned his industry in mechanical pursuits, he turned his attention to the improvement of the village which had begun to grow under his liberal auspices. He was successful, and both friends and neighbors also flourished. More than one hundred of the houses were erected by Col. PRATT himself, and the churches and other public edifices, are evidences of his liberality, all of which received liberal contributions from his own funds, and are still as liberally sustained. In the disposition of building lots, he was always liberal to the poor, frequently aiding them in the erection of their dwellings.

He became early a member of the Greene County Agricultural Society, and boldly advocated the elevation of that important class of the community engaged in agriculture—the bone and sinew of our population. His fellow citizens having witnessed his energy, perseverance and public spirit, called him from his retirement to the councils of the nation. His election to Congress took place in 1836, by a majority of more than 2700. While in Congress, he did not forget the interests of the farmer. He originated the proposition which was adopted by Congress, providing for the introduction, through our Consuls and Naval Officers of seeds and plants from foreign countries for gratuitous distribution, and which if carried out, as it deserves to be, will benefit largely our country. Already, through the attention of the Commissioner of Patents, through whose office the distribution takes place, the most salutary results have been secured.

While in Congress he moved a bill directing that a portion of the Smithsonian Fund be appropriated for the improvement of Agriculture and the Mechanic Arts. To what nobler end could this magnificent gift have been devoted and in what manner could the great mass of our population have been so much benefitted as by this disposition of these funds?

In 1845 Col. PRATT, on his election as President of the Agricultural Society of his county, delivered an address which evidences the same good sense which marks his career in every other station he has been called upon to occupy. As a plain, practical, useful man, where can we find his superior? A few extracts from his addresses are the best comments we can give of his peculiar fitness for the station to which he had been called:—

Gentlemen:—You have chosen for your President one who does not boast the graces of eloquence, and you cannot, and do not expect from him, on this occasion, a display of fine words and happy fancies, but rather a plain statement of true and practical ideas. You are working men, and you have chosen a working man: and it is on this account that your choice confers honor upon me. It was in Congress, where my strength has always been given to the protection and advancement of American labor, that I heard of this new evidence of your kindness and confidence: and I thank you for it, and for thus affording me another opportunity, and a more honorable place than the Halls of Legislation, to express my high sense of the dignity of those occupations, the interests of which this Society is so happily designed to promote. I need not say to those who know me, that through life I have practiced and encouraged industry, and exerted my influence in every sphere, (according to my ability,) in promoting the true welfare of my fellow men. I have acted upon the principle, and so have you, that it is not mere physical or mental structure that makes the man, in the best sense of the word, but the mode of life. It is not to have a head—a heart—an arm—a human body and soul, that makes one worthy of so noble a name; but to give the wisdom of that head—the strength of that arm—the combined energy of all the powers to constant and useful industry. The hard-working farmers and mechanics of our country are its glory and strength, their labors have produced wealth; their honesty, their patriotism and its faithfulness to the institutions of liberty, have given it its standing among nations; and in times of danger, their strong arms and firm hearts are its safeguard. He is not the Lord of the soil who calls so many acres his own, yet has no power to use them; but he, rather, who plows and sows, and reaps, and scatters abroad over the country the products of the glorious harvest, to feed the hungry and clothe the naked. He is not master over earth's treasures who has the bare title to a mine; but rather he whose skill and industry

raises the ore—reduces the metal—moulds it into countless shapes of usefulness—and sets to work the gigantic engine with its thousand hands. Farmers and mechanics, if faithful to their duties, are men in the full meaning of the word—useful men—men that the world cannot do without. Their occupations develope all the faculties, and produce "sound minds in sound bodies;" they accustom men to rely on their own strength, to love labor, and to feel the independence of other men, and that contempt of little difficulties which are the foundation of true greatness of mind.

These, fellow-workingmen, are the occupations, this is the land, ours the institutions, and our fathers the stock which have produced the noblest race now living; and shall, if we value and use our privileges aright, yet exhibit human nature in its highest standard of perfection. We have resources and advantages possessed by no other nation, and a people better fitted than any other to develope these resources and improve those advantages. We need little aid from abroad, for we have every thing at home; we need little teaching from strangers, for we know best what is best for ourselves. According to my observation, farmers are too easily persuaded to look to other states and countries for the means of increasing the products of their fields, and improving their flocks and herds. We are not in England, nor at the north, nor at the south; and neither English, northern, or southern improvements are what we want. We want improvements of our own, suited to our own wants and position, such as none can make for us as well as we can make them for ourselves. Is it not better, as a general principle, both as to animals and vegetables, to choose and improve the best of such as are already adapted to our climate and soil, than to be shifting and changing, in the vain hope of arriving, by some short cut, at such results as God intended we should accomplish only by close attention and the sweat of our brows?

After some very judicious remarks as to the kind of horses best suited to the wants of the farmer, he says:—

What I have said as to horses being improved on the foundation of our native stock, applies with equal force to cattle. In every settlement, a stock of good cattle is of the highest importance; and every sagacious farmer will learn to choose, for breeders, such as promise best for his particular object, whether it be butter, beef, cheese, or labor; and he should study this subject with a deep feeling of scientific interest, as well as for the sake of gain. Let his first care be to put aside the very best progeny of his stock, and never permit his dearest friend to cast a wistful eye on them, nor be tempted by any price to sacrifice them to the butcher's knife. If he has a favorite cow, of the real fill-pail breed, let him reserve and turn out that one of her calves that most resembles herself, before it grows old enough to be sold to the butcher, and always guard it with special care.

We read of premiums being given to large imported cows that have yielded some thirty quarts a day; but every dairy woman will tell you that it is not the cow that gives the largest quantity at a milking, that makes the best one in the long run. A better one still is she that keeps on through the year, the same in winter as well as summer, let the food be short or long. Run fast is a good dame, but hold fast is a better one.

In the agricultural journals I have read an account of a middle-sized country cow: I refer to the celebrated Oaks Cow, bought out of a drove in Massachusetts, for a mere trifle. Her history illustrates two things worthy of note. First, what we can obtain from the best of our old breed; and secondly, how much depends on good feeding.—And just as it was with the Oaks Cow, so will every man find it with his farm. If he won't feed his farm, and that often and well, he need not expect it long to feed him. Always taking out of the meal-tub, and never putting in, will soon come to the bottom, as poor Richard says. But to return to the Oaks Cows, that did so much honor to the name of Caleb Oakes: it is stated on the most unquestionable authority, such as satisfied the Massachusetts Agricultural Society, that in the first year, with ordinary keep, she ate twelve bushels of corn-meal, and then gave 300 pounds of butter: the next, 35 bushels, and she gave more than 400 pounds; the next year she had a bushel of meal a week, and all her own milk skimmed, and then she gave, from the 5th of April to the 25th of September, the day of the show, 434 pounds, besides suckling her calf for five weeks. She was exhibited, and deservedly took the premium on the last mentioned day; and will carry down her owners name, with credit, to posterity, as long as Oaks grow.

* * * * * * * * *

Before I close these remarks, let me suggest (being myself a father, with some opportunities of observation) that you should incline your sons, above all things, to prize the honest station, however humble, which is gained by personal industry, and enjoyed without dependence on the capricious breath of party, or of any mortal man in power.

Any honest pursuit will be esteemed by a young man of independent spirit and honorable ambition, in preference to being seen lounging in the anti-chambers of public departments and the lobbies of the Capitol, a suppliant for the precarious emoluments of office. Let it ever be deemed a high honor by those who are qualified to be called on to serve the people; but when you see your son, made in the image of his God, inclined to quit the handles of his plow, or throw down his hammer, and sell his birth-right for a mess of pottage—put into his hands the homely fable of the dog and wolf, which inculcates the love of independence as a boon above all price.

It is the independent spirit of our people that ranks them above all other nations of the earth: because each man has in himself the ability and resolution to accomplish his ends, of and by himself. It is on this account that an American can be cast penniless and alone in any corner of the earth, and amongst any people, and instead of wasting his life out a poor and despised stranger, he will summon his energies and bear himself like a conqueror. Whatever the natives are doing, he does it better than they: he makes the most money—exerts the most influence, and soon becomes a leader and a prince among them. From soleing a shoe to leading an army, he shows himself in all things capable, in all things superior; and having accumulated sufficient fortune for himself, and honor for his country abroad, he returns to lay at her feet the spoils of other lands, and enjoy in his native home the society of his equals. What does such a man want of official patronage or protection? He scorns to eat the bread he has not earned, or to enjoy honors he has not deserved.

The farming interests of Greene have been greatly benefitted by his exertions while President of the Society. A new impulse has been given to the cause of Agriculture, and long will the County remember the zeal, the energy with which he devoted himself to the advancement of this all-important interest. During his presidency he contributed in various ways over $500 to the funds of the Society, to be expended in judicious premiums; and the effects, as might have been expected, have been most salutary in increasing and greatly extending the usefulness of the Society.

In presenting to the Society in 1845 the sum of $250 to be added to the amount of premiums to be given, he remarked—

Peculiarly adapted as our country is to pasturage, and conveniently situated for sending the productions of its soil to the great emporium, which furnishes always a ready and profitable market, I confess that I should like to see a liberal portion of the premiums distributed by our Society for exciting emulation in the making of butter and cheese, as well as for encouraging attention to the best breeds of cattle suited to our highland regions. The name of Orange or Delaware county is a creditable passport for butter all over the Union; and is there any good reason why the dairies of Greene county (even to the summit of the Catskill mountains) may not be made to compete with old Orange or Delaware, or any other county, in the articles which it sends to produce market?—and for raising hardy horses, the highland is superior to any other. No branches of agricultural industry are more profitable when properly pursued, and let it be our aim, as a Society and as individuals, to stimulate attention to their advantages.

Without wishing to obtrude my opinions on men more familiar with the subject, I would respectfully suggest that the premium list be arranged so as to excite more attention to the improvement of our native breed of cattle and horses, as probably calculated to weather our climate better than some of the imported breeds—though I would not be understood as underrating the very valuable qualities developed by careful experienced culture in the management of live stock.

The Society on receiving this donation, gave this much merited testimonial to their fellow citizen:

Whereas, the Hon. ZADOCK PRATT, with his characteristic liberality, has presented to this Society the sum of $250, and this donation furnishing another evidence (among numerous other instances) of his good will towards, and attachment to the interests of the Society, as well as of his generous disposition, and a desire to promote all useful and laudable purposes and pursuits. Therefore—

Resolved, That the thanks of the Greene County Agricultural Society be presented to the Hon. ZADOCK PRATT, for the munificent gift, together with the best wishes of the Society for a long life to him of public usefulness and honor, and for his individual happiness.

He was three times elected President of the Society, and declined, at their meeting in 1847, a re-election. He addressed some appropriate remarks on that occasion, to a large assembly of farmers at Windham, at the Annual Show, and congratulated them upon the improved condition of agriculture in our state. He spoke of the energy and zeal with which the farmers of Greene had come up to this great festival —"As lords of the soil, with cheerful faces and hearts overflowing with gratitude at their privileges in this land of the free, where, by the labor of their own hands, they earned their own bread — members, too, of a government which derived its powers from them — what was to prevent them from being happy? This day is indeed the FARMER'S JUBILEE — a day of thanksgiving for the abundant products of our land, as well as for life, liberty and happiness — a day to rest from the toils of labor, unbend the bow, compare notes with each other, extend acquaintance — in short, the great *Intellectual Feast* of the farmer."

After introducing the orator on this occasion, (Mr. JOHNSON, of Albany,) he held up to the view of the audience a silver medal awarded him for the best *hemlock tanned leather* by the American Institute. "Every man," said he, "possesses some pride, and it was well it was so, else why were we here to-day? The great object of life is *to be useful* — and why then should we be as misers, who keep their money out of sight, to do no good to themselves or to any body else. 'Tis for this reason I show you this testimonial — how else would you know it?"

The Report which Col. PRATT made to the State Society of the proceedings of the Society of his county, during the year 1847, which will be found in the Transactions of the Society, is among the noblest and most useful reports in that excellent volume. It gives an extended account of the history, condition and resources of the county, and may well serve as a model for other societies in making up their reports.

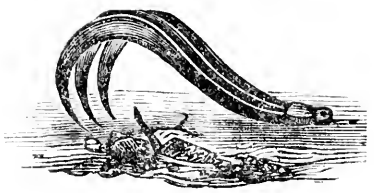
We cannot better conclude this brief article, than by copying the following from a notice of Mr. PRATT, which we find in the Knickerbocker Magazine, for January, 1847:—

While in Congress, Mr. PRATT devoted himself to the *utility* of legislation; and his example certainly demonstrates the advantage of sending men of practical business habits to our national council, and shows 'how much that is really important to the people may be performed by one man, when he is more anxious to *act* than to *speak*.' His speeches were confined to plain statements of important facts which he had thoroughly investigated. It is to Mr. PRATT, as a member of the congressional committee on public buildings, that the capital is indebted for the beautiful General Post-Office edifice; but for his exertions, it would have been erected of the porous stand-stone which in process of time crumbles like wet gingerbread, instead of the admirable marble of which it is constructed. He was an early and ardent advocate of the cheap postage reform; of the improvement of the public grounds at Washington, he introduced the resolution for the Branch Mint at New York; for the publication and engraving of all the important inventions patented at Washington, to be distributed throughout the country; to require, once every two years, an inventory of the public property in the hands of public agents; for the establishment of a Bureau of Statistics; and various other important measures, which we have not space to enumerate, being over fifty in all. Indeed, the reports made to Congress by Mr. PRATT cover more than a thousand pages, during his career in that body, to which he declined a re-election, in an able address to his constituents, giving a faithful account of his stewardship.

At first a poor boy, yet always true to the "dignity of labor;" energetic and persevering; living *with* and not *upon* his neighbors, as he advanced in means; liberal and true-hearted, in private as in public life, Mr. PRATT presents an example which we hope will be lost upon no young reader of these pages. We are glad to know that he is still in the prime of life, and in the full enjoyment of his bodily and mental vigor; a fact, indeed, which is sufficiently evinced by his portrait, which combines, in no ordinary degree, the appearance of health, self-possessed dignity, firmness and kindness. In looking at this picture, in hearing the original converse, and in reading the sketch of his life, we have been confirmed in a long-settled belief that that man is scarcely half-educated who has not in his early years had something to struggle for, and who has not at some period of his life lived among "*the people*" in the country. There is scarcely one of our most eminent public men whose private and public history is not an illustration of this undeniable fact; and it is a fact full of encouragement and hope to the toiling, self-denying, self-respecting country boy.

In whatever position we view the character of Col. P., whether as a farmer, tanner, legislator or banker, he has been eminently successful, without impeding the progress of others — developing those rare qualities which are so happily united in him, of sound judgment, prompt and efficient action and execution and far reaching sagacity, blended with the kindest and most benevolent impulses. Such is a brief history of one who has thus far lived only to do good, and whose life we trust will long be spared to bless his country and the world.

We close by mentioning the highly honorable fact that Col. PRATT is the first self-taught farmer and mechanic in our country, who has received the honorary degree of Master of Arts, from one of our highest literary institutions — an honor richly merited by him, and reflecting credit on the distinguished institution (Union College) by which it was conferred.



ROOT AND BUSH PULLER.

THIS implement is very effective in tearing out stools or clumps of small bushels, which grow in wet, boggy land. It is made by inch and inch and a half bar iron, with two, three, or four prongs, weighing from twenty to forty pounds. The ground is first, if the roots are large and thick, loosened around the bushes, when the claw or pull is fastened to one side, and a pair of oxen attached by means of a chain to the implement. At the word given, the bushes are torn out by the roots. One man, with a smart and well broken pair of oxen, will thus do the work of ten men. Price from $2 to $5. Manufactured by Ruggles, Nourse & Mason, Boston, and for sale at the Albany and other Ag'l Warehouses.

AGRICULTURAL ASSOCIATIONS.

BY AGRICOLA.

The importance of Agriculture as a pursuit is acknowledged by all, although but few, comparatively, appreciate it as they should. Its successful prosecution requires mental as well as physical energy, and it is not among the least of the favorable indications of the times, that the importance of education adapted to a progressive and enlightened system of farming, is exciting public attention. My object at present is to offer your readers some considerations in favor of Agricultural Associations, as connected with improvement.

Since 1841 State and County Societies have been in operation in this State, and the question arises, "Have they been the means of advancing the true interests of the farmer?—What is the tendency of these Societies?" The farmers in any county, as a body, have few opportunities of mingling together, of exchanging opinions and learning the results of the efforts of each other's mode of operations. Once a year, however, through these associations they are brought together: every improvement which has been made, every experiment tried, becomes the subject of conversation, and many a farmer has returned to his farm, with new incentives to action, and with new resolutions that his course shall be so changed as to advance the interests entrusted to him. A spirit of emulation is aroused, and the appearance of the farms in many of the counties of this State, affords the best evidence that a spirit has been aroused to some good and valuable purpose. The mere assembling together of a body of intelligent farmers, for a common purpose, relating to their profession, cannot fail to arouse a spirit of inquiry in every right mind. The importance of his profession is more deeply impressed upon the farmer—and he feels that he has interests at stake that take a far wider range than the limited spot where he dwells.

But the influence of these associations are by no means confined to their annual meetings. The publication of their proceedings—the valuable articles from practical farmers which find their place in the Agricultural Journals of our country, are exercising continually a most salutary influence. Every new discovery made by the farmer is, through his association, or by himself, directly spread before the public—and the example of one man, it may be, in this direction, will in the end induce many others to make new and vigorous efforts to advance the cause.

Can any one doubt that the improvements in the various breeds of animals in this State, which to the most common observer must be apparent, have not arisen in a great measure from the influence which Agricultural Societies have exerted. What has induced our farmers in so many instances to adopt an entire new system of farming, by which their products are increased, their farms cultivated in a much neater and more systematic manner? Is it too much to say that here, too, the influence of these associations has been felt? Have not these Associations done much for the improvement in the cultivation of fruit in our State—a branch of the farmer's business of no ordinary importance? The experience of the year which is now past, so far as the information has reached the writer, has proved most bountiful in proof of the value of these societies. More and deeper interest is apparent among all classes of community, and the Annual Shows are now the holidays not only of the farmers and their wives and daughters, but of every class in community. How few indeed can be found, who do not desire to have it understood, that they take a deep interest in the success of the farmer. Many professional men and merchants can be found in every village in our State, who delight to give attention to the cultivation of fruit, and to appear as competitors at the shows, and thus plainly indicate that they have been made to feel that the farmer's pursuit is one of no little importance.

There are many other considerations which are apparent to every one, which might be urged, but those already adduced are sufficient to satisfy your readers of the importance of these Associations. Shall they, then, be sustained? Will the farmers more generally come up to their aid, and give their influence and exert themselves to extend far more widely their benefits, and make them, in every respect, what they should be? These are questions which come home to the bosom of every farmer, and may I not ask that each ponder them well, and let them receive the attention which they deserve.

Let no one imagine that I undervalue the labors of the Agricultural Journals of our country. I most cheerfully award to them great merit. They have done nobly for the cause, and I could wish that they might find a lodgment in *every farm house* in our land, instead of a comparative small proportion, as they now do. The language of the editor of one of these journals at the West, a journal that is freighted monthly with blessings for the freemen of that new world, expresses much on this subject. After giving a very interesting account of the Show of the State Society at Buffalo the past season, he says:—"I am confident, since being here, that this Society does as much as any one thing, if not more, to keep alive the cause of improvement. If it should be said, that its influence is not equal to that of the Agricultural Journals, I will reply that the Agricultural Journals *are themselves sustained by it.* Could such an institution as this, or even a dozen smaller ones—well distributed—be kept in vigor, in the region of circulation of the Prairie Farmer, its circulation would be quadrupled, if not more, in three years."

Such are my views, and I ask, do they not commend themselves to every mind, upon a moment's reflection? If then you would encourage improvement—if you would sustain liberally the Agricultural Journals of the country—if you would do most for the cause which I doubt not is dear to you—encourage and sustain the Agricultural Associations around you, by your own personal efforts, and by encouraging your neighbors with you to go forward and sustain them and increase their influence and their usefulness.

Never grow anything carelessly. If it be worth growing at all, it is worth growing properly. Jerusalem Artichokes and Horseradish are both treated ill, but there is no comparison in their quality when treated as weeds, and when cultivated as they should be. Both ought to be planted in clean ground every year, though horseradish is better two years old or three; and as they come ready, clear the ground of them. Artichokes may be cleared out once a year.

Never buy any quantity of seed without knowing the party you buy of; and before you depend on it for a crop, put a hundred grains in a hot-bed, and see what proportion is alive and what dead.

WIRE FENCE—MODE OF MAKING, EXPENSE, ETC.

BY MYRON ADAMS.

MESSRS. EDITORS:—Having lately completed twenty-four rods of wire fence, and knowing that many farmers intend building such fence if it is found to answer a good purpose, I am induced to give a detailed account of it, that others may profit by my experience.

In the first place I would premise that this fence extends from my house (which is situated on a considerable elevation,) to the highway, and is therefore more expensive than ordinary fences upon the farm. At each end of the fence I set a large cedar post three feet in the ground, and brace it firmly in the direction of the fence. The brace is about eight feet long, and extends from the top of the post to a large stone placed firmly in the ground. Two other cedar posts are placed at unequal distances between the outside posts, on account of the irregular descent of the ground. All the other posts are of band iron 1¼ inches wide, ¼ inch thick, and placed one rod apart. Intermediate posts are placed between these, extending only to the fifth wire, and made of half-inch band iron. All of these posts are punched with holes for the wires to pass through. The long posts pass through large flat stones and are clinched on the under side. These stones are firmly bedded in the ground. The posts should be fastened in these stones by pouring around them melted lead or brimstone.

The wires used are Nos. 10 and 12, and I am confident these are the best sizes where a strong fence is required. In building, I commence by running the upper wire through first, which is four feet from the ground. The second wire is ten inches below the upper, both of which are of No. 10 wire. The third wire is eight inches below the second and of No. 12 wire. The fourth wire is six inches below the third and of No. 10 wire, and so alternating the two sizes of wire to the bottom. The distances of the remaining lower wires apart are 5, 5, 4, 4, 4, inches. The wires, after passing through the lower post, are fastened firmly, which I did by passing them through a strap of iron and coiling the ends.

I don't know that I can describe the manner of straining the wires intelligibly, but I will try. At the upper end of the fence, after the wires have passed through the post, they also pass through a plank of the same width and height. Each wire is then passed through a roller 1½ inches in diameter and 6 inches long, having one end tenanted for a crank. A board of the length and width of the plank is placed upon these rollers. After each wire is strained by turning the rollers, a pin is passed through the board and roller into the plank, which fastens them firmly. The wires will contract some in cold weather and should not be drawn too tight, at first.

As to the expense, I can not be as definite as I could wish, as some of the wire purchased was too small. I have used about 110 lbs. of wire, costing $9,50. Twenty iron posts at 6 cts. each, $1,25; 20 short posts at 3 cts. each, 60 cts; 4 cedar posts $1, making $4; painting $1—making an amount of $16,35.

Since the fence was completed I have had it broken through once by an ox racing with a horseman.—I have found that the wires break only where the ends are looped together. I have since joined them by flattening the ends, laying them together and winding them for four inches with a small wire. This is the manner of joining them at the Niagara Suspension Bridge. The wires of this bridge are boiled in linseed oil, which forms an impervious coating, and probably toughens the wire.

As to the strength of the fence, I think it sufficient to withstand any ordinary pressure. Wires of the same size at the Suspension Bridge are each strained to a tension of 1500 lbs. The great objection to this fence, in the minds of many people, is its being invisible. This is why I like it, as it does not mar the beauty of the landscape.

In conclusion I would say that I like this fence, because the winds make no impression upon it—no snow banks form beside it—it occupies no space—costs less than the painting of a good board fence, and, although invisible, looks beautifully when the ground is covered with snow; and as to its durability, if wire bridges will endure, surely wire fences will last an age. *East Bloomfield, N. Y., Dec.*, 1848.

SEEDING WITH CLOVER.—LUCERNE.

BY F. W. LAY.

MESSRS. EDITORS:—As this is the time of year in which farmers are, or at least should be, making calculations and plans for the coming season, it may not be amiss to state one fact in relation to seeding with clover.

I believe it is not generally known among agriculturists that when wheat is sown in the fall with one plowing, as in wheat after oats or barley, or a clover sod turned over, that clover will not grow and live if sown on the ground in the spring after. It will vegetate and seem to start well, but will soon wither and die. I have noticed this in repeated instances, both among my own crops and those of my neighbors. Why it is, I leave with those who have more time to examine the subject to determine. (Can't Dr. LEE tell us?) I think this of considerable importance to be known, as many lose not only the trouble and expense of procuring and sowing the seed, but are also disappointed in their calculations of crops and rotations. It may be that on some soils and under some circumstances clover may grow, but in my observations for the last six years I have never known it to come to any thing.

I see by the last Farmer that you think Lucerne can be cultivated and made profitable. Have you ever seen it tried to any extent in this country? Some time since I visited the farm of Mr. ROBINSON, in Hartland, Niagara county, an English gentleman, and one of the best farmers and most successful experimentalists that I have ever seen. He told me that he had considerable experience with Lucerne, both in this country and in Europe, and had entirely abandoned it as not adapted to our soil and climate. I should like to see statements from any person who has tried it extensively, together with the result.—*Greece, N. Y., Dec.*, 1848.

DRAIN all your lands, that the surface may be laid level. Never resort to open or surface drains, if you can help it; they create much water, especially in grass lands. Some meadows are absolutely spoiled by surface draining.

GROUND that is to be vacant in winter time should always be left rough or in ridges. The more the frost can penetrate it, the better it is. If the whole depth of a spade could be frozen through, it would be as good as a coat of dung.

PEAT MUCK, LIME, PLASTER, AND ASHES.

BY S. BARRETT.

MESSRS. EDITORS: — Having a little snow, and wishing to improve the "sleighing," (though rather out of season,) I have commenced hauling muck, for the purpose of increasing the manure heap.— I think I have a pretty good supply of the raw material. Some twenty rods from my barn I have a pit of muck. It covers about three-fourths of an acre of surface, and is from two to six feet in depth. It is of a dark brown, when thrown up, but most of it turns black on exposure to the air.

I had a man from the "land of bogs" to throw it up for me. He cut a large ditch across two sides of it, which answers the double purpose of bringing up the muck and draining the water off, so that the remainder will bear good grass. Some of it, he said, looked very much like the peat they burn in the "onld counthry." At the bottom, it appears to be composed mostly of leaves; their form is very distinctly to be seen, but is very rotten. How long these substances have lain there it would be difficult to conjecture. Trees of two feet over or more have grown upon the ground.

The properties of this muck, I suppose, could not be ascertained without a chemical analysis; but its effects on lands I intend to test in various ways, and after a careful series of experiments, you may expect to hear from me again. To-day I have thrown some in my hog-pen and put some by my horse stable; and when our winter gets a little *bigger*, and I have a little more leisure, I shall put a larger quantity in my barn yards, and let the cattle, sheep and hogs have the pleasure of mixing it well with straw and litter.

And now I want to put in an inquiry or two, which is the object of this communication. It is about the use of lime, plaster, and ashes. I know not when nor how to use lime; my land I think evidently needs it, especially for the production of wheat. But I have seen some statements of lime being used in compost, where it was a positive injury. As for plaster, is it better to put it into the heap, or to sow it on the land? And leached ashes, whether a farmer can, with profit, draw them four or five miles?—and if so, whether he had better put them in the yard, and then load and haul them out again? As for lime, which would be economy, in drawing it eight or ten miles, to buy that which is air-slaked and pay some five cents per bushel, or take the real article fresh from the kiln and pay double that price? If you will give us some light on these subjects, you will not only oblige the writer, but, as he thinks, confer a favor on many of your readers.

Ridgeway, N. Y., Nov., 1848.

REMARKS. — The description our correspondent gives of his "muck," shews it to be pure decayed vegetable matter, having undergone the last stages of decomposition, and is the material known as *peat*. It possesses none of the properties of manure alone, and can not be stimulated into fermentation by any of the mineral salts or earths. If charred it becomes a kind of charcoal or coke, and is highly carbonaceous and a capital absorbent of ammonia and the other gasses and salts of animal manure. In a raw state, it is valuable to distribute in manure heaps, and in sheds and among composts. In open barn yards it is objectionable, as it produces a very unctious and disagreeable black mud.

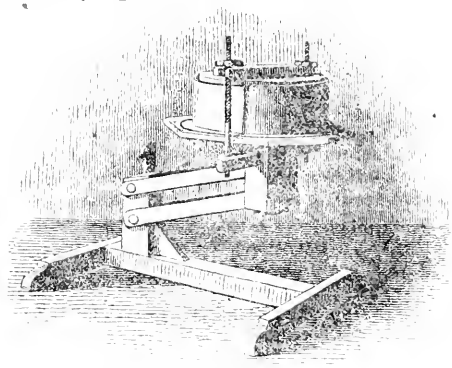
Mixed with clayey heavy soils it has a good effect mechanically, if not chemically, in rendering it open, light, and pervious to water and air. It is entirely different from the sediment of ponds, as this contains recent vegetable and some animal matter, lime, clay, and silecious earths in a very fine and comminuted state, and is a strong stimulating manure on any soil.

If the soil needs lime, apply it by spreading or sowing on the surface; never mix it with recent or fermentable manures. Air slaked is just as valuable as quick lime, as it has to become a hydrate before it can act; if one bushel of quick lime will make two when slaked, it is of course worth twice as much.

Plaster for wheat should be dragged in, in the fall at sowing, and for all other crops be used as a top dressing. Ashes may be used in any and all ways; it never comes amiss. As well as plaster, it may be mixed in the manure heaps, in stables and sheds; or used as a top dressing. If you can buy in your own neighborhood fresh ashes for eight or ten cents, don't think of drawing the leached article four or five miles. They are worth more than plaster, for any crop— particularly on sandy or loamy soils — although its effects are not as lasting. A bushel of plaster weighs about 100 lbs., for which we pay at the mills 12½ cts per hundred, and good house ashes can be purchased at 6 to 10 cts. If our readers think as we do of the value of ashes, the question is easily settled as to their relative value.

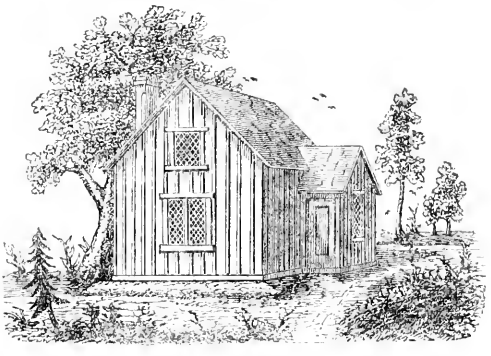
COLLEN'S AND STONE'S PATENT CHEESE PRESS.

THE annexed figure and description of this very valuable implement, we copy from the Catalogue of the Albany Agricultural Warehouse:

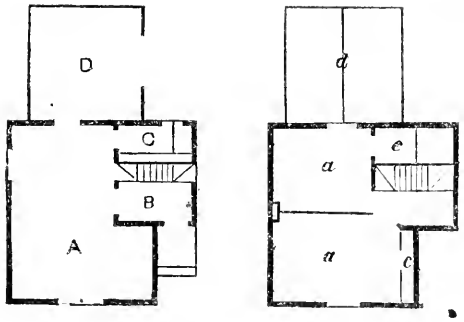


"This cut is a correct view of the press in actual use. It is constructed by means of double or compound levers, which are so arranged that the weight of the cheese or curd is the power which presses itself, and as they are usually made, press in a ten or twelve fold ratio. This is found enough for the commencement of the process, but when more is required, it is added by simply placing on the platform an extra weight, as a brick weighing four pounds would give forty to forty-eight pounds of extra pressure. It is sufficiently strong to hold a cheese of 150 or 200 pounds weight. The press is loosened in an instant by a small lever, about four or five feet long, and a child can loosen it. By hooking down the lever, the press answers every purpose of a table to turn and trim the cheese upon. The whole weighs from thirty to fifty pounds complete, and occupies a space of about two feet square. There are three sizes now made: No. 1, smallest, $5,00; No. 2, second, $5,50; No. 3, largest, $6,00."

Rural Architecture.



ELEVATION.



FIRST FLOOR. SECOND FLOOR.

PLAN OF A CHEAP COTTAGE.

MESSRS. EDITORS:—In planning our dwellings we men of small means find it prudent to consult more the length of our purses, than our desires for the ornamental or even the most perfect convenience. But we are glad if, in such approximations toward the latter as our means and knowledge permit, we can at all gratify our sense, vague and crude it may be, of the picturesque and beautiful. I am not sure that the least possible expenditure necessary to the production of a comfortable dwelling is not entirely compatible with the most classical correctness of parts and proportions, and adaptation to site and scenery. However this may be, it does not seem to me to be often done. I do not flatter myself that I have done it in the plans and perspective elevation which I send you herewith.

But when fatigued by a hard day's labor, I take my seat in the front or parlor end of our one room, (A,) and while listening to, and being rested, by the prattle of the wee ones, or talking with a guest, I am under no apprehension of being disturbed by the needful opening of some door; and, looking across the cooking stove,* see my good wife busied in preparing our evening meal, with the pantry door, door to the wood-house, cellar door, and door side of the stove, all in her own end, where husband, children, and guest are out of her way—I think I have happened to make a pretty large room of 10½ feet in the clear, by 18, to say nothing of the recess, 4½ by 8 feet, where, in an emergency, we can quite conveniently place a bed, though we have two comfortable bedrooms (*a a*) up stairs, 9 by 10½, and 9 by 13 feet, with closets, where the bed-places are not against doors or windows.

Our entry (B) is only 3 feet 9 inches by 8 feet 2, but it does very well to hang overcoats and hats, and save wife and children from the cold blast of an open door in a stormy day. The pantry (C) is of the same size; but having shelves 14 inches wide running the whole length of the right-hand side, and a broad shelf across the end to roll the doughnuts on, with its little flour and meal bins underneath, we think it very convenient. Our wood-house (D) is 12 feet square, and 8 high: *d*, in the chamber plan, represents the roof of it. I mean, in the spring, to put in it a cistern close to the cellar wall, and cover it with rough boards, which extend over one-half the area of the wood-house, which, with the addition of a sink and pump, will make us a good summer kitchen.

Now, Messrs. Editors, when I take an outside look at our cottage, I cannot help thinking that the proportions, 16 by 19, with 12 feet posts, and its brave little rectangular roof, (it looks steeper, more gothic, in the house itself, than in the drawing: I don't know why, the proportions are the same,) its little addition for hall and pantry of 10 feet 8 inches, by 4 feet, 10 feet posts, with its gable end, are pretty fair. And though it is built of rough, upright planks, battened, (it is battened also on the inside, and the laths nailed to the battens:) yet, with its terraced foundation, its projecting water-table, its perfectly plain though somewhat prominent cornice, and its tessillated windows, with their rough casings, as well as the cornice battens and water-table, lime-washed a slightly lighter stone-color than the planks, the effect is to me rather pleasing. And when we get our little Chinese verandah, 4 by 4—built on the foundation for it, which you see I have marked on the ground plan—to shelter the front door, and our fruit trees shall have grown, (by-the-bye, please ask your engraver to anticipate a few of them, for I can't draw trees,) we think the *tout ensemble* will be quite an advance upon the Yankee-cheap architecture that we see every where about us. G. S. G.

REMARKS. — There is a sad lack of appropriateness and convenience, as well as of taste, beauty and true economy, in most of the dwellings occupied by the rural population of America. We vote for an entire and thorough reform in this matter, and intend to do our share to consummate an object so desirable and beneficial. As an initial step in this reformation, we commence at the foot of the ladder, by giving the preceding plan of a CHEAP COTTAGE for tenants, laborers and freeholders of small means. Such a cottage as our correspondent describes will cost from $1,50 to $2,25 — according to finish, cost of materials, (which varies in different localities,) and whether built on the cash or "dicker" system. We like the design much, and think our readers will unite with us in our admiration of its combined conveniences and attractions.

In future numbers we shall give original plans of larger and more expensive dwellings, suitable for farmers. If any of our readers have any suggestions or plans which they think will benefit the public, we shall be happy to hear from them. We desire to communicate light upon the important but sadly neglected subject of Rural Architecture.

* The stove is placed directly under the chimney, which is built from the chamber floor.

"SCIENTIFIC AGRICULTURE."—GEOLOGY.

Last month we briefly noticed a work entitled "Scientific Agriculture," by Dr. M. M. Rodgers, recently published by E. Darrow, of this city. Since then we have given the volume a more careful examination, and find that its pages contain a large amount of valuable scientific information. It embraces the elements of Chemistry, Geology, Botany, and Meteorology, as applied to Practical Agriculture: and each subject is discussed in a brief, plain, and comprehensive manner. The work is a good one for the young, or new beginners in these sciences. The annexed extract is from the department devoted to Geology:—

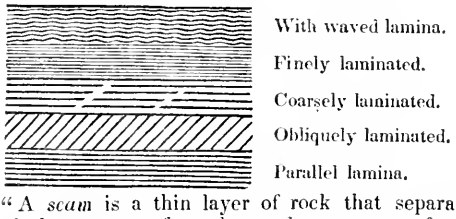
GEOLOGY.—DEFINITION OF TERMS.

Rocks are divided into two great classes, viz: *stratified* and *unstratified*.

Stratification consists of the division of a rock into regular parallel planes or leaves, varying in thickness from that of thin paper, to several yards. Strata are often tortuous and variable in thickness in different parts of the same lamina or layer; "nevertheless, the fundamental idea of stratification, is that of parallelism in the layers." "The term stratum is sometimes employed to designate the whole mass of a rock, while its parallel subdivisions are called beds, or layers." So also of sand, clay, gravel, &c.

The term *bed* is used to designate a layer or mass of rock more or less irregular, lenticular or wedge shaped, lying between the layers of another rock—such as beds of coal, gypsum or iron.

Fig. 1.

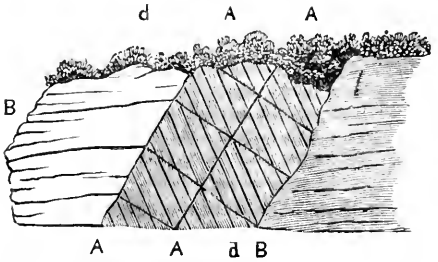


"A *seam* is a thin layer of rock that separates the beds or strata of another rock, as a seam of coal, limestone, &c."

A *joint* is a separation of rocks, both stratified and unstratified, into masses of some determinate shape: joints are more or less parallel, and usually cross the beds obliquely.

Cleavage planes are divisions in rocks, which do not coincide with those of stratification, lamination or joints. They are supposed to result from a crystaline arrangement of the particles of the rock.

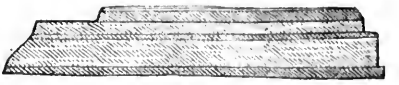
Fig. 2. *Cleavage Planes.*



[Fig. 2 exhibits the planes of stratification, B, B,—the joints A, A, A, A, and the slaty cleavage, d, d.]

Horizontal strata are those which have little or no inclination, but lie parallel with the horizon: this position, however, is rare, almost all strata being more or less inclined.

Fig. 3. *Horizontal Strata.*



The *dip* of strata signifies the angle which they form with the horizon.

Outcrop.—When strata are uncovered above the surface, or protrude from the side of a hill so as to be visible, they are said to *crop out*.

Fig. 4. *Dip and Outcrop.*

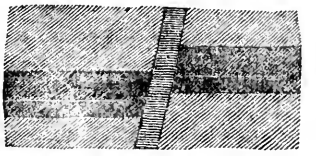
An *escarpment* is formed when strata terminate abruptly, so as to form a precipice.

A *fault* in a rock is the dislocation of strata, so that their continuity is destroyed, and a series of strata on one or both sides of the fracture are forced from their original position, and raised one above another, or, moved laterally. Faults are generally filled with clay, sand and fragments of other rocks.

A *gorge* is a wide and open fissure or fault: when still wider, with sloping sides and rounded at the bottom, it is called a *valley*.

A *dyke* is a mass or wall of rock interposed between the ends of a dislocation, so as to break their continuity:—dykes rarely send off branches.

Fig. 5. *A Dyke.*



Veins are portions of rock smaller than dykes, proceeding from some large mass, and ramifying through a rock of a different kind. Metallic veins were originally melted metals, which were injected into the fissures and crevices of rocks by some subterranean force.

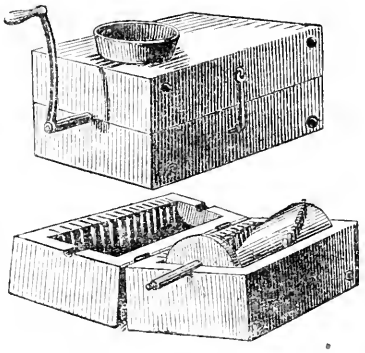
Fossil.—This term includes those petrified remains of plants and animals which are found in alluvium, or imbedded in solid rock, and constituting part of its structure.

Formations.—The term formation is used to designate a group of rocks having some character in common—either in relation to age, origin or composition. Every formation consists of several varieties of rock, all agreeing in certain qualities, and occupying such relative situations as to indicate that they were formed during the same period and under the same circumstances. Thus we speak of graywacke formation, gneiss formation, coal formation, &c.

Wheat Flies.—We collected from a bin of wheat a number of flies, on the 10th day of December, which appeared to have recently hatched out in the same. They are not the *Cecidomyia tritici*, nor the Hessian fly, nor the wheat weavil; all of which we have collected in Georgia. We know not what to call these last. Some will be sent to Dr. Fitch, of Salem, N. Y. A good deal of wheat has been sown in this State within the last two months. Seed sent us from Wheatland has come up well. *Augusta, Ga., Dec.*

NEW SAUSAGE OR MINCING MACHINE.

HAVING been furnished by Mr. H. L. EMERY, of the Albany Ag. Warehouse, with the accompanying cut and description of this neat and valuable machine, we give it to our readers in the belief that it is a great labor-saving article for farmers, pork packers, and hotel keepers. We are informed that the machine is extensively used in the eastern portion of this State, and very generally in the New England States:



New Sausage or Mincing Machine.

One machine, by the power of a man, is capable of cutting readily from 80 to 100 lbs. of meat per hour—the person turning the crank feeding the machine, thus leaving the mass cut sufficiently fine and uniform.

It is constructed of blocks of hard wood about five inches thick, nine inches wide, and fifteen inches long, connected together by hinges and hasps. The two faces of the blocks are carved or bored out so as to form a hollow cylinder or barrel extending through the length of the blocks, excepting enough at each end to form a head or cap. In this cavity is suspended a wooden cone on an iron shaft, running lengthwise, and one end of the shaft extending through and connecting with a crank outside. In this cone are placed three rows of wood or iron pegs, so arranged spirally as to form a kind of screw, running lengthwise—the pegs being smaller, shorter, and closer together as they approach the large end of the cone—making the mean diameter of the pegs the same at each end of the cone, and just filling the space or cavity. Each block has a set of triangular knives fixed stationary, and so as to allow the pegs to pass between them.

The process is simply putting in the meat at the small end of the cone, through the kind of hopper or funnel, and by turning the crank the meat is passed round, through and between the knives, and forward to the large end of the cone by the combined action of the pegs and knives, and finally discharged through an aperture in the bottom at the large end of the cone or opposite the hopper end—the fineness being guaged by the size of this discharging aperture.

The machine is warranted to cut fit for use from 80 to 150 lbs. per hour, according to the power applied—one man being sufficient to turn it constantly. Several hundred have been sold during the past two years, and given entire satisfaction. A good machine, warranted, can be afforded at from $12 to $15—and may be obtained at Mr. EMERY'S Warehouse in Albany, or at his Depot in Rochester.

THE AMERICAN LOCUST IN VIRGINIA.

BY YARDLEY TAYLOR.

IN the 6th month number of the Genesee Farmer is a communication by DAVID THOMAS, written it seems in 1831 and republished in 1848, asking for information from other sections of the country respecting the American Locust as it is called, or the *Cicada Septendecem* of Linnæs; and concluding with several queries to which answers are requested.

To several of these queries I have no answer to give, but to this one, "What has caused the locusts in one district to differ in regard to time from those of another district?" I reply, that I have no evidence that they do so differ. There may be in other places, as there is here, two sets of them, but they regularly observe the period of 17 years in their appearance. These two sets have different boundaries for their districts, and consequently overlap each other, and such circumstances as these may lead the casual observer to suppose there is an irregularity in their appearance, when there is not.

By noticing the public papers we hear of the locusts being numerous in some sections of our widely extended country almost every year. In this county, (Loudon, Va.,) they have appeared in regular intervals of 8 and 9 years for upwards of 50 years. It is said that they have appeared here in 1792, in 1800 and in 1809. Since then I recollect them myself, to wit: in 1817, in 1826, in 1834, and 1843, and we look for them again in 1851. In 1826 and 1843 they extended to the north, east and south of this county for a great distance, but did not extend but very little to the west of the Blue Ridge, which bounds this county on that side. In Frederick county, Va., there were no locusts those years, though only 30 miles west of this, while in 1817 and 1834 they were numerous in that county, and at the same time extended to the north and east and south of this place as well as to the west. They were more numerous in the latter than in the former years. Whether these boundaries in other directions are the same, I do not know.

If I remember right Dr. GIDEON B. SMITH, of Baltimore, is collecting materials for a map of the United States, showing the different districts of the locust as they appear in different years. Such a map, with the history of this singular insect, would be interesting. The great length of time they remain in the ground renders it very difficult to ascertain their history exactly, yet their appearing in the immediate vicinity where their eggs were deposited, shews conclusively that they do not travel far in a lateral direction. And they sometimes appear in situations where we might reasonably conclude they could not descend into the earth many feet without coming in contact with water at all seasons. What their food is in this long interval it is difficult to say. I have never seen any injury to the roots of plants done by them, and seldom ever see them except a short time previous to their appearance. There are a few solitary ones to be met with every year, and I see no good reason to suppose them a different species, as has been intimated. *Loudon Co., Va., 11th month*, 1848.

PLANTS that are grown too fast cannot be handsome. The more rapid the growth, the further apart are the leaves, the longer the bare part of the stems. Flowering plants are better grown too slow than too fast.

Spirit of the Agricultural Press.

In each number of this volume we design to give a page or two under the above heading. It will be our aim to condense and extract from our exchanges in such a manner as to convey, in a small space, much valuable information—thus giving a collection of items that may be appropriately termed the *Spirit of the Agricultural Press.*

Rotary Mould Board Plow.—The Scientific American says, that at the late Fair the most novel agricultural implement was a Revolving Mould Board Plow, the invention of Mr. Page, of Baltimore. The mould was a circular concave shield revolving from the point with the sod of earth. This mould board was movable, and could be taken off and put on at pleasure. Whether its complexity will prevent its general introduction or not, remains yet to be seen. Its principle is the combination of a revolving apron to move with the earth, and perform the same office as a friction wheel in a shaft box.

Side-Hill Plowing.—Plows are now made to go forth and back in the same line, and to turn all the furrows down hill. This is convenient when the land lies in such a position that one side of the hill is inaccessible. When one side only can be plowed, the side-hill plow turns the whole in one direction, and no lands are marked off. Some farmers object to turning the furrows all down hill, because they would not expose the high parts to barrenness or dead furrows. But plowing furrows up-hill is decidedly up-hill work, and should be avoided if possible. When we have a circular piece of land, rising in the middle to a peak or a knoll, we begin to plow at the base and make the dead furrow on the ridge. It is so much easier turning furrows down-hill than up-hill, that we prefer to cart a larger share of manure on to the peak, and make up the loss.—*Mass. Ploughman.*

Advice in Poultry Keeping.—The principles upon which I rely for success in keeping hens, are, first, to have two breeds—a few to hatch and rear the chickens, and twice the number of everlasting layers, as eggs are more profitable than chickens; second, to get a hatch as early as possible in spring, and to keep them well; these never cast their feathers like the old birds, and if they begin to lay in autumn, lay more or less all winter; third, never to keep old fowls, (none but favorite fowls ought to be kept more than two years;) old birds lay larger eggs than pullets, but not nearly so many; fourth, to give them the best barley I could get, and as much as they could pick up, once a day in summer, and twice in winter; they are not only more profitable, well kept, but the eggs are better. The two breeds I like best are the spotted Dorkings for sitting, and the pheasant breed for laying.—*Agricultural Gazette.*

The best Breed of Sheep.—Let it be assumed that the best breed of sheep is that which produces the greatest net profit in money from a given quantity of food.—*Ib.*

Westphalia Plan of Smoking Hams.—A room in a garret; fire in the cellar; smoke gathered in a tunnel, and led to the smoke rooms by a small pipe; by the time it gets there all the heaviest part of the pyroligneous acid has condensed, and the smoke has become cool. Nothing touches the hams but a pure, light, cool smoke, which is allowed to pass off by a number of small apertures, about as fast as it is supplied.

Wire Worm.—A successful farmer in this vicinity, Mr. D. D. T. Moore, states that he has tried various substances for preventing the ravages of the wire worm, none of which, excepting sulphur, proved of any use. An Irishman told him that sulphur had been used with advantage in Ireland. Before planting his corn, Mr. M. wet it and rolled it in flour of sulphur, and afterwards coated it in plaster to prevent the sulphur from wasting. He saved a crop by this means, where he had failed for three years before. We see no reason why the sulphur might not be equally effective for any other grain.—*Cultivator.*

One-Horse Carts.—A great improvement has been made in attaching the horse to the cart, to prevent the sudden descent of the weight of the load upon the animal's back, after mounting obstructions. A half elliptic spring is fastened under each shaft, the centre of which is connected to the lower ends of the staple, which passes freely through a hole bored in the shaft, and connects with a chain that passes over the back of the horse.—*Ib.*

The Crops of 1848.—We invite attention to a valuable table which we give below. It has been compiled by the editor of the New Orleans Commercial Times, and is accurate as anything of the kind can be made under existing circumstances. Under the head of crops, thirteen different articles are included, on each of which the value has been adjusted to the several States, with the necessary advance on the same items, as they were reported in 1840; thus affording the approximate value of the crop of 1848, together with the sums invested in manufactures and merchandise, respectively. In making up the "crops," prices have been assumed as follows:—Cotton, at 6 cents per pound; sugar, 4; rice, 3; tobacco, 7; wheat, 60 cents per bushel; corn, 30; barley, 30; oats, 25; rye, 40; buckwheat, 50, and potatoes 30 cents; hay, $10, and hemp and flax, $50 per ton. These are the home prices before transportation to market, and apply to the first column of the following table:

Estimated value of the crops of 1848, and the sums invested in manufactures and merchandise in each State.

	Crops.	*Manufactures.*	*Merchandise.*
Maine	$13 000.000	$10.000 000	$5.000.000
New Hampshire	9.000,000	12 000.000	3 000.000
Massachusetts	11,000.000	52.000.000	16,000.000
Rhode Island	1.500.000	13.000.000	4 000.000
Connecticut	9 000.000	17.000 000	8,000.000
Vermont	15.000.000	5,000,000	4.000.000
New York	79.000.000	69.000.000	53.000.000
New Jersey	11 000.000	14 000.000	5.000.000
Pennsylvania	55,000.000	50.000.000	45,000,000
Delaware	1.800.000	2.000.000	1.300.000
Maryland	16,000,000	8.000 000	13 000 000
Virginia	38.000.000	13,000 000	21.000,000
North Carolina	19.000.000	5.000 000	6 000.000
South Carolina	14 000.000	4.000.000	10 000.000
Georgia	21.000.000	4.000.000	11.000.000
Alabama	17.000.000	3.000.000	8.000.000
Mississippi	14.000.000	2.000 000	7,000.000
Louisiana	19.000.000	8.000 000	20.000.000
Tennessee	40.000.000	5,000.000	9.000.000
Kentucky	28.000.000	7.000.000	11.000.000
Ohio	49.000.000	20.000.000	27.000.000
Indiana	47.000.000	5.000,000	7.000.000
Illinois	18.060.000	4.000.000	6.000.000
Missouri	12.000.000	4.000.000	10.000.000
Arkansas	6.000.000	1.000.000	2.000.000
Michigan	7.000.000	4.000.000	3.000.000
Florida	3.000.000	1.000.000	2.000.000
Wisconsin	2.000.000	8.000.000	1.000.000
Iowa	2.000.000	3.000.000	1.000,000
Texas			
District of Columbia	100.000	1.200.000	3.000.000
Total	$591,400.000	$343.300,000	$322.000,000

From the above estimate it will be seen that nearly $600,000,000 in value will be derived this year from the cultivation of the soil, besides what may proceed from gardens, orchards, dairies, &c., amounting at least to $50,000,000 more. These productions are increased with every harvest, as new parts of the country are settled, and additional labor is employed to the ratio of population.

Agricultural Schools in France.—At a recent session of the National Assembly of France, the principal part of the day was devoted to the bill relative to agricultural schools. It was resolved that one of these institutions should be founded and maintained in each department at the public expense; and further, that the country should be divided into agricultural districts, not exceeding twenty, in each of which a government school is to be established.—*Foreign paper.*

Poudrette Companies in France.—It is stated that there are twenty-two companies in France busily engaged in converting the refuse of towns into inodorous poudrette. The disinfectant generally employed is said to be the chloride of iron.—*Ib.*

How to Kill Chickens.—The best method of killing fowls is to cut their heads off at a single blow with a sharp axe, and then hang them up and allow them to bleed freely. By this process, they never know what hurts them, or endure pain for a second. Wringing the necks of poultry is almost as shocking as nailing their feet to planks, for the purpose of fattening them, and follows in the same barbarous category.—*American Agriculturist.*

Fecundity of Hens.—A young hen will lay the first year about 150 eggs; the second 120; the third 100—diminishing every year as she grows older; and, says the Maine Farmer, she should "go to pot" after the fourth.

Experiments, without noting the actual circumstances connected therewith, avail but little.

Editor's Table.

COMMUNICATIONS have been received, since our last issue, from Agricola, T. C. Peters, Myron Adams, G. S. G., F. W. Lay, *, Yardley Taylor, H. L. Emery, Richard I. Hand, John Williams, S. W., West, Samuel Spaulding, G. E., Erie, H., John Moxon, Wm. W. Deak, Kentuckian, Judson, and Dairyman.

SEVERAL communications, inquiries, &c. came to hand too late for insertion or answers. They will receive proper attention next month. Notices of a number of books, &c. also deferred till our next issue.

OUR NEW DRESS. — As we promised, this number of the Farmer is printed on "NEW and CLEAR type," with such other improvements as we think will meet the approbation of its readers. It will be observed that the type is smaller than that of our previous volume, (though quite as bold and distinct,) and we consequently give a greater amount of reading on the same number of pages. In selecting we had in view the wise remark of a modern genius who *reckoned* "that society was like a barrel of pork — the middle pieces being better than either top or bottom;" and if what we *print upon it* shall enable our friends to replenish their pork and other barrels more advantageously than heretofore, we trust they will acknowledge the benefit derived from type, ink and paper — yclept "book knowledge." We will add here, for the benefit of those interested, that our beautiful dress is from the Foundry of Mr. N. LYMAN, of Buffalo. Mr. L. is a very upright dealer, and his establishment is deservedly popular among the members of the "art preservative."

WE this month have the pleasure of introducing several new contributors to our readers. They are practical, observing and thinking men, who "know whereof they speak," and we give them a cordial welcome. We also invite others to communicate such facts, suggestions and items as may appropriately appear in this journal. Give us the *substance* — the facts, briefly and definitely — and we will attend to the minor points of style, grammar, &c.

THE MEMOIR of HON. ZADOCK PRATT, which we give in preceding pages, (accompanied with a life-like steel plate Portrait,) will very properly attract the attention of our readers — and prove particularly interesting to the admirers of men who have, by their own indomintable energy and perseverance, risen from humble origin to highly honorable and eminent stations. We especially commend the Memoir to the comparatively poor but right-minded Young Men of America, as it presents an example eminently worthy of imitation.

This is the first of a series of Sketches of Distinguished Friends of Improvement which we propose giving in the pages of this journal — a feature which we doubt not will receive the hearty concurrence of our readers.

"NEW ENGLAND FARMER" is the honored title of a neat semi-monthly of 16 octavo pages, which has just reached our table. It is edited by S. W. COLE, Esq., late of the Boston Cultivator. The number before us is well filled, and we see no good reason why the work should not succeed. We extend the "right hand of fellowship," to brother COLE, and wish him prosperity in this new enterprise. Published by J. NOURSE, Boston, Mass., at $1 per annum.

HOLDEN'S DOLLAR MAGAZINE for January is a superior number of a deservedly popular work. The proprietor is proving to the literary public, what we are to the agricultural, viz: that the *cheapest* publications may be made the most *profitable* to their readers, and most useful to community. The number before us contains a Biography and truthful Portrait of Rev. CHESTER DEWEY, M. D., D. D., of this city, (an occasional contributor to the Farmer over the signature of C. D.) It also contains Sketches and Portraits of HORACE GREELEY, DR. TURNER, and LOUIS BLANC, and is otherwise well filled with choice reading and illustrations. Published by C. W. HOLDEN, 109 Nassau-st., New York.

BUFFALO AG. WAREHOUSE AND SEED STORE. — Many of our readers will no doubt be pleased to learn that T. C. PETERS, Esq. has opened an Agricultural Warehouse and Seed Store, in connection with his Wool Depot, at Buffalo. We commend this new enterprise to the attention of our western readers, as well as to those residing in the vicinity of its location. See advertisement.

ENTITLED TO THANKS.—Col. B. P. JOHNSON, who has served as Secretary of the N. Y. State Ag. Society during the past two years, is entitled to the thanks of its members and the agricultural public generally, for his judicious efforts to promote the interests and augment the usefulness of that valuable Institution. The duties of his office have been performed with ability and promptness, and in a manner highly creditable to himself and the Society. We have heard frequent remarks relative to Col. J.'s admirable management, not only in the Agricultural Rooms, but at the State Fairs, where the exercise of much firmness and energy, as well as patience and suavity, were requisite. His addresses at various County Shows have also been very acceptable, and exerted great influence in behalf of Rural Improvement. It is rarely that any similar association can secure the services of so faithful an officer, and we are confident that we represent the wishes of many members and friends of the Society, when we express the opinion that he should receive a unanimous re-election, providing he will accept the same.

"NOTES FOR THE MONTH," by S. W. of Seneca county, were received too late for insertion in this number. We add a couple of them, however, as follows:—

WHEAT, Indian Corn, Barley, Oats, Buckwheat and Hay, have been good crops this season, the two first unusually large. The introduction of Indian Corn into the United Kingdom of Great Britain under the present low duty there, has not only given this cereal an increased value as a farm crop, but it has also added very much to our shipping trade on the lakes, canals and on the ocean. The receipt of corn at the port of Buffalo alone the past season, has frequently exceeded 60,000 bushels in a single day. The quantity exported direct from New Orleans, and that received coastwise and shipped from New York to the West Indies, to Nova Scotia, Newfoundland, and to Great Britain, now amount to millions of bushels annually.

BEEF AND PORK. — Our farmers feel that they cannot compete with the farmers of the far west in the market for Pork. 2200 slaughtered hogs, averaging 250 lbs. each, have been forwarded to New York, by railroad and river, from one distillery here; farmer's pork is all taken for home consumption. Beef has been high through the whole year. Butter and Cheese have sold at good prices giving unusual pecuniary prosperity to the dairy counties of the State.

VALUABLE BOOKS.—The Publisher of the Farmer has a variety of standard works on Agriculture, Horticulture, &c., which he will supply to his distant patrons, by mail, at the regular New York cash prices. Money may be sent *at his risk*, if enclosed and mailed in the presence of the Postmaster of the office from which it is sent. Those who cannot obtain such works at home, are requested to favor him with their orders, as it will make good, in part, the *very small* profit derived from the Farmer. It is also safest to transmit orders to a well known publisher, who will be prompt in his attention. Books can be forwarded with perfect safety to any section of the country. See list of works and prices on advertising page.

CREDIT. — We notice that many of our exchanges copy extensively from the Farmer, without giving *credit*. If this course is continued we shall be obliged, as a matter of protection and self-defence to copyright the Farmer or discontinue sending to the journals that republish our articles as original. We have no objection to our friends copying any thing we publish, *providing proper credit is given* — but we do object to the unjust system, adopted by several of our exchanges, of appropriating our labors to their own benefit, without the least acknowledgment.

COLMAN'S EUROPEAN AGRICULTURE. — The two concluding numbers of this work have been handed us by Mr. J. H. WATTS, agent in this city — but at too late an hour for particular notice in this number.

OUR present number is necessarily incomplete in some respects, in consequence of the time required to change from old to new type, and the haste with which we are compelled to have it stereotyped and put to press. We however think it will compare favorably with its cotemporaries, and do not consider any apology necessary — though our intentions are not fully realized. And we trust that the friends of the work will not "forget to remember" that the best way to promote its usefulness is to SHOW THE PAPER TO THEIR ACQUAINTANCES and solicit their subscriptions. How many of our readers will lend a portion of their influence to promote the cause in the manner suggested?

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

The Editor of this Department is now absent on a Horticultural Tour in Europe. This will be a sufficient explanation, we trust, should any deficiency be apparent in the manner or matter of these pages. We expect some interesting correspondence from him, for publication in the February number.

POMOLOGICAL REFORM.

We have received an article on this subject, written by "*Erie*," but owing to its length we are obliged to defer it for the February or March number. The author has been one of the foremost in "Pomological Reform" in Western New York. We shall be happy to hear from him in the manner suggested in his private note.

The article before us is, we believe, written for the benefit of the many. The following is its conclusion — to which we doubt not every true son of the "Empire State" will subscribe: —

"We sincerely hope and trust the lovers of fine fruits, the amateur, and the honest, (and I would by no means infer there are but few) nurserymen — the farmer, and all who love rural works, and rural labors — will come up to the work with heart in hand, and with a hearty desire to promote the good that can in this wise be accomplished. Let us of the State of New York, at least, honor and sustain our noble institution, the New York State Agricultural Society, whose labors and beneficence is doing more to elevate, to ennoble and enrich the tillers of the soil, than does perhaps any other institution existant among us."

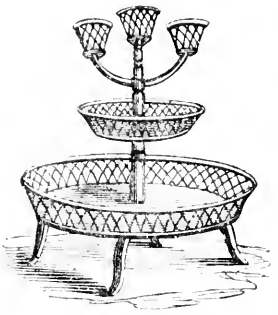
A WORD ABOUT GARDENING.

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 quantities 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 comeliness. 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.

It shall be our business in VOLUME TEN of the Farmer to remove as far as possible these causes, and to show not only that health, happiness and good living are the legitimate products of well cultivated gardens — but to give all who read its pages such information as the season may require—so that he who has no garden, or one of which he has reason to be ashamed, shall not be able to present, as an excuse, his lack of knowledge.

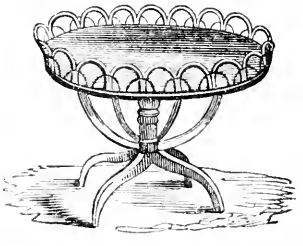
ORNAMENTAL FLOWER STANDS.

Those who admire flowers in the hall or in the drawing room, should always provide such stands as will enable them to keep the pots without pans, for the water in a pan is ruin to all plants standing in them, and this can easily be proved by reference to the thousands and tens of thousands that are killed daily, in all the manufacturing towns and populous cities in the empire. They are watered by filling the pans. This water is soon mischievous, because the roots are easily rotted by stagnant moisture.



The stands for flower pots should therefore be provided with a receptacle for the superabundant moisture, for it is impossible to prevent water from running through the pots.— This receptacle may be a groove round the outside, or near the outside of the solid bottom, forming a gutter into which the surplus moisture might run, and from which it is easily taken up by a sponge. The bottom must of course slope towards the outside, or have grooves or gutters leading from the center to the outside. This does away with the necessity of using pans, and the danger of injuring the plants by stagnant water.

With regard to the form of these stands, they may be various, according to the places they are to occupy, and the number of plants which they are to accommodate. There is good room to exercise a little taste upon the subject. When the stand is for a single pot, there must be a sort of cup for it to stand over: not to stand in, so as to touch the water, because that would be as bad as a pan. These stands require to be emptied occasionally, because every time the plants are watered, some would go into the gutters, which, if not attended to, would overflow. These stands are made variously of iron or wicker, as the case may be, and may be had of almost any form, in wood of the rustic seat makers and verandah builders, and in iron from the general wire-workers. Some are cast, but, rich as they look, they are not adapted to move up and down or about a house.—*London Horticultural Magazine.*

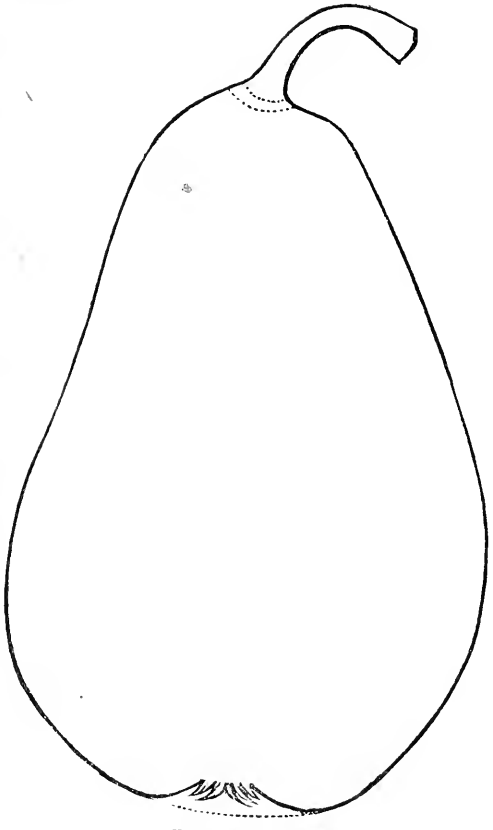


We saw at the Fair of the American Institute a great variety of very pretty rustic stands, but we are not aware that any of them were constructed with a receptacle for the superabundant moisture that necessarily flows from the pots. This, it will at once appear to any one, is a great improvement on the usual mode, and we recommend it to the attention of the ladies, who are especially interested in the management of *house* plants, and who are the best judges of matters of taste and ornament.—ED.

LE CURE PEAR.

VICAR OF WINKFIELD. — *Fruit and Fruit Trees of America.* CLION. — *Kenrick's American Orchardist.*

THIS is a French variety, supposed by many to be identical with the the old *St. Lezin.* The London Horticultural Society named it *Vicar of Winkfield,* from its having first produced fruit in the Vicar's Garden. Mr. HOVEY, in his "Fruits of America," adopts the name LE CLURE, and we believe with propriety.



Le Cure Pear.

It has acquired a very high reputation among the best pear growers of this country, on account of its vigorous growth, rich luxuriant foliage, extraordinary productiveness, large size and beauty of the fruit, as well as its excellence both for the kitchen and table. Col. WILDER, of Boston, who is known as one of the most eminent pomologists and pear cultivators in this country, has said that if he were to cultivate but one variety it should be this. He says: "It never fails to produce a good crop — never blows from the tree — may be used for cooking in August, and will ripen in a warm room in October, and will keep till February." SAMUEL WALKER, Esq., of Boston, now President of the Mass. Hort. Society, stated at the New York Convention, that in the city of Boston they were sold at $1,50 per box of one dozen fruits, and the purchasers, at that, always thought they had the best of the bargain.

For some time after the introduction of this pear, and until of late, when its many good qualities have become better understood, it was much under-rated, being considered only as a "baking pear." We think it is destined to occupy a place among the smallest collections. We have a specimen before us now, ripened in the desk of our office, that is buttery, melting and really delicious, though only second rate compared with White Doyenne, Seckel, and some others.

Fruit large, often six inches long and three in diameter. The specimen from which our outline was taken is rather below medium. Form, oblong, pyryform, occasionally one-sided. Skin, smooth and fair: pale yellow, with a blush on the sunny side, and sprinkled all over with distinct brown specks. Stalk an inch to an inch and a half long, usually curved, with flesh at the base. Calyx, large, open, in a very shallow basin. Flesh white, juicy, melting, and often, as in the case before us, buttery. Flavor, sprightly, sweet and agreeable. May be ripened in October and kept till February. It succeeds admirably on the quince, and does well also on the pear.

SWAN'S ORANGE OR ONONDAGA PEAR ON QUINCE.

BY JOHN WILLIAMS.

P. BARRY, ESQ.—I received from your firm, in the spring of 1847, a few trees of the Onondaga Pear on quince roots. You then gave me the assurance that it did well on the quince. My subsequent experience fully confirms what you then said. Having grown it the present season on quince in parallel rows with the Colmar, D'Aremberg, and Langleur Beurre, (both of which are free growers,) the Onondaga has done as well as either and given a rich healthy foliage.

As I see there are doubts expressed as to the adaptation of this pear to the quince, I thought it due to you to say this much. *Plymouth, Ms., Sept.* 1848.

JAS. E. REED, of Dalton, Ohio, makes a similar statement in a late number of the Horticulturist. Indeed there is not a doubt but this pear will prove to succeed well on the quince.—ED.

PROFITS OF FRUIT.—NORTHERN SPY APPLE.

BY RICHARD I. HAND.

MR. BARRY:—Below I give you a statement of the products of one acre of land on which I have grown the Northern Spy and Roxbury Russet apples during the year 1848:—

110	barrels	Northern Spy, sold at	$2,50,	$275,00
10	"	" "	3,50,	35,00
30	"	" " 2d quality	1,00,	30,00
100	"	Roxbury Russet,	1,00,	100,00
				$440,00

I sold the Spys mostly to J. H. WATTS, at Rochester. If any of the Monroe county farmers have a better story to tell, let's have it. They were grown on twenty-three trees. *Mendon, N. Y., Dec.,* 1848.

HOT-HOUSES, green-houses, pits, and other horticultural buildings for supplying a warmer atmosphere than the open air, should always be cooler at night than in the daytime. It is too frequently managed to have the reverse: the fires are made up in the evening, and the plants are forced more in the dark than in daylight.

THE twigs of fruit trees intended for grafting are sometimes obtained long before they can be used. Put the lower half of them into the ground, and they will keep for weeks as well as if they grew on the tree.

TRANSPLANTING PEACH TREES.

BY A. HUIDEKOPER.

Mr. Editor :—Observing in the April number of the Farmer a notice of winter-killed peach trees, has induced me to offer a few remarks, suggesting whether the rule laid down in all our manuals, of transplanting peach trees early in the fall, or *very early* in the spring, is the correct one. I have transplanted peach trees in the autumn when the foliage was but partly divested by the frost, and have had them suffer more than those set out after the leaves had entirely fallen from the tree. So the rule of transplanting them *very early* in the spring may do along a lake shore or in a region where "one swallow makes a summer," but in a country where severe spring frosts are of frequent occurrence I think it questionable.

I have transplanted, for experiment, peach trees in February with a bulb of frozen earth attached to the roots, and have also removed them in March and in April, and the last did decidedly the best. In the fall of 1846 I received some trees from Ellwanger & Barry as late as the 1st of December — having been delayed on the way. Three days after they were planted it froze very hard, and yet on uncovering the trees the following spring I found them to be entirely uninjured, and I would suggest the method I pursued as being as good to make trees hybernate well as to plant them very early.

At the time of planting, finely pulverised material should be used, with two or three buckets full of water to make every thing right about the roots. A mound of coarse strawy litter from the stable, eight or ten inches high, should be placed around the base of the tree, and left there till the following April. A stake should be driven firmly along side of the tree, the branches brought up in a compact form, and then a *light* coating of long rye straw placed around the tree, beginning below and letting the next course overlap the first. A little wrapping thread around it will keep every thing in order. At the top the straw should be brought to a point and tied to the stake. A slight envelope of straw in this way will protect a tree from the sleet and winds, and sudden changes of temperature in the winter, and in the following April the limbs will be found as fresh and green as when the tree was first removed.

If trees are transplanted in the spring as late as practicable before the starting of the buds, and are well watered and mulched with litter as above, at the time of setting them out, they will suffer less danger, I apprehend, from summer drouth than they will from spring frosts by being transplanted early. The additional trouble of treating peach trees as above is but trifling compared with the loss of time and labor in losing them for several years under the ordinary method. *Meadville, Pa., April*, 1848.

The above article was mislaid soon after its receipt, or it would have been published at an earlier period. If the writer will favor us again, his papers shall receive due attention—and himself our thanks.

A Lilac is best as a standard, because all the heads will bloom, whereas all of a bush does not; besides, you can keep down the suckers which spoil all neglected lilac bushes.

Seeds always keep better in their pods than threshed out, and for private use should always be so kept, if the nature of the pods will allow of it.

DESCRIPTION OF 25 NEW VARIETIES OF PHLOXES.

Mr. Barry :—I have heard so much about new Phloxes that I am really anxious to get some information respecting the best varieties. Will you have the goodness to describe one or two dozen of the finest kinds in the Genesee Farmer? Floriculture should not be neglected, when Pomology is making such rapid progress. By complying with the above you will oblige West.

Cincinnatti, O., Dec., 1848.

Phlox Van Houttii.

The Editor to whom the above is addressed, and who would answer the inquiries to a charm, is now in Europe on a Horticultural Mission. We will not tax W's patience to wait for his return, but give what little light we have on the subject. Too much praise cannot be given to these charming plants — when we take into consideration the variety of colors, the long time of flowering, and their easy cultivation. They will certainly become the most popular hardy border plants.

The above cut, which we consider a good representation, is from the Horticulturist. Want of space will not permit us to give full descriptions. It was our intention to give an engraving of *Reine Louise*, (which we consider superior to Van Houttii,) as well as some others in the annexed list of more recent introduction, but our artist was absent when the flowers were in perfection.

The annexed list contains all the newest and best Belgian varieties, which we doubt not will soon find their way into every good collection in the country. Planted in a lawn, in clumps or rock-work, they produce a beautiful effect, particularly when a large number of plants of one color can be planted in a mass. They are all perfectly hardy, originating from American stock :—

Arsina—White, with delicate purple tinge, and dark eye.
Alba Glomerata—Pure white; very fine.
Anais Chauveri—Pure white, with deep pink eye; large and superb.
Blanche de Neully—Beautiful white.
Cardidissima Nova—Pure white, very large heads of flowers; a superb variety.
Delecta—Showy purple, with dark eye.
Cromwell—Lilac, with purple stripe; a very striking variety.
Fleur d'marie—Pure white, with showy pink center; very fine.
Goethe—White, striped and dashed with lilac.
Herman Kezel—White, with distinct eye.
Invincible—Rose shaded, striped with pink.
Lilacina Grandiflora—Blush striped and dashed with lilac.
Marianne—Pink eyed, with white; fine.
Mazeppa—Pink, with dark eye; very striking.
Macrantha Speciosa—Pink, striped with white; large and fine.
Nymphea Alba—Pure white, immense heads of bloom; fine.
Oiel de Lynx—White, with bright pink eye; superb.
Pottsi—White, tinged delicately with flesh.
Picta—White, with purple eye; distinct and very fine.
Rosea Superba—Delicate beautiful rose; distinct.
Rippo—Pink, with deep stripes and large dark eye; very fine.
Reine Louise—Pure white, flaked with rosy pink like a carnation; superb.
Standard of Perfection—White, tinged and striped with bluish purple, fine pyramidal heads of flowers; one of the very finest.
Tricolor—White, pink and purple striped.
Van Houttii—Striped, purple, white and crimson, superb.

There are several other fine varieties which we will describe in a future number. G. E.

PRACTICAL HINTS TO AMATEURS.

BY "AN OLD DIGGER."

You may transplant, all winter, when the ground is not frozen—only take care not to expose the roots to frost while not covered with soil. In winter-planting, it is best to pile up a mound of earth 6 or 8 inches around the trunk of the tree. This keeps it steady, and protects it, partially, against severe frost.

When a tree brought from a distance has been a long while out of the ground, and looks quite dried up, don't plunge it into a tub of water; that would be well-nigh as fatal as giving a gallon at a single drink, to a man nearly dead of thirst. *Moisten* the roots, and after shortening the branches severely, bury the *whole tree* in the ground for three or four days.

When you prune a small branch of a tree, always see that a *bud* is left opposite the cut; this will help it to heal over quickly: and you will assist the matter still more, by making the cut always a *sloping* one.

Don't let insects of various kinds overrun your orchard or garden, and then lazily fold your arms and say, "it's no use, this trying to raise things, now that so many vermin are about." Spend three days, industriously, in the early stage of the matter, in putting down the rascals, and then look around you and see if a little industry is not better than grumbling.

If you want early vegetables, set yourself, in winter, about making some boxes to protect them. A few cheap boxes, a foot square, with a pane of glass in the top, to put over tender things at night, will cost you but a trifle, and will give you ten days start of the open ground.

To have good currants, gooseberries, or raspberries, the old plants should be dug up at the end of three or four good crops, and their places supplied by young ones. If you plant a few cuttings of the two former, as you should do, every spring, you will always have a supply of fresh plants ready at all times: always cut out all the eyes (buds) of a cutting, on that part which goes in the ground—otherwise you will be troubled by their coming up, year after year, in the form of *suckers*.

If you have a tree that grows "apace," but won't bear, dig a trench round it, and cut off a third of the roots. This will check its growth, and set it about making fruit-buds.

Never buy fruit trees in the "market-places," of unknown venders, who have no character to lose. You cannot tell by "examining the article," whether they cheat you or not; and you get your tree at half price, only to wish, when it comes to bear, that you had gone to an honest dealer and paid ten times as much, for something worth planting. "Hog-Peach" trees are dearer at a penny, than "George the Fourths" at a dollar.

If you don't love flowers yourself, don't quarrel with those who do. It is a defect in your nature which you ought to be sorry for, rather than abuse those who are more gifted. Of what possible "*use*" is the *rain-bow*, we should like to know? And yet a wiser than you did not think the earth complete without it.

Do not grudge the cost and labor necessary to plant a few of the best shade-trees round your house; and if you have any doubts about what to plant, stick in an elm. There are few trees in the world finer than a fine sweeping elm; and two or three of them will give even a common looking dwelling a look of dignity. If you plant fruit trees, for shade, they are likely to be broken to pieces for the fruit, and they grow unsightly by the time that forest trees grow spreading and umbrageous.

There are very few men whose friends build so fair a monument to their memory as they can raise with their own hands, by planting an elm or maple where it can grow for a century, to be an ornament to the country.—*Horticulturist.*

GRAPE CULTURE IN MISSOURI.—Farms in the neighborhood of Hernann, Missouri, have risen very much of late, in consequence of the increased cultivation of the vine. A Mr. POESCHEL, who has a vineyard of not quite one acre, which was planted with Catawba grape in the spring of 1845, made from it this year one thousand gallons of wine, and the value of the whole produce of the vineyard was seventeen hundred dollars.

THE forcing of plants into flower early by heat should be managed carefully; begin cool, and gradually increase it week after week until it will bear the stove. Too sudden a change of temperature destroys the beauty and sometimes the plant.

ALWAYS clip hedges, to keep them down, and make them grow close. If you neglect this, they grow open and naked at the bottom, and keep off the air, and sometimes the sun, by their overgrown tops.

CULTURE OF HALF HARDY TREES AND SHRUBS.

Some young trees and shrubs suffer much in winter before the wood becomes hardened and well matured. For a long period I have seen the American Spindle tree regularly killed down; and for several years the Chinese Honeysuckle shared the same fate; but the same shrubs now appear perfectly hardy. When newly introduced, such plants generally receive more attention than in after time. They are stimulated by high culture to grow late in the season; and abounding in juice, suffer in proportion from the cold. Dry substances never freeze. The seeds of melons and cucumbers endure the greatest severity of our climate; but the plants that spring from them are destroyed by the first touch of frost. Neither oaks nor maples would abide our winters, if they continued their growth into autumn. Half-hardy shrubs should, therefore, be planted in soils not too rich, and their growth should be stopped in summer if possible.

Have we a better guide than Nature? Her seedlings generally rise among other plants, where they are protected from the scorching sun, from untimely frosts, and from being thrown out in winter. Many a plant which we foster in the green-house, would do well in the thick shades of our forests, where the branches above them would lessen the radiation of heat, and shield them from freezing winds. But hot sunshine may be as destructive as a cold night. The difference between the climate of the woods and the climate of the open border, is very great: and it may explain why many of our native plants refuse to inhabit our gardens. For instance, who has succeeded with the *Gerardias* in open sunshine? Or with *Cypripedium acaule?* I have known the last, however, to bloom for several successive seasons, in the *twilight* of a broken flower pot, open on the north side.

Some shrubs suffer much from exposure to cold winds. In the open ground, the white Antwerp raspberry, has been much injured — while ten rods under the lee of red cedars, it has done well. The common laburnum may illustrate the same doctrine. One which stood in a door-yard, exposed to the west winds, was damaged every winter, until a building was erected very near it, so as completely to shelter it on that side, and from that time, during seven years, it has not been injured.—*D. Thomas' Address.*

American Almonds.—We are indebted to Mrs. William A. Banker for a sample of almonds raised in her own garden. They are of extraordinary size, and fine flavor. This, and other experiments, prove that our climate is not unfavorable to the growth of many plants and fruits for which we are in the habit of looking abroad.—*Winchester (Va.) Republican.*

There is little doubt that the cultivation of almonds can be rendered profitable in Georgia and other Southern States. The growing of fruits of this kind would greatly tend to increase their consumption, benefit small landholders, and, by so much, check the over-production of cotton. If one has seeds that will germinate, now is a favorable season to plant them.—*Augusta Chronicle.*

Liquid Manure—*Grapes.*—The Ohio Cultivator says that a grape vine at a hotel in that State, but three years old, has climbed to the second story, and has extended its branches round the corner of the building to a distance of twenty or thirty feet, nearly the whole being full of clusters of fruit. The only unusual treatment it had received, was a watering every day with dish-water, and occasionally with soap-suds.

Plants in pots should be kept dry in winter time: they take less harm in case of frost. So that life be kept in them they cannot be watered too little. The plants are then at rest.

Proceedings of Agricultural Societies.

N. Y. STATE AGRICULTURAL SOCIETY.

The Annual Meeting of this Society is to be held in Albany, on the third Wednesday (17th) of the present month. Premiums will be awarded on Grain and Root Crops, Butter, Cheese, Fruits, &c. We annex names of Judges constituting various Committees:—

Management of Farms—Hon. A. Van Bergen, Coxsackie; William Buel, Rochester; J. S. Gould, Hudson.

Experiments and Essays—Asa Fitch, M. D., Salem; Hon. George Geddes, Onondaga; Hon. S. Cheever, Saratoga.

Cheese and Butter Dairies—B. P. Johnson, Albany; Hon. H. C. Tuthill, Cayuga; A. Doubleday, Broome.

Butter and Cheese—Joseph Alleyn, Rochester; Joseph Carey, Albany; Amos Briggs, Seaghticoke.

Wool—Hon. J. P. Beekman, Kinderhook; S. N. Dexter, Whitesboro'; Hon. D. S. Curtis, Canaan.

Draining—John Dalafield, Oaklands; Roswell Reed, Coxsackie; B. B. Kirtland, Greenbush.

Fruit—E. Emmons, Albany; D. Thomas, Greatfield; H. Wendell, Albany; J. W. Bissell, Rochester; C. S. Wilson, Utica.

For the best new seedling variety of winter apples, of decidedly superior quality, and valuable for exportation; one dozen specimens to be exhibited; together with a history of its origin, a description of the growth, character and habits of the tree, and the growing of the fruit—such fruit to be adjudged by the committee as of the first character for orchard purposes, diploma and $10. For the second best do., $5. The above new seedling variety to be sent to B. P. Johnson, Secretary, Agricultural Rooms, Albany, before the 15th January, 1849, for examination.

Field Crops.—*Wheat and Indian Corn*—Charles Lee, Penn Yan; Hon. Tracy Pardee, Batavia; Hon. John I. Brinkerhoff, Cayuga.

Barley, Rye, Oats, Peas, and Beans—Hon. O. Hungerford, Watertown; J. W. Ball, Exeter; W. A. McCulloch, Greenbush.

Potatoes and Root Crops—A. Osborn, Watervliet; Robert Harper, Albany; J. W. Haydock, Greenbush.

Corn Fodder, Hops, Clover and Timothy Seed.—Col. E. Kirby, Brownville; Hon. Benjamin Enos, De Ruyter; Hon. Henry Wager, Western.

Arrangements for Pomological Exhibition—Herman Wendell, M. D., J. McD. McIntyre, James Wilson, Albany.

Prof. E. Emmons, M. D., is expected to deliver an address on the first evening of the annual meeting. Notice will be given of the subject of the address.

A Pomological Exhibition is to be held in connection with the meeting, and will undoubtedly add to the interest of the occasion.

Monroe County Ag. Society.—At the Annual Meeting of this Society, held on the 12th ult., officers were elected for the year 1849, as follows: Alfred Fitch, President; C. K. Hobbie, J. S. Ramsdell, and Wm. R. Booth, Vice Presidents; Joseph Alleyn, Rec. Secretary; D. D. T. Moore, Cor. Secretary; John H. Robinson, Treasurer. Elisha Harmon, D. D. T. Moore and Joseph Alleyn were appointed delegates to the Annual Meeting of the New York State Ag. Society.

The Committee on Field Crops awarded a premium of $3 and a copy of Trans. Am. Institute to Rufus Beckwith, of Henrietta, for Corn Crop averaging *one hundred and eighteen bushels per acre.* To John Row, of Riga, a premium of $5 for crop of Mangel Wurzels, averaging at 60 lbs to the bushel, 1311⅔ bushels per acre. (According to the requirements of the State Society, 50 lbs. to the bushel, this crop would be equal to 1574 bushels per acre.)

The meeting was an unusually interesting one.

Ladies' Department.

THE following article is appropriate for this department, and we insert it with an assurance of more, if not better, extracts from the same valuable work.—It is from a new and handsome volume by Dr. M. M. RODGERS, of this city, entitled "Scientific Agriculture"—embracing the elements of Botany, &c.

ORGANS AND STRUCTURE OF THE FLOWER.

THE essential organs of a flower are three, viz: the *stamens*, the *pistils*, and the *receptacle*. These are all the parts necessary to the perfection of the seed—they, therefore, constitute a perfect flower: to these, however, is added in most flowers, the *perianth*, consisting of the *calyx* and *corrolla*.

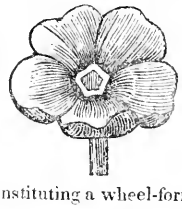
The STAMENS are slender, thread-like organs within the "flower" or perianth, around the pistils: their most common number is five; but this varies from one to a hundred. Their office is said to be the fertilization of the seed.

The PISTILS are usually slender, larger than the stamens, and occupy the center of the flower: "they are destined to bear the seed." They are sometimes numerous, but in many cases there is only a single one.

The RECEPTACLE is placed at the end of the flower stalk, and constitutes the basis upon which the organs of fructification are usually placed, in such manner as to encircle it.

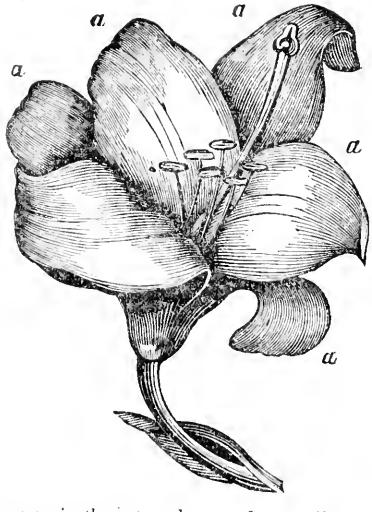
Fig. 1.

Fig. 2.



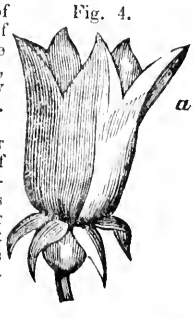
The COROLLA is the interior part of the perianth, consisting of one or more circles of colored leaves of various hues and delicate texture, situated upon the receptacle: these leaves are called *petals*, (Fig. 3, a, a,) and they may be united at the edges, constituting a bell-form flower (Fig. 2,) or they may be separate, constituting a wheel-form flower, (Fig. 1.)

Fig. 3.



The CALYX is the external part of the perianth, consisting of a circle of leaves, the same in number as those of the corolla, in some cases distinct, and in others united: they are usually green: these leaves are called sepals. (Fig. 4, a.)

Fig. 4.



We see now that a complete flower is made up of four regular sets of organs, viz: the *stamens*, *pistils*, *receptacle*, and *perianth*; these organs are arranged in concentric *whorls*, or rings: some of them may be absent or suppressed, some superfluous ones may be developed, and some degenerated into those of a different set, as petals into stamens, flowers into leafy branches, &c.

The *stamen* consists of three distinct parts, viz: the *filament*, (Fig. 5, a,) the *anther*, (Fig. 5, b,) and the *pollen*. The filament is the thread-like part which supports the anther at its summit: the pollen is a fine yellow dust of various forms contained within the cells of the anther, until discharged through its pores into the air.

Fig. 5.

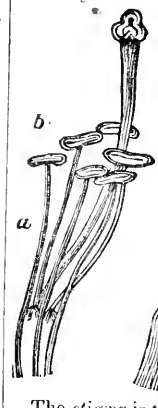
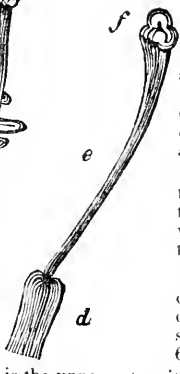


Fig. 6.



The *pistil* consists also of three parts, viz: the *ovary*, the *style*, and the *stigma*.

The *ovary* is the base of the pistil which contains the young seeds, and which ultimately becomes the fruit. (Fig. 6, d.)

The *style* is a prolonged column arising from the ovary, and supporting the stigma at its top. (Fig. 6, e.)

The *stigma* is the upper extremity of the style, usually of a globular form: it may be either simple or compound, according to the structure of the ovary and style. (Fig. 6, f.)

The *ovules* are minute globular bodies in the cells of the ovary, which become the seeds of the matured fruit.

The *placenta* is a fleshy ridge within the cells of the ovary, from which the ovules are developed, and to which they are attached.

There are several other secondary and minute parts, belonging to the flower, which it is not necessary or practicable to describe here, as it would only burthen the memory with technical terms which would convey but little useful knowledge.

TRAINING OF CHILDREN.—The instruction of your children cannot commence too early. Every mother is capable of teaching her children obedience, humility, cleanliness, and propriety of behavior; and it is a delightful circumstance that the first instruction should thus be communicated by so tender a teacher. It is by combining affectionate gentleness in granting what is right, with judicious firmness in refusing what is improper, that the happiness of children is promoted, and that good and orderly habits are established. If children are early trained to be docile and obedient, the future task of guiding them aright will be comparatively easy.—*Nicholls.*

SWEETENING BUTTER.—Mr. Trevelgan has communicated to the Mechanics' Magazine the following item of dietetic improvement. Whilst making some experiments, it occurred to him that butter, either fresh or salt, possessing a disagreeable effluvia and flavor, might be rendered perfectly sweet by the addition of a little carbonate of soda. On trial this surmise proved correct. The proportions are, carbonate of soda, two and a half drachms to butter three pounds. In making fresh butter, the soda is to be added after all the milk is washed out, and is ready for making up. The unpleasant smell is produced by an acid, which being neutralized by the alkali, disperses at the same time the disagreeable flavor. This acid is generated by peculiarities in the constitutions of some cows, by the condition of certain fodders, by the length of time the cream is kept before being churned, but too often by the dairy utensils not being kept thoroughly clean. Soda produces the same results when added to the culinary greases—as drippings, lard, &c.

TO PURIFY HONEY.—Expose the honey to frost for three weeks, in a place where neither sun nor snow can reach it, and in a vessel of wood or other substance which is not a good conductor of heat. The honey is not congealed, but becomes clear.

CLEANING SILK.—The following directions for cleaning silks are by one of the first Parisian dyers: Half a pound of soft soap, a teaspoonful of brandy, and a pint of gin; mix all together; with a sponge or flannel, spread the mixture on each side of the silk, without greasing it; wash it in two or three waters, and iron it on the wrong side; it will then look as good as new.

Boys' Department.

It was our intention to occupy at least one page of this number with matter interesting to our young friends—but the space devoted to other departments compels us to contract our anticipations, as well as articles. We have hardly room to *begin to talk* with the thousands of boys who, we hope, are constant and attentive readers of the Farmer—and who, if they act well their several parts in the pathway of life, will soon become intelligent, useful, and honorable men. But it shall be our endeavor to make amends, in future numbers, for the lack of instruction or amusement in the present. Premising thus much, we wish our youthful readers a "Happy New Year;" trusting that they will so improve the hours, days and months of 1849, as to acquire the sound principles, industrious and systematic habits, and mental wisdom necessary to constitute capable and intelligent cultivators, good brothers, husbands and fathers, and worthy citizens.

Farmer's Boys.—There is a wholesome change going on in public sentiment, which promises to do much for the improvement of the country, and the condition of the people. We mean the change which is taking place among the young in relation to the great work of tilling the soil. A few years ago, and the young men left their father's farms as soon as they could get away from them—and the fathers themselves not unfrequently encouraged them in it. A hard hand and a sunburnt face were deemed poor recommendations in life; and more *genteel* modes of getting a living were sought by the young. But they are beginning to look at the matter in a different light. The dull times through which we have passed, have opened their eyes to the fact, that after all there is nothing like a farmer to stand through all times, and they are quite content to stay at home. The result will be, that our farms will be to a very great extent better cultivated, and produce more—that large farms, which are not half cultivated, will be divided, and well husbanded—and that we shall have a large and virtuous population scattered all over our fertile hills.—*Nashua Tel.*

The appetite for sensual pleasures palls with enjoyment. With moral and intellectual pleasures, the reverse is true.

CONTENTS OF THIS NUMBER.

ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, Dec. 26.

FLOUR—Extra brands, $6.12*a*6.25; pure $5.62½*a*5.87; common and good, $5.37½*a*5.50. Meal, $2.87*a*2.94. Rye flour, $3.06*a* 3.12½.

GRAIN.—Genesee wheat, $1.25; good western held at $1.10. Corn, old Southern at 56*a*59; new northern 60*a*61; old mixed 64. Oats, 33*a*36.

PROVISIONS.—Pork market steady, and old held at $10.75*a*13; new sold to arrive in January at $11*a*14. Beef dull at $5 65*a*7 and $9.75*a*11. Lard quiet at 7¼*a*7¾c. Fair business in Butter and Cheese—the latter at 6½*a*7c.

Rochester, Dec. 27

FLOUR nominally $5. Wheat, $1.06. Corn, 50c. Rye 50c. Barley 50. Oats 26.

PROVISIONS.—Pork in hog $5 per hundred; mess, $13*a*14 per barrel. Beef $3.50*a*4 per hundred Lard 7½*a*8c. Butter 12*a*15c. Cheese 5*a*6cts.

Bound Volumes of the Farmer.

THE NINTH VOLUME OF THE FARMER, for 1848, just completed, and for sale bound or in numbers, as preferred. It contains a larger amount of matter pertaining to Agriculture and Horticulture than any similar work of the same price ever published—and is illustrated with OVER EIGHTY ENGRAVINGS. Price, 62½ cents bound in boards and leather—or 50 cents in marble paper, with cloth backs.

Also—complete sets of the Farmer from its commencement, (except the 2d volume,) substantially bound, which we will sell at 50 cents per volume. These volumes are not suitable for sending by mail—but we have copies of vols. 6, 7, and 8, bound in paper covers, which may be mailed.

Fruit Scions.—The subscriber can furnish Scions from the "Northern Spy" and most other apple trees for 1849. They can be sent by Express or Mail. Price $1 per 100.

Rochester, Jan. 1, 1849. [1-3t] JAMES H. WATTS.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH ENGRAVINGS OF

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

THE TENTH VOLUME of this Journal will commence on the 1st of January, 1849. In making this announcement to his AGENTS and the FARMERS and FRUIT CULTURISTS of the country, and again asking their support in behalf of the work, the Publisher has the satisfaction of stating that the GENESEE FARMER now has a circulation EXCEEDING, BY SEVERAL THOUSAND, that of any similar periodical published in America. This fact, alone, furnishes abundant evidence of the *real value* and *superior merit* of the work—for no journal, however cheap, can become and continue so universally popular, unless actually WORTHY of the substantial support of an intelligent community.

THE HIGH REPUTATION which the Farmer has acquired throughout the United States *will be maintained*, and if possible *augmented*, during the ensuing year. To accomplish this object, no effort or expense will be spared by the Editors or the Publisher. Their aim is to furnish a *reliable* and *independent* journal—one which shall avoid and condemn *humbug* in whatever guise it may appear, and impart correct practical and scientific information on all subjects pertaining to Agriculture and Horticulture.

It will be issued on NEW AND CLEAR TYPE, and SUPERIOR PAPER, and printed in the best style of the art—NEAT and CORRECT. Its ILLUSTRATIONS—embracing Portraits of distinguished friends of improvement (on STEEL and WOOD,) and Engravings of Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Trees, Flowers, &c.,—will be more numerous and expensive than those of any preceding volume. ☞ Each number will contain at least **24 Royal Octavo Pages!** making a large and handsome volume of several hundred pages at the close of the year.

The Genesee Farmer is, beyond dispute, *the cheapest Agricultural and Horticultural Paper in the World!*—and the Proprietor is determined to make it the NEATEST and BEST. We confidently ask for it that support which it *merits* from the Farmers, Gardeners and Fruit Culturists of the United States.

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☞ 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

D. D. T. MOORE, Rochester, New York.

To Agents, Post-Masters and Subscribers.

AGENTS, Post-masters and other friends of the Farmer will bear in mind that we offer Premiums amounting to OVER TWO HUNDRED DOLLARS (in Agricultural Books, Implements, &c. at cash prices,) for subscribers obtained before the 20th of April next. We have not room to publish the list of Premiums in this number, but will send it, together with show bill, specimens, &c., to all who wish to compete.

We hope that *all* of our present patrons will renew their subscriptions, and get as many new subscribers as convenient. If each of our readers will take the matter in hand—and we earnestly invite all so disposed to obtain and forward subscriptions—much may be accomplished in every section of the country. Friends, will you SHOW THE FARMER TO YOUR NEIGHBORS AND ACQUAINTANCES, AND INVITE THEM TO SUBSCRIBE?

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

P. BARRY, Conductor of Horticultural Department.

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.

ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Farmer, 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. No deviation from these terms.

GENESEE FARMER.

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

VOL. X. ROCHESTER, N. Y.—FEBRUARY, 1849. NO. 2.

AGRICULTURAL EDUCATION.

It gives us especial pleasure to notice the strong recommendation of Gov. Fish to the Legislature, to endow an Agricultural School. A whole generation has passed off the stage since Judge Buel reported a bill in the session of 1822–3, to establish such an institution as is now for the first time commended by an Executive of the Empire State. How sure, but slow is the progress of public opinion! Mental training and professional study are deemed by every body necessary to qualify a man to be an officer in the army, the captain of a ship, a clergyman, lawyer, surgeon, or any thing else of the least pretensions to science, but farming. The professional agriculturist is thought by many to need no particular knowledge of the origin, composition, and capabilities of the various soils which he cultivates. For him to study the chemical difference between granitic, syenitic, felspathic, slate, sandstone, and limestone rocks, by the weathering and disintegration of which all the minerals in his lands were derived, would be, in the opinion of some, as waste of time.

Thousands of practical farmers know that wood ashes are excellent fertilizers, and contain considerable *potash* and other valuable minerals, but they would not permit their sons to attend an agricultural school provided with a good laboratory to extract from the parent rocks and soils every *atom*, whether potash, lime, soda, magnesia, iron, chlorine, sulphur, phosphorus, flint, carbon, nitrogen, or the elements of water, taken up by a forest tree or a cultivated plant. They seem to cherish a kind of morbid, hydrophobia dread of an increase of knowledge on the part of the great agricultural interest of the country. Such men would not take an agricultural journal on any account; nor read a book on any rural topic, nor permit their children to study one, lest some new light should disturb their profound Rip Van Winkle sleep in after years.

Fortunately, the absolute rule of this class of farmers is drawing to a close. They have had their day, and it has been a long and gloomy one. A new era has dawned upon the world to bless the children who are to follow the plow in after life. Unlike their fathers, they will be taught to know what changes the plow, harrow, cultivator and hoe effect in tilled land. Every man sees that these implements which have been in use so long without a *why* or a *wherefore*, neither add to, nor take away from the soil. What *chemical changes* in the elements and combinations of earth do the plow and the hoe bring about, so beneficial to the husbandman? Who can say that no farmer applies too much, none too little labor, to give the most profitable return? Who dare assert that he adapts each fertilizer to the particular wants of every crop? and never fails to sow or plant the kind of vegetable with the elements of which his soil is most abundantly supplied? Who is certain that he makes the best practical use of the mold, manure, lime, potash, gypsum, bone dust, and other substances appointed by Providence to form every cultivated plant? Think of these things.

Alas! that so many should believe that they are *too wise* to learn any more about the natural laws which regulate the organization and growth of all crops and domestic animals. Such have not begun to study. Establish one good school, and the fact will soon be apparent, that at least half a dozen more should be added to the list. Indeed, we fear that there may be so many sections, each eager to get the institution located in its neighborhood, as to defeat the scheme altogether for the present. This will be the height of folly. Considering the efforts that were made in that behalf in 1843, 4 and 5 by the friends of the measure in Western New York, it would seem to have a pretty strong claim to the honor. But we care infinitely more for the advancement of the cause, than for the location of the school. We hope to live long enough to see honest manual labor and high intellectual culture fairly united; just as God has united in the same person both hands to work and a mind to reason. Science needs but to be fairly understood to secure an enduring place in the popular heart.

Encouragement — *Thanks.* — During the past month we have received abundant evidence of the high estimation in which this journal is held by all classes of citizens—farmers, mechanics, and members of the learned professions. Though its chief patronage is derived from agriculturists, the Farmer receives a large portion of its support from, or through the influence of, men of other professions and occupations. Many clergymen, physicians, mechanics and merchants in all sections of the Union, are actively engaged in extending its circulation. We would fain tender suitable acknowledgments to all who are laboring to promote the cause of improvement in this manner. And we invite others to present the Farmer to the attention of their friends.

DEEP AND SHALLOW DRAINING.

It is loss of time to discuss whether deep or shallow drains are best, till you know what kind of strata you are going to cut through. Both are good when the soil is adapted for them; and nothing but experience and great practical knowledge can tell what depth, what distance, and what direction they should be cut in; and not then, till he sees what form the land is in, and what kind of strata lies under. There can be no uniform system for draining. The process must be entirely governed by the nature of the strata and how it lies.

In the length of my practice, which is upwards of forty years, I have drained almost all kinds of lands from 2 ft. and 2 ft. 6 in., to 3 ft. 6 in. and 4 feet. The different kinds of subsoil rule these, and what depth they lie, and whether they are porous above and retentive below, or retentive above and porous below. A man cannot tell which of these depths are best until he comes to execute the work. I have found them all to answer when the strata is adapted for them. Respecting the distance, that depends upon the form the land lies in, and what kind of strata lie under. I cannot find any body that can give a reason why drains should be cut 5 feet deep in stiff clay, and the clay put on the bare pipe or tile again. In the course of my practice I have seen one of clay put upon the brushwood which was put upon the tile; and which prevented the drain from having the desired effect. Every farmer that is a little acquainted with the spirit level, considers himself competent to the drainage of his land, without the assistance of a practical man; and in cases applying solely to clay and surface water the object is generally well effected; but where the land is springy, the strata varies, and the water breaks out at different levels, the spirit level must be used with great care, and with the aid of a practical man. In these cases I consider parallel draining of no use, as it would double the cost of the land, and not have the desired effect. But these things would require a practical man, and he must have the knowledge and use of the spirit level, or else he cannot make an estimate of what the draining of an acre of land will cost. In the course of my practice I made an estimate to the amount of £1,921 18s. 6d., and contracted for that sum before a drain was cut. Whenever I find it necessary to cut to any depth in clay, I always fill the drain up again with some kind of material that will admit of free access for the water to the tile, and spread the clay on the land. I have known a piece of land drained from three to four feet deep, and the clay put in again, and the land was none the better.—*Cor. of Chester (England) Chronicle.*

Coming from a practical man of large experience, we regard the above brief remarks on deep and shallow draining, and also on the impropriety of filling a ditch with compact, impervious clay, over a stone, tile, or brushwood drain, as exceedingly valuable. The writer says that he has had 40 years experience in draining lands, and made estimates and contracts in single jobs of £1,921 18s. 6d., equal to nearly $10,000 our currency.

The practice of carting off the clay excavated in digging ditches, after it has undergone the mellowing and chemical influences of sunshine, frost, oxygen and carbonic acid, above ground one year, and spreading it as a fertilizer over the field, we have seen performed with great success at the South. It may be removed as fast as the clay is dug out in making the ditch: and some planters have horse carts at hand for that purpose—each shovelfull of earth being thrown into a cart, rather than on the ground by the side of the excavation. Others use a scraper, and with it haul the clay thrown out back into any low places that may exist in the vicinity. Whether the soil and subsoil thrown out in digging a ditch be taken off immediately, or allowed to dry, freeze, and more or less decompose, before it is carried away to be used as a fertilizer, or to fill hollows and depressions, is, probably, not very important. It may not however be amiss to inform our young readers *why* such soils often partake of the character of marl, and are of far more value as a top-dressing than would be an equal quantity of dry upland surface and subsoil excavated in a similar manner. The elevated position and perviousness of the latter, naturally favor the washing away of all their soluble salts of lime, potash, soda, magnesia, alumina, &c., and all decomposing, soluble mold, by the rains and snows that fall in the course of the year. Low grounds are less exposed in this way. On the contrary, the surface of the earth in such places is often saturated with water that has leached through the fertile soils of uplands, and dissolved out of the same not a little of both the organic and inorganic food of plants. This water evaporating in natural basins, or on level surfaces, leaves its fertilizing lime and other elements behind. The cream of high rolling lands, and especially when cultivated, is constantly flowing, both in limpid springs and turbid surface streams, into the basins and over the flats of lower levels. The same causes which render the ocean and seas salt, and furnish an abundance of nourishment for the support of myriads of marine plants and animals, operate to enrich all low lands. Valuable as these generally are when well drained, they are usually worthless without it for agricultural purposes.

Having intimated the impropriety of filling up ditches over wood, tile, and stone drains, with compact clay, it follows that they should be covered with sand, gravel, or some earth through which water can easily percolate. It is proper to remark in this connection, that Englishmen of large experience are not agreed in regard to the propriety of using the clay dug from a ditch to fill the same over the conduit for carrying off water at its bottom. Many adopt this practice and say that it answers every desirable purpose. Others fill with small round stones, gravel, sand, or loose earths. To prevent the filling up and stoppage of the drain, no surface water with its mud and sediment should be permitted to flow into it. All water should filter through soil or sand before it enters the subterranean passage. This alone will prevent the necessity of taking up and opening the drain anew, and often. A drain well made will last for ages and need no repair—operating as a perennial spring. As one means of promoting the health of the human family and domestic animals, the drainage of swamps and all wet, low grounds, deserves far more attention in this country than it has yet received.

Pea Bugs.—Various remedies have been suggested to get rid of the pea bug—such as scalding the seed, putting it in bottles hermetically sealed, &c. The first has its objections, and the second retards the growth and exit of the bug until after planting time, but does not in all cases destroy it unless more air is abstracted from the bottles than can well be done without apparatus. A certain way is to gather in one year your seed peas for two, put them in separate bottles, and leave the bottles for the second year corked up until you want the peas to plant. Peas lose none of their vitality by being kept, (they have been found to grow taken out of an Egyptian mummy,) and it is a question whether, like melon seed, they are not all the better for keeping. A. H., *Meadville, Penn.*, 1848.

Never allow the seeds of any weed to ripen on the ground. If this were always attended to, a garden or farm would soon be cleaner, and in time clean.

ANALYSES OF FIVE VARIETIES OF CABBAGE.

Mr. J. H. Salisbury, assistant in the Laboratory of Prof. Emmons of Albany, has made a valuable contribution to the farming and gardening interest of the United States, through the pages of the December number of the American Journal of Agriculture and Science, by publishing the results of ten analyses, five of the organic and five of the inorganic elements of as many varieties of cabbage. This is a most nutritious vegetable: and we believe it can be grown with sufficient economy to aid in making butter, cheese, and wool, with a fair profit to the husbandman.

Every farmer knows that cabbage needs rich land; Mr. Salisbury has demonstrated the reason *why*. The varieties examined by him are the Drumhead, Savoy, Red cabbage, Cauliflower, and Turnep cabbage. They all contain a good deal of water. 100 parts of the head of the common white or large Scotch Drumhead gave only 11.335 dry weight and 88.665 water. The Savoy contains about 2 per cent. less of water, or 13.475 parts dry matter in 100 of the fresh head. The Cauliflower contains still less water, having 14.300 per cent. of dry substance. The Turnep-rooted cabbage has nearly as much water as the common turnep itself, giving 91.140 parts of the pure liquid in 100 of the plant.

Estimated dry, the Drumhead contains 6.969 per cent. ash; Savoy 6.605; Red cabbage 7.695; Cauliflower 10.629; Turnep cabbage 9.086. They all abound in phosphoric and sulphuric acids, combined with soda, potash, magnesia, lime, and iron. They are quite an exhausting crop. Supposing an acre of choice land to yield, as it has done, 36 tons of the Drumhead variety, the crop would take from the soil in pounds, the following minerals:

Silicic acid,	2.958 lbs.
Sulphuric acid,	56.134 "
Phosphoric acid,	63.784 "
Phosphate of per oxide of iron,	5.916 "
Lime,	14.484 "
Magnesia,	17.986 "
Potash,	112.448 "
Soda,	161.772 "
Chlorine,	3.978 "
Total,	468.450 "

Of these 468 lbs. 304 are pure soda and potash, and 120 lbs. phosphoric and sulphuric acids.

Cabbage is found to contain a large amount of organized nitrogen or azote. Calculated dry, i. e. after the water is all evaporated, Drumhead gives 17.899 parts in 100; Savoy 20.281; Cauliflower 20.763; Red 16.212; Turnep-rooted 19.052. Dry lean beef and dry blood contain within a fraction of 15 parts in 100 of nitrogen. Skin has 18.72 per cent.; wool, hair and horn a little less than 18 per cent.

From the above statement it will be seen that the plant under consideration is remarkably rich in nitrogen, phosphorus and sulphur; and when cabbage decays or rots, it smells not unlike decomposing meat or eggs. A cow can elaborate a good deal of cheese, and a turkey organize eggs, by eating cabbage.—That healthy children can be raised in a good degree on this food, other countries beside Holland and Belgium can bear witness.

A vegetable so abounding in the elements of bone, skin, brain, and all flesh, demands a soil pretty thoroughly saturated with *animal* manure. The liquid excretions of animals, common salt to yield soda, wood ashes to furnish potash, bones to supply phosphoric acid, and gypsum to add sulphur and lime, will all come in play. With rich well-plowed land, industrious boys can raise and house, or bury in the lot, a good many dollars worth of cabbage, and not greatly interfere with their other duties. See that the seed is sown early, and every thing attended to in season. Perhaps the large per centage of water in this crop will deter some from trying to grow 36 tons on an acre. It should not. There are 75 lbs. of water in 100 of fresh lean beef. Near cities where night soil can be had, cabbage seed might be drilled like turneps in fields, and cultivated partly with a small plow, or some other implement drawn by a horse.

GOLDEN DREAMS.

California Gold, its effects on business and black legs—Advance in land and digging 'taters—Beggary of Mortgagees and Silk Stockings—Considerable of a Shower—All the world mad and in straight jackets—The wise all rich, &c.

What will be the result of the recent discovrey of the precious metals in our new acquisitions from Mexico, on the business, morals, and politics of our country? If only a moiety of the reports are true, and there can not be a rational doubt indulged on the subject, there is a revolution at hand in all of our preconceived notions, habits, and pecuniary relations, such as the world never experienced.

If gold was as plenty as iron, it would be worth no more than iron, nor would a pound of it buy any more belly timber than a pound of iron. Real estate, farming lands, and labor, being the only real producing agents, the *primum mobile* of wealth, must advance with giant strides: and all those who now live on the representative of the "almighty dollar"—on the dividends, or interest of bonds, mortgages, government stocks and others of fixed value, and all who subsist on salaries, annuities and pensions, will become beggars. The time is at hand when a barrel of flour will cost $20, a pound of meat and butter 50 cents, and other necessaries in proportion: a half eagle will not buy as much as a silver dollar will now: the dividends and salaries that now support the wealthy in luxuries and extravagance, won't buy Johnny-cake and salt to support nature.

If gold becomes extremely plenty, it must of necessity depreciate in value, or rather every article of production will advance in price, as it always did and ever will, at every great inflation of the currency. No man ever got five dollars very easily, but what he did, or was tempted to play the fool with it: what has been, will be, to the end of time.

Land, machiney, and labor, will be the great levers that will move the world, and before one year passes, if the clouds of the golden shower continue to rise from the western horizon, there will begin an inquiry for real estate, and monied capitalists will resort to that investment as the only ark of safety for their funds; so old square toes, hold on to your acres and bide your time—don't be fooled with the idea that "it is not going to be much of a shower."

Now, is there any foundation for believing any of these predictions? Let us see. The accounts that we receive is, that gold is found in various localities embracing 10 to 20,000 square miles of surface—say 10,000, that is 640,000 acres, which at 10 acres to a person, which is a mineral lot in the U. S. lead mines, would allow a lot to 64,000 persons. Each one procuring an ounce per day, which is a low rate, is considerably over a million of dollars per day, and

equal to 300 millions a year, and lee-way for the rainy season and other casualties. The bullion of the world does not probably exceed 1000 millions of dollars, and at the above rates it would be doubled in about three years: to say nothing of the diamonds, platina, silver, lead, and quicksilver which are found in that region, in which case the result is inevitable, we shall all go mad under the new dog star. So be it. We are willing to trust our individual luck at catching larks when the sky falls. The wise will grow rich and the fools poor: but whether temperance, honesty, charitableness, morality, content, happiness, home made coats, and stogy boots, and hard hands, and honest hearts, will prevail in this happy land, under this state of things, is another affair — which this deponent at this time sayeth not.

NOTES FOR THE MONTH.

BY S. W.

Prosperity of Farmers. — It is universally admitted that the farmers of Western New York are by far the most prosperous moneyed class of our citizens at this time. What the Erie Canal has not done to produce this result, the Railroads have at length accomplished. Slaughtered hogs now bring 5¼ cents the pound, and sheep $3 a head, to take cast on the Railroad. Thanks to the drovers, beef is hardly to be had at any price: and poultry *is not.* Farms all alluvial (as our formations are,) are now in demand at improved prices. Our farmers — at least some of them — begin to learn that it is easy to have a new farm beneath an old one; ditching and draining are two items now added to the routine of farm labor. If the more obtuse of our rural population still resist modern improvements, they no longer scoff at them. Slow as farmers have been to embrace the late new theories and improved practice in farming, in this age of universal progress and astounding discoveries, they no longer hang back, but are up and doing.

Top Dressing. — The London Farmer's Chronicle has a long, interesting article on "top dressing fruit and garden grounds." If the advantages of top dressing are so manifold in the cool and humid climate of England, how much greater benefit may be derived from it during our hot dry season? It is not generally known among farmers, but such is the fact, that a newly planted tree may be often saved alive, by a top dressing of straw for several yards around the tree, when watering alone will have no power to save it: this covering keeps the soil both loose and moist. Subsequent top dressing with long manure, turning the same under and planting potatoes, will very much accelerate the growth of the trees: the crop of potatoes being clear gain.

One of the great advantages from not feeding meadows and pastures too closely, is the top dressing or shade of the surplus grass. The theory of the "fertilizing effect of shade," is no new theory. Some of our shrewd Cayuga County farmers have long since eschewed the practice of summer-fallowing for wheat.

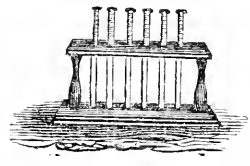
Fattening Beef and Pork. — Whenever I see a farmer peddling half fatted pork, I ask the age of the hogs. Strange as it may seem, such animals have generally starved through two or three winters; and it requires no exercise of faith to believe the farmer's story, that it took fifty bushels of ears to get them started, or *on the lift.* The science of making the most pork with the least feeding, is to keep the hog growing from the start given him by his mother's milk. 'Twas but the other day that I saw a farmer who disports himself on 150 all arable alluvial acres, hawking about a few quarters of lean cow beef; am I in the wrong for saying that I instinctively felt as though all the fat of that animal had been lost, without one cent of corresponding gain to the farmer. I once knew a farmer who suffered his sheep to eat out one side of a stack of hay, when it fell over and crushed several sheep to death. This farmer averred with a smile that the surviving sheep were enough better for their extra feed to compensate him for the loss! But the man who essays to fat a half starved animal from fall to Christmas, has not even the excuse of the sheep story.

BUTTER AND BUTTER MAKING, WITH NOTICES OF VARIOUS CHURNS, &c.

BY HORACE L. EMERY.

Butter making is becoming more generally understood as the farming public become convinced that it is governed by, and in fact depends upon, certain fixed principles, the knowledge of which enables the farmer to produce with certainty more and better butter, and that with uniform if not less expense.

In the first place, the cows of a butter dairy should be selected with special reference to that purpose; for every dairyman has learned by observation that the cow that gives the most milk is often worth little or nothing for making butter. This selection is greatly facilitated by means of the *Lactometer.*— (See figure.) It is simply a series of glass tubes open at the top and set perpendicularly in a frame. These tubes are some 10 inches long, and graduated in inches and eighths from the bottom upward. In using it each tube is supplied with an equal quantity of milk from a separate cow, and all allowed to stand until the cream is risen; then, by examining the tubes before a strong light, the comparative quality of each cow's milk is instantly known by the proportion of cream it contains—thus showing the dairyman at once which cow is most profitable for butter and which for milk.



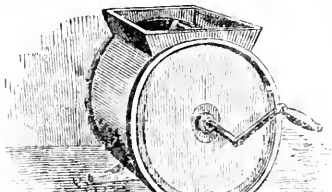
Lactometer.

The next thing, in order to succeed, is to obtain the greatest possible quantity of cream from the milk. To this end it should be allowed to stand without being disturbed in a cool, ventilated place as long as it remains sweet, when it should be taken off and churned — the sooner the better. Many churn the new milk — others the cream and milk together, even after it has become sour. The objection to churning new milk is that a less quantity of butter is produced, and unless the sweet butter milk can be profitably used, a loss of butter, as well as of labor, is the consequence. The objection to churning milk and cream together is the unnecessary labor caused by it, and the objection to keeping it too long before churning, is, that it becomes more and more acrid until it will produce but indifferent butter, at best, and that will remain sweet but a short time even if it is so at first. This last fact may be accounted the principal cause of the great proportion of poor butter in the market.

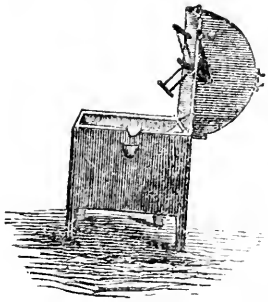
The next thing in order is to churn the cream in the most simple and direct manner. To this end it is necessary to know the structure of cream and in

what state the butter exists in it before the operation. Having carefully examined with a powerful microscope sweet milk, cream, and butter, in the various stages of the operation, I have found the particles of butter in the form of minute globules existing in each and every case without the least perceptible change. In milk the particles appear independent of each other, floating in the fluid. In cream they appear to have partially collected together, not being compact but the interstices filled with the more fluid parts of the milk. In butter they appear closely compact, the fluid being entirely expelled. By various experiments it is ascertained that these particles unite more readily at some temperatures than others, producing at a proper temperature more butter and that of a better quality. If too warm, the adhesive power of the particles is in a measure destroyed and a portion only can be secured, while what is collected is soft and colorless. If too cold, the particles become hard and refuse to unite, though often brought in contact, the result is as before — only a part of the butter is secured and that hard and crumbling. The proper temperature for producing the most and best butter is from 58° to 60° Fahrenheit.

The continued agitation of the cream or milk is the means commonly used to promote the separation of butter from the fluid. This is a simple process and is performed in various ways—in some countries by placing the milk in leathern bottles upon the backs of camels, where the motion of the animal agitates the milk. In this country the ordinary upright dash or barrel churn has been longest known, and produces, under equal circumstances, as much and as good butter as any other kind in use. The Cylinder Churn known as *Kendall's Patent* (see figure) is probably as extensively in use as any other, if not more so. Its principal advantages over the dash churn are, that it produces an equal and uniform action by means of a crank, the most natural mode of applying manual power. The paddles are readily removed to take out the butter and it is easily cleaned. The *Thermometer Churn* is similar in its construction to Kendall's, except it has two metalic cylinders — one within the other, and the cream is tempered by introducing hot or cold water between them—the temperature being at all times indicated by a thermometer permanently set in the cylinder. The principal difficulty with this churn arises from the butter adhering to the inside of the metalic cylinder. Were it not for this objection, it would be the most complete churn in use.



Kendall's Cylinder Churn.



Gault's Cylinder Churn.

Another kind much in use and highly approved is *Gault's Cylinder Churn.* (See fig.) The principal difference between this and Kendall's is that it opens in the middle and never can be more than half full; this would make it necessary to use a large and more expensive article for the same dairy.

Still another kind has been recently introduced, called the *Atmospheric Churn.* (See figure.) Its form is square and it has a perpendicular hollow shaft in the center terminating at the bottom in two horizontal hollow arms. By means of crank and gear this shaft is made to revolve rapidly in the direction of the arrows, (B B,) causing the air within the horizontal tube (D) to be thrown out by centrifugal force at the open ends. The fresh supply of air rushing in the upright shaft at *c, c, c, c,* to supply the arms D, thus causing a commotion by the combined action of the tubes, air, and square form of the churn.

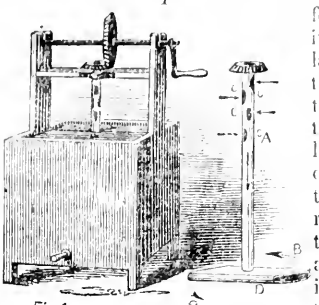


Fig 1. Fig 2.

Atmospheric Churn.

The inventors of the churn last named claim that, by the aid of the oxygen absorbed from the atmosphere, butter is produced in less time and with less labor: but experience shows that the separation is caused by the agitation which forcibly brings the particles in contact where they unite and collect in large masses, if the temperature is favorable. In a public trial of the Atmospheric Churn under different temperatures, at the N. Y. State Agricultural Society's Rooms in this city, in September last, it failed to produce butter at all at a temperature of 78° Fahr. After reducing the temperature by ice to 58° and dividing the cream equally between this and Kendall's Cylinder Churn, both were put in motion at the same time. At the end of seven minutes the Atmospheric Churn produced one pound of butter, and the temperature of the cream had risen to 68° Fahr. In ten minutes the Kendall's Churn had produced one pound seven and one-half ounces of butter, and the cream had risen only to 62°. The extraordinary change in temperature in the atmospheric churn was caused by the absorption of heat from the air of the room, (it being quite a warm day,) which was constantly passing through the cream. Kendall's churn being almost entirely shut from the air, the cream was very little affected by it—thus proving conclusively that the presence and absorption of oxygen by the cream is not only unnecessary, but its introduction is often attended with much disadvantage. Could the air where the churn is used always be of the proper temperature, (which is impossible,) the atmospheric churn would undoubtedly become extensively used.

It may be remarked that, other circumstances being equal, the time occupied in churning makes no difference in the amount of butter produced; and consequently where done by dog or water power, the ordinary dash churn can be used to as good advantage as any other. But when manual labor is applied it is important that the process should require as little time as possible, and may be sooner and easier accomplished with either of the cylinder churns above described. *Albany, N. Y., January,* 1849.

NOTE.—For figure, &c., of Crowell's Thermometer Churn, see VOL. IX, page 69, of this journal.—ED.

"LABOR WELL APPLIED IS PRODUCTIVE OF PROFIT."

BY AGRICOLA.

FARMERS should ever bear in mind that "well directed labor" will ensure its reward. Of all classes of men, there is none upon whom this truth needs to be enforced more than the farmer. How many of our farmers are year after year toiling on, overwhelmed with their business on an immense estate, and at the close of the year the accounts are about balanced, and again the same toil and vexation must be renewed. If right directed effort had been put forth, no more land farmed than could be done to perfection, what a saving of labor, what an increase of profit, what a reward in every point of view, would be received! In traveling through the best farming districts of this State, we often find illustrations of this truth most striking.

I have in my eye a farm of medium size, which, a few years since, was any thing but neat and in order, and which gave sad indications that labor had not been "well applied." But a change has come over this scene. A new occupant takes possession, fixed in his principles — determined that he would carry out this great maxim, on which depends the prosperity and success of the farmer, that "What is worth doing, is worth doing well." Now how soon the farm begins to assume a new appearance. The fences are repaired, the land is drained where needed, the buildings are neatly repaired and arranged; manures are obtained best suited to the soil and crops which are adapted to this region; a new and improved stock of cattle, sheep and swine are secured, and in short every thing characteristic of the good farmer appears year after year, under the direction of him who knows how to *apply labor*. Instead of having, at the end of the year, to resort to loans to make up deficiencies, this same farm yields a return that gladdens the heart of the farmer. As years roll on, each succeeding one finds a larger balance in favor of well directed labor; and now, in addition to the ordinary appendages of a farm, there is reared, out of the profits of this well regulated concern, a neat and tasty cottage, in the midst of shrubbery the most tasty and luxuriant — all the work of him who started with the determination to do all things well. And this is not all, as the well regulated expense book is balanced: a profit which would gladden even the hearts of some of our bankers on the capital invested, is found on hand, to be applied as may best conduce to the comfort and welfare of an interesting family. There is no complaint of means to educate the children. They are brought up practically to appreciate the maxim that, "What is worth doing, is worth doing well," and their education prepares them to carry out in all the varied scenes of life this all important but too little practiced truth.

Let me then urge upon the farmers who read this paper,— and I am glad to know they are many, and among the most intelligent in our land,— to put in practice, if they have not already done so, this simple but effectual method of farm labor, which brings with it the most abundant reward, and without which they will in vain struggle on, never securing the end of their toil. Order is Heaven's first law — and let it be yours in every thing relating to your farm.— Remember you belong to a noble profession, and one that is destined to exert a mighty influence on the destinies of a world. As one man, then, let the American Farmers adopt as their motto, "*All things relating to my farm shall be well done*"—and no more should be undertaken than can be thus done — and soon he will be found to occupy that exalted position that will cause his influence to be felt the world over. Surely it can not be necessary to urge upon the enlightened, the intelligent, the hard working American Farmer, further considerations in support of a principle that must, on a moment's reflection, commend itself to every right-minded, reflecting man.

In the London Gardener's Chronicle I find the following anecdote which the celebrated ROBERT BAKEWELL used frequently to relate — he whose name is familiar to almost every one for his extraordinary success in breeding cattle and sheep, and to whom probably Great Britain as well as this country owes as much as to any one individual, for that system of breeding which has secured the choice breeds of animals which are now to be found. It is to our purpose as it gives the history of an old farmer, and one of olden times too, who was renewed by adopting the principle laid down as the heading of our article — "Labor well applied is productive of profit."

Mr. BAKEWELL said: "A farmer who owned and occupied 1000 acres of land, had three daughters. When his eldest daughter married, he gave her one-quarter of his land for her portion, but no money; and he found, by a little more speed and a little better management, the produce of his farm did not decrease. When his second daughter married, he gave her one-third of the remaining land for her portion, but no money. He then set to work, and began to grub up his furze and fern, and plowed up what he called his poor, dry, furze land, even where the furze covered, in some closes, nearly half the land. After giving half his land away to two of his daughters, to his great surprize he found that the *produce increased*; he made more money, because his new broken up furze land brought excessive crops, and at the same time he farmed the whole of his land better, for he employed three times more laborers upon it; he rose two hours sooner in the morning; had no more dead fallows once in three years — instead of which he got two green crops in one year, and ate them upon the land. A garden never requires a dead fallow. But the great advantage was, that he had got the same money to manage 500 acres as he had to manage 1000 acres; therefore, he laid out double the money upon the land.

"When his third and last daughter married, he gave her 250 acres, or half that remained, for her portion, and no money. He then found that he had the same money to farm one-quarter of the land as he had at first to farm the whole. He began to ask himself a few questions, and set his wits to work how he was to make as much of 250 as he had done of 1000 acres. He then paid off his bailiff, (who weighed 20 stone,) rose with the larks in the long days, and went to bed with the lambs: he got as much more work done for his money; he made his servants, laborers, and horses move faster; broke them from their snail's pace; and found that the eye of the master quickened the pace of the servant. He saw the beginning and ending of every thing: and to his servants and laborers, instead of saying, "Go and do it," he said to them, "*Let us go, my boys, and do it.*" Between *come* and *go* he soon found a great difference. He grubbed up the whole of his furze and his ferns, plowed the whole of his poor grass land up, and converted a great deal of corn into meat for the sake of the manure and preserved his black water (the essence of manure;) cut his hedges down, which

had not been plashed for 40 or 50 years; straightened his zig-zag fences; cut his water courses straight, and gained a great deal of land by doing so; made drains and sluices, and irrigated all the lands he could; he grubbed up many of his hedges and borders covered with bushes, in some places from 10 to 14 yards in width—and threw 3 and more closes into one. He found out that instead of growing white-thorn hedges and haws to feed foreign birds in winter, he could grow food for man instead of birds.

"After all this improvement, he grew more and made more of 250 acres than he did from 1000; at the same time he found out that half of England, at that time, was not cultivated, from the want of means to cultivate it with. I let him rams, and sold him Long Horned bulls," said Mr. BAKEWELL, "and told him the real value of labor both indoors and out, and what ought to be done with a certain number of men, oxen and horses within a given time. I taught him to sow less and plow better; that there were limits and measures to all things; and that the husbandman ought to be stronger than the farmer. I told him how to make hot land colder and cold land hotter, light land stiffer and stiff land lighter. I soon caused him to shake off his old prejudices, and I grafted new ideas in their places. I told him not to breed inferior cattle, sheep, or horses, but the best of each kind, *for the best consume no more than the worst.* My friend became a new man in his old age, and died rich."

Is it not true that, "Labor well applied is productive of profit?"

WIRE FENCE.—HOW TO MAKE, CHEAPNESS, &c.

BY T. C. PETERS.

THE experiment of Mr. ADAMS with wire fence, as detailed in the last number, is worthy of notice. The fence was more costly than it need to have been, and upon the whole would not be the thing for a long line.

I can not do better than to ask you to copy an article on the subject, in the January number of the American Agriculturist—premising, however, that I do not think it best to heat the wire, as I notice by an article in a late number of the Prairie Farmer, that when the wire has been heated it is apt to get bent, and gets out of shape. Perhaps Mr. ADAMS' suggestion as to the alternate use of a larger and smaller strand is worthy of adoption. It would enhance the price but slightly. A further improvement might be made by training the Prairie Rose, or any other climbing rose, among the wires.

"I AM glad to see the attention of farmers turned to this subject, as I believe at no distant day wire fence must become the leading kind generally over the Union. It is true that there is a difficulty in fencing against hogs, but even that can be overcome without much trouble as is hereafter suggested.

"I have never yet had any made, but intend to make a sample next spring. I have given the subject, however, a good deal of thought, and made inquiries and figures thereupon. From some small experiments I have made, there can be no doubt but my figures are mainly correct. I shall use No. 11 wire, cedar posts, as they are the most durable, and shall set them six rods apart, making the fence five strands high. The post being set, I should begin by boring an inch hole through each, at eighteen inches from the ground; then another hole eight inches from that, the next ten inches, then twelve inches, then fourteen inches; making the fence five feet, two inches high. After the wires have been drawn through and strained tight, drive plugs into the holes at each side to hold them in their places. Between each post, and one rod apart, drive down a stake, saw into it opposite each wire, perhaps an inch, lay in the wire, and drive in a shingle nail to keep it in its place. It would be less trouble to drive a small spike into the post and wind the wire round it by one turn, rather than to bore the holes: though the expense would even be more.

"The wire ought to be prepared in the same manner that it is for bridges, boiled in linseed oil for a quarter of an hour, and then dried, and the same process repeated three times. This anneals and at the same time coats the wire, and saves painting it. If, however, there be but a small quantity to put up, it would be better to heat the wire, and afterwards paint it. Coal tar would also be an excellent substance for that purpose. Now for the expense:

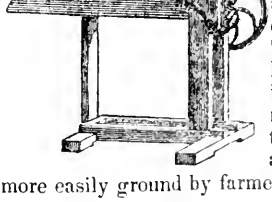
A strand of No. 11 wire, 80 rods long, weighs 25 lbs.	
80 rods of fence would weigh 125 lbs., at 7 cents,	$10.75
14 red-cedar posts, 25 cents each,	3.50
85 stakes, 1 cent each,	0.85
Preparing wire and painting,	1.00
Setting posts and stakes,	0.50
Putting up fence, including spikes, or boring posts,	1.00
Contingences,	1.00
Outside cost for 80 rods of wire fence,	$17.60

This would be 22 cents per rod; but the actual cost to the farmer would not be 20 cents.

"On most farms, where there is plenty of timber for posts, it would not cost but about 16 cents per rod. But allowing for all contingencies, and that it costs 25 cents per rod, it is then by far the cheapest fence that can be built.

"In order to fence against hogs, I would drive down short posts and put on boards about two feet, and put the wires above, but nearer together. I think that no hog that ought to go at large would ever get through. For all other kinds of stock, it would be impenetrable. A neighbor of mine, who is compelled to fence against a whole village of street cows, put but two strands across a stream, where his fence was washed away, and it has proved a perfect protection. I have seen the cows walk up to it, but have never yet known one to attempt to get through, although the temptation between a fresh pasture and dry streets was very great, I have no doubt. T. C. P. *Darien, N. Y., November,* 1848.

TOWERS' HAY CUTTER.—This machine, like Stevens' and Hovey's, is constructed with a cylinder of knives cutting against a hide roller, with this difference,—the knives are straight, but placed diagonally upon the cylinder, and confined by movable cast iron heads, which receive the ends of the the knives, and when these heads are confined, all is held firm. This is a comparatively late invention and promises to work well. The manufacturers hold that this form of knife is best, as, being straight, it is more easily ground by farmers in general.



WANT of light to plants makes them pale, want of air makes them draw up long and slender; plants grown in the dark would be quite white.

DRILL HUSBANDRY.

THE broad-cast system of sowing wheat, oats, barley, rye, and peas, generally prevails in this country. It is not practiced because it is the best, but has been handed down from father to son, like an heir-loom, for many generations, and indeed is the only system of which the great mass of our farmers have any knowledge. The intelligence and enterprise of American farmers have become proverbial throughout the entire civilized world, and it is natural to infer that it is only necessary to point out an improved system of managing any branch of the ancient and noble profession of Agriculture, to at once enlist in its favor all those whose circumstances and means would admit of its profitable introduction. A portion of the agricultural press of this country have recently made favorable mention of drill husbandry, and in some instances the knowledge thus imparted has been seized upon and practiced in a manner highly creditable to the parties concerned.

In various portions of the United States may be found very sensible and enterprising farmers who originally migrated from those countries of Europe where drill husbandry has been long successfully practiced; but, strange to say, as if by common consent, it has almost invariably been the case that this as well as many of the other acknowledged improved systems of farm practice in general use in those countries, have been pronounced inapplicable to the agriculture of America. The system of passing wholesale opinions, and looking merely at the surface of things, does not answer a wise purpose at this enlightened period of the history of agriculture.—That drill husbandry can be profitably practiced in this country, has been thoroughly proved by the writer and scores of other American farmers, and when accompanied by horse hoeing, at least twenty per cent. may be added to the yield of those crops enumerated above. From a number of trials, some of which were made upon a pretty large scale, an additional average of five bushels of wheat per acre from drill husbandry alone, was produced; and when horse hoed, a still further additional average of five bushels per acre was the result. So large an extra yield as this should certainly be a sufficient inducement to influence every thinking man to make some effort in becoming acquainted with this or any other system of agriculture adapted to produce so favorable a result.

Some of the most prominent benefits to be gained by drill husbandry are, a saving of about one-fourth in seed; the regular distribution of seed in rows to a uniform depth; the free admission that is given to the air and rays of the sun, between the rows of the plants; the excellent opportunity that it affords the farmer for the eradication of noxious weeds that may appear in the growing crops; and for the use of the horse hoe in the early spring and summer months, by which a much larger growth of straw and yield of grain will be produced on most soils, and besides the ground will be thoroughly cleaned and improved in texture for the succeeding crops.

The saving in the quantity of seed is not an object that should influence a change of system in the mode of farming in this country, so much as that of obtaining a greatly increased yield; but nevertheless, when a large breadth of land is sown, a saving of one or two pecks of seed per acre is an item of some importance. When the seed is sown in rows, the roots of the plants, especially of winter wheat, become interwoven in each other and hence are not so likely to be thrown out and destroyed by the action of winter and spring frosts as if sown broad-cast, and besides the tops of the plants spread and cover the roots, which afford a natural protection to them during the most critical period in the growth of the wheat plant, in the northern sections of our country.

If a portion of a field be sown with a drilling machine, and another portion be sown broad-cast, that which is drilled will not suffer nearly as much by severe frosts as that sown broad-cast. After an extremely cold winter, or a cold backward spring, wheat sown in the ordinary method will in most cases have a sickly and stunted appearance: whereas that sown with a proper drilling machine will scarcely be affected by the frost. There may be exceptions to this rule, but after many years experience with both systems it has been found the case in almost every instance where drill husbandry has been efficiently tested.

The regular width between the rows should not be less than nine nor more than twelve inches. Where drilling grain crops is practiced with a view of employing horse hoes to clean the ground, the rows should be about eleven inches asunder; a less distance than this would be advisable, if the crops are not intended to be hoed: but if the rows be much less than a foot apart, it will be found difficult to efficiently work the land with hoes while the crops are in a rapidly growing state. Horse hoeing a crop of wheat or other grain, once or twice in the early part of summer, will promote a very strong and healthy growth of plants, and land that ordinarily produces only fifteen or twenty bushels per acre, will, under favorable circumstances, yield from thirty to thirty-five, and even as high as forty bushels per acre.—While this statement will be found to fully accord with the practice of most of those who adopt drill husbandry and horse hoeing, yet it must not be forgotten that there are soils which do not possess a sufficient amount of the requisite elements or food for the wheat plants, to produce so large a product, and hence a much less average increased yield must be taken in the aggregate.

A smart plow-boy with the aid of a horse, and a single drill horse hoe, will find no difficulty in cleaning three acres per day, in the long days of the month of May or June. Two such hoeings would not cost more then one dollar per acre, which is a very trifling expenditure, when the advantages resulting therefrom are carefully taken into account. By the use of the improved English self-expanding horse hoe, one man and a horse will clean in a more perfect manner than can be done by employing hand hoes, from eight to ten acres per day: but as these machines, being constructed entirely of wrought iron and steel, are very expensive, their use in this country is not likely to become very general.

The increased quantity of straw produced by horse hoeing a crop of wheat, barley, peas, oats or rye in the manner described, may be safely calculated at an average of thirty per cent. on the amount that would be produced by the ordinary method of sowing those grains broadcast. The value of this straw in many parts of our country, especially near large cities would be an object, and where it is not a marketable article, it will be found worth at least as much as the outlay in hoeing the crop, for the purposes of fodder and manure. The extra cleanliness of the ground

produced by the frequent use of horse hoes among growing crops, is an advantage that must not be slightly passed over.

The extra large yield of straw, the proportionably increased yield of grain, and the superior tilth or cleanliness imparted to the soil by the practice of drilling and horse hoeing the ordinary field crops grown in our country, are of such great magnitude that no intelligent cultivator should for a moment neglect to make himself thoroughly acquainted with the subject. Every one acquainted with the science and practice of agriculture must have observed the importance of thoroughly disintegrating or pulverizing the soil, and who is there but must have observed the powerful influence that a single hoeing has upon the growth of a crop of garden or field vegetables? No one would think of obtaining a full average of corn without previously pulverizing the ground for the crop, and also, would frequently employ the hand or horse hoe in keeping the ground clean, for the purpose of loosening it, so that the lateral and fibrous roots of the plants might have a perfect freedom in searching for the requisite supply of food to bring them forward to a full and healthy state of maturity. An equal benefit will be found in hoeing field crops, which work cannot be done unless the seed be sown in regular rows.

There are various methods of sowing grain in drills, and the variety of machines used for that purpose in Europe have become so numerous that a clear description of them would scarcely be found interesting to the American farmer. The ingenuity of our mechanics has within the few past years been happily turned to the investigation of this branch of agricultural mechanics, which has resulted in the production of machines for drilling grain that are in many very important particulars superior to the best in use in Europe. These machines are cheap and simple, and before we bring our series on "*Drill Husbandry*" to a close, shall be described, so that their particular merits may be understood and appreciated.

Although horse hoeing is not indispensable to drill husbandry, still, on the score of economy, it should rarely if ever be neglected, and hence in discussing the merits of the latter, we shall invariably press upon the attention of our readers the importance of the former.

DESCRIPTION OF SNOW-FLAKES.

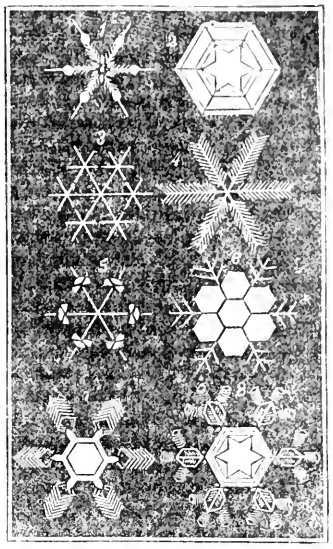
BY L. WETHERELL.

"Snow is the frozen moisture that descends from the atmosphere when the temperature of the air at the surface of the earth is near, or below, the freezing point."

The size of the snow-flakes depends upon two causes: when the atmosphere abounds in vapor and the temperature is near 32° Fah., the flakes are large; and as the moisture diminishes and the cold increases, the snow becomes finer. In the former condition of the atmosphere it is not uncommon to see flakes that are an inch in diameter. The lower the temperature the less the diameter of the flakes. At 10° Fah. snow-flakes rarely exceed seven-hundredths of an inch in diameter. Snow has been known to fall with a temperture that caused the mercury to fall 12° and even to 20° below zero. But this is not common.

The snow-flakes have a great diversity of form, which, as every accurate observer will testify, constitute beautiful and regular crystals; and it is the copious reflection of light caused by these, that gives snow its brilliant whiteness.

The bulk of snow, just fallen, is ten or twelve times greater, (more or less, depending upon the temperature and moisture of the atmosphere,) than that of the water produced by melting it.



Forms of Snow-Flakes.

Isolated crystals unite under angles of 30, 60 and 120 degrees. These by their different modes of union form several hundred distinct varieties of snow-flakes. Scoresby, an arctic navigator of great celebrity has enumerated six hundred: and these are all comprised under five classes. According to Scoresby the starred figure, (fig. 4) in the diagram given above, is observed when the thermometer is near the freezing point. The hexaedron, (fig. 2) is seen both in moderate and very low temperature. The diagram given above presents only eight of the ninety-six figures delineated by Scoresby. From it, however, the reader may be led to observe for himself, the great variety of forms which Infinite Wisdom has given bodies of so small a bulk as snow-flakes.

Red Snow and Green Snow have been known to fall in the Arctic regions. The cause of this is said, from examination, to be an infinite number of a certain class of microscopic plants which flourish at a very low temperature. But with regard to the worms which are reported to have fallen in this vicinity with the snow last December, I say as a distinguished naturalist of the age said to some one who told him that he had *seen* a shower of animals with his own eyes: "It is fortunate," said he, "that you have seen it, for now I believe it: had I seen it myself, I should not have believed it."

The uses of snow are too well known to the intelligent farmer to more than need naming. It has been properly styled, "the poor man's manure." It forms a warm covering for the soil, and thus defends vegetation from the severity of the winter. It also diminishes the intensity of the darkness during the long winter nights, and furnishes a favorable opportunity for the farmer to replenish his wood-pile, to move his fencing materials, and to carry his surplus produce to market.

REVIEW OF THE JANUARY NO. OF THE FARMER.

MR. MOORE:—I have been looking over your January number, and am much pleased with its appearance, both as to matter and manner. I admire that so few among your 20,000 subscribers become contributors to its pages. There is probably no one single individual among them but what knows some one fact that accident, experience or reason has taught him, that would be interesting and valuable to perhaps nine-tenths of your readers. I can hardly conceive of a person who has the good taste to take and read your paper, but what has the ability to communicate his experience through its pages. In my voyage of life I have never yet found that *sober* person that I could not dig something out of that was worth knowing. All useful facts, communicated in howsoever homely style, with your correction of grammatical construction and orthography, are of paramount importance. I am convinced that it is impossible for an editor—a single mind, to be able to amuse and instruct his readers, for years and years together, unassisted: his *pond* of thought, ideas and facts, will eventually run out—to use a homely phrase, his barrel will run emptyings; therefore, those interested in multiplying facts, and sending forth the knowledge and experience of years, in the different operations and effects of the great science of agriculture, ought to lend a hand.

You, reader—yes, you—as Nathan said to David, "Thou art the man," who can thus render some important benefit to your fellow laborer in the great battle of life; which, like the tears of the recording angel, may blot out some of your short comings, with the congratulation of saying, I have not lived in vain: a satisfaction that many, I fear, in this breathing world, who have heaped up the acres and the paltry dollars, will not arrive at and who will cease to be without being able to say, I have left one valuable fact or discovery for the benefit of mankind. Perhaps, Mr. Editor, I shall come broadly in that catagory: but if so, it sha'n't be for lack of good will.

There is a saying that Doctors never take their own medicines, and that they try it on a dog first; but with your leave, I propose to take mine and to try it on you, by looking over your monthly numbers and telling you plainly what some folks think of your articles—mechanical execution, errors of the printer, &c., &c., a kind of fire-side review, with the notions and views of one of the million.

MESSRS. EDITORS:—In your opening article for the January number, in speaking of the exhausting systems of planting and farming, you seem to be growing very *tender footed* on the subject of the "peculiar institution" of our southern brethren, in that its effects are not deteriorating and fatal to the soil it cultivates. It has been said that the foot of the slave was rank poison to the soil. This is not true, literally, and only co-relatively as a result. The system is fatal to the continuance and permanence of the soil's productibility. The cotton, rice, and sugar crops, can not at the present rates be made except by slave labor; all of these crops impoverish the soil, as there is no return—no rotation of grass, or other grain crops to enrich it; and in those warm climates, animals are not housed and fed to make manure, the land is soon exhausted, soon run down, and there is no remedy but a different system, different crops, and an intelligent population. The *peeooliar* institution must be abandoned, or new worlds discovered for its use.

Artichokes.—The article recommending that whatever is worth growing, is worth growing properly, is a truism not to be controverted, and which is applied to Horse-Radish and Artichokes, which I consider a nuisance and not worth growing at all. It would be a good operation to exchange them for Canada thistles—any thing but Red Root; and as to clearing them out yearly, it would take Father MILLER's universal conflagration to do it, and nothing short.

Wire Fence.—Mr. ADAMS' manner of getting up this fence is ingenious, simple, and cheap; but that such fences can ever prevail, for turning cattle, horses, or hogs, is hardly admissable. The wires are so minute, that they are not visible and carry no terror to a creature disposed to ramble. An animal the least frightened, unruly, or wild, would mind it no more than the "spider's most attenuated thread."

Clover.—Your Grecian correspondent labors under a most singular hallucination, in asserting that clover will not grow when sown in the spring on the wheat crop. If cast early enough, before the frosts have ceased to elevate and crumble the soil, so as to cover the seed, it never fails if the seed is good, except the occurrence of an exceeding dry May, which often kills it. He is correct as to the value of Lucerne. It is like the Quaker's horse that had but two faults—one was that he was bad to catch, and the other that he was worth nothing when he was caught. It is entirely worthless in this climate.

Wire Worm.—Mr. MOORE, in an extract you give, has come to a singular conclusion on the subject of this insect—that by the use of sulphur on his seed (a dry insoluble and inert substance,) he saved a crop on the same field upon which he lost it three years ago.

It is not well settled what time is the periodic transmutation of the wire worm *(Elater segetis.)* Some make it two and some three years in the larvæ state; consequently if a field is troubled with it one year, at the third year they have taken the *imago* or perfect state and have departed, particularly if the land was under cultivation, as there was no food or convenience for propagating their species. Their natural *pabulum* is grass roots, and in its absence, young wheat, corn, potatoes, &c. In many locations, the first crop is invariably lost that follows green sward, that has laid in grass longer than three years.

Col. B. P. Johnson.—I think you will be sustained in your commendations of this gentleman's course, as Secretary of the State Agricultural Society, as well as for his attentions to the County Societies. His address at the meeting of the Monroe Society was capital. It was the only straight out and out, practical, direct to the point address I have ever heard delivered on these occasions.

SMALL HOLDINGS.—A small proprietor, who knows every part of his little territory, who views it with all the affection which property, especially small property, naturally inspires; and also, upon that account, takes pleasure not only in cultivating, but in adorning it, is generally of all improvers the most industrious, the most intelligent, and the most successful.—*Adam Smith.*

NEVER allow a hedge to get foul, or anything to grow in a ditch; it is a receptacle for weed-seeds, and if neglected would soon make the adjoining ground as foul as itself.

"WHAT COWS SHOULD FARMERS KEEP?"

BY WILLIAM HANFORD, JR.

UNDER the heading above quoted SANFORD P. CHAPMAN, in the October number of the Farmer, (Vol. IX, page 242.) has given us an able and quite an elaborate article. Undoubtedly Mr. C. has answered this question fully and correctly, so far as he offers a rule for the consideration of breeders and "judges at our Cattle Shows;" but when he comes to point to the place where "*right stock*" can be seen, in absence of the *testimony*, I, for one, shall *demur*. I do not, however, question the value of Mr. VAIL's stock, "just to look at," or their ability to pay the expenses of a "good journey" for that purpose—but does his herd contain such cows as *farmers should keep?*

I have been taught in past volumes of the Genesee Farmer, that, for dairy purposes, our common stock is decidedly the best. Now, unless there has been error in my instruction, "full-blood Durhams," wherever found, are deficient in one and that the most important qualification. Beside this, the policy of farmers keeping Durham stock is questioned for other reasons,—among which, it is said, they are great consumers. In this principle, it will be observed, is involved the quality of feeding. But if Mr. CHAPMAN will produce satisfactory information of Mr. VAIL's stock, or of that cow of his, of the worth of which he says he "knows," showing the management used—the kind, quality and amount of food given, with the profits arising therefrom—he will furnish to the readers of the Farmer an article of deep interest, if not of real value. In doing so he will also present us what we all desire in our agricultural operations, viz: *facts* with *figures*—the PRACTICAL with the THEORETICAL. *Dryden, N. Y., Dec.*, 1848.

AN article in last year's volume, headed "What kind of Cows should farmers keep," is worthy of serious consideration. After naming the several qualities that make a good cow, your correspondent says, he "never yet owned but one cow that came any where near suiting him," and that was a full blood Durham, for which he paid $150 in cash, and thinks her worth twice that sum. No doubt your correspondent has a fine cow; nor am I disposed to underrate that fine breed of animals, as a breed, but I do deny that their value is so much greater than any other breed. Suppose a man about commencing the dairy business, should purchase forty just such cows; it would amount to the nice little sum of $6,000. Allowing that said cows would produce thirty-five dollars worth of butter and cheese each, and you have as the product of one year $1,400.—Deduct the cost of keeping and interest on capital invested in cows, and you would have but a small income—to say nothing of the depreciation of said stock after they are seven years old, which would be full fifteen per cent. I think it is worth twenty dollars per head to keep such cows a year, which would be $800, interest $420, which sum deducted from $1,400, would leave $180.

Here comes another man, who has purchased his cows for one-fourth of said sum. They will make an equal amount of butter and cheese, and he has $4.500 to purchase land, or invest in State stocks, and is not weighed down by debt and taxation. But how stands the account: $1,400 worth of butter and cheese—deduct expenses of keeping, $800; interest on cows, $105; which makes $905 from $1,400, leaves $495; interest on capital invested, $315: these two sums added would amount to $810. I leave it for the reader to judge which of these two men would act most wisely. A. G. P. *Lyons, N. Y., Jan.*, 1849.

"LUNAR INFLUENCE"—AGAIN.

BY H.

MESSRS. EDITORS:—In the November number of the Farmer is a somewhat squirming and rather pie-*crusty* article from the pen Mr. J. W. DICKINSON, in answer to a brief communication from me, requesting information in respect to the cause of the TIDES. My inquiry was made in honest sincerity and good faith, and I was not a little surprised at the style and spirit of Mr. D.'s reply. I shall not, therefore, answer Mr. D. in full, but simply make a few remarks by way of explanation. And

1st. "Modern Philosophy." Here Mr. D. and I differ in our definition of the term. He calls "Davis' Revelations," &c., "Modern Philosophy," which I call modern "humbuggery," and if you choose modern *nonsense*, with which he seems to be more familiar than I am. If he wishes to see a specimen of what I call "Modern Philosophy," in distinction from the mysteries and absurdities of former times, or the nonsense of the present age, he will find it in "Arnott's Elements of Physics," and even in most of the treatises on Natural Philosophy, now in general use.

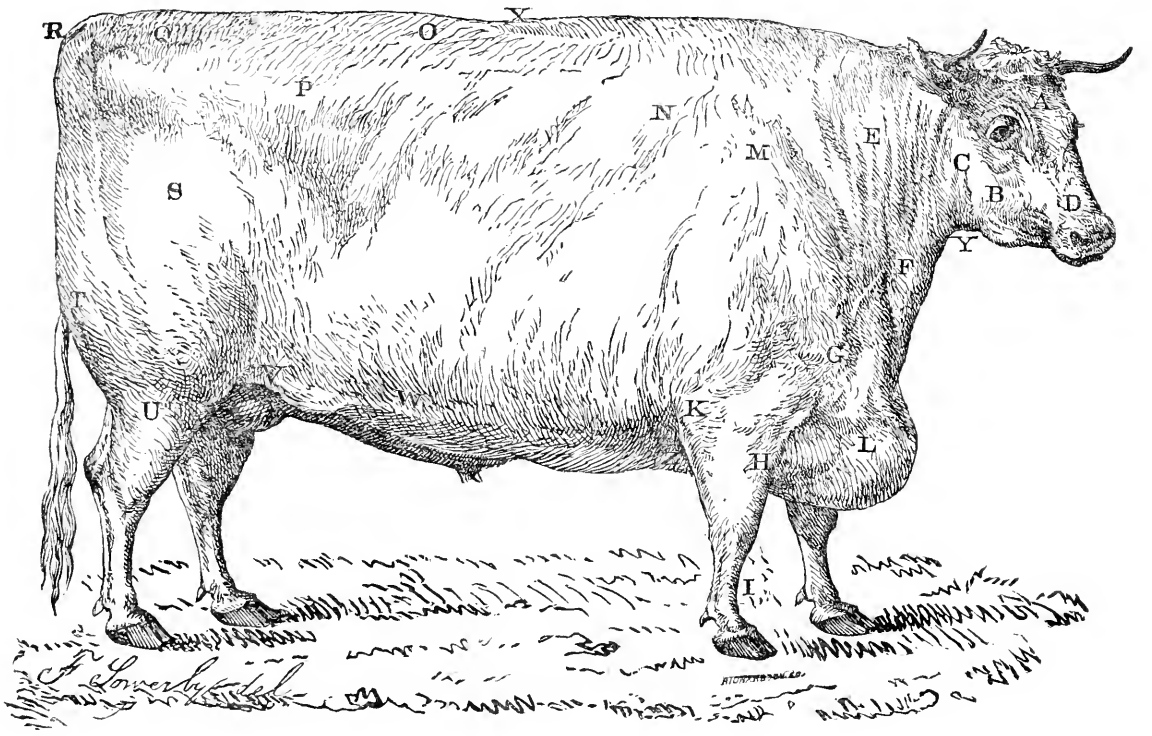
2d. Mr. D. regrets that I will not "argue the question with him." I have no occasion, and no wish to "argue the question with any one." I only asked for information; and although *not* "a farmer," am still willing to receive it from any one who can give it, even though he be "a farmer."

3d. Mr. D. asks me to "define attraction." If he will put a small magnet on a floating chip, or piece of a shingle, and place it near another piece of iron similarly situated, and watch their motion; or suspend two cannon balls by long cords, near each other, or suspend one ball near the perpendicular surface of a precipitous mountain, and watch the effect, he will know as much about the nature of attraction, as the best of us. But is it wise or *philosophical*, to deny the existence of a thing that we cannot explain? If so, we must deny the existence of every thing, even of ourselves.

4th. Mr. D.'s taunting remark about my inference from his acknowledgment of being a "farmer," is entirely uncalled for and out of place; and the still more taunting one about my attachment to old "notions," I leave without further notice. My statement, that "I adhere to the Newtonian (theory) of the tides, *for want of a better*, ought to have shielded me from any such remark, as it was an acknowledgment that I was ready to abandon it for *a better*, which "better" I hoped D. could furnish.

5th. Mr. D. says, "I did NOT intimate that I had a better theory." I have read again his communications in the March number of the Farmer, and can come to no other conclusion. But he denies it, and I have no more to say about it. Yet if "the laws of nature ARE ALWAYS SIMPLE," I cannot see why he has none. "*Down East*," *Dec.*, 1848.

AGRICULTURE, like the leader of Israel, strikes the rock—the waters flow, and the famished people are satisfied. She supplies all, she feeds all.



EARL SPENCER'S PRIZE SHORT HORN OX.

EXPLANATION.——A—Forehead. B—Face. C—Cheek. D—Muzzle. E—Neck. F—Neck vein. G—Shoulder point. H—Arm. I—Shank. J—Gambril or hock. K—Elbow. L—Brisket, bosom or breast. M—Shoulder. N—Crops. O—Loin. P—Hip. Q—Rump. R—Pin bone. S—Round bone, thurl or whirl. T—Buttock. U—Thigh, or gaskit. V—Flank. W—Plates. X—Back, or chine. Y—Throat. Z—Chest.

SHORT HORN CATTLE.

We propose giving, in the present volume of the Farmer, portraits of animals of the various improved breeds. It will be our aim to present figures which shall convey as correct an idea of the distinguishing points of each breed as possible, in order to instruct our young readers and others unacquainted with the subject. With this object in view, we present the accompanying portrait of a properly shaped Short Horn, with explanations of the particular points of the animal, which must prove highly interesting to young farmers.

For this engraving we are indebted to Lewis F. Allen, Esq., author of the *American Herd Book*, in which work it originally appeared. In the introduction to his work, (which contains a history of English and American Short Horns,) Mr. Allen says:

"It is a mooted question with many of our American breeders as to what *extent* short horns can be profitably substituted for our native breeds. In this, circumstances must measurably govern. So far as climate is concerned, they have flourished equally well in all the northern, middle and the upper southern states. That they will equally succeed in the southern states, including Florida, Louisiana, and Texas, provided they be supplied with an abundance of their natural food, and sheltered from the extreme heats of the summer sun, is not yet a settled problem. Time will investigate this. A good, and a productive soil, yielding an abundance of pasturage in summer, with a fair quantity of winter forage, will content them. *True* short horns are moderate consumers, compared with their capacity to yield both milk and flesh.

There is an economical question connected with Short horns, which to the American breeder has great importance. If we are to become a beef and tallow, as well as a butter and cheese exporting country, as from the complexion of late events in Great Britain, it would appear, it is of the last importance that we produce a race of neat cattle which will give a high quality of beef, and that in the greatest quantity, as well as those possessing large dairy properties. Now, no animal whatever, is more strongly developed in the choice beef and tallow-bearing points, than the short horn. To illustrate our position we present a cut of a properly shaped Short horn, with designations of the particular points of the animal. This was drawn from hints by Mr. Rotch of Otsego county, New York, than whom few have a more accurate judgment in neat cattle."

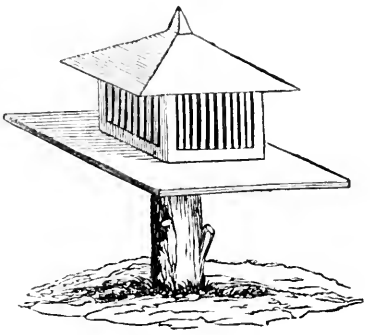
POULTRY FEEDING-HOPPERS.

BY C. N. BEMENT.

It is the practice with most farmers to feed their fowls grain, by strewing it on the ground from the hand. This is, however, considered by many as a slovenly and wasteful mode, and well calculated to invite rats and mice.

From experience we have found it more economical to keep grain constantly before them, where they can help themselves at all times; and for that purpose constructed several kinds of feeding-hoppers, but have been constantly annoyed by the depredations of rats and mice. Some of the patriarchs, grey with age, would not only help themselves sumptuously, but actually drive the fowls from their food.

Now, to obviate this difficulty, and to render them rat-proof, we present a plan, a figure of which accompanies this, which is so simple, that any man or boy who can handle a saw, a plane and a hammer, with a few nails, could make one in a few hours that would cost little or nothing.



Poultry Feeding-Hopper.

First make a platform of boards, say three feet square, then make a square sixteen inches in diameter of strips of an inch and a quarter plank, and three inches wide; nail this in the centre of the platform; saw four strips one and a quarter inches square, for the posts, which should be about eighteen inches high; nail strips of plank two inches wide to the posts at the top, to secure and steady them; then take common sawed lath, or thin strips of board one and a half inches wide, and nail them to the top and bottom, up and down, leaving a space of two inches between each slat, which will enable the fowls to insert their heads to pick the grain. The roof may be formed four square like the figure, or may be made flat, or pitched on two sides, like the roof of a house, and should be detached, so that it can be moved when grain is to be put in. Now, to make it proof against rats and mice, it will be necessary to elevate it a few feet from the ground, and this can be done by suspending it with wires, or setting it on a post firmly set in the ground, as represented in the figure. The wires being small and smooth, they could not pass down on them, and the platform projecting so far from the post, they would find it rather inconvenient to climb over the edge of the platform.

The fowls will soon learn to leap upon the platform, and feed from the grain-box between the slats. From ten to twelve fowls can feed at the same time.

This may be made self-feeding, by setting a funnel shaped box within, the small end reaching down to within half an inch of the bottom. The size or capacity may be varied according to the number of fowls kept. The foregoing is calculated for about one hundred fowls.—*Amer. Jour. of Agriculture.*

Gutta Percha—*What is it?*—This question is asked by thousands who have heard the name. It is a gum, similar to that of the caoutchouc or India rubber, but susceptible of more varied uses. It is thicker and heavier. Hose and gas pipes, boot and shoe soles, book bindings, canes, buckets, bags, cloaks, coats, and various other articles are made of it; and, altogether, it may be considered the most valuable vegetable gum ever discovered.—*Ex.*

See that all your domestic animals are properly attended to "about these days."

TO ASCERTAIN THE WEIGHT OF LIVE CATTLE.

This is of the utmost utility to all those who are not experienced judges by eye. By the following directions, the weight can be ascertained within a mere trifle: Take a string, put it round the breast, stand square, just behind the shoulder blade; measure on a foot rule the feet and inches the animal is in circumference; this is called the girth: then, with the string, measure from the bone of the tail which plumbs the line with the hinder part of the buttock; direct the line along the back to the fore part of the shoulder blade; take the dimensions on the foot rule as before, which is the length; and work the figures in the following manner; Girth of the bullock, six feet four inches; length, five feet three inches;—which multiplied together, make 31 square superficial feet; and that multiplied by 23 (the number of pounds allowed to each superficial foot of cattle measuring less than seven and more than five in girth,) make 713 pounds. Where the animal measures less than 9 and more than 7 in girth, 31 is the number of pounds to each superficial foot. Again, suppose a pig or any small beast should measure two feet in girth, and two along the back, which multiplied together, make 4 square feet; that multiplied by 11, the number of pounds allowed each square foot of cattle measuring less than 3 feet in girth, makes 44 pounds. Again, suppose a calf, a sheep, &c., should measure 4 feet 6 inches in girth, and 3 feet 9 inches in length, which multiplied together makes 15¼ square feet; that multiplied by 16, the number of pounds allowed to all cattle measuring less than five feet, and more than 3 in girth, makes 265 pounds. The dimensions of the girth and length of horned cattle, sheep, calves, or hogs may be as exactly taken this way as it is at all necessary for any computation or any valuation of stock, and will answer exactly to the four quarters, sinking the offal, and which every man who can get even a bit of chalk can easily perform.—*Chamber's Information for the people.*

Patent Safety Bridle.—Mr. Henry Seitz, of Marietta, Lancaster county, Pa., is the inventor of a very ingenious Bridle for which letters patent were recently granted, whereby it is impossible for a spirited horse to kick or run away, and perfectly safe for a lady to drive or ride. The principle on which it is constructed is to hold the horse by the application of a pully around which the reins are made to pass at the side of the horse's mouth, which enables the rider to exert a great deal of lever power to control the mouth of the animal, to check him at any moment. We consider this a very useful improvement, as with some horses, especially when they are young, the old curb when pulled makes them to rear and pitch, to the great danger of the rider. This bridle effectually remedies this evil.

Shearing or Clipping Horses. — We have seen specimens of this recently in the city, that would quite astonish the uninitiated. A long-haired, shabby-looking beast, after being a few hours under the hands of the shears, comes out with a close, smooth, shining coat, quite to the taste of the admirers of horse flesh. There are some advantages in this practice irrespective of the looks. The horse does not sweat so easily, and when once wet he dries more readily, and the tendency to colds is thereby materially lessened.—*Am. Agriculturist.*

REARING LAMBS.

Like all other young stock, lambs ought to be kept steadily growing, without getting too fat. Where a healthy, strong, and young ewe has a good range of pasture, the lamb may acquire so much fat as seriously to interfere with its thrift, when taken away and put upon its winter's food. Experienced flock masters say they have frequently lost lambs from this cause, and that when an ewe has twins, and the milk is divided between the offspring, this loss never occurs. This is an important fact for the practical man.

It is well to have the lambs accustomed to dry forage before they are put up for the winter. If good sweet hay, dry clover, or oats in the sheaf, or threshed, be thrown out to a few old sheep, surrounded by all the lambs, while the latter are in fine condition, brisk and lively, they will at once begin to nibble at the dry food, and soon will be entirely familiar with and enjoy it. If left, however, till weaned, and they have become pinched by the snows and frosts of approaching winter, and the scarcity and insipidity of autumnal forage, their stomachs are in a weak or diseased condition, they have no appetite for their new dry food, they stay away from the racks, and daily become weaker and more indisposed, and soon have become too far reduced to recover, or if they survive, it is with a constitution permanently impaired.—*Am. Ag.*

Unnatural and Injurious Over-Feeding of Animals.— At very many of the meetings and gatherings of the president, vice president, and members of council, as well as at the yearly, general, and country meetings of the Royal Agricultural Society, and, in short, at most agricultural societies, you will find this subject discussed, and correct views on it most strongly and urgently recommended, and instructions given to the judges are not to take into consideration the fatness of animals in awarding prizes to stock intended for the purpose of breeding.

In the face of these instructions what is the general result? Why, that year after year, and meeting after meeting, the premiums are still given to a most unnatural and (to breeding stock,) very injurious fatness. Fat is sure and certain to carry away the palm whenever placed in competition against rational and fitly-fed animals of every class and description, and that are in a natural and much safer condition for breeding, both as regards themselves as well as their produce, but they are not made almost immovable—most unwieldly, by their joints and sinews being, as it were, rendered of no effect by useless and injurious fat. Bear in mind that I confine my observations wholly and solely to breeding stock, and if the judges would, in awarding the premiums, take into consideration the aptness and fitness of condition for breeding, combined with shape, make, and quality, and give these their proper and right, and all-important place (even to the discarding of over-fed breeding animals,) they would be doing greater, truer, and stricter justice to the intentions and objects of the society, and confer a much greater benefit on those engaged in the breeding, not fattening (for they should be viewed and considered separately,) of animals, than by encouraging, as the awards mostly do, the great and injurious evil of feeding breeding stock so over and preposterously fat.

Never attempt to save seed from two sorts of Cabbage at the same time—they spoil each other.

Spirit of the Agricultural Press.

PROPHECY.—The Hon. JOHN LOWELL, in an address before the Massachusetts Society for promoting Agriculture, in 1813, made the following remarks in reference to the connection of chemistry with agriculture. They evince the wisdom and sagacity of an able mind:—"There are few persons who have read the late able and interesting work on agricultural chemistry, by Sir Humphrey Davy, who do not perceive its intimate connection with this important art, or who do not feel a prophetic conviction of its future usefulness." Mr. Lowell went on to say, that though he regarded this as a subject with which the practical farmer need not trouble himself, lest he should become "confused and bewildered," yet he thought there was "reasonable ground of hope, that men of leisure and science would be led to more accurate and philosophical views of agriculture, and that from their experiments their neighbors would derive great ultimate advantage."—*Cultivator.*

AGRICULTURAL PUBLICATIONS are among the most useful printed, and it is quite important to an improved system of farming, that they be widely disseminated. They add vastly to the productive wealth, comfort, and happiness of the country, and tend greatly to enlighten the minds of those engaged in cultivating the soil. It is the duty, therefore, of all to exert themselves in their dissemination. No man can well do a greater good to his country.—*Am. Ag.*

VERY TRUE INDEED.—Somebody says, when you see a man who curses when it rains, frets when a fog occurs, and smiles only when the sun shines, be sure that such a one can never bear up with fortitude against the attacks of misfortune, nor stand with equanimity the marvelous changes of our daily life.

POULTRY—*Hen and Chickens.*—A writer on this subject (and let no one say it is not an important one) in the Providence American, gives the results of his experience in economizing the time with hens, and we think them worthy of being communicated to our readers. All who are familiar with rearing chickens, know that there are very few hens that will allow newly hatched chickens to be committed to their care, when their own are a few days old. This the writer attributes to the fact that the hen has become acquainted with her own chickens, from color, marks, &c., and considers the new-comers in the light of intruders, which she too frequently punishes with death. To obviate this, he puts the first hen that hatches into a coop, and keeps her there with her chickens till another hen hatches, when he substitutes the second hen for the first, leaving the charge of the former; and when another hen hatches, she is put in place of the second, with all three broods—if the aggregate number do not exceed thirty, which he says she will take care of affectionately and efficiently.

PROFITS OF HENS.—Dr. J. Barstow, of Chicago, kept an account of the expense and income of fifty hens, for one year. The cost of keeping on corn, was about twenty-five cents for each hen. The hens averaged ninety-one eggs each. One of the editors of the *Prairie Farmer* states that he has kept forty hens the past year; that the cost was about the same as given by Dr. Barstow; but the fowls averaged only sixty-five eggs each. The fowls in both cases were confined to a yard, but one lot of them were allowed to have their liberty for a part of each day. They were fed with fresh meat occasionally.—*Cultivator.*

THE TEA PLANT IN THE UNITED STATES.—The planters and farmers of the Southern States will be gratified to learn that seven cases of black and green tea-plants, Chinese stock, have just arrived from London in the ship American Eagle, shipped by Dr. Junius Smith, during his late visit to that city. There are 500 plants, of from five to seven years' growth. All are designed by the Doctor as seed plants. A small quantity of tea-seed was brought out by him in the steamship Britannia, which was received in London overland from the northwest provinces of India. We understand the Doctor designs to proceed soon to the South, with a view of forming a plantation. More plants and seed are expected from India and China this season, and if we may judge from the progress already made, we have now the means in hand of extending tea plantations throughout such sections of our country as may be found adapted to their cultivation.—*Journal of Commerce.*

A BRIGHT plowshare is the cheapest commodity ever used by a farmer.—*Cobbett.*

IMPROVED ROAD SCRAPER.—Messrs. C. Schofield and G. J. Johns, of Albion, Illinois, have made a very useful improvement on a Scraper for making and repairing common roads, which should be adopted and employed by all our farmers in every township. It is especially useful for new settlements. The improvement consists in combining the *scoop* with a plow and having the scoop fixed to the standard by a swivel joint, so that by a catch lever connected with it, the scoop can be emptied with the greatest ease without tumbling over the scoop, which has to be done with the scrapers at present in use.

IMPROVED CIDER MILL.—At Madison, New Jersey, there is a cider mill which consumes about 1200 bushels of apples per day. The apples are not *ground*, or broken by squeezing between nuts as in the common cider mill, but they are cut into very thin slices by sharp knives around two revolving cylinders, and then pressed in a machine from which the juice comes out entirely free from the pulp and other things which are found in new cider at the old mills—the cider retaining its sweetness a longer time.

The price of apples was perhaps never lower than this year. The farmers bring them by the wagon load 10 or 15 miles, and sell them at the mill for five cents a bushel.

IMPROVEMENTS ON WINDMILLS.—Mr. Charles B. Hutchinson, of Waterloo, Seneca Co., N. Y., has recently made some valuable improvements on windmills both for self-regulating and reefing the sails. A common governor is used for the regulating of the angle of the sails to the wind, but this is employed in a most judicious and novel manner, for retaining the ends of the booms in slot when necessary, at an angle reverse to the allowing of the sails to present the square of their surfaces to the blast. This mode of self-regulation has been completely successful in practice during the most fitful windy days of this autumn.

PAGE'S PORTABLE WINDMILL.—This contrivance, constructed upon entirely new principles, is capable of producing great power with light winds, with no danger of being blown away by those that are heavier, as the sails are so constructed as to set instantaneously, and throw off any surplus that may occur. It has also a vane so arranged as to counterbalance the power used below, always keeping the wheel square to the wind. It is capable of being applied as a locomotive power—the one on exhibition having been so used, placed upon a common buggy wagon.—*Ib.*

PAGE'S PATENT PORTABLE SAW MILL.—This mill has been extensively used, and has fully recommended itself to the public. Mr. Page has made several important improvements upon it, and it is now very generally considered the very best mill extant for sawing lumber. Mr. Page (who is from Baltimore, Md.) has in his possession certificates from gentlemen of undoubted character, saying that with this machine they have cut 8,000 feet of inch boards in one day, with eight horses. He has moved his mill, after sawing 200 boards in the morning, thirteen miles in one day, and was sawing again before eleven o'clock the next morning, without any extra help other than in use at first—six horses and two men.—*N. Y. Farmer and Mechanic.*

BIG SHEEP.—It is stated that some of the sheep exhibited at the last show of the Royal Agricultural Society, were estimated to weigh as follows: Leicesters, of 16 months old, 46 lbs. per quarter; of the same breed, 3 years and 4 months old, 56 lbs. per quarter. Long-wools, (not Leicester,) 16 months old, 52 lbs. per quarter; of the same breed, 3 years and 4 months old, 72 lbs. per quarter. South-Downs, 16 months old, 36 lbs. per quarter; of the same breed, 3 years and 4 months old, 46 lbs. per quarter.—*Ib.*

THE ATMOSPHERIC CHURN OUTDONE!—The following description of a mode of churning practiced in Mexico, we think goes a little ahead of the "atmospheric" wonder: "Two tin cans are enclosed in a green cow-hide—the size to correspond to the quantity of milk. The hide, on drying, will shrink, and adhere to the cans. These cans are partly filled with milk, and placed like saddle-bags on a hard-trotting horse; a person then mounts the horse, and rides seven or eight miles into the city. The motion of the horse effects the separation of the butter from the milk, and the rider has only to pocket the cash for his butter and buttermilk, and wend his way home at his leisure."

TOOLS AND IMPLEMENTS.—Let every description of tools and implements be examined, have those requiring it repaired, and those not in use carefully put away under cover. Such attention saves both time and money.

Editor's Table.

TO CORRESPONDENTS. — Communications have been received, since our last, from Agricola, T. C. Peters, S. W., Horace L. Emery, *, L. Wethercll, A. G. P., Oscar Warren, I. A. Clark, A. H., D. Kingman, C. J. V., A Subscriber, H., S. C. Lee, R. H. Hoyt, M. D., S. Heston, C. H., A Young Farmer, N. W. H., H. Eaton, Nathan Marble, Buckeye, and A Friend to Ag. Improvement.

PAMPHLETS, &c., have been received from many known and unknown friends. If we get time to examine them, we will "report progress" in our next. We have been so constantly occupied, during the past month, with the business affairs of the Farmer, that we are also compelled to defer answers to many inquiries. Indeed, orders for the paper, requiring immediate attention, have reached us in such abundant and unexpected profusion, that we have not even found leisure to peruse the numerous complimentary notices of the Farmer which are being "thrust upon us" by our brethren of the Press. While we feel duly grateful for these favors, and strive to bear the "blushing honors" with becoming humility, we must ask the indulgence of those whose communications, inquiries, &c., are not inserted or responded to in this number, or by letter.

THE AGRICULTURAL JOURNALS for January come to us teeming with the choicest emanations of thought and experience—embracing abundant *material* from which wealth and happiness might be coined by the millions of American Farmers. Would that these journals were better appreciated and more generally read by those most designed to be benefited in their publication. At present we can only notice some changes and improvements, and one or two new recruits. The *Ohio Cultivator* is changed from a quarto of 8 to an octavo of 16 pages—a decided improvement.—— R. L. ALLEN, Esq., author of "American Agriculture" and "Domestic Animals," (two of the best practical agricultural works ever published in this country,) has become associate editor of the *American Agriculturist;* and the January number of that always excellent publication gives evidence of the additional strength.—— The *Valley Farmer* is the title of a new monthly hailing from St. Louis, Mo. It is edited by H. GATES, (former editor of the Iowa Farmer, recently discontinued,) and E. ABBOTT. Published by PICKERING, PENN & Co.—20 pages quarto—at $1 per annum.——We regret to learn that the "American Journal of Agriculture and Science," published at Albany, N. Y., has been discontinued for want of proper support. It was ably conducted by C. N. BEMENT, Esq.; but the price, ($2 per annum,) prevented the work from obtaining such a circulation as it deserved. We trust the editor will meet with abundant success in other pursuits.

DEVON STOCK IN MICHIGAN. — Among the published proceedings of the Kalamazoo Co. Ag. Fair, held at Schoolcraft, in October last, we observe the following item, and copy it for the benefit of our western readers:

"The executive committee were also much gratified at the exhibition of some full blood Devon Cattle by F. V. Smith, Esq. of Coldwater, Branch county, and would recommend them to the notice of breeders."

We understand that Mr. Smith's Devons were bred by E. P. Beck, of Wyoming county, from stock obtained of Wm. Garbutt, Esq., of Wheatland. Our western friends will find them worthy of attention.

GENESEE CO. AG. SOCIETY.—The Annual Meeting of this Society will be held at the American Hotel, in Batavia, on the *second Tuesday*, (13th) of February instant, at 10 o'clock, A. M.—for the election of officers and making out a premium list for 1849. A general attendance is particularly requested.

TOO MUCH BY HALF. — In a notice of this journal, the Prairie Farmer says our terms are $1 per annum. "No other paper has the news." However we presume brother WIGHT considers it worth the amount mentioned—and he is not the first person, or editor, that has voted the Farmer "too cheap by half." He is not far wrong about its having "a large circulation"—though in proportion to the expense of publication, it probably affords the least profit, per copy, of any periodical in the country.

IMMENSE EXPORTATION OF CHEESE. — Last Friday one house in this city cleared at the Custom-House, for Europe, 16,319 boxes and 267 casks of cheese, weighing 983,445 lbs. and valued at $68,841. This is an immense shipment for one day, and by one establishment.—*N. Y. Express.*

TO ADVERTISERS. — A large number of advertisements have been received for publication in the present number, which we could not insert. We shall issue an advertising cover next month, (on a separate sheet,) and will then endeavor to accommodate all who desire to avail themselves of its advantages—providing our terms are complied with. Among the advertisements received, which we cannot publish in full, we give below an abstract of the most important ones:—

Ayreshire Cattle.—C. N. BEMENT, of Albany, will sell at public auction, at Three Hills Farm, 3½ miles west of Albany, on the 14th of March next, his choice herd of Ayrshire Cattle —consisting of the imported Cow *Alice*, her daughter *Fairy*, [for which 1st premium was awarded at State Fair in 1847:] *Lassie* 3 years old; *Moggie*, 2 years; *Norma*, 1 year old; and *Jenny Deans* 9 months old. Two year old bull and bull calf. Also several head of cows and heifers, a cross of Ayrshires and Durhams. Two young boars and several breeding sows of the Medley breed.

SANFORD P. CHAPMAN, of Clockville, Madison county, sends us an advertisement from which we extract as follows: —"Durham Bull *Beuna Vista* for sale. Bred by Mr. VAIL; calved April 10, 1845; got by Meteor, (104 Amer. Herd Book.) Dam got, by Chas. Henry Hall's Meteor, out of Queen I, (page 219.) He possesses a first rate pedigree, is an excellent bull in appearance, and a good and sure stock getter. He is orderly, not vicious, and easily managed. He was awarded the 1st premium at the Madison Co. Show in 1843. Having another young bull I should like to dispose of Beuna Vista, as I do not need both. Price $200."

JNO. P. JEWETT & Co., of Boston, send us an announcement of *The American Fruit Book*, by S. W. COLE, author of "American Veterinarian,"—to be published about the 10th of this month. Price 50 cents.

We have likewise received an advertisement of "A good book coming," from a publisher in New York—but as he did not even pay postage, we do not think it worth while to give his name, or the title of the work, to our hundred thousand readers.

THE HON. LEWIS F. ALLEN'S ADDRESS to the N. Y. State Agricultural Society on Wednesday evening, on resigning his place to his successor, received from the Assembly a marked compliment. A copy of the Address, on motion of Mr. Pardee, was requested for publication and distribution, in advance of the Society's volume of Transactions. This is a compliment as rare, as it was deservedly bestowed.—*Albany Argus.*

COMBUSTION.—Combustible bodies will not burn if dipped in a solution of potash or phosphate of lime, or muriate, sulphate, and phosphate of ammonia, with borax. The alkaline substances arrest the hydrogen, or prevent its combination with oxygen.

CLOTH MADE OF PINE APPLE LEAVES.—At Singapore in the East Indies, there is quite a thrifty branch of business in preparing the fibres of Pine apple leaf for exportation to China, where they are manufactured into cloth.

FLY IN THE WHEAT.—The Howard District (Md.) Advocate of Saturday says "Our farmers are loudly complaining of the ravages by the fly in the wheat. In many parts of the District they say some of the fields look sear and yellow. But we think they are croaking a little too soon."

DOG POWER.—The Scientific American contains a notice of a dog power, consisting of a wheel 11 feet in diameter, inside of which the dog works like a squirrel in his cage. The gudgeons turn on friction rollers. This power is applied to a circular saw, a lathe, and several other operations, such as churning, pumping and washing. It is said to be much superior to the old one so long in use for churning.

TWO CROPS OF RASPBERRIES THE SAME YEAR.—Mr. William E. Lyman picked upwards of half a pint of raspberries from his garden in this city, the past week, being the second crop of this year's growth. The berries were of fine size and flavor.—*Buffalo Commercial.*

PORK—USE OF CHARCOAL.—The Richmond Whig has the following: "We alluded the other day to the very general loss of pork sustained by the people in every part of the State in consequence of the weather. We would suggest to such persons, as this paper may reach in time, that the free use of charcoal upon meat which has been tainted has succeeded in many instances in restoring it."

THE NEXT FAIR of the N. Y. State Ag. Society, ir to be held at Syracuse, on the 11th, 12th and 13th of September.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

We are happy to hear from all parts of the Union that the cultivation of fruits is attracting universal attention. North and south, east and west, almost every individual who owns a lot of ground is alive on the subject. The emigrant who goes to the far west would rather go without money than without trees; and it is a noble idea, for what better monument could a man erect than the planting of a tree?

The question will naturally arise, how did such a sudden change come about? The Horticultural publications of the day will answer this question, and among them we will mention some of those which have been most active in the battle—"Downing's Fruit and Fruit Trees of America," "Hovey's Fruits of America," "Kenrick's American Orchardist," "Thomas' Fruit Culturist;" and among the monthly publications, "The Magazine of Horticulture," "The Horticulturist," the Albany and Boston Cultivators, and "Prairie Farmer." These publications have been and are continually passing through this vast country, like mighty engines, "clearing the way" of superstition and ignorance, and scattering broad-cast the choicest fruits in every direction; so that an individual who was but three or four years ago satisfied with a *Choke Pear*, a *Sour Crab Apple*, and a *Fox Grape*, will now have his Swan's Orange, Bartlett, Seckel, and White Doyenne Pears: Early Joe, Melon, and Northern Spy Apples: Black Hamburgh and Royal Muscadine Grapes, &c., &c.

In this great struggle for improvement the Genesee Farmer has not been an "idle spectator."—Every important advancement of Horticulture has been timely and duly noticed in its pages; and the choicest fruits have been figured and described—particularly our native varieties. In taking a retrospective glance of our past labors, however, we feel sensible that we have done but little. This is an age of improvement, and we shall endeavor to keep pace with its advancement.

The horticultural exhibitions have also been instrumental in bringing about this great changes; and our Pomological Conventions, with leaders of the first talent and experience in the land, what may we not expect them to accomplish? The interest manifested at the *first general Pomological Convention* ever held in this country, (in Buffalo,) gives us reason to hope that the spirit which moves the mass (somewhat similar to the great political excitement in times past,) will be exhibited at our future Conventions. Where and how could an intelligent individual spend a day or week more interestingly and profitably than among a choice collection of fruits, and a combination of talent only to be met with at such gatherings?

Another cause, and not the least, is the profit arising from the sale of fruits. The many articles which have appeared the past year in the public prints will be ample demonstration on this point, and therefore we forbear further comments. It will be seen, in a communication from the Editor, that there is an unfailing market for good fruits in England. If poor apples sell readily for 3 and 6 cents each, what may we not expect of choice varieties, such as the Northern Spy, Roxburry Russet, Esopus Spitzenburgh, Swaar, Pomme Gris, &c., &c.?

EDITORIAL CORRESPONDENCE OF THE FARMER.

The Season in England—Flowers, &c.—American Apples in Europe—French Pears in London Market—Vegetable and Flower Markets—Show of Smithfield Club, embracing Fat Cattle, Field Roots, Implements, &c., &c.—Gutta Percha—Glass Milk Pans, &c.

London, Dec. 14, 1848.

My Dear Sir:—As the Europa sails to-morrow from Liverpool, I thought I would send you a short gossip touching a few of the more interesting matters that have caught my attention since I arrived in England.

The winter, so far, has been remarkably mild.—The lawns are as bright and green as ours in the middle of May, and the gardens are yet gay with Roses, Chrysanthemums and Laurustinus, and other flowers. I am delighted, at every step I take, with the profusion of evergreens that fill up every little space throughout the cities. Laurels, Bays, Yews, Cypresses, Aucubas, Hollies, Junipers, Rhododendrons, Ivys, &c., clothe every wall and door yard with a verdure as fresh and luxuriant as we could hope for in the month of June. This is some compensation for the muddy streets and rainy, murky weather that continually prevails. I have not seen the sun half a dozen times since I have been here, and then only glimmering through a fog. I eat breakfast at eight in the morning, by candle-light, and dine at four in the afternoon by candle-light; we are hardly aware of its being day, till night returns again. It takes three or four days to accomplish the work of one.

Large quantities of American apples have been brought into Liverpool recently, but the most of them have been of indifferent quality, and badly gathered and picked, and hence they do not command high prices, nor do us any credit,—nor can the shippers gain by the operation. There is an unfailing market here for our orchard products, but to make the shipment of them profitable, it is absolutely necessary that select varieties be sent, that they be carefully hand-picked and packed in the best manner. One barrel will then sell for as much as three or four: and the frieght, which is the great item, will be no more on a barrel that will sell more readily for $5, than one that will bring only $2. Many of the apples I see here cried up as "nice American apples," "beautiful American apples," &c., would scarcely sell at all in our market, yet they are sold here at 3 to 6 cents each.

The English people have fairly given up growing apples for market, unless it be Codlins, &c., that come in early for cooking, and *Beaufins*, &c., for drying. They see it will be impossible for them to compete with American orchardists. Yesterday I examined two or three hundred varieties in the fruit rooms of the London Horticultural Society, and among them all there was not a single large, clear colored fine looking specimen. One would suppose, at first sight, that they were all wind-falls gathered from under the trees last August. The *Roxbury Russet*, *Fall Pippin*, and *Rhode Island Greening*, were among the best specimens, and they were not half the size we grow them. The most esteemed varieties pointed out to me by Mr. Thompson, such as *Pearson's Plate*, *Warmsley Pippin*, *Pomme Royal*, (not our Pomme Royal) *Golden Harvey*, *Sturmer Pippin*, &c., are small inferior looking things,—in size from that of a small *Pomme Gris*

to that of a *Siberian Crab*, — but they are generally harder and richer than ours. The Newtown Pippin and Roxbury Russet come nearer the English taste than any other varieties we cultivate. I had some Northern Spy and Melon with me, that I have here now in London in fine condition. They have elicited the admiration of all who have seen them. There are indeed no such apples to-day in England. The Northern Spy may be sent to Covent Garden market, just as well as to Fulton or Washington markets, New York. The pears in the markets here now, are from France or the Island of Jersey. They come in half-bushel baskets, containing 50 to 100, according to the size of fruit. They are packed in very dry soft meadow hay — a layer of this hay two or three inches deep is laid on the bottom, then a layer of fruit, then another of hay, and so on to the top,—the fruits are not allowed to touch, and in this way they go any distance with entire safety. I saw at Liverpool little baskets of *Glout Morceau* and *Chaumontel*, 50 in each, sold for $3 to $4 each to the confectioners and market-women to retail.

In Covent Garden Market, which is head-quarters for all rare and fine garden commodities, I see fine *St. Germains*, (the old one,) *Marie Louise*, *Passe Colmar*, *Winter Nelis*, *Beurre Rance*, *Easter Beurre*, &c., sold at 12½ to 18¾ cents each. If we ever succeed in raising pears beyond what may be required for home consumption, they will find market and good prices here. Not one person in a thousand, I might say five thousand, ever tastes a fine pear.— There is also a fair supply of new potatoes from Holland, sold at about twenty-five cents per quart. There is plenty of Asparagus, Brussels Sprouts, Rhubarb, Mushrooms, and all other vegetable luxuries. The Flower Market is very rich. Boquets are made up very tastefully by women who buy the flowers from the Florists and make a business of preparing and selling the bouquets. You can have a nosegay for a penny — a single rose and a leaf. For a shilling (25 cents) you can have a pretty Bouquet of Roses, Primroses, Heliotropes, Asaleas, &c. Go higher, and you get Camillias, Heaths, Epacris, &c.—higher still, and you get Orange Flowers, Cape Jassimines, Cyclamens and Euphorbias; and if you offer half a guinea ($2,50) you get a gem of beauty, combining all these, arranged with exquisite taste. So much for fruits and flowers, and I find that I must close on that head.

I found on my arrival in London that the Smithfield Club was holding its Annual Christmas Show of Fat Cattle. I embraced the opportunity to see it. The animals were all enormously fat, even to a downright deformity, — in many cases huge, unwieldly masses of fat, not inappropriately termed by some, "animated oil-cake and beet-root machines." The fattening process in the case of these animals appears to be carried to an extreme; no market requires it, and no profit can result from it, nor is any expected, I believe.

The purposes of the Club are to induce experiments that will test the capacities of the various breeds for fattening, and the effects of different sorts of food and modes of feeding. It undoubtedly brings out results that will be highly useful to the breeders and feeders of animals. Those who are engaged in these experiments are able to carry them out to any extent, and the public at large have the benefit of them. No restrictions as to feed are imposed; but the articles of food must be certified, as well as the age of the animals. The oxen and steers are divided into six classes, according to age, weight, &c.; cows and heifers into three classes, according to age; sheep into ten classes, according to breed and age; pigs into four classes, according to age. In the first class of oxen and steers, three premiums, amounting to £50 ($250) were awarded; in the second the same; in the third $225, and so on. From this you will see how considerable, I ought to say how princely, the premiums are; and so they ought to be, for most of the competitors are Princes, Dukes, Earls, and other nobles.

His Royal Highness Prince Albert, the Queen's husband, is an active member of this Club, and is showing masterly skill in the breeding and feeding of various sorts of live stock. He carried off the first prize of £30 ($150) in the first class of oxen and steers, for a Hereford ox 4 years and six months old, fed on oil cake, roots, bean meal, hay, and green food. The animal was very attractive. When I saw him, three of the best artists were taking his portrait. He was a low, small animal, of a dull red color, with a white face and chest. He belongs to what is called the white faced, or new Hereford breed. There were specimens of Short Horns, Devons, Scotch, Welsh, &c., all the most perfect of their kind. The show of sheep and pigs was varied and highly interesting; but I will not trouble you now with further details.

There was also a fine show of field roots. I saw extraordinary globe beets of yellow and red — Skirving's improved Swedes, some of them weighing 26½ pounds. Mr. Skirving carries on the nursery and seed business extensively at Liverpool, and continues from year to year to improve this valuable root. Our seedsmen will do well to supply themselves with his pure and genuine seed. Messrs. Gibbs & Co., of London, have the Globe Beet seed alluded to. There was a large display of implements, such as Drill Machines, Manure and Seed Drop Drills, Iron Plows and Harrows, Hay, Straw, and Chaff Cutters, Root Slicers, Oil-cake and Seed Crushers, Pipe and Tile Making Machines, and, in fact, all sorts of implements. Gutta Percha, that new and wonderful production, figured largely. An entire room was filled with articles manufactured from it. I noticed cart, carriage, and plow harnesses of all descriptions, water pipes, pails, riding whips, bowls, canes as pretty as rose-wood, and an endless variety of useful and fancy articles.

Glass milk pans are coming into general use among the dairy people. A great variety was exhibited. I saw patent sack holders on wheels, answering for a holder and barrow at the same time. Our millers and grain dealers ought to have it, and indeed farmers.

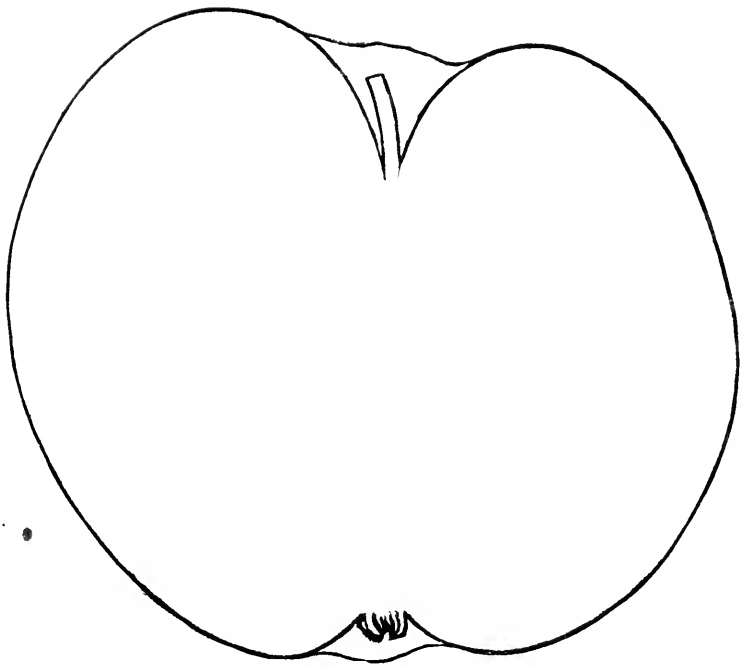
I have seen a multitude of things that I should like to tell you of; but I have already drawn this out too long. You will not be anxious to hear from me again for some time. The newspapers will tell you how the curious, impossible people of France have discarded their Cavaignacs, Lamartines, Marrasts, Ledru Rollins, and all their patriots that formed and preserved their Republic, and have placed Louis Napoleon, who has said something, but done nothing for them, almost by acclamation, in the Presidential chair.

Yours, P. B.

The exhaustion of moisture by a plant is in the ratio of the surface of its leaves and stalks presented to the sun and air.

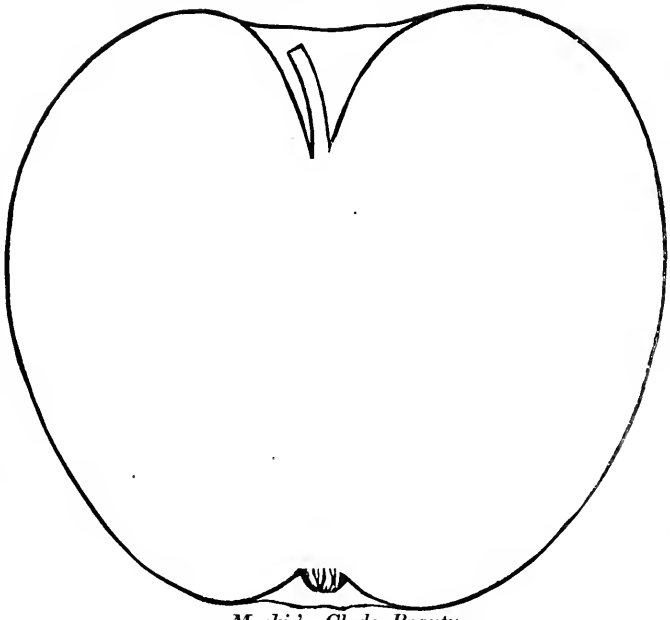
DESCRIPTION OF TWO FINE NEW NATIVE APPLES OF WESTERN NEW YORK.

We take pleasure in presenting our readers two new Apples of the highest excellence. We been acquainted with the Bailey Sweet for two years, and do not hesitate in saying that it is the finest looking and richest sweet apple of its season. Mackie's Clyde Beauty possesses all the good qualities of a first rate Desert Apple. It comes in at a season when good apples are very scarce, and hence it is particularly valuable. Both of these apples combine beauty and good quality.



Bailey Sweet.

Bailey Sweet — *Paterson Sweet.*—This is a splendid Sweet apple, received from E. A. McKay, of Naples, Ontario Co., who called it the *Paterson Sweet*, and is said by him to have been introduced from the east by Peter Paterson, of York, Livingston Co. Since then we have been informed from good authority that it originated with Calvin P. Bailey, Esq., of Perry, Wyoming Co., N. Y., and hence its name. Size very large, roundish oblong, slightly ribbed. Stalk about half an inch long, slender and in a deep cavity. Calyx closed and nearly covered with folds of the flesh that grows in around it irregularly, giving a peculiar appearance here. Skin smooth and fair, ground color pale yellow sometimes striped and mottled with bright red and stripes of darker, and some specimens entirely covered, except at the stem and eye, with bright red and clouded with small gray specks. Flesh yellow, fine grained and tender, with a rich saccharine flavor unequalled in so large a fruit. In form, color, size, &c., this fruit is admirable, and distinct from any we know. November and December. We kept some specimens until April last year.



Mackie's Clyde Beauty.

Mackie's Clyde Beauty. — A beautiful seedling Apple, from Mathew Mackie, of Clyde, N. Y. It originated in a seedling orchard of his father. The tree has been in bearing 12 years, and is a fine grower and bearer, size large, 2½ to 3 inches in diameter; form inclining to conical, broadest at the base, and tapering to the crown; slightly ribbed. Skin smooth and glossy — ground color of a pale greenish yellow, crimson in the sun, striped and mottled with light red in the shade. Stalk quite short and slender, in a deep and broad cavity. Calyx moderately deep, closed in a furowed basin. Flesh white, fine grained, juicy and tender, with a splendid sub-acid flavor. In use October, November and December. This apple is far better than the Autumn Strawberry and keeps later. Indeed, taking size, beauty and quality into the account, it must soon take its appropriate rank among the very best.

THE EUSTIS APPLE.

BY H. EATON.

MR. EDITOR:—I see in the February number of the Farmer, (Vol. IX, p. 58,) a notice of several New England apples, one of which is the *Eustis*. You say you believe it originated on the farm of JAMES EUSTIS, Esq., of Southboro, Mass., which is a mistake, as it originated on the farm of FRANCIS SMITH of South Reading, one of our first settlers, and is known here by the name of *Ben Apple*. It is thus noticed in a poem delivered by the Hon. LILLEY EATON at a Bi-centennial Celebration of the town of Reading in 1844:

"A son of Francis, Ben. by name,
First raised that apple, known to fame,
So juicy, rich, of flavor fine
That still for him is called the 'Ben.'"

It is one of the best apples that we have in New England; a late fall or early winter apple, but I have a friend that says he keeps it until July. It has been introduced of late years into Essex and Middlesex county nurseries quite extensively by a distinguished fruit culturist, JAMES EUSTIS, Esq., of this place—hence the name of *Eustis*. *So. Reading, Mass. Jan.*, 1849.

PRESERVING BUDS AND GRAFTS.—The mode suggested by T. G. YEOMANS of Walworth, N. Y., of preserving the scions of fruit trees in moist saw-dust, has proved superior to any other. It is better than damp moss in the facility with which the scion may be perfectly embedded in it, leaving no interstices, and it excels most sand in being lighter, more spongy, and entirely free from a grit which may injure a knife. We have without any difficulty preserved scions, which were cut in the summer, for budding, till the following spring, and inserted them as grafts with entire success; and we have kept winter-cut grafts till midsummer perfectly fresh, and employed them successfully in budding. A bushel of saw-dust will retain its moisture for many weeks nearly unaltered; but water must not be applied too copiously, or water soaking and decay will be the result. The north side of a building, or a cellar, is the best place.—*Farmer & Mechanic.*

M. MASSON, the head gardener at the Luxembourg, has lately grown a new root called the Ulucco, which can very well it is thought, replace the potato. It originally comes from Peru, and grows perfectly well in the open air; the flavor is very nearly the same as that of the potato. In addition, the part above ground furnishes a very agreeable vegetable, something like the bean in flavor. Three crops of the green part can be obtained the same season.—*Paris Paper.*

THE MELON APPLE.—Among the remarkably fine fruits shown at the Pomological Convention in New York, some specimens of this new apple, described in our last volume, were greatly admired. They were from Rochester and Macedon, N. Y. Its beauty, as well as its unusual juicyness and freshness of flavor, will make it much sought after as a dessert fruit.—*Horticulturist.*

AT Cheshire, Mass., there is an apple tree measuring thirteen feet in circumference, which has borne from ninety to one hundred and ten bushels of apples in a season.

Proceedings of Agricultural Societies.

N. Y. STATE AGRICULTURAL SOCIETY.

THE Annual Meeting of this Society, held at the Assembly Chamber in Albany on the 17th and 18th of January, was well attended by delegates from various sections of the State. The proceedings were very interesting, and characterized throughout with much harmony and unanimity; but we have only room to give a synopsis of the most important.

The Society designated SYRACUSE as the location of its next Annual Fair—provided security be given to the satisfaction of the Executive Committee, that the local expenses of the Fair, (not exceeding $3,500) be discharged by the inhabitants of that city.

Officers of the Society for the ensuing year were elected as follows:—

President—JOHN. A. KING, of Queens.
Vice Presidents—1st district, Jas. Monroe of New York; 2d, Saxton Smith, of Putnam; 3, E. P. Prentice, of Albany; 4, Le Roy Mowry, of Washington; 5, Wm. Fuller, of Onondaga; 6, David Maine, of Madison; 7, John Delafield, of Seneca; 8, Henry W. Rogers of Erie.
Corresponding Secretary—B. P. Johnson, of Albany.
Recording Secretary.—John McD. McIntyre of Albany.
Treasurer—Luther Tucker, of Albany.
Executive Committee—J. B. Burnell, of Onondaga; P. N. Rust, of Onondaga; Henry Wayne, of Oneida; J. J. Viele, of Rensselaer; Samuel Cheever, of Saratoga.

PREMIUMS AWARDED.

ON FARMS.—1st premium to H. F. E. Foster, Lakelands, Seneca co., silver cup, value $50. (Hon. P. Crispel, jr., of Ulster, having received the 2d premium last year, and being assigned the same position this year, the certificate of the Society and a set of transactions is awarded, pursuant to the rules of the Society.) 2d, E. C. Bliss, Westfield, Chautauque co., $30; 3d, McCullock & Kirtland, Cantonment farm, Greenbush, $20; 4th, John Carpenter, Wales, Erie county, Set Transactions.

Experiments for three years, with successive crops, to test the value of manures.—W. D. Osborn, Port Byron, $20

MANAGEMENT OF FINE WOOLED SHEEP.—Hon. D. S. Curtiss, Canaan, Col. co., $50. J. S. Randal, Clay, Onon. co., statement recommended for publication.

FARM CROPS.—*Winter Wheat, 2 acres.*—1st, Amos Miller, Vernon, Oneida co., 44 bush. per acre, $20; 2d, Ira Apthorp, Riga, Monroe co., 43 26-60 bush. per acre, $15; 3d, E. C. Bliss, Westfield, Chau. co., 43 bush per acre, $5.

Indian Corn, 2 acres.—1st, Hon. P. Crispel, Hurley, Ulster co., 90-5 bush. per acre, $20; 2d, Benj. Enos, De Ruyter, Madison co., 89-14 bush. per acre, $15; 3d, Levi F. Marshal, Vernon, Oneida co., 86-38 bush per acre, $5; Wm. Wright, Vernon, Oneida co., 114-36 bush per acre. (Mr. Wright had only one acre measured; as by the rules of the Society two were required, no premium could be awarded. From a statement furnished by Mr. Wright, it appears he had in the same field about ten acres, of which the yield was nearly equal to the acre measured.)

Barley, 2 acres.—1st Melos Adams, Martinsburgh, Lewis co., 62½ bush. per acre, $15; 2d, Elisha M. Bradley, East Bloomfield, Ontario co., 60-9 bush. per acre, $10, 3d, Benj. Enos, De Ruyter, Madison co., 54-25 bush. per acre, $5.

Oats, 2 acres.—1st, Elisha M. Bradley, East Bloomfield, Ontario co., 89½ bush. per acre, $15; 2d, Daniel Jenison, Galen, Wayne co., 87½ bush. per acre, 10; 3d, Benj. Enos, De Ruyter, 86½ bush. per acre, 5.

Beans, 1 acre.—1st, E. C. Bliss, Westfield, Chautauque co., 33½ bush. per acre, $10.

Timothy Seed.—E. C. Bliss, Westfield, Chautauque, $5.

Flax.—E. C. Bliss, Westfield, 1 acre 24 rods, 18¾ bushels seed, 431 lbs. lint, $5.

ROOT CROPS.—*Potatoes for table use.*—1st, Samuel H. Church, Vernon, Oneida county, 269½ bush. per acre, $15; Wm. Newcomb, Pittstown, Rensselaer co., experiments, 10.

Mangle Wurtzel, ¼ acre.—1st, John Row, Riga, Monroe co., 1439 bush. per acre, at 50 lbs. per bush., $8.

Carrots, ¼ acre.—1st, Wm. Risley, Fredonia, at the rate of 1031 bush. at 50 lbs. per bush., $8.

Ruta Baga, 1 *acre.*—1st, Joseph Hastings, Brunswick, Rensselaer co., 1400 bush., at 50 lbs. per bush., $10.

Butter Dairies.—1st, John Holbert, Chemung, silver cup, value $50.

Butter.—1st, John Holbert, Chemung, $15; 2d, Hon. H. C. Tuthill, Cayuga, 10. (The above butter, comprising 5 tubs, was sold readily to gentlemen in this city at 25 cts. per lb., and had many more been exhibited of like quality the same price would have been paid.)

Fruit.—*Seedling Winter Apple.*—1st, Chas. Lee, Penn Yan, Yates co., Wagener Apple, $5 and diploma.

An analysis of Indian Corn, for which the Society had offered the sum of $300, was presented by Jas. H. Salisbury, and the same has been referred to a committee for examination, and their report will be announced as soon as received.

Asa Fitch, M. D., of Salem, Washington county, has finished his survey of that county, for which the sum of $200 was appropriated, and it will be received in time for the transactions to be submitted to the Legislature.

Designs for Farm Dwellings.—F. R. Elliot, of Cleveland, Ohio, presented a design of a farm dwelling with description, plan, and elevation, which were examined and are entitled to special commendation, and, although no premium was offered the present year, a diploma and silver medal is awarded. J. W. Ball, of Exeter, presented a description and plan of a farm house, which was very much approved, and a diploma is awarded.

EXHIBITION OF FRUITS.

From out of this State.—Montreal Horticultural Society, 20 choice varieties. Contributors, J. Frothingham, Esq., W. Lunn, Mrs. McIntosh, G. Shepherd.

Cleveland, Ohio, F. R. Elliott and Prof. J. B. Kirtland, 16 varieties; J. Gallup, 17.

J. C. Holmes, Esq., of Detroit, forwarded from A. C. Hubbard, Troy, Michigan, 15 varieties, and from Judge Hubbard, Plymouth, Michigan, 8 varieties.

Michael Gander, of Canada West, by Master Cleveland Allen, of Black Rock, 10 varieties.

The thanks of the Society were tendered to each of the contributors as well as to the Montreal Horticultural Society, and the Secretary was directed to forward to each the Diploma of the Society.

From our own State.—J. H. Watts, Rochester, fine specimens of the Northern Spy, and a beautiful painting of this fine fruit, and through Mr. Watts, from the following contributors: Thomas Johnson, Brighton, 5 varieties; H. R. Brown, Greece, 7; H. Hooker, Brighton, 11; C. K. Adams, Ogden, 6; T. Rhoorback, Greece, 12; J. C. Campbell, Rochester, 6. C. Paulk, Honeoye Falls, Seedling Pear.

John Delafield, Oakland, Newtown Pippins, and from Waterloo, through Mr. D., 24 varieties; from Tyre, 11; Romulus, 3; Junius, 1 variety, the King Apple.

Judge Miller, Rochester, 2 varieties Winter Pear.

John Donallan, Greece, Monroe county, 7 varieties Apple.

Joseph Cary, Albany, Isabella and Catawba Grapes, very fine and as fresh as when picked.

B. Hodge, jr., Buffalo Nursery, 5 varieties and Stannard Seedling Apple.

Ellwanger & Barry, Mt. Hope Nurseries, fine specimens of Northern Spy and Melon Apples.

W. R. Coppock, Buffalo, 4 varieties.

B. P. Johnson presented, (from Cayuga co.,) 5 varieties.

Justus Harwood, United Society of Shakers, Niskayuna, 4 varieties. Samuel Rose, same Society, Watervliet, 6 var.

Herman Wendell, M. D., Albany, 4 varieties Winter Pear; 1 Apple, and 5 Painting Seedling Cherry.

T. C. Peters, Darien, Genesee county, 14 varieties.

Lewis F. Allen, Black Rock, 6 varieties apples.

H. Snyder, Kinderhook, 3 varieties.

Wilson, Thorburn & Teller, 13 var. Apple, 2 Pear.

A. Marks, Greene county, 4 varieties.

Dr. J. M. Ward, Albany, 7 var. from his farm in N. J.

J. M. Lovett, Albany, splendid Bouquet of natural grasses.

Fred. W. Lay, Greece, Monroe co., by J. Alleyn, Rochester, 12 varieties Apple. W. D. Osborn, Port Byron, 2 var.

James Wilson, Albany, splendid display of Camelia-Japonicas, &c., in full bloom.

Prof. Emmons, Albany, beautiful specimen of Painting of Currants. Hon. F. Bellinger, Herkimer, Middle Apples.

P. H. Warner, Columbia, Herkimer co., do.

Sheldon Goodrich, Aurelius, Cayuga co., 3 varieties.

A beautifully arranged box of Indian Corn, by Mrs. B. B. Kirtland, Greenbush.

The thanks of the Society were tendered to the Contributors, and a volume of Transactions to each.

Ladies' Department.

BOTANY.—FRUIT AND SEED.

[Continued from page 30]

The Fruit.—The ultimate object of the whole vegetable organization appears to be the production of fruit; which is the agent through which the reproduction of the species is accomplished. After the seed is perfected in annual plants, they soon wither and die: the flower always precedes the fruit, and is necessary to its development and perfection. The fruit consists of two parts, viz: the *pericarp* and the *seed*, or the seed-covering and the seed: the pericarp is wanting in some plants, but the seed is essential in all. In the coniferous plants, as the pine spruce, &c., the seed is naked and destitute of the pericarp.

The pericarp is the part which envelops the seed, whatever be its substance or structure. Fig. 1. In the peach and plum, this is a fleshy, pulpy substance,—in the oak and walnut, a dense hard shell: (fig. 2.) thus the structure and composition of the pericarp varies in different plants, from a soft watery pulp to a dense shell. The process of the ripening of fruit consists of certain chemical changes produced by the action of light, heat and air, and perhaps other agents. Pericarps have received specific names, according to their form and structure: that of the pea and bean is called a pod,—that of the walnut & butternut is called a nut,—that of the apple and pear, a pome,—that of the currant and whortleberry, a berry, &c.—Fig. 3.

Fig. 1.

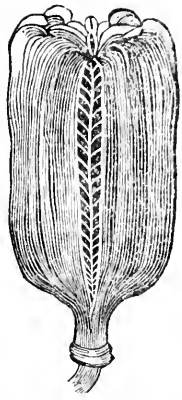


Fig. 2.

Fig. 3.

This figure represent the pericarp, or seed capsule of the œnothera.

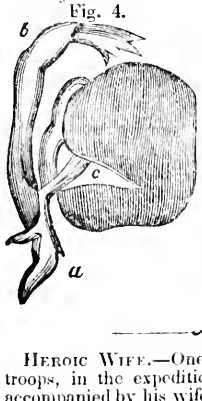
The Seed.—The seed contains the rudiments of a new plant, and is the final product of all the complicated and beautiful processes of vegetation. The essential parts of the seed are, the *integuments*, the *albumen* and the *embryo*.

The *integuments* are composed of several distinct layers, which constitute the immediate coverings of the other parts.

The *albumen* lies next to the integuments, constituting the principal bulk of some seeds; it is a whitish substance composed mainly of starch, which, by the chemical changes which it undergoes during the process of germination, serves to nourish the embryo plant.

The *embryo* comprises all the rudiments of the new plant: it consists of three parts, viz: the *radicale* the *plumule*, and the *cotyledon*.

Fig. 4.



The *radicale* is the part which forms the root,—the *plumule* forms the ascending portion of the plant,—the *cotyledon* is the bulky part of seeds, and forms the first leaves of young plants, which in the garden bean, cucumber, &c., are thick, fleshy and oval, when they first rise above the surface of the ground; these support the plant and perform the function of leaves until the proper leaves are formed.

[This figure shows an embryo with its plumule and radicale developed from the cotyledon: a, radicale; b, plumule; c, cotyledon.]

Heroic Wife.—One of the officers of Col. Washington's troops, in the expedition to the wilderness to California is accompanied by his wife and child. Who but an American woman would brave the perils of the Far West to be by her husband's side?

MOTHERS, strive not so to educate your children that they may be considered prodigies of learning, at the expense of health, perhaps life. Let mental and physical education go hand in hand—let health and knowledge embrace each other.

FEMALE EDUCATION.—It was a judicious resolution of a father, as well as a most pleasing compliment to his wife, when on being asked what he intended to do with his girls, he replied: "I intend to apprentice them all to their excellent mother, that they may learn the art of improving time, and be fitted to become, like her, wives, mothers, heads of families, and useful members of society." Equally just, but bitterly painful, was the remark of the unhappy husband of a vain, thoughtless, dressy slattern: "It is hard to say it, but if my girls are to have any chance of growing up good for anything, they must be sent out of the way of their mother's example."

A GOOD DAUGHTER.—A good daughter! There are other ministers of love more conspicuous than she, but none in which a gentler, lovelier spirit dwells, and none to which the heart's warm requitals more joyfully respond. There is no such thing as a comparative estimate of a parent's love for one or another child. There is little which she needs to covet, to whom the treasure of a good child has been given. But a son's occupation and pleasure carry him abroad, and he resides more among temptations, which hardly permit affection that is following him perhaps over half the globe, to be mingled with anxiety, until the time when he comes to relinquish the shelter of his father's roof for one of his own, while a good daughter is the steady light of her parent's house.—*Mary Howatt.*

SCIENCE IN THE KITCHEN.—Professor LIEBIG, in a letter to Prof. SILLIMAN, says: — "The method of *roasting* is obviously the best to make flesh the most nutritious. But it does not follow that boiling is to be interdicted. If a piece of meat be put into *cold* water, and this heated to boiling, and boiled until it is 'done,' it will become harder and have less taste than if the same piece had been thrown into water already boiling. In the first case the matters grateful to the smell and taste, go into the extract—the soup; in the second, the albumen of the meat coagulates from the surface inward, envelopes the interior with a layer which is impregnable to water. In the latter case, the soup will be indifferent, but the meat delicious."

CORN BREAD.—We are in the daily habit of eating corn bread made after the following recipe, by our good landlady, Mrs. NORTON, of Astoria. It is equal to anything we ever tasted: — To one quart of sour milk add two teaspoonfuls, well stirred in, of finely pulverised salæratus, two eggs well beaten, one tablespoonful of brown sugar, and a piece of butter as large as an egg. Salt to suit the taste, and then stir in the meal, making the mixture about as stiff as for pound-cake. Now comes the great secret of its goodness. *Bake quick*—to the color of a rich light-brown. Eat it moderately warm, with butter, cheese, honey, or sugar-house molasses, as most agreeable to the palate.—*American Agriculturist.*

Boys' Department.

A WORD TO BOYS AND YOUNG MEN.

AN intelligent farmer remarked to us, a few days ago, that we "must talk to the boys, the young men of America, about increasing the circulation of this journal. They are the ones who are to be benefitted by the dissemination of books and papers devoted to agriculture and horticulture—for they are soon to cultivate the farms and manage the estates of their fathers. The 'old heads'—men of forty years of age and upwards—do not like to begin improvements in the decline of life, but prefer to continue in the track of their ancestors. In this age of progress, however, those farmer's sons who are entering upon active life, must avail themselves of the aid afforded by science and experience, or be and continue in the rear—a reproach to the age and their profession."

There is much good sense in the remarks of our friend, and we commend them to the careful consideration of our young readers. The great improvements being introduced will be adopted by the shrewdest and wisest, who will thereby realize profit; while those who, through either ignorance or prejudice, continue in the *old track*, will be losers. But a great many of the boys and young men of America are thinking and acting aright. We have now before us letters from several of them, the contents of which convince us that there is an increasing desire to cultivate the *mind* as well as the *soil*, and at the *same time*. They are doing much to increase the circulation and usefulness of the various agricultural journals of the country. The following letter from a young man in Erie county, N. Y., speaks to the point on this subject. Had we space, we could give letters from still younger friends (some only 15 years of age,) residing in different and distant sections of the country, who are actively engaged in disseminating books and periodicals pertaining to agriculture, horticulture, &c.

MR. MOORE:—I commenced taking your valuable paper when I was 17 years of age, and have now taken it three years, and hope to be always blest with that privilege.—Considering the importance of such a paper to the agricultural portion of community, I have embraced every opportunity in order to obtain as many subscribers as possible; and although I met with many prejudices it only increased my ambition—for I know that the GENESEE FARMER is one of the sunbeams which will eventually melt the ice of prejudice that has so long bound our country in relation to Scientific as well as Practical Agriculture. And I think, if the time has not already come, it is not far distant, when the name of *farmer* will be crowned with many honors.

I have increased the number of subscribers from 17 (which I think was the number taken the past year,) to 45—and, with the hope of getting more, I remit for fifty copies.

OSCAR WARREN."

PREMIUM ARITHMETICAL QUESTIONS.

BY I. A. CLARK.

FRIEND MOORE:—I have noticed in some of the late numbers of the Farmer arithmetical questions for farmer's sons: and as some may have leisure during the long winter evenings to solve a few more, I send you the following. Some hard nuts for farmer's boys to crack:—

$5 *Premium.*—On the side of a mountain grew a lofty fir, which, being broken by the wind but not severed, the top [C,] struck below the foot of the tree [B,] 50 feet, and a right line [B, E,] from the base of the tree to the body is 30 feet. What is the length of the pieces—the height of the tree [B, C,] being 150 feet?

$3 *Premium.*—In two right angled triangles A, B, E, and D, B, C, right angled at B, we have the side A, B, = 40. B, C, = 50 and D, E, = 30; required D, B, and B, E.

$2 *Premium.*—If 7½ oxen eat 4½ acres of grass in 2 weeks, and 12 oxen eat 4 2-5 acres in 5 weeks, how many oxen will eat 60 acres in 3 weeks?—the grass being at first equal on every acre and growing uniformly.

The above questions are found on the 176th page of the "Prussian Calculator," and the premiums for the best solutions will be paid in books. The solutions can be sent to your office or to my address, "Lakeville, Livingston Co., N. Y." Yours truly, ISAAC A. CLARK.

ARITHMETICAL QUESTIONS.—We wish those who furnish us with Questions for this department not only to make their questions perfect, but to furnish us with the answers, as no question will be inserted unless the answer accompanies it.

BOYS, if you would be *respected*, try to BE what you would have others think you are—if you would be *happy* yourselves, try to make others happy.

CONTENTS OF THIS NUMBER.

ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, Jan. 23, 1849.

FLOUR AND MEAL.—Fair business in flour. Transactions reach 4000 at $5,50 *a* 5,63, for common to desirable. Not easy to get fair parcels below 6, 56—included were 500 bbls. New Orleans at $5,50—pure sold at $5.87*a*0. Meal $3 for Jersey. Rye Flour $3,25 *a*3.37½.

GRAIN.—Nothing doing in wheat, except small parcels Long Island at $1.08*a*1.10. Corn in moderate demand—sales 15,000 bu. at 57*a*58 for N. O. and new white—69 for old, and 64*a*65 for yellow. Oats 35*a*36.

PROVISIONS.—In Pork not much movement—Ohio is $12,50*a*13,50—sales 400 bbls. state at $12.50*a*14 and 150 bbls city prime at $13,50. Beef steady, with sales 300 bbls. at $12.50*a*13 for mess. Lard 6¾*a*7. Pickled meats quiet. Sales 20,000 pounds greese Lard at 5½. Dressed Hogs $6*a*6¾.

TALLOW—sales 20,000 lbs. at 8¾. cash.

ASHES dull—small sales at $6.75 for Pots. Pearls $7,87½.

COTTON—business to fair extent at steady prices, with sales 1600 bales. Fair upland 7⅞*a*7½—Orleans 7¾*a*8.

Rochester, Jan. 23, 1849.

FLOUR $5.50. Wheat $1,15. Corn 44 cts. Oats 25 *a* 28. Rye 53c. Barley 50c.

PROVISIONS.—Pork in hog $5.25—mess $13*a*14. Beef, cwt. $3.50*a* $4. Hams 7 cts. Butter 12*a*15 cts. Cheese 6*a*6½ cts.

SEEDS.—Clover $3,50*a*4. Timothy $1,25*a*2. Flax $1.

Bound Volumes of the Farmer.

THE NINTH VOLUME OF THE FARMER, for 1848, just completed, and for sale bound or in numbers, as preferred. It contains a larger amount of matter pertaining to Agriculture and Horticulture than any similar work of the same price ever published—and is illustrated with OVER EIGHTY ENGRAVINGS Price, 62½ cents bound in boards and leather—or 50 cents in marble paper, with cloth backs.

Also—complete sets of the Farmer from its commencement, (except the 2d volume,) substantially bound, which we will sell at 50 cents per volume. These volumes are not suitable for sending by mail—but we have copies of vols. 6, 7, and 8, bound in paper covers, which may be mailed.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH ENGRAVINGS OF

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

THE TENTH VOLUME of this Journal will commence on the 1st of January, 1849. In making this announcement to his AGENTS and the FARMERS and FRUIT CULTURISTS of the country, and again asking their support in behalf of the work, the Publisher has the satisfaction of stating that the GENESEE FARMER now has a circulation EXCEEDING, BY SEVERAL THOUSAND, that of any similar periodical published in America. This fact, alone, furnishes abundant evidence of the *real value* and *superior merit* of the work—for no journal, however cheap, can become and continue so universally popular, unless actually WORTHY of the substantial support of an intelligent community.

The Genesee Farmer is, beyond dispute, *the cheapest Agricultural and Horticultural Paper in the World!*—and the Proprietor is determined to make it the NEATEST and BEST. We confidently ask for it that support which it *merits* from the Farmers, Gardeners and Fruit Culturists of the United States.

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☞ POST-MASTERS, AGENTS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free,) at the risk of the Publisher. Address to

D. D. T. MOORE, Rochester, New York.

Competitors for our Premiums.

BELOW we give the names of the principal competitors for our January and April Premiums. The three first are entitled to the January premiums of $20, $10 and $6. The names are given in regular order—commencing with the person sending the largest number. Those in parenthesis are equal, or tie:

Silas H. Swetland, V. W. Sunderlin, E. C. Bliss, Apollos Kent, J. D. Stone, J. H. Stanley, Silsby & Keeler, O. Warren, B. Farr, (H. J Ray, E. F. Munson, W. Lyman,) H. Frisbie, W. L Booth, (E. S. Marvin, D. P Chamberlain,) Moses Eames, S. Heston, (S. Lee, L. Strobridge, L. A. Miller, R. Clark, C. H. Carter,) (W. Churchill, A. Eaton John White,) W. Hadley, (Jo. Wykoff, C. L. Young, Luman Shepard, John Davis, R. Sears,] [Wm. Chamberlain D. M. Smith, H. Munson,] J. M. Trowbridge, E. W. Gerrish.

Farmer Office, Rochester, Jan. 25, 1849.

To Agents, Post-Masters and Subscribers.

AGENTS, Post-masters and other friends of the Farmer will bear in mind that we offer Premiums amounting to OVER TWO HUNDRED DOLLARS (in Agricultural Books, Implements, &c. at cash prices.) for subscribers obtained before the 20th of April next. We have not room to publish the list of Premiums in this number, but will send it, together with show bill, specimens, &c., to all who wish to compete.

We hope that *all* of our present patrons will renew their subscriptions, and get as many new subscribers as convenient. If each of our readers will take the matter in hand—and we earnestly invite all so disposed to obtain and forward subscriptions—much may be accomplished in every section of the country. Friends, will you SHOW THE FARMER TO YOUR NEIGHBORS AND ACQUAINTANCES, AND INVITE THEM TO SUBSCRIBE?

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Farmer, 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. No deviation from these terms.

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

GENESEE FARMER.

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

VOL. X. ROCHESTER, N. Y.—MARCH, 1849. NO. 3.

Farm Husbandry

MAKING AND PRESERVING MANURE.

Few things are more stale than the popular talk about making and preserving manure. Every practical man thinks that he understands the art to perfection: and every babbler in chemical jargon believes that he has attained to the fifth story of rural science when he repeats in fair parrot imitation, the words of Johnston, Liebig, Boussingault and other standard authors. In all this, there is a lack of vigorous, independent reasoning, and of original research, which we can not commend. Let us arouse ourselves to the task of making a little investigation which is not the reproduction of other men's thoughts and language, but our own by legitimate paternity.

Why is the carcass of a dead sheep which contains thirty pounds of dry matter, better for manure than a like weight of dry grass or other herbage, similar in kind to that consumed by the animal to form its flesh, bones, brain and nerves? This is a plain and important question; and one that every farmer's son who is twelve years old should be able to answer correctly, in a moment. Give us the true explanation of this phenomenon, and we will proceed a step farther in the same direction. The solution of the problem is this: The atoms in the carcass of a sheep which weigh but thirty pounds have been extracted during the growth of the animal, from a small beginning up to full maturity from at least 2,000 pounds of grass or other forage. No 300 pounds of dry hay contain the same quantity of phosphate of lime, sulphur and organized nitrogen, which exists in the carcass named. But this fact would be of no importance, if it were not for another, which is almost universally overlooked in collecting and preserving fertilizers. To bring it out fairly, permit as to inquire: why a pound of bone-earth, (phosphate of lime,) or a pound of available sulphur, or one of nitrogen, is worth more as a manure than a like weight of carbon, pure lime, or oxygen? In a pound of wheat or corn, there is ten times more carbon and oxygen than of phosphorus, nitrogen or sulphur. Why then should the last named elementary bodies be so useful, and peculiarly valuable as food for corn and wheat plants? There are two reasons for this. One is, the extreme scarcity of salts of phosphorus and sulphur, and of available nitrogen, in old, well drained fields, which have been often plowed. The other, and more noticeable reason is, the almost universal ignorance that prevails throughout the country in relation to elementary substances in soils, without which not the first kernel of corn or wheat can grow. Every body knows that all kinds of matter in the earth will not do to make bread of; nor will every thing do to make into grass or potatoes. If 100 pounds of common sand, clay, iron or lime would form by any tillage an equal weight of human food, we could all live with little labor and without cultivated reason. A snake can live comfortably in a cage a whole year on a single meal. If our race could thus subsist, we should not be the industrious, inventive, moral and improving beings we now are.

The time is coming when every child must be taught a knowledge of the things and laws which its Creator has appointed to transform *simple minerals into good bread*, by the harmonious union of science and physical labor. At present this knowledge is despised; these elements of bread are thrown away; and the natural productiveness of our parent earth is assailed by four or five millions of powerful semi-civilized men, who are eagerly running a race to see who shall coin into grain, tobacco, cotton and other crops, the most of the virgin soil, for exportation and loss to the country. More of the valuable elements of corn and cotton is wasted through ignorance in raising those great staples than is consumed in organizing the same. In this remark allusion is made to the dissolved vegetable and animal mold in soils, and their incombustible salts, which never enter into the composition of the plants in cultivation, but are lost, partly by evaporation, and partly by washing and leaching. When tillage decomposes mold and inorganic matter, if no vegetables are growing to imbibe the volatile and soluble elements of crops, they are apt to be lost.

We now return to the consideration of the art of making and preserving manure. Any element, or substance, which can aid in making a ripe and perfect wheat plant, is a fertilizer. Fertilizers or manures exist in nature in two distinct conditions. The one is, in that of organized atoms, as we see them arranged in the tissues of vegetables—in their seeds and tubers—as in wheat and potatoes: and as we find them in lean meat, fat, brain, bones and membranes. The other condition is that, in which the elements of plants and animals are wholly disorganized, or *mineralized*. For illustration: a slice of

bread, a potato and a beef-steak are fertilizers in an organized form. Burn these completely, and the water, air and ashes into which they will be transformed by combustion, are to all intents, and for all purposes in nature, *minerals*. They will combine chemically with metals and earths, and exist for indefinite centuries as solid unchanging rocks. To make and preserve manure, implies the skillful collection and husbanding of the elements of bread and meat, both in their mineral and in their organized state, as in the dung and urine of animals, in common vegetable mold, in salts of lime, potash, silica, soda, magnesia, iron and alumina.

In order to collect and preserve the elements of human food and clothing to the best advantage, the operator should have a clear idea of the natural process by which both plants and animals *grow*, come to maturity, die, and are dissolved into their original elements, preparatory for a new organization. In a study so wide as this, we can only serve as a guide-board to point the way. Know then this truth, that no animal from man down to the fish and worm, can subsist on disorganized matter, like the gases, vapor and ash of a loaf of bread, when entirely consumed by fire, or fully decomposed by fermentation and rotting. These elements of bread can only be *re*-organized by a living plant under the influence of solar light, heat and electricity. From this it follows, that plants are older on our planet than animals; and that if all vegetation were to cease for a few years, all animals must inevitably perish. Plants may have flourished for ages on the globe before an insect or molusca was created: but as all animals mineralize their food, not completely, but in a degree, and cannot live on the carbonic acid which they all form, it follows that, without plants to decompound this carbonic acid, and reorganize its constituent atoms, to serve again as food for animals, they would soon become extinct, from the lack of nutriment.

The works of God are full of interest. They are unfolded in a peculiar manner before the vision of an intelligent, reasoning farmer. He cannot fail to notice the wonderful proclivity of all living things, whether vegetable or animal, to multiply in number, and gain, at the expense of the mineral kingdom, in the aggregate weight of organized matter on our given area of land. It is the every day business of the husbandman to organize the most useful plants and animals out of the atoms which Providence has appointed for that purpose. Has God made provision for the large increase of these through the instrumentality of that talking, reasoning biped, on any little spot of the earth's surface, which by courtesy is called a farm? If a larger weight of plants and of animals, can live on thy farm, kind reader, than it has at this time, think for a moment, and tell me where thou wilt get the food, the manure, to be organized into more grass, grain, roots, wool, mutton, milk and beef? These things have a market value. Providence favors their increase in thy hands: but thou, strange lump of contradictions, wilt not extract pure gold from the subsoil and the atmosphere. Thou art regardless of its loss from the vault of the privy, the pig-stye—the barn yard in winter and the cow yard in summer. Thy heart lusteth for more land, when thou hast so much already, that no acre of it yields two-thirds of its maximum. Thou hast not duly tested the advantages of soiling cows, nor the benefit of deep tilth, of close planting and seeding. Spires of grass stand too far apart on thy pastures and on thy meadows. Some of these fields can be improved by turning little rivulets over them for irrigation. Others need draining, and a coat of caustic lime to sweeten the sour muck and neutralize the mineral acids. Manure derived from cat-tails and bull-rushes is worth something; but that which clover and peas draw from the earth is worth five times more, pound for pound. One hundred pounds of rye harrowed into the earth in a cornfield at the maturity of the crop, has organized more than a ton of fertilizers by April, to be plowed in, and feed a summer crop. For ewes with lamb, or while nursing their offspiring, a moderate allowance of green rye early in the spring, is capital. Have valuable plants always growing the year round, so far as you can, on every rod of land, to feed domestic animals, unless it is thought best to sell the crops. To make the most out of vegetable vitality, it must ever be kept at work accumulating manure, which should all be saved *somewhere*. A pea can work wonders in the way of storing up fertilizers in an available form. A carrot seed has a gift in the same line; but the little clover seed is a perfect gem. Small as it is, the growing plant can not live on air alone. It consumes a good deal of sulphur and often requires gypsum to supply it.

Good farmers at the South make great use of forest leaves and leached ashes in their compost heaps. These leaves are generally rich in potash and other earthy salts as well as in organic matter.

Suppose you raise sheep for their wool, meat and tallow and sell them when three years old. The manure that can be made by a sheep in three years, with the aid of good plants to draw minerals from the subsoil and gases from the atmosphere, will be about equal to the production of food for two sheep at the end of the term. Nothing is plainer than the fact that, organized matter consumed and voided by a sheep will greatly favor the growth of food for another animal. And, although about 60 per cent. of the matter eaten, escapes from the lungs in the form of carbonic acid and vapor, and through the pores of the skin by insensible perspiration, yet the other 40 per cent. voided by the bowels and kidneys, adds more to the soil in the way of mold than was probably consumed in making the plants fed to the sheep. The quantity of mold dissolved in organizing a crop, is very unequal. It is a point in rural affairs, which we have studied with some care. On another occasion we will attempt to elucidate the laws which govern its consumption and increase, on both tilled and untilled land.

Rural industry is very generally spread over too much surface, to be profitable in the highest degree. This occasions a great waste of travel in man and beast. It also leads to a bad system of husbandry by robbing remote fields of their fertilizing atoms, not a few of which cows and other domestic animals drop in the highway. A farm being a sort of chemical laboratory, it is miserable economy to have it ten times larger than one has any use for. Less land, and more money drawing 7 per cent. annual interest, which will double the principal in 10¼ years. would be an improvement in the circumstances of more than one reader of this journal.

DAIRY COWS.—The excellency of a dairy cow is estimated by the quantity and quality of her milk. The grand desideratum is to discover a breed alike useful to the grazier, dairyman, and small farmer.

BASTARD FALLOWS

The system of making summer fallows, by allowing land to lay a whole year in a naked and unproductive state, for the purpose of preparing it for autumn wheat, is extensively practiced in all the wheat growing districts of the United States. The process of making naked fallows, when the loss of a whole year's rent of land—or interest on the value thereof—is taken into account, under the most favorable circumstances is expensive, and may be in most cases dispensed with, without in the most trifling degree detracting from the annual productiveness of the soil. If this proposition can be sustained *in practice*, by the entire mass of the wheat growers of our country, then may the over populated portions of Europe have confidence in being able at all times to get a supply of bread stuffs from America.

Naked fallows are expensive and useless, and that a much more profitable system of managing land for fall wheat can be adopted, are opinions which are gaining ground, and are believed by many of the most enlightened cultivators of this country. The great bulk of the farmers, however, have not given the subject much consideration, nor do they yet understand the best and cheapest method of keeping up the fertility of their soil, and at the same time, increasing its annual products without subjecting their land, in periods of four or five years, and in some instances much more frequently, to the old fashioned and extravagant practice of summer fallows. With a view of promoting the interests of agriculture, an attempt will be made by the writer, to minutely discuss the subject in all its bearings, during the succeeding six or eight numbers of the Farmer.

The ordinary practice of making fallows cost at least eight dollars per acre: in this calculation is included the rent of land a twelve month, and the plowing and harrowing required to bring the land into a clean state of culture. The expense of manuring, draining, laying the ground into ridges, and seed, &c., would be the same in one case as the other, and therefore on the score of expenditure or economy need not be included in the calculation. In the term *bastard fallows* may be included the various modes of preparing land for fall wheat by which the loss of a whole summer or crop is not required to effect that object. It has already been shown that if land be summer fallowed, a direct charge of about eight dollars per acre must be put against the wheat crop, and as will be presently proved to the satisfaction of every reflective mind, without affording an equivalent return for such an extravagant outlay. The system proposed to be practiced will be based upon the soundest principles of economy, nor will it require a large capital to carry it out throughout the various ramifications of a well managed arable farm. One of the most important features of the system is this: the green or other crop grown upon the land with a view of preparing it for fall wheat will be of such a description, and grown upon such a scale, that in most cases the proceeds thereof will pay the rent of land and the entire expense of managing both the summer and winter crops—thus leaving the latter clear profit to the cultivator. The average yield of wheat, extending over a period of ten or fifteen years, on the best managed wheat farms in this country does not exceed thirty bushels per acre. Now, it is quite certain that even when this high average is obtained by superior cultivation and by the aid of naked fallows, quite as great a yield of wheat may be had without summer fallowing the land as with it, and therefore, why should such a practice be longer tolerated by American farmers. The Chinese, who are noted for the superiority of their Agriculture, have not found it difficult to keep up the fertility of their soil by annually growing heavy crops, without giving it any rest. In the best cultivated portions of England farms and even whole parishes are in great abundance in which the yield of wheat, extending over a long period of years has equalled forty bushels per acre, and during the whole course of cropping a naked fallow has not been made. Indeed, the enlightened and scientific portion of the farmers of Great Britain have long since exploded the semi-barbarous practice of making naked fallows, and there appears to be no valid reason, why a similar view of this important question should not be favorably received by the wheat growing farmers of America. To enlighten public opinion regarding the various systems of cultivation adapted to secure this object, and at the same time keeping in mind the climate, soil, the high price of labor, scarcity of capital to be employed in agriculture as compared with Great Britain and some portions of the continent of Europe, and other prominent features that have an influence to a greater or less degree upon the character of American Agriculture, are the real grounds that have induced the writer to take a bold stand in discussing this somewhat intricate subject, which in many of its features will be found opposed to the practice of many of our very best farmers, with whom on many other points of husbandry we perfectly agree, and the contributions of whose pens we shall be pleased to receive, on this or other subjects, whether their opinions and practice correspond with ours or not. Without further prefatory remarks, we shall briefly at this time take up the subject in a *tangible* point of view, and in our next resume it in several of its *practical* bearings.

INDIAN CORN.

The maize plant may be profitably cultivated in nearly every portion of this great Republic. In the most northern sections, where it is grown as a preparative crop for fall wheat, an early variety should be selected, and by liberally manuring the land, and clean culture, it may be pushed forward to full maturity by the first week in September, after which it should be cut up and drawn off, and the land plowed and prepared for fall wheat. By planting the hills of corn in rows about four feet apart both ways, and by passing the steel tooth cultivator twice in each direction between those rows, the land will be in as good a condition for fall wheat as if it had been summer fallowed. Besides, the manure applied to the land for the corn crop will have passed through its various stages of fermentation, and the juices having been partially absorbed or extracted in giving strength and vigor to the maize plants, there need be but little apprehension on the score of having a fallen or rusted crop, as would probably have been the case had the manure been applied to the land whilst being summer fallowed. This influence however operates only on soils where there is a great depth of decayed vegetable matter on the surface, and where a strong and luxuriant growth of straw is produced without extraordinary means being used to secure that result. There are but few soils on which unfermented barn-yard

manure can be applied immediately before the sowing of wheat, without doing more or less injury to that crop. On soils where this is not the case, it will be found that *human* or vegetable mold forms a very small proportion of their ingredients, and doubtless on soils of this kind, crude and unfermented barnyard manure may be applied without producing the foregoing results. In those cases where vegetable deposits form a small proportion of the active soil, unfermented barn yard manure, buried in the soil to a depth of six or nine inches with the plow, will aid materially in bringing into action such inert properties as will promote a vigorous growth of plants and vegetables. Manure thus applied has a powerful mechanical action on soils, and the beneficial or prejudicial influence produced, may be attributed as much to this agency as to that of affording a direct supply of food for their sustenance.

The mechanical action of manures on soils, of course greatly depend upon the quality and condition of the soils on which they are intended to act. This fact should be duly considered in connection with the manuring of land for the wheat crop. The wheat plant is decidedly the most precarious to cultivate, of the cereal plants, and hence a greater degree of judgment should be employed by those who engage extensively in its cultivation. In northern Europe, the heat of summer is less severe than in the same degree of latitude on this continent, and consequently a much longer period is given the wheat crop to mature and ripen, and hence the disease known among us by the appellation of *rust*, is scarcely known in the best wheat growing districts of Europe. It is well known by all wheat growers, that cool dry weather during the month of July, and up to the period of wheat harvest — or from the time that the wheat plants come into ear, until they arrive to full maturity — is most favorable for an abundant harvest of wheat. Such weather has just the opposite influence with Indian Corn and most of the other cereal plants. The cause of this somewhat strange phenomenon, may be tolerably correctly reconciled by examining the peculiar habits and constitution of the wheat plant. A minute enquiry into this matter, will probably be made in discussing another branch of this subject—and in the mean time the fact should be remembered, that the plants of wheat have strong roots, which strike to a great deph into the ground, and send forth an abundant supply of food through the sap vessels, which impart either a healthy or sickly growth, just in ratio with its quality and adaptation for this class of plants. Warm humid weather is the most favorable for a vigorous growth of plants, and vegetables—when weather of this kind prevails to a considerable extent, between the periods that the wheat crop comes into ear and ripens, the consequence will be a strong growth of straw, and probably disease. The disease produced from the foregoing peculiar state of the atmosphere would be either mildew or rust. The latter, by far the most prevalent on this continent, is mainly engendered by too great a flow of juices or food through the sap vessels of the wheat plants. The outer covering of the straw being of very weak structure, when the sap vessels become overcharged with food, rupture and premature decay immediately follows. The state of the atmosphere and climate doubtless has much to do in effecting this work, but the soil also has a great influence, in preventing or promoting this disease. It is for this reason that Indian Corn may be profitably grown as a preparative crop for either fall or spring wheat.

The manure applied to the soil for the corn crop, will have undergone a thorough state of fermentation during the process of cultivation, and as the maize plant requires a different quality of food to bring it forward to maturity than is required by the wheat plant, the latter will be more apt to be free from disease, if sown after a well cultivated crop of Indian Corn, than if the land had been summer fallowed purposely for that crop. A clover or timothy sod well plowed, and liberally manured, is the best possible state that the soil can be in for Indian Corn. If the hills be planted in rows four feet apart both ways, there will be no difficulty in cultivating this crop entirely with the horse cultivator, and shovel plow. By the free use of those implements the ground may be made as clean as if it had been summer fallowed, and besides the profit of the corn crop will pay the whole expense incurred in the cultivation and management of the wheat crop.

An acre of Indian Corn managed in the manner proposed, will yield in an average of cases upwards of 40 bushels of marketable grain per acre. This at the lowest calculation is worth 50 cents per bushel, as an article of export, which, in addition to the corn stalks for winter provender for horned cattle, would give a net profit of twelve dollars per acre. When it is intended to sow wheat after corn, the latter crop should in all cases be harvested and drawn off the ground, a short time before the crop is thoroughly ripe, by which means more time will be given to prepare the land for the wheat crop, and the fodder will also be much more valuable than if allowed to get dead ripe before being harvested. When the proper season arrives for the practical operations on the farm, suited for the cultivation of the maize plant, full directions will be given, for the proper performance of the business in all its details.

In our next issue, the cultivation of the clover plant as a preparative crop for fall wheat will probably receive attention at our hands.

UNSEASONABLE WEATHER

The past month (December) has been seven degrees warmer in Philadelphia and farther south, than any previous December in 57 years. This high temperature, (now the 16th January, it is up to summer heat,) in Augusta, Ga., has caused a good deal of vegetable and animal matter to decompose in this warm climate, and induced Cholera and other bilious diseases. Very few duly appreciate how large a portion of sickness in the United States springs directly or indirectly, from noxious gases diffused in the water drank, or the air inhaled into the lungs. Farmers are nowhere particular enough to collect all the volatile and soluble elements of plants and animal excretions, which are lost in rivulets and poison the atmosphere, and use them as manure, by fixing them in the surface soil. A dead sheep cut up and buried a small distance under loam or earth will not smell offensively, because the soil condenses and holds for a time at least the mephitic gases. In all cities there is a prodigious waste of most concentrated and valuable fertilizers, which too often breed pestilence. Charcoal, leached ashes and gypsum mixed with night soil will do wonders on all crops. The winter is a good season to collect the raw material for abundant harvests. Study the deficiencies in the land, and remedy the same.

THE PLOW—ITS HISTORY AND IMPROVEMENTS.

BY HORACE L. EMERY.

It has been well said that "the history of the plow is the history of civilization—that the progress of its improvement marks the progress of society." Thinking that a few remarks upon, and facts concerning the past and present condition of the plow, with a description of several of the most approved forms now in use, showing their adaptation to the various soils, modes of culture, &c., &c., might not be uninteresting to many of your readers, I offer you herewith a short communication upon the subject—hoping to be able to complete the article in your next number. I intend to show, by the use of several new cuts, the various forms of mould boards, and the difference in the effect produced by them, both in the same and different soils; also the effect of different construction of the wood work, the various modes of attaching the team, and the comparative cost and simplicity of the same.

One of the first improvements upon the original plow, or straight-pointed stick of wood, drawn through the ground by manual power, was the substitution of the crotch of a tree, drawn by being attached to the tail of an ox—afterwards, however, by being attached to the horns, which last method is still extant in some countries. From that era in the history of the Plow, it has gradually received more and more attention as its importance has become known: but until within the nineteenth century the implement has been rude and imperfect, as compared with our modern plows.

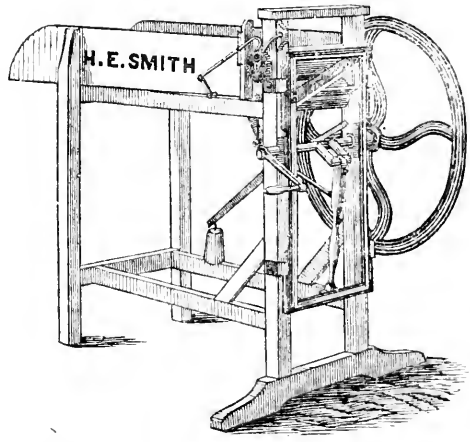
I remember when mould-boards of plows were made from the trunks of winding trees, cut into pieces of proper length and split through the middle, the face of each half thus forming a regular winding surface. These sticks were then wrought from the other side until a proper thickness was obtained—the winding surface being preserved, formed the mould-board. These mould-boards were then covered with strips of wrought iron and furnished with wrought iron and steel edge coulters and points. The beams and handles were similar to those of modern plows, excepting that the handles were made with natural crooks for the top, by using the stumps of oak trees, and a portion of the root near the surface of the ground, which were obtained with much labor; and, instead of a clevis on the end of the beam, a staple was driven into the side, by which it was drawn.

In making this kind of plows nearly the same process is gone through in each one as in the making of a pattern. Uniformity in their construction was not thought of—in fact, almost every plow was made to order, according to the peculiar notions of the purchaser. As for repairs, they were made according to the ability of the blacksmith, and nearly as often as repaired the plow would be quite altered—sometimes for the better and sometimes for the worse. A good plow maker in those days could obtain $12 to $16 for a plow of the size now sold for half the sum.

One great step forward from the last described, was the substitution of cast iron for the wearing parts in separate pieces, so as to be replaced when worn or broken—thereby preserving the original form, strength and durability, and at the same time effectually reducing the cost of repairs. The honor of this is generally accredited to JETHRO WOOD; at all events he obtained the first patent for this invention and improvement. In process of time he produced many patterns of plows, some of which are still highly esteemed for their simplicity and adaptation to some uses; but he, like most inventors, had much to contend against in introducing them to the public, and died without realizing due reward for his labors—although his heirs have, by a renewal of the patent, realized a handsome sum, yet it is now common property by its own limitations. Cast iron is now chiefly used for plows throughout this country, excepting in some portions of some of the Western States, where still plates are struck up in shapes and used for the mould boards.

The principal improvements which have been made in the plow, since Mr. WOOD's, have been in its form—the composition of the metal, as regards its strength and hardness, the connection of the several parts of the same, and the mode of attaching the wood work to them; also in the manner of constructing the wood work as regards simplicity and uniformity, so that repairs for the wood are as easily made as for the irons, and with the same perfection. Great improvements have also been made in the manner of regulating and adapting the same plow to a greater variety of work.

The credit of these improvements belong to a great number of persons—among whom may be named Starbuck, Wright, Hitchcock, Hawkins, Emery, Rich, Nourse, Minor, Prouty, Burrall and many others. Each of these men has added something new and useful in pattern, form, or construction, until the business of building of plows has become systematized and an immense amount of capital has been invested in it: and it now is as distinct a business of itself as carriage building. *Albany, N. Y.*, 1849.



SMITH'S HAY, STALK AND STRAW CUTTER.

THE above engraving represents a Straw Cutter, invented and manufactured by H. E. SMITH, of Fowlerville, N. Y. An examination and trial of this machine will, we think, satisfy any practical man that it is at least equal to many of the most celebrated cutters offered to the public. This is our impression, after seeing and handling Mr. S.'s machine. There are three sizes—the prices of which are $12, $13 and $14. They can be obtained of the manufacturer, as above, or of Rapalje & Briggs, E. Watts, and Barton & Belden, in this city. [A description of the machine was prepared for this number, but is necessarily deferred.]

ANOTHER CHAPTER ON WIRE FENCE.

BY MYRON ADAMS.

MESSRS. EDITORS:—I did not say all I wished concerning Wire Fence in your January paper, because I am aware that short articles are much more acceptable to your readers than long ones. The fence there described is rather a fancy fence than a cheap one, being in front of my dwelling house, and in a very exposed situation. I am sensible that it is much more expensive than ordinary farm fences need be, but much cheaper for that particular place than any other I could make. I wished rather to present to the public what I had done, than untried theories of what I might do.

I find my fence the subject of some remarks in your last paper, and am well aware that the subject of wire for fencing is attracting much attention throughout the country. I think if Judge PETERS had waited until he had built the sample of wire fence he speaks of building, he would have found experience to have corrected somewhat his plan as laid down in your last paper. In the first place he would have found that there is no possible advantage of having a wire fence over four feet high, as no animal will attempt to jump it. The reason I suppose to be, that they do not see it until too near to jump. Nothing has ever attempted to jump mine, although it has been assaulted by every kind of animal that runs the street. They always expect to pass right through without hindrance or molestation, but the moment they strike the wires they recoil as if touched by an invisible hand. His manner of fastening the wires by passing them through holes in the posts, and driving in plugs, will not answer. I began my fence in the same way, but found whenever an animal run against it the wires slipped, and the fence was broken through. The number of wires, and their distances apart, are objectionable. If the object be merely to fence against horses and grown cattle three wires are as good as more. But if sheep and swine are to be restrained by it, nine wires at the distances I proposed will be found better adapted to the purpose. If animals get their heads through, they will break the wires if they are able.

I will now describe the manner I would build a common field fence. After having set the posts and braced them as described in the January number, I should place the coil of wire upon a reel and drawing out the end run it from one post to the other—having the same number of wires and distances apart as before described. After these were strained, I should take narrow strips of boards instead of those iron posts mentioned in the January number, and drive tenter hooks over the wires to keep them at their relative distances apart and from sagging. If the ground is of uniform descent, twenty rods is the distance I should place the posts apart, and this should constitute one pannel, separate and entire from the remainder. The object of this is in case of accidents it may the more easily be repaired. The next pannel might commence from the same post, but the wires should not be connected. I should think two men could build twenty rods of this fence in a day, after the wires had been prepared by boiling in oil. This is the cheapest way of building wire fence I could name. And yet I should prefer going to the expense of iron posts, as I have before described.

Those persons who build a wire fence in the cheapest possible manner, I fear will be discouraged, and throw it aside as worthless. Farmers ought to be content if they can build a durable fence, and one that answers every desirable purpose, for fifty cents a rod. Mine has been one of experiment from the outset, and I have tried almost every plan I have heard suggested. Before I had completed it in the manner described, it was frequently broken: but since, it has only been broken once, as before mentioned. Your reviewer is pleased to speak of it as offering no more resistance to an animal disposed to ramble than "the spider's most attenuated thread." With due deference to his opinion, permit me to say, that if he should witness the throng of starved village cows which roam our streets, and notice with what eagerness they eyed the apples just out of their reach, he would at least allow that this fence had *enchantment* about it. I know that this kind of fence is more liable to accidents on account of its being invisible. But this objection is in a great measure counterbalanced by suffering no damage from high winds, or forming no snow drifts beside it.

I will now describe my manner of mending it when broken, remarking, that nothing conveys a more vivid picture of complete ruin than a broken wire fence, as the wires recoil and twist up the whole length of the pannel. After loosening the wires at the windlass, I provide myself with a small furnace, such as is used in families for heating flat-irons—bring the ends together and heat them in the furnace, then flatten them for two or three inches, laying them together and winding with small wire. Then, by turning upon the cranks, the fence is brought to a standing position, and is repaired much quicker and at a less expense than a board fence could be. It will not answer to loop them together, as telegraph wires are united, as they always break in case of accidents when the wires are bent.

I should like to tell of the vibrations which a damp snow causes to the wires—of the sweet sounds which sink and swell through the air on a cold windy night—and of the cost of this kind of fence in comparison to other fences, if wire can be purchased as cheaply as stated by Judge PETERS—but have not time to say more at present. *East Bloomfield, N. Y., February,* 1849.

DOOR YARD FENCE.

BY N. ALLEN.

A durable, and in many places a cheap door yard fence may be constructed as follows: Get rough stone as they come from the quarry, (3 feet long or more,) and set in the ground 18 or 20 inches. That part of the stone above ground should not be more than 8 inches square. Prepare casings as for wood posts, of uniform size, and sufficiently large that when well mitred together they can be put over the stone posts. At the proper height for the top and bottom rails, (to which the pickets are to be nailed,) mortice through the casings, and make tenons on the ends of the rails, long enough to pass through the casing, and admit a pin through the ends of them, in the inside of the cap. Set the cases over the stones, putting in the rails and pinning as you proceed. Then straighten your posts and rails, and raising the cases from the ground a few inches, proceed to fill up the cases to the top with small stones, taking care to put them in as closely as possible around the stone posts. Then cap your posts and upper rail to suit your own mind—but let it be done with taste. *Toledo, O., February,* 1849.

Transmutation of Plants.

WHEAT AND CHESS

BY R. L. WARREN.

Much has been said, pro and con, for a few years past upon the metamorphosis of wheat to chess; and while some writers have denied the possibility of such a change, others have maintained with equal confidence that, under certain circumstances, such a change does take place. I am not at all surprised that many who have never given the subject a thorough investigation, but have taken *appearances* and the belief of their ancestors as law and gospel, should adhere to and advocate this doctrine, but I am surprised that any observing person should adhere to a doctrine which does not bear the test of experiment, and which is not supported by a solitary scientific fact or argument.

We shall look in vain through the whole vegetable kingdom for a parallel—the changes produced by cultivation—those witnessed in the Orchis and other tribes do not furnish it—for *varieties* only, and not new *Genera* and *Species*, are thus produced. Wheat and chess do not even belong to the same *Genus*, and if the theory of the transmutation of wheat to chess be admitted, it presents a solitary exception to the laws which govern the vegetable kingdom—an anomaly in the vegetable creation.

Perhaps by a little investigation we may arrive at the true state of the case, and satisfy ourselves whether this one anomalous circumstance does exist in the vegetable kingdom—whether wheat is ever metamorphosed to chess. Let us first premise that in no other known case does the metamorphosis extend beyond the production of *varieties* by cultivation, or by the admixture of the pollen of plants of *different species in the same genus*. Thus the pollen of the pumpkin will fecundate the seed of the squash, and the product will partake of the properties of both. The same may be said of the different varieties of apples, peaches, potatoes, corn, &c. But we never find varieties produced by the intermixture of the pollen of different *genera*, as of apples and pears, melons and pumpkins, or of Indian corn and broom corn. Indeed such changes rarely take place in different species of the same genus, and when they do, *varieties only, and not new species are produced*. We never discover any thing of the kind among the *Asters*, the *Solidagos* or the *Careces*; yet these are three of the largest genera of plants. If we plant a kernel of Indian corn we do not expect it to produce broom corn; neither do we look for oats or rye from wheat, yet, in fact, there is as much probability and possibility of such a change, as that wheat will change to chess. None of them belong to the same genus. Wheat belongs to the genus *Triticum*—rye, *Secale*—oats, *Avena*—chess, *Bromus*. But, say you, this metamorphosis may take place by changing the condition of the roots of the young plants, and without the agency of the pollen. In fact, this seems to be the general belief. A few words will expose the fallacy of this theory also.

Students of nature have in vain endeavored to determine by what process plants are enabled to absorb from the earth, and appropriate to their use only such elements as their particular organization requires, rejecting all others. We see the oak, sugar maple, chestnut, gensing, poison hemlock and deadly night-shade spring from the same soil and experience no fear that their proximity will cause the one to partake of the properties of the other; in whatever situation they grow we find their constituents the same.

Some have supposed that the form of the pores in the bark of the roots is such as to regulate the conditions of *endosmose* and *exosmose*, (flowing in and flowing out) of the ingredients held in solution by the moisture contained in the earth, which may be the case, although the phenomenon has by no means been fully and satisfactorily accounted for.

In order to account for the change of wheat to chess in this way, we must suppose that the form of the pores—the conditions of the *endosmose* and *exosmose*—by some unseen agency meet with a radical change, which is again contrary to all experience, and the only known exception to the laws which govern and regulate vegetation. Let the conditions be what they may, we nowhere else in nature find a parallel to this. Hence, we are almost irresistably forced to the conclusion that no such transmutation ever occurs, and shall be forced to concede the point if we can account for the presence of chess in any other manner, which we will endeavor to do in a few words.

Not only will chess vegetate, which has often been denied, but its vitality is not destroyed by lying in the ground several years. Hence experiments for testing the fact of its production from wheat, should be conducted with the utmost caution. It may be in the ground before the wheat is sown, and it is a well known fact that pigeons disgorge it from their crops, (and also other food) when they find any thing more palatable.

Farmers are often deceived as to the amount of chess contained in their seed wheat, and often that which is considered very clean, will contain two or three kernels of chess to each handfull of wheat, and, allowing this to cover two square yards of ground, we have at least one kernel of chess to every square yard of ground, and oftener three. Chess rarely winter-kills, it being much more hardy than wheat. In the fall of 1847 I planted sixteen kernels of wheat and sixteen kernels of chess side by side—only *three* roots of wheat survived the winter and came to maturity, whilst *thirteen* roots of the chess matured. Comment is needless.

It may be asked why so much more chess is found in fields of winter-killed wheat than in others, if wheat does not change to chess? I answer: where the wheat is killed the chess has abundant room to stool out—from 25 to 80 stalks often springing from one root. As many *roots* of chess may exist in a field of wheat which is not winter-killed, but not as many *stalks*, as the wheat prevents its stooling. These facts may be ascertained by any one who will take the trouble to investigate.

But the most conclusive argument against the theory, is the fact that those who have made careful experiments upon the subject, become convinced that no such change takes place—those who *sow* no chess *reap* none. *Alabama, N. Y., Feb.*, 1849.

It has been eloquently remarked, that in the obscurity of the cottage, far from seduction of rank and affluence, is nursed the virtue which counteracts the decay of human institutions—the courage which defends the national independence—the industry which maintains all classes of the State.

Meteorological Observations, &c.

METEOROLOGICAL ABSTRACTS OF 1847 AND 1848.

BY LEANDER WETHERELL.

These years are placed in juxtaposition in order to present to the reader a comparative view of the last two years.

Monthly mean temp. of	Jan.	1847,	24.63;	do. 1848,	30.66
" "	Feb.	"	25.31;	do. "	26.50
" "	Mar.	"	33.41;	do. "	32.25
" "	April	"	41.42.	do. "	44.70
" "	May	"	58.27;	do. "	59.72
" "	June	"	61.94;	do. "	67.63
" "	July	"	71.76;	do. "	69.23
" "	Aug.	"	67.31;	do. "	72.81
" "	Sep.	"	58.48;	do. "	56.20
" "	Oct.	"	47.36;	do. "	49.33
" "	Nov.	"	41.05;	do. "	35.81
" "	Dec.	"	32.23;	do. "	34.35
Annual mean temp. of		"	46.64;	do. "	48.55
Highest degree,		"	95.00;	do. "	94.00
Lowest degree,		"	0.00,	do. "	0.00
Greatest range,		"	95.00;	do. "	94.00
Warmest day,		"	July 19;	do. "	Aug. 16
Coldest day,		"	Feb. 23;	do. "	Jan. 10
Wind — North, in		"	14 days;	do. "	17½ d'ys
" Northeast,		"	32½ "	do. "	24½ "
" East,		"	8 "	do. "	11½ "
" Southeast,		"	38½ "	do. "	33 "
" South,		"	33½ "	do. "	23½ "
" Southwest,		"	68 "	do. "	62½ "
" West,		"	63 "	do. "	67 "
" Northwest,		"	102½ "	do. "	126½ "
Prevailing wind of		"	NW.;	do. "	NW.
Number of fair days in		"	166½;	do. "	188½
" cloudy days in		"	198½;	do. "	177½
" days on which rain fell,		"	119 ;	do. "	111
" " " snow		"	56 ;	do. "	57
" " " rain & "		"	33 ;	do. "	23
Total fall of rain and snow,		"	39.99 in.	do. "	32.03 in
First frost in the autumn of		"	Sep. 16;	do. "	Sep. 27
First snow in the autumn of		"	Oct. 11;	do. "	Sep. 22
Robin first heard,		"	Mar. 22;	do. "	Mar. 3
Bluebird first heard,		"	Mar. 23;	do. "	Mar. 3
Maple in bloom,		"	Apr. 9;	do. "	Mar. 26
Plum, peach, cherry, and apple in bloom,		"	May 15;	do. "	Apr. 24

These annual abstracts are carefully compiled and published yearly in the Genesee Farmer.

The monthly mean of each month is found by taking three daily observations; the first at sunrise, the second about 2 P. M., and the third one hour after sunset; these are added and divided by 3, which gives the daily mean; and the daily means at the end of each month are added and the sum divided by the number of days in the month. This process gives the monthly mean temperature. The annual mean is found by adding the daily means at the end of the year and dividing the sum by the number of days in the year.

The highest degree is the highest point to which the mercury in the thermometer rises during the year; the lowest, the lowest that it falls within the same period; and the range is the difference between these extremes. The wind in 1848 blew from the Northwest 126½ days — 26 days more than from the North, Northeast, East, Southeast, and South added together. The wind blew from the Southwest, West, and Northwest 256 days. This shows how greatly the westerly winds prevail over the easterly, over the locality where these observations are made.

The day is registered fair or cloudy according to the prevailing state of the atmosphere during each half day. However slight the sprinkle of rain, the day is set down as one on which rain fell, and so of snow. The snow is caught in a vessel during the snow season and melted, and then gauged: this added to the falls of rain, which are gauged, gives the total fall of water for the year in inches.

The greatest fall of water for any one month during the year 1848 was 6.16 inches—this was July: the least fall was in April — 78 hundredths of an inch: the warmest month, August: the coldest, February. The highest annual mean temperature of the last 14 years, 48.66 degrees—this was 1846: the lowest of the same period 43.71 degrees — making a range of 4.95 degrees. The highest degree of the thermometer, kept in the shade where there was a free circulation of air, and not exposed to reflected heat, within the above named period, 102 degrees—July 16th, 1845: and the lowest 8 below zero—February, 1836; making the greatest range of the thermometer 110 degrees. The greatest annual fall of water in 1847, 39.99 inches; and the least fall, 25.46 in. The annual average is near 35 inches. The greatest fall of water for any month within the above period, 6.79 — October, 1846: and the least in January, 1837—16-hundredths of an inch.

The year 1848 has few predecessors more marked for political changes: and these are not confined to the eastern continent alone, though much greater and more exciting there than here. It is memorable for the progress of the Cholera on the eastern continent, and also for its appearance in New York and New Orleans on the western just before its close. It was a year also which the husbandman will have as little cause to forget as the lover of liberty: for it crowned his toils and cares with abundant harvests.

METEOROLOGICAL MEMORANDA.

The lowest degree of the mercury of each of the winter months in Rochester from Jan., 1835, to Feb. 17, 1849 :—

1835. Jan., 4 below zero; Feb., 7 below zero; Dec., 4 below zero.
1836, Jan., 2 above; Feb., 3 below; Dec., 3 above.
1837, Jan., 4 below; Feb., zero; Dec., 11 above.
1838, Jan., 5 above; Feb., 1 above; Dec., 1 above.
1839, Jan., 2 below; Feb., 1 above; Dec., 8 above.
1840, Jan., 2 below; Feb., 3 above; Dec., 5 above.
1841, Jan., 3 below; Feb., 1 above; Dec., 3 above.
1842, Jan., 5 above; Feb., 7 above; Dec., 10 above.
1843, Jan., 3 above; Feb., 6 below; Dec., 6 above.
1844, Jan., zero; Feb., 2 below; Dec., 6 above.
1845, Jan., zero; Feb., 3 above; Dec., 5 above.
1846, Jan., 1 above; Feb., 1 above; Dec., 14 above.
1847, Jan., 4 above; Feb., zero; Dec., 10 above,
1848, Jan., zero; Feb., 6 above; Dec., 12 above.
1849, Jan., 9 below; Feb., 7 below.

Jan. 12, 1849, shows the lowest fall of the mercury, here, on record.

The coldest day within the above period, was Friday, Feb. 16, 1849—the mean temperature of the day, from three observations, being $2\frac{2}{3}^{\circ}$ above zero. The record of the 16th of Jan., 1840, shows 3 deg. above zero, $\frac{1}{3}$ of a deg. higher than the cold Friday of 1849.

Note.—Saturday morning, Feb. 17: the mercury 7 deg. below zero at 7 o'clock A. M.; at 7½, 5 below; and at 8½, zero. This an hour and a half after sunrise, and a clear atmosphere.

The Feeding of Animals should be regulated by a variety of considerations. The young who may be destined for maturity, should be supplied with milk from the dam until weaning-time. No food can be substituted for the well-filled udder of the parent, which is so safe, healthful and nutritious. —*Allen's Domestic Animals.*

WHEELER'S PATENT HORSE POWER AND THRESHER.

WHEELER'S HORSE POWER AND THRESHER—represented in the above engraving—is one of the best machines with which we are acquainted. One of them was exhibited, in operation, at the State Fair at Buffalo, and also at the last Fair in this county, and attracted much attention from farmers and others. For a farmer of comparatively limited means and business, we believe the purchase of Wheeler's Power and Thresher a very judicious and valuable investment. Indeed, in all cases where the strength of only one or two horses is required, and particularly if a portable power is wanted, it will prove almost indispensable. The power will be found convenient for many purposes besides threshing—such as sawing, cutting straw, &c., &c.

From what we have seen of this machine—and we have witnessed the power in operation while threshing different kinds of grain, and sawing wood—we have no hesitation in recommending it to our readers. It is constructed on the "endless chain" principle, and if *properly manufactured*, we are confident it will give good satisfaction. It combines several important advantages—being cheap, portable and durable, and easily attached to different machinery. Manufactured by H. L. EMERY, Albany, N. Y.—to whose advertisement, published in the appropriate department of this number, we refer the reader for further information, embracing numerous testimonials, price, &c.

MANAGEMENT OF BEES.

BY ALVIN WILCOX.

MESSRS. EDITORS:—Having occasionally seen an article in the Genesee Farmer on the management of the Honey Bee, I have thought that more might be written on the subject, with profit to your numerous readers; and for that reason I offer a few remarks, which may perhaps be the means of inducing others to write on the subject, who are more competent to give proper information.

I have had much experience in the management of bees for the last twenty-five years—being a mechanic, and my work such as to admit of my seeing to them daily, if necessary. I have taken much pains to inform myself by actual observation and experiments, what was the best way to manage them profitably. In the spring of 1836, my brother-in-law and I had two hundred and twenty swarms, and we took from them that season over four thousand and six hundred pounds of box honey—being about twenty-one pounds to every old hive. That was what is called a honey season. The honey brought in New York market, over thirty dollars per hundred. The amount of box honey will vary from five pounds to twenty to the old hives kept—depending altogether on the season for honey.

Those who intend to buy, should, if convenient, begin with two or more swarms, as there is always some that will not produce more than they will use. Select early, last season swarms, as they are the best, if they have honey enough to winter. Rather small hives are the best for profit. In winter they require but little care more than occasionally looking to, and keeping the passage clear: and board and tub hives should have a place for the bees to pass out and in at two or three inches above the bottom board, as in winter there is a mist continually rising from the breath of the bees that accumulates in the top of the hive in the form of frost: in milder weather it melts to water and runs down and freezes and shuts the lower passage tight: then if there is not a passage above to admit air the swarm will suffocate.

At the commencement of warm weather in the spring they should be examined, the bottom boards cleaned off, and if any swarms are feeble as to amount of bees it is best to give them but one place to enter, as it enables them the better to guard against robbers. Bees are the most liable to rob each other the first warm weather before they begin to gather honey. If they begin to rob a hive, the best way is to take it up, as I never had a swarm amount to any profit after the robbers had gained free access to the honey. It is very seldom that robbers injure a healthy, good swarm.

West Bloomfield, N. Y., 1849.

IDLENESS.—Said the distinguished Chatham to his son, "I would have inscribed on the curtains of your bed and the walls of your chamber, 'If you do not rise early you can never make progress in anything. If you do not set apart hours of reading: if you suffer yourself or any one else to break in upon them, your time will pass unprofitable and frivolous, and unenjoyed by yourself.'

NOTES ON THE FEBRUARY NO. OF THE FARMER.

YOUR leading article on the subject of Agricultural Schools, is just and to the point. It is to be lamented that farmer's sons, who must forever compose the great bulk of community, are to have no better education than can be picked up by a few month's desultory teachings of perhaps beardless boys and untaught pretenders, who often officiate in our common schools; many of whom themselves learn B, while they are teaching their pupils A. The subjects taught in a properly regulated Agricultural School, will not simply relate to the *ic's* and *ate's* of science, but to all the parts of practical knowledge, that compose and create the business man and render them fit for our future Legislators and Governors. Is it not to be deprecated, that the whole of our legislative concerns have to be managed by the learned professions, one half of whom don't know a clevis from a coulter, and but little of the practical wants of community? In the name of common justice let it be once tried, if only as an experiment.

Cabbage.—The analysis you gave of the plants of the cabbage tribe, show from their constituents, why their decomposition in cellars and pits are so offensive and deleterious. They contain the elements to form the most deadly miasmata. We knew a family to perish by a most malignant fever, in an entirely healthy neighborhood. On searching for some local cause, a temporary pit under the floor was found, containing a decaying mass of cabbage and turneps, sending forth the most deadly exhalations. Cellars should early in the spring be thoroughly cleaned of every description of vegetable, and well ventilated.

Golden Dreams.—Your correspondent, in his speculations upon the amount and result of the great influx of the precious metals: must have been indulging in a dose of exhilirating gas. He underrates or overrates every point. His estimate of the circulating medium of the world is too low by half. If he refers to gold only he is nearer the truth. The produce of the mines of Europe and America, are at the present time less than $30,000,000 annually. The precious metals have not increased as fast in proportion as population, since the year 1815, the period of the termination of the great wars of Europe and America: hence the general decline of prices since that time. The precious metals as a circulating medium are daily declining in amount, from the great demand for the uses of the arts. The amount required to absorb bank paper, in case it should become extremely plenty, would consume over $400,000,000 in Europe and America; quite an item for the "golden shower," and when we consider that were the agrarian system to prevail, and all the gold and silver in the world were equally distributed, there would not be quite *seven dollars* per head: there would be lee-way for a good many drops of the golden shower, before we should all go mad as he prognosticates.

In the commerce and exchanges of the world, there must be something to represent property and value, and it matters not whether it is gold or rags, so long as the conventional notions of the world call it good. Tommy Nokes' paper is good only as far as Tommy Nokes is known, but the auriferous bars and coin are universal, and will crowd paper off the boards, if it becomes plenty. The value of gold and silver is in exact ratio to its scarcity and *vice versa*.

The mind of man is but too prone to be on the alert to speculate on human credulity and take an unfair advantage of every monetary mania. Kingdoms and nations have their rise and fall as well as families and fortunes, commercial and agricultural affairs: it is one of the conditions entailed on the affairs of this world, and from the long depression of business affairs, we will not undertake to controvert the opinion of your correspondent, that it requires but a small dose of stimulus, to awaken a spirit of speculation, in the dormant energies of our excitable population. Yet we are skeptical that it will be a tornado that will annihilate all land-marks of propriety. We do not believe that it will be any "great shakes of a shower after all."

S. W., who is your constant and generally reliable correspondent, in your February number twice uses the word *alluvial*, as applied to the soil of the Western country, not in a correct sense, scientifically speaking. Alluvial, strictly, is the recent deposits of rivers, lakes, and descending currents, and known as "intervale," while the great mass of soil or *drift* is a remote deposit, the result of the last great convulsions that swept over the globe and anterior to the existence of animal life, or the present order of vegetation, and is denominated as *diluvial*.

Pea Bugs.—We should like to know what advantages A. H. promises himself, in keeping peas corked up in a bottle for two years. The objection to sowing buggy peas is not that they are thus distributed in the field, assisting future propagation, as their number must be utterly insignificant—but that the bug destroys the germ and it fails to vegetate. The mischief is done by the insect in the larvæ state, and that process would go on, as well in the bottle, as in the bag.

Butter and Butter Making.—Mr. EMERY's recommendation of the use of the Lactometer, for testing the value of milk, should commend itself to every dairyman and farmer. When we consider that two cows of equal fine proportions and giving equal quantities of milk, one may be worth $30 and the other only $15, relatively as to the *quality* of milk, the importance of an instrument to immediately test the fact, is of great consequence.

In the experiment stated in relation to the Kendall and Atmosperic Churns, the first is made to produce 7½ ounces to the pound more butter than the latter, with equal quantities of cream. If this is true and was a fair experiment, the result must be fatal to that invention and result in an immense loss to the purchasers of that right, as it is said the patentee has realized $100,000 from his sales.

Wire Fences—Again.—Your talented correspondent T. C. PETERS, suggests another variety of this new "Boston notion," and of a much cheaper construction. We think the stakes intervening between the posts, if not made of a more indestructible material than any we are acquainted with, would prove but a broken reed; in short we must be permitted to remain a doubter as to its applicability to farm fences, except in the prairie country where they have no other resource. Yet its expense would not ruin one to try it. An ounce of trial is worth a pound of speculation.

Drill Husbandry.—We think favorably of the process of drilling in wheat and all small grains: if for nothing more than for the advantages of the deep and perfect planting of the seed. In those fields

infested with red root and other noxious weeds, it would be invaluable, as it would allow the harrow, or hand hoe to destroy the whole mass of plants previous to their seeding, except in the drills, which might be hand weeded.

Lunar Influence.—Your correspondent H., in answer to Mr. D., seems to us to be engaged in that unprofitable contest—trying which can do the other the most harm; a course more to be tolerated in the breach than in the observance. His articles on other subjects are interesting.

Page's Portable Wind-Mill.—We have often thought what a mighty and available power, sweeps daily over our heads, unused and unnoticed. Although the whole inventive power of man is tasked to multiply labor-saving machinery, yet the irresistable torrents of the viewless air, possessing all the potentiality of water or steam, is not harnessed by the will of man for his benefit. In all flat countries, which have to depend upon wells for the use of cattle, a cheap, simple and durable wind-wheel, with a leather strap and buckets, like a mill elevator, lifting the water into a trough, the overplus conducted back into the well, and situated at the corner of two or more fields, would double the value of the land for pasturage.

Outlines of Fruits.—Won't you, Mr. Editor, to oblige ten thousand of your readers, omit those uncouth outlines of apples, pears, &c., those cycles in epycicles, orbs in orbs—those unmeaning uniformities. There is no individual one of them but may serve for twenty varieties, and no person under heaven can individualize any one of them, sepatate from the letter press descriptions. They are unsightly and unprofitable to your readers, and costly to yourself. We pray you to reform it altogether.

In Season and Out of Season.—Permit me, Mr. Editor, to suggest to you the propriety of adapting your own and your selected articles to the season of the year in which they appear. To be talking to us of planting corn, when there is two feet of snow on the ground, or of housing and feeding cattle in dog days, is like "sweet bells jangled—harsh and out of tune." H. Y.

GOLDEN DREAMS—GEOLOGICALLY CONSIDERED.

Mr. Moore:—Many persons are disposed to question the authenticity of the reports, relative to the almost inexhaustible supplies of Gold and other precious minerals in California and New Mexico; because they cannot see how, or why, such an immense deposit should only be found in that locality, and not otherwheres on the globe.

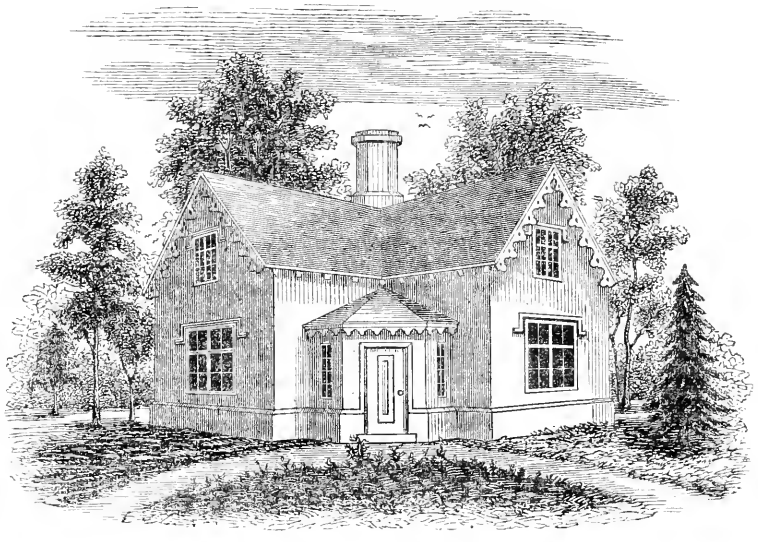
I am disposed to think, that gold is a more universally distributed metal than has generally been supposed, and many sands will be found to be auriferous, especially if in the neighborhood of primitive or metamorphic ranges. It is found in Mexico, South America, Africa, the Southern States, in Vermont, in the Wicklow Mountains of Ireland, and to the extreme north in Russia. Some persons suppose that it has been thrown up by volcanic action and fell a gold shower on the sands. Its production and location is simple and easily accounted for, if we look at the cosmogony of the earth, and observe its strict mechanical structure, from the lowest sedimentary rock to the surface; coming to the unerring conclusion, that every particle of the soil, is the result of the decomposition and abrasion of the plutonic and sedimentary rocks: quiet, by the elements, and by the rushing of floods and currents, caused by a change of the poles; or variation of levels, from the upheaving, or depression of vast tracts of the surface. The source of these metals will be found in the great chain of mountains, that separate the Atlantic and Pacific Oceans, which are volcanic and probably green stone and basaltic. These upheaved and volcanic masses in cooling contracted and cracked, leaving fissures, which were subsequently filled by igneous action, with quartz and metamorphic matter, which contained the gold, injected by the mighty force acting from below, as is always found to be the case with the metals found in the primitive rock as a matrix.

Gold is often associated with sulphuret of iron, which is of easy decomposition, leaving the gold, which is indestructible, free, to be washed down to the valleys, by floods and rains and the great commotions of the early periods of the earth's history. From the flattened and plated appearance of the washed gold of that region, it is evident that the agent of its distribution was the tremendous currents, that, during the unsettled periods of the earth's age, were so general over its whole surface, and the rushing of all loose, yielding and unattached matter, compounded of water, rocks, icebergs and abraded materials, sweeping with inconceivable velocity, at a time when the "earth was void and without form," which denuded and laid bare formations and strata, which had originally superior deposits, of more than 10,000 feet in thickness, and which being crushed and comminuted forms the present soil.

The direction of the last of these great currents, which finally left the drift or soil as it is now found, was in a direction on the Atlantic side of the great dividing ridge, (occasionally deflected by the mountain ranges a few degrees,) in a north and south direction, as the marked and striated rocks below the drift, every where give unmistakeable evidence. The precious metals found not in *situ*, but in the soil, can readily be turned up to the original deposit, by finding the course the great oceanic currents took on the Pacific coast and following the mountain ranges. Gold is generally found pure, occasionally alloyed with silver, but never with a salifiable base. It is found in all sizes and shapes, from hundred pound masses to the finest dust, in which case quicksilver is used to dissolve it, which is then driven off by heat.

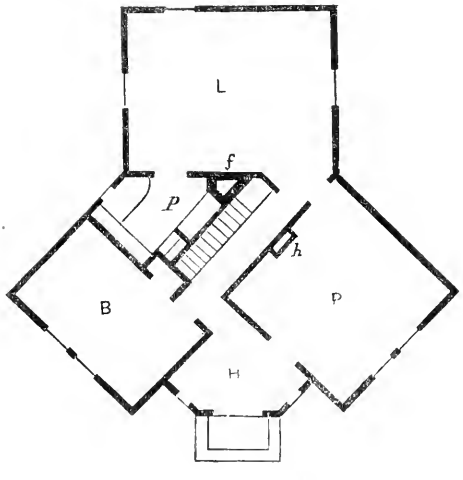
Rearing Lambs.—I think the difficulty mentioned in the January number of the Farmer, page 46, may be obviated by the following process:—In the month of August take the lambs away from the ewes, with a few old sheep you wish to fat and kill, and put them in fresh feed, and the lambs will do better than to run with the ewes. The ewes will improve, and the lambs will winter as well as the old sheep, on the same feed. My word for that. Try it. *Wayne Co., Feb.*, 1849. E. F.

The Best Animals.—Of all animals, of whatever kind, those with the smallest and cleanest bones are generally the best proportioned, and covered with the best and finest grained meat. They are the hardiest, healthiest and best feeders; able to bear the most fatigue while living, and worth the most per pound when dead.—*Sel.*



PLAN OF A FARM OR SUBURBAN COTTAGE.

THE number and uses of the rooms in this plan for a small Farm House, are of the most common description, to wit: a parlor, a living room or kitchen, a pantry and a bed room, on the first floor; and three bed rooms, with closets, on the second. It is manifest that this singularly odd, yet more than ordinarily convenient arrangement, is adopted for the sake of the novelty of the external form—a form which will produce a very pleasing effect when finished in the most simple style, and which is particularly adapted to a high degree of ornamentation.



GROUND PLAN.

[H, Hall or entrance. P, Parlor. L, Living room or kitchen. B, Bed room. P, Pantry, with shelves. *f*, Principal chimney. *h*, Parlor chimney.]

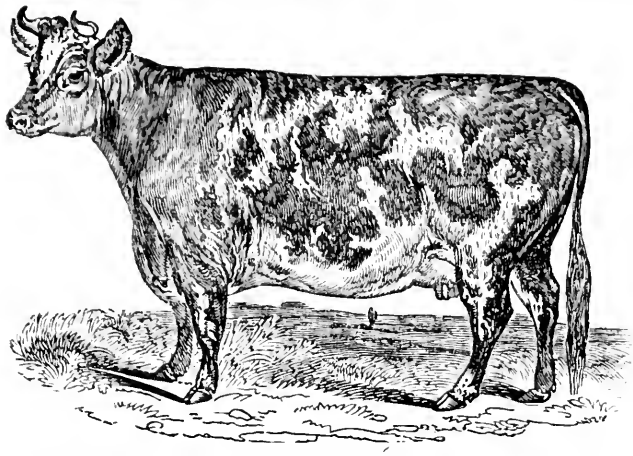
In this design the parlor is 13½ feet square, inside measure; the kitchen 13½ by 16½; the bed room, which has a small closet, 13½ by 9; the pantry 6½ by 8½; the hall or entrance 7½ by 7½; the passage 2 feet 8 inches wide, and the stairs 2 feet 4 inches. The bedrooms in the second story are of the same size as the 3 lower rooms, and directly over them. The space over the pantry affords room for two good sized closets. The parlor chimney ascends only to the chamber floor, and a pipe runs from it across the passage to the main chimney The rear gable is of the same height as the two front ones, but the roof is less steep, inasmuch as the back part is wider than the front parts. The wood-house should stand 20 feet in the rear of the building.

The cost of materials and labor, varies so much in different locations that it seems needless to attempt giving an estimate of the expense. It can be readily ascertained in any given place, when the style of architecture is determined on. S.

REMARKS.—The novelty of the plan here given by our modest friend "S.," will attract attention. We think the perspective front view is admirable—showing good taste, without that excess of ornamental finish so frequently attached to modern cottages. This plan will meet the wants of many grain-growing farmers. It will also make a handsome Suburban Cottage, as the style of architecture and finish may be varied to suit the taste of the owner. The cost will vary from $500 to $800—depending upon style of finish, cost of material, &c.—and is therefore within the means of farmers and others of limited abilities or acres.

We have several other original plans for farm cottages, recently received, some of which will be given in future numbers of the Farmer.

THOSE who prepare plans of Buildings for publication in the Farmer—and we invite all who possess a talent for designing to exercise it in that direction—will oblige us by making their drawings as perfect as possible. The size of each room should be given, and distinguished by some mark or letter, by which it can be easily referred to on reading the description of the plan. A careful estimate of cost would, also, add much to the value of such articles.



THE IMPORTED AYRSHIRE COW "ALICE."

AYRSHIRE CATTLE.

It was our intention to give, in this number, an article embracing the history and qualities of this breed of cattle, illustrated with two or three portraits furnished for that purpose; but our pages are so crowded that we have only room for a brief notice.

The above is said to be a fair portrait of the imported Ayrshire Cow *Alice*, owned by C. N. Bement, Esq., of Albany—and will convey a good idea of the distinguishing points of a properly formed cow of that breed. *Alice* was awarded the first prize at the State Fair at Utica, in 1845. In a notice of her, published in the Journal of Agriculture, for August, 1848, Mr. B. says:—"Alice is now ten years old, has a calf by her side, and fills a common sized pail with milk night and morning, averaging from 18 to 20 quarts per day."

In his valuable treatise on "Domestic Animals," Mr. R. L. Allen says:—"The Ayrshire is a breed that has been much sought after of late years, from their reputation for fine dairy qualities. The milk is good both in quantity and quality, yielding, according to a recent statement of Mr. Tennant, of Scotland, who owns a large herd, fifteen quarts per day during the best of the season, twelve of which made a pound of butter. The product of the latter averages about 170 pounds per annum to each cow. Another authority says, on the best low-land pasture, a good cow yields nearly 4000 quarts per year. This is a large quantity, and implies good cows and extra feed."

Mr. Sanford Howard of the Cultivator, (who is considered good authority on the subject of cattle), thus closes an article on Ayrshires:—"Our conclusion is, from what we have seen of the various breeds of cattle, that if we wished to obtain a stock for the production of the greatest quantity of butter in proportion to the cost of keep or food consumed, we should make one trial at least with a selection of Ayrshires."

According to Youatt, "the origin of the Ayrshire cow is, even at the present day, a matter of dispute; all that is certainly known about her is, that a century ago there was no such breed in Cunningham or Ayrshire, or Scotland." Quade, who wrote the Agricultural Survey of Jersey, asserts that "the Ayrshire was a cross between the short-horned breed and the Alderney." And Count De Gourcey seems to be of the same opinion, as he remarks that "there is a considerable affinity between the two breeds." But Mr. Robertson, in his Rural Recollections, conjectures that they are either of the Holderness breed, or derived from it—judging from the varied color, or from somewhat better evidence, the small head, in which they bear a striking resemblance to them.

MANAGEMENT AND PROFITS OF POULTRY.

BY H. S. CHASE, M. D.

Messrs. Editors:—Having seen several articles lately in the Farmer, in regard to the profits of keeping Hens, I am induced to give you briefly, my experience on the same subject.

On the 27th of March, 1848, I purchased four hens and one cock, and kept them until the 15th of November, when I killed them. During that time I received three hundred and eighty-six eggs, as the result of their laying. I fed them on grain which I purchased at the stores—seven pecks of corn at 75 cents per bushel, and one peck of oats at 50 cents per bushel. The account will stand as follows:

386 eggs, average price 12 cents per dozen,		$3 86
7 pecks corn at 18¾ cents per peck,	$1 31	
1 peck oats,	12—	1 43
Nett profit of 4 hens for less than 8 months,		2 43

Average number of eggs laid by each hen,...96

My family is very small, which will account for the limited scale on which I tried the experiment. The fowls had the liberty of a barn, in which they were constantly kept, excepting about an hour before sunset, when they were let out; a part of the floor was taken up, however, that they might have constant access to gravel. Corn, lime and water were kept in vessels, where they could help themselves, at any time. I occasionally gave them grass, chickweed, &c., which they ate greedily.

As I need so small a number of fowls for my own use, I make a practice of killing them in the fall, and making a new purchase every spring, rather than be at the trouble of taking care of them through the winter. If farming was my profession, I should keep three or four hundred hens. No stock *pays* as well as this. *Woodstock, Vt.*, 1849.

BENEFIT OF UNDER-DRAINING

BY ADIN MANLY.

MESSRS. EDITORS:—In the December number of the Farmer my attention was called to the subject of Draining Lands, and believing the subject too little practiced or understood in this country, with your leave I will give you a trifle of my experience in Under-Draining.

I have now more than forty acres of wheat on which there is not a surface drain, the whole being under-drained. It is some six or eight years since I began the work. My first experiment was on a lot of about twelve acres, very wet and miry in the spring, so much so that we could not get on to it till late. It being more particularly designed for spring crops, it became necessary to have it drained.—Accordingly we commenced an under-drain through the dampest part first, until the whole was done. The result was most satisfactory, making the whole dry early in the spring, and rendering the clayey parts friable and easy to cultivate. During a freshet the water will run a day or two on the surface and then all disappear. Streams running from the road and other fields, coming in contact with the drains, immediately disappear. I have observed in wet weather the water would be running out at the lower end of the drain when no water was to be seen on the surface. I have been draining more or less for a number of years, with the very best results.

It is observed in digging drains that the subsoil is full of veins or water-courses, conveying the water considerable distances. I once observed, in digging a drain some thirty or forty feet distant from a small pond of water that had stood a long time, that when we got nearest to it, the subsoil which before had been dry was full of water and commenced running off, and in a few hours the pond was all gone. In addition to what is already stated, I have found a never failing spring of water, which by using about fifty rods of lead pipe, is conveyed to the lane where it is convenient for stock, and teams going to and from work—the benefit of which will pay for draining the whole farm.

Many other advantages of draining might be named, but enough for the present. This being the first communication ever sent by me to an editor, I will wait and see its fate. *Clarkson, N. Y.*, 1849.

OUR friend acquits himself well for a beginner. He apparently understands that plainness and brevity are the essentials in writing for an agricultural journal. Now that his hand is in, we shall be glad to receive a brief statement of his mode of constructing drains, &c.

BONE DUST.—An experiment, tried by Mr. Mortimer, of Silverton, furnishes a remarkable proof of the efficacy of this manure. At a recent meeting of the Netherexe Farmers' Club, Mr. W. Strong, of Powhay Mills, offered to give some bone dust to any agriculturist, to be tried against guano. Mr. Mortimer took the offer, and manured a piece of land, one part with bone, another with Peruvian guano, and a third portion with farm-yard dung, leaving a small strip without any dressing. The whole was planted with turneps, and we are assured by an agriculturist who has seen them, that while on the boned ground there are turneps larger than his hat, the part left unmanured has not one so large as his finger. The guano crop is finer than the dung turneps, but by no means equal for the size, though the superior, in thickness and rapidity of growth, to that grown where bone manure was used.—*Mark Lane Express.*

Veterinary Department.

PHYSICKING THE HORSE.

WHEN a horse comes from grass to hard meat, or from the cool air to a heated stable, a dose, or even two doses of physic may be useful to prevent the tendency to inflammation, which is the necessary consequence of so sudden and great a change. To a horse that is becoming too fat, or has surfeit, or grease, or mange, or that is out of condition from inactivity of the digestive organs, a dose of physic is often most servicable; but the reflecting man will enter his protest against the periodical physicking of all horses in the spring and autumn, and more particularly against that severe system which is thought to be necessary in order to train them for work, and also the absurd method of treating the animal when under the operation of physic.

A horse should be carefully prepared for the action of physic. Two or three bran mashes given on that or the preceding day are far from sufficient when a horse is about to be physicked whether to promote his condition or in obedience to custom. Mashes should be given until the dung becomes softened A less quantity of physic will then suffice, and it will more quickly pass through the intestines, and be more readily diffused over them. Five drachms of aloes, given when the dung has thus been softened, will act much more effectually and much more safely than seven dramchs, when the lower intestines are obstructed by hardened fæces.

On the day on which the physic is given, the horse should have walking exercise, or may be gently trotted for a quarter of an hour twice in the day: but after the physic begins to work, he should not be moved from his stall. Exercise would then produce gripes, irritation, and possibly dangerous inflammation.—*Youatt.*

CURE FOR HEAVES IN HORSES.—A farmer tells us that he has recently cured two of his horses, which had the heaves badly, by the use of the following remedy: To three quarts of sweet milk add a teaspoonful of sulphuric acid, (oil of vitriol,) and mix with the horses' feed. Give at first three times a week, and afterwards once or twice as there may seem occasion for a few weeks longer. Our informant says there was little appearance of the heaves after the first week.—*Christian Alliance.*

LAME COWS.—*Mr. Editor:* In 1802 or 1803 my father had about 44 head of cattle; the foot ail got into the stock, lost two oxen and one cow before we found a remedy: the hoof began to crack off at the back part and kept on gaining till it came off. We took a fine toothed saw and cut the point of the hoof off so that the hole was sufficient for it to discharge, and put on some tar or other healing ointment: the complaint begins in the hoof and cannot find any other way to discharge but to crack off: the back part without the point is cut off: the inside is dead and rotten and emits a great stench when cut off. We did not lose any after cutting off the point.—*Mass. Plowman.*

SNOW BALLS IN HORSES FEET.—David Thomas, in the Albany Cultivator, says that soft soap well rubbed into the bottom of the hoofs when clean, and before the horses leave the stable, will prevent the collection of balls of snow.

Spirit of the Agricultural Press.

Maple Sugar.—A good man will make six or seven hundred pounds in three weeks. The man that took the premium at Auburn in 1846, kept all vessels clean. He run the hot sugar into conical vessels, having a half inch hole, plugged at the bottom, until the sugar was thoroughly hard, then put three layers of woolen cloth on top, and poured on a pint of water every morning for three weeks in succession. The water looked like brown molasses, and the sugar when done, like loaf sugar.

Earliest Food for Bees.—In a conversation the other day with a worthy and observing farmer, he remarked that the earliest food for bees, in the spring, is maple sap. He states that he has seen them gather round the sap troughs, in the woods, during the warm days in the spring, before the buds or tassels of the willow and other trees and shrubs had put out, sipping and making themselves glad with the sweets that they find there. It wouldn't be a bad plan, if a person had any maples in the vicinity of his hives, to tap them for the use of his bees.—*Maine Farmer.*

A Good Subject for Preaching.—We learn from the Birmingham (England) Gazette, that the late Mr. Thomas Ingraham, of Tickhill, near Bewley, by his will left a legacy, the interest of which is to be applied to procure three sermons in as many different churches, in or near Birmingham, yearly, "on the kind and merciful treatment of all dumb animals, but more especially that of the horse," and "that on Monday, previous to the preaching of such sermon, notice be inserted in the Birmingham Gazette, requesting the masters of families to direct their servants, having the care of their horses, to attend divine service on that day." It would be a good subject for preaching in this country, by men who can preach truth and duty without the stimulus of a premium from vested funds.

Large Production.—Mr. Allen Dyer, residing in Byberry, this county, gathered and thrashed this season, from five bushels sowed, *ninety-three and a half bushels of wheat*, exclusive of the gleanings. The wheat was of the variety known as the Genesee white wheat, recently introduced into this neighborhood by George M. Ivins, and weighed sixty-six pounds to the bushel! With such a result as here recorded, this must be a most valuable variety of wheat, and ought to be generally known to and used by our farmers.—*Germantown Telegraph.*

Duty on American Wheat.—After the 1st of February, 1849, the fixed duty on wheat in England is to be one shilling per quarter, or about three cents per bushel: on flour it is to be four pence half-penny per cwt., or nine pence per barrel, of 200 pounds—equal to about eighteen pence per barrel.

Effect of Domestication on Birds.—Professor Low, in speaking of the effect of domestication on birds says, "They lose the power of flight by the increase of size of their abdomen, and the diminished power of their pectoral muscles and other parts of their body are altered to suit this conformation. All their habits change; they lose the caution and sense of danger, which, in their native state they possessed. The male no longer retires with a single female to breed, but becomes polygamous, and his progeny lose the power and the will to regain the freedom of their race."

Curious Mode of Grafting the Grape Vine.—A gentleman in the neighborhood of Oporto, split a vine shoot, (white grape,) very carefully down the middle, cutting the bud in half, and then split a corresponding shoot on a black vine, and united them as in common grafting, and after many experiments, succeeded in making the graft grow, and the produce of the vine was white and black fruit on the same bunch, and on others variegated fruit.—*Foreign paper.*

A Great Product.—The Newark (New Jersey) Advertiser states that a farmer has raised this season on his farm at Clinton Place, in that vicinity, 603 bushels of white, or Belgium carrots to the acre—an amount of produce never exceeded in that climate.

To Quiet Bees.—A correspondent of the Ohio Cultivator says that a little alcohol or almost any kind of ardent spirits, placed on the bottom boards around and under a hive of beligerent bees, will allay their fury, and cause them to cease fighting. If an article which sets the human race by the ears, will produce peace and harmony in a hive of bees, the fact certainly is anomalous.

Relative Cost of Mattresses.—*Hair Mattresses.*—These are generally sold by weight, and cost from 50 to 75 cents per pound. 30 or 10 pounds will cost $15 to $20.

Wollen Mattresses.—30 pounds of wool, at 30 cents per pound, $9; 15 yards of ticking, at 12½ cents per yard, $1 50, labor, thread, &c., $2.75—total, $13.25.

Feather Beds.—10 pounds of feathers at 30 cents a pound, $12.00. 15 yards of ticking, at 12½ cents per yard, $1.87½, labor, thread &c., $2.75—total, $16.62½.

Moss, or Corn-shuck Mattresses, ready made, $12. The labor of properly preparing the shucks constitutes its main cost, and which cannot be done for less than the above price, all materials furnished.

Cotton Mattresses.—30 pounds of cotton, even at 8 cents per pound, $2.40; 12 yards of ticking, at 12½ cents per yard, $2.50; labor, thread, &c, $2.75—total, $6.65.—*N. O. Paper.*

Rich Dairies.—The Prattsville (Green Co.,) Advocate says: "One day last week, no less then 260 butter wagons passed through our village; and one day this week as many more—making in two days 560. The average number of firkins was 20 for each wagon making a total of 11,200 firkins of butter. This multiplied by $15, the average value of a firkin of butter, amounts to the large sum of $134,000—and all from the dairies of Delaware and Otsego,

Improved Strainers for Pails.—Mr. William Cooley, of Geneva, N. Y., has invented and applied for a patent for a new and useful improvement of attaching a strainer to milk pails, which appears to be as valuable as the improvements lately made on churns. His plan is to have the strainer fit on to a tube or spout on the pail by a screw or slide, so that it can be put on and taken off at pleasure, thus rendering the strainer easier cleaned, and at the same time one strainer will answer a number of pails better than a sieve, and at one-fifth the expense.

Cultivation of Cotton in Africa.—It is said that an association formed at Graham's Town, in the British colony at the Cape of Good Hope, for the purpose of promoting the growth of cotton in the colony, intends to send immediately to the United States for a few of the most approved gins, and to provide also a supply of those varieties of seeds which are supposed to be most suitable to the soil and climate of the colony.

Weeds in Gravel Walks.—For more than 10 years I have used salt (but not in solution) for destroying and keeping down weeds in my gravel walks, with perfect success, and without perceiving that the application acted as a stimulant to reproduction. The contrary is the case. I sow the salt by hand in dry weather, and sweep it about thin, and as regularly as possible. I have seldom occasion to do this more than once in twelve months.—*English Paper.*

How to Catch Hawks.—The following method for destroying these pests to the farmer is given by S. Webb, Esq. of Waldo county, Maine:

"Erect a pole, twelve or fifteen feet high, in a place where there will not be anything else near for them to light upon, and upon it set a common fox-trap on which they will alight. A strong rat-trap will answer the purpose, by tying it to the pole lengthwise, with the jaws raised above the end, the pole being a little leaning, so that the jaws will not fall together. When the hawk is taken, tie it on the ground near the pole, and its mate will be in the trap in a short time. The season is near for the hawks to re-appear, and if farmers do not wish to have their chickens destroyed by them, they will do well to adopt this method of putting a stop to their depredations.—*Scientific American.*

How it is Done.—The editor of the Mass. Plowman, speaking of the progress of improvement among the farmers of the Old Bay State, thus explains the manner in which it is done:—

"Farmers *read* vastly more on the subject of farming than they have ever done. The prejudices against written agriculture are fading away as fast as farmers of practical knowledge are coming forward and giving the results of their own experience. They hold meetings and reason together on various matters relating to their business, and none can fail to improve by intercourse and free converse on any branch of farming."

To teach a Horse to Lie Down.—First with some soft handkerchief or cloth tie up one fore leg; then with a stick tap him on the other and say "kneel." Sometimes by rubbing him on the head and patting him on the leg, you will induce him to lie down.—*Domestic Animals.*

Editor's Table.

TO CORRESPONDENTS.—Communications have been received, since our last, from Myron Adams, H. Y., H. S. Chase, M. D., Horace L. Emery, R. B. Warren, Adin Manley, *, C. Paulk, E. F., Alvin Wilcox, S., L. Wetherell, B. Allen, Utilitarian, E. Hurd, B. F. Sweet, L. E. B., John Sheldon, F. W. Lay, W. E. W., J. Wells, J. H. Beech, M. D., F. Hurd, W. Hodge, S. W., J. A Pease, J. B. Ellis, Subscriber, J. G. Anthony, J. W. Dickinson, A. W., D., Clark Glidden, Arista, S. P. Chapman, Fenner, P. Palmer, R. K. Taft, Jas. P. Knowles, Henry C. Stoddard, W. B. Wheeler, J. Frye, jr., A. Western Farmer, W. S. Tupper, B. S. Crofoot, L. H C., Spencer Daniels, W. J. Pette, W., J. H. W., A Subscriber, J. Gibbons, and C. L. Chappell.

SEVERAL articles from correspondents, in type, but necessarily deferred—and a large number on file for publication.

ACKNOWLEDGMENTS.—We are indebted to J. W. LINCOLN, Esq., of Worcester, for a copy of the "Transactions of the Agricultural Societies of Massachusetts for the year 1847"—and for the transactions of the Worcester County Agricultural Society for the year 1848.....To Col. B. P. JOHNSON, for a copy of the Address delivered by Hon. L. F. ALLEN at the recent Annual Meeting of the N. Y. State Agricultural Society.....To MUNN & Co., publishers of the Scientific American, New York, for a pamphlet copy of the American Patent Laws.....To J. R. POWELL, Esq., for "Catalogue of the Mt. Airy Agricultural Institute, Germantown, Pa.; also an Essay on "Lime and Marl; their Agricultural uses"—by JAS. HYATT, Chemist of the above named Institution. .....To WM. WOOD, Esq., of Canandaigua, for "Report of the Meetings of the Association to promote Spade Husbandry, and Stall Feeding, on the estates of the Earl of Dartmouth, in Yorkshire, England."....Also to Members of Congress, Officers of Agricultural Societies, and several unknown friends, for various documents, pamphlets, &c.

WOOL GROWING AND STOCK RAISING IN THE MOUNTAINS.—The article on this subject, in the December number of the Farmer, has caused considerable inquiry. We have been unable to answer, by letter, the various inquiries propounded, for the want of both time and proper information—but have receieed from the senior editor, now at the South, an article in answer to those who have inquired upon the subject. The article was received too late for insertion in this number, but will be given in our next.

AN EXAMPLE.—A young man thus writes us from the Green Mountain State:—"Having been a subscriber the past year, I wish to continue the Farmer, as I am fully aware of its value. I am a young man; farming is the occupation I have chosen, and I wish to become a good and successful farmer. I think your journal will aid me very much, and I enclose you $1, the subscription for two years in advance, I am a hired man on a farm, and will inform you if I change my residence."

We predict that, extraordinaries excepted, the writer of the foregoing extract will, ten years hence, be the possessor and intelligent cultivator of a farm worth more than a trifle of California sand. We wish young men of the same views were more numerous in this nation of farmers. There is undoubtedly a "better time coming" in this particular—but the apathy and prejudice of many *fathers*, on the subject of *printed light*, precludes us from specifying the period.

DIRECT TESTIMONY.—A subscriber in Oakland County, Michigan, writing relative to his last crop, says:—"I shall have of wheat, barley corn and oats, (principally wheat,) on 43 acres, about 1750 bushels.—For the continued increase of my crops, *I am mainly indebted to the agricultural works and journals.* My neighbors say it is *luck*, but they have the same sun, soil and rain. They think they can cheat the land, and not have it cheat them in return—but in this they will be mistaken."

This "lucky" farmer usually grows from 40 to 43 bushels of wheat per acre, and other crops in proportion; while the crops of his "unlucky," anti-book-farming neighbors are annually decreasing—becoming "small and beautifully less." Comment is unnecessary.

READ the advertising department, or cover of this number. You will find something interesting, and which may prove valuable. The cover does not increase the postage on the Farmer—which please bear in mind. The postage on both sheets, unstitched, is the same as on a single newspaper.

ENCOURAGEMENT—*Progress.*—The accessions to the subscription list of the Farmer, during the past month, indicate that the cause of improvement is making rapid progress throughout the country. Agricultural books and periodicals are receiving favor with the most prominent and intelligent persons engaged in rural pursuits; and such works are creating a salutary influence among those who, through ignorance or prejudice have hitherto denied their usefulness. We might fill this whole paper with extracts from letters recently received, in favor of Agricultural publications, societies, &c., and containing gratifying evidence of the onward march of improvement in numerous sections of our widely extended country. Among various similar epistles, received within a few days, (written by gentlemen of different professions, but principally farmers,) we extract the following from a distinguished Clergyman now residing in Central Michigan—the Rev. ANSON TUCKER:

"Enclosed I send you two dollars for the Farmer, for 5 years in advance. Though not engaged in Agriculture, yet I look monthly, with great interest for the appearance of your exceedingly interesting and valuable journal—and as the science you are laboring to promote constitutes the grand basis of our national prosperity and glory, I hope you may be so sustained by an intelligent public that you shall never falter, never tire. I am convinced that not only every cultivator of the soil, but every *mechanic* and every *professional man*, should, as a matter of *principle*, as well as *interest*, take at least one well conducted Agricultural paper. Far better were it that such papers as the "Post" and the "Courier" should die, if possible, a thousand times over, then that one such journal should perish."

FROM CALIFORNIA!—The publisher acknowledges the receipt of $5 from California, not in *gold dust*, however. No doubt the volumes of the Farmer ordered will be of great service in procuring gold—provided their contents are carefully noted and properly applied in using the plow, hoe and spade, instead of the pick-axe. So mote it be.

SPEAKING of sending the Farmer abroad, we will add, *par parenthesis*, that those who wish to send copies to their friends in distant sections of this country, or Europe, the Canadas, &c., can be accommodated "on reasonable terms." In such cases we only ask the club price (40 cents per copy)—adding postage if sent to foreign countries, which is 12 cents on each volume. Several of our readers hereabouts are sending the Farmer to distant friends—having somehow obtained the impression that Western New York is the source and location of the handsomest, cheapest and best farmer's journal on this continent. As to the accuracy of such an impression, which is apparently becoming quite prevalent among the readers of the Farmer, we express no opinion. It is a subject on which we beg to remain *sub rosa.*

BROOME COUNTY.—In a recent letter, enclosing $10 on subscription to the Farmer, Mr. SILAS S. SAGE, of Windsor, writes us as follows:—"We have not in this section, until quite recently, enjoyed the facilities for market which are desirable for an Agricultural community. During the construction of the N. Y. and Erie Railroad, all kinds of produce have commanded good prices; and now we are within 12 hours travel of N. Y. City, so that if the citizens of this county turn their attention to dairying, as they probably will, I think the time is not far distant when Broome County Butter will not be many hours behind the far famed Orange County. I hope we may gain some hints from your truly valuable journal, to aid us in the selection of cows, the construction of buildings, and in procuring all the parapharnalia necessary for producing the gold, without going to dig for it in the sands of California."

—And which it shall be our constant endeavor, as it will be our pleasure, to furnish thee and all other kind friends and attentive readers of the Farmer.

A SUGGESTION AND REQUEST.—We wish to remind those of our readers who are interested in extending the circulation of the Farmer, that the approaching Town Meetings and Elections will offer a favorable opportunity for efforts in that direction. Those of our subscribers who can consistently do so, may aid the cause materially by taking their numbers with them to the Election, and obtaining subscriptions. It is a good time to "show the papers" to those who ought to subscribe—and we will cheerfully supply extra numbers to all whose copies are soiled or given away, on such occasions. Think of this, reader, and see what you can do for the benefit of your fellow townsmen, in thus promoting the circulation of the Farmer and similar journals.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

THE SEASON'S CALL.

"The works of a person that builds begin immediately to decay—while those of him who plants begin immediately to improve."

SHENSTONE, the poet and lover of rural scenery, was the author of the above truthful quotation. As soon as the work of the builder is completed, from that moment commences the slow, yet sure work of decay. Every year, every day, its beauty diminishes and its value lessens, until the new has become old, and the costly edifice is a heap of ruins. But, he who plants may see the work of his hands constantly improving until his eyes have become dim with age: he raises a monument under the shade of which future generations may repose, and bless his memory. The acorn planted in boyish sport may shade and shelter declining manhood, and sing its sad requiem while dust returns to dust.——He who not only plants, but takes good care of what he has planted, does much by his example to spread a taste for horticultural pursuits, and to correct the bad habits of his neighbors.

With this month commences the work of the Gardener and the Horticulturist. The true lover of fruits and flowers begins his work with increased knowledge and new zeal, after the long repose of winter. The "foliage, fruits and flowers," he loved when he beheld their beauty, appear now even more lovely, as he sees naught around him but leafless trees and half-frozen earth—drear as a new made grave. He considers how much even the violet and the daisy, and their companions in beauty, add to the happiness of man—and as he contemplates, sighs for their return. To such we have nothing to say—their inquiring minds—their cultivated tastes—their watchful eyes—will note THE SEASON'S CALL.

But there are those, who when admiring the neatly kept and productive gardens of their neighbors, and contrasting them with their own, resolve that another season shall witness an improvement in their own practice. The rich pass the humble cottage of the poor, and feel proud in contrasting its whitewashed planks with their own stately walls—and yet, its neat flower yard—its running roses, and honeysuckles, covering its sides and shading its windows—give it a look of beauty and a sweet-home air that all their wealth, so lavishly expended, has failed to procure. They thus learn that there are pleasures WEALTH cannot purchase, and determine to learn that art which can make a paradise of the poor man's cot.

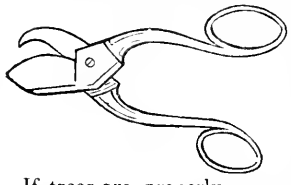
There are those too, who have considered themselves too poor to attend to aught save the necessaries of life. They pass the cabin of the poor widow—the abode of the fatherless: they behold her otherwise unsightly abode rendered pleasant by the masses of white and scarlet runners that not only hide its deformity, but characterize it as the abode of refinement. The poor thus learn there are pleasures of which POVERTY cannot rob them, and go home in love with the art that can make pleasant the abode of poverty, and beautify the widow's hut.

It is such we would remind of THE SEASON'S CALL. Much depends upon commencing with the season. The following matters claim attention the present month.

PRUNING.

Although this operation can be performed at any time during winter, yet we consider the beginning of March the most favorable season, particularly for peaches and apricots. All gardening should be done with neatness, but above all things, let your pruning be neatly done. We have seen trees "*pruned*" that looked as though cattle had been "*browsing*" among them. When you wish to remove a shoot, do so by means of a clean sloping cut, at the back of a bud, as seen in the figure. As soon as the bud pushes this wound is readily healed.

To do this, well, however, the operator must have a keen knife. We give a figure of a proper *Pruning Knife*. "Those things," says THOMPSON, of the London Horticultural Society, "which some men call pruning knives, blunt and notched, a sort of cross between a file and a handsaw, used for grubbing up weeds, drawing nails and trimming roots, are never seen in the hands of a man who understands his business or attends to it. To a gardener his pruning knife is as much an object of solicitude as his razor. Indeed, of the two, he would rather hack his chin than his plants." We give also a figure of *Pruning Scissors*, so well adapted to pruning roses, shrubs, and for cutting flowers. We would particularly recommend them as a useful and convenient implement for ladies.*



If trees are properly pruned from the beginning, a pruning knife will perform all the necessary thinning out, &c., annually, and the butchering system so much practiced, of cutting off large limbs, will be avoided, and the trees will not only present a more pleasing appearance, but will produce a finer crop of fruit. The "shortening in" system, recommended by Mr. DOWNING, and others, and which we have seen practiced in the South of Germany as long as we can remember, answers well for Peaches.

Grape Vines that have not already been pruned, should be attended to first; and nothing will repay a judicious pruning better. The crop will be larger, and the flavor of the grape much improved. Currants and Gooseberries should be pruned rather close, in order to get perfect fruit. Deciduous ornamental trees, shrubs and roses should now be pruned. Ornamental trees only require the decaying and irregular branches to be cut away. With few exceptions, decideous shrubs and roses require annual pruning. (For particular and specific directions for pruning, see former volumes.)

CUTTINGS.

Cuttings of hardy trees, shrubs, &c., should now be made. The following will grow with proper treatment, and will save much valuable time which would be necessarily required in propagating them by layers in the summer—besides, cuttings, as a general thing, make the best plants. They may be

* These implements may be obtained of Rapaljee & Briggs, Rochester, H. L. Emery, Albany, N. Y., and at most of the Agricultural Warehouses.

kept in a cool cellar, covered with sand until time to plant them. Cuttings of evergreens should be properly shaded, and kept in frames.

Trees, Shrubs, Vines, &c.—Quinces, Grape Vines, Gooseberries, Currants, Platanus, Populus, Salix, Kerræ, Cornus, Deutzias, Euonymus, Hibiscus, Hydrangeas, Privet, Loniceras, Ribes, Spiræas, Viburnums.

Evergreens.—Cedrus Deodora, Juniper, Arbor Vitæ, Yews, Aucusas, Box, Evergreen Euonymus, Laurels, &c., &c.

Roses.—Boursault, for stocks; almost all the Climbing Roses, Hybrid Perpetuals, Hybrid Chinas, Noisette, and other Chinese varieties.

SCIONS.

Scions should be cut now. Apple, pear and plum scions will keep best covered with moist sandy loam, or sand, in a cool situation. Cherry scions we have found would grow better by laying them on the cellar floor, even should they get slightly shrivelled. We hardly ever miss one kept in this way. We cannot agree with the article published last month, and which inadvertently passed without comment, headed "*Preserving Buds and Grafts,*" by T. G. Yeomans. We have seen thousands of scions ruined kept in saw dust: and we also saw a statement to the same effect in the Albany Cultivator, by our friend Hildreth, whose opinion and judgment can be relied upon. There may be some instances where scions keep well in sawdust, but we would not recommend it as a safe mode of preserving them.

GRAFTING, TRANSPLANTING, &c.

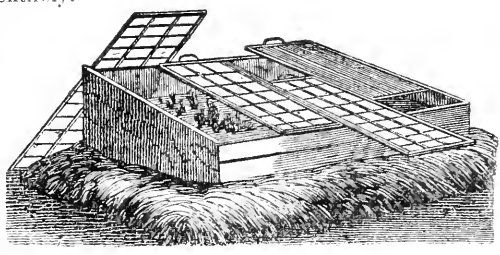
As soon as the weather will permit, cherries should be grafted. Last year we performed this operation before the frost had left the ground, with entire success. Plums should be done next, and then follow pears, apples, &c. Root grafting should be finished as soon as possible, before the busy season commences.

Transplanting of trees, &c., should be commenced as soon as the ground is in proper order. Currants, gooseberries, and cherries should be attended to first; and among the ornamentals, Daphne, Pyrus Japonica, Indus Trees, Magnolia Conspicua, and Saulangiana, Spiræas, Lonicera Tartiraca, Lilacs, &c.

Coverings of bulbous roots, herbaceous plants, strawberry and raspberry beds, as well as any thing else that had any protection during the winter, should be removed as soon as the frost leaves the ground.

THE VEGETABLE GARDEN.

Hot Beds.—Every one should have a hot bed, if it were only to forward plants for the garden. The too prevalent opinion is, that they are expensive articles and difficult to manage, requiring the skill of the professed gardener. Both suppositions are entirely erroneous. A hot-bed may be constructed by any man of ordinary ingenuity. A frame of about 12 feet long and 6 wide, which will allow of 3 sashes, each 3 feet wide will be found large enough for any family. It should be made of common two inch plank—the back about 3 feet high, the front about half that, the ends having a regular slope from back to front. This will give an angle sufficient to throw off rain, and give the full benefit of external heat and light to the plants within. If the beds are narrower, the front must be higher in proportion. The sides and ends are simply nailed to a strong post, four inches square or more, placed in each corner. For the sashes to rest and slide upon, a strip 6 inches wide is placed across the frame, the ends morticed or sunk in the sides of the frame, so as not to cause a projection. The sashes are made in the ordinary way, but without cross bars; and in glazing, the lights are made to overlap an eighth or quarter of an inch, to exclude the rain. Such a frame, costing but a mere trifle beyond the labor will last for years, and furnish all the cabbage, tomato, celery, cauliflower, egg, pepper, melon, and cucumber plants needed—with a sprinkling of early radishes, &c. Where so large a frame may not be wanted, an old window may be used for sash, and all expense of glazing be avoided. The annexed figure will convey an idea to those unacquainted with it. One of the sashes is moved down as in admitting air and the other laid off entirely.



Hot beds should occupy a dry situation, where they will not be affected by the lodgment of water during rains or thaws. They should be exposed to the east and south, and be protected by fences or buildings from the north and northwest.

Where it is intended to merely grow plants for transplanting to the garden they may be sunk in the ground to the depth of 18 inches, and in such a case require not more than 2 feet of manure; but when forcing and perfecting vegetables is designed, a permanent heat must be kept up, and the bed must be made on the surface, so that fresh and warm manure may be added when necessary. A depth of three to four feet of manure will in such cases be wanted. Manure for hot beds requires some preparation. It should be fresh stable manure, placed in a heap, and turned and mixed several times, promoting a regular fermentation. It is thus made to retain its heat a long time; otherwise it would burn and dry up, and become useless.

The mold should be laid on as soon as the bed is settled, and has a lively regular-tempered heat. Lay the earth evenly over the dung about six inches deep. Radishes and lettuce require about a foot of earth. After it has lain a few days it will be fit to receive your plants, unless the mold has turned to a whitish color or has a rank smell, in which case add some fresh mould for the hills, at the same time vacancies should be made to give vent to the steam, by running down stakes.

Those who wish to force cucumbers, &c., should begin, if the weather is favorable, by the first of March. For raising plants, the middle is time enough.

Having been requested to furnish information in regard to the construction of hot beds, we think we have presented the matter in so plain a manner that the mere novice in gardening may construct one.

Lettuce and Early Peas may be sowed as soon as the ground is open.

Poles for Beans and other Climbers should be made ready for use.

OSAGE ORANGE FOR HEDGES.

It is pleasing to observe that with the general advancement of horticulture, the unsightly rail fences are rapidly disappearing, and making way for the various kinds of hedge plants. As yet the majority of farmers are not convinced of the economy of "clearing away" their favorite "land-marks," notwithstanding they require, every two or three years, as much outlay, (taking time and cost of timber into consideration,) as would the purchase of seeds and planting a hedge—and nothing adds so much to the beauty and value of a place as a well planted and properly kept hedge. We consider the outlay better than bank or railroad stock.

The Osage Orange has within the past year been the subject of much discussion in the horticultural and agricultural publications, and we have of late received several communications making inquiries as to the best mode of sowing, planting, &c., and we present such facts on the subject as our space permits.

The vigorous growth, bushy habit, shining leaves and strong sharp spine of this plant are well calculated to make it not only a very ornamental, but also a very resistive body. Our experience does not warrant us as yet to recommend it for extensive planting in the Northern States, although it is said there is a hedge near Boston that has proved quite hardy.

The appearance of the plant or tree, is not unlike the true Orange. The above engraving, (from the Horticulturist,) is a correct representation of a small branch. It is not an evergreen, but during the whole summer, and until late in autumn, the leaves are of a brilliant and shining green. The wood is very hard and strong, and the thorns so sharp and numerous that no animal will attempt to get through

The following directions for SOWING THE SEED, cut from the Prairie Farmer, corresponds so well with our experience, that we cannot do better than to recommend them to the perusal of our readers—if strictly followed, almost every seed will vegetate.

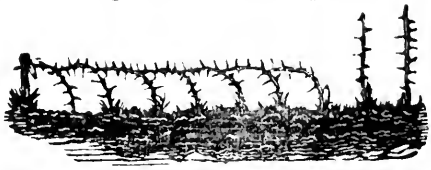
"All that can be done now about the seeds is to wait till spring unless they should be covered with damp sand in a box and exposed to the weather; but we doubt if any considerble advantage would be gained by this, as the seed does not need to be frozen at all. We made some experiments last spring in sowing the seed of the Osage Orange, and also of the Buckthorn—for they are similar in their habits of germination, and require to be treated alike, and we are satisfied the best way to manage them is this: when the ground becomes well warmed—say during the last half of May in this latitude, and proportionally earlier further South—pour npon the seeds warm water, of the temperature of 140° farenheit, or as warm as that the finger can be held in it, and let it stand in this water about thirty-six hours. Then pour off the water, and let the seeds remain *wet* in a warm room, for a week. If a little earth be mixed with them they will be kept damp somewhat easier, for they must in no case be allowed to dry. Then sow in a seed bed, covering them about an inch in depth; care must be taken that the seed bed does not dry, or the seeds will be killed. If the seed is old it will not all vegetate, the mode above sketched will bring up all that will come—the first season at all events. We used boiling water on one lot of seed, but it failed to come as well as that treated as above. This mode of managing all seeds with thick shells, may be followed. Many plants may be killed the first winter, in this latitude, but we are assured they will start again."

The following directions for PLANTING and TRAINING we copy from the Ohio Cultivator:

"The ground where the hedge is to be planted, should be plowed in the fall, if hard or in grass, so as to be mellowed by the frosts of winter. Set the plants in a single straight line, eight or nine inches apart; or if a very close hedge is desired, set them in a double line, one foot apart in each—six inches between the two rows, and the plants in one row to stand opposite the vacant space in the other, thus:

* * * * * * * *
* * * * * * * * *

When set, cut off all the tops within about two inches of the ground. This will cause two or more shoots to spring up. The next year these are to be cut off within about six inches of the ground—which will cause many lateral shoots to form, and thus make the hedge thick and close. Or, if the plants are set in a single line, the following is a good plan:



When there are two or three stems to each plant, cut to within six inches of the ground all but one to each plant, which leave eighteen inches, then bend down the first to a curve not exceeding eight inches in height—fasten it with a peg, and then twist the top of the next plant under the curve of the first, as seen in the engraving."

EDITORIAL CORRESPONDENCE OF THE FARMER.

A RAMBLE IN PARIS.

New Year Holidays in the French Capital—The Revolution—Louis Napoleon—The Jardin des Plants, and its collection of Trees, Shrubs, &c.—Jardin d' hiver

PARIS, January 5, 1849.

The change that has recently occurred in the political affairs of France, seems to have had no effect whatever in Paris. It continues to be the same splendid city—the great resort of science, fashion, and taste. The fearful conflicts and bloody struggles, at which we shuddered in America, but a few months ago, are, in the main, entirely forgotten, and Paris seems as beautiful, polite, and gay as ever. Her glittering shops and cafes are fitted out with a taste you will find nowhere else. The theatres, promenades, and other places of amusement, are still thronged with gay and fashionable pleasure seekers. I have spent the Christmas and New Year Holidays here; and have had an opportunity of seeing nearly the whole population of Paris in the streets and promenades—a mode of enjoyment that we rarely see in America. The fine trees that were unmercifully hewn down along the boulevards, are replaced by others.

The only thing that forces the remembrace of war or revolution upon one's mind, is the army of soldiery that are stationed in every nook and corner of the city, making it, throughout, a complete barracks. In every shop and cafe, you will see soldiers; in all the public squares companies are being reviewed; in the suburbs of the city, juvenile bands are practicing their music; and every public building is not only guarded but surrounded with soldiery. I believe it is estimated that the guard in this city alone nearly equals in numbers the immense standing army of Great Britain. How France can bear such a weight beside so many other great public institutions of arts, science, charity, &c., is a problem for her most sagacious politicians to solve.

Louis Napoleon is fairly installed as first President of the Republic; and the National Assembly is quietly and industriously pursuing its legislative affairs. Very little is said of politics, except by mere politicians. How long matters may continue peaceable as at present, no one can say. The French are an uncertain people: and Louis Napoleon may, in six months, find himself as unpopular as any man in France. He has not selected for his cabinet such men as it was expected he would. He has given the preference to men no way prominent in State affairs. Perhaps in this he was wise.

Guizot has just published a small work on "Democracy in France," that meets with a good deal of approbation.

Among the multitude of attractions presented to the stranger here, the *Jardin des Plants*, has been to me the most interesting.

The immense collection of trees, plants, and animals here has been accumulating for upwards of a century—since the days of Louis XIII. I spent a day in it; and I could have spent a week delightfully. Indeed, I had but a passing glimpse at the various departments. I have visited no botanic garden so satisfactory to the student or visitor as this. In those of England they usually aim too much at producing a fine landscape, instead of arranging plants in such a way as to be readily seen and examined by all. Here each family of plants occupies a separate bed or compartment; and all are legibly labelled. The original plantation of trees occupies a beautiful hill, commanding a prospect of the whole houses and gardens of the institution, and the adjacent parts of the city. Here is a noble cedar of Lebanon, planted by Jassieu, in 1735; it is about 12 feet in circumference. There are also many young ones, ten or fifteen years old, that are very fine. I also saw many fine specimens of the new and rare pines, such as *excelsa*, *sabiniana*, &c.; also a beautiful tree of the new and much-admired *taxodian sempervirens*—one of the most elegant evergreen trees I have seen. The largest and oldest Pawlonia in Europe is here. It is now twelve to eighteen inches in diameter, and covered with blossom buds. I noticed, also, fine specimens of several of our American oaks—of our White Pine, Buttonwood, Hemlock, &c. I saw a Weeping Sophoro here that is remarkably graceful, and must occupy a prominent place among such elegant pendulous trees as the Ash, Willow, Birch, &c.; and, by the way, I have seen a new Weeping Birch, Weeping Willow, Black Weeping Thorn, Weeping Euonymus, and some others that will give us a most interesting collection of trees of this habit. In the Conservatory and Green House of the Jardin des Plants, are fine specimens of rare Palms, &c.; but I had little time to see them: and cannot now give you a detailed account of them. In the fruit department I was much pleased with the pear garden. Indeed, the pear trees are famous all over France and England, amongst cultivators, as being the best managed specimens known. The superintendant of this department, M. Cappe, has had the honor of managing his pear trees, as pyramids, better than any other in Europe; but I have seen better managed trees than his, and shall speak of them in future.

These are, certainly, beautiful models, and cannot fail to please all who see them. They are just what all garden pear trees should be in shape. They are planted in rows ten feet apart, and eight feet apart in the rows; between each drill is a small plot of strawberries; and between each bed is a walk of three feet; so that the bed itself is about six feet wide. The trees are, perhaps, eight or ten years old; about a foot in diameter: most of them ten to twelve feet high. The first tier of branches are within a foot or less of the ground: the next, two or three inches above it; and so on, forming a symmetrical pyramid. They are all on quince stocks. Another of the luxurious and delightful places of public amusement, is the *Jardin d' hiver*, an immense structure of glass, over 300 feet long, 200 feet wide, and 54 feet high. It is filled with fine plants. The largest Norfolk Island Pine in Europe is here, brought from the Jardin des Plants. It is now about forty feet high. Connected with this is a fine collection of paintings; and concerts are held in it once a week, to which the admission is very moderate.

Of the flower market, and many other things, I must tell you at a future time. P. B.

REPORT OF THE OHIO NURSERYMEN AND FRUIT GROWER'S CONVENTION.—We are indebted to M. B. BATEHAM, Esq., Editor of the Ohio Cultivator, for the above. It is a pamphlet of 64 pages, and contains much practical information. It is the most complete pomological report that has been published in this country, and Mr. ELLIOTT deserves much credit for the industry and skill displayed in compiling it.

RETARDING THE GROWTH OF FRUIT TREES.

Mr. Editor :—Can the blossoming of Peach Trees be retarded by any means affecting their roots *only?* Straw, coarse manure, &c., laid round the roots in winter will retain the frost in the ground several days, and perhaps several weeks after it is out of the ground not so covered. But will the blossoming of the tree be thereby retarded?

If the blossom buds are in a temperature sufficiently elevated, will they expand fully and *independently of the condition of the roots?* If they will, then the first and second questions must be answered in the negative. In the latter part of March or fore part of April last, the end of a peach limb was covered up in a pile of fermenting horse-stable manure, which was thrown into my garden. In a few days after I extricated the limb, and it was in full bloom. The blossoms appeared to be perfect, though somewhat compressed from mechanical pressure. Not a blosom appeared on any other part of the same tree, (or any peach tree in the garden,) till more than ten days after. C. Paulk.—*Honeoye Falls N. Y., 1849.*

Remarks.—As the immediate effect of heat will rouse the vital forces of regulation, so in the same degree will frost retard it. By covering the roots with straw, leaves, or saw dust sufficiently to exclude the heat from penetrating, the vital actions will of course be retarded for some time, and thereby the blossoming. Blossom buds will expand fully independent of the roots. We have cut branches of Peaches, Apricots, Almonds, Cherries, and even Lilacs, and put them in water in a temperate room, (the water must be changed regularly,) and in three or four weeks the blossoms were fully expanded. Of course they are not perfect.

A branch of a tree can be forced with a very good effect, independent of the temperature of the roots, (extremes excepted.) For instance, we have seen Apricots and Peach trees trained against a wall, and in order to get a succession of fruits, part of the trees were covered with glass, (common hot bed sashes were placed against the wall,) and by the time those parts that were not covered were in flower, that part under glass had fruits nearly half grown. The ground where the trees stood was not much frozen.

The heat of horse manure *caused* the excitability of vegetable action on your Peach limb, independent of the situation of the roots.

We may as well mention here for the benefit of those who are unable to raise Apricots, Nectarines, &c., on account of the ravages of the curculio, that trees planted against a house or wall, and glass placed before them, (during the time the curculio is in existence) will prevent this "great destroyer" from operating, and a sure crop of fruits may be expected. The fruits will be earlier and often larger.

Superior Grafting Wax—The following mixture, viz:

1 pint linseed oil; 6 lbs. rosin; 1 lb. bees-wax, makes a better and cheaper wax, than any I have used made from rosin, tallow and beeswax. The oil will admit of a much greater proportion of rosin than the tallow. This wax will give entire satisfaction to those who use it—*T. G. Yeomans, in Horticulturist.*

Return of Mr. Barry.—We learn by Telegraph, just as this number is going to press, that the Editor of this department of the Farmer, has arrived at New York, on his return from Europe. He will consequently soon be "at home:" and will probably make amends, in future numbers, for any lack of attention to inquiries of correspondents during his absence.

BUFFALO HORTICULTURAL SOCIETY.

At the Annual Meeting of the Buffalo Horticultural Society, held at the Secretary's Rooms on Wednesday, February 14th, 1849, the President in the Chair, it was—

Resolved, That the Society proceed to the election of officers for the ensuing year.

Messrs. J. R. Lee, B. Hodge, and C. F. S. Thomas were named a Committee to nominate officers.

Mr. W. R. Coppock, in a neat and appropriate address, respectfully declined being a candidate for re-election as President. Mr. W. B. Coleman also declined being a candidate for the office of Secretary.

The Committee reported the following list of officers, which were unanimously elected:

President—William R. Coppock.

Vice Presidents—Lewis Eaton, Orlando Allen, H. P. Potter, G. F. Pratt, H. W. Rogers, Abner Brynut, Joseph Dart, jr., W. W. Mann, Charles Taintor.

Treasurer—John R. Lee.

Corresponding Secretary—Benjamin Hodge.

Recording Secretary—C. F. S. Thomas.

STANDING COMMITTEES.

On Flowers and Flowering Plants—Messrs. C. F. S. Thommas, J. Dart, jr., and J. W. Brown.

On Fruits—Lewis Eaton, C. Taintor, and Lewis F. Allen.

On Vegetables.—H. W. Rogers, J. D. Sheppard, and H. A. Parsons.

On motion, it was resolved that the Gold Medal awarded to the Society by the State Agricultural Society, remain in the keeping of the President, to be handed over to his successor in office.

Resolved, That the Society's first and second premiums for the best display of Vegetables during the season of 1848, be awarded as follows:—To Mr. J. Keel, first premium, $5. Robert Dickinson, second, $3.

The propriety of offering premiums for the ensuing year was discussed and concurred in. The list will be published in due time.

Resolved, That the sum of $10 be paid to the publishers of the several daily papers and of the Western Literary Messenger, providing they publish the proceedings, reports and notices of the Society. Adjourned

C. F. S. Thomas, *Rec. Sec'y.*

GENESEE VALLEY HORTICULTURAL SOCIETY.

At a meeting of the Horticultural Society of the Valley of the Genesee, held February 5th, 1849, the following officers and committees were elected for the ensuing year.

President—Levi A. Ward.

Vice Presidents—John Williams, Rochester; Alfred Fitch, Riga; H. P. Norton, Brockport; Asa Rowe, Sweden; Zera Burr, Perinton.

Corresponding Secretary—Leander Wetherell.

Recording Secretary—J. A. Eastman.

Treasurer—James H. Watts.

Committee on Fruits—P. Barry, chairman; M. G. Warner, J. W. Bissell, S. Moulson, F. F. Backus, J. J. Thomas, Isaac Hills, Edward Roggin, Samuel Miller, H. P. Norton.

Committee on Trees, Shrubs and Flowers—Geo. Ellwanger, chairman; Francis Brown, jr., Wm. King, S. G. Crane, Henry Billings.

Committee on Vegetables—Jason W. Seward, chairman; James P. Fogg, J. Rapalje, S. E. Alden, L. B. Langworthy.

Committee on Botany—Leander Wetherell, chairman; G. H. Smith, J. W. Seward, J. M. Whitney.

Committee on Entomology—N. Goodsell.

Executive Committee—Levi A. Ward, John Williams, P. Barry, Geo. Ellwanger, J. W. Seward, L. Wetherell, N. Goodsell.

Wire Fence.—Our Seneca Falls friend, who inquires for information on this subject, is referred to the articles of Mr. Adams, in this and the January number of the Farmer. We think his plan the best we have received, and we are of the opinion that it will *pay*. It is best, however, for those who have any doubts to try the experiment on a small scale at first. It is our intention to test the matter the present season, or have it tested in this vicinity, and shall of course take notes in order to report the result for the information of our readers.

In Grafting take care that the bark of the graft and the bark of the stock meet and join on one side.

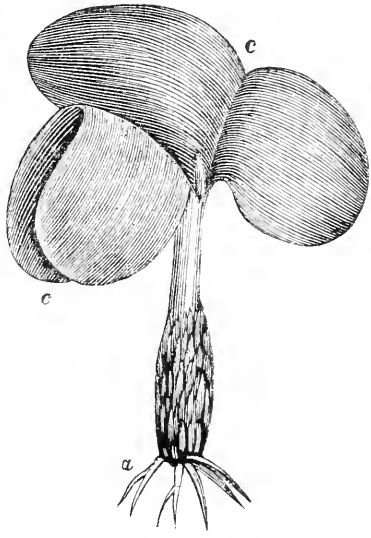
Ladies' Department.

BOTANY.—GERMINATION OF SEEDS.

[Continued from page 53.]

GERMINATION consists of the first chemical changes and vital action, which take place when a new plant is about to be produced.

"When the seed is planted in a moist soil at a moderate temperature, the integuments gradually absorb water, soften and expand. The water is decomposed, its oxygen combines with the carbon of the starch which has been stored up in the tissues. Thus, losing a part of its carbon, the starch is converted into sugar for the nourishment of the embryo, which now begins to dilate and develope its parts. Soon the integuments bursts, the radicale descends, seeking the dark and damp bosom of the earth, and the plumulule rises with expanding leaves, to the air and light. The conditions requisite for the germination of the seed are, heat, moisture, oxygen, air and darkness."



This cut represents a young dicotyledonous plant, with its radicale, *a*, developed; its cotyledons, *c*, *c*, appear in the form of large, succulent leaves; the plumule is just appearing as a minute point between the cotyledons.—*Rodgers' Scientific Agriculture.*

CHILDREN—Every romp with them is death to a score of gray hairs. Their games, moreover, present such a contrast to the rougher contest of bearded children, in the game of life, where money, power, and ambition are the stake, that it is refreshing to look at them and mingle with them, even were it only to realize that human nature yet retains something of its divine original.—*Selected.*

TWENTY years ago it was common to trim straw bonnets with artificial wheat and barley in ears, on which the following lines were written:

Who now of threatening famine dare complain,
When every female forehead teems with grain?
See how the wheat sheaves nod amid the plumes!
Our barns are now transferred to drawing-rooms;
And husbands who now indulge in active lives,
To fill their granaries may thresh their wives.

THE MOTHER.—A writer beautifully remarks that a man's mother is the representative of his Maker. Misfortune, and even crime, set up no barriers between her and her son. While his mother lives, he will have one friend on earth who will not listen when he is slandered, will soothe him in his sorrows, and speak to him of hope, when he is ready to despair. Her affection flows from a pure fountain, and ceases only at the ocean of eternity.

TO YOUNG LADIES—I have found that the men who are really the most fond of the society of the ladies, who cherish for them a high respect are seldom the most popular with the sex. Men of great assurrance, whose tongues are highly hung, who make words supply the place of ideas, and place compliment in the room of sentiment, are the favorites. A due respect for women leads to recpectful action toward them—and respectful is usually distant action, and this great distance is mistaken by them for neglect or want of interest.—*Addison.*

USEFUL KNOWLEDGE.—The education of our children is never out of my mind. Train them to virtue, habituate them to industry, activity, and spirit. Make them consider every vice as shameful and unmanly. Fire them with ambition to be useful. Make them disdain to be destitute of any useful knowledge.—*John Adams to his wife.*

APPLE CUSTARD.—To make the cheapest and best every day farmer's apple custard, take sweet apples that will cook, (such as every farmer ought to have through the summer, fall, winter and spring,) pare, cut, and stew them; when well done, stir till the pieces are all broken; when cool, thin with milk to a proper consistency, and bake with one crust, like pumpkin pie. Eggs may be prepared and added with the milk if handy, though it will do without. No sweetening is necessary. It may be seasoned with any kind of spice to suit the taste—the less the better.—H.—*Ohio Cultivator.*

CREAM that has been suffered to stand untll rancid, or slightly mouldy, which is often the case, should never be churned; it may make very palatable cream cheese, but abominable bad butter. Cream never rises from the milk after thirty-six hours standing. This may be proved by the lactometer. It becomes more solid, and thus appears thicker, but nothing is gained in quantity, and much lost in quality, by suffering it to stand too long before skimming.

SAGO CREAM.—This article, so grateful to the sick is prepared in the following manner:

Take a desert spoonful of good sago, and boil it in pure water till it is reduced to a jelly. Add a cup of sweet cream, and boil again. Beat up a fresh egg very light, and pour the sago on while hot. Sweeten and spice, with sugar and nutmeg, to your taste.

TO COOK A HAM.—Boil a comman size ham four or five hours, then skin the whole and fit it for the table; then set in oven for half an hour, then cover it thickly with pounded rusk or bread crumbs, and set back for half an hour. Boiled ham is always improved by setting it into an oven for near an hour, till much of the fat fries out, and this also makes it more tender.

Boys' Department.

SUGGESTIONS TO FARMER'S SONS.

BY "UTILITARIAN."

Mr. Moore :—Feeling a deep interest in the advancement of the present tillers of the soil of our beloved country, and especially for those who are soon to compose the bone and sinew of the American nation, I am constrained to give a passing hint to the thousands of boys who may do themselves the honor to read your valuable paper—which hint was called out by a failure to obtain, as subscribers to the Farmer, men who will spend dollars annually for that kind of reading herein contemplated, and who still have the effrontery to call themselves *farmers*.

Our country is, at present, flooded with a newspaper and periodical circulation unequaled by any other country on the earth — and if the whole of the matter thus poured out upon our population were of a character calculated to give such information and instruction as should be of a truly beneficial nature, what amount of good might we not rationally expect would be realized from it? But, when we examine a large proportion of the reading thus circulated, do we find such as is calculated to be of any real benefit to our rural population, from which by far the greatest part of the patronage of the press is received? The farthest from it possible. Instead of such matter as shall inspire a love for the useful and praiseworthy, or furnish such information as will fit them for a noble discharge of the public and private duties of life, they are furnished with the sickly productions of imagination, which are often not only useless, but polluting to the minds of youth, while they create a distaste for the more substantial productions of more worthy authors — and the only reason for their extensive circulation is, that they cost but little.

But do we look upon a thief, who steals from us a penny, with any more respect than if he had taken a hundred dollars? This kind of trash, however, not only takes from us the trifling change we give to come into possession of it, but it steals our time, and that true force of character which constitutes the intrinsic wreath of a community, or a nation.

Will not the farmer's boys, who are soon to become the sovereigns of our extended country, strive to become men prepared to rule an enlightened nation with that wisdom which can never be drawn from works of fiction? *February* 13, 1849.

How to Live Long. — A venerable minister who had preached some sixty-five years, being asked what was the secret of long life, replied, "Rise early, live temperately, work hard, and keep cheerful." Another who had lived to the great age of one hundred years, in reply to the inquiry how he had lived so long said, "I have always been kind and obliging, have never quarreled with any one, have eaten and drank only to satisfy hunger and thirst, and have never been idle." Above all things avoid law suits; they impair your health and dissipate your property.

He that has never known adversity, is but half acquainted with others, or with himself. Constant success shows us but one side of the world; for, as it surrounds us with friends, who will tell us only our merits, so it silences those enemies from whom alone we can learn our defects.

PREMIUMS FOR THE BOYS.

During the past month we have received remittances from quite a number of young friends. While we tender them our thanks for their efforts in behalf of the Farmer, we may be permitted to remark that the fact that their influence is exerted in favor of a work like ours, in preference to the tempting and too often senseless literary trash which is flooding the country, gives us greater pleasure than the receipt of the subscription money they have forwarded. It proves that their minds contain the germ, and a trifle of the fruit, of good sense and wise forethought—and certainly indicates enterprise and progress in coming manhood.

As an incentive to such of our youthful readers as are or may become agents for the Farmer, we make the following proposition :—To every boy or young man under 20 years of age, who will obtain 5 subscribers to the present volume of the Farmer, remitting payment according to our club terms, we will send a copy of Johnston's "Catechism of Agricultural Chemistry and Geology" — or any other work of the same price (25 cents,) which we offer in our advertisement of books. The Catechism is a valuable work of 75 pages, illustrated with engravings, &c. And to each one who obtains 8 or 10 subscribers, and forwards pay according to our club terms, (37½ cents per copy if sent to one address, or 40 cts. if the papers are directed to each subscriber,) we will give a volume of the Farmer for 1848, bound in marble paper covers and cloth back. The books can be sent by mail to any part of the country.

CONTENTS OF THIS NUMBER.

ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, February 23—7 P. M.

FLOUR AND MEAL—Sales are to a small extent. 3,000 bbls. at 5.56 *a* 5.69 and 5 75. For pure 69 is freely paid. Included were 500 barrels in store at 5.50. Some inquiry for Western for the East. Meal is a little higher. $2.94 *a* 3$ for Jersey is asked. Rye Flour 3.44 *a* 3.50.

GRAIN—Wheat moderate inquiry. Sales 4,000 bu. Ohio at 1.15 and some Long Island at 1.10 *a* 1.15, Genesee 1.30 *a* 1 32. Corn 10,000 bu. N. O. at 52 *a* 55 for white southern and 62 for yellow, 65 for northern· Oats 40 *a* 42.

PROVISIONS—Market for pork rather heavy. Sales 6 or 700 bbls. mess at 10.75 *a* 11. Prime mess is nominal at 9.87. A sale of 500 was made yesterday at 10.25. Beef is quiet. Sales 80,000 lbs. smoked beef at 15 *a* 11. Lard is heavy. No change in butter and cheeee. Tallow 8½ and quiet.

ASHES—Sales 100 bbls. Pots at 6.37. Pearls, 7.50.

WOOL—Market firm and quiet.

Rochester, February 24, 1849.

FLOUR AND GRAIN.—Flour $5.50. Wheat, $1.12½ per bushel. Corn 44 cents; Rye 53; Barley 50; Oats 30.

SEEDS.—Clover seed. $3.50 *a* 4; Timothy, $2 *a* 3; Flax $1.

PROVISIONS.—Pork (mess) $13 *a* 14 per bbl.—in hog 5.50 per cwt. Beef, per cwt. $5—barrel 7 *a* 8. Butter 13 *a* 14 cents; Cheese 6 *a* 6½. Hams (smoked) 7 cts. Poultry 6½. Eggs 16.

SUNDRIES.—Hides (slaughter) 3½—Calf 10—Sheep Pelts 40 *a* 75. Salt, bbl. $1.25. Potatoes, bush., 37 *a* 50. Apples, bu. 37—dried 62½. Beans, bu., 75 cents. Hay, ton. $7 *a* 11.

To Agents, Post-Masters and Subscribers.

AGENTS, Post-masters and other friends of the Farmer will bear in mind that we offer Premiums amounting to OVER TWO HUNDRED DOLLARS (in Agricultural Books, Implements, &c. at cash prices,) for subscribers obtained before the 20th of April next. We have not room to publish the list of Premiums in this number, but will send it, together with show bill, specimens, &c., to all who wish to compete.

We hope that *all* of our former patrons will renew their subscriptions, and get as many new subscribers as convenient. If each of our readers will take the matter in hand—and we earnestly invite all so disposed to obtain and forward subscriptions—much may be accomplished in every section of the country. Friends, will you SHOW THE FARMER TO YOUR NEIGHBORS AND ACQUAINTANCES, AND INVITE THEM TO SUBSCRIBE?

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH ENGRAVINGS OF

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

THE TENTH VOLUME of this Journal will commence on the 1st of January, 1849. In making this announcement to his AGENTS and the FARMERS and FRUIT CULTURISTS of the country, and again asking their support in behalf of the work, the Publisher has the satisfaction of stating that the GENESEE FARMER now has a circulation EXCEEDING, BY SEVERAL THOUSAND, that of any similar periodical published in America. This fact, alone, furnishes abundant evidence of the *real value* and *superior merit* of the work—for no journal, however cheap, can become and continue so universally popular, unless actually WORTHY of the substantial support of an intelligent community.

THE HIGH REPUTATION which the Farmer has acquired throughout the United States *will be maintained*, and if possible *augmented*, during the ensuing year. To accomplish this object, no effort or expense will be spared by the Editors or the Publisher. Their aim is to furnish a *reliable* and *independent* journal—one which shall avoid and condemn *humbug* in whatever guise it may appear, and impart correct practical and scientific information on all subjects pertaining to Agriculture and Horticulture.

It will be issued on NEW AND CLEAR TYPE, and SUPERIOR PAPER, and printed in the best style of the art—NEAT and CORRECT. Its ILLUSTRATIONS—embracing Portraits of distinguished friends of improvement on STEEL and WOOD, and Engravings of Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Trees, Flowers, &c.,—will be more numerous and expensive than those of any preceding volume. ☞ Each number will contain at least **24 Royal Octavo Pages!** making a large and handsome volume of several hundred pages at the close of the year.

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D. D. T. MOORE, Rochester, New York.

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

P. BARRY, Conductor of Horticultural Department.

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ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Farmer, 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.

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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. X. ROCHESTER, N. Y.—APRIL, 1849. NO. 4.

Farm Husbandry.

IMPROVED SYSTEM OF HUSBANDRY.

BY AGRICOLA.

When shall we see improvement among all our farmers? We do not despair of seeing it general, if not universal. We see it already in many towns throughout the State—and what is the result? In many of these towns already, an *advance* of from ten to twenty bushels per acre of the various crops raised. This is encouraging, and should induce every farmer to lend his aid. But perhaps some readers of the Farmer will say, "what do you mean by improvement?" We answer generally—first of all, know what is your soil: if grains are your main dependence, what grains are best adapted to it. See if draining is needed—and here let me say it is much oftener necessary than farmers who have not paid attention to the subject generally suppose. If needed, see that it is done with as little delay as practicable—and we will venture to assure you, your crop from this source alone shall be increased from one-quarter to one-half. If you doubt, try it carefully on a small piece of land, beside your land on which water stands more or less during the season, and if you do not realize at least one-quarter advance, we will admit that for once, land that needed draining has not been improved.

Select your manures judiciously and apply to the crops that need the variety you make. Would not this add much to your crops? Who does not know that often a wheat crop is ruined almost by an application of fresh manure directly to the crop, which if applied to a preceding corn or root crop would have been of great value, and would have been sufficient for a wheat crop to succeed. Keep your land thoroughly subdued and let not the weeds master the grain. It costs no more to raise grain than weeds—and which is the most profitable for the farmer? Improvement then can be had by carefully extirpating your weeds, and giving the grain an opportunity to obtain all the nutriment.

Be careful in the choice of your seed. No man ever succeeded well who neglected this. It is a small matter perhaps you think. Is it? Let us see. Good and perfect seed will usually vegetate and produce much larger returns than poor half formed seeds. It will not fail to prove true as a general rule that like will produce like, and what a man sows that shall he also reap.

Let your implements be of the best kind, and wherever labor-saving implements can be introduced to aid you, have them: all helps to cheapen the cost of production and increase the profit of the farmer. And don't forget to have every thing on your farm needed for work in its place when not in use, so that half the time of your men may not be taken up in running after the utensils, which have been left where last used, instead of being in their proper place. Would not this be improvement, if properly attended to?

Keep an account with your farm—yes, with every field—and let it be carefully charged with every expense and credited with its avails, so that you can at any time know what is your condition, whether advancing as you desire, or whether the result is a loss. Change your method, if the latter is the case from year to year, and soon you will find the crop and the system of management that will pay: at all events you will know where you are, and it will be your own fault if you do not bring your books to show the balance on the right side.

Is your land suited to fruit? Then let the best kinds for your locality, adapted to market, be selected. The trees will grow while you sleep. It will be but a little time before they produce, and soon your fine apples will yearly find their way to the sea-board—across the ocean, it may be: and the balance sheet will be all right, and you be in the enjoyment of the good fruits of improvement. Is not this well worth trying?

Is the dairy your business? How much cheese and butter do you make per cow? Those who attend to their dairies as they should, and select cows suited to them, are realizing from 500 to 600 pounds of cheese per cow, and from 200 to 300 pounds of butter. Have you reached this standard? If not, is it not worth your while to make the inquiry and ascertain what is the difficulty? Now is not that an improvement which secures the return above given?

And now let us look at this matter personally. Improvements are needed—can be made—and shall they not be made? What say the farmers?—what say the boys? An answer such as would be worthy of an American farmer would be—*I will try;* and if you *try* with all the lights which experience as well as science suggest, we venture the prediction, you will succeed—and then an answer will be found to the question which commences our article.

Editorial Correspondence of the Farmer.

WOOL-GROWING AND STOCK-RAISING IN THE MOUNTAINS.

The article which was published in the December number of this journal under the above heading has excited a good deal of inquiry, and induced the writing of not a few letters both to the office of the Farmer and the writer in Augusta, Georgia. The subject is one of national importance: and will be generally acknowledged as such, when maturely considered. From the Highlands on the Hudson to the Tenessee Bluffs, on the Mississippi, there extends a range of mountains, hills and elevated plains, whose agricultural capabilities are little known, and less appreciated by the great mass of American farmers. This remark applies with peculiar appositeness to the high dividing ridges, plains and valleys southwest of Pennsylvania, which divide the waters that flow into the Ohio on the north, from those that fall into the Atlantic and the Gulf of Mexico on the south. The tobacco, corn, cotton, rice and sugar planter from Maryland and Louisiana have had little occasion to work far up-stream and settle on the table lands, and in the gorges of the Alleghany and Cumberland Mountains. The emigration of planters has set steadily in a south-westerly direction, and spread itself over the the rich bottoms and diluvions of Alabama, Mississippi, Louisiana, Arkansas and Texas. A large portion of Virginia, and parts of North and South Carolina, Georgia, Alabama, Tennessee and Kentucky present the most inviting field for rural industry and enterprise to be found on the continent.

The writer has now spent two winters and one summer at the South: and has travelled over and studied the country with all the attention to its natural advantages and disadvantages, which he could command. So soon as one rises above the exclusive planting region on the Atlantic slope, he comes at once into a district where pure air and pure water with a mild and most agreeable climate, promise him good health and every physical enjoyment. As a general thing the soil is not rich, for if it was, the excessive growth of vegetation and its rotting on the surface of the ground would cause much sickness. If any one is so foolish as to desire a very rich soil, and is willing to pay the imminent hazard of his life, and jeopard the lives of his family to cultivate the same, it can be found anywhere along the coast from Chesapeake Bay to the Rio Grande. By going back into the highlands, you find a region perfectly healthy, where all useful grasses flourish in great luxuriance; where crystal springs and noisy brooks abound on every side; and where the husbandman can raise grapes and all other northern fruits, and at the same time escape at least two-thirds of the winter of Massachusetts and New York.

Wheat, rye, barley and oats *grow* in the coldest weather. Wheat sown in December here, is harvested in May: so are oats and barley. We have in our office a stalk of corn that has six good sized ears that grew upon it; and round turneps that weigh over 16 pounds each. That a high degree of solar light and heat is favorable to the rapid organization of all plants, when properly fed, either by nature or art, few readers have occasion now to learn. The skilful farmer can turn this increased power to organize grass, grain, roots and tubers, to a most profitable account. The northern man should have nothing to do with legitimate planting. Leave that to the worthy citizens who understand the business; but know nothing about wool-growing, making butter and cheese, nor any mixed agriculture. We are now paying two dollars a bushel for northern Irish potatoes. They are also brought from Tennessee. We have fine apples from Knoxville.

Northern hay sells here at $20 a ton, when it can be raised at one fourth of the money. One can buy fair farming land within forty or fifty miles of this city on the railroad toward Nashville at from $2 to $5 an acre. These lands have some buildings and fences upon them. They belong to planters who want to emigrate with their "force" to the richer virgin soils of Alabama, Mississippi, Louisiana, Texas and Arkansas. This tide of planting emigration, setting so constantly westward, creates a vacancy for a new race of legitimate farmers. The latter uniformly do well: for they get their land for a song; they have an excellent market at their doors, and purchase all their groceries, dry-goods and hardware as cheap as the farmers of Western N. York do.

Sweet potatoes and peaches are raised here by free white labor at a cost not to exceed six cents a bushel. Three crops of figs grow on the same tree in a season. Although Augusta is too far north to make a business of growing oranges, yet we never saw finer ones than grew in the open air in this city the past year.

The man that makes pork and beef in the Cherokee country for European consumption has about 2,000 miles freight advantage over the pork and beef at Cincinnati, which has to be sent 1500 to N. Orleans, and 1000 more round Cape Florida, before it reaches Savannah or Charleston. In 24 hours the Georgia farmer can have his on ship board in either seaport. Count up the difference in time, interest on capital, freight, insurance, danger of spoiling in the hot Gulf: and you will see the advantage of being near the sea-coast. Wool growing can be made profitable on the table lands of Tennessee: as it can be in this state. Tanning and currying leather, and getting out timber and boards in our pine forests, are truly profitable in the hands of men that understand the business. One that understood the trade of making plows and all agricultural implements, might realize a fortune in this city. It has a water power nearly equal to that at Rochester.

These things are named in answer to private letters. Manufacturing and mechanical pursuits are regarded with favor—all seek to encourage them. As a general rule money is made easily and spent freely. There is a large number of northern men here, and especially in mercantile business. Very few of them are planters. A few days ago a slave paid $2000 down for himself, wife and two children, in this city. There are scores that own good houses and lots, who are yet slaves. One in the city of Macon owns two slaves. On being asked why he did not buy himself, he said his master asked $1,700 for him; and he had purchased two men as good as himself for $1,300. All this class of negroes hire their time by the year: usually at about $75 or $80; and have all they can make by keeping horses and drays, snd doing job work, which often amounts to $1000 per annum. Every change made is for the better. Both races are working upward, and will, we hope, come out right at last.

Augusta, Ga., 1849.

HINTS TO DAIRYMEN

Four years ago the number of cows milked in the State of New York was within a small fraction of a million. It now considerably exceeds even that high figure: for the dairy business has been greatly extended since the census of 1845. No branch of rural industry presents greater facilities for improving a farm, for increasing its capacity to keep more cows and enlarge the annual receipts of the husbandman. By carefully saving all the manure, both solid and liquid, made by domestic animals, it will be easy to raise an immense amount of excellent food for cows, on a comparatively small surface. For this purpose, corn, carrots, potatoes, pumpkins, clover and herd's grass are among the most available crops which we have seen cultivated.

The dairyman, by uniting skilful tillage with grazing, will experience little difficulty in feeding a much larger number of cows than is now generally kept in New York and Ohio. Of course, he will need more funds to purchase more cows, and more help to milk and take care of them. Many, however, who do not lack the wherewith to procure either labor or cows, fail to see their way clear, how to raise six or eight tons of sweet nutritious forage an acre, by planting corn quite thick in drills for that purpose. Like all other farming operations, this must be practiced repeatedly to be well understood. We have seen some failures, but more cases of the most satisfactory results. There is some trouble, particularly in wet weather, in curing a luxuriant growth of green maize. Being cut when most succulent, just as the kernels begin to form when the whole plant abounds in saccharine matter, it needs to be exposed to the sun, turned over, like thick new mown grass, and thereafter to be bound in small bundles and set up to make in small bunches or stooks. The Rochester City Milk Company, and other milk-producing establishments with which we have been acquainted, have found the raising this kind of forage as well as carrots, profitable. At the South green rye, oats and peas are fed to mules, horses and cows. On good land, the expense of growing additional feed for dairy cows, i. e. something beside common pastures and meadows, is much less than one who has never tried it would suppose.

A top-dressing of lime and gypsum spread over pastures and meadows in the spring of the year will often impart new vigor to the grass, and add greatly to its yield for the season, if not longer. Sometimes more grass seed should be sown, and the ground well scarified with the harrow. Ashes are particularly valuable to scatter over all fields where a good crop of grass is desired. Swamp muck sweetened with caustic lime in the form of compost, is generally worth more than it will cost, to be used as a top-dressing on meadows and pastures. Applied to hoed crops it is also valuable.

As first rate dairy cows are always in demand at fair prices, every farmer should be careful to raise all calves, particularly females, from a family remarkable for good milkers. In this way the dairies of the country will improve rapidly. Much depends on the keep of calves and heifers, and the way in which the latter are treated during the two first years they are milked, in fixing their productive value for dairy purposes. Perfect regularity in feeding, uniform kindness and gentleness, as well as milking reasonably fast and quite clean, are matters of practical importance. A young cow which is much inclined to elaborate a large flow of milk will secrete more, if it be drawn three times in twenty-four hours, and at eight hours between each milking than she would if milked but twice a day. Salt cows regularly, or have it under a shed where they may eat what they will, after having been restricted a little, till accustomed to a full supply by degrees. Have your pastures as near the milk house as practicable that your herd be not taxed with a long walk to and from their fields to the yard or cow house.

TEXAS WHEAT.—VALUE OF LIME.

It is stated by a gentleman from Corsicana, in Limestone county, that about forty thousand bushels of wheat have been raised in Limestone and Navarro counties this season. A part of this was harvested as early as the 9th of May, and it is of an excellent quality. The grains are plump and large, and the wheat, it is believed, will average over sixty pounds to the bushel. A large quantity of wheat has been raised in Trinity Valley above Dallis. The experiments in the culture of this grain, indicate that the whole region, watered by the Trinity and its tributaries above Smithfield, is as well adapted to the culture of wheat as the best wheat growing regions in the middle States. The soil, in that section, contains a large proportion of lime, and it is probably owing to the presence of this mineral that it is better adapted to the culture of wheat than the soil near coasts. There is a belt of country extending quite across Texas from the Red River to the Rio Grande, and including most of the undulating region of that country, that is as well adapted to the culture of wheat as any portion of the Union. This section comprises at least thirty millions of acres, and may at some future day, yield breadstuffs sufficient for the consumption of more that ten millions of people.

We clip the above from a Texas journal for the purpose of impressing on the mind of every reader the importance of lime in all soils, not merely for the production of wheat, but of all other cereal plants. It is most striking to note the difference in general fertility, between limestone and ordinary granite lands. The average crops of the latter, especially after a few years' cultivation, do not exceed a third of what are grown on common calcareous soils. Lime seems greatly to improve the mechanical texture of all cultivated lands, as well as furnish plants with their appropriate mineral food. It is instructive to study the reasons why such soils accumulate near the surface, so bountiful a supply of potash, soda, magnesia, sulphur, phosphorus, chlorine, soluble flint, and rich vegetable mold. Lime is not transmuted into any of these substances; but this mineral serves in a remarkable degree, and in more ways than one, to prevent their loss in premature solution, and by washing and leaching. Alumina, (the basis of pure clay,) possesses similar properties to an equal and perhaps greater extent. Hence, the strongest and most durable soils in the world, combine the two advantages of lime and clay; i. e. they are calcareous and argillaceous in their leading chemical and mechanical characteristics. Now, whilst all know that subsoils lack vegetable and animal mold and that this cold earth is peculiarly lifeless, still, there are few who are wholly ignorant of the fact that, subsoils usually contain more pure clay and lime than the pervious, and apparently richer ground above. To bring lime and clay up to the light and heat of the sun, to the chemical action of atmospheric gases, and to the fertilizing influence of rains and dews, deep plowing is the thing.

If the intelligent reader has reason to believe that his land lacks lime, from the scarcity of that mineral in his neighborhood, and the softness of the water

in springs and wells, its application can hardly fail to improve the soil. If it can be had at a small price, the dose should be often repeated in the course of successive crops, that the lime may be thoroughly incorporated in the whole texture and mass of the earth. With all needful facilities for its cheap transportation, lime is so abundant in this country, that before many generations pass away, no farming district will do without this important element of fertility. The mineral which makes the Cherokee country in Georgia, the Trinity valley in Texas, and that of Genesee, in New York, so famous for yielding wheat, will be applied in due quantity, to the free sand stone and granitic soils of other regions. It is a mistake to suppose that the application of one or two small doses of lime will form a truly *calcareous* soil. Such a result can be economically effected only as the work of years, and after much mixing by tillage with the plow, harrow, cultivator and hoe. A regular system of liming carried through many seasons, on a moderate scale, will doubtless bring about a most salutary change in the strength and productiveness of the land.

Farmers should investigate the peculiarities of every kind of husbandry; and be able to distinguish closely between all practices which impair and all that improve the soil. Nothing is easier than to be mistaken and disappointed in these results. Extreme caution in trying experiments on a large scale is the only safe course; but a little experimenting will harm no one, and often brings to light some important improvement. There are many millions of acres that greatly need improvement: and still other millions whose natural fertility should be saved from any deterioration.

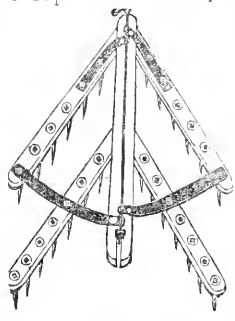
A DROP FROM THE CORNICE.

Messrs. Editors:—As I have recently become a subscriber to your valuable paper, I have, of course, become one of its readers. Although a Mechanic, and not "a Farmer," I esteem its contents of greater value than its subscription price. Now, though I may be but a small *drop* in the stream, if I chance to get into it, I will accept the invitation friend Peters has given in his fable of the Raindrop, in your January number, and come out from under the cornice; yet I have not the vanity to think that he had me "in his eye" when he gave the invitation.

As great things cannot be expected from so small a drop as I am, I will put myself in motion by trying to answer a small question, suggested by your correspondent, "G. S. G.," in your January number, though I am not an Architect. He says, in a parenthesis, "that his house looks steeper and more gothic than his drawing: thongh he don't know why, as the proportions are the same." He has undoubtedly drawn the end in exact proportion with the exact angle of the roof. Had he drawn a view of the end only, the roof would then have appeared as steep in the drawing as in his house; but as he has to this added a view of the side, it indicates that the point of observation is not in front, but at one side of the front, and from this position the end of the house itself must appear narrower while the height appears the same, consequently the angle of the roof would appear more acute. If these laws had been observed, the drawing and house would have appeared to have the same proportions. I will close by hoping to say something in my next to interest more directly the Horticulturist and Farmer. D.—*Albion, N. Y.*

GEDDES' HARROW.

"The Geddes Harrow, so called from the inventor, George Geddes of Tyler, Onondaga County, in this State, is considered by those who have used both, to be superior to the square harrow, inasmuch as it draws from a centre, without an uneasy and struggling motion, and is of course easier for the team. The accompanying cut is so simple that it needs no description. Being hung on hinges, it is easily lifted when in motion, to let off collections of weeds, roots and other obstructions. It can be doubled back, and is of very convenient form to be carried in a wagon about the farm. Some have teeth put in as in common harrows, simply by being driven in from the upper side; others have the teeth so made as to be let through the timber from the under side, with a washer below, and a nut and screw on the top; this avoids the loosing of teeth, by preventing them from dropping out, as in the common harrows.



There are several sizes containing more or less teeth as required. The following table shows the number of teeth in the several sizes, and their prices:

14 teeth, for one horse	$8.00
18 teeth, for one or two horses	9.50
22 teeth, for two light horses	11.00
26 teeth, for two heavy horses	13.00
30 teeth, for two or three horses	15.00

The work performed by this harrow is better, with one operation, than can be done with a common A harrow by going twice over the ground."

This Harrow may be obtained at the Albany Agricultural Warehouse, Albany, and at the Genesee Seed Store and Ag. Warehouse, Rochester. Also of the principal manufacturers and dealers in implements throughout the country.

An Agricultural School.—We are credibly informed that Mr. Wilkinson of Germantown, Pa., seven miles from Philadelphia, has an Agricultural School for the instruction of young gentlemen in Scientific and Practical Agriculture, and that a thorough English education, with four modern languages, is given as an adjunct to the scientific course. Every branch is thoroughly and practically taught. The school is called the Mount Airy Agricultural Institute. Its location is proverbial for health. It is said that the character and advantages of this school are not excelled by any in the Union. The Tuition year is divided into two terms of five months each: the summer term commences on the first Thursday of April, and the winter term on the first Thursday of October. The charge for tuition, board, washing, fuel and light is $100 per term, payable in advance.

Persons wishing further information relative to this school, will address the principal, John Wilkinson, Germantown, Pa. Reference is also given to the following gentlemen: Gen. P. S. Smith, Philadelphia; Thos. McElrath, Esq., N. Y. Tribune, N. Y.; Hon. Thos. Baltzell, Tallahasse, Fa., and Richard Peters, Esq., Atlanta, Ga. — *Southern Cultivator.*

THE PLOW—ITS HISTORY AND IMPROVEMENTS.

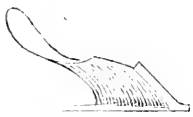
BY HORACE L. EMERY.

FRIEND MOORE:—With what cuts I have been enabled to obtain in time, I resume the subject of the Plow, commenced in your March number.

I closed my remarks by speaking of the improvers of the plow. Among others, it is but justice to name E. G. MATTHEWS as one of the most ingenious of the later improvers, but more particularly as an inventor of machinery by which the wood work of the plow is made with perfect uniformity and precision not otherwise attainable, and by the aid of which six to twelve men are enabled to make more and better plows than three or four times the number could make in the usual way. The effect of the use of this machinery has been to give a character to the plows made by it, and to establish the confidence of the public in their excellence. It has, also, in a great measure, been the key to the success of some of the largest establishments engaged in their manufacture.

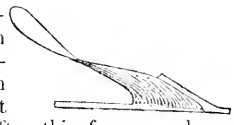
With regard to the form of plows, much improvement has been made by combining more perfectly the power of the wedge and screw, (which, by the way, are the only two natural powers combined in the mould board of the plow). Very many patterns pre-

FIG. 1.



sent a broad and thick, stunt wedge, with too much of a cross cut to the edge, not unlike that shown in Fig. 1, (of plow inverted,) while others, of later and more approved model, are thinner and more pointed, as shown in Fig. 2. This difference is observable between the American and the approved wrought iron English and Scotch plows. One great obstacle in making plows after this form, as shown in Fig. 2, has heretofore been the deficiency in the strength of cast iron when made thin and pointed and sufficiently hard. Such, however, have been the improvements in the combination of the various iron ores, as to obtain strength, with less weight and thickness, nearly equal to malleable iron. Although rather soft, this iron bears the hardening process to almost any degree, and can be used in those parts mostly exposed to wear, without endangering the strength. As this fact has become known, the cast-iron plow has become more pointed and wedge form, and the approved modern American plow will not suffer by a comparison with those of England or Scotland.

FIG. 2.



Much depends upon the curves given to the mould-board. They should be so formed as to bear the earth equally and lightly over the whole surface, and these curves carried so far as to completely invert the soil. In grass or sod land it is not desirable to break the furrow slice, and good length of mould-board is required—nearly in the proportion of width to length, as one to four—while, in stubble and tilled land, a shorter mould-board is preferred, say width to length, as one to two or two and a half: the same rule should be observed in both cases.

I have formed the opinion, from close observation, that the best form for plows (and the best plows now in use come very nearly to this standard.) is that which will lift, carry, and turn the soil in straight lines, from that point upon the forward part of the share where it first begins to rise, to the point where it leaves the mould-board. For instance, in a furrow twelve inches wide, the sward would begin to rise after the point had penetrated three to five inches; one edge of the slice would rise from this point by the forward motion of the plow, until, at the point where it leaves the hind end of the mould-board, it is twelve inches from the bottom of the furrow. What I would term the straight line would be a fulness to a straight-edge between these two points. This fulness to a straight line should apply not only to one edge of the slice, but to the whole surface of the mould-board.

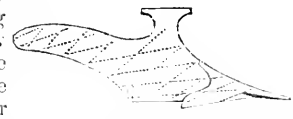
Again, to work easily and turn a smooth furrow, the slice should also be fully supported crosswise; therefore the mould-board should have a fulness at right angles or nearly so, with the straight lines before described, and as represented in Fig. 3.—

FIG. 3.

When the mould-boards are so formed as to present irregular curves, or so as to lack this fulness, or to be too full, the friction becomes unequal, the draft of team and labor of plowman are increased, to say nothing of the imperfection of the work performed.

In Fig. 4 is shown a form which, although regular, is not in accordance with the foregoing description. A plow which presents the straight lines in these directions is inferior to the first in operation, in all respects. Therefore, if I am correct, a farmer purchasing a plow will find a simple straight-edge of great service in making a good selection.

FIG. 4.



Thus much for the form of the mould-board.—Another improvement now adopted in nearly all late patterns, is that of forming the share so as to renew the front portion of the plow and the landside, so as to extend the whole length and next the share. By this arrangement the strength of the whole base and front of the plow is preserved, and when the old point and landside are replaced by new ones, the original strength, form and effect are restored. The chilling process being applied to the edge of the share and the base of the landside and mould-board, those parts are not only made to wear sharp, and of three or four times more service, but actually create less friction—the difference being the same as that between steel and iron sleigh shoes upon the ground. *Albany, N. Y., March*, 1849.

[To be continued.]

BONES.—That world-renowned chemist, LIEBIG, says that a single pound of bone dust contains as much phosporic acid as one hundred pounds of wheat. From this we can easily perceive that there are bones wasted on every farm sufficient to manure the entire wheat crop. This, to many, will doubtless appear strange, but it is nevertheless true.

THE SALT found in the great salt lake in California, is said to be superior to any now in use, for preserving butter, beef, &c. It is the strongest ever yet discovered.

NEVER grumble at what you cannot prevent; you have no right to grumble at what you can prevent.

EXPERIMENT IN WIRE FENCE MAKING.

BY D. KINGMAN.

Messrs. Editors :—Believing that my brother farmers feel an interest in whatever experiments others may try, whether useful or otherwise in themselves considered,—especially if facts are stated, so that they can practice, throw away, or improve upon them, as their judgments may direct—I have been induced to send you my experience in making wire fence.

During the last fall I constructed 104 rods of wire fence in the following manner: I placed red cedar posts one rod apart, the posts being sawed about 3½ inches square at the bottom, and 3½ by 2 inches at the top, and set firmly in the ground to the depth of 2½ feet. I then bored holes through the posts with a ¼ inch bit—the upper one 4½ feet from the ground, and then 9, 8½, 7½ and 6 inches below, using five wires. Five inches below the lower wire I placed a board fourteen inches wide, (with a short post in the centre to which I nailed the board,) which comes near enough to the ground. I then drew the wires through the posts and strained them by means of a lever, one end of which I stuck into the ground. I then looped the end of the wire around the lever near the ground, and while one is drawing upon the top of the lever, I plug the hole tight with pins of red cedar, previously prepared. I usually strained the wires 15 or 20 rods at a time, then spliced the wires by looping and twisting the ends, and proceeded in like manner again. After the wires are in and the boards on, I take pieces of wire of the right length and make one end fast to the upper wire, and then wind it round the wires below till I come to the board through which I bore a hole and fasten the lower end of the wire; three of these wires between each two posts, thus fastening it all together.

The upper and lower wires are No. 10, and the others No. 11. I bought my wire of Messrs. Pratt and Co., of Buffalo, at $7,50 per hundred. The five wires weighed 355 pounds. The wire that I used to weave in up and down was No. 16, and cost 10 cents per pound; it took 25 pounds. My posts I bought in the log (pretty large ones,) at $12 per cord; one cord made 105 posts, the number used. It took 2000 feet of hemlock boards, which I reckon at $7 a thousand. The saving of the posts was $2,25. The cost foots up as follows :

355 pounds of wire, at 7½ cents,	$25,02
25 pounds of wire, at 10 cents,	2,50
One cord red cedar posts,	12,00
2000 feet boards, at $7,	14,00
Sawing posts,	2,25
Making the cost of materials,	$55,77

Which being divided by 104, the number of rods of fence made, gives 53½ cents as the cost per rod—aside from nails of which I kept no account.

Some of your numerous readers may be anxious to know whether such fence will answer the purpose in all cases. I can only say that mine is a road fence, and that when it was built, there was a good crop of pumpkins lying in the field along side, where they grew, and that notwithstanding many cattle and hogs made the attempt at them, they did not succeed; and my short experience goes far to convince me that no cattle, hogs or fowls will get over or through it.

Ridgeway, N. Y., January, 1849.

The above article should have been published in our February number, but was overlooked. Its facts and figures are important.—Ed.

MORE ABOUT WIRE FENCE.

BY T. C. PETERS.

My friend Myron Adams, Esq., has another good article on the subject of wire fences. As he is the only one among us, as yet, who has made the experiment, I concede to him the right to speak by authority.

But he does me too much honor where he writes me "*judge*," and I fear a wrong impression might be created if I were to leave the error uncorrected. I am not a judge, never was, and never desire to be a judge. The highest elective office I was ever elevated to, was Trustee of a School District, and some idea may be formed of my popularity when I say that I never got a single vote for re-election! Perhaps I am wrong in saying that I have never held any other elective office, for I have been several times honored by being elected President of the Genesee County Agricultural Society. I am free to say that I am prouder of that office than any other the farmers have it in their power to bestow, and am more anxious to discharge the duties in a proper and satisfactory manner.

But to the fence. I have been confined so much of the past month by sickness, I have neglected the subject entirely. Mr. Adams may be right as to the number of strands, though I cannot see the necessity of over five in four feet, for he says that is the proper height. I however won't quarrel with him. All I want is to keep the matter before the public, and ultimately we shall get something that will be reliable and useful. I am entirely confident that within ten years wire fence will be the prevailing fence in this country and abroad, because it will be the cheapest, most durable and ornamental of any that can be built. There will be failures of course, but the very necessity of the thing will force it to perfection.

Mr. Adam's practice is worth all my theory, and I learn very much from him each time he writes. He has adopted the only true method of mending, or joining the wires, and that by winding. The same method is used at the suspension bridges. I commenced agitating this subject of wire fence about a year ago, and although I have been often ridiculed and called visionary, I have not been deterred from keeping it up. I am amply repaid by the great amount of knowledge which has been thus far brought out. And before another year goes round, the building of this kind of fence will be no longer an experiment. I fully agree with Mr. Adams that farmers ought to be satisfied if they can build a durable fence for fifty cents per rod. *Darien, N. Y., March*, 1849.

GRAVEL FENCE.

O. E. Garrison, of Troy, Ill., gives in the Prairie Farmer, the following mode of constructing gravel fence. It looks quite practicable:—"Put up a wall of gravel and lime three feet six inches high, (the same way they build gravel houses) eight or ten inches thick at the bottom and three or four at the top. When the last layer is in the moulds, put in sticks (strips of lath will do) eight or ten inches long, leaving them six inches above the mortar, and sharpened like pickets; you will then have a fence four feet high that will last forever.

If you want it to look nice, take sand and lime, each an equal quantity, add any coloring matter to suit your fancy—lay it on the wall and mark it like stone blocks. It will make a fence nobody need be ashamed of, at a cost of not more than a dollar a rod."

VALUE AND CULTIVATION OF BARLEY.

BY MYRON ADAMS.

Messrs. Editors:—My attention has been called to the crops of barley raised in this town for which premiums have been awarded by our State and county Agricultural Societies during the last six years. I think the value of the barley crop is not duly appreciated by our farmers, and perhaps a statement of what has been done here may stimulate others to engage in its culture. I have not been able readily to find full statements of all the crops for which premiums have been awarded by our Society, and have therefore taken nine crops which I find reported in the Cultivator. The largest crop, grown by S. B. Dudley, was 69 bushels. The least crop of the nine was 48½ bushels—the average 56⅓ bushels. Three of these crops were grown by Mr. Bradley, and the average of the three is 59⅓ bushels. Mr. Dudley also raised three of these crops, and his average is 57⅓ bushels.

These crops were all grown after corn—the land having been manured for the corn with from 15 to 30 loads of unrotten barn yard manure. The land was but once plowed, thoroughly harrowed, and in some cases rolled and plastered. The seed was generally sown dry, but for some of the crops it was soaked in the strong black juice of the barn yard, and rolled in lime. One important feature in these crops is, they were heavily seeded. In most of them 3 bushels of barley, per acre were sown. The average expense per acre of growing these crops I think will not exceed $10, including rent of land—and the value of the crop per bushel will average 50 cents. The amount of the average of these nine crops is 56⅓ bushels, at 50 cents per bushel, would be $28 25 deduct expense of cultivation—$10 would leave a profit of $14 per acre.

Another thing in favor of this crop is that the land is only occupied by it for about three months, and is then in the very best state for a crop of winter wheat. I apprehend the reason why this crop is so unpopular with farmers is that when they raise barley they sow it upon poor land, in an exhausted state, and quite too many acres of it. It ripens when they are engaged in their wheat harvest, is suffered to stand until it is dead ripe, and is then very disagreeable indeed to handle. Our best growers of barley do not sow over two or three acres, sow it easily and harvest it as soon as the stalk begins to whiten below the head. It is then pleasant to handle, and the straw is better for fodder than the straw of any other grain. With good culture it is a very sure crop. It is sometimes smutty but never when the seed is limed. There is a great temptation to sell the crop for distilling when the price rises to 60 and 70 cents a bushel, as it has the two last seasons—but I think farmers will always find it a profitable grain for consumption. Grind it or soak it and feed it to hogs, horses, working cattle, poultry—any thing but milch cows and breeding sows. *East Bloomfield, N. Y.*, 1849.

SEEDING WITH CLOVER.—AGAIN.

BY F. W. LAY.

Messrs. Editors:—Your reviewer of this month thinks I labor under a hallucination, in asserting that clover will not grow when sown in the spring on the wheat crop, with once plowing a sward; and says "that if cast early enough, before the frosts of spring have ceased to elevate and crumble the soil, so as to cover the seed, it never fails if the seed is good." Whether this is his mere *ipse dixit*, or the result of any experiments or observations, he does not inform us; but he probably reasons from theory instead of experience;* and as this may be important for some to know in order not to be disappointed in crops and rotations, I will state my observations on the subject.

The first time I observed it was some six years ago in making an alteration in the lots. I brought about an acre of clover sod in with my summer-fallows, which I turned under and sowed with wheat—the soil a deep rich sand. The next spring I seeded the whole with clover; have forgotten the time of seeding. The part summer-fallowed grew finely, and was very thick, while directly side of it, where the clover sod was, scarcely a plant was to be seen.

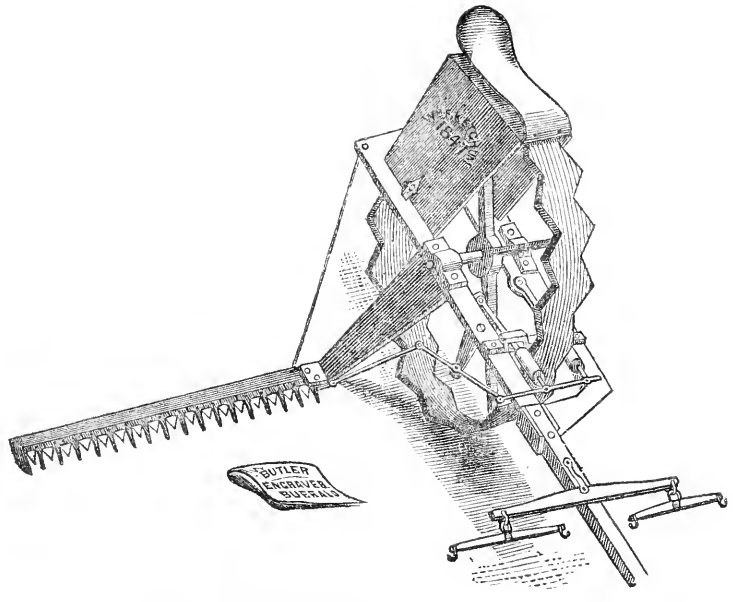
The next year I had a lot of nine acres, about three of which was planted with corn and the remainder in wheat; and as I wished to get it all in one crop, I plowed it all in the fall and sowed it with wheat. The next spring I sowed on clover seed, as sown in the spring as I could after the snow was gone. The soil was a gravelly loam. The three acres where the corn was, the clover grew very thick and rank, while directly along side, for the whole length of the lot, which was sixty-three rods, not a plant was to be seen. I afterwards turned over three acres of wheat stubble in the spring and sowed with oats and clover, dragging in the clover seed with the oats. I watched this carefully; the plants came up but soon began to wither, and, by midsummer, were all gone, as the whole lot was alike. I am not certain but the dry weather of summer may have killed this, but the two first cases to me were fair and satisfactory. I have also noticed it in several cases on my neighbors' grounds, and have never known a different result. How it might be in some soils and circumstances, I know not. Why it should fail with once plowing, any more than several, I cannot tell. *Greece, N. Y., February*, 1849.

* Our reviewer is one of the most experienced practical farmers in Monroe county.—Ed.

Improvement in New England.—The subject of farming, or rather of improvement in the mode of farming, is beginning to attract a little more notice than it formerly did; and amidst much prejudice and ignorance, some of our best farmers are thinking and talking about how they shall turn their labor to better account. They begin to see the necessity of connecting science with agriculture. As an evidence of an increased interest on the subject, I will mention the fact, that a few weeks ago, a "farmers' club" was organised in this place, for the purpose of "Mutual improvement in the art of farming;" and the subject of "Manures," was proposed for discussion at our next meeting. *Warren, Ct., March*, 1849. H.

Pea Bugs.—*Friend Farmer*:—Not having bugs in my seed peas for several years, I claim, in behalf of all concerned, to tell my story. My way of doing it is, to sow early peas, and as soon as they are ripe, sow them for a second crop the same year. No bugs will be found in the last crop. Whether the same time of sowing of last year's seed or of keeping the same to the second year I know not, not having tried it. My first crop I have found usually stung badly; but by sowing immediately, the insect has not time to mature, and leaves the second crop untouched.

Hinmanville, March, 1849. Cephus.



KETCHUM'S MOWING MACHINE.—PATENTED JULY, 1847.

KETCHUM'S MOWING MACHINE.

The information in our possession relative to this machine induces us to recommend it to the attention of farmers. The manufacturer states that—"This machine is simple in its construction, and made mostly of iron, and not liable to get out of order. It is capable of cutting from 16 to 20 acres a day; and the grass when cut by it falls back to the rack bar, and lays smooth and even on the ground, in a proper shape to dry—thereby saving the time and expense of spreading it. In meadows that are considerably broken and uneven, as well as those which are smooth and even, it has been found to operate with perfect success, and to all appearance the cutting is the same."

This machine received the first premium of the N. Y. State Ag. Society, at the Annual Fair at Saratoga, in 1847. It was exhibited at the State Fair in 1848, and received a Certificate as the highest evidence of merit. We annex the report of the Committee:

"The undersigned, a Committee on Mowing Machines, *Report.*—That, only one Machine, and that patented to Wm. F. Ketchum of Buffalo, has been submitted to their inspection. They have examined this with care, and have had a full opportunity of witnessing its operation, and in their opinion, the Machine is simple in construction, and performs its work in a very satisfactory and complete manner, accomplishing a great saving of manual labor.

Although the Machine works best in meadows with smooth and even surface, yet, we see no reason why it will not do well on surfaces moderately broken and uneven, not being exposed as we see, to any greater embarrassment from uneven surfaces than the Plow is. As regards its liability to be broken or disarranged in its work, we discover nothing peculiar, and as to this, it can only be determined by longer continued experiments than we have had opportunity to witness.

On the whole, we recommend the Machine to the favorable regards of the Society, and through the Society to the attention of the Agricultural public. All of which is respectfully submitted.

Albert H. Tracy,
Thomas C. Love,
W. R. Coppock."

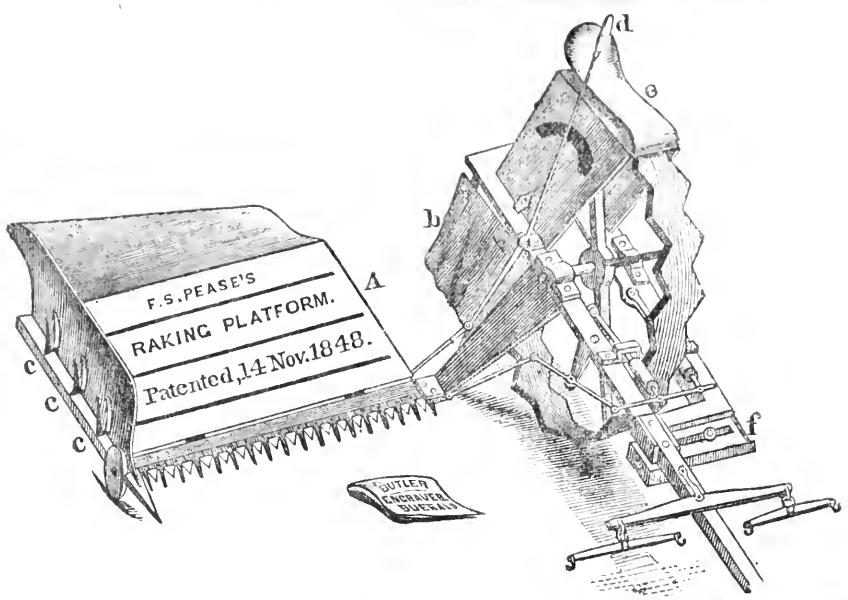
Buffalo, Sept. 7, 1848.

PEASE'S RAKING PLATFORM.

If this improvement, attached to the machine, above represented, will work as well in a wheat field, as is indicated by the operation of a model we have examined, it will prove a most valuable invention. It is thus described by Mr. Pease:

"The Raking Platform (A) is attached to the back of the rack bar, it being of the length and width required to receive the grain, and from two to three inches in thickness, consequently not interfering with the stubble over which it passes. When a sufficient quantity of grain has been cut and falls on the platform, it is easily raked therefrom by the person that drives, who sits upon a spring seat (e) and by pulling the lever (d) a short distance, (it being connected with the raking apparatus which is placed in the platform,) it operates immediately on the teeth (c c c,) which are forced across the platform, raking the grain from it, and landing it on the ground between the platform and the apron (b.) By a reverse motion of the lever the teeth fold up and travel back under the platform, and rise behind the turn off, by which they are protected; consequently the teeth in their return, do not interfere with the grain which is constantly falling on and across the platform. The time required to rake the bundle is no more than is necessary for the person who drives to move the lever a short distance. By this simple machine it will be seen that one man is required to drive the team and rake the grain: having at his control the raking apparatus enables him to gather a bundle as large as he likes, and rake it when and where he pleases; and he can make allowance for the thickness and thinness of the grain and rake it accordingly. It is raked in such a manner, that the bundle is landed upon the ground smooth and even, and out of the way of the machine when it comes round for the next swarth, leaving the grain in bundle, and in good condition to bind at leisure.

The Raking Platform is easily attached to any



grass or grain cutting machine. As represented above it is attached to Ketchum's Mowing Machine, which is made to answer a double purpose. A farmer can use it for mowing; and by attaching the platform it is made a reaping machine, capable of raking its own grain, and easily operated by one man.

The great amount of time and expense saved by this invention will be acknowledged when it is known that in all other reaping machines it requires a number of men to operate them, or to bind the grain and get it out of the way, for the next swarth. By this machine one man can drive his team and rake the grain into a bundle and leave it smooth and even on the ground, and out of the way of the machine when it comes round for the next swarth. The attachment of this "*rake off*" to Ketchum's Mower, or any similar machine,enables the farmer to cut his hay, and cut and rake his grain with the same machine."

Further information relative to Ketchum's Mowing Machine, and Pease's Raking Platform, can be obtained of Mr. Samuel W. Hawes, of Buffalo, N. Y., who is owner of the patents. See his advertisement in February number of the Farmer, and also in the advertising department of this number.

NOTES FOR THE MONTH.

H. Y., in the last Farmer, demurs to my use of the term *alluvial soil* as incorrect when applied to our formations. He says *diluvial* is the word. I wrote *alluvial*, because every farmer knows the meaning as rich bottom soil; and all the subsoil of Seneca County is of that character. Diluvial, I take it, is often mere barren drift or detritus. The hills of Indiana have been called alluvial by professed geologists. But as I am far from accusing H. Y. of hypercriticism, I hope he will excuse me for demurring to the expletive he puts in a line of Shakespeare.

The Sovereign Peo·le.—It must be admitted by all the world that to the people of these United States alone belongs the title of *Sovereign People*. In republican France all is taxed to support a colossal army to protect the government, not against the foreign foe, but against the fickle, factious people, who made the government itself. It takes the enormous amount of $328,000,000 annually to support the republican government of France; whereas the Secretary of the Treasury of the United States estimates our expenditures for the coming year at a little over $33,000,000. The taxation of the United States is only about one dollar and fifty cents per head, and nearly all from a duty on imports. In France it is nearly ten dollars per head, and the revenue is raised chiefly by direct taxation. What would our farmers say to such taxation? 'Tis true that the products of the soil might rise in price, but what would become of those farmers who have little or no surplus to sell? S. W.

CARROTS.

Cyrus T. Deak has raised in the town of Mt. Morris, Liv. Co., the past season, on seventy-three square rods of land, three hundred and seventy bushels of carrots, about one half of the yellow kind, the remainder of the white field variety. The land on which they were raised, is a black muck, with clay subsoil. The expense of raising the crop was as follows:

2 days work of hand and team plowing and harrowing,	$3.00
4 days planting by hand,	4.00
7 days hoeing, at $1 per day,	7.00
Expense of harvesting at 3 cents per bushel,	10.00
	$24.50
Crop worth 25 cents per bushel,	90.00
Over and above expenses,	$65.50

Yours, &c., Wm. W. Deak.

Remarks.—We are highly gratified with the above result, as it is a subject,—the raising of roots,—that we have taken a great interest in, and the benefits of which we wish to enforce upon our readers. Mr. D. has stated his price for labor, and perhaps the value of his crop, too high—but with that deduction, it is an important result.—Ed.

Improved Stock.

SHORT HORN CATTLE.—MR. VAIL'S STOCK.

BY SANFORD P. CHAPMAN.

[Reply to M. Hanford, Jr., and A. G. P., page 43 of present volume.]

As friend H. calls for some testimony in regard to Mr. Vail's stock, and also asks a few questions, we think we cannot do better than present him a few facts, most of which are already familiar to the greater part of the agricultural public.

At the show of the American Institute, in 1843, Mr. Vail's *Meteor*, then only two years old, was awarded the highest premium for the best bull of any age, competition open to the United States. At the State Show, held at Poughkeepsie, in 1844, *Meteor* was again awarded the first premium for the best Durham bull, and also the first premium for the best bull of any age or breed. At the State Show at Auburn, in 1845, Mr. Vail's *Lady Barrington III*, [for portrait and pedigree of this cow see vol. VIII, p. 212 of this journal.—Ed.] received the first premium. At Saratoga in '47, Mr. F.'s *Hilpa* was also successful. In '45 Mr. Z. B. Wakeman, of Herkimer Co., purchased two calves of Mr. Vail, a bull and heifer. These obtained the first premiums in their class at Utica in '45, at Auburn in '46, at Saratoga in '47, and the bull at Buffalo in '48.

In 1844, (see the Society's Transactions for '44, pages 214 and 215,) the Society's first premium was awarded to Mr. Vail, for the largest quantity of butter made from 6 cows,* (*all thorough bred Durhams,*) in 30 days, fed on *grass pasture alone*, and that not the best. It will be seen by that statement, that the six cows produced 265 lbs. and 10 oz. of butter in 30 days. One cow, *(Old Willey,)* milk and cream kept separate, produced 52 lbs. and 9 oz. The quantity of milk, accurately weighed and measured from the six cows in one day, was 265 lbs. 10 oz., measuring 134 quarts; averaging for each cow in one day $22\frac{1}{3}$ quarts.

In the American Agriculturist for 1848, page 294, Mr. Bell, of Morrisiana, gives a challenge for milking stock, (his stock are Durhams,) which is still open. If friend Hanford, or some of his friends who have the "common stock," wish to test their value as *milkers* against the Durhams, this will afford them a good opportunity. We have not the pleasure of a personal acquaintance with Mr. Bell, nor do we know much about his herd; but judging from the animals we have seen, and knowing that they possess the blood of the late Earl Spencer's celebrated herd, we have no fears as to the result.

There are many recorded facts showing the good *milking* qualities of the short horns, a few of which we will briefly mention. Mr. Calvert, near Brampton, in England, had a short horn cow, which produced 373 lbs. of butter in 32 weeks. In one week she produced 17 lbs. on grass pasture. The imported cow *Dime*, owned by Mr. Allen, gave upwards of 30 quarts of milk per day, on grass pasture. Mr. Whittaker of England had one cow, *Yellow Rose*, which gave when 3 years old, 36 quarts (wine measure) per day, and when 4 years old 38 quarts. The celebrated herd of Col. Jaques of Mass., which from the quantity and quality of their milk he has named "Cream-pots," are high grade Durhams; descended on the side of their sire from the imported bull *Cœlebs*. While Col. J. owned this bull he received no less than three thousand two hundred and thirty dollars for his services. (A better investment we should think than money in the state stocks.) In a letter to the Editor of the Cultivator, in 1845, Col. J. says: "The different strains of *Cœleb's* blood are now daily talked of, and are eagerly sought after, * * * *particularly* by our *milk-men*." A little farther on the editor remarks—"Particular trials have been made with some individuals of this stock, and they have given at the rate of from *seventeen* to *twenty-one* pounds of butter per week." Truly a *strain* of Durham blood does not *injure* the milking qualities of our native stock. Mr. Allen, Editor of the American Agriculturist, for 1848, page 54, says: "For a combination of all these qualities," (viz: good working cattle, good beeves and good milkers,) "and especially as beeves and milkers, we do not think those Durhams which are *properly bred can be excelled*." In the article referred to Mr. Allen tells a story of a Durham bull, which we wish friend Hanford to read. We think, however, it will be rather hard for his *quality* feeding to digest.

"It is said," (by whom ? any one that ever bred or owned a pure bred Durham ?) "they are great consumers. In this principle it will be observed is involved the *quality* of feeding." We should like to see the *facts* with *figures* to prove this. We deny the charge; and without the *testimony* we think we have as good a right to *demur* as friend Hanford.

The Editor of the Cultivator in 1845, page 44, speaking of Mr. Prentice's Durhams says: "This herd of cattle cannot be large consumers; after making due allowances for the fertility and production of the land, the quantity of stock kept is certainly remarkable. * * * *Appolenia* is one of the best *dairy* cows we have ever seen."

In 1842 in the New Genesee Farmer, Mr. Colman, then Editor, says—"If any man, however, chooses to see this stock in perfection, let him go to the farm of E. P. Prentice, of Albany; and if he has *any* prejudices of *any kind* against the stock, and is not prepared to yield *every one* of them, I can only say he is differently constituted from what I am."

We last fall purchased the cow *Charlotte* of Mr. Vail, [for portrait of this cow see plate in February number of Cultivator, for 1848—Ed.] formerly owned by Mr. Prentice. We have kept this cow through the winter until February, entirely upon *barley straw;* and yet such is her thrift and the ease with which she is kept, that strangers frequently inquire if we are fattening her. A few years since we kept a Durham bull *Nero*, from Mr. Van Rennselaer's stock, owned by Mr. Ward of Wampsville. During part of the winter we were under the necessity of feeding this bull wheat straw, as he was likely to become too fleshy upon barley straw for spring's service. We don't however suppose that all Durham's will keep with the ease of the two last mentioned animals, but we do think *as a herd they are small consumers.* As to the cow referred to in our previous article we would say, that she is expected to calve in June next, and should we find it convenient, as we presume we shall, it will afford us much pleasure to furnish friend Hanford, and the readers of the Farmer the information he requests.

We would not advise A. G. P., if he is about com-

* The keeping of these cows during the winter previous to the trial, was hay fed at night, and during the day corn stalks and straw in the barn yard. Had the pasture been *first rate* during the time of trial, we presume the cows would have yielded nearly two pounds of butter more per week each.

mencing the dairy business, and has $6,000, to expend it all in Durham cows at $150 each; but we would advise him if he keeps much stock or intends to, to purchase a first rate Durham bull, although it might cost $300. Make up the rest of your herd with the best common cows you can purchase, and by a judicious use of this bull with such change as occasion may require, we doubt not in a few years you will find, (by carefully raising your heifer calves and disposing of your older cows,) the value of your herd greatly increased, and the sum expended for the bull a profitable investment. Friend A. G. P. erred a little in his calculations in not reckoning the value of the calves into his account. A good Durham calf is worth from $50 to $300 when quite young. If he had counted them worth only the smaller sum, it would have made a little difference in his figures. We can hardly think that A. G. P. would suppose any one so foolish as to pay $150 for a Durham cow, and then "*deacon*" her calves! This would be folly in the extreme. At the time of Mr. Prentice's sale in '45, one bull calf, *Tecumseh*, out of *Charlotte*, and another, *Duke*, out of *Matilda*, sold for $200 each. Mr. Vail has sold all his bull calves from his *Lady Barrington, III*, two in number, for $300 each when quite young. Col. Jaques, before referred to, has sold some of his full bloods, when 8 months old, for $300.

There has been no time in England since the sale of the COLLINGS, that the short horns have been in greater demand, or brought better prices than at the present. Mr. BATES, (the breeder of Mr. Vail's Duke of Wellington and Lady Barrington III,) last year let a bull to serve a small herd of cows for seventeen weeks, for *over one thousand dollars*. The short horns belonging to Earl Spencer's estate were sold last year. Eighty-eight animals brought the round sum of $28,717. One bull sold for $2,100. We mention these facts merely as a proof, that, in the words of Mr. ALLEN, "where they have been bred longest they are liked best," and to show the value that is there placed upon this noble breed of cattle. *Clockville, Mad. Co., N. Y., Feb.*, 1849.

BREEDING HORSES.

THE "*Vermont Agriculturist*" for January, 1849, contains an article with the above head. As that paper has been discontinued, I am under the necessity of asking you to insert in the Farmer the following reply to the article alluded to.

The writer in the *Agriculturist* says—"The horses whose stock in this State have proved superior, were without an exception, *thorough-bred horses*. * * * The four horses that have been most celebrated in the State, are the 'Morgan,' the 'Cock of the Rock,' the 'Magnum Bonum,' and the 'Old Telescope.' The Morgan stock has, as a general thing, been most noted. The pedigree of the original Morgan goes directly back through 'True Briton' and imported 'Othello,' to 'Musgrove's Arabian' and 'Childers'."

In relation to these statements, the first question that arises is, What constitutes a thorough-bred horse? Perhaps it will be replied, the English race horse. And this answer may for the present be received as correct, without stopping to inquire into the origin of the race-horse.

Is it then true, that the four horses named were thorough-bred? Take them in order: First, the Morgan, whose stock the writer of the article in the *Agriculturist* says "has, as a general thing, been most noted," (a conclusion, by the by, which I think will not be disputed.) Was he a thorough-bred horse? His sire is admitted to have been a horse called True Briton or Beautiful Bay, obtained (stolen it is said) from Gen. JAMES DE LANCY, of New York. There have been several horses by the name of True Briton. What was the blood of the one mentioned? The late JOHN MORGAN, of Lima, N. Y., stated, (see Albany Cultivator, vol. IX, p. 140,) that he was got by the imported horse Traveller, (Morton's Traveller.) Mr. M. kept him several years, during which time he begot the old or original Morgan horse. But the writer in the Agriculturist says the sire of the original Morgan was imported Othello! Where is the evidence of it? The true Briton, by Othello was on the turf and won matches in 1765–6. (Am. Turf Register, vol. VI, p. 5.) The old Morgan was foaled in 1793. Is it probable he was got by a horse so old as to have run races *twenty-eight years before?*

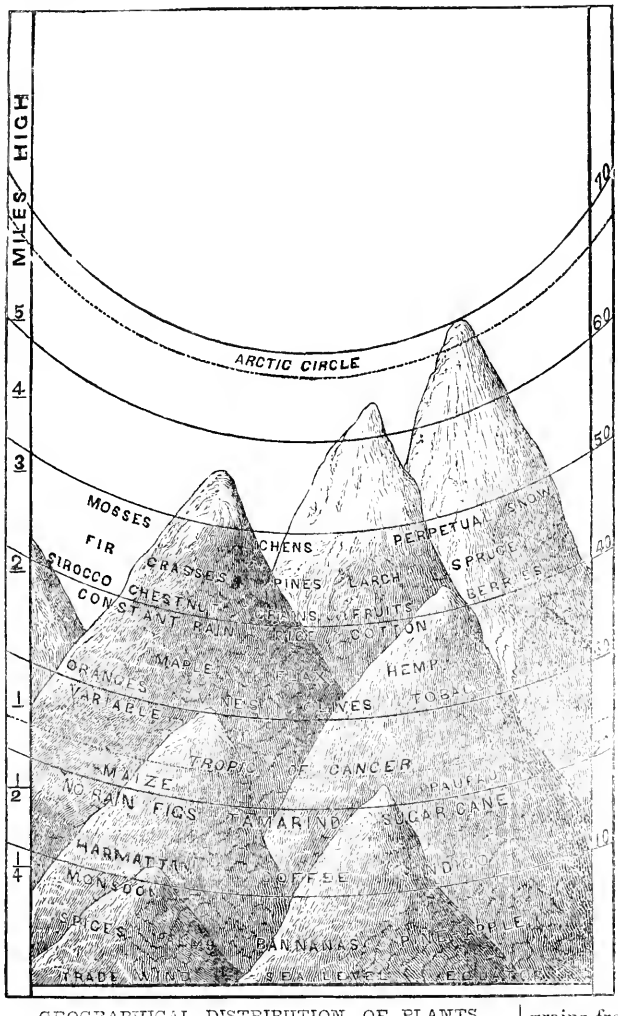
But admit that the sire of the old Morgan horse was a full blood race-horse. What was his dam? JOHN MORGAN, (before named,) states that she was got by a horse called "Diamond;" he by "the Church horse;" and he by the imported "Wild-air." Nothing is said by MORGAN of the blood of the *granddam* of the Morgan horse, or the blood of the dam of "the Church horse." The inference is, therefore, that they were of the common or *cold* blood. The dam of "Diamond" is said to have been an "imported" mare. (See Albany Cultivator for 1846, p. 19.) "Wild-air" was a well known English race-horse. Now if he begot "the Church horse" on a common mare, the latter horse would of course have been half blood; if "the Church horse" begot "Diamond" on a full blood mare, he would have been three-fourths blood; and the latter horse having begotten the dam of the old Morgan on a common mare, she would have been *three-eighths* blood. Hence, if True Briton was a full blood or thorough-bred horse, the old Morgan, inheriting half or *eight-sixteenths* of his blood, and *three-sixteenths* other racing blood, (from his dam,) would have been *eleven-sixteenths* blood. *Does this make a thorough-bred horse?*

The writer in the Agriculturist next gives what he calls the pedigree of "Cock of the Rock."—He says he was got by Duroc; his dam by imported Messenger. But is this such a pedigree as would satisfy a breeder of blood horses? Admit that Duroc and Messenger were thorough-bred horses—(though it is well known to turf-men that there is a *flaw* in the pedigree of the former)—is the case then made out, that this "Cock of the Rock" was thorough-bred? On the side of his sire his pedigree may be accepted. His dam was half Messenger: but what was his *grand-dam?* According to this "pedigree," "Cock of the Rock" was half Duroc and a quarter Messenger—that's all. *Does this make a thorough-bred horse?*

He then goes on with "Magnum Bonum," who he says was "sired" by imported Magnum Bonum; but his dam is not even mentioned; and according to this statement he was only half-blood! This is the third of his "thorough-bred" horses.

As to "Telescope," the fourth horse mentioned, it is merely stated that his pedigree can be "traced [in the same way the others are traced?] back to the highest strains of English blood."

Comment on such "pedigrees" is unnecessary. * *



GEOGRAPHICAL DISTRIBUTION OF PLANTS.

BY L. WETHERELL.

The above illustration is from "Rodgers's Scientific Agriculture;" and was designed by the author to aid the mind in acquiring a knowledge of the distribution of plants with regard to height; to show the latitude of prevailing winds, and the altitude of no rain and of almost constant rain. The figures on the right hand side of the cut, denote the degrees of north latitude; those on the left denote the height of mountains, graduated in miles. There is also an attempt to show the lines which separate between the elevation of the different species of plants; "and the line of perpetual snow."

It is a well established fact that a greater degree of cold prevails in the upper regions of the atmosphere than at low levels. This is manifest from the fact, that, the mountains of the equatorial region at the height of 16,000 feet are covered with perpetual snow; the height of the snow line diminishes in passing from the equator to the poles of the earth, until it rests on the sea level at 70 or 80 degrees north latitude; this is true of the summer temperature: the snow line is much further south when the sun is in the tropic of Capricorn. According to Prof. Leslie, the mercury in the thermometer falls one degree for every 500 feet of ascent. Hence an elevation of 15,000 feet near the equator produces the same changes in the vegetable kingdom as the distance of 3,000 miles north of the equator on the level of the sea. An elevation of 7,900 feet in the tropics gives a temperature the same as that of France, which is 49 degrees north latitude.

Humboldt, in his travels in S. America, has given a sketch of the vegetation of the Andes, commencing in the torrid zone on the level of the ocean, and ascending to the region of "eternal snow." A condensed view of this sketch with the aid of the cut, will enable the reader to gain a very correct idea of the distribution of plants,—remembering always that altitude from the level of the sea produces the same effect upon climate and plants as travelling north or south of the equator.

1. *The Tropical Zone.* This is called the region of palms, and extends from the level of the sea to 3,500 feet. Here grow in perfection the splendid palm family, the sugar-cane, the coffee plant, the tea plant, the orange, the lemon, the fig, the citron, the pine-apple and the banana; also the region of the nutmeg, cinnamon, clove; and of the various fragrant and medicinal gums. Here are found, also, various and valuable kinds of wood, as the mahogany, the iron-wood, the teak-tree, and the bread-fruit-tree; the various kinds of dye-wood, as logwood, camwood, &c. Wheat does not flourish at this altitude: maize, rice and millet do—: these with the bread-fruit, plantain, cassava, manioc roots, taro-root and the yam, furnish food for more than one-third of the human race.

2. *The Temperate Zone.* This region produces in great abundance the grains from which man's bread is made. Here the wine-grape is cultivated in the greatest perfection; also the apple, pear, plum, peach, cherry, apricot, &c. Some of them flourish better in the northern and others in the southern part of this region, or what corresponds thereto, the less or greater altitude.

3. *Arctic Zone.* In passing from the temperate to the arctic zone, the limit of the vegetable world is soon found: very few plants are seen above the elevation of fourteen thousand feet. Lichens are the first that appear on the outside of the vegetable world, whether altitude or latitude be regarded. More than 2,400 species are known. As you approach the limits of the temperate zone, shrubs and herbaceous plants appear—then the evergreens, mingled with the birch and willow. Wheat scarcely comes to maturity—some of the more common garden vegetables are produced here at an altitude corresponding to the temperature of between 60 and 70 degrees north latitude.

The dwarf birch and willow are the trees nearest the snow region: the former seldom exceeds two feet in height, and the latter is still smaller. The reindeer moss grows beyond this limit, proceeding north. As you approach the equator from the region of the dwarf birch, the common birch, the mountain ash,

and the Scotch fir, two or three species of the willow, a species of the alder, the bird-cherry, the aspar, the goose-berry and the rasp-berry; and as we go on south we arrive at the northern limit of the ash, the oak and the beech. The northern limit of the oak on the Atlantic coast of Norway is 63 degrees north latitude. On the eastern part of Europe on the borders of Asia it is not found north of 57½°: a fact showing the difference of climate between eastern and western Europe. On the coast of Norway the spruce fir is not found north of 67°; the Scotch fir extends to 70° and the birch to 71°.

The birch unfolds its leaf when the temperature any time during the month rises to 52 degrees. It has been found that barley may be produced where the mean temperature during 90 successive days rises to 48 degrees. It has ripened in Norway under the 70th degree of latitude. In European Russia wheat scarcely ripens at 60°; and the limit of it in Kamskatka, the eastern part of Asia, is 51°; and on the eastern coast of America not beyond 52°. Wheat demands a warmer climate than oats or barley. The apple does not ripen north of 62° in northern Europe, nor north of 57° in eastern.

Humboldt estimates that the cultivation of the vine succeeds only in those climates where the annual mean temperature is between 50 and 68 degrees. The mean temperature may be as low as 48°, provided the summer heat rises to 68. In the old world these conditions are found true as far north as lat. 60°; and in the new not beyond 40°, and ceases in both within 30° of the equator. Thus, as the reader will observe, the region for vineyards is twice as broad in the old world as in the new.

The orange and lemon require an annual mean temperature of 62 degrees.

I have endeavored in this communication to give the reader a sketchy, outline view of the distribution of plants. I am indebted to "Rhind's History of the Vegetable Kingdom" for some of the facts here given.

I propose to present in a future number of the Farmer some considerations on the subject of climatology, which is intimately connected with the present. I shall then have occasion to refer the reader to the cut inserted in the present article for further illustration. *Rochester, N. Y., March*, 1849.

TILE FOR UNDER-DRAINS.—INQUIRY.

Messrs. Editors:—For several years past I have read much in the Genesee Farmer and Albany Cultivator, urging the importance of thoroughly draining all wet lands; and each of them for March has an excellent article on under-draining, from practical farmers, showing its importance, and how soon a return is obtained for the outlay. Many farms are destitute of suitable materials to build drains with, and tile are needed.

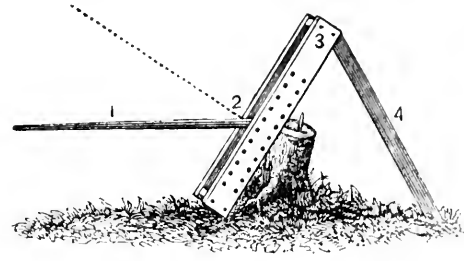
The object of this article is to arrive at the best pattern for tile. I intend to commence the manufacture of tile, this spring, of the following pattern:—The tile over a half circle, three inches in the clear, about fourteen inches long; and flats, the same length of the tile, wide enough to lay the tile on: when laid to brake joints like brick work.

If any of your readers can describe a better pattern for tile, will they please give a description in the Farmer? Alvin Wilcox.—*West Bloomfield, N. Y.*

For price, &c., of Mr. W.'s tile, see advertisement in this paper.—Ed.

A CHEAP STUMP MACHINE.

Messrs. Editors:—You have so many times called upon the readers of the Farmer to become contributors to its pages that I have determined to make the attempt, and herewith send you a description and rude sketch of a Stump Machine, with which last fall I cleared fifteen acres from stumps.



There may be many of your readers living, like myself, on farms not very heavily timbered originally, and which have been cleared long enough for the roots of the stumps to become considerably decayed, to whom it would be some object to obtain a small, cheap and simple stump machine, which would answer their purpose as well as one more costly. In the sketch 1 is a round pole 10 feet long, 4 inches in diameter at the largest end, which is well banded. Into this is inserted a bar of iron 2 by 2½ inches, drawn to half that size at the end inserted into the pole, and 2 feet long. Near the end of this, two notches are cut, a little over 4½ inches apart. In the middle between these, a hole is punched and a link 6 inches long inserted, as seen in Fig. 2, which represents the bar, large hook to hitch under a root of the stump, a link inserted in each, and a connecting hook. The links are made of round ¾ inch Swede's iron, the connecting hook of 1⅛ do.; the large hook of a bar of old sable iron 18 inches long, bent round edgwise. 3 is a frame consisting of two oak planks 3 inches thick, 8 wide, and 7 feet long, pinned together at the ends through a piece of 4 inch scantling, between the planks. There are two rows, 4½ inches apart, of 1¼ inch holes through these planks: the holes being 3½ inches apart in the rows, from center to center. The holes in the right hand row are one inch lower than the opposite ones in the left. Through these holes two iron bolts, as large as the holes, are made to pass for the bar or lever to rest upon.

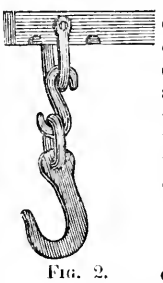


Fig. 2.

To use this machine, it is set up as seen in the figure; 4 being a board for a brace, the lever placed between the planks, the notches resting on the two bolts, and the hook hitched under a root. Now elevate the end of the lever, (which needs a short pole attached by a ring to the end of a long one,) withdraw the left hand bolt and raise it one hole higher; now depress the end of the lever and raise the right hand bolt; and so on as high as you wish. The cost of the machine was $7—iron $4, making $3. Any blacksmith and carpenter can construct one. With a team and sled or stone boat to draw the machine about, I have seen two hands, on a lot that had been cleared fourteen years, pull in a day from sixty to a hundred stumps, mostly from ten to eighteen inches in diameter. *Ontario Co.*, 1849. T. W.

LUNAR INFLUENCE—THE TIDES, &c.

BY PROF. C. DEWEY.

That attraction holds bodies together, draws bodies towards each other, directs the course of the earth around the sun, influences the motions of the moon and planets and produces the tides, was maintained by wise men before the Christian Era. It has been the glory of modern philosophy to ascertain the *amount* of the attractive power, its *direction*, its *varying action*, and in that way to come at the *solution of phenomena* before inexplicable.

The force of gravitation takes place between the parts of matter comprising the earth, moon, &c. It operates downwards upon the matter around, and sideways upon matter contiguous to a mountain, between two balls of lead, between a pendulum and any large mass of matter. All this is proved by experiment. A pendulum is proved to be drawn sideways towards a mountain.

What is attraction? The answer—and hence the definition of attraction—is, these *effects* must have a *cause*, and attraction is the name given to the *cause* of these *effects*. It is of no consequence what the *nature* of the cause is; the operation is the same as if attraction took place between the bodies, and hence the *power* or *cause*, be it what it may, is named attraction.

You strike a ball and it is set in motion by the blow. You call it *impulse*, or the *momentum* of the *striking* body which moves the ball, and thus you call the *cause*, be it resistance, or repulsion, or momentum acting on the matter, or mass upon mass directly, *impulse*. So, attraction is the name of the cause.

The force of gravitation at the earth's surface in our latitude is sufficient to move a body a little more than sixteen feet in the first second of time, if the body could fall without any resistance or counteracting action. The *amount* of the force is thus determined.

The *law* of the force is ascertained; and the force diminishes as the square of the distance increases. Hence, the moon, at sixty semidiameters of the earth from the earth's center is attracted but one-thirty-six-hundreth as much as matter is at the surface of the earth. This is actually the distance she falls towards the earth at a mean rate, in order to revolve round the earth.

The *force varies* too as the *quantities* of matter, that is, each particle attracts each particle in the sphere of its influence. Hence the attraction of the earth upon the moon is equal to the moon's attraction of the earth. The earth has eighty times the matter to attract the moon, and the moon has eighty times her own matter to be attracted by her in the earth. Their attractions must be equal.

If any one is disposed to say there *is no such thing as attraction;* very well, let it be so. Still the fact is before the eyes of all men, that the earth and moon revolve around a common center in a little more than twenty-seven days, or a little less than those twenty-seven and one-third days, and thus fall towards each other. There must be some *cause or power* which does this, and makes them so fall and revolve; that *cause* is called *attraction*, or in this case, *gravitation*. Again—oxygen and iron unite and form *rust of iron*, and lead and oxygen combine and form *red lead*. *Some power* unites and holds together these substances, and that power is called *attraction*; and because a new compound has been produced, the power is called *chemical* attraction or *affinity*.

We as easily conceive of attraction operating a distance as near or in contact: for *how* it does it, we know not in either case. A magnet holds iron in contact with it, or attracts it at some distance, but we know not the *how* in either respect. But, the *fact* is certain, and some cause or power acts in this case, which is called *magnetic attraction*. Objection to the *name* does not alter or annihilate the *thing*.

The *tides* are one result of this power, called *gravitation*, or an attraction which makes matter gravitate towards matter. Both sun and moon must operate on the earth, and as their power varies at different parts of the earth, matter in a fluid state and capable of being easily moved will be affected by this power. The earth too is in different positions in respect to both the sun and moon, and both are in varying situations in respect to the equator of the earth. Sometimes power of the sun acts with that of the moon, sometimes with direct opposition to it; sometimes the power of the sun and moon act obliquely with or against each other, and with all degrees of obliquity. The moon too, being so much nearer than the sun, exerts a greater power in moving the waters or in producing the tides. Her power in this respect is about two and a half times greater than the sun's at a mean rate. Hence the moon must have the controlling influence on the tides, and the power of the sun will be employed in modifying the effects produced by the moon as the tides are respected.

This is exactly what takes place; and the tides are computed from the relative positions of the sun, earth and moon, varying distances and obliquity of forces. If we call this a *mere coincidence*, we cheat ourselves with the name. I put my finger in the fire, and it is blistered—a mere coincidence. I put iron in the furnace, and it is softened—a mere coincidence. I wish to move my hand to my head, and it moves—a mere coincidence. A man lets a brick fall ten feet on my head, and breaks my skull—a crushing coincidence. Another fires a pistol towards you, and the ball pierces your heart—a bloody coincidence. But—more on the *tides*, hereafter.

A New Kind of Wheat.—Advices from St. Petersburg to the 12th of August, mention that a new variety of the Arnautka wheat has recently been discovered and cultivated in Bessarabia. It is called the Kolus, or large-eared wheat, on account of the peculiar beauty of its ears. At present it is limited to mere seed wheat, and fetches twice the price of the ordinary Arnautka. One other and important peculiarity of this grain is; that it is less affected by drought than any other varieties. At the same time it posseses several other features, its deep amber colour, and its earlier ripening. This important discovery was made by a peasant of the name of Bulatowsich, in the villiage of Troitzk, in the district of Bender, who being a close observer of nature, detected in his crops certain ears which were larger and became ripe more speedily than the rest of the crop. These he collected and sowed separately, and the result was an admdnt harvest, and the introduction of a new and valuable variety of wheat. The event had created a great sensation amongst the agriculturists and dealers in grain, and the new wheat well merits being named after its discoverer.

Laudable.—The authorities of Oswego assume the duty of planting shade trees in the streets.—The street Commissioner advertises for "three or four thousand Elm and other suitable trees for border and street shrubbery," to be delivered the present spring.

Veterinary Department.

Choked Cattle.—*Remedy.*—Take any kind of tube, say an elder or quill, and fill it with gun-powder. Open the mouth, hold out the tongue, put the tube as far down as convenient, and blow the powder from the tube into the throat. It will relax the pipe and suffer the obstruction to pass on. Try it. D. S. Buffington. *Hinmanville, March*, 1849.

To Preserve a Horse from the Botts.—Take of bees wax, mutton tallow, and sugar, each 8 ounces, put it into one quart of warm milk, and beat it until it all melts and mixes; then put the whole into a bottle, and just before the wax, &c., begins to harden, give it to the horse. Two or three hours afterwards give him physic.

Another Method.—Give a horse occasionally a half pint of hard wood ashes, mixed in his grain and sprinkled, or given in his drink. This is an exellent remedy.

Another.—Give your horse salt freely—as that will, in nine cases out of ten, preserve him from the Botts. If he is attacked by them, give him a quart of warm fish brine; and if the case be a bad one, repeat the dose once an hour. For this purpose, save your fish brine.—*Farmer's Receipt Book.*

Cure for the Spavin.—Take one pound of angle worms, fry them well in a pound of butter, and after it is cool add one gill of spirits of turnentine. Take one ounce Origanum Oil, (sold at the druggists',) which mix in one gill of spirits of turpentine. Every morning, rub the spavin with the angle worm mixture, heated in a shovel over the fire. Every evening rub the spavin with the origanum oil mixture. By the time these are used you will begin to see the horse inprove.

During the operation, it will often appear to make him worse: but this must not be regarded as injurious. It does not remove the lump, but the disease will be extirpated.—*Ib.*

Beware of Ring Bone.—If colts stand on a plank or any hard floor that is not well littered, they will be subject to the ring bone. When breeding horses, we left the floor of the colt's stable of the soil over which they were built. If this should be a deep loam, or of a clayey texture, then remove the soil about two feet deep, and replace it with sand, or the finest gravel to be obtained. Colts should always be let out to exercise in a yard, or open space, every day, during the winter, when not particularly stormy: and in this yard there should not be older horses, or any horned cattle which can do them injury. Being very playful they are more apt to provoke attacks upon them than other animals.—*American Agriculturist.*

Clipping Horses.—Observing a paragraph relative to clipping horses, I beg to state that I have lately been informed that the process injures the constitution of the horse in the long run, causing the animal to wear out sooner, notwithstanding every care may have been taken with him at the time of the operation and subsequently; although it is conceded that at the time of clipping, the horse is thereby enabled to perform his work more easily, and also thrives better.—*Agricultural Gazette.*

Horse Skates.—A writer in the National Intelligencer mentions the invention of Horse Skates, by means of which in cold latitudes, an ordinary horse has been often known to travel as far as 100 mils in three hours, without apparent fatigue. A full set, (he says) of these marvellous skates, bedecked in the Norwegian style, has been deposited in the patent office.

Spirit of the Agricultural Press.

Carrots.—As I have been a grower and consumer of roots for some few years (especially carrots,) I would, therefore, give what little information I can, all derived from experience. In the first place, I think there is no root ever yet introduced that will produce so great an amount of fattening properties per acre as the carrot. I believe there is no corn or hay, or oilcake or linseed, that will fatten any horse or bullock so soon and so completely as the carrot given in its raw state. Horses, however poor (if healthy), will get fat in a few weeks with carrots only. No hay, no water—in fact, they will not drink if you feed entirely on carrots. Now, as to quantity, if you wish only to fatten let them eat as many as they like, but one bushel per day, with hay, will keep your horses in good working order, without corn, and two bushels per day will fatten them while working without any hay or corn. There is no fear of griping them, as I believe the carrot quite free from any propensity that will produce that effect. I have two horses that are *wintering upon* carrots and hay. They have 40 lbs. of carrots weighed to them, and about 8 lbs. of hay, and they thrive wonderfully upon it. I am such an advocate for carrot cultivation that I should like to see every farmer with some acres every year. I think also it is the most profitable crop to grow for sale, for I believe it is quite possible to grow 50 tons to the acre. Several gentlemen have told me they have 30 tons to the acre this year. Perhaps we have not had so unpropitous a year for a long time, not only the quantity and quality of the carrot is great and good, but the mere cultivation is like subsoiling the land, and it is always kind for any grain after it. I generally grow the white Belgian and Altringham, but I think the short carrot called the "early horn" will grow the greatest weight per acre.

Richd. Webb, *in Mark Lane Express.*

We endorse the above views in full; and during the failure and uncertainty of the potato crop we advise that more atten be paid to the Carrot for milch cows, cattle and horses, and the Parsnip for feeding and fattening hogs.—Ed.

Salt as a Garden Manure.—I can strongly recommend a dressing of this manure (except on very stiff land.) To grow asparagus and seakale in perfection, it is essential, and I find a general improvement effected by its use in the bulk and quality of our culinary crops; it also distroys snails and other insects. For general crops, about ¾ lb. to the square yard will be sufficient; this should be sprinkled evenly over the ground when it is bare, and if dry, forked in immediately. To the crops of seakale and asparagus twice this quantity may be given; it should be spread over the beds in winter, or early spring, and either forked in at once or left to be dissolved by the rain.—*Agricultural Gazette.*

Agricultural Education in Cuba.—Three of the principal schools of Havana have instituted a new department in which instructions are given in Chemistry as applied to *Agronomia*, or cultivation of the various kinds of field crops.—*La Cronica.*

Patent Safety Bridle.—Mr. H. Seitz, of Marietta, Lancaster county, Pa., is the inventor of a very ingenious Bridle for which letters patent were recently granted, whereby it is impossible for the most spirited horse to kick or run away, and perfectly safe for a lady to drive or ride.—The principle on which it is constructed is to hold the horse by the application of a pulley around which the reins are made to pass at the side of the horse's mouth, which enables the rider to exert a great deal of lever power to control the mouth of the animal, and to check him at any moment.

Large Poultry.—At a show held in England, under the direction of the late Earl Spencer, the following were the dressed weights of some of the poultry exhibited. The best turkey weighed twenty lbs. 4 oz.; capon, 7 lbs. 11½ oz.; pullet, 6lbs. 3½ oz.; goose, 18 lbs. 2½ oz.; couple of duck, 15 lbs. 10 oz.

How to Render Cloth, Silks, &c., Water Proof.—Take one pound, each, of common alum, (sulphate of alumius,) and sugar of lead, (acetate of lead,) and dissolve them in six quarts of boiling water well mixed by stirring. When cold, the top portion of the mixture should be poured off for use, as the sediment consists of sulphates of lead, potash, &c. Any article of dress, no matter how slight the fabric, if well saturated with this liquid, and allowed to dry slowly, will bear the action of boiling water, and not permit it to pass through it.

Editor's Table.

To Correspondents.—Communications have been received, since the publication of our March number, from Agricola, A. Bryant, H., Prof. C. Dewey, Myron Adams, T. C. Peters, H. L. Emery, S. W., Cephas, *†, L. Wetherell, D. S. Buffington, L. B. Manley, Alvin Wilcox, H. P. Norton, J. H. W., Jas. Weed, John Watson, E. Hildreth, M. L. Gallup, J. H. Wyckoff, Reed Burritt, J. R., Clinton Wood, W. H., *, Isaac W. Jones, H. W., A Physician, H. P. Buell, Farmer, A. H. Norris, J. D. C., Westfield, A. Wilson, Jacob Scott, and Subscriber.

Our thanks are due to various old and new correspondents for valuable contributions. We must, however, beg our friends to have patience with us for a while. All of their favors shall be attended to as fast as we can find space, either by publication or such notices and remarks as shall seem most beneficial to our numerous readers. It is our aim to furnish matter that shall be as nearly adapted to the period when it will be practically useful as possible. All contributions that will *keep* over a publication or two, we are at present obliged to defer.

The illness of our Engraver has prevented us from giving a number of illustrations intended for this issue. Several plans of Houses, Cottages, and Agricultural Implements (from new contributors,) shall be given as soon as the engravings can be prepared.

Sowing Clover Seed.—(C. V. J., Clarkson, N. Y.) In answer to your inquiry we have no hesitation in advising you to sow your clover seed; and the first dry time in May or June sow on a half bushel of plaster to the acre, without fail—and if the elements are not extremely adverse we will endorse the result. We think, for the present and immediate use of the wheat crop to be benefitted by the green crop plowed under, that 8 or 10 inches is too great a depth of furrow—though, in a series of years, it will be found beneficial.

Hens Eating their Eggs.—(T. R. S., Omar, N. Y.) We know of no other preventive for hens eating their eggs, than to keep them supplied with lime and gravel in some other shape, and not feeding them the shells, except very finely broken; and by making their nests in a box so deep and small that they cannot reach them while standing on the edge. Hens that are confined are much more apt to commit this fault, than those running at large.

(S. B. F., Livonia, N. Y.) Your article concerning a new and valuable stalk and straw cutter was crowded out last month, and is out of season for this number. As it will not spoil, we shall lay it over until the proper time.

Page's Portable Mills.—We have received several letters of inquiry relative to Page's Portable Wind and Saw Mills, mentioned in our February number—but cannot furnish the information desired. We think Mr. P.'s post office address is Baltimore, Md., and presume that communications directed to him at that place will receive attention.

Premium Arithmetical Questions.—We have received a large number of letters concerning the questions proposed by Mr. Clark in our February number. We will submit them to Mr. C. the first opportunity, and endeavor to publish his decision next month.

Genesee Seed Store and Agricultural Warehouse.—The proprietors of this establishment have a very large and superior assortment of Seeds and Implements for the spring and summer trade. Farmers and others visiting Rochester should call at their spacious and well filled rooms. Their assortment of plows, cultivators, &c., &c., is the most complete ever offered in this section of the country. See advertisement.

New Books.—Among other works received too late for particular notice in this number, are the following: "The American Farm Book; by R. L. Allen," and "The American Bee-Keeper's Manual; by T. B. Miner." Published by C. M. Saxton, 121 Front st., New York, and for sale by E. Darrow, corner of Main and St. Paul sts., Rochester. Price, $1 each.

Draining low lands will contribute to promote health and profit. Generally speaking, our wet and marshy lands are the richest in organic matters, and become the most profitable to the owner, when thoroughly drained.—*Buel.*

The Wool Grower.—This is the attractive title of a new paper just started by our friend and correspondent, T. C. Peters, Esq., of the Buffalo Wool Depot. The initial number is issued in good style, and well filled with valuable matter. In his introductory article, Mr. P. says:—"If I am sustained, it will be well for the farmers and wool growers; and that I shall be I have no manner of doubt. The paper will obtain and disseminate information to be found nowhere else; and it will be the organ of the wool-growing interest throughout the country." We commend the *Wool Grower* to our readers, and trust the editor will meet with the success his enterprise merits. Published monthly—16 pages octavo—at 50 cents per annum. Address as above.

Daguerreotypes of Devon Cattle.—We are indebted to Wm. Garbutt, Esq., of Wheatland, for Daguerreotypes of a pair of four year old Steers, and a two year old Heifer, (Devons,) owned by E. P. Beck, of Sheldon, Wyoming county. The animals represented received the first premium (in each class, as grass fed animals,) at the State Fair at Buffalo, in September last. The "counterfeit presentments" are quite natural and life like, and creditable to the artist—Alex. McDonald, of Buffalo. The likenesses can be seen at our office.

Speaking of Devons—we never saw a more beautiful show of cattle, than was made by the owners of this breed at the Fair at Buffalo. We shall give an article upon the history and merits of Devon cattle, in our next.

The next Fair of the N. Y. State Ag. Society, as we have heretofore stated, is to be held in Syracuse, on the 11th, 12th and 13th of September next. The amount of premiums offered is about *six thousand dollars*. Now is the time for the farmers of Western and Central New York to commence their preparations to add to the interest of the show, and *win the prizes*. We shall endeavor to publish the premium list, or a synopsis of it, in our next. It can be obtained in pamphlet form, we presume, by addressing the Secretary, B. P. Johnson, Esq., of Albany.

Agricultural Societies.—Notices, embracing lists of officers for current year, and premiums awarded at annual meetings of several County Ag. Societies, are necessarily deferred.

Secretaries of Agricultural and Horticultural Societies will oblige us by sending to the address of this journal, local newspapers containing proceedings of their annual and other important meetings.

Facts for Agriculturists.—The exports of breadstuffs from the United States, Sept. 1 to Jan. 1, 1849, as compared with the same period ending Jan. 1, 1848, are as follows:

	Flour, bbls.	*Meal, bbls.*	*Wheat, bu.*	*Corn, bu.*
1848,	95,767	52,715	118,004	606,301
1849,	638,994	45,193	854,005	5,078,712
Increase,	544,227		735,911	4,465,412

Wheat on the Lakes.—At Chicago, Michigan City, Little Fort, Southport, Racine, and Milwaukie, there are one million and thirty-eight thousand bushels of wheat in store, and vessels enough in ports on Lake Michigan to carry it all forward to market.

Cheap Lightning Rods.—No. 1 wire is said to be an ample protection against lightning, put up as the large rods are. War ships use the wire with complete success.

Plowing by Steam.—A steam plow has been tried on a farm near Stratford, in England, by stationary engines at the extremities of the field, and the experiment is said to have been satisfactory. The engine is ten feet by six in bulk, portable with a pair of horses, and may be used for plowing, threshing, or for any purpose where power of the kind is required.

American Prodigality.—No observing American comes from the United States to Europe, without soon becoming convinced that economy of living is nowhere so little understood as in his own country; and that for nothing are the Americans more distinguished, than for a reckless waste of the means of subsistence. The refuse of many a family in the United States, even in moderate circumstances, would often support, in comfort, a poor family in Europe.—*Colman.*

Read the advertising department of this number. Observe the advertisement of Books—Mr. Vail's Stock—Stallions—Agricultural Implements—Fruit and Ornamental Trees and Shrubs—and various other matters "too numerous to mention" in this place.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

PROGRESS OF HORTICULTURE IN EUROPE.

That the two months we spent among the Gardens and Green-houses of England, France and Belgium were pleasant ones to us, no one will doubt. Winter as it was, we found thousands of rare and beautiful things, the sight of which would repay us for a journey much more tedious and hazardous than the Atlantic, even in winter.

It is somewhat strange that amidst all the revolutions and political excitements—all the want and downright starvation—all the fluctuation in commercial affairs, that have for a few years kept European society in a ferment, bordering on and in many cases resulting in actual explosion—Horticulture flourishes, and that beyond all precedent. At no period in the history of European civilization have horticultural pursuits attracted so much public attention. From the prince to the humblest peasant we find the garden the object of the greatest solicitude. Everywhere a new spirit seems to be awakened—public grounds are being enlarged and improved—collectors are sent at enormous expense to all unfrequented or unexplored parts of the world, exposing themselves to all manner of hardships and privations to bring to light whatever there may be new, curious or beautiful. Commercial Nursery establishments are extending and multiplying rapidly, and these too, are sending out, on their own account, their collectors to China and California, to South America and the Tropics, in search of new plants to enrich their collections. The prices at which new plants are sold is perfectly amazing: for instance, the elegant new Japan Cedar, *(Cryptomeria Japonica)* two to three feet high, cannot be bought at private sale for less than five guineas; five feet, and there are few of that size, ten guineas. So with the new and rare Pines and Firs from California, Mexico and India. Plants of many of them 1 to 2 feet in height cannot be bought for less than from 1 to 5 guineas. With Orchideous plants the same: 10, 20 and 50 guineas are common prices for these, and that too at public sale. The same is true of all other new and rare plants of whatever class or character.

The production of new flowers, by hybridization, such as Roses, Dahlias, Paonies, Phloxes, Chrysanthums, Camelias, &c., is carried on in the same spirit. Efforts such as have never been previously attempted, are now being made by hundreds of scientific and practical men to reduce this most interesting department to a science, and to base it upon competent laws and regulations, and some ably conducted journals are solely devoted to its advancement.

In the culture of fruits there is no less interest. In all the English horticultural journals no topic at the present moment is more frequently discussed, or calls forth more experiment and investigation than the culture of fruits. The formation of fruit borders, manures, composition of the soil, exposure, pruning and training, are continually discussed with as much interest and animation as if they were entirely new subjects. So it is in respect to the construction and heating of houses, pits, &c., for the shelter and growth of plants, and for the protection and forcing of fruits and vegetables.

The quality of particular varieties of fruits is also attracting unusual attention. Gardeners who never before thought of inquiring whether their fruits were correctly named or not, or whether they had any names, are diligently comparing and testing, approving and rejecting. Nurserymen, particularly on the Continent, who have grown trees for sale for fifty years, without seeing their fruit, and who did not know by sight half a dozen varieties of the hundreds in their catalogue, are just planting specimen orchards to test them, and are beginning to read, compare and make notes and memorandums as to quality, growth, &c. I was astonished to find in some of the oldest Belgian and French nurseries specimen grounds neither so extensive nor so mature as our own, and in many just a beginning. Heretofore they have considered it their business just to *grow* the trees. In a celebrated Belgian horticultural establishment, where an immense fruit Catalogue is annually published, and the proprietor of which has been generally supposed a pomologist, we found not a single tree, nor does the proprietor know half a dozen fruits probably of all that are cultivated. Land we were told had just been purchased for a nursery, and some trees planted last autumn. And yet we have seen a nurserymen in this state take especial pains to advertise that his trees were procured from this source. All the trees ever sent by that establishment to this country were purchased from less noted and equally ill-informed growers. This purchasing of ignorant, irresponsible parties, did well enough in times past; but lately got him into great trouble, and has fairly compelled him to grow trees and study pomology.

The only men to be found, having a critical knowledge of fruits and fruit trees, such as every well-informed nurseryman in America already possesses, were the directors of the fruit department in the public gardens, such as the *London Horticultural Society's*, the *Jardin des Plants* at Paris, Rouen, Brussels, &c., and a few enthusiastic amateurs. The growers of trees did not aspire to be pomologists; and here is the great cause of the thousand and one blunders they have made, and have compelled their kind customers in America to make. But they have now woke up: and here I must say that the American trade has exercised a very beneficial influence upon them. Indeed, they have been compelled by their American customers to commence the investigation and correction of their numerous and long standing errors. Year after year they have been censuring them for mistakes and explaining their nature to them. Orders upon orders have been sent out for particular varieties, and these to be *positively correct*—in many cases the purchaser going into a a minute description of the fruit as well as the tree, in order to enable them to send the genuine article. This has naturally led to the course which we find now very generally adopted, of forming specimen grounds, and testing varieties as we do here. American nurserymen, therefore, may claim the credit of setting men, who are greatly their seniors in cultivation, right in this the most important branch of their business. In future, more reliance can be placed upon the correctness of what we receive from them.

In the culture and management of trees, and particularly garden trees, we have much to learn from the Continental gardeners. It is in Belgium and France we can study how to grow many trees in

a little garden, and how to grow them *well*—how to produce beautiful forms, and to hasten and maintain fruitfulness. In all the French and and Belgian gardens one is struck not only with the economy which prevails in filling every nook and corner, covering every wall or fence, with something for use or ornament; but the observer is also delighted with the appearance of propriety and fitness about every thing. You will not find an immense apple or pear tree, or a clump of old plum trees, or two or three great quince bushes covering nearly the entire garden; but you will find elegant pyramidal pear trees, or apples as pyranills on *doucain stocks*, or in bushes, on *paradise;* cherries either in pyramids or bushes, on *mahaleb* stocks; apricots, nectarines and peaches, in espaliers; plums, quinces and filberts, in pyramids; gooseberries, currants and grapes, when the gardens are small, trained on the walls. These trees are not only beautiful objects, but bear large crops of fine fruit, superior in size, flavor and beauty, as a general thing, to that produced on standards; and then the advantage of enjoying such a variety on a little spot, and of having trees at all times perfectly manageable—for these dwarf trees can be moved from one place to another, at any age. The gardens around Rouen, in France, were the best I saw any where in regard to fruit trees. As I passed the streets I noticed many little gardens that I wished I could take with me, and set down in Rochester, as a model. But the Rouen people have a thorough love of these things, and they have a capital teacher, in Professor Dubriel, director of the fruit department in the Botanic Garden. His trees are the best specimens I have any where seen, not only perfect pyramids—absolutely perfect—but they are covered with fruit buds, and in the most perfect health and vigor; so are his cherries and plums, filberts, &c. His espalier peaches, apricots, nectarines, gooseberries, &c., are all as perfect as any artist could draw on paper. Many of the French works on pruning give examples that had no existence but in the imagination; but Prof. Dubriel has created his illustrations, first in his garden and then on paper. The citizens of Rouen are admitted freely to see this elegant tree culture, and benefit by it. Mr. D. also gives lessons in pruning; his classes meeting at regular hours, each scholar with his pruning knife. He proceeds, and they follow, through the whole minutia of both the principles and practice. One day he takes apples, another pears, and then peaches, and so on through all the fruits, in all their forms. To these practical teachings he adds lectures, and these lectures and lessons on pruning and arboriculture are attended not by mere gardeners, but by large numbers of gentlemen of wealth desirous of being able to assist in the direction and management of their own gardens.

On the occasion of my visit on the 6th of January last, the pruning classes were about opening, and I met in the garden a Mr. Bard, a respectable merchant of the town, who had been a pupil, and so apt an one, that his own garden, though small, is one of the best managed in France, and that by his own hands at his leisure hours. I have never met an amateur so enthusiastic or so well skilled in the treatment of garden fruit trees. He had just contrived a new style of scale for giving the proper angle in the various modes of espalier training, and had come to show it to Mr. Dubriel.

Some ill-informed persons in this country since we commenced to direct attention to pyramidal and dwarf garden trees, have raised a cry against pears on quince stocks, as being short lived; but I have seen trees 30 years old in the most perfect health and vigor, and all over the continent trees may be found 50 years old.

I shall have something to say at some other time of Mr. Dubriel's method of culture.

TREE PLANTING.

We need hardly urge upon planters the necessity of the utmost care in every particular. The ground should be thoroughly prepared. In all cases it should be, as we have often said, trenched or subsoil plowed, and properly enriched, so that the young roots may spread out freely on all sides, and find abundant nourishment. If people were half so zealous in the proper preparation of the ground, in the planting *well*, and in the after culture of trees, as they are in seeking for trees of *large size*, they would find their labors much more successful and profitable in the end. Many we have known to utterly refuse to plant a tree because it was not so tall that the "cows could not reach its branches." Such persons have much to learn about trees.

The well-informed, careful cultivator cares but little for size, if he gets a good, healthy, well-grown plant of the right sort. The purchaser of young trees has the advantage of shaping them to his own taste and convenience—and this is a consideration of some consequence.

The careful treatment of the roots is another important point. They should neither be bruised, broken, nor exposed to the air until they get dried.

After being well planted they should be neatly tied to stakes, and have the surface of the ground around them cleaned and loosened every two or three weeks during the growing season. With such care, it is surprising how soon trees attain size and fruitfulness: and without this care, they had better never be planted.

By way of answering several correspondents in regard to distances, we subjoin the following table, which according to our experience is about right, in general.

SPECIES.	FORM.	STOCKS.	DISTANCES.
Apples,	Standard,	Common.	30 to 40 feet.
"	Pyramid,	Com'n or Doucain,	10 to 12 "
"	Dwarf,	Paradise,	6 "
Pears,	Standard,	Pear,	30 "
"	Pyramid.	"	12 "
"	"	Quince,	9 "
"	Dwarf,	"	6 "
Cherries,	Standard,	Mazzard,	20 "
"	Pyramid,	Mahaleb,	10 "
"	Dw'f bushes,	"	6 "
Plums,	Standard,	Plum,	18 "
"	Pyramid,	"	9 "
Peaches,	Standard,	Peach,	18 "
"	Pyramid,	Plum,	9 "
Apricots,	Standard,	Peach or Plum.	18 "
"	Dwarf,	Plum,	10 "
Nectarines	"	"	10 "
Quinces,	Standard,		12 "
"	Pyramid,		9 "

Currants,	4 feet.
Gooseberries,	4 "
Raspberries,	3 "

The *Prince Albert* is considered the best early variety of peas; next to this, the *Early Washington*. They may be planted as soon as the ground is settled.

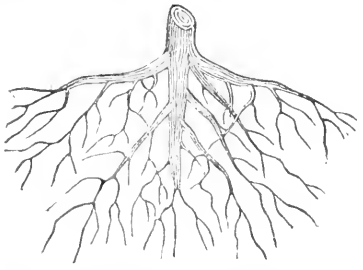
BOTANY.—THE ROOT.

The Root consitutes the basis of the plant: it serves two purposes in the vegetable economy—first to fix the plant mechanically in the soil and retain it in its position—secondly to absorb from the soil those inorganic elements which are necessary for its food. The general direction of the root is downwards; but the roots of various plants grow at all angles from the horizontal to the perpendicular: the principal perpedicular axis is called the *tap root*. The number and extent of the roots must correspond with those of the stalk and leaves of the plants, in order to supply their demand of food from the soil.

Roots do not usually extend to great depths, but keep within the limit of that portion of soil which supplies their proper nutriment. Roots are distinguished from stems and branches by the absence of stomata, buds and pith—and by the presence of absorbing fibres.

The stock, or main body of the root, sends off the *fibrils*, or minute, slender branches of the root,—the delicate, tender extremities of the fibrils are called *spongioles:* these are the growing points, and the organs which absorb from the soil the earthy part of the food of all plants. If some trees, as the willow or currant, be inverted in the soil, the branches are changed to roots, while the roots put forth leaves in the air, and the plant grows.

Roots are of several different forms, which have received specific names for the sake of convenience.



Ramose, or *branching* roots are those which send off many ramifications in various directions, like the branches of a tree: such are the roots of the oak, &c.

Fig. 2.

Fusiform, or *spindle shaped* roots, consist of a fleshy stock, tapering downwards to its extremity, sending off fibrils, which are its true roots: such are the radish, carrot and parsnep. Fig. 2.

Fig. 3.

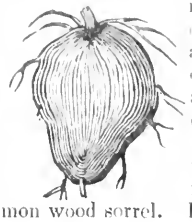
The *napiform* root is a variety of the fusiform, in which the neck or upper part swells out, so that its diameter equals or exceeds its length. The turnip and turnip-radish are examples. Fig. 3.

Fig. 4.

Fibrous roots are made up of numerous small thread-like roots, attached directly to the stalk, without any neck or main root: such are the roots of most grasses. Fig. 4.

Fasciculated roots differ from the fibrous in having some of their fibres thickened and fleshy, as in the dahlia and paeony.

Fig. 5.



Tuberous roots consist of fleshy, roundish knobs or tumors, at or near the extremity of the stalk, as in the orchis: "the potato was once classed among tubers,—but as it uniformly bears buds, it is classed among stems." Fig. 5.

Granulated roots consist of many small rounded bulbs connected by fibres, as in the common wood sorrel. Fig. 6.

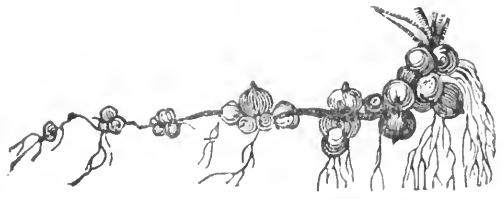


Fig. 6.

Besides these varieties of roots, there are several others which are peculiar; and distinguished by not being necessarily fixed in the soil.

Aerial roots are those which grow from some part of the plant above the surface of the soil in the open air. Some creeping plants, as the ground ivy, send forth these roots from their joints. The screw-pine also send off roots which are several feet in length before they reach the ground. Such roots are often seen in the common maize.

Floating roots belong to plants which float upon the surface of water. The water-starwort is said to float upon the surface until flowering, when it sinks and takes root in the mud till its seeds ripen.

The *epiphytes*, or plants fixed upon the branches of other species, derive their nourishment mostly from the air; such are some species of moss.

Parasites are those plants which grow upon other plants; and some of whose roots are said to penetrate their tissues and subsist upon their juices; while the roots of others are aerial, and derive their food from the air: such are the mistletoe and dodder.

Roots are divided again into three varieties, viz: annual, biennial and perennial, according to their duration.

Annual roots are those which live only one year, and must be raised from the seed, sown every spring,—as beans, peas and cucumbers.

Biennial roots are those which live two years and do not blossom the first season,—but they produce flowers, fruit and seeds the second year, and then die; such are the beet, cabbage and carrot.

Perennial roots live several years,—some of them, as forest trees, live to a very great age: the grasses, dandelion and asparagus are other examples.—*Rodgers' Scientific Agriculture.*

Pomological Reform.—A. J. Downing, Esq., chairman of the General Fruit Committee of the Congress of Fruit Growers, has addressed a circular to the committee, directing their attention to the necessary subjects for investigation. It is an important document, and we shall call attention more particularly to it at a future time.

HINTS FOR APRIL.

Pruning should all have been done last month, but if any has been deferred it should be attended to forthwith. In orchard fruit trees little is necessary beyond thinning out the small branches to admit air and light freely to all parts of the tree, and removing all straggling branches or those that cross each other; spoiling the form and balance of the head. It is too late for grapes, or stone fruits, unless it be small limbs or twigs; if pruning be necessary defer it till summer.

Spade around and give a top-dressing of manure to all fruit trees, if not done last fall. Use well rotted manure; some decayed leaves from the woods, and a portion of ashes and lime mixed with the manure makes a good compost for any trees, particularly for peaches.

Grafting must be done, commencing with cherries and plums, and finishing with pears and apples. The grafts of last season should be looked over and all shoots that have appeared below them cut away, and weak shoots cut back to a good plump eye. *Suckers* that appear around the roots of trees, and all shoots on the trunks of standards should be carefully removed.

Transplanting should be finished as early as possible. Some people cannot think of going into their garden to see what trees should be planted in it, or what care it needs until the ground is dry and clean, the sun warm and bright, and the leaves and blossoms begin to appear—then gardening becomes so charming that it can be no longer resisted — something must be done; and then it is so late that a great many important little things must be deferred. Don't be afraid of a little blustery weather; but get every thing done in season, fair or foul, and when fine weather comes, your trees and plants, your grass lawns, your seeds, &c., will have but to grow.

Roses should have a careful pruning and a liberal dressing of good old manure. The rose cannot have a soil too rich, and in a poor soil, or one half way poor, you cannot expect a fine, first rate bloom. Many people will buy a good rose, and plant it in a miserable worn out border. It grows *perhaps* a very little, and produces a small starved blossom. It has neither the size, color or fragrance that was expected, and then the poor nurserymen are blamed for overpraising it. Well, sometimes they are too lavish of their commendations, but cultivators are much more frequently at fault in their treatment. All roses should have a deep, rich and if possible a somewhat heavy soil. *Climbing Roses* should be cut back a little; that is, remove the small weak ends of the last season's shoots, and they will push more vigorously afterwards. All straggling, superfluous shoots should be cut out entirely.

The Everblooming Roses that may have been protected in the borders should be uncovered, if not done, and properly pruned and dressed. Those wintered in cold frames may be turned out at any moment; cut them back freely to obtain strong growth.

Flowering Shrubs should be pruned, too, if the heads have become dense: this, with a dressing of manure is necessary to luxuriant foliage and a profusion of blossoms.

Herbaceous Perennial Plants, if old and large, will not bloom well. The roots cannot find nourishment, and they will fairly wither away in midsummer. They ought to be divided—(it ought to have been done last fall)—and re-planted in fresh good soil.

Annuals may be sown in well prepared borders towards the end of the month, when the ground is dry and warm. If planted too soon they will rot. If an old hot-bed could be had with a trifling heat, they might be forwarded in it and a month of time be gained.

Lawns, Walks, Hedges, &c., will all require attention at this time.

Those who wish to live well will not forget the Kitchen Garden. No doubt most people have *Peas* now nearly in blossom, and *Lettuce* fit for table. These are things that can be started early in any sheltered corner. A little frost don't harm them. The general crops may now be put in, such as *Potatoes, Beets. Carrots, Onions, Cabbage, Cauliflower, &c.* Beds of *Sea Kale, Asparagus* and *Rhubarb*, three culinary plants that are really indispensable to all good gardens, may be made now, and old beds dressed and enriched.

There are a multitude of other matters to be done that cannot escape the attention of careful persons;—what we have given are, of course, but mere Hints.

The North American Pomological Convention has appointed State Committees, and issued a plan of operations similar to that of the Congress of Fruit Growers. This body will meet with the New York State Agricultural Society at Syracuse, next fall. We apprehend that pomological science will not be greatly benefitted by two such bodies in the same field. Looking only to the general good, we conceive that it would be better for the friends of this matter to unite their labor and efforts and influence in one organization. There cannot be two such bodies without more or less rivalry being engendered; and if rivalry is at all admitted, we cannot reasonably expect good. This view of the subject, we think, will ultimately prevail.

THE BAILEY SWEET APPLE,

BY C. P. BAILEY.

Dear Sir:—I owe you an apology for having so long neglected your inquiry in regard to the apple called the "Bailey Sweet." I have often, in its early history, conversed with the first settlers of this place, in regard to the origin of this apple; but could only ascertain that the orchard, containing some twenty trees of this fruit, was transplanted in 1814 or 15, and came into my possession in 1829, at which time I commenced distributing the scions liberally throughout the country. From this circumstance, it no doubt received its name. I have learned its history, wherever introduced, and can trace it no farther back than this orchard.

The tree is of vigorous growth, bears abundantly; the fruit ripens early, and deep red on the outside—size, large—shape, oblong, tapering handsomely towards its summit. Its flesh tender, juicy, sweet and excellent. A superior table fruit, fine for baking or cooking, and decidedly the most popular apple in this vicinity, and so considered wherever it has been introduced, as far as I can learn, both east and west. With proper care will keep into the month of February.—*Perry, N. Y., February*, 1849.

VARIETY OF APPLES—CHAPIN'S ORCHARD,

There probably has not been an instance of the production of as fine varieties of apples as are now grown and originated on the farm of the late Heman Chapin. The "Early Joe" ripe in August and September; Water Melon, or "Norton's Melon," November to February, and the "Northern Spy" from March to 15th of June—a complete succession of apples, the two first, particularly a desert fruit, and the "Spy" answering for both table and cooking. Western New York can boast of the three, and they cannot be too highly prized. Let every one be advised to cultivate them, and when they succeed, they will thank the writer of this for his advice.—J. H. Watts. *Rochester, N. Y., March,*, 1849.

PLANTING TREES ON CLAYEY GROUND.

BY A. BRYANT.

Mr. Editor:—I notice in the Horticulturist of February a communication from Mr. J. Fulton, Jr., a nurseryman in Chester Co., Pa., detailing his method of preparing ground for and planting an orchard which seems to me to be calculated to mislead the inexperienced, who may be induced to practice after his example.

His preliminaries are excellent, except "digging the holes:" the most critical and important of all. In this I think he is entirely wrong, and that before he becomes the profitable proprietor of an orchard thus planted, he must be his own customer for a second lot of his fine two-year-olds. The work commences by "digging the holes from 4 to 5 feet square and 2 deep, throwing the clay subsoil entirely away." Now, allowing there to be eight inches of good surface soil, it follows that he must remove sixteen inches of solid clay, forming a basin large enough to hold three barrels of water, and almost as capable of retaining that element as any vessel that a potter could produce. And over this reservoir, after filling in with rich compost, he proposes to place his young trees—which I think is a great mistake.

How tenacious the clay may be on his place, I do not know, but in ordinary clayey-subsoil I am sure they would realize the presence of "water-cure" at least until midsummer, and if they did not die out the first or second year after planting, but should survive such ultra hydropathic treatment, their stinted groth and annual crop of moss, for the first ten or twelve years of their youth, would evidence to the planter that he was sadly mistaken in the premises, or that his trees were endued with sense enough to rebel against their destiny.

I have known many trees to be destroyed by pursuing the above method. The water should never be permitted to lodge under the roots of a tree. Where the subsoil is a heavy clay, the ground should be worked quite two furrows deep, and thrown into ridges by frequent plowings to the center, until the depth of two feet of good soil is obtained, when the trees should be set at the desired distance, on the middle or highest part of the ridge.

Staking and mulching are indispensable in this case, as the evaporation is greater and the tree more likely to be rocked by the winds from its position, than when the subsoil is soft and presents no obstruction to the downward direction of the roots. Frequent wetting of the stem and branches during the first summer after planting, especially if the season be dry, will be found far more beneficial than watering at the roots, a practice I am satisfied that kills more trees than it saves. It is proper to observe that wetting should always be performed toward evening, and never at any other time. *Erie County Nursery, Buffalo, N. Y., February*, 1849.

With Mr. Bryant we deprecate the practice of digging deep holes for trees in a damp, clayey soil. Far better keep the roots near the surface, within the reach of heat and air, and good wholesome food. —Ed.

The Beet Root was first brought from the shores of the Tagus, and was cultivated in gardens, on account of its elegant leaves and the rich red color of its roots, two hundred years before it found a place on our tables as an esculent luxury.

ANSWERS TO CORRESPONDENTS.

DWARF APPLE TREES.

M. L. Bucrall, *Lockport*. A standard apple tree requires to be planted at least thirty feet apart; dwarf bushes on Paradise stocks, about five or six—so that you may have a very interesting collection in the place of one tree. And these dwarf trees when seven or eight years old, will bear, if properly managed, from half a bushel to two bushels of fruit according to the nature of the variety—they bear very early, say the second or third year from the bud or graft, but, of course, the quantity is small at first. The French grow very nice pyramidal trees on the *doucain* stock, a species that holds an intermediate rank between the Paradise and the crab or common stock. These pyramids would perhaps suit your purpose best, if you could get them; they may be planted ten feet apart.

But the production of large quantities of apples should not be aimed at in a garden, because it is an impossibility. We do not hesitate to say that much more pleasure and profit will result from the bushes or pyramids than from the standards. In the grounds of Mr. Rivers, of Sawbridgeworth, we saw a little plantation of 360 dwarf apple trees on paradise, on about ten square rods of ground. For your benefit and others, we give, in another place, a table of distances.

CERASUS MAHALEB.

A. Thompson, *Otisco*. This is what is called the perfumed cherry on account of the leaves, wood and blossoms having a strong perfume. It is a native of the south of Europe. It is a branching tree with smooth, glossy, light green foliage, and attains the height of 20 or 25 feet. It bears small, roundish, black, bitter fruit, and is remarkable for flourishing on the poorest soil. It is cultivated in British gardens as an ornamental tree, but extensively used by the French for dwarfing the cherry tree. The first year or two the free growing sorts make as strong growth in it as on free stock, but afterwards they shoot less vigorously and become very prolific. It is raised principally from seeds as the mazzard, and may be worked the second year. The price of stock fit for working is about $5 per 100 in the nurseries here, being mostly imported. The price of Paradise stock is, we believe, about the same.

The Cottage Garden of America, containing practical directions for the Cultivation of Flowers, Fruits and Vegetables: by Walter Elder. Philadelphia, Moss & Brother.

The above is a neat work of about 250 pages, with which we have been favored by the publishers. The author claims that he has taken untrodden ground; that other works on the subject of gardening have been designed for the rich, while his book is "addressed entirely to the cottagers of America."

Mr. Elder is an experienced gardener, making no pretension to literary acquirements, being more accustomed, in his own language, "to the spade than the pen; and better at laying out gardens than making books." This work, however, is the fruit of long practice and close observation; and although the best gardeners differ somewhat in their practice, the author declares that "every article in the book will stand the scrutiny of practice." It contains a large amount of matter in a small compass, and will be a valuable book for the "cottagers of America."

Premiums for Seedling Grapes.—Mr. Longworth, of Cincinnati, has lately offered premiums of $50 each for a seedling Catawba, Ohio, Herbemont or Missouri grape, equal to the original, and of a white, blue or black color. It is not considered a difficult matter to obtain seedlings of the proposed colors. White seedling Catawbas have been already grown in the vicinity of Cincinnati.

Cuttings and grafts, when sent to a long distance, should be enveloped in pieces of oil cloth. This preserves them from the action of the air.

CULTIVATION OF LIMA BEANS.

Mr. EDITOR :—I hand you for publication in the Horticultural Department of your paper, a communication from one of our citizens in relation to the cultivation of Lima Beans, presented to the *Horticultural Society of the Valley of the Genesee.* Should the experiments of others prove as successful as have those of Mr. SEWARD, we may hope soon to see our market well supplied with this most excellent and valuable table vegetable. L. A. WARD.

BY the request of the President of your Society, I submit the following details of my experience in cultivating this plant for some time past. It is now about eight years since my attention was called to the article by Mr. BATEHAM, at that time of the Rochester Seed Store. I purchased a single handful for a shilling, and have succeeded in perfecting a sufficient quantity for use and for seed since that time, not exceeding fifteen or twenty hills in a season. In the mean time, having had an opportunity for observing the peculiar habits and necessities of the plant, I prepared last spring a strip of ground equal to two square rods, on which were planted about sixty hills, with four seeds to a hill, which *averaged*, after the common catastrophies of germinating, and the depredations of the cut-worm, two and a half matured plants to the hill. They grew as usual in the months of July and August with great vigor, some of the vines attaining a length of more than twenty feet. The bean was sufficiently matured for cooking about the 15th or 20th of August, and from that time to the last of October they were gathered freely for the use of a small family. A half peck was submitted at the exhibition of your Society about the 20th of September, to which was awarded a premium of two dollars.

Mr. FOGG, of the Seed Store, desiring to obtain for seed what might mature at the rate of seven dollars the bushel, I had them carefully gathered about the 10th of November, amounting to a full half bushel of plump dry seed, in addition to which there was nearly a peck of dry beans not considered sufficiently ripe for seed, which we find to be as great a luxury for the table in winter as they were in the fall. Under all these circumstances, the crop cannot be considered less than one bushel, at $7. (It is said, by the way, that the article is considered in the Philadelphia market as good as lawful tender for $10 the bushel.) One acre of ground at this rate would produce eighty bushels, and at $7 a bushel, $560 —enough one would think to satisfy the rapacity of a California gold digger. The inferences to be deduced from the foregoing statements are, first, that there is no good reason why our vegetable market should not be as well supplied with this *real luxury* as are the markets of New York and Philadelphia; and second, that they can be produced for market, in quantities and at prices that would place them in reach of all our citizens.

The Lima Bean, as its name indicates, is a native of Lima, in South America, introduced into the United States probably within the last thirty years. It is consequently a little out of its latitude in Rochester. It will be necessary, therefore, to secure the greatest success in cultivating it, that you select a warm, sandy rich soil, if possible a little elevated from the plain, as such elevations will often escape a frost in spring which would destroy the plant a hundred yards distant on a plain ten feet below, and it will be apt to be too late to plant this bean a second time. The same will be true of the frost in the fall, when every day will be needed to perfect the crop. They should be planted between the 1st and 15th of May, immediately after a warm rain, so as to get them up if possible before it rains again—a few cold wet days, or a hard crust on the surface, may dvstroy a large part of your plants after they have sprouted and before they are up. The vines, after they commence running, will need a little assistance in attaching themselves to the poles; the cultivation after this need not vary from that of other beans. The roots may be pulled up in the fall or cut off near the ground, and the beans left to dry on the poles.

To those who are entirely unacquainted with this vegetable it may be proper to state, that the Lima Bean is to all other beans what the Marrowfat Pea is to the common Field Pea. It is a large white bean, growing three in a capsule or pod, rich and buttery, having the starchy or beany taste peculiar to the family scarcely perceptible. J. W. S.

A WORD ABOUT PEARS.

BY H. P. NORTON.

IN the spring of 1846 I gave a neighbor scions of the Bartlett: which he inserted on bearing trees, and in September, 1848 delivered me a specimen of large and excellent fruit gathered from those scions.

In August, 1847, I budded several varieties upon stocks of the apple or orange quince. This day I have measured the growth, and thinking the results may be interesting and perhaps useful, furnish them:

	HEIGHT.	DIAMETER AT BASE.
Bartlett,	4 feet 9 inches.	½ inch.
Beurre d' Aremberg,	4 " 2 "	¾ "
Summer Bon Chretin,	5 "	¾ "
Jargonelle,	4 " 8 "	¾ "
Rousselet de Rheims,	2 " 9 "	¼ "
White Doyenne,	2 " 4 "	½ "
Gray Doyenne,	2 " 1 "	½ "

Golden Beurre, of Bilboa, grafted April, 1844, shows the following height of main stem, 2 feet 10 inches: 6 side shoots, 21, 11, 9, 9, 8, 4 inches, making, making the entire growth 8 feet. Diameter ¾ inch.

I am surprised that Beurre Diel on quince is not more frequently and more highly recommended by cultivator's of fruit and conductors of pomological publications. The rapid advance, hardiness, productiveness of the tree, and the large size and excellence of the fruit render this, in my poor opinion, a desirable variety. Indeed, I do not know its superior.

You will have observed that Mr. DOWNING has recently in the Horticulturist, uttered strong animadversions upon the practice of giving long and deceptive lists of pears in Nurserymen's Catalogues, and affirms there are not over twenty varieties really worthy of cultivation. If this be true, a very obvious inquiry suggested is, Why has he in his Fruits and Fruit Trees described 233 varieties? If not worth cultivating, why fill the book with their description? The book was designed to be, and has become a standard work, for the information and guidance of those who desire to grow good fruit At least 80 to 100 of these varieties are expressly pronounced to be "first rate," "excellent," "delicious," "worthy of cultivation," &c., so that no reader can doubt the author intended to recommend them as desirable, and entitled to a place in fruit gardens. If those who raise trees to sell are censurable for putting before the public extended lists with an indiscriminate recommendation of the varieties, is not the writer of a standard work justly obnoxious to severe rebuke for misleading the uninitiated in a similar manner? In the one case purchasers are likely to suspect the representations and are on their guard; in the other, discovering no motive for over-wrought descriptions, they are more liable to be injured. *Brockport, March,* 1849.

The idea of reducing the list of pears to about a dozen of the best varieties is rather utopian, while so many tastes exist and so many climates and localities to be suited. Nurserymen are compelled to grow a great variety, but people are by no means compelled to buy them.—ED.

Ladies' Department.

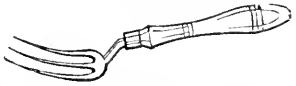
GARDENING FOR LADIES.

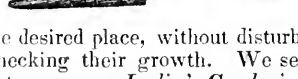
Mr. Downing, in the February number of the Horticulturist, when urging the ladies to decorate their homes with climbers and creepers—the drapery of nature, more beautiful far than festoons of satin and gold—says: "All that is most graceful and charming in this way owes its existence to female hands. * * * They are naturally mistresses of the art of embellishment. Men are so stupid in the main about these matters, that if the majority of them had their own way there would neither be a ringlet nor a ruffle, a wreath nor a nosegay left in the world."

Without entirely assenting to the truth of the above, we would say that the ladies have ever been considered, the world over, the almost exclusive patrons of flowers. And we know of no employment—no exercise or recreation—so conducive to health and happiness—none that will bring so effectually the glow of health to the cheek, and of joy to the heart, as Gardening. It not only furnishes exercise, but exercise in the open air, and that regularly. While riding and other modes of exercise are attended with expense, and inconvenience, and loss of time, and are seldom attended to regularly, even by those most favored: yet she who cultivates a flower garden, and loves flowers, will seldom neglect her daily task. The ever encroaching weeds, the necessities of her plants, call daily for her attentions—and seldom calls in vain.

The healthy appearance of English ladies is noticed by all American travellers. And for this they are in a great measure indebted to their passion for gardening. All English ladies work in their flower gardens, from the proudest princess to the poorest cottager.

When the hoe and the spade were almost the only garden implements in use, ladies had some excuse for neglecting to cultivate their gardens with their own hands; but now, implements are made so light and convenient, especially for ladies' use, that there would seem to be no excuse. The *Ladies' Garden Fork* is one of the most useful of these, either in the garden, or among plants in pots. The *Transplanting Trowel* is a light and convenient implement for preparing the ground for small plants, and for removing them to the desired place, without disturbing their roots or checking their growth. We see advertised in the eastern papers *Ladies' Gardening Gloves;* but we would not advise our fair readers to be particular about the *mittens*.





The architect may design, and the builder erect, the stately mansion or the simple cottage; it may be faultless both in design and execution, yet it stands stiff, unmeaning and lonesome;—but let some fair hand surround it with the drapery of nature—leaf and blossom—and it is changed as if by magic; its deformities, if any, are hid, its beauties heightened, and it becomes at once the abode of grace and beauty.

Soda Coffee.—The flavor of coffee may be very much improved by adding forty or fifty grains of carbonate of soda to each pound of roasted coffee. In addition to improving the flavor, it neutralizes the acid contained in the infusion.

Boys' Department.

Boys Look at This.—*The Orphan's Gratitude.*—Hon. A. H. Stevens, of Georgia, in a recent address at a meeting in Alexandria, for the benefit of the Orphan Asylum and Free School of that city, related the following anecdote:

"A poor little boy in a cold night in June, with no home or roof to shelter his head, no paternal or mateal guardian or guide to protect or direct him on his way, reached at nightfall the house of a rich planter, who took him in, fed, lodged and sent him on his way, with his blessing. Those kind attentions cheered his heart and inspired him with fresh courage to battle with the obstacles of life. Years rolled round, Providence led him on, he had reached the legal profession; his host had died; the cormorants that prey on the substance of man had formed a conspiracy to get from the widow her estates. She sent for the nearest counsel to commit her cause to him and that counsel proved to be the orphan boy years before welcomed and entertained by her deceased husband. The stimulus of a warm and tenacious gratitude was now added to the ordinary motive connected with the profession. He undertook her cause with a will not easy to be resisted, he gained it; the widow's estates were secured to her in perpetuity; and Mr. Stephen's added, with an emphasis of emotion that sent its electric thrill throughout the house, "that orphan boy stands before you!"

Arithmetical.—*For the Boys.*—To find the square of any number, or series of numbers, having the square of any other number given.

Rule 1.—To the square of the number, (the given square,) add twice the number increased by *one*, and the sum will be the square of the next greater number: thus, $12^2=144$; and $144\ddagger12\ddagger2\ddagger1$, $(=25,)=169$, the square of 13; &c.

2.—From the square of any numbers, subtract twice the number diminished by one, and the remainder will be the square of the next less number; thus, $12^2=144$, and $144-12\ddagger2-1$, $(=23,)=121$, the square of 11; &c.

Why? Boys.—H. *Down East, Feb.*, 1849.

Enthusiasm.—Nothing is so contagious as enthusiasm: it is the real allegory of the tale of Orpheus; it moves stones—it charms brutes. Enthusiasm is the genius of sincerity, and truth accomplishes few victories without it.

Early Poverty a Blessing.—An English judge being asked what contributed most to his success at the bar, replied, "Some succeed by great talent, some by a miracle, but the majority by commencing without a shilling."

The three most difficult things are, to keep a secret, to forget an injury, and to make good use of one's leisure.

Dr. Franklin, in speaking of education, says, "If a man empties his purse into his head, no one can take it from him."

OUR PRESIDENTS.

First stands the lofty Washington;
That noble great immortal one;
The elder Adams next we see,
And Jefferson comes number three,
Then Madison is fourth you know,
The fifth one on the list Monroe;
The sixth an Adams comes again,
And Jackson seventh in the train;
And Harrison counts number nine;
The tenth is Tyler in his turn,
And Polk eleventh, as we learn;
The twelfth is Taylor, people say;
The next we'll learn some future day.

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ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, March 22—7 P. M.

FLOUR—Flour rather heavy. Sales 3,000 bbls. at 5 37 *a* 5.60, with an occasional sale at something off.

GRAIN—Yellow Corn firm, but white heavy. Sales 25,000 bu. at 52 for white, 59 *a* 60 for northern yellow. Rye 60¼. Oats 37 *a* 39. Barley 62.

PROVISIONS—Pork has a speculative tendency. Sales at 9 *a* 9.12 and 11 *a* 11.12. At the close 9.25 and 11.25 was asked. Beef firm. Lard 6 *a* 6½ N. Orleans, 6½ *a* 6¾ for prime. Sales 1000 kegs. Butter and cheese without change.

SEED—Clover 6 *a* 6¾ for old and new.

ASHES—Are $6.75 for Pots, $7 for Pearls.

Rochester, March 23, 1849.

IN consequence of the bad state of the roads, but little produce has been offered in market during the past ten days

FLOUR AND GRAIN.—Flour is selling at $5—some holders ask $5.12. Wheat $1.13 *a* $1.16 per bushel. Corn 46 *a* 47 cents. Rye 53 cents. Barley 50 cents. Oats 30 cts.

SEEDS.—Clover $5.50 *a* 4—retail, $3 75 for medium, and $5 for large kind. Timothy $2 *a* 3. Flax $1.

PROVISIONS.—Pork (Mess) $13 *a* $14 pr. bbl. Beef $5 per cwt. —mess $7 *a* $8 per barrel. Butter 12 *a* 14 cents. Eggs 13 cts. Cheese 6 *a* 6½. Lard (tried) 7½ *a* 8. Maple Sugar 10 cts.

Buffalo, March 22.

There is more disposition on the part of the holders to sell than for some time back. In Flour good brands are generally held at 4.62½ Mess pork sells at $13; prime $9 50.

To Agents, Post-Masters and Subscribers.

AGENTS, Post-masters and other friends of the Farmer will bear in mind that we offer Premiums amounting to OVER TWO HUNDRED DOLLARS (in Agricultural Books, Implements, &c. at cash prices,) for subscribers obtained before the 20th of April next. We have not room to publish the list of Premiums in this number, but will send it, together with show bill, specimens, &c., to all who wish to compete.

Friends, will YOU SHOW THE FARMER TO YOUR NEIGHBORS AND ACQUAINTANCES, AND INVITE THEM TO SUBSCRIBE?

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH ENGRAVINGS OF

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

THE TENTH VOLUME of this Journal will commence on the 1st of January, 1849. In making this announcement to his AGENTS and the FARMERS and FRUIT CULTURISTS of the country, and again asking their support in behalf of the work, the Publisher has the satisfaction of stating that the GENESEE FARMER now has a circulation EXCEEDING, BY SEVERAL THOUSAND, that of any similar periodical published in America. This fact, alone, furnishes abundant evidence of the *real value* and *superior merit* of the work—for no journal, however cheap, can become and continue so universally popular, unless actually WORTHY of the substantial support of an intelligent community.

THE HIGH REPUTATION which the Farmer has acquired throughout the United States *will be maintained*, and if possible *augmented*, during the ensuing year. To accomplish this object, no effort or expense will be spared by the Editors or the Publisher. Their aim is to furnish a *reliable* and *independent* journal—one which shall avoid and condemn *humbug* in whatever guise it may appear, and impart correct practical and scientific information on all subjects pertaining to Agriculture and Horticulture.

It will be issued on NEW AND CLEAR TYPE, and SUPERIOR PAPER, and printed in the best style of the art—NEAT and CORRECT. Its ILLUSTRATIONS—embracing Portraits of distinguished friends of improvement on STEEL and wood, and Engravings of Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Trees, Flowers, &c.,—will be more numerous and expensive than those of any preceding volume. ☞ Each number will contain at least **24 Royal Octavo Pages!** making a large and handsome volume of several hundred pages at the close of the year.

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THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

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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. X. ROCHESTER, N. Y.—MAY, 1849. NO. 5.

Farm Husbandry.

PRODUCTION & CONSUMPTION OF MOLD IN SOILS.

Few subjects are more interesting than the natural laws which govern the production and consumption of organic matter in soils. By the terms "organic matter" the unlearned reader will understand a substance, which was once a part of some living vegetable or animal, and was organized by vitality.

On all lands covered with forests or other growing vegetation, the production and consumption of mold are constantly in progress. When production exceeds consumption there is of course an increase of vegetable matter on the surface of the earth. On the other hand, if from any cause the decomposition of mold is larger than the additions to it, a diminution of the amount of organic matter ensues.

The quality and agricultural value of mold depend mainly on the character of the plants by the decay of which it has been formed: and by the length of time which the vegetable debris has been washed and leached by rains, since the vegetables ceased to live. Plants and forest leaves that abound in azote or nitrogen, in sulphur, phosphorus, lime, potash, soda, magnesia and chlorine, yield a far richer mold than such as contain very little of the elementary bodies named. One hundred pounds of wheat, oats, corn, peas, beans, clover, and cabbage, will produce in rotting, better mold for all agricultural purposes, than a like weight of pine wood, rye straw, or other vegetable substance which is poor in bread and meat-forming elements. Common wood and all plants lose a portion of their earthy salts, (which appear as *ashes* when they are burnt) if long soaked in water. Old and long weathered cornstalks, grass and straw will have parted with more or less of their fertilizing atoms by protracted exposure. Hence, after plants cease to live and begin to decompose, the sooner they are plowed in, and mingle with the earth, the less they lose, and the more valuable they are to enrich the soil. The process of disorganization is governed by chemical laws as certain and uniform, as those which regulate the re-organization of the same or similar atoms, in developing the germs of a new generation of vegetable existences.

The elements of water, oxygen and hydrogen, which exist in all plants, separate and pass off faster in mold than carbon and azote. It is carbon, or the great element of coal and lamp-black, that renders muck and mold darker colored than were the vegetables, before they began to undergo any chemical change. Light, heat and moisture hasten the decomposition of all vegetable and animal tissues, and the consumption of their remains or mold on the surface of the earth. These same natural agencies equally favor the growth of plants, and the re-organization of mineral matter to serve as food for animals. The tillage and cropping of the husbandman, being purely artificial operations, are extremely liable to destroy the balance in organic nature, to the injury of the soil.

Tillage greatly promotes the decay of organic elements in soils, and the solution of the before nearly insoluble salts of silica, lime, potash, magnesia, &c., that furnish aliment to all crops. Vegetable and animal substances when rotting, evolve gases, which attack insoluble compounds of flint and lime, potash, soda and magnesia, and render all these minerals available to growing plants, which imbibe them through their roots, and fix them permanently in their tissues. In nothing is the wisdom of God more perceptible, than in regulating the solubility of mold and the minute particles of rocks, which together, form all the diversified soils on our planet. Without this admirable adjustment for hourly, daily and annually feeding plants, which in turn feed animals, both would soon cease to be on the earth. How shall we make plain to the comprehension of a child, the science of feeding plants—the art of accumulating bread, meat and fruit in the soil?

In 100 parts of fresh, lean meat there are 77 parts of water which may be expelled by drying. In 100 parts of perfectly dry beef there are 4.23 of *ash*, or incombustible salts. Muscle contains about 15 per cent. of nitrogen: and nearly 52 of carbon. The other constituents are oxygen and hydrogen, or the elements of water. Lean meat, like the seeds of cereal plants, contains sulphur, phosphorus, lime, iron, and all the elements required to form bones, brain, nerves, skin, &c. Hence, a dog or other carnivorous animal can subsist on lean meat, or on bread and water alone. A good cow extracts from the soil in her food, some 40 or 50 lbs of bone-earth, in the course of a year. Thirty pounds of this will be given in her milk, which will be sold, probably, in cheese, and the balance will be in her urine and dung. In 100 lbs. of wool there are five pounds of pure sulphur. In 100 lbs. of gypsum there are some 20 of sulphur. Gypsum aids in making clover, peas and beans, and they make wool; and old woolen rags will form rich mold.

For the same reason, clover, peas, and all leguminous plants, yield valuable food for a crop of wheat. But to begin at the beginning: How is a farmer to raise large crops of grass, clover or peas on *poor land?* The thing cannot be done without manure, or good ashes to furnish the constituents of the crops, which nature demands, and the soil does not contain. It is silly to believe for a moment that two tons of timothy or clover hay, or 20 bushels of wheat, can be organized out of *nothing*, or from any other materials than such as the Creator of all things has appointed for that purpose. So far as the subsoil possesses lime, potash, phosphorus and sulphur, deep plowing and subsoiling will render these elements available to cultivated plants. But on most soils, it will be found good economy to apply lime, plaster of paris, ground bones, salt, forest leaves, wood ashes, and all the manure one can possibly save, or make on the farm. There is just as much propriety in laying up raw materials for making wheat, corn and potatoes, as there is in having a crib or store house full of grain for making bread. Lands thickly set in grass and not injudiciously fed, nor mown, i. e. not robbed of their products, will gain from the subsoil and atmosphere, the organic and inorganic elements of human food and clothing. To scarify old pastures with a sharp harrow, sow more seed, and apply a top dressing of gypsum, is often followed with the happiest results. Similar treatment of meadows, or a top dressing of ashes, or one of lime alone, will greatly increase the product, in most cases.

It will not do to be ever removing grass in the stomachs of domestic animals from pastures, and hay and grass from meadows, and make no return. This is the right way to impoverish an estate, and render it comparatively worthless. Remember that, by improving land, you lessen the expense of raising every thing of a vegetable or animal nature which it yields. Very few men make the difference large enough between the price of poor, and that of good land. Every acre should be reasonably certain to give 50 bushels of corn and 25 of wheat. A plenty of lime, of potash, and of the mold formed by pea vines and clover, will achieve such a consummation.

If the surface and subsoil naturally lack lime, its sulphates, phosphates and carbonates—if the earth has a small allowance of potash, magnesia, soda and chlorine in its composition—it is unreasonable to expect large crops annually, which consume in growing, a good deal of these indispensable elements. Soils poor in alkalies and alkaline earths, must not be expected to yield much bread and meat per acre, no matter how large a quantity of swamp muck is added, unless lime, potash, phosphorus and sulphur are added also. Bones, gypsum and salt, or good wood ashes, will give rich mold, by the aid of clover, peas, grass or corn: and a mold rich in the elements of flesh and bones, will be certain to furnish the farmer with cheap potatoes, cheap bread and meat. In raising wheat, it is not desirable to have a soil largely stocked with organic matter. Hence, it is often better to have the 40 per cent. of clover voided in the dung and urine of sheep, evenly spread and distributed in the soil of a wheat field, than to plow in the whole crop without permitting any animal to feed upon it. In the latter operation, more than twice as much organic matter is added to the soil, as in the former. Whenever an agriculturist has reason to believe that a field lacks mold, he should grow crops and plow them in, rather than pasture it, or otherwise consume the vegetables that it produces. This will augment its mold.

DAIRY BUSINESS.

OUR northern friends must look sharply to their cows, their pastures, meadows, root, corn and other forage crops; for Virginia, North Carolina, Georgia, and Tennessee are already in the field as competitors in the dairy business. There is not a State in the Union in which both cheese and butter can not be made. Like all other arts, that of rearing good milkers, keeping them well and cheaply, and at the same time manufacturing choice butter and cheese for market, demands experience, care and study. The operation is mainly performed in those seasons of the year, when all animal substances, like milk, whey, buttermilk, and curd, are extremely liable to chemical changes which injure the products of the dairyman. Only a small portion of the butter and cheese made in the United States is really first rate. And why not? The milk is good when drawn from the udder, but it is badly handled ever after. Less attention is paid to keeping milk pails, pans, churns, cheese tubs or vats, perfectly sweet and clean than is required to secure the best results. Butter when taken from the churn is not properly worked over; nor salted with pure salt; nor protected from the influence of atmospheric air, as it should be. The germ of that peculiar change, known by the common name of "frowy," is early planted in a mass of butter, although undeveloped for weeks or months.

Butter and cheese which are put up wrong, if kept any time, will never come out right. The changes which they undergo present a subject for close and curious study. As in curing meat, good salt, pure air, and the entire exclusion of oxygen from butter in kegs, and cheese in a well oiled, impervious rind, are the leading matters to be attended to. In cheese-making, the heating of the milk, the condition of the rennet, the quantity used, and the quantity of salt, the degree of pressure on the curd, the time for it to be in press, the turning of cheese, surrounding with cloth, &c., &c., are all details of great importance. To incorporate into the cheese all the casein (curd) and butter which the milk contained, and preserve both sweet and delicious with aroma, peculiar to each, are the objects to be attained. Keeping milk too long, bad skins, using too much rennet, too much scalding, impure salt, excessive pressing, neglect in turning and oiling, and an offensive atmosphere in the dairy room, are among the most common causes which injure cheese.

Butter is damaged by permitting cream or milk to stand too long before churning; by the defective working out of the buttermilk; bad salt; and too long exposure to the atmosphere before it is packed down in crocks or tubs. Keep the air from your butter as much as practicable.

Plant carrots and corn in drills for your cows; and see that they are milked regularly and clean. A little labor will often produce a good crop of pumpkins. The main point is to raise a full supply of good food, and take care to husband all their manure as well as other products.

KEEP BEES.—Bees cost nothing for their food, neither for their pasturage in summer, nor for their provisions in winter.

ECONOMY OF FARMING.

BY AGRICOLA.

In every department of industry, except that of the farmer, special effort is made to cheapen the expense of producing articles of manufacture. This has resulted in diminishing also the price at which articles are sold, though the profits to the manufacturer, from the extensive sale of his articles, are larger than formerly. Why then, may it not with propriety be asked, does the farmer in most instances continue in the beaten track of olden time, instead of availing himself of the facilities which have been furnished him for cheapening the cultivation of his farm? How many farmers content themselves with a preparation for a single crop, instead of adopting a system of manuring that will, by a proper rotation, be available for a succession of crops. How little attention is given, after all, to systems which have been adopted, by which the products of many farms have been largely increased, and the expenses of cultivation, by the use of improved implements and the right use of manures, have been very materially lessened.

Now it must be evident, that any farmer who does not avail himself of the means within his reach, and thus economise the expenses of his farm, is pursuing a course that must result in great loss, and in permanent injury. It may be said, and doubtless truly, that this deficiency arises from want of information. But are not our agricultural journals published at such rates as to bring not only one, but several within the means of every farmer? and can it be excusable in a farmer, to make his ignorance his apology, when the necessary means of information are placed within his reach? Our farmers read far too little of what is going on in the world around them. In the pages of our agricultural journals, in the proceedings of our agricultural societies, information is afforded that would enable one of these farmers greatly to increase his income, while at the same time his farm would be rising in value and increasing in fertility. Let me then urge upon the farmers of our country to patronise liberally the agricultural press. Give to their columns the results of experience on their every farm—add to the usefulness of these works by contributing the results of their observations—and thus make these papers what the editors desire them to be, the repository of the experience of practical farmers. Were this done, I doubt not, economy in the management of the farm would prevail every where, as it now does in comparatively few localities.

In addition to this let the farmers unite in town, county and State associations for the improvement of agriculture. Here a farmer meets his brother farmer, canvasses the methods of farming pursued, hears what others may advance in favor of new methods of cropping and culture; his own mind is quickened, his desire for improvement is aroused, and I hesitate not to affirm, that an advance will result from this intercourse. The mind of the farmer must be aroused—he must become a *thinking* as well as a working farmer—and whoever knew the thinking, reflecting farmer who was not, in the main, a successful one? Encourage also the introduction of agricultural education into schools—and the establishment of institutions for the especial benefit of the agricultural class. Why should not this be done? Do they not deserve this at the hands of their legislators? Shall it be said, that the farmer who feeds all, who mainly contributes to the support of government, is not entitled to any special effort to enable him to rightly improve his mind for the noble pursuit which he has chosen? I will not for a moment believe, that this subject will be permitted to sleep, after the farmer shall have examined it at his fireside, with that attentive consideration which he gives to the matters that ordinarily are the subjects of examination. The result of this, if carried out, will be a better race of farmers—more perfect management of the farm—better husbandry and better crops; in short, economy in farming will be produced—diminished expenditures and increased returns.

Much might be accomplished towards attaining the object suggested, *economy*, if the farmer should become as systematic in his accounts with his farm as he is with individuals. I am pleased to learn that many of our farmers are adopting this system in their operations. Not long since I was permitted to look at a farmer's account for the year—and I found a statement, with all the necessary facts to substantiate it, of the expense of all his crops—that is, what each had cost him per bushel. Thus, wheat 38 cents, oats 13, barley 29, beans 37, &c., &c. Now who cannot see, that this farmer can at once determine whether the course he is pursuing is the one best for his interest, or whether a change is necessary!—and if so, he knows where to make it. I would press this matter home to every farmer. Be systematic in all your operations, and thus you will be enabled to decide at once which course is best for you to pursue.

I would urge upon every farmer who makes the production of grain his leading object, to pay particular attention to the cleaning of his lands. Let this be attended to with the most scrupulous care; give to your grain all the nutrition the land can yield, and let not the weeds interfere with its full development, and you will be satisfied with the result. This is a matter far too little attended to in this country—and yet upon it depends the complete success of the farmer in raising grain. He may manure thoroughly, his seed may be good, his land thoroughly pulverised, yet if he neglects his crops, and suffers the weeds and grass to usurp a portion of the nutriment from the soil, a diminished crop will convince the farmer, that a wise economy has not attended his operations.

While improvements (so called) are often made at an expense that far outweighs the return of the crops, the farmer hearing of them is led to say, it is useless to make the attempt, for it will be ruinous; but if he will for a moment reflect, that this is *not improvement* which leads to such ruinous results, but improvement means *increased products* at *diminished expenditure* in cultivating the soil, by the aids of improved implements and machinery, and a careful husbanding of the manure of the farm. And is not this desirable, is it not attainable? I greatly mistake, if the farmer will carefully follow out the suggestions herein made, with such other aids as experience has shown to be useful, he cannot fail of success, and in the end will learn the true secret of success, in the *economy of the farm.*

Cure for Founder.—"The seeds of sun-flowers," says a correspondent of the Zanesville Gazette, "are one of the best remedies known for the cure of founder in horses. Immediately on discovering that your horse is foundered, mix about a pint of the whole seed in his feed, and it will effect a perfect cure."—The seed should be given as soon as it is discovered that the horse is foundered.

BONE-MEAL FOR COWS.

[From the Massachusetts Plowman.]

MR. EDITOR—Sir: Being a reader of your excellent paper, I have often seen questions from your correspondents about various subjects connected with agriculture, which I have seen answered satisfactorily. My father has a valuable cow, which gives an abundant supply of rich milk, and which is, in all respects, a good cow. I noticed the past summer, in driving it to and from pasture, that it would eat bones that she found by the road-side, and also, this winter. I have often found her eating them, and have prevented it, when possible. It does not seem that it is the want of salt—for she has had most of the swill from the house, and also salt, occasionally. If you can tell me the cause, and if hurtful, the preventive, I shall be very much gratified.

Yours, truly, N. P. B.

Hopkinton, March 19, 1849.

It is supposed by many that cows are fond of bones because they require something of that nature to restore what they lose when they give milk. Milk is the article that nature has provided for young animals whose bones are forming and growing; and it is found to be the best article they can have.

Now a cow that has come to maturity can afford to yield up some of her milk without injury as her bones are already formed. Yet she may yield such an abundance of milk as to injure her own carcass. We find some cows running to milk, as the phrase is, and becoming poor in flesh while they are yielding large quantities. Such cows are more liable to suffer from disease or derangement of the system than cows that give but an ordinary quantity and incline to flesh. The garget in particular, which always affects the udder, is always found to be most troublesome in cows that yield large quantities of milk.

This is the theory—that great milkers injure their bones by parting with too much that is needed to supply the natural waste of bone. Now, as to the remedy—*bone meal* has been used on the supposition that it might supply the waste occasioned by the great yield of milk. And a number of farmers in Essex county who have tried it have reported to us that they found the remedy effectual. Bone meal is now kept in Agricultural warehouses for the purpose of restoring cows that hanker after bones.

No harm will result from eating any bones that are found in the street provided they are well ground by the cow before she attempts to swallow them. Any bones may be pounded fine with a sledge hammer and given to cows. Or the meal may be obtained in this city.—*Editor Plowman.*

REMARKS:—The above relates to questions of great practical and theoretical importance. The early readers of this journal need not be informed how often and earnestly we have urged upon the attention of the Agricultural community, the value of *bone earth* in all soils, whether used as pastures, meadows, or grain lands. The amount of phosphates which is annually wasted in the dung, urine and milk of animals in this country, is infinitely larger than is generally supposed. The elements of bones are not abundant in ordinary earths: hence their loss, no matter in what shape, is a serious calamity. In the bread, meat, milk, potatoes and other food consumed by the human family, there is a prodigious waste of valuable phosphates and sulphates of lime and magnesia, under the present customs of society, without any fair excuse whatever. As the country becomes older and its cities and villages more populous, the necessity for saving night soil increases, whilst the quantity extracted from cultivated lands and lost is equally augmented. Pursue this system of robbing the soil of the elements of bones one or two generations longer, and not only cows but children will have to eat bones to satisfy the demands of nature to repair the distorted, enfeebled skeletons within them. When a child, a calf, a colt or a lamb can organise its frame-work out of iron, then it will do to waste the phosphate of lime in the excretions of animals.—ED. GEN. FARMER.

THE PLOW—ITS HISTORY AND IMPROVEMENTS.

BY HORACE L. EMERY.

FRIEND MOORE:—I send you herewith brief descriptions of some of the modern plows.

Among the various forms and kinds, I would first describe that called the "*Swivel Plow*," or by some the "*Side Hill Plow*." (Figure 1.) This is so constructed that the mold board is suspended upon pivots, by which arrangement the mold board can instantly be changed to the right or left side of the beam—thereby, forming a perfect plow at the pleasure of the operator, which will turn furrows either way.

This is an important invention, and the best now in use for the particular purpose for which it was originally designed, viz: for turning furrows down the sides of hills—thereby requiring less team—doing the work much better, and what is most important, this method of plowing prevents all washing of side-hills by heavy rains, &c. This plow has recently been so much improved in form as to work equally well on level lands, as the furrows may all be turned one way, avoiding all dead furrows and ridges when desired. It is also useful in working roads, plowing from fences, &c. The credit of this *invention* belongs to J. RICH, and the plow has always been known as *Rich's Swivel Plow*. The accompanying cut is a correct representation of the plow.

Another plow for the same purpose is in use to a considerable extent in this State, which is formed with a right and left mold-board combined, and the beam so attached to the irons as to be readily made to vibrate from side to side—the main bolt through the beam forming the pivot—when the hind end is moved quite to one side, one mold-board being nearly in a plane with the furrow, it forms the land-side, while the other mold-board turns the furrow slice, and *vice versa*. This answers a good purpose. It is however a better plow for ridging and ditching, as it can be made to turn two furrows, one each way, simply by confining the hind end of the beam, midway between the mold-boards. This was invented and patented by BARNABY & MOORS, of Ithaca, N. Y.

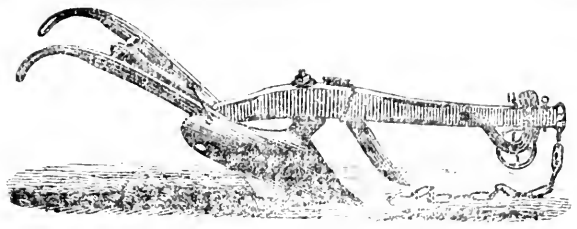
Another kind of plow for ordinary kinds of work is extensively used and well approved by farmers in the interior of the State, which is known as the "*Wheel Plow*." This derives its name from the fact of its being formed with a revolving landside, thereby producing a rolling, instead of a sliding friction. In other respects the plow differs little from other kinds in general use. In theory, by the use of the revolving wheel landside, a saving of power is obtained—and in fact it is the case, when and where the bottom of the furrow is compact and hard enough to sustain the weight and pressure of the plow upon the wheel, without being indented: but whenever the earth is mellow, and constantly giving way to the pressure of the wheel, this saving of power is more than counterbalanced by the increased resistance to be overcome. The more complicated construction, and the constant wearing of the axis and revolving parts, has retarded its very general introduction.—The plow, however, is thought highly of by many of the best farmers in the central part of the State. It is the invention of T. D. BURRALL, of Geneva.

Another kind now in use to a great extent in some sections of the country, is known as the "*Self Sharpening Plow*." (fig. 2.) These are so constructed that the *point* and *wing*, and front or top of share, are three separate pieces—each piece so formed as to be capable of being reversed several

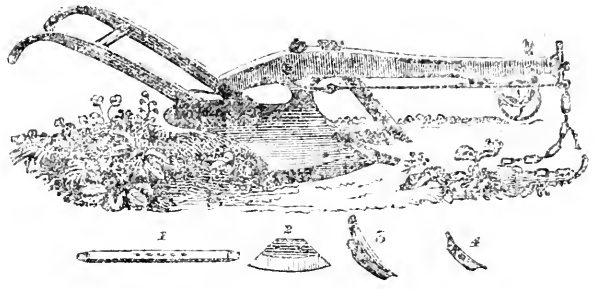
times as they wear away; these have been found to be cheaply kept in order, and when the land is free, have been sufficiently strong, notwithstanding their complex construction. They have recently been improved, and wrought iron substituted in place of cast metal, with steel points and edges—thus making them equally strong as any other plows—and by being newly laid by any ordinary blacksmith, once in a year or two, the plow can be worn out without being dependent upon distant furnaces for repairs. The various improvements in the Self-Sharpening Plow have been made by several different persons, at different times during the past ten years; but the most important has been that of substituting wrought iron and steel in place of cast metal for the wearing and exposed parts, which last belongs to, and was patented by, Ruggles, Nourse, & Mason.

With the *Sub-Soil Plow* I will close this communication. When the advantages to be derived from the use of the Sub-Soil Plow are known, very few good farmers will think of cultivating their farms without one. On many farms which have become impoverished by surface culture, and become unprofitable, the use of this plow will renew the soil, and to a great extent produce the effect of manures, &c., by restoring to them their original fertility. Were this the only advantage to be derived, its use should be no longer delayed; but when it serves as a drainer to receive the surface and surplus water, and also to open the soil to a greater depth to receive the roots of plants for food and moisture, and to admit a rapid passage of moisture upward from a greater depth—thereby avoiding drouths in dry times and extreme wet in early spring and heavy rains—its utility can no longer be questioned. Since their introduction to this country from England and Scotland, they have been much simplified—retaining at the same time the original effect in operation of the most approved imported plows. They are afforded here at less than one-fourth the original cost.

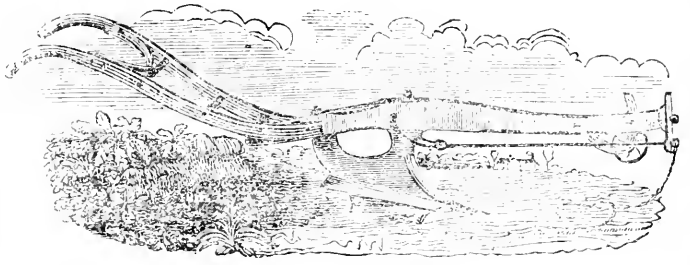
The above cut (fig. 3) shows the plow, which is so constructed as to follow in the furrow of an ordinary plow, and break and pulverize the soil to any depth required, without bringing any of the sub-soil to the surface, but leaving it where it is; and the next round of the common plow covers this sub-soil so loosened, and so on through the field. It is also found of great benefit to grass lands (where the water stands late,) by plowing through the same once in two to four feet, in the direction of the run of the water: this, by forming small blind drains, carries off the surface water much earlier: and if this is done in the fall, it prevents the injurious action of the frosts to a great extent, the land becomes settled earlier, and a heavier and larger growth of hay is obtained. In view of these evident advantages, no farmer should do without a good Sub-Soil Plow.



(Fig. 1.) *Swivel, or Side-Hill Plow.*



(Fig. 2.) *Self-Sharpening Plow.*



(Fig. 3.) *Sub-Soil Plow.*

It was originally my intention to have described several other kinds of plows in use, as the *Eagle Plow*, the *Diamond Plow*, the *Peekskill Plow*, the *Center Draft Plow*, &c., but my time will not now permit, and beside the public are already familiar with them. The subject of the draft of plows I will take up, and perhaps send you a communication upon it. Probably no one thing about the plow is less correctly understood, not only by the farmer but by the plow maker, and also the committees selected to judge and test the merits and demerits of the different kinds. *Albany, N. Y., April*, 1849.

Messrs. Editors:—Will you or some of your readers give us, through the Farmer a description of a wind mill of about one man power—or a power sufficient to churn, wash, turn grindstone, pump water for stock, &c.? One that will be simple in its construction, cheap and durable, and that will preserve a uniformity of motion in our Western New York breezes as nearly as possible. If it does not oblige thousands of your readers, it will your friend in Van Buren.

The industrious are seldom criminal, but the most of those who yield to guilty enticements, may trace their lapse from rectitude to habits of idleness.

THE PRINCIPLES OF BREEDING.

BY S. P. CHAPMAN.

THE first great axiom laid down by nearly all writers on this subject is that "like produces like." This indisputable law of nature is seen in every thing both animate and inanimate that has the power of reproduction throughout the entire universe. But while this fact is universally acknowledged it is also equally well known that the union of two different substances often produces something differing very much from either. This law governs the animal as well as the vegetable and mineral kingdoms. By the union of two animals the produce often differs in form, color and appearance from either—sometimes being superior and at others inferior, according as the skill and judgment exercised in their selection has been wisely applied or the reverse.

To breed from two animals so that the produce shall be superior to either requires no small amount of judgment and experience. But it is evident this has been accomplished, else we should have had no improvement. It is very easy to *improve* so long as we can obtain a sire *superior* to the other portions of our herd: but when we have raised our entire stock equal to the best animals we now possess, must we then cease our exertions; or are there certain grand principles which, if correctly carried out, will enable us to continue that vast improvement which has already effected such great changes? We for one are far from supposing that any of our domestic animals have as yet reached their highest state toward perfection; on the contrary we believe they have but just begun to advance in improvement. Who that lived a century since would have supposed that from the animals then in existence we could have produced our present excellent improved stock?—and who can tell what our best breeds may become one hundred years hence?

The first thing an individual should do in order to become a successful breeder is to establish in his own mind what he deems to be perfection, as regards the animals he is breeding; for without some definite object in view it is evident but little can be accomplished. In order that he may entertain correct views it will be necessary for him to give the subject much study and observation. He should then select for the foundation of his herd those animals that approach nearest this standard of perfection. It is not probable that he can find animals that will entirely suit him. They will all have some little defects. How is he to eradicate these defects and preserve their excellencies. It can only be accomplished by long and steady perseverence and great care in the selection of his breeding stock.

If, for instance, we have a cow possessing many valuable qualities but deficient in some important point it is not enough to insure improvement in the produce that we should breed her to the male possessing this point in perfection. In the first place to calculate on any thing like success we must ascertain that the male *inherits* this excellency. We must then see that he has no defects which he will be likely to stamp upon the produce. He will, without doubt, be deficient somewhere. Is the cow perfect where he is deficient, and does she *inherit* this perfection? If so, we may calculate we have the right materials for improvement. Every defect in the male should be counterbalanced by a corresponding *hereditary* excellency in the female and *visa versa*. One great reason why some individuals are not more successful as breeders is, they do not study the animals they breed from. They possess perhaps a very good sire, and their cows are better than an average. But after several years breeding they find their stock have deterioated instead of improving. The reason of this is that while they have retained in some degree their former excellencies they have been breeding animals together both of which have been deficient in some one and the same important points, and they have been in fact *establishing defects.*

This is one of the great objections to the "in and in" system of breeding. The animals being descended from the same family are likely to possess the same defects, and by a union of like defects, it is evident we can never create an excellency. On the other hand by bringing together animals of different families, we have a greater chance to obtain those whose defects and excellencies will in a great measure counteract each other. If it were possible to obtain *perfect* animals and have them descended from *perfect* ancestors for years back we think there would be no danger of breeding "in" for generations to come, and we presume all the produce would be perfect. We do not, however, know of a *perfect* cow, or bull, and any individual possessing both might amass an ample fortune.

We would here say a few words as regards the raising of animals in connexion with their breeding, and that is, that they should be *well fed.* It matters not how good animals we may possess, we can in a few years ruin them by neglect, and almost starvavation. All young animals should be kept just as well as they possibly can be without becoming *fat.* We have known young animals ruined by over feeding, and we have known of many more spoiled by starvation. The safe and most judicious course seems to be to adopt the medium as we have before stated. The young animal is then more healthy, will attain a greater size at maturity, and will have a firm and more perfect appearance. *Clockville, Madison Co., April,* 1849.

SELECTING INDIAN CORN FOR SEED.

BY CALVIN E. HILDRETH.

MESSRS. EDITORS:—I believe there can be an improvement made upon Indian Corn, by a proper selection of seed. About ten years ago it was a rare chance to find an ear of corn with fifty kernels in one row of the eight rowed variety. The same variety I plant now, and can find ears that will have fifty-five and sixty kernels in one row.

The way I selected my seed was this: I took the longest ears that were not filled out at the top end, believing that an ear of corn that was filled out over the end would grow no longer; and selected from year to year those ears that were not filled out, and small at the butt. I have ears that have fifty-six or eight kernels in a row, and the cob one inch in diameter at the butt and not filled over the end. The length of the longest ears is from ten to twelve inches. I have from fifty to sixty bushels to the acre in this climate. No doubt a great improvement might be made in four or five years, by close application, on a small scale.

If you think the above will be of any use to your readers, you may publish it. *Raymondville, St. Lawrence Co., N. Y.,* 1849.

THE above suggestion is in season, and worthy of particular attention.

HARROWING WHEAT IN SPRING.

BY MYRON ADAMS.

Messrs. Editors :—In none of the improvements in agriculture do I find farmers so *slow to believe* as in harrowing wheat after the ground has settled in the spring. Some ten or fifteen years ago much was said on this subject in the Genesee Farmer, showing the results of experiments and explaining the reasons why it should operate beneficially upon the crop.

Farmers know that a hard crust forms upon ground exposed to the frosts and drying winds of March and April, and that this crust greatly retards vegetation. But the great objection is, it will pull up all the wheat to harrow it. Having practiced harrowing my wheat every spring for the last eight or ten years, and uniformly with good effect, I feel disposed to recommend the practice to my brother farmers. Of late years I have been in the habit of plowing in my wheat at the time of seeding with a gang plow, leaving it in the furrow. In the spring after the ground has become dry, the last of April or early in May, I harrow lengthwise of the furrows, then crosswise, loosening up the ground thoroughly. I should like to do this just before a rain. If the land is to be seeded with clover, I sow on the seed and harrow it in. This I think far more safe than sowing early and trusting to the heavings of the frosts and the wash of rains to cover it. Early sown clover is often killed by the drouths so common in April.

I have been amused at the earnestness with which some of my neighbors would remonstrate with me for harrowing my wheat. "Such a fine piece of wheat" say they, "to be spoiled in that manner; he ought to be sent to the mad house."

And afterwards, when the crop showed for itself it was not ruined, "Oh, it was such a good piece of land it will produce a good crop in spite of your experiments." A field of wheat looks bad while under the process of harrowing, as it is prostrated and partly covered with earth; but after a shower it starts up fresh and vigorous like a field of corn refreshed by a shower after being hoed. I have often examined as to the amount pulled up, and do not believe it will average a bushel upon ten acres. Farmers try it: and be not frightened by the appearance. I never yet heard of a field injured by it.

East Bloomfield, N. Y., April, 1849.

SALTING STOCK.

BY J. H. BEECH, M. D.

Messrs. Editors :—A correspondent of the Farmer some time ago offered some speculations about salting stock—questioning the utility of the practice, and asking for actual experiment. Believing the question important, and that sufficient time has elapsed for those better qualified to have given details of experiments, if they had previously made any in that line, or to have given an answer on scientific physiological principles, I have no apology for writing, provided I succeed in making my article worthy your publication.

The animal system has no power to create any of the elements of flesh, organised tissue, or salutary secretions. But the organs of nutrition and assimilation have wonderful power to modify the chemical constituents of the animal body, into a part of that body, when they are supplied. Healthy, perfect animals cannot be raised, or kept unless all the various chemical constituents of bone, meat, fat, &c., are furnished in food, or drink, or in the atmosphere they breathe. Combinations of gluten, starch, oil, &c., found in the food of herbiverous animals, supply much of the material for organized tissue, and fat; and abundance of carbon for the purposes of respiration. But a variety of mineral substances, are equally necessary, to wit: phosporus for the formation of nervous tissue, bones, white and yolk of eggs, and milk. It is furnished in the grasses and seeds of plants. Sulphur exists in flesh, eggs and milk. It is found in most spring and river water, and in some plants with their azotized compounds. Lime is a well known ingredient in the animal structure. It is equally abundant in the vegetable kingdom, and in all hard water. Iron is a "*sine qua non*" in red blood, animal flesh, yolk of eggs, and milk. It is supplied in some water and in many vegetables.

Common salt is no less important in the animal economy. It is contained in flesh, in the egg, in milk, and other fluids. It is a combination of muriatic acid and soda. The first named, is essential to the gastric juice, making it a ready solvent of many substances which would otherwise be useless to the purpose of assimilation. Soda is necessary in the production of bile. Common salt is scarcely found in plants, except such as grow in salt marshes, *salt licks*, or sea water. This deficiency must be supplied. Instinct and appetite impel wild animals to seek such marshes, and licks, where they choose the raw material in the most concentrated form they can find it. Domestication prevents animals from obeying this desire, and renders it our duty and interest to mingle it with their food or treat them regularly with this luxury, as their actions prove they esteem it.

By the advice of some old farmers I have fed my pigs with salt freely and regularly, especially while fattening, for four or five years; and am satisfied that it is of great service in giving permanency to the appetite and solidity to the flesh,—besides being well paid for expense and trouble in grateful grunts, and smacking chops. *Gaines, N. Y.*, 1849.

FEEDING BARLEY TO PIGS AND EWES.

I saw in the Farmer, some time since, a recommendation for feeding ewes that had lambs, barley meal. I wish to ask if any of the readers of the Farmer have tried the experiment; and if they have, what has been the result? It has a very bad effect on sows that have pigs—drying up their milk and eventually starving the pigs. Likewise, barley straw and barley beards will dry up milch cows.

In regard to sows and pigs, one circumstance has happened under my observation. A farmer had a fine sow which had a nice litter of pigs, and he thought he would take extra trouble and have nice hogs. He had some barley ground and he gave the meal to the sow, and if he had not left off feeding it as he did he would have lost all. He made out to save two or three out of the litter by feeding other slops.

Yours, &c., Arista.

Will some of our correspondents respond to the above inquiries?—[Ed.

Vermont Sugar.—The Green Mountain Freeman says that the "amount of maple sugar made annually in the State of Vermont, according to the best estimates we can obtain, is about five millions of pounds."

CULTURE OF FIELD BEANS.

MANY of our farmers would find it advantageous to cultivate a few acres of field beans, and as the season for planting the crop is approaching we direct attention to the subject. A friend states that he raised a very profitable crop the past year — and, though his land is well adapted to wheat, he thinks beans pay quite as well on a small scale. In most localities the crop brings a fair price—from $1 to $2 per bushel; rarely if ever less than the former.

The crop thrives well on a quick dry soil, finely pulverized; but if inclined to be wet, the land should be ridged. The seed may be put in any time this month, after the danger of frost is past. Do not plant in a cold wet time, as the seed will be more liable to rot; the ground ought to be well warmed by the sun, before planting. Bush beans are the only ones used for field planting, and of these there are several kinds. Among others the long garden beans, white, red or mottled, are known as great bearers, of good quality, and mature early.

Relative to the culture and produce of this crop, Judge BUEL says: — "Beans may be cultivated in drills or in hills. They are a valuable crop, and with good care are as profitable as a wheat crop. They leave the soil in good tilth. I cultivated beans the last year in three different ways, viz., in hills, in drills, and sowed broadcast. I need not describe the first, which is a well known process. I had an acre in drills, which was the best crop I ever saw. My management was this: On the acre of light ground, where the clover had been frozen out the preceding winter, I spread eight loads of long manure, and immediately plowed and harrowed the ground. Drills or furrows were then made with a light plow, at the distance of two and a half feet, and the beans thrown along the furrows about the 25th of May, by the hand, at the rate of at least a bushel on the acre. I then gauged a double mold-board plow, which was passed once between the rows, and was followed by a light, one-horse roller, which flattened the ridges. The crop was twice cleaned of weeds by the hoe, but not earthed. The product was more than forty-eight bushels by actual measurement."

KEEP THE SWINISH MULTITUDE AT HOME.

MR. MOORE:—The suggestion of your correspondent H. Y. that communications should be appropriate for the season, I think a very good one, and would suggest to your readers, as I think this is the proper time, that if they wish to promote a public good—to turn money into their own pockets—to cultivate a friendly relation with their neighbors—to contribute their mite to the promotion of a correct rural taste—to abate a very great nuisance—and to appear at the bar of judgment with a clear conscience, and not meet any of their neighbors there as witnesses against them: That this spring, just before they turn their swine into the highway without any wires in their noses, they put some in and turn them into the pasture where they can find them at feeding time: and thus save the poor creatures the trouble of carrying sore ears, and going on three legs, occasioned by the help of their neighbor's boy and dog in an ejectment from his fields. Yes, we say, commence the spring of 1849 anew: turn the pigs into the pasture and save law suits, and save the green grass by the side of the road which adds so much to the beauty of a farming district, and keeps out noxious weeds,—for we all know that where the turf is rooted off, the seeds of weeds will lodge and grow.

If we were to judge from appearances, we should think that, in some neighborhoods, swine were the only highway laborers, and that they labored most assiduously too; not however to make the passage over the road smooth and agreeable, or to make the prospect interesting. It is almost sickening, certainly revolting, to see how some roads are turned up by half fed swine. Half fed, I say, for full fed would be at home at rest. What right has my neighbor to turn his pigs into the road, and compel me to watch them, and to save my crops, fence against *hogs* of the smallest dimensions? Would he not be liable for trespass if his pigs come and root up the grass plat in the road before my door as much as if he should take a hoe and dig it up himself? What the law is I do not know; but if our country laws are all right our *country practices* are not. But a man that will not do right only as the law compels him, I like to have said, ought to have a wire in his nose and be turned out with his pigs, for they all resemble each other in hogishness. If farmers must pasture the highway, sheep are much less objectionable, if they will not get over fence. They do not deface the road, are not so liable to creep through fences, and are more timid and more easily frightened from mischief. I would by no means, however, recommend turning any animal into the highway, for they will, in spite of all the good wishes of their owner, molest his neighbors.

In looking over the above I find I have directed my suggestions to your readers. I beg their pardon. It is not the readers of "The Genesee Farmer" that are in the fault. It is generally those who will not read—those who "know enough" without reading the Farmer. But I would suggest to them that they use their influence to get their neighbors to abandon this nefarious practice of *swining* the road; or to get them to take, and *read* the Farmer, and if there is any pride or spirit of emulation in them they will abandon it voluntarily.

Mr. Editor you are at liberty to do with this just what you please. You can publish any, all, or none of it, and it will be all the same with your friend in

VAN BUREN.

Onondaga Co., N. Y., March, 1849.

CARROTS.—On 270 square feet of ground I raised 10½ bushels of carrots, weighing 47½ lbs. to the bu. —making 494 9-16 lbs. At the same rate per acre it would amount to 79,833⅜ lbs., nearly 40 tons — some below the amount stated in last number, as the writer supposed might be raised on an acre. The largest carrot weighed 4¼ lbs. They were the first carrots I had ever raised, and I took pains with them to satisfy myself as to the profit, and the amount that could be raised on an acre. The soil was clay; it was well manured; seed sown in drills one foot apart, and the plants were thinned so as stand about four inches apart.

While preparing the ground an old gentleman remarked that I would not harvest two bushels from it; but in this case the "debts were paid" to the soil, as suggested in your August number. Let S. P. C.'s advice be adopted, and bountiful crops will be our reward. J. I. S.—*Alexander, N. Y., April*, 1849.

PLASTER.—PLOWING UNDER CLOVER.

Messrs. Editors:—It is well known that the farmers in this part of the State use plaster quite extensively, and value it very highly. The effect of plaster upon clover, corn, potatoes, &c., on gravelly soil, considering the amount applied, is truly wonderful and surprising. The increase in the yield of these and other crops, by the application of a bushel of plaster per acre, is oftentimes doubled, and even trebled. Notwithstanding the great and extraordinary increase of crops it produces, many farmers are skeptical as to the utility or economy of applying plaster to the soil, believing it will have the effect in the end of destroying and rendering utterly worthless their farms. And my object in penning these lines is to inquire your opinion upon this point—Whether plaster does injure the soil? and if so, does the injury result from the application of plaster to the soil?—or does it exhaust the soil merely from the great increase it produces in crops?

There is another inquiry upon which I should like your opinion. Is it for the interest of farmers who own small farms, and who wish to keep up, and enhance their productiveness by plowing under clover for sowing winter grain, to plow it twice—once just before the clover is fit for mowing, and again before sowing, or mow it once and then plow in the second crop just before sowing? If you will answer these inquiries, it will be satisfactory and conclusive to all concerned. A Subscriber.—*Aurora, N. Y., 1849.*

Remarks.—That the use of plaster has a tendency to deteriorate and exhaust the soil, is a most ridiculous assumption. Its action is to fix and retain the ammonia of the air, rains, and snows—which in itself is an important assimilating agent of all plants. Gypsum is composed of sulphuric acid and lime, and ammonia of nitrogen, (which composes four-fifths of the atmosphere, and combined with plaster is nitre or salt petre,) and hydrogen, one of the constituents of water. In the mutual action and decomposition of gypsum and ammonia, results are produced and agents developed, important to the process of vegetation, and in which the value of plaster is supposed to reside. But if the farmer wholly depends upon the application of plaster to keep up the fertility of his land, without rotation, rest, and the requisite green or stable manure, his lands will run down and become sterile and barren.

For a clean clover and timothy ley, devoid of foul grasses, it is our opinion that once plowing on or before the first of September, turning under about five inches in depth a good second crop of clover, is the best and cheapest method that ever wheat was cultivated—while a saving of one crop of hay and two plowings is made. It will not show as luxuriant in the fall as the regular summer fallowing, but when fermentation of the buried vegetable fibre commences in the spring, it brings up with a rush.

To Drive away Rats.—Mr. Charles Pierce, of Milton, pounded up potash and strewed it around their holes and rubbed some on the sides of the boards, and under parts where they came through. The next night he heard squeaking among them, which he supposed was from the caustic nature of the potash which got among their hair and on their bare feet. They disappeared, and he has not been troubled with them since that time, which was nearly a year ago.—*Boston Cultivator.*

BLACK LEG AMONG CATTLE.

Messrs. Editors:—We have a disease among our cattle in this vicinity, which always proves fatal. We can neither tell the cause of it, nor do any thing which will give relief. It is called by some the Murrain, and by others the Black Leg. It attacks yearlings (between the months of January and July, generally) in the [illegible], and is from six to twenty hours [illegible]. The parts affected become black or dark [illegible] to flesh and blood seem to be mixed [illegible] severely bruised. I think that [illegible] our yearlings in this vicinity are lost by this disease. I have seen nothing in the Genesee Farmer of late upon this work which gives much satisfaction [illegible]. Perhaps the disease is not a universal one. [illegible] you will give us some information, or collect the investigations of some of your correspondents [illegible] beneficial results will be gladly received by me, and I trust by many of your patrons. John Watson.—*East Java, N. Y., 1849.*

Remarks.—This disease is known as the black leg, quarter evil, black quarter, and blood striking; and our correspondent describes it correctly. It is an endemic and very local. Its cause is very obscure, and not very rationally accounted for. It is mostly confined to young cattle, with occasional exceptions, and to those confined to low marshes and woodlands. Very high feed, after getting lean in flesh, producing a redundancy of blood and a tendency to inflammation, are supposed to be the predisposing causes. A nephitic atmosphere or poisonous plants may also be an accelerating cause. The first symptoms are a dry muzzle, extension of the head, heaving of the flanks, and every symptom of fever, with low pulse, and staggering of the limbs. Bleed freely and copiously on the first symptoms, and physic immediately, if it will not operate, give injections. Feed lightly with scalded bran or shorts. Foment the parts and put in setons. The great object is to reduce the system, and allay fever and inflammation. Cattle poor in flesh and milch cows are said to be almost exempt. It is contagious, and cattle affected should be removed from contact with the healthy.—Ed.

The Art of Health.—Walking is the best possible exercise. Habituate yourself to walk very far. The Europeans value themselves on having subdued the horse to the use of man; but I doubt whether we have not lost more than we have gained by this animal—for no one thing has caused such degeneracy of the human body. An Indian goes on foot nearly as far in a day as an enfeebled white does on his horse, and will tire the best horses. A little walk of half an hour in the morning, when you first rise, is advisable. It shakes off sleep, and produces other good effects in the animal economy.—*Jefferson's Memoirs.*

An Ohio Cheese in London.—The London papers mention the arrival there of an enormous cheese. The milk of seven hundred cows was used in making it, and it weighs 1174 pounds. It is thirteen feet in circumference, four feet and a quarter in diameter, and eighteen inches in thickness. It was offered for and obtained a prize at the Fair of the American Institute in New York city.

The best way to get help is to help yourself.

LETTER FROM THE SANDWICH ISLANDS.

HONOLULU HOUSE, Oct. 25, 1848.

D. D. T. MOORE, Esq.—*Dear Sir*: I have regularly received the numbers of your paper since you were kind enough to put my name on your list, more than a year since. Be assured, though the climate and soil of the Sandwich Islands is so different from your latitude, as to render inapplicable many of the valuable suggestions it contains, I find much in it that, by analogy, can be made useful to the horticulturist and agriculturist of this region. As yet, I have not, of course, been enabled to experiment in any of the departments of cultivating the soil, but I hope within a few years to demonstrate that a better climate or a superior soil does not exist than can be found on the Hawaiian group for the tillers of the earth.

As yet but little, comparatively nothing, has been done to develope the resources of these Islands. Most persons who have become residents here are either merchants, seeking their fortunes in commercial operations—missionaries, confined by their obligations to the Board, to other than agricultural pursuits—discharged sailors, who are ignorant and inefficient, except upon the ocean—and now and then an individual of extravagant habits and crude notions of the means necessary to secure efficient labor and render it productive. The latter class have generally been the foreign agriculturists, and their unsuccessful efforts have tended much to discourage others, fitted by their education and habits to make the soil productive. The native population, just emerging from an uncivilized and degraded state, it cannot be expected would, as yet, be able to comprehend or execute the plans of an intelligent farmer. Such being the facts, it is not surprising that the rich resources of our soil and climate are as yet undeveloped. It is to be hoped that the recent discovery of mineral wealth in California will attract a large, intelligent and efficient population from the United States and the Eastern Continent, and that the market that will be thereby afforded for the natural products of this tropical climate, will induce men of capital, experience and proper taste, to emigrate here to supply their wants. I am clearly of the opinion that more money is to be made and more happiness secured by supplying the wants of the gold-hunters, than can, or ever will be realized by them, should their golden dreams all be realized. And I hope and trust the day is not far distant when, as a consequence of the present mania for the gold-dust of California, these Islands shall be rendered the garden of the Pacific.

I am satisfied from the expensive and indifferent experiments that have already been made, that coffee of the best quality, equal to Mocha; sugar unsurpassed in the world; oranges, and all of the tropical fruits, may be abundantly produced, and at a cost that will compete with the Mexican and South American provinces. Specimens of most of these I have seen, and others of more experience assure me there can be no question but they all may be produced at the market price, with profit. But it can not be done without intelligent, industrious and prudent men to manage and direct the labor of the native population.—Could we be blessed with one hundred men, of the experience and ability of the farmers of New York, who would seek their fortunes in agricultural and horticultural pursuits upon these Islands, the day would be near at hand when they would be the West Indies to that portion of the United States west of the Rocky mountains.

As I can say but little concerning the present state of agriculture here, I make these general remarks hoping they may direct attention to the general facts they contain.

The simple wants of the natives, which are so easily supplied, are not calculated to stimulate them to continued and assiduous exertion; but the example of the few foreigners who have located in their midst already has elevated their tastes and increased their desire for the comforts and luxuries of civilized society; and there are many striking examples of thrift and business habits, which warrant the belief that the future progress of this nation is not to be less rapid in the improvement of its business habits, than it has been in intellectual and moral culture. All that is needed now to make the natives emulous in the cultivation of the soil, is the example of foreigners who are ready and willing to secure their comforts and pleasures by the sweat of the brow.

I am satisfied that many of the fruits and products of your climate may be successfully cultivated here. Peaches have already been grown, but as they were seedlings, and proved not to be of the best qualities, I have heard it repeatedly said they were not worth cultivation. You see, therefore, how important it is that the simplest truths in horticultural science should be understood. Patience and successive attempts to grow peaches from stones (as yet the only practicable method here,) I have no doubt would finally result in producing desirable varieties, which might then be propagated by scions and buds. But as the first attempt was not satisfactory, little attention is paid to the subject, and we are without a supply of that delicious fruit. So it has been with many other unsuccessful efforts in horticulture—a single unsuccessful experiment has discouraged a second; and as we are generally without the *Genesee Farmer*, or a similar paper to enlighten the community, as I have before suggested, we are greatly in want of men to give a practical illustration of even the commonly acknowledged truths that make up the science of agriculture.

With very little cultivation, abundant supplies of sweet and Irish potatoes, beans, squashes, tomatoes, and all the other common culinary vegetables, are produced; and was the soil simply sufficiently disturbed, without any of the aids of manure, lime, and the many other auxiliaries that are used in America, I have no doubt the quantity would be doubled. The man who is now planting my garden was astonished that I required him to move or stir the soil beyond the narrow limit of a contracted basin, before I permitted him to plant corn to supply my table—so little is known and practiced of the essential requisites of cultivation. A sub-soil plow or the double spading of a garden, would be considered entirely a waste. The portion of the earth that has been cultivated at all, has generally as yet been only disturbed by a Carolina hoe, or an "Oo," as it is called by the natives, which is a clumsy instrument in the shape of a spear; yet, as I have remarked, it produces a rich reward for the labor bestowed. Could the sub-soil be thrown up and manure and lime supplied, (the latter being very essential, as the entire formation of the Islands is of volcanic origin,) I doubt not the products of what are now comparatively barren districts would equal those of the Genesee bottoms adjacent to the lime ridges, and supplied therefrom with a

solution of lime. Nature has done all that the most covetous could require, and I hope and trust that man will soon enjoy the rich bounties that are in store to reward his labor.

Gorgeous and beautiful are many of the flowers of our indigenous plants and shrubs, and I should be glad to have some of them cultivated in the hot-houses of Rochester. If you think any of your Floriculturists would pay the cost of sending them by express from Boston or New York, I will send you seeds of some of the most desirable. They very far surpass the natural products of a colder climate.

If this general and hastily written scroll will interest others it is at your service, and I hope at some future day to send you an article better suited for an agricultural paper. Yours, &c.,

A. B. Bates.

FARMER'S LABORATORY.

The discoveries and improvements of late have added "Modern Agriculture" to the list of the sciences, and erected it into one of the highest dignity. The intelligent and skilful agriculturist possesses, in his farm, a splendid laboratory, furnished with a thousand chemical agents, by the action of which all the results of culture are obtained; and the ancient alchymists are now realized by every scientific farmer; for they have truly discovered the philosopher's stone and derived the true means of converting into gold, the very elements of the earth. By the aid of Geology, Mineralogy, Chemistry, Botany and *Labor*, he has forced the earth, the rocks, minerals, acids and alkalies, to yield their stubborn properties, singly or in combination, in relief of the first wants of mankind. The discoveries of the nature and properties of the constituents of the soils, has taught him the art of adapting the proper growth to their peculiarities, rendering the same land, by the same labor, doubly productive, and the means of resuscitating exhausted lands, making them fertile as virgin soil. The improvement in the construction of implements of husbandry, the invention of a thousand new modes of saving labor, by ingenious machinery, and the wonderful facilities of transportation, have materially lessened the toils and risks of the farmer, and contributed essentially to the success of his pursuits.—*Bement's Jour. of Ag. and Science.*

Milking Cows.—In your last year's volume, page 55, you have given us ten rules from the "Maine Farmer," to be observed in milking a cow—all of which I highly approve of, excepting one, which is, wetting the cows teat with the first stream of milk. That practice I have strong objections to—first, because it is what our New York dairy women call a *nasty* trick. If you watch such milkers, you will often see them use so much milk that it will drop from the hand into the pail, carrying with it the filth of both the hand and the teat, which forms a composition that many would not relish. Second, the teat being left wet in the cool air is liable to crack. Third, it is an unnecessary practice. A cow can be milked equally as quick, and with the same ease, with a dry teat as with a wet one. Try it. Reed Burritt.—*Burdett, N. Y.*, 1849.

The consciousness that, in a particular matter, we are doing right, often constitutes more real enjoyment than triumph itself.

CULTURE OF INDIAN CORN — A PREMIUM CROP.

BY JOHN SHILLDON.

Messrs. Editors:—The following statement of two acres of corn cultivated by me in the town of Leicester, in 1847, was presented to the Livingston Co. Agricultural Society. The Society awarded its first and second premiums, offered for the best and second best acre of corn raised in the county the year mentioned.

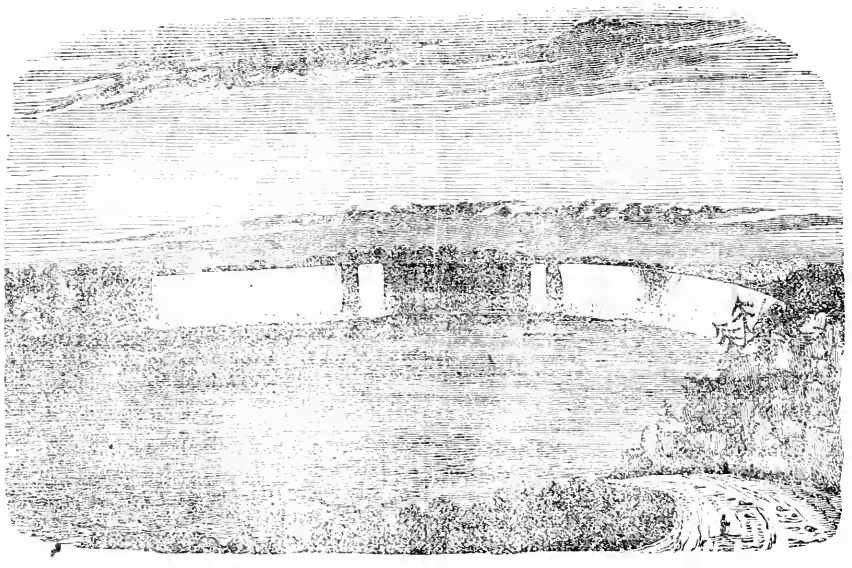
The two acres were selected, separate from each other, from a field of about 5½ acres. The soil alluvial, near the Genesee River—heavily manured 6 or 7 years previous to this crop, but none since. Corn had been grown on the same field for 8 years in succession, previous to this crop—in 1846 about 50 bushels per acre. I commenced plowing it on the 10th of May, and plowed from 9 to 10 inches deep. Harrowed and marked it ready for planting on the 14th—finished planting on the 17th—rows 3 feet apart each way—from 4 to 6 kernels in a hill, and covered about an inch deep. The seed was soaked about 12 hours in salt petre, (immediately before planting,) and rolled in tar and plaster, taking care not to let the sun dry the seed. On the 7th and 8th days of June, I hoed the corn the first time—first passing once each way with a cultivator. On the 28th and 29th of same month, passed through each way with a shovel plow, and hoed second time. Hilled the corn considerable, and thinned it to four stalks in a hill. At husking time, agreeable to my request Col. Hosford, one of the Executive Committee, viewed the corn standing in the field and measured the ground.

Now for the result. I husked and measured from the first acre 220¾ baskets or bushels of ears—and from the second acre, 200 baskets. Two bushels of ears, measured in the above manner, made one bushel and 3 pints of shelled corn—and assuming that every two bushels of ears would yield the same quantity, the produce of the two acres, in shelled corn, was as follows: From the first acre 115½ bushels, and from the second 101 bushels and 22 quarts. The corn was all measured with care by myself, in a basket which held a trifle over a bushel when even full, at which height I measured, thinking I could be more accurate than by heaping it. It was measured in a sealed half bushel, by which the basket was also measured.

The variety of corn grown was the 8 rowed white flint. The expense of cultivating the first acre was as follows: Plowing, harrowing and marking, $2—planting and hoeing twice, $3—cultivating and plowing, $1—seed 25 cents—husking (115½ bushels at every 10th, 11½ bushels at 50 cents per bushel,) $5.75—making in all $12. Deduct this from crop (115¼ bushels, at 50 cents,) $57.75 and stalks $6, and it leaves net profit $51.75. Second acre, corn $52.33—stalks $5 50: expense of cultivating as above, except husking, $11.48—leaving a net profit of $46.35.

This crop received the most thorough cultivation in every respect. I was particularly careful at each hoeing to stir every part of the surface thoroughly, and to do the plowing so as to turn it *topsy turvey* and pulverize the soil completely in the process. In short I aimed to have every part of it done in a farmer like manner, as it ought to be, and I was well rewarded therefor—which I believe to be the almost invariable result from thorough cultivation.

Moscow, Livingston Co., N. Y., 1849.



VIEW OF NIAGARA FALLS.

Agricultural Geology.

NIAGARA FALLS—ITS PAST, PRESENT AND PROSPECTIVE CONDITION.

BY DR. E. EMMONS.

Among the phenomena of waterfalls and river gorges the Cataract of Niagara is justly regarded as holding the first rank, and as standing an index in the path of time, by which the influence of numberless ages upon the surface of our planet may be recorded. Its present, its former and its prospective conditions have engaged the investigation and speculation of many philosophers. The possible consequence of its entire reduction, and the drainage of the upper lakes, have excited the wonder and apprehensions of many. The estimated time of its recession has sprinkled gray hairs among the fresh locks of the young and blooming earth, and alarmed those who would consider her still youthful in years.

But amid all these speculations, Niagara still remains: the thunder of its cataract still reverberates through its deep chasms, and its ocean of waters still rolls on as, unknown to the white man, it rolled a thousand years ago. When we come to the investigation of facts, we find that, except to travelers and the aborigines, Niagara was unknown until within the last fifty years; and that even during this time no accurate observations have been made, no monument erected to determine whether the falls are retrograding or not. The testimony of living witnesses and historical evidence unite in confirming the opinion that the water is wearing away the rock, and that the outline of the falls has changed. From these general observations, it has been estimated that they have receded at the rate of about forty feet in fifty years. Without pretending to question the accuracy of this or any other estimate of the kind, or to establish any rate of retrogression in the falls, we may examine its present, and from numerous facts infer its past condition, and from these we are entitled to draw an inference for the future, though without specifying time.

Both in relation to the former condition and to the future recession of the falls, we may regard the problem as undecided with respect to time. So many disturbing causes are constantly presenting themselves, that, although the great principles may be regarded as established, still it is impossible to calculate accurately the effect of these minor influences. The recession of every mile changes the whole aspect: new elements are brought into operation; the nature of the strata varies; the relative height of certain portions, and the elevation of the whole cascade is altered; and we have had time to observe only one of the phases, and to reason from that to the future, before the condition is changed, and we must take into the account new influences, which the previous changes have called into operation.

The great difference in elevation between Lake Ontario and Lake Erie, and the occurrence of the Cataract of Niagara, form one of the most striking features in the topography of Western New York. The difference in elevation of the upper great lakes is comparatively small, they being nearly in the range of the strike of the strata, while the passage from Lake Erie to Lake Ontario is directly across the line of dip.* Lake Erie is 334 feet above Lake Ontario, and the greater part of the descent from one to the other is overcome by the rapids and falls of the Niagara river in the space of one mile.

Niagara Limestone.—Asilico argillaceous limestone forms the bed of passage from the soft shale below, to the purer limestone above. When freshly exposed it is often of a dark or bluish color, but soon changes to light gray or ashen; and though variable in character, it is a constant accompaniment of the group as far as observed. It forms a good hydraulic cement, where it has been used for that purpose.

*The geological positions of Lake Superior and Lake Ontario, the highest and the lowest of this chain of lakes, correspond very nearly with each other.

In the eastern part of the district, these beds of passage are succeeded by a dark bluish gray, subcrystalline limestone, of a rough fracture, and separated into thin courses by dark shaly matter. When not too much divided by seams, it forms a durable building material. This again is succeeded by a coarse-grained concretionary mass in irregular layers, exhibiting an appearance as if much disturbed while in a semi-fluid or yielding condition. The concretions often present cavities lined with crystals, or the remains of some fossil body. The upper strata are finer grained, with a resinous lustre; and on weathering the surface is harsh and sandy to the touch; this, however, seems due to the presence of magnesia rather than silex.

Agricultural Characters.—The two members of this group are marked, to a considerable degree, by a difference in the soil. The destruction of the shale has given rise to a clay, which mingling with the more sandy productions of the Medina sandstone on the north, has produced a soil of unequalled fertility; and there is rarely, if ever, to be found a better wheat-growing soil, than the portion overlying this rock. In some places it has a greater amount of argillaceous matter than is desirable, and forms a stiff soil; but where the slope of the surface is sufficient for effectual drainage, it produces no inconvenience.

The soil covering the limestone, particularly where it is a little elevated above the country on the north, is of a loamy character, the argillaceous nature of the mass below having had little influence. In many places however, for a small extent, the surface is clayey, and even extremely so, as if the materials of the lower rock had been deposited upon the higher. An example of this kind occurs a little west of the village of Lockport, where the limestone is covered by a clayey soil, while a mile or two further east, the soil is a light loam. The latter character also prevails in some places near Rochester, and at other points along the outcrop of this limestone. This character of the soil, together with the rapid drainage to which it is subjected, from the fissures or joints in the limestone, as well as the proximity of the rock to the surface, has given rise to a different growth of timber, which every where marks the limestone terrace. While the country on the north and south sustains a forest of maple, beech, elm, ash, and the associated forest trees; that along this limestone is indicated by oak, chestnut, and others of the same nature.—*Natural History of New York.*

THE POTATO DISEASE.

BY R. H. HOYT, M. D.

Messrs. Editors:—I have been solicited, for the past four years to give my views and observations in regard to the causes, &c., of potato rot. It is now nearly twenty years since I first discovered a worm in the potato vine, and which I little thought of then, but which, from mature observation and research, I have no doubt is the cause of the potato rot. I observed, at that time, only an occasional worm, and probably every farmer of experience and observation can recollect for the last twenty years occasionally finding a rotten potato in his fields while digging. There has been notice given of this worm within the last two years by two individuals, but no particular description of it.

I have confined my observations, particularly for the last seven years, to the ravages of this worm; of which, if it were necessary I could obtain abundant evidence. Like the caterpillar tribe it is first generated from an egg, which forms a chrysalis state, lies buried in that state through the winter, and changes (from the vivifying influence of the sun) to a small white miller, that resembles in every respect that which infests the apple and other fruit trees; although a perfectly distinct species. The miller deposits an egg or eggs, the last of May, or beginning of June, either on the vine, or on the ground near it—mostly I think on the vine—which hatches in from one to three days, depending on the weather. This produces the small worm, probably, described by Mr. Bartholomew, although I have not discovered it pointed at either end. While in the larva state it is from five to eight lines in length, but attains that of an inch or more. The back is a light brown color, the head dark, belly white, with six legs three on each side, near the head. I have killed many thousands of them, by cutting off the vine close to the surface of the ground, slitting it open lengthwise, and have universally found this description of worm, and very active, squirming and throwing itself into various attitudes, but never attempting to crawl off. It perforates a hole in the vine from the surface of the ground up to one-half or two-thirds of the top, and I have never seen the hole bigger than a common darning needle. It works its way up and down the vine, making it a complete hollow tube. The situation it remains in during the winter I am unable to say, never having been able to detect it in any condition. I have found it often in weeds growing among potatoes, and in corn stalks planted by the side of them. When it infests the corn stalk it commences at the top before tasseling, and works its way downward, in a measure destroying the stalk. (I would here say that I am greatly indebted to Mr. Thomas Anderson, of Painted Post, Steuben Co., N. Y., for his assistance in discovering this insect in the winged state, and in the deposition of its eggs.) After entering the vine it works its way up and down, eating all the soft spongy part of it down to the very bottom, to the commencement of the first root, not molesting that or the small branches.

And now having given all that I have been able to learn of its ravages upon the vine, its different states, &c., I would say a few words upon the decomposition or rot of the potato. I have examined hundreds of hills in the last six years, and have universally found that, where there was a hollow vine, there was a rotten potato at the termination of it—the small branches of roots having, as universally, sound potatoes. *East Townsend, Huron Co., Ohio,* 1849.

We are compelled to omit some experiments and speculations embraced in the above article. In fact the subject has become so hackneyed, that we have declined publishing the thousand theories and histories of this disease; but Dr. Hoyt is so certain of his discoveries that we relented, although entirely contrary to our views and examinations. In short, it is a subject as inscrutable as the cause of the cholera, and whether it is tuberic, atmospheric or parasitic, is far from settled; and the only preventive to be relied on, is to plant early, on dry high ground, that is not rich, or been recently manured.—Ed.

Don't give the boys the poorest tools, and then complain because they can't keep up with men in planting, hoeing, &c.

Meteorological Observations, &c.

METEOROLOGY---CLIMATOLOGY.

BY L. WETHERELL.

Some account of the variations of temperature upon the surface of the earth, with a statement of some of the causes that produce them.

THAT department of meteorology denominated climatology, is of great interest to man in every relation of his earthly existence. But none feels a more direct interest in this subject than he whose labors are nothing worth unless aided by the seasonable distribution of light, heat and moisture.

The sun is the source of both light and heat, without whose rays vegetable and animal life would soon cease from this planet. It is a well known fact that these are not equally distributed over the surface of the earth. This is owing to the following causes, viz: the annual motion of the earth round the sun, the diurnal rotation upon its own axis, the inclination of its poles; also, the effect of geographical position, configuration and altitude. In consequence of the earth's annual motion the position of the sun in the heavens apparently changes. The path of the sun thus described is called the *elliptic;* intersecting the celestial equator at an angle of 23° 28′, on the 21st of March and September of every year. On each of these days, at noon, the sun's rays fall perpendicularly upon the earth's surface at every place upon the terrestrial equator, and falling very obliquely at the poles.

Two imaginary circles are drawn parallel to the equator, each 23° 28′ from it; the one north is called *the Tropic of Cancer*, and the one south *the Tropic of Capricorn.* Over that part of the earth's surface embraced between the tropics the heat is distributed with something like equality; that is to say, unless varied by altitude.

Geographers have divided the earth into five zones or belts—the first, or torrid zone, is 3,243 miles in breadth, containing 77,700,000 square miles: second, the two temperate, each about 2,970 miles in breadth, each containing 50,000,000 square miles: and, third, the two frigid, each 1,663 miles wide, embracing each 8,000,000 square miles. Instead of this division the ancients used the word climate to signify that obliquity of the sphere with respect to the horizon from which results the inequality of day and night. The day and night are of equal length on the equator—soon varying as the poles are approached either north or south.

The following table, copied from "Muller's Meteorology," will give a very good view of this use of the word climate; also showing the length of the day in different latitudes:—

Polar elevation.	Length of the longest day.
0	12 hours.
16 deg. 44 min.	13 "
30 " 48 "	14 "
49 " 22 "	16 "
63 " 22 "	20 "
66 " 32 "	24 "
73 " 39 "	3 months.
90 "	6 "

Some of the ancients, instead of nine divisions, made twenty-four between the equator and the polar circles, and six between the polar circles and the poles—the former called half-hour climates: because, from one to the other the length of the day is increased half an hour; the latter called month climates, because between any two of the lines, as the pole is approached, there is a difference of a month in time.

The annual mean temperature of a belt 1,390 miles wide, embracing 10° each side of the equator, and on a level with the sea-coast, is said to be about 82°—varying, however, whether an eastern or western coast, always higher on the western. The sun being twice vertical in the year to every place lying in the hot zone, every place situated within this belt has two summers and two winters every twelvemonth. The difference of temperature is so trifling as scarcely to attract attention. At Cumana, in South America, situated at 10° north latitude, the mean temperature of the winter is 80¼°; and that of the three hotter months is only 83½°. The mean temperature of Havana, on the island of Cuba, situated 23° n. lat., is 78°; that of Madras, in lat. 13°, is 81°; that of Manilla, the principal of the Philippine islands, in latitude 15°, is the same as Havana. The temperature here is remarkable for its equaminity.

The annual mean temperature of Massowa (Abyssinia, 15½° s. lat.) 87-6°; of Mexico, (19½ n. lat.) 62°; of Lisbon, (38½° n. l.) 61.4°; of Madrid, (40½ n. l.) 57-4°; Baltimore, (39° n. l.) 53°; of Paris, (49° n. l.) 51.3°; London, (51½° n. l.) 50.9°; Vienna, (48 n. l.) 50.1°; of Geneva, (46° n. l.) 49.3°; of Berlin, Edinburgh, Hamburgh, and Tubingen, (the first 52½°, the second 53½°, and the third 56°, and the fourth, 48½ n. l.) each 47.6°; of Rochester, (43° n. l.) about 48°; of Petersburgh, (60° n. l.) 38.2°; of North Cape, (71° n. l.) 32.1°; and of Melville Island, (75° n. l.) 1.75 below zero. The mean temperature of the winter of the last place mentioned, is 28.2 below zero; of the spring 3.1 below; of the summer 37.1 above; and the autumn 0.4 below zero; the coldest month, February, 35.8 below zero.

As will be well recollected by those who read the article on the "Distribution of Plants," in the last number of the Farmer, it is found to be much colder on the eastern coast of either continent than on the western; that is when the annual temperature of places on the eastern coast of America is compared with those of the western coast of Europe, a remarkable difference is seen. Nain, on the coast of Labrador, 57° n. lat., has an average temperature of 26.5°; Christiana, in Norway, 60° n. lat., average temperature 42.7°.

The average temperature of Quebec is 42°, while that of Amsterdam, 5½° further north, has an average temperature of 52°. Halifax lies in the same latitude with Bordeaux, New York with Naples. The average temperature of Halifax is 13° lower than Bordeaux; and that of New York 7° lower than Naples. As the equator is approached these differences gradually diminish, as seen by comparing St. Augustine and Cairo: each, situated 30° n. lat., has almost the same degree of temperature.

New Archangel, on the west coast of America, has nearly the same lat. as Nain on the opposite coast; yet its average temperature is 19 deg. above that of Nain. Pekin is further south than Naples; yet the former being situated on the eastern coast of Asia, has an average temperature of 9 deg. lower than that of the latter. In the northeast of Ireland, lat. 55°, the average temperature of the winter is about 8 deg. above freezing point: here the myrtle thrives as well as in Portugal. On the coast of Devonshire the

Camelia Japonica and the *Fuschia Coccinea* winter in the open air.

But it is time to notice the causes of this unequal distribution of heat over the same latitude and altitude of the earth's surface. These are here presented as condensed from Muller's work, already quoted from. Muller says that, "In the northern temperate zone, southwest and northeast winds prevail, the former from the equatorial regions, bearing with it the genial influences already noticed. The second cause, to which Europe owes its relatively warm climate, is, that in the equatorial region, it is bounded on the south by Africa, whose vast extent of desert and sand render it extremely hot, exposed as they are to the vertical rays of the sun. A heated current of this air is continually rising from these glowing hot sandy wastes, and is borne over Europe, where it mingles with the air and greatly elevates its temperature.—Finally; the *Gulf Stream* contributes greatly toward rendering the European temperature milder than that of other countries of the same latitude and altitude. This stream or current has its origin in the Gulf of Mexico, where the temperature of the water is 87 deg. This heated water is borne off toward the coast of Europe, and in lat. between 45° and 50° the temperature in January varies from 51 deg. to 48. And there are two other important causes to be mentioned, viz.: there are no mountains to interrupt these currents of warm air on the southwest and west; and secondly, Europe does not extend so far north as either America or Asia—and it is also protected by northern seas which greatly modify the cold from the north."

Thus are presented a few of the great facts which go to make up the science of Climatology.

Rochester, April, 1849.

Spirit of the Agricultural Press.

Washing Sheep.—A correspondent of the Prairie Farmer says he washed his sheep last spring in the following manner—as recommended by an experienced wool dealer:—

I took a trough that would hold about a barrel, and filled it with soap suds. I laid a board on one edge of the trough, slanting towards the trough, so that when a sheep was dipped and taken on to the board the water would drain into the trough. A boy took the hind legs of the sheep, and I took the fore legs, and turned their back into the trough; then raised them out on the board and squeezed the wool thoroughly with our hands. When the soap suds grew low we would add more—having a quantity of dissolved soap in readiness. The suds should be made very strong.

When we had thus soaked them all, we commenced washing. I found the wool whiter and cleaner than I ever got it before without soap, though I have helped to wash sheep more than twenty years. And when we came to shear the sheep, we found the ticks all dead. Not more than four live ticks were found on any one sheep.

Fence Posts.—A practical farmer informs the Hartford Times, that in taking up a fence that had been set fourteen years, he noticed that some of the posts remained nearly sound, while others were rotted off at the bottom. On looking for the cause, he found that those posts that were set limb part down, or inverted from the way they grew, were sound. Those that were set as they grew were rotted off. This fact is worthy the attention of the farmers.

Scare Crows.—We have for several years used sheets of bright tin, tied to slanting poles ten or twelve feet in length. Six or eight sheets are sufficient for an acre, and they have proved to be the cheapest and best scare-crows we have used. The motion given the sheets by the wind, causes a brilliant reflection of light at every turn, when the sun shines and no crow has ever troubled our corn fields while the tins remained suspended upon the poles.—*Boston Cultivator.*

Chinese Hemp.—French agriculture has recently been enriched by a very important new production. This precious article is the Chinese hemp, the seeds of which were imported into France by M. Stier, a member of the French embassy in China and has been cultivated and naturalized at Marseilles by M. Garnier Savatier. This hemp, the reproduction of which is now secured by the seeds which have ripened in the best possible manner, grows to a height of twenty-four or twenty-five feet, the stalk is from 5 to 6 inches in circumference, each plant produces from two to three kilogrammes of seed, and furnishes thread enough to make a yard of superb lawn, superior in beauty and quality to any obtained from French materials. The cultivation of the plant in the south of France will be the more precious to the country as a climate of the temperature of that region is necessary for its fructification, and its seeds will find a ready sale in other countries where the seeds will not ripen, but where the filaments may be produced. The South will thus have a double advantage. Some specimens of this plant were exhibited at the Agricultural Show at Montpelier. The height of it was from twenty to twenty-five feet.

Grafting Chisel.—The above is probably the best form for a Grafting Chisel. The wide edge is used for splitting the stock, after being cut off with a fine pruning saw. The two pointed ends are used to open the same to receive the scions.

Marking Sheep.—An agriculturist says, I wish to impress it upon every one who keeps a flock, if not more than half a dozen, that Venetian red is the best thing that I ever saw used to paint-mark sheep. It is, as most all know, a cheap red paint, only a few cents a pound, and one pound will mark a thousand. Take a pinch of dry powder, and draw the thumb and finger through the wool upon the particular spot you would mark, loosing the powder at the same time, and it will combine with the oil of the wool, and make a bright red mark that rains will never wash out, and which will endure from one shearing to another, but does not injure the wool. It is readily cleansed out by the manufacturer.

The Striped Bug.—We find in the Vermont Agriculturist the following, recommended as a sovereign remedy for that pest of the melon vines—the striped bug. "Take half a peck of manure from the hen-roost, put it in an old tub or box, and add four gallons of water. In twenty-four hours, by stirring it two or three times, it will be ready for use.—Put half a pint of this liquid upon a hill of melons or squashes, and the *striped bugs* will certainly vanish. At least we have found it so on repeated trials, for several successive seasons. The bugs may not every one vanish on the first trial; and they may re-appear; but we have never had a vine injured after this application. Besides protecting the vines, this liquid is the very best of manure, and the application may be frequently repeated, wetting the leaves if a stray bug or two should linger on them, without apprehending any harm.—The manure tub will bear to be filled up several times with fresh water. The only objection to this plan is made by the olfactory nerves."

New Invention in Baking.—The Glasgow Citizen (Scotch Paper,) says that a machine has been invented in that city which both kneads the dough and moulds the loaves into the required shape, ready for the oven. One machine not quite a yard in length and 18 inches in breadth, by the attendance of one man accomplished as much work as five bakers, and the bread was of the best quality. The Citizen also says, that "by a new and original process of mixing and kneading, which can be done either with or without barm (yeast) the usual loss of weight attributed to evaporation in 'raising the sponge' is avoided, and a great saving of flour, as well as time and labor is effected."

Clover Seed Sown with Buckwheat.—On a late visit to Hydepark, we were shown several fields of heavy clover on the farm of J. W. Wheeler, Esq., which was sown last season, with buckwheat and timothy. The soil is a gravelly loam, and the grass exhibits a burthen superior to that generally sown in the spring. This, we believe, is the practice of Judge Van Bergen, of Coxsackie, who is one of our most successful farmers.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

THERE is no other branch of horticultural practice more discussed, and withal, less understood, than the simple matter of TREE PLANTING. To plant a tree properly means more than to dig a hole and put the roots into it, and cover them with earth: yet more than half, we might say three-fourths, of those who do plant, consider this the *only* necessary process, and wonder when they have done it that their trees do not grow well. Every planter should remember that few trees are in the proper state to plant as they are taken from the nursery. The nurserymen desire to have their trees well clothed with branches; and if replanted with all these branches left entire, a tree will either die the first season or make a very feeble effort at living. Grow it cannot, for the roots that would have fed and sustained all these branches have been mutilated and disabled from performing their usual functions until they have emitted new roots.

Now some trees form roots much quicker than others—and some soils and seasons are much more favorable for the development of roots than others—so that certain kinds of trees, and in certain soils, a transplanted tree will bear a large head and numerous side branches, and yet live and grow, while other trees in other soils will remain a year before any considerable number of new roots have been formed. Among fruit trees, the *apple*, the *quince* and the *peach* emit roots much more freely than the *pear*, *plum* and *cherry*—and in light, sandy, friable soils form much more easily than in stiff, moist, adhesive soils. These are familiar facts to all cultivators, and they serve as a guide in planting.

But under all circumstances it is unsafe to plant a tree without reducing its branches in such a manner as to compensate for the loss of root, and general derangement inseparable from removal. Let us take, for instance, an apple tree, six feet high, with a fine head and numerous side branchess. This tree was growing vigorously in the nursery, with its roots spread out and well at home in the soil; but the tree is dug and pulled up, part of its large roots are *cut* off, many of the smaller ones are dragged off, and before it is planted a great many more are dried or rotted and killed off. Thus the tree is left minus a great portion of its feeding roots, on which the top must depend for support. Its nice balance, which nature and art gave it in the nursery rows, is destroyed, and without some compensation it cannot live—at least it cannot grow for a long time to come. The opening buds seek for nourishment, but after the little stock laid up previously is exhausted, they can find none, and perish they must.

How often have we heard people say, "my trees leaved out nicely, but died away immediately after;" and this was owing to a defect in the roots—they could not meet the demands of the mass of buds struggling to grow. The cause might be in a large head, small or poor roots, an unfavorable soil, or in all combined. Now how are planters to guard against these difficulties? Simply by the exercise of a little judgment in the matter. If a tree has attained considerable size, and has a branching head, these branches should be cut back according to circumstances. A tree with large and healthy roots, and abundance of fibres, will sustain a much greater amount of head than a tree with short, poor or badly mutilated roots, and few fibres. Apples, Quinces or Peaches will bear more head than pears or plums, and so on. Trees taken fresh from the soil and replanted do not require the same degree of cutting as those that have been transported to a great distance. Trees that are planted in a light, mellow, warm soil, favorable to the formation of roots, will require less cutting than those planted in a colder, stiffer soil, where roots will be emitted slowly. Trees taken up with the earth around the roots, and evergreens, are the only exceptions. These are a few of the circumstances to be well considered by every one who plants a tree.

Pruning and cutting back, must not only be done, but done well. It is next to manslaughter to cut and slash the branches of a tree with an old rusty saw-edged jack-knife. It is nothing else than tree-slaughter, and there are thousands that ought to be convicted of it this moment, and sentenced to seven years pilgrimage on a treeless prairie, for their cruelty and carelessness. It would fare ill with them were they brought before a court and we were judge. A pruning knife should be as sharp and smooth on the edge as a razor. When a branch is to be wholly removed it should be done smoothly, close to the trunk or limb on which it grows. If a limb is merely to be shortened, it should be cut close to a good plump and healthy looking bud, that promises to make a vigorous shoot. If the future shoot is desired to grow erect, the bud should of course be on the upper side of the branch cut: and if desired to take a spreading or horizontal direction the bud should be on the under side. The object in cutting close to the bud, (not so close as to injure it,) is to avoid the piece of dead wood that must remain, if cut between two buds. Then the balance of the tree must be thought of. If the branches are left longer on one side than on the other, the tree will inevitably grow one-sided; the shoots on one side will be more vigorous than on the other, and this will be another disaster. This is as plain as we can at present make the matter in a few words. To sum it up, in short, we would say—

1st—Place the roots of your trees in a soil *favorable to the formation of roots.*

2d—*Reduce the heads* in a manner to correspond with the character of the tree, the condition it is in, and the season and situation in which it is planted.

3d—In every operation exercise *reason* and *care*, for it is astonishing what even the unpracticed hand can do, if he will but *think*.

These remarks would perhaps have been more valuable last month, but even now they are not too late for many to profit by them. A great many spring and even last autumn planted trees, may be saved and benefitted by a careful shortening and thinning of their branches. Had it not been for the absence of our engraver, we should have illustrated these suggestions with cuts that would have rendered them more serviceable.

SOW PEAS.—"Bishop's Early Dwarf," "Early Prince Albert," and "Landreth's Extra Early," are all good kinds for early sowing. The "Blue Imperial," and the large "White Marrowfat" are good kinds, but later.

HINTS FOR MAY.

Transplanting of all deciduous trees will have been completed. Evergreens may be transplanted nearly all the month. Large trees cannot be moved with safety, unless with large balls of earth attached. Plants from one to two feet are always safe. Among our native trees the *White Pine*, *Hemlock*, *Red* and *White Cedar*, *Balsam Fir* and *Juniper*, are all worthy of attention and easily procured. Among foreign trees the *Norway Spruce*, *Silver Fir*, *Chinese* and *Siberian Arborvitæ*, *Scotch* and *Austrian Pine* are among the most common and are all fine trees, and are now sold cheap in the nurseries.

The new and rare Evergreens are generally kept in pots for safe removal, and may be planted out any time. The principal of these, now to be had at the nurseries, are the *Deodar Cedar*, the *Auracaria* or *Brazil Pine*, the *Cedar of Lebanon*, *Himalayan Spruce*, and *Pinus Excelsa*. These are all elegant trees for lawns.

Hedges of *Norway Spruce*, *Red Cedar*, *Hemlock*, *Arborvita*, &c., may be made all the month. Small plants, one or two feet high, are the best for this purpose.

Hardy Annual Flower Seeds may now be sown where wanted to bloom—and those raised in frames planted out on a dark day.

Border Plants of all sorts wintered in the house or in frames, may be planted out in masses. The principal of these are the *Everblooming Roses*, *Scarlet Geraniums*, *Verbenas*, *Petunias*, *Salvias*, *Heliotropes*, &c., &c. *Phloxes* of the more dwarf varieties make elegant plants for masses, and as a stock of them are always kept in pots, may be planted out any time. *Dahlias* should be planted about the latter part of the month. Strong young plants raised from cuttings this season will give a better bloom than old roots.

VEGETATION IN MISSISSIPPI.

Dear Sir:—I have this day (March 7) measured the growth of some trees here, so as to be certain in my figures. I measured a *peach tree*, budded Sept. 18, 1846, removed from my nursery 6 days ago—it measures 9 inches in circumference within 6 inches of the earth, and retains this size for over two feet. *Apple*, grafted in Feb., 1848, over 2 inches. *A cutting of a seedling pear*, put out Feb., 1848, is now 2 inches in circumference. *Quince cutting*, put out Jan., 1848, over 2 inches. *Paulonia Imperialis*—a cutting of a root not larger or longer than a pencil case was put out Feb., 1848—it is to-day 7 inches in circumference, and I suppose it to be over 10 feet, as I had no pole convenient. *Asparagus* 26 inches high to-day—not strong enough yet for cutting.—*Red bud* in bloom. *Dog-wood* in bloom. *Double Flowering Apple* in full bloom on the 5th.

I saw an apple tree bloom to-day. Several varieties of pear in bloom. Forest trees have quite the appearance of spring—in a few days the trees will be green, as red oak and post oak buds are nearly bursting. The bark of the forward seedling peaches and of quinces will now admit of budding; and by way of trying, I budded a peach on Monday, the 5th, and a plum to-day.

These items may prove pleasing to you, and if you deem them to be worthy of record, hand them to Genesee Farmer. [We are much obliged for them. —Ed.] With respect, &c., yours, M. W. Philips.
Washington, Miss., March 7, 1849.

SUMMER BON CHRETIEN PEAR.

Friend Farmer:—The object of this communication is to do justice to an old and honored friend, the *Summer Bon Chretien Pear*, and say, come up hither, for thou art worthy of a higher seat. That different varieties of pears are not adapted to the same location, I believe to be an orthodox doctrine; and however poorly the stock may do elsewhere, or however much it may lack flavor, or however undeserving it is of a place in a small garden, it certainly ranks high in this section of country. The tree is one of the most healthy and vigorous that we have. It seems to be at home on the quince, apple or pear. It is also a good bearer, and instead of the fruit's lacking flavor, it is one of the highest flavored varieties grown in this part of the State. A neighbor of mine who has the *Onondaga* or *Swan's Orange*, *White Doyenne*, *Gansel's Bergamot*, and *Dearborn's Seedling*, in bearing, together with the *Summer Bon Chretien*, told me a few days since that he thought the latter decidedly the best pear he had ever ate. David Thomas, too well known to the fruit culturists to need an introduction, once told me that he considered the Summer Bon Chretien the best eating pear he had. The Fruit Culturist, by J. J. Thomas, if my memory serves me correctly, does it very good justice. My friend Thorp, of the firm of Thorp, Smith & Hanchet, of the Syracuse Nursery, told me that he had seen them on the Hudson and thought that Downing's description of them was correct for that section, but that it would not apply here. I think then that it is but fair to conclude that although it may prove indifferent on the Hudson or in more southern and eastern longitudes or latitudes, yet for this country or even farther North, for I am told that it prospers in the vicinity of Montreal, it should not be given up. But in both the garden and orchard, it should have a place among the first class of pears. Cephus.
Hinmanville, Oswego Co., April, 1849.

We find this old pear in our markets every year in abundance, indeed much more plentiful than any other; and while we admit that it may be called *good*, we must say that it is, to our taste, inferior *greatly* to Bartlett or Seckel. We think with Cephus that it succeeds much better here than in the East.—Ed.

[1] Downing's Fruit and Fruit Trees of America.

The Season.—The spring so far has been exceedingly cold. About the middle of April, after a week of mild, growing weather, we had three days of extreme cold. The ground was frozen two to three inches deep, and all out door work suspended. In some places the fruit crop, particularly peaches is said to be injured; but, as far as we have seen, the prospect here is fair. Neither the unusual severity of the winter, (as low as 10° below zero,) nor this untimely April frost, has materially injured the crop in this vicinity. In the South the peach crop will probably be an entire failure.

To Preserve Flowers.—Ladies who wish to preserve flowers are recommended to try nitrate of soda. As much as can be held between the thumb and finger placed in the water with flowers, will preserve their freshness and beauty, it is said, for a fortnight.

PAXTON'S MAGAZINE OF BOTANY.

This famous English Journal closed its fifteenth year on the 1st of January last. It has been, during the whole of its existence, devoted almost exclusively to notices of new flowers and flowering plants worthy of cultivation, and has rendered important service in this department.

Both its character and title are now changed. The introductory address says: "The present state of society, however, requires us, in commencing our labors for 1849, to enter upon a far more extended field of action. Floricultural subjects, however lovely or enchanting, are not the only ones which must henceforth occupy the attention of those who would keep pace with the progress of gardening pursuits; for although an almost undivided attention has been paid by many practical men, for years past, to ornamental plants, it has only been with the design of placing Botany and Floriculture in the same position as that occupied by the other and perhaps more useful portion of the vegetable creation. This end being attained, we feel that we can now usefully direct our attention to vegetable nature in all its vast variety, and cultivation in all its different forms, both of fruits, vegetables and flowers." The new work is, therefore, to be called "The Magazine of Gardening and Botany," and will "include articles from the first pens on Botany, Floriculture, Horticulture, Arboriculture, Landscape Gardening, Natural Science, Rural affairs, and every other subject connected directly or indirectly with the vegetable creation." We have no doubt but this Magazine will in future be the best of its class in England, or perhaps in the whole of Europe. We do not suppose that many of our readers know anything of it, or feel any interest in it; our only object in noticing this change and its cause is, that something of the condition and progress of English Horticulture may be learned from it.

THE PLUM.

Our correspondent J. H. W., of New Haven, N. Y., sends us the following acoount of his experiments in plum culture:

"This article shall be devoted to the Plum tree. Perhaps my best course would be to give the history of one particular tree—a blue damson—the only one I succeeded in saving out of quite a number planted at the same time; the black gum destroying all the others, in despite of all I could do with the pruning knife. This was attacked in the same way, but being younger, I destroyed the knots as fast as they appeared. The tree stands on a heavy clay loam* I made the ground quite rich, and then put on a heavy top dressing of unleached ashes. I believe that nearly all trees flourish well on new lands. May we not take a hint from this fact, and by restoring to the soil what has been exhausted by cultivation, succeed well with all fruits suited to our latitude.

Since the time I applied the ashes I have not seen a black knot upon it. It was vigorous and healthy. But although it grew well and blossomed every year, it produced no fruit—all blasted. A friend from a neighboring county advised me to apply salt; I did so the next spring, covering the ground as far as the limbs extended nearly one quarter of an inch thick: that year, for the first time, the tree was loaded with fine fruit.

But now came another enemy which had never troubled me before—I mean that exceedingly provoking little insect, the curculio. The fruit set well, but less and less came to maturity, till in the summer of 1847 not a plum ripened. I tried the way recommended by D. Thomas; I shook the insects from the tree and killed them, and destroyed the fallen fruit; but all to no purpose. Last spring I tried another remedy which I had seen recommended, with a half inch augur I bored about two-thirds through the tree and filled the hole with sulphur, covering it with a plaster of grafting wax. This is better than plugging, as the sulphur then comes in contact with the sap. Now for the result; the year before not a plum ripened, but last fall the tree was literally loaded with fine fair fruit. I state the simple facts; others may draw their inferences."

* Mr. Downing says he never knew trees, on such a soil to be attacked with the circulio.

[Does he not say that trees in a heavy soil are less subject to the attacks of the curculio than they are on a light soil?—Ed.]

NORTH AMERICAN POMOLOGICAL CONVENTION.

The undersigned, a Committee of the above Convention, who were appointed at the meeting held in Buffalo last September to report such plans for the organization of future Conventions—should it be deemed advisable to hold them—as might be deemed necessary to carry out successfully the objects for which they were to meet, agreed, after consultation, as part of their plan, to appoint committees for each State, Territory, and the Canadas, whose duty it should be to report the results of their observations and consultations in relation to matters suggested for their action in a circular—(which was issued by us and sent to each one of them)—on the first day of the assemblage of the Convention, which was by unanimous resolution agreed, should be held in the autumn of 1849.

The Committee have had their attention called to an editorial in the Horticulturist for March, in which it is stated that the North American Pomological Convention is a defunct Convention, and that the State Committees have received the compliment from a Committee which does not exist, or by an authority unknown. Without intending in any way to comment on the article alluded to, the Committee think it their duty to remark that by a perusal of the report of the proceedings of the Buffalo Convention, it will be seen that the report of this Committee, making the Convention a National and a permanent one, was adopted unanimously, that it is entirely unconnected with the New York State Agricultural Society, and that the designation of the time and place for its next meeting, where the great fair of that Society is to be held, was done for the better accommodation of the public who are in the habit of attending it from all parts of the country, and also as a compliment to that Society, in acknowledgement of the great benefit they had conferred on Horticulture, by being the *first* to move in calling a National Pomological Convention. The Committee, owing to the hurried close of the Convention at Buffalo, had not time to concoct, or submit fully, their plans for the consideration of the Convention, and in doing it thus far afterwards, they conceive that they are carrying out the true spirit and intent of their appointment, and that their action will meet with the approbation of all concerned.

The Committee therefore hope that the gentlemen appointed will not be deterred by the article above alluded to, from attention to the several duties which have been submitted for their action, as the North American Pomological Convention will convene at Syracuse in the State of New-York, on the 14th day of September next, at 10 o'clock, A. M.—it being the day succeeding the closing of the annual fair of the New York State Agricultural Society.

Pomological, Horticultural, Agricultural, and kindred Societies, or Associations, throughout this Continent, are requested to send delegates to the Convention; and gentlemen resident in vicinities where no societies exist, who take interest in the advancement of Pomological science are also invited to attend.

J. D. G. Nelson, Indiana, *Chairman.*
James Dougall, Canada.
Herman Wendell, M. D., New York.
J. C. Holmes, Michigan.
Lewis F. Allen, New York.
F. R. Elliott, Ohio.
N. Goodsell, New York.

March, 1849. *Committee.*

Native Wine.—Cincinnati is in rapid progress of becoming the great market of American wines. The vintage of 1848 will reach fifty-thousand gallons, equal to eighteen hundred quarter casks. The finer qualities are sold in bottles, and the Catawba wine of our favorite brands are sold off as fast as sent into market. These wines are manufactured without the addition of spirit, and have a character and flavor peculiarly their own.

[From the Horticulturist.]

DESCRIPTIVE NOTICES OF FIFTY RARE OR NEW PEARS.

BY ROBERT MANNING, SALEM, MASS.,

[We have much pleasure in publishing the following notes, and in calling the attention of pomologists and amateurs to them. Mr. MANNING's reputation as a pomologist is well deserved; for he unites enthusiastic zeal, excellent judgment, and sterling honesty,—qualities so rarely combined in *devotees* to any art: and he has the advantage of the experience of two generations. We have either tested in our own, or carefully noted in other gardens, many of the sorts he notices, and our opinion accords almost entirely with those expressed by him. ED.]

1. *Bergamotte Caietti.*—This pear has been cultivated for some years as Beurre Beauchamps; but that name not having been firmly established, it was thought best to substitute for it the one at the head of this notice, which is that adopted by the London Horticultural Society. I wish now to recommend a more extensive trial of it, as I do not think it has been as much cultivated as it deserves to be. It is rather under middle size; form roundish obovate; flavor very fine, sometimes excelling the Winter Nelis. Ripe the early part of winter. I do not notice the diversity in the ripening of this sort, mentioned in the London Catalogue.

2. *Beurre Kennick.*—I have now fruited this pear several years, and have had many specimens, some of which were very fine of their kind, but I do not think it entitled to be recommended for general cultivation. It ripens the first part of September.

3. *Beurre d' Angleterre.*—Very productive, but soon decays at the core.

4. *Beurre Adan.*—A new pear, not yet fully proved. It appears to resemble the *Bishop's Thumb.*

5. *Beurre of Bolwiller.*—A variety received from Dr. VAN MONS, which may fairly claim a place in the rejected list.

6. *Beurre Delbecq.*—The same remarks as were made on the last will apply to this.

Beurre Witzhumb proves identical with *Beurre Delbecq.*

7. *Bergamotte Parthenay.*—A winter fruit, lately imported from France; worthless as a dessert pear, and though good to cook, but being deficient in size, it is hardly worth cultivation for that purpose, while we have plenty of larger ones.

8. *Ambrosia* does not come up to the reputation given it in the books. It is not a melting, but a breaking pear, and does not ripen here before the first of September. It is commonly said to decay very soon; but I think it keeps full as long as most pears of its season. Tree of upright growth, making strong shoots, of a very dark, purplish color, thickly marked with white dots.

9. *Alpha.*—To my taste, this is one of the finest pears. It is sweet, and exceedingly fine grained, melting and juicy. The tree is a great bearer; and although the fruit does not hold on very strongly, those which blow off open so as to be full as good, or even better than the others. And I may here remark, that many of the autumn pears are as much improved as the summer fruit, by being taken from the tree before fully ripe.

10. *Aston Town.*—A good grower, making smooth, vigorous shoots, of a light gray color. Fruit rather small, with a long stem, and ripening the first of September, but so much inferior to many others of the same season as to be hardly worth growing.

11. *Beurre Van Marum.*—Hardly comes up to medium size, but is of very fine flavor. It appears to be allied to the Urbaniste. Ripe the first half of October. It is easily known, by the peculiar insertion of the stem in a small regular cavity. Stem long, slender and curved, with a little swelling at the bottom. Bears young and well, so that the shoots are soon thickly covered with fruit spurs. Leaves long, narrow, flat, and pointed at both ends.

12. *Heukel.*—Received from Dr. VAN MONS. It resembles the B. Van Marum in its early and abundant bearing, in shape and color, in the length and curvature of the stem, and in its likeness to the Urbaniste; but differs in being larger, a month earlier, and the stem being stouter. It ripens the first part of September, and is among the best of its season.

13. *Burgomaster.*—The true variety is very distinct from the Vicar of Winkfield. Of medium size, long pyriform; skin pale, yellowish green, sprinkled with russett; flavor very poor. The wood cankers worse than that of any other variety, without exception. Altogether, one of the most worthless.

14. *Brandes St. Germain.*—I think this must have been among the first originated by Dr. VAN MONS; as it is stated in *Prince's Pomological Manual*, published in 1831, to have been raised seventeen or eighteen years previously. It was comprised in the first lot of scions received from VAN MONS; but its great merits have remained unrecognised until quite lately. For several years past, it has proved one of the finest winter pears. Form oblong, pointed at the stem, which is always planted obliquely on one side; skin brownish yellow, often with much smooth russett, flesh rich and juicy, with a vinous flavor, resembling the St. Germain or Dix. Tree productive, and a tolerable grower. Foliage small and narrow, like the old St. Germain. It succeeds finely on the quince. Altogether, I think it a most desirable variety, especially when its season is taken into consideration; as we are deficient in good winter pears.

15. *Columbia.*—With me, this has proved rather unproductive, and very apt to blow off; and though large, fair and handsome, I cannot say much in praise of its flavor.

16. *Capucin*, (of VAN MONS.)—A very high flavored, juicy pear; skin of a dark brownish red; surface knobby.

17. *Caen du France.*—A rather singular looking, but handsome pear: form obovate, sometimes lengthened, and pointed at the stem; skin russeted, and thickly sprinkled with raised dots of darker russet, and often with a fine red cheek; medium size; flesh very fine, juicy and sweet; flavor resembling the Winter Nelis. Ripe in December and January. From Dr. VAN MONS.

18. *Coter.*—Another from Dr. VAN MONS, and a very fine one, among the first of those received from him; medium size; form regular obovate; skin pale green; flesh very fine grained, tender and melting, filled with a refreshing juice. Ripe in November; at which time there is none superior to it. The tree makes a round, compact head; young wood, short jointed, light yellow.

19. *Clara.*—Unworthy of cultivation.

20. *Curelier.*—Unworthy of cultivation.

21. *Doyenne Boussock.*—One of the most valuable additions to our list of fine new pears. It is a White Doyenne, on a much larger scale. Tree very vigorous, foliage large, thick and glossy. Last of September and first of October.

22. *Dundas.*—Exceedingly handsome, and pretty good; apt to blow down.

The *Parmentier* proves to be the same as Dundas.

23. *Easter Bergamot*—I do not think worth growing, either for dessert or kitchen use.

24. *Foster's St. Michael.*—Wood cankers badly, and the fruit is inferior to many others of its season,—the first part of September.

25. *Gilagil*—I have discontinued cultivating, on account of its unproductiveness.

26. *Gendeseim.*—Medium size, obovate, pale, greenish yellow, sprinkled with russet, melting, juicy, and of good flavor. A very strong grower on the quince. October.

27. *Flemish Bon Chretien.*—One of the best pears for cooking in the winter.

28. *Green Sugar.*—Unworthy of cultivation.

29. *Doyenne d' Hiver.*—This pear was a favorite with the late S. G. PERKINS, Esq., from whom it was received here. It is large, fair and productive; though not high flavored, it is sweet and juicy. I think it a desirable sort, particularly for market. It is the same as "Coffin's Virgalieu," which was received from France with the name lost, and thus designated from the name of the importer, and its resemblance to the White Doyenne or Virgalieu. Ripe early in winter.

30. *Wilbur.*—Medium size, obovate; skin of a dull yellowish color, sometimes almost covered with russet, flavor often decidedly first rate. A native pear, productive and hardy. Ripe in September.

31. *Limon.*—For one who loves a pear, full of rich, *sprightly* juice, there is nothing superior to the Limon, among the summer fruits.

32. *Elizabeth.* (*Manning's.*)—This very fine summer pear is one of the best growers on the quince. It bears young and well.

33. *Duchess of Orleans.*—One of the most perfect of pears. Tree vigorous,—making light yellow shoots, an early and abundant bearer; fruit very handsome, and of delicious flavor. It fruited here in 1845, for the first time in this country. Some of the specimens then produced were the finest pears I have ever tasted. Grows well on the quince. Ripe in October.

34. *Tyson.*—A very rich, sweet, summer pear, of medium size, and pyriform figure. The *Tyson* and *Rostiezer* are among the few pears which may be said to approach the

Seckel, in flavor. The growth of the tree is healthy and vigorous,—making a handsome top, resembling the Seckel; but taller. Ripe the last of August. A native of Philadelphia.

35. *Las Canas.*—Received from M. EMILIEN DE WAEL, of Belgium. It proves to be a very fine pear, of medium size, pyriform; skin pale yellow, often partly covered with thin russet; seeds very black; flesh juicy, very sweet and rich. Tree upright and vigorous, bears young and well. October.

36. *Paradise d' Automne.*—Quite distinct from the Beurre Bosc, though resembling it in general appearance. A very striking difference is observable in the flowers. The texture and flavor of the flesh are even superior to that magnificent pear. I consider it the most valuable addition to the list of fine new pears which has ever been introduced at the Pomological Garden. The growth of the tree is more vigorous than any other pear whatever. October.

37. *Citron des Carmes Panache*, or *Striped Madeleine.*—The difference between the fruit of this, and the common Madeleine, consists in the skin of the former being striped with light yellow, and the flesh being a little sweeter; wood short jointed, striped with dull red and yellow. Not being as vigorous as the common Madeleine, it is less liable to the blight. Of two trees, standing about three rods apart, the striped variety has never been in the least affected, though much younger than the common kind, which was badly injured. Both varieties ripen together.

38. *Doyenne d' Ete.*—A nice early pear, and very handsome; rather under medium size; form obovate: skin yellow in the shade, bright red next the sun; flesh juicy, and of pleasant flavor. Ripens the last of July, with the Madeleine, and is full as good. Bears very young; trees of two or three years from the bud are frequently covered with fruit buds, making it quite difficult to get any growth on them.

39. *Jean de Witte.*—A new winter pear, not unlike the Winter Nelis in size and flavor, and I think fully equal to it; form obovate, a little flattened: skin pale yellow. "No. 1432, of Van Mons," which I have before described and recommended, proves identical with *Jean de Witte;* as also, Nos. 1032 and 1692. The habit of the tree is very similar to the Seckel, with short jointed shoots and compact head.

40. *Plombgastel.*—This has fruited on scions received from J. C. LEE, Esq., who imported it from France: medium size, dull, greenish yellow and russet, in flavor about as good as the Bartlett. The tree makes very stout shoots, and grows well on the quince. September.

41. *Calebasse Monstreuse.*—A large obovate pear, tapering both to the eye and stem, very productive, and excellent for cooking. Winter. Its shape not being at all like that of a calabash, has created some suspicion that it may be incorrect. It was received from M. DE WAEL.

42. *Fantasie Van Mons.*—Worthless.

43. *Bruno de Bosco.*—Worthless.

44. *Hampden's Bergamot.*—Often very large and handsome; skin smooth and yellow. I have tasted specimens which I thought as good as the Bartlett. First half of Sept.

45. *Citron of Bohemia.*—I think this has been overrated. It is a breaking pear, ripe the first part of September, and is certainly inferior to others of that season.

46. *Marulis.*—A Belgian fruit; a strong grower, very productive, high flavored, and high colored, but rather small and dry. August and September.

47. *Johonnot.*—Exceedingly rich; in flavor and appearance resembling the Brown Beurre, from which it was not improbably raised. I do not know of any thing surpassing it in flavor. Ripe here in September.

48. *Angleterre of Noisette.*—Very distinct from the Beurre d' Angleterre. A large roundish pear of a dark green color, with a dark brownish red cheek. I do not consider it yet fully proved; but so far as it is, it does not appear worthy of propagation. Further trial may develope some valuable properties, either as a cooking or dessert fruit.

49. *Jalousie de Fontenay Vendee.*—Productive, and very fine flavored.

50. *St. Andre.*—Very delicious; wood somewhat apt to canker. ROBERT MANNING.

Pomological Garden, Salem, March, 1849.

SPARE minutes are the gold dust of time; and Young was writing a true, as well as a striking line, when he affirmed that "Sands make the mountain and moments make the year." Of all the portions of our life, the spare minutes are the most faithful in good or evil.

Editor's Table.

TO READERS AND CORRESPONDENTS.—Severe illness is our only apology for any apparent deficiency in the matter or arrangement of this number of the Farmer. The same cause has prevented us from attending to various inquiries—particularly those requesting answers by letter.

OUR ADVERTISING COVER is discontinued for the present. As there is but one steam press in the city, suitable for printing the Farmer and Cover, we find it impossible to publish both, and mail as promptly as is desirable.

ADDRESS AT THE STATE FAIR.—The Albany Journal states, on the authority of the Secretary of the State Agricultural Society, "that Prof. JAMES F. W. JOHNSTON, of Durham, England, has accepted the invitation of the Executive Committee, and will deliver the annual address in September next, at Syracuse. Prof. JOHNSTON is one of the most distinguished agricultural chemists in Great Britain, and we doubt not the announcement of his name for that occasion will secure the attendance of many distinguished gentlemen from our country, as well as from the British Provinces."

GEN. TAYLOR has accepted an invitation to attend the next Fair of the State Ag. Society, at Syracuse.

HON. HENRY CLAY is to deliver the address at the Ohio Fair—to be held in Cincinnati, on the 5th, 6th and 7th of September.

STATE AG. SOCIETIES IN THE WEST.—We are pleased to learn that State Ag. Societies have recently been organized in Michigan and Wisconsin. We will endeavor to give names of officers, &c., in a future number. The Legislature has granted a charter to the Mich. State Ag. Society, and appropriated $400 towards paying premiums. The fee of membership is $1, and there are already over one hundred members. J. C. HOLMES, Esq., of Detroit, is Secretary.

AGRICULTURAL SCHOOL COMMISSIONERS.—Under the resolution of the Legislature for the appointment of a Board of eight Commissioners, to mature a plan for the establishment of an Agricultural School, Gov. FISH has made the following appointments:

Joseph Blunt, New York, 1st district.
A. J. Downing, Orange co., 2d district.
John P. Beekman, Columbia co., 3d district.
Samuel Cheever, Saratoga co., 4th district.
Edmund Kirby, Jefferson co., 5th district.
Adrian Lott, Chenango co., 6th district.
Jas. S. Wadsworth, Livingston co., 7th district.
Wm. Risley, Chautauque co., 8th district.

FARMER'S BAROMETER.—We are indebted to Mr. JNO. KEDZIE, for a very neat and accurate Barometer, manufactured by the BROTHERS KENDALL, New Lebanon, N. Y. Every farmer will find a good barometer a valuable aid in his calling, and those made by Messrs. KENDALL are superior. For sale by J. KEDZIE, No. 11 State-st., Rochester.

A DICTIONARY OF THE GERMAN AND ENGLISH LANGUAGES; by G. J. ADLER, A. M., Prof. of the German Language and Literature in the University of the City of New York. D. APPLETON & Co.

THIS is probably the best work of the kind published, to aid the learner of the German language. Its basis is Flugel's German Dictionary. It contains about 30,000 more words than Flugel's work, and will be found just the thing for the reader of German agricultural and scientific works. The lists of abbreviations, irregular verbs, and its synonyms will greatly facilitate the inter-communication between the German and American or English mind. The typographical execution is elegant.

THE WHEAT CROP of Western New York, so far as we have been able to learn, has withstood the severity of the winter remarkably well, and promises a fair yield. Late Michigan and Wisconsin papers speak favorably of the wheat crop in those States.

RYE GRASS.—"H. R." is informed that Italian Rye Grass may be obtained at the Genesee Seed Store, in this city—price $3 per bushel. Rye Grass does not thrive well in our long hot summers; nor can it be put in competition with Timothy. Indeed there can be no excuse for the exchange. If for meadows, sow the large clover, which is in season for mowing at the same period with Timothy.

The Osage Orange may stand our winters; but whether it is proof against field mice, which are the great enemy of live fences in all snowy regions, is yet to be settled.

PREMIUMS FOR SUBSCRIBERS TO THE FARMER.

Below we give the award of Prizes for subscribers obtained to the Farmer up to the 20th of April. In addition to the names here given a large number of persons have procured very handsome lists, to whom we are greatly indebted. It is a source of regret that we cannot afford to distribute a greater amount in premiums than was originally offered, for we are aware that many other friends and agents of the Farmer have devoted much time and attention to augmenting its circulation. We hope that we shall be able to offer another year, such a list of Prizes as will prove more acceptable.

1st. To F. C. Ellis, Westfield, Chautauque Co., N. Y., for 238 subscribers—$40.

2d. To Silas H. Swetland, Jonesville, Saratoga Co., N. Y., for 237*—$30.

3d. To Samuel E. Norten, Phelps, Ontario Co., N. Y., for 236—$20.

4th. To Silsby & Keeler, Seneca Falls, Seneca Co., N. Y., for 159—$12.

5th. To John Davis, Birmingham, Oakland Co., Mich., 152—$6.

6th. To J. H. Stanley, Le Roy, N. Y., 149—V. W. Sunderlin, Dundee, N. Y., 125—Wm. Lyman, Moscow, N. Y., 121—I. D. Stone, Clyde, N. Y., 109—Apollas Kent, Amboy, Ohio, 104—for the five next highest list, each $4 in bound volumes of the Farmer, (or, though not first offered, other books if preferred.)

7th. To S. B. Wise, Jefferson, Greene Co., Pa., 85—E. F. Munson, Oberlin, Ohio, 81—B. Farr, Albion, N. Y., 75—E. S. Marvin, Rollin, Mich., 62—H. J. Ray, Livonia, N. Y., 58—for the five next highest lists, each $3 in bound volumes of the Farmer.

8th. Oscar Warren, Willink, N. Y., 57—Moses Eames, Rutland, 57—H. Frisbie, Holley, 54—J. M. Swart, Quaker Street, 52—Jacob Boyer, Pittsburg, Pa., 51—O. C. Comstock, Marshall, Mich., 51—S. Lee, Camillus, 50—C. Fenton, Crown Point, N. Y., 50—C. Leet, Harbor Creek, Pa., 49—D. P. Chamberlain, Hudson, Mich., 48—J. B. Lowell, Yates, N. Y., 46—for the next ten highest lists, $2 each in bound volumes of the Farmer.

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* Since the above was made out we have received the following despatch, by Telegragh, from Mr. Swetland: "On account of some pilfering in the post office at ————, please Telegraph to me immediately how many names you have received from me. The number should not be less than 280." If Mr. S. has mailed remittances which have not reached us, it may change his from the second to the first premium.

Monroe County Agricultural Society.

An adjourned meeting of this Society will be held at the office of the Genesee Farmer, in Rochester, on the SECOND TUESDAY (the 8th day) of May instant, for the purpose of making out a Premium List for the current year, the appointment of Judges, and the transaction of other important business. A full attendence of the members is desired.

May 1, 1849. JOSEPH ALLEYN, *Sec'y.*

Seymour's New Drill.

This is one of the latest improvements in Drilling Machines, and is believed to be better adapted to the wants of the farmer in the line of a Seed Drill than any other before the public. Its operation is not only correct in drilling wheat but also in all other grain, such as peas, beans, corn, rye, oats, barley, &c. &c.

Nor is this all: Any desired quantity of lime, plaster, ashes or bone dust may be mixed with the seed and all deposited in the earth in the most correct manner. *More yet:* When the farmer wishes to plant corn, beans or any other seed in hills both ways, this is readily done. *Something more yet:* Its construction is such that the drill teeth, and all the fixtures necessary for drilling and not needed for broad-cast sawing, can be removed in five minutes—and a complete broad-cast machine is left, ready for sowing any kind of grain broad-cast.

Four sizes may be had. The smallest, with five teeth, is a very easy machine for a light horse and convenient for planting two rows of corn at once, 3 feet apart—one with 7 teeth for 1 or two horses—one with 9, one with 11 teeth, each for two horses. With either of the two large sizes three rows of corn may be planted at once.

The subscriber, believing the farmer will be better paid for his money in purchasing this instead of any other similar machine in the country, would invite those desiring an article of the kind, to examine his machine before they purchase elsewhere. All who would be sure of one of these machines as early as wheat-sowing next fall, should send their orders as soon as the first of June.

SEYMOUR'S BROAD-CAST SAWING MACHINE is also kept on hand. This is far superior to any thing of the kind ever known in the United States. It sows *correctly* all kinds of grain, from peas to grass seed. Also, plaster lime, salt, ashes, bone-dust, &c., &c. It is drawn by one horse, sows ten feet wide, and is furnished with an easy seat, on springs, for the driver. Drill teeth are also added to this if desired, converting it into a drill at pleasure. This machine has been recently much improved. All communications post paid will meet with prompt attention.

N. B. A few responsible agents are wanted to sell the right for these machines in distant territory. P. SEYMOUR.

East Bloomfield, Ontario Co., N. Y., May 1, 1849. [5-1t]

Hussey's Reaping Machine.

The subscriber would respectfully call the attention of Farmers to the ensuing correspondence in relation to Reaping Machines. It settles much the question, at the present day, whether the Wheat can be cut with economy by Machinery, as it is what Machine should the Farmer purchase to cut his Wheat.

The subscriber will leave the annexed correspondence to answer that question, and come to say that he builds his Machines in Auburn, Cayuga County, N. Y., at the extensive manufacturing establishment of PEARSON, KEELER & CURTIS.

☞ Those in want of these Machines are requested to send in their orders at an early day, that we may make our arrangements accordingly. All orders to be addressed to

May 1, 1849. THOMAS R. HUSSEY, Auburn, N. Y.

CERTIFICATES.

Auburn, February 17, 1847.

Mr. Thomas R. Hussey:—I have used one of your Grain Reapers for three years, which cuts five feet. I can cut fifteen acres in one day, and in doing so, I gather the grain as clean as it can be done with a sickle. I much prefer it to any other mode of cutting grain. J. M. SHERWOOD.

Mr. Thomas R. Hussey:—Sir: I have used your Reaping Machine for six years, and consider it one of the most profitable Machines that can be used on a farm, and could not be induced to do without one. I can cut from fifteen to twenty acres in one day, and can get lodged grain better than in any other way. I can recommend this Machine to all farmers, as a cheap and expeditious way of getting grain. Scipio, March 6, 1847.

ISAAC AKIN.

[Many other certificates, &c., are omitted for want of space.]

☞ Rapalje & Briggs, of the Genesee Seed Store and Ag. Warehouse, Rochester, are agents for the sale of Hussey's Reaper, and will promptly attend to all orders.

J. W. Sherman's First Premium Grain Drill and Cultivator and Broadcast Seed Sower.

Combining three of the most useful farm implements. Superior to any other grain and seed planter for all kinds of grain or seeds; also a superior corn planter. It will sow broadcast, or in drills or hills, and cover grain, and sow plaster, ashes and all fine manure, broad-cast—or will drill it in the rows in such quantities as desired. As a Field Cultivator it works well and is believed to be superior to any other, on all kinds of ground. It sows or plants from the smallest to the largest grain and seeds, accurately. It is the most easily managed; all the tubes can be raised or lowered, or either of them, without stopping the team. Any person capable of managing a team can use this machine and alter it from one quantity to another in one minute. It is durable, permanently constructed, and not liable to get out of order. We do not boast of inventing three drills. We happened to get a good machine the first time, which is more than can be said (truthfully) of some that have invented more, who boast of their worthless articles. We cannot tell of getting 500 made this season for Western New York; it takes time to make a good article. But we will *try* to fill all orders from Western New York and other sections and warrant our drill the best in use.

We do not tell of selling $25 cheaper than others, for we think we can sell all we can make at a fair price, and we believe our farmers are willing to pay such a price for a good article. We promise to sell as cheap as any other that has a reliable machine, that does the work up right. All we ask of those wishing Planters is to examine for themselves. We are also ready to meet any inventor of Drills on the soil. Boasting on paper is one thing; demonstration on the soil another. All we ask is a trial.

To any one wishing further information we will take pleasure in sending a descriptive sheet. We would conclude by just stating that our machine received two first premiums last fall, at the State Fair at Buffalo, on an imperfect machine, not finished. We subjoin the certificate the Committee kindly gave us:

"We the Committee on Farming Implements, No. 1, having J. W. Sherman's Field Drill and Cultivator under consideration, consider it the best implement of the class that has been presented, and have returned it as being entitled to the highest Premium.

Buffalo, Sept. 7, 1848. A. OSBORN, *Ch'n.*

I have received the Premium in three Diplomas.

All communications should be sent to me at this place and will be promptly answered and attended to.

We shall want a number of agents to sell machines and rights to commence soon. J. W. SHERMAN.

Ontario, Wayne Co., N. Y., April 15, 1849. [5-tf]

An Elegant Country Residence and Farm for Sale.

CONTAINING one hundred and seventy-five acres of first rate land, situated on the west shore of Cayuga Lake, two miles south of Cayuga bridge, in the town of Seneca Falls, Seneca county. There is a large brick mansion with a two story kitchen adjoining, with wash and wood house attached; out-buildings, barn, shed and carriage house; a lawn and garden in front, enclosed with a handsome fence; apple and peach orchards, with a number of cherry, plum and pear trees. The stock, crops in ground, and farming utensils, &c., will be sold with the farm. Possession given immediately. For further information, price and terms of payment, application can be made to the subscriber, on the premises, or by letter addressed to him, Oakwood Farm, near Cayuga Bridge; or to D. D. T. MOORE, at the office of the Genesee Farmer, Rochester.

[5-tf] JOHN OGDEN FAY.

Short-Horns at Auction.

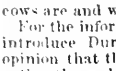
THE subscriber being about disposing of 50 acres of his farm for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle (being about one half of his present herd) on the 13th day of June next at 11 o'clock in the forenoon consisting of yearlings, two year and three year old heifers and cows; and 11 young bulls from 10 months to 2½ years old. Great care has been observed, and considerable expense incurred in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the N. Y. State Ag. Society, and the N. Y. American Institute attest the estimation in which this stock is held wherever it has been exhibited for competition. About 8 head of the above cattle are a purchase made from E. P. Prentice, Esq., of Albany, last May being all the Short Horns of that gentleman, and the product of his four selected cows retained at his public sale. These animals have the strain of blood of the herd of Mr. Whittaker, of England from whom Mr. Prentice made his principal importations. The other part of the lot of young animals partake largely of the blood of the celebrated herd of Thos. Bates, Esq., of Yorkshire, England from whom my importations have been derived, and are mostly of the get of my imported bull Duke of Wellington, and my prize bull Meteor. The heifers and cows are and will principally be in calf with these bulls.

For the information of Southern gentlemen who may desire to introduce Durham stock in that region, and who entertain the opinion that that climate is uncongenial to its successful propagation there, I here introduce an extract from a letter I received from A. G. Sumner, Esq., editor of the South Carolinian, dated Columbia, 25th January, 1849—"The bull you sold Col. Hampton of this State gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 head of his get now in his yard. They are the most superb yearlings ever bred at the South."

Further particulars, and the pedigrees of the stock will be issued one month previous to the sale. A credit from 6 to 18 months will be given.

Troy, N. Y., April 1, 1849 [4-3t] GEO. VAIL.

The Norman Horse.



THE celebrated Norman Stage or Diligence Horse, "LOUIS PHILLIPE," will stand the ensuing season at the Spring Mills, in the Village of Union Springs on the east side of Cayuga Lake, ten miles south west from Auburn. Louis Phillipe was raised by Edward Harris, of Morristown, N. J., from full-blooded parents, selected in France, and imported by himself, and is a perfect specimen of that class of horse, a class celebrated for their quick powerful action great hard-hood and long life. His color is a beautiful dapple gray with a splendid heavy flowing mane and tail. He is 15 hands high, 5 years old, and weighs about 1150 pounds.

THE "CAYUGA CHIEF."

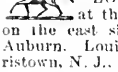
At the same stand will be found this noble Horse of the Surprise and Childers' descent. A beautiful dappled bay colt just coming 5 years, over 16 hands, of powerful close make, round and admirably proportioned.

Both these horses show a fine stock of colts. Gentlemen sending mares from a distance may be assured that they will have such attention as they desire and on the most reasonable terms.

Terms—$5 at the 1st leap, and then $5 to insure, payable on the 1st of 3d month (March,) following.

Communications may be addressed to ROBERT B. HOWLAND, Union Springs, Cayuga Co., and will receive prompt attention. [4-4t]

The Genuine Morgan Horse, Gen. Gifford,



WILL stand for mares the ensuing season, on Mondays and Tuesdays at the stable of Geo. A. Mason, two and a half miles north-east of Jordan; Wednesdays Thursdays and Fridays at the stable of D. A. Munro, in Camillus; Saturdays at the stable of D. A. Munro, in Bellisle.

TERMS—$10 to insure. Mares that are not placed directly in in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers for 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and in style of action, *General Gifford* more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits. General Gifford was sired by the Gifford Morgan, his dam a pure Morgan. A full description of the origin of the Morgans, and pedigree of Gifford Morgan, may be found in the Albany Cultivator for 1846 page 19.

April, 1849. [4-3t] MUNRO & MASON.

Agricultural Implements and Mechanics' Tools.

I AM now manufacturing a few of those MANURE FORKS so much sought after by the FARMERS. Also, *Hay* and *Straw Forks* of all kinds warranted. Also, a full supply of *Spades, Shovels, Hoes, Axes, Scythes*, and almost every kind of MECHANICS' TOOLS always can be found at my store, No. 3 Buffalo-st., first building west of Main-street Bridge, Rochester.

[4-3t] R. D. BARTON.

The Imported Horse, Consternation,

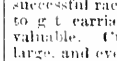
WAS bred by MATTHEW HORSLEY, Esq. of Stillingham, Yorkshire, England, in the year 1831. He was imported by T. C. Arbott, Esq., in the year 1845. He is now owned by J. B. Burnet, Esq. of Syracuse and will serve a limited number of mares the ensuing season at his own stables near the village of Geddes, two miles west of Syracuse. The very best pastures with plenty of water and the most secure fences will be provided for mares from a distance at two shillings and sixpence per week. No mares taken except at the risk of the owner.

Consternation is a beautiful imbading dapple brown color stands 15 hands and 3 inches high and is a very 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 horse, yet of a *rangy* and majestic figure. His chest and flank are deep and full. His action is grac ful, 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 stud books from horses of great distinction and of the purest blood. There is no horse living that can boast a more illustrious pedigree. His immediate ancestors were of uncommon size and elegance of figure. Confederate, although an eminently successful race horse was kept by his breeder, Earl Fitz William, to get carriage horses and hunters, for which he proved very valuable. Curiosity, the dam of Consternation, was equally large, and even handsomer than Confederate. All his ancestors were animals of good disposition and entirely free from blemishes, so far as it can be ascertained. The following is a brief copy of his Pedigree: By Confederate; dam Curiosity, by Figaro, her dam by Waxy. Confederate was bred by Earl Fitz William; got by Cornus, by Cervantes, by Sir Peter, by High Flyer, by King Herod by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Esq., Oneida Castle, Henry Rhodes, Trenton, A. Ford or John Best, Rome, and to farmers generally in that vicinity.

Terms—$5 in advance, and $5 additional if the mare is got in foal. [4-3m] J. B. BURNET.

The Valuable Horse, Young Morgan.



WILL stand the ensuing season on Mondays, Tuesdays and Wednesdays at the stable of the subscriber near Clyde; on Thursdays at the stable of Abner G. Gillett, in Junius; on Fridays and Saturdays at the stable of J. Landon, in Lyons.

Terms—$8 to insure a foal.

Young Morgan is of a bright bay color, without white, 15 hands high, and weighs 1200 pounds. He will be four years old next July, and is not surpassed by any horse in this State. He was sired by Morgan Tiger, owned by Wm. May, of Palmyra; his dam was Noah Yates' Beauty, got by Austin's Duroc.

Clyde, April 1, 1849. [4-3m] J. M. GILLETT.

BOOKS ON AGRICULTURE, HORTICULTURE, &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 Farmer's Encyclopedia. $3 50 in leather—cloth $3.
American Shepherd, by Morrell. $1.
American Agriculture, by Allen. $1.
American Poulterer's Companion, by Bement. $1.
American Veterinarian, by Cole. 50 cents.
Buist's Kitchen Gardener. 75 cents.
Buel's Farmer's Companion. 75 cents.
Chaptal's Agricultural Chemistry. 50 cents.
Downing's Fruits and Fruit Trees of America. $1 50.
Domestic Animals, by R. L. Allen. Cloth, 75 cts.; paper, 50 cts.
Farmer's and Emigrant's Hand-Book. $1.
Fruit Culturist, by J. J. Thomas. 50 cents.
Gardener's Farmer's Dictionary. $1 50—half bound, $1 75.
Horse's Foot—and how to keep it sound. 2 cents.
Johnson's Agricultural Chemistry. $1 25.
Loudon's Ladies' Flower Garden. $1 25.
Liebgig's Agricultural Chemistry, (new edition) $1 paper, 75 cts.
Liebgig's Agricultural and Animal Chemistry, (pamphlet editions.) 25 cents each.
Parson's on the Rose. $1 50. Prince on the Rose. 75 cents.
Rural Economy, by Boussingault. $1 50.
Stable Economy, by Stewart. $1.
Scientific Agriculture, by Rodgers. 75 cents.
Smith's Productive Farming. 50 cents.
Treatise on Milch Cows. 38 cts. Treatise on Guano. 25 cents.
Youatt on the Horse, (new edition.) $1 75.
Youatt on the Pig. 75 cents.
Catechism of Ag. Chemistry and Geology. 25 cents.
The Gardener and Complete Florist. 25 cents.
Knowlson's Comple Farrier, or Horse Doctor. 25 cents.

*** 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.

Address to D. D. T. MOORE, Rochester, N. Y.

CONTENTS OF THIS NUMBER.

[In consequence of the continued absence of our engraver we are unable to give several illustrations intended for this number.]

Market Prices of Agricultural Products.

New York, April 27—7 P. M.

FLOUR & MEAL—Foreign news had a favorable effect upon the market for Western flour and the sales in most instances were at an advance of 6¼c. per bbl.; the range is 4.75 *a* 5.12 for common to good brands of State and mixed to very good Western. Pure Genesee 5.62 *a* 75. Sales 4,000 bbls. Included in sales were 1,000 good Ohio at 5.18 and 1100 do. common State, part Troy at 4 75. Rye flour steady. Sales 400 bbls. at 2 75*a*2 81. Meal firmer. 500 bbls Jersey sold at 2 18 afloat.

GRAIN—Fair milling demand for wheat; prices below the views of holders. Sales 400 bu. Genesee at 1 25. 1,000 Ohio on private terms and 6,000 white Pa. at 1.18. Sale of 7000 bu. Rye at 57 deliver'd. Barley—sales 4 000 bu. prime two-rowed, part on private terms and part at 63½. Corn about 2c better. Some 20,000 bu. sold at 50c. for heated N. O., 54 *a* 56 for mixed to a very good white southern. Oats without change.

PROVISIONS—Pork dull and heavy. Sales 400 bbls. at $10.12 *a* $10.18 for mess, and $8 25 for prime. 500 bbls. sour sold at $9.25 and $7.25 for mess and prime. Beef, no change, with small sales. Lard is in fair inquiry. Sales 500 bbls. and tierces at 5¾ *a* 6⅛—the latter for strictly prime. Butter and cheese dull, and without change.

Rochester, April 27, 1849.

IN FLOUR there is hardly any thing doing. One or two sales of 2 or three hundred bbls. have been made during the past week at $5.

GRAIN—Wheat $1.08. Corn 44c. Rye 53. Oats 29.

SEEDS—Clover $3.75 *a* $5. Timothy $1.50 *a* $2.25. Flax $1.

PROVISIONS.—Pork (mess) $12 per bbl. Beef $4 to $5 per cwt.—mess $7 *a* $8 per bbl Butter 10 *a* 12 cts. Cheese 6c. Eggs 9c.

IN ALBANY, April 27, flour was quoted at $4.75 *a* $5 for common to good State and Western—and $5 50 *a* 5.75 for pure Genesee. Oats 36 *a* 37 cts.

BACK numbers (and volumes) of the Farmer promptly supplied to all new subscribers.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH ENGRAVINGS OF

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

THE TENTH VOLUME of this Journal will commence on the 1st of January, 1849. In making this announcement to his AGENTS and the FARMERS and FRUIT CULTURISTS of the country, and again asking their support in behalf of the work, the Publisher has the satisfaction of stating that the GENESEE FARMER now has a circulation EXCEEDING, BY SEVERAL THOUSAND, that of any similar periodical published in America. This fact, alone, furnishes abundant evidence of the *real value* and *superior merit* of the work—for no journal, however cheap, can become and continue so universally popular, unless actually WORTHY of the substantial support of an intelligent community.

THE HIGH REPUTATION which the Farmer has acquired throughout the United States *will be maintained*, and if possible *augmented*, during the ensuing year. To accomplish this object, no effort or expense will be spared by the Editors or the Publisher. Their aim is to furnish a *reliable* and *independent* journal—one which shall avoid and condemn *humbug* in whatever guise it may appear, and impart correct practical and scientific information on all subjects pertaining to Agriculture and Horticulture.

It will be issued on NEW AND CLEAR TYPE, and SUPERIOR PAPER, and printed in the best style of the art—NEAT and CORRECT. Its ILLUSTRATIONS—embracing Portraits of distinguished friends of improvement on STEEL and WOOD, and Engravings of Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Trees, Flowers, &c.,—will be more numerous and expensive than those of any preceding volume. ☞ Each number will contain at least **24 Royal Octavo Pages!** making a large and handsome volume of several hundred pages at the close of the year.

The Genesee Farmer is, beyond dispute, *the cheapest Agricultural and Horticultural Paper in the World!*—and the Proprietor is determined to make it the NEATEST and BEST. We confidently ask for it that support which it *merits* from the Farmers, Gardeners and Fruit Culturists of the United States.

TERMS—INVARIABLY IN ADVANCE—AS FOLLOWS.

Single Copy, 50 Cents. Five Copies for $2, and any greater number at the same rate, if directed to individuals. If directed to *one person*, Eight Copies for $3, and any additional number at the same rate. The entire volume sent to all subscribers.

☞ POST-MASTERS, AGENTS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

☞ The back numbers of the present volume have been stereotyped, which enables us to promptly supply those numbers to all new subscribers.

Subscription money, if properly enclosed, may be sent (post-paid or free,) at the risk of the Publisher. Address to

D. D. T. MOORE, Rochester, New York.

☞ See page 125 for award of Premiums.

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y. by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Farmer, 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 FARMER is subject to newspaper postage only.

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. X. ROCHESTER, N. Y.—JUNE. 1849. NO. 6.

WOOL AND WOOL-GROWING IN THE U. STATES.

Our excellent friend, T. C. Peters, Esq., of Buffalo, in his "Wool Grower, and Magazine of Agriculture and Horticulture," has indulged in some speculations on the "amount of wool for the coming clip," (1849.) and the present number of sheep in the United States, which differ somewhat from our own views on the same subject. He assumes that, inasmuch as the number of sheep in the State of New York increased about 25 per cent. from the census of 1840 to that of 1845, all the other States in the Union have, on an average, done as well. The fleeces of this year are estimated to weigh two and three-fourth pounds each, throughout the country. He supposes that the census of 1850 will show "about thirty millions of sheep in the United States." Had we not seen the kind of sheep, and of sheep-husbandry that prevails at the South, as well as at the North and West, our opinion would not differ materially from that of the "Wool Grower," aforesaid. But "with the lights before us," if the official returns of next year exhibit the existence of more than 27,000,000 sheep this side of New Mexico, we shall be disappointed; and still more so if the average weight per sheep exceeds 2½ lbs.

In about half the States, wool is clipped without washing the sheep, and weighed in the dirt. There is in Georgia, South Carolina, Alabama and other Southern States so much of foreign matter in wool that it shrinks nearly half in cleansing; and it is regarded as no better than South American wool, which is sold in New York at from 7 to 9 cents a pound. There is a woolen factory within six miles of this city, (Augusta,) that annually consumes a good many thousand pounds of both foreign and native wool; and it seldom, if ever, pays over 12 cents for the latter. All sheep run in the forests the year round, and are usually black with burrs. Many shear them every six months to save a little more wool from being torn off in briars and bushes. They are generally kept not so much for their fleeces as for their meat and tallow.

No branch of productive industry in this country, is susceptible of greater extension and improvement, than that of growing wool. In connection with raising lambs and fat sheep for market, the production of wool can be made profitable in every State in the Union. Fat lambs sell in this city at from two to three dollars a head. A friend has raised and sold over eighty at an average of the price last named, this spring. He is an exception to the general rule, and takes good care of his sheep—some die from an apparent excess of fatness. As a general thing, sheep are quite healthy in the "piny woods." Hungry, thievish dogs are the principal impediment in the way of keeping sheep in this region, although one would have to grow white clover, (which is indigenous,) grasses, peas, rye, oats, corn, turnips or potatoes as food, at least six months in twelve.

The longer we investigate the capabilities of the South for producing cheap food for domestic animals, the better satisfied we become that stock-raising and wool-growing can be made profitable. In no other quarter of the Union are fine sheep, cows, horses, mules and swine sold at so high a figure. The climate is about like that of Spain—being perhaps a little colder here in the mountains, than there. In the Highlands of Texas, stock-raising is beginning to command particular attention. Such is not the case in any of the Southern Atlantic States.

Somehow wool-growing appears to prosper best where there is a dense population. France, with 36,000,000 souls, on a comparatively small territory, keeps 40,000,000 sheep. According to McCulloch, it had 39,000,000 at the census of 1840. England has about the same number in proportion to population; as have also the people of this country. We have a small excess, as compared with France. But our facilities for sheep husbandry, when compared with those of Great Britain and the French Republic, would seem to warrant our trying to keep at least two sheep to every inhabitant—or over forty millions.

The consumption of cotton, however, increases much faster than that of wool. As the one is a very *exhausting*, and the other an *improving* crop, we hope the "Wool Grower" will do good service in extending a branch of business which is generally so much neglected. Our friend Peters must remember that "this is a great country;" and that he must not take New York, Ohio, Vermont and Michigan, as a fair average of the States, neither in the yield per fleece, nor in the increase of sheep since 1840.

A Mr. J. F. Nelson, of Weehaw, Jefferson Co., Va., in a letter to the editor of the "Plow, Loom and Anvil," states that he "has weighed fleeces of the flock of Richard K. Meade, and that two bucks about 16 months old, clipped *thirty-two and a half pounds of wool*, equal to ¾ or ⅞ merino." Allowing this to be half dirt and gum, the yield was large. He does not say whether it had been washed or not.

PREMIUM CROPS.

REQUIREMENTS OF THE N. Y. STATE AGRICULTURAL SOCIETY.

The list of premiums offered in New York has just been published. The minimum of crops fixed upon, *under* which no premium is to be awarded, is—of winter wheat, not less than 40 bushels per acre; spring wheat, 30; Indian corn, 50; barley, 40; rye, 35; oats, 70; buck wheat, 25; peas, 2[illegible] potatoes for the table, 200; potatoes, field crop, 300; ruta bagas, (50 pounds to the bushel,) 450; mangold-wurtzel (same weight,) 400. We don't see that any premium is offered for hay.

These quantities being fixed as the minimum produce, when we look at the average crop of the whole State as her official returns show, what a wide margin we find to be filled up by higher skill and heavier manuring, as thus: in 1845, according to returns from each county by State authority, the averages were as follows: winter wheat averages 14 bushels per acre; oats, 25; barley, 16; rye, 9½; Indian corn, 25; buckwheat, 14; peas, 15; beans, 19; and potatoes, 90. Thus it would *seem* that the crops in most cases do not come to a third, in some cases not a fourth of the *smallest quantity*, which the Society have determined should be distinguished by a premium. This might leave some doubt about agricultural progress in the Empire State, were it not that the State Society, by its President, last year, reported "that the State of New York is improving its agricultural condition *every year testifies*." If it be improving every year, and has yet reached only to the averages we have stated—14 of wheat, 25 of corn, 9½ of rye, 90 of potatoes, &c.—how low must it have been 25 years ago! Yet in 1821 Earl Stimson of that State, made throughout his farm—of oats, 60 bushels per acre; Indian corn, on 3 acres 112 bushels; on 19 acres, 90; spring wheat 34; barley, 60. And we have accounts before the revolution, of 14,000 bushels of potatoes from 16 acres—being 687 bushels to the acre, on new red land on the Hudson river; third year, 3,496 bushels of potatoes—being 531 bushels to the acre; fourth year, in wheat gave 37 bushels to the acre; fifth year, in barley gave 730 bushels, or 45 bushels to the acre, sixth year, 630 bushels of peas, or 39 to the acre. All this was without manure, and that by a miserable system of the most exhausting rotations, as —potatoes, wheat—potatoes, wheat—barley, peas; all in six years! Is it to be wondered at, that the crops throughout the State have been brought down to the miserable averages we have stated? Still we are told, on the highest authority, that the condition of New York agriculture is improving, as "every year testifies!"—and who knows how low it might have gone, if it had not been for the premiums distributed from year to year?

After all, these facts bring to mind the doubt once expressed by one of the wisest, wealthiest and best men the Empire State ever boasted—JAMES WADSWORTH. Said he —"I am doubtful as to the expediency of small premiums for cattle. I think the raising of these animals may be left to self-interest. Suppose you take a hint from Napoleon, and offer *very liberal* rewards for agricultural implements;" and might not crops be left to the dictates of self-interest as well as cattle? The Agricultural Society of New York appears to entertain a very different opinion, for while they have offered some 150 or 200 premiums for cattle and sheep—and nearly 100 of the amount of $10 and upwards, many as high as $20 and $25—under the head of "*Farm Implements*," $10 is the highest for any single one, and that only in one case—a thrashing machine. For the others they offered a "dip," and sometimes $2 or $3, or $5, besides the "dip," but, done by such high authority, it must be "O. K."

WE copy the above from the May number of "The Plow, the Loom and the Anvil," (conducted by J. S. Skinner & Son, of Philadelphia,) that New York farmers may see what is said and thought of their progress of improvements in other States; and for the purpose of making a few comments.

The fact that the Executive Committee of the N. Y. State Society refuse to pay any premiums on grain crops, except in cases where the product is unusually large, indicates a disposition to curtail expenditure in that direction, that more money may be offered to encourage improvements in other departments of rural industry. The writer of the above criticism seems not to be aware that New York is rather a *grazing* than a *grain-growing* State; and that the "improvement in its agricultural condition," to which the late President of the Society referred, is more conspicuous in the increase of its dairy products and flocks of sheep, in its richer pastures and meadows, than in its crops of wheat, corn, rye, oats and barley. It would not be difficult to show that the eleven hundred thousand cows now annually milked in New York, yield about twenty millions of dollars worth of milk, veal, pork, butter and cheese. This, certainly, is a great improvement on what was done when the State Society was organized.

The number of farmers in New York, and its strictly rural population, increased very little from 1840 to 1845; yet the number of sheep kept in the State was augmented 25 per cent. Their yield of wool per head was also increased. In regard to the census returns of the bushels of grain harvested in 1845 or '44 as the case may have been, they are indeed not creditable to the farmers of the Empire State. In addressing assemblies of farmers at the South, we have frequently been met by the statistics of New York, in a way not flattering to the pride of a native son of that enlightened and populous commonwealth. The truth is, as the writer of this believes, that those that till the earth in New York go over too much surface as a general thing, and sadly neglect to apply lime and plaster to their land; to turn in grass, clover and other green crops, and otherwise fertilize the soil. There are too many farmers that take no agricultural paper; who keep aloof from all agricultural societies; and who never read a book on rural affairs. However unconscious of the fact, such men are gradually impairing the productiveness of the land which they plow, sow, plant and hoe. They have no idea of the substances in the soil which are necessary to form a large crop of wheat, corn, barley, oats or potatoes. Hence, the elements of all cultivated plants are wasted and lost in many ways, which they do not understand, nor appreciate. Too many farmers are more anxious to own large fields and many of them, than to drain, subsoil, manure, and make rich a smaller estate.

Our New York friends are probably not aware how much their brothers of the plow are doing in other States, by deep tillage, the use of ashes, guano, stable manure, lime, forest leaves, and by turning in green crops, by soiling domestic animals, irrigation, &c., &c., to improve their cultivated fields. The agricultural statistics of your "Model State," are studied by thousands quite as closely as by the veteran editor of the "Plow, the Loom and the Anvil." We feel not a little anxiety that the official returns of 1850 shall prove that the wheat, corn, oat and potato crops of New York have greatly improved within the five and ten annual harvests that will have immediately preceded the census of next year. As the crops of this season, 1849, will have to be given in, provided the marshals go round before the harvest of corn and potatoes, try and make good showings, if you can.

Let your corn and potatoes have all the ashes, bones boiled to a powder in strong lye, adding to the compound a little common salt and lime, which you can well procure. Mix pulverized charcoal and gypsum with the contents of the vault under the privy, and scrape the stables, barn-yard and hog-pen anew, and do your best in plowing, manuring, hoeing and cultivating your summer crops.

DEVON CATTLE.

Among the improved breeds of cattle in this country, the Devons are held in high estimation, and probably the most generally admired. As a distinct breed of neat cattle they possess several features peculiar to themselves, of which they are very tenacious—retaining them in a great degree, even through their distant crosses with other breeds, and particularly our native stock. The color of pure Devons is always red, varying to a dark mahogany. The dark color is generally most admired, although the light shades are equally profitable. There is occasionally a little white on the belly, which is more common with the heifers than the steers, and the cows udders are frequently white. The hairs which form the brush of the tail are very remarkable; on calves they are a darker shade than the other parts of the body, but always turn white before the animals are three years old. The hide is thin, soft, and mellow to the hand—the hair silky, and frequently curled. The horns are long, fine and smooth, and frequently yellow at the root when young; the muzzle and round the eye yellow, with a bright, keen and active countenance.

The Devons are fine boned, clean limbed, and very active—resembling in cattle what is called blood in horses more than any other stock. They are good feeders, and make as much beef in proportion to the food consumed as any other cattle. Their beef is also of the best quality, being what fleshers call marbled (or well mixed with alternate fat and lean;) and they always prove well when dressed—weighing heavy to their appearance. In size they are about the medium of neat stock. When dressed the cows weigh from 6 to 800, and oxen from 10 to 15,000 lbs., grass fed.

The bulls of this breed are usually inferior, in size and beauty, to the oxen; but his stock is the best proof of the value of a sire, and not his appearance. For labor we believe the Devons are not excelled by any other breed—and their uniformity of color and build renders them easily matched. They are very active, docile and tractable, as well as tough and hardy, and when carefully used will perform much labor from four to eight years of age, without diminishing their size or aptness to fatten.

As milkers the Devons are similar to our native cows, but the quality of their milk is always rich. On this point Mr. Allen, author of "Domestic Animals," (published in 1848,) remarks:—"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 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 4 lbs. per week for the whole year. He has challenged England to milk an equal number of cows of any breed, against 40 pure Devons, to be selected out of his own herd, without as yet having found a competitor."

We believe the Devons were first introduced into Western New York about twenty-five years ago, by Wm. Garbutt, Esq., of Wheatland. In 1835 or 6, Mr. G. stocked his farm in Sheldon (in charge of Mr. Beck, an experienced Scotch farmer,) with a portion of his home stock. In 1838 or 9, Mr. Verson, of Roanoke, Genesee county, imported a bull and two heifers from the best stock in Devonshire, England. Messrs. Garbutt, Beck and others, bred from the Vernon Bull (now known as the Dibble Bull,) and produced many valuable animals. This stock is now scattered over much of Western New York, and some of it in Michigan and Canada, so that purchasers can be accommodated with thorough bred Devons, not inferior to any, at much less expense and trouble than to import them from England.

N. Y. STATE AG. SOCIETY.—PROF. JOHNSTON.

We are pleased to learn that Prof. J. F. W. Johnston, of Durham, England, widely known for his successful labors in the cause of Agricultural Improvement, has accepted the invitation of the Society to deliver the Annual Address at Syracuse. We doubt not this announcement will determine many to attend this great Festival of the Farmers, who otherwise might not have done so. The distinguished gentleman will, doubtless, give to his hearers some account of the improvements that are in progress in Europe, in very many of which he has borne an important part. We anticipate great good from the visit of Prof. Johnston to this country. He designs, we understand, to spend a year or more before he returns, and he will doubtless devote much of his time in delivering lectures to Societies, &c., and it appears to us that our State and County Societies can in no other way at the present time appropriate a portion of their funds more usefully, than by securing his services in that capacity.

The officers of the State Society are entitled to the thanks of the friends of Agriculture, for their efforts to secure the services of this distinguished Chemist, and we trust the result will prove in the highest degree beneficial to the Agricultural interest.

We have watched with no little interest the proceedings of the State Society—and we believe we but express the united sentiment of the farmers who are interested in the true advancement of the Agriculture of our State, when we assert that the manner in which the Society has been conducted for the last few years, has been in every respect well calculated to sustain and advance this great interest of our country. The operations of the Society have been conducted with a single eye to the public good. No plans of mere theorizing have been put forth—but objects of substantial and permanent usefulness are presented, and untiring efforts are made to bring subjects of deep interest to the farmers, before them in such a manner as to attract their attention, and enlist their energies, so that improvement shall be the result.

The influence of the Society is felt, not only in our own State, but in every portion of our Union—new State Societies are being organized, and none can foretell what is to be the effect which is to follow the efforts of our State Society. A responsibility of no light character rests upon its officers, and they need the cordial co-operation of all who are interested in the cause of Agriculture. The labors appertaining to the business department of the Society are becoming very arduous, and we doubt not the officers will make every necessary arrangement for their discharge in a manner that will continue to be satisfactory to the public, and maintain the high standing which the Society has already attained.

DESTRUCTION OF WHEAT, CORN AND COTTON IN THE SOUTHERN STATES.

PROBABLY more than half the wheat that would have been harvested this season in the States south of North Carolina, has been destroyed by the succession of severe frosts which began on the night of April 15, and continued nearly a week. Some fields examined by the writer, were so forward as to be out of blossom. The price of cotton was so low last year that an unusual breadth of land was sown in this grain. About two-thirds of the cotton in the principal cotton growing States was up, and killed dead. Where seed could be had, it is planted anew. The prospect is poor enough for this important crop. Corn was killed down; but some grows again, and in some fields it is re-planted. Peaches, grapes, figs, and other fruits are mostly destroyed. More snow fell in Augusta, Ga., on the 15th of April than had been seen before in several winters. In many places the foliage on oak trees was killed; and tender trees, like pomegranates and lagerstræmias were smitten to death. Hessian flies, which are very abundant, came out perfect insects, twenty miles south of this city, on the tenth of April. *Augusta, May* 2, 1849.

CHESS—TRANSMUTATION.

WE have before us eight well written communications on the transmutation of wheat into cheat or chess. It is a subject we dare not again open our pages to, as it is interminable, and we almost regret having published Mr. W.'s article in our March number.

Let us premise that we think the transmutation of *vegetable, animal*, or any *material* substance, is philosophically, physically and mathematically impossible—and that opinion fire can't burn out of us, until we can see a plain and indisputable instance to the contrary. And yet we admit there are some facts which cannot be explained, that seem to favor that doctrine, and it requires a little *faith* sometimes to keep us from being skeptical on the subject. All of our communications are from experienced, and practical farmers, and every one takes the affirmative.

H. W., of China, N. Y., cites instances where wheat in the spring was cut to feed a traveller's horse, which came entirely chess, while the rest of the field was fine clean wheat. M. T., another instance, where a horse was tied in the corner of a fence, and eat the wheat to the length of his tether, and that was chess alone. These are not solitary instances of the like.

J. R., of Pekin, Niagara Co., says he has the ability to convince the most skeptical, and asks if the $100 premium is yet alive, or the man that offered it; as he is prepared to carry off the prize, and desires us to name some one in that county to call on him to have it settled at once. We take that bet.

J. A., of Yates county, states some strong reasons which he thinks are conclusive; but we think his reasoning unphilosophical when he applies it to the planting of a vineyard of choice grapes, which turned to wild ones. If the seeds were planted, then a variety might be expected, but not a different *order* and *genus*—and no one will pretend but what cuttings, or rooted vines, will produce the same as the parent plant forever.

L. R., of Clyde, relates three very strong cases, which, if there were no deception or hidden causes to account for them, would be a *settler* to our views on the subject.

"A subscriber," of Oakfield, is rather severe on Mr. W., and asks if pigeons are more apt to disgorge chess on ashes where logs and stumps have been burned, than other places, as those places are usually full of chess. He also says that clean seed, that had chess growing among it, is more liable to produce chess than that that had not any, and therefore not impregnated with the pollen of the chess—a suggestion that may be worthy of notice, and as far as we are informed, is original with our correspondent.

And last, though not least, comes our friend E. F., of Rose, Wayne Co., with several cases of transmutation, which are difficult to account for, without occular examination. He winds up with the "proof positive," of the following certificate, duly sworn and subscribed:

THIS may certify that I, Simeon J. Barrett, of the town of Rose, county of Wayne, about twenty-four years ago, in the fall of the year in picking over some wheat to thrash for seed, pulled out some chess and found it grew in a wheat head of the usual length, and seven kernels of chess grew out of one side of it, about one-third of the way up. In July, 1848, I was passing through a field of wheat and saw a head of wheat with chess on it; I plucked the head, which was of usual length, and about half way up the head, there grew out eleven kernels of chess. SIMEON J. BARRETT.

The above statement was verified before me the 7th day of April, 1849. P. GUITCHELL, Justice.

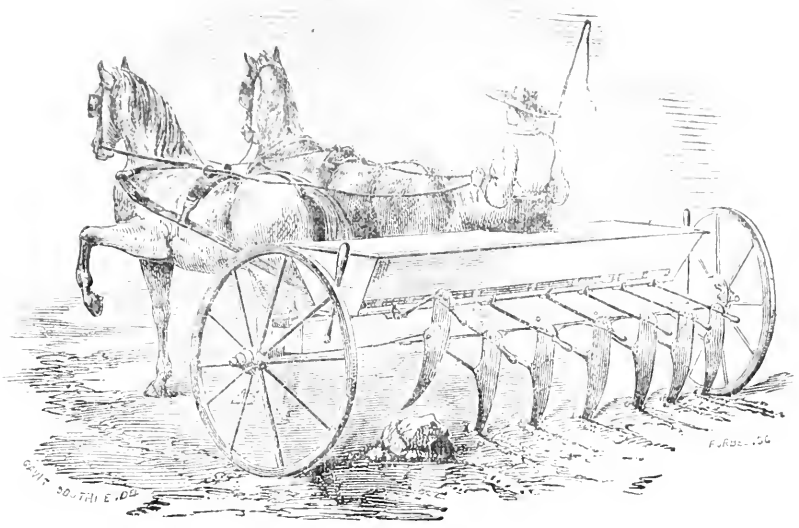
Now, in order to set this subject at rest, exhibit to us this *lusus naturae*, this *rara avis*, and we will cry *peccavi*, and give a premium for a knot-hole to creep into, and forever after hold our peace.

We must beg of our correspondents to excuse our not giving their entire articles, and to let this mooted and unsettled question rest until some proof can be adduced beyond cavil or dispute.

AN EXAMPLE FOR THE BOYS.

MANY of our youthful readers have responded to our offer in the March number, by sending lists of new subscribers. The zeal manifested shows that there are some boys in the country who desire to improve their minds, and become MEN in the fullest sense of the term. It has afforded us real pleasure to hear from our young friends. The orthography and penmanship of their letters, in most instances, are quite creditable. Among various similar letters received from boys residing in this and other States, we copy the following from Master WM. H. HUNT, of Geneseo:—

"After I saw your offer to the boys, I started out to obtain subscribers to the GENESEE FARMER, and in a short time I got five. I am satisfied from my inexperience, and the success attending such feeble efforts, that if but one boy in each School District in New York was to engage with zeal worthy of the cause, in obtaining subscribers for your useful journal, that your list of subscribers would be greatly increased, and many minds stored with practical knowledge, that now are filled with worse than useless trash. I find it very agreeable to go on this business, as it brings into practice my lessons in arithmetic, in making change with the subscribers. I intend to add some each year, as I have eight years of minority to labor in this pleasant vineyard, if my life is spared. I herewith enclose $2 for five subscribers. * * * You may send me Johnson's Catechism of Agricultural Chemistry and Geology."



PALMER'S WHEAT DRILL.

PALMER'S WHEAT DRILL.

Of the various improvements in grain drills, this is one of the most recent. It is designed to combine, in a simple, substantial and yet cheap form, the advantages of the numerous English and American drills heretofore in use. We extract the following from the inventor's description of its construction and operation :—

"The frame-work consists of a simple axle, four by six inches, and a pole, on the former of which is placed a box or hopper. One simple distributor driven by a cam wheel and friction rollers, conveys the grain from the hopper into the several drills, through hollow braces or levers, and the quantity in each drill cannot vary a spoonful in sowing five bushels. Each drill is independent of the others, and either can pass over a stone or other obstruction eighteen inches high, without interfering with the operation of the other. It will drill perfectly, a strip of land of any width, from four inches to the entire width of the machine, and will work on land of any shape, without wasting the grain. All the teeth or drills can be raised or remain in a position eighteen or twenty inches from the ground, rendering it perfectly safe to drive over the roughest places. By the most simple movement, the distribution of seed can be stopped in an instant, or continued with the same ease. All the injury the drill can sustain by coming in contact with roots or fast stones, is the breaking of a small wooden peg, which is easily replaced. The machine is so contrived, that by a very simple movement, the interior work is exposed to view, and at all times, the grain, while passing into the drills, is in full view of the operator, so that he can detect at a glance, any stoppage of the grain, and at once remedy it."

A large number of these drills are being manufactured, the present season, by J. A Holmes & Co. of Brockport, N. Y. See their advertisement in this number of the Farmer.

FACTS IN BUILDING.

A writer in the American Mechanic, mentions the following very sensible facts for those who propose to construct dwellings with reference to comfort, economy, and convenience:

One fact is that a square form secures more room with a given cost for outside walls, than any other rectangular figure. Great length and little width may afford convenient rooms, but an increased expense.

Another fact is that ventilation is an essential in a human dwelling. No other consideration should exclude this. The halls, windows, and doors, should be so situated with regard to each other, that a full draught of air can be secured at any time in the summer season, by day and night, through the whole house. The stories should also be sufficiently high to afford a sufficiency of air in all the rooms. Nine feet is a good height for lower rooms, and eight for upper. Bed rooms should also be larger than they commonly are. Great injury to health is the result of sleeping in small, close apartments.

The third fact is that a steep roof will not only shed rain and snow far better than a flat one, but will last immensely longer.

The fourth fact is that a chimney in or near the centre of the building will aid to warm the whole house, while if built at one end or side, the heat will be thrown out and lost.

The fifth fact is that a door opening from the outside into any principal room, without the intervention of a hall or passage, costs much more than it saves, in the free ingress of air into it.

The sixth fact is that the use of paint is the best economy, in the preservation it affords to wood work.

The seventh fact is that if the front door is made at one side instead of the middle of the front, a partition will be saved, and for small houses this should not be forgotten, but for large houses have the main door and lobby in the middle of the house.

FARMING ON TWENTY-ONE ACRES OF LAND.

BY WILLIAM GARBUTT.

MESSRS. EDITORS:—Many of the cultivators of the soil, who occupy large possessions, do not realize the amount of labor that can be profitably employed in cultivation: and few farm laborers are aware how small a piece of ground will afford full employment to an industrious man, and yield himself and family the comforts of life, and make them an independent home.

In illustration of these facts, I will give an account of farmer B. His farm consists of twenty-one acres: one acre of it is occupied with buildings, yards and garden, and twenty acres are for cultivation — all made productive by thorough draining and bountiful manuring. A good substantial fence all round it, but no division fences. He has 57 rods of patent fence, which is easily removed, with which he encloses one-fourth of the ground for pasture.

The farm is divided into four equal parts—5 acres in each part. First season, No. 1 is in grass, clover and timothy, for pasture; No. 2 in hoe crop — one acre in wurtzels, one potatoes, and three in corn; No. 3, barley; and No. 4 in wheat. With these crops he keeps a regular rotation each year. Second season, No. 1 is manured in the fall with all the manure that he has collected the past year, and plowed for next season's hoe crop; No. 2 is plowed in the fall for barley next spring: No. 3 (barley stubble) is sown with wheat; and No. 4 (wheat) is sown with timothy and clover for next season's pasture — which rotation he uniformly pursues.

He keeps a yoke of oxen, two cows, twenty good ewes and a breeding sow, for which 5 acres of fresh clover on a rich soil will afford plenty of pasture, provided that he does not turn into it too soon in the spring. The wheat and barley straw, corn stalks, and roots, will be ample forage for them in winter. He is industrious, economical and prudent. Every thing is well done, and in season. The ground is kept clean, no weeds being allowed to grow, not even around the fence; it is made rich by plentiful applications of manure, which renders it very productive. His wheat averages 30 bushels per acre. It will take 24 bushels to bread the family the year, (which consists of himself, wife, and four little ones,) and it will take 7 bushels for seed, which will leave 119 to sell; this, at $1 per bushel, will make $119.— His barley yields 40 bushels per acre: it will take 8 of it for seed, and 192 bushels to market, at 50 cts. per bu., will be $96. The corn averages 60 bushels per acre: the three acres produce 180 bushels: it will take 80 bushels to feed the pigs, fat the pork, and use of the family, (for they eat Johnny cake and mush,) which leaves him 100 bushels to market, at 50 cts. per bu., is $50. The potatoes and beets are all used at home. The wool of the 20 ewes averaging $1 per fleece, will be $20. They raise 20 lambs, which he sells in July or August for $20. By taking the lambs from the ewes early, the latter will get fat by fall: 15 of them are sold for $30, with which he purchases 20 ewes for next season's keeping — and he has 5 fat sheep left for the use of the family. The sows have 6 pigs the last of March or early in April: 5 of them, with the sow, are fatted, and a young sow kept for pigs next spring. The 5 pigs and old sow when fatted will make 1,100 lbs. of pork; 500 will do the family, with the 5 fat sheep, and leave him 600 lbs to sell, which at 5 cts. a pound is $30. The two calves are fatted and sold for $5. This makes $340 worth sold from the products of the 20 acres, and the family have had their farm living the past year.

It may be thought that this calculation is too large for an average production, but I assure you that if the operator is industrious, economical and judicious, he will seldom fall short of the quantity stated. But it is asked, how can an industrious man be constantly employed on 20 acres of ground cultivated for farming purposes? Look at it. His ground for spring crops is all plowed in the fall. On the first of April he commences operations for the season. He first sows the grass seed on the wheat: then 10 cwt. of plaster on the hoe ground; and as soon as the ground is sufficiently dry he harrows it and sows the barley: then harrows and cross harrows until it is thoroughly pulverized, and then rolls it. By that time the planting ground is ready to harrow, which operation is continued until the ground is well pulverized, and the nearer it can be made to a garden tilt the better.

But if he is ahead of the season with his work he can always have full employment in making the manure heap. He collects every thing that will make manure that his time and means permit; he puts on it at least one ton of plaster at different times. Leached ashes, swamp muck, marl, dirty salt, and old brine, are all collected and mixed with the barn yard dung, so as to increase the manure heap to at least 200 loads.

The ground being in good order and the season favorable, he commences planting the first of May, and takes time and does it well—for there is more lost by careless planting than would pay for four times the labor of doing it well. He first plants the wurtzels, then the potatoes and corn. Planting done, the wheat is to be wed; and as soon as the wurtzels are up he begins hoeing, which affords him employment until the first, and perhaps the fifth of July. He then has some leisure, and assists a neighbor in haying, to procure help in hauling in the grain.

He commences harvest as soon as the grain will answer, and barley will do to cut pretty green. If it is not sufficiently dry to bind let it lie two or three days in swarth. Harvest begun he may work as faithfully as he chooses until the grain is all secured. That done, he harrows, cultivates, or plows shallow the barley stubble, so as to pulverize it thoroughly four inches deep, and sows on it half a ton of plaster. The corn is now ready to cut up; that done he plows the barley stubble deep and well, and sows the wheat. The summer crops are now ready to gather, which employs him a while. When all are secured, he takes out the manure, spreads it evenly over the surface, and plows it under. The hoe ground is also to be plowed for barley next spring, which keeps him busy until it is time to prepare for winter.

In winter he takes good care of the stock, thrashes the grain, and provides fuel—having none on his farm. The orchard is planted by the fence around the farm and door yard.

Now, my Young Friends, be industrious and saving, and you will soon be able to purchase 21 acres of land. And you who have large possessions, and sons you wish to settle near you, divide your possessions with them, and teach them to realize that industry and economy are the sources of wealth— and that a neat, comfortable and independent home, though it is small, will afford more rational enjoyment in old age, than large possessions, with a princely mansion, even if it is not encumbered with debt. *Wheatland N. Y.*, 1849.

RED ROOT OR PIGEON WEED.

BY F. W. LAY.

Messrs Editors:- In my rambles through the country this spring, I have been surprised to see the hold this curse to wheat growers has on the fields: even some of the best and most thorough farmers have very much of it in their soils. While a person has but little of it in his fields, it may be easily kept under by going through the wheat in the spring, and weeding it thoroughly: but if neglected for a few years it will get such a foothold on the soil as to be almost impossible to get it out.

A practice which I have seen tried, is well worthy the attention of those who are thus situated. Some time in the fall, after the wheat is taken off, go over the stubble and drag or cultivate thoroughly—the same as for seeding wheat. This will cover all the seeds of red root that are in the stubble, and will cause them to vegetate—after which they can be plowed under in the spring and destroyed. The great difficulty with the seeds of red root always has been to get them to grow: they will remain in the ground for years, and finally start and grow upon being brought to the surface and covered in the fall. The straw containing the seed of red root should be piled up or made into compost in the spring, and not drawn out in its long state: if not reduced to a finer state, all the seeds will grow when brought to the surface.

I hope farmers will attend to the matter, and not not let this, the worst of weeds to the wheat grower, get the upper hand. *Greece, N. Y., May,* 1849.

Remarks.—We are glad that our friend Lay has broached this subject. Foul weeds are fast gaining *ground* in many sections of Western New-York, and possess something more than a mere "local habitation and a name." Farmers must be on the alert, and guard their possessions from an attack or advance of the enemy. And in this connection we will refer to *one* practice which tends to *increase* rather than *destroy* these pests. Many farmers are in the habit of throwing red root, thistles, screenings, &c., into the highway—not thinking that the seeds are easily carried, by adhering to the hoofs of horses, wheels of carriages, &c., to the barns and farms of those who take great pains to keep their premises entirely free from all noxious plants. In some localities this has become so prevalent, that a reform is urgently needed, and we direct the attention of all interested to the importance of at once and entirely discontinuing the practice. "A word," &c.

WESTERN PENNSYLVANIA.

Messrs. Editors:—Having recently become a subscriber to your journal, I feel bound to acknowledge the benefit it has been to me in awakening an increased interest in the subject of Agriculture; and I am also impressed with the conviction that a more intimate connection between the two great sister States of the Union—New York and Pennsylvania—would be productive of great good to each. Especially would an infusion of New York enterprise benefit Western Pennsylvania. We are a sound, sober, stable people; careful, prudent, industrious and economical—but lacking that indomitable energy which fully develops the wealth of a State.

The eastern county border is the summit of the Laurel Hill, which together with the Chestnut Ridge, (which is included in the county as far as the county extends,) is rich with iron ore, and there are a number of furnaces already erected in that section of the county, and room for many more. The streams which emanate from the mountains, though not generally large are permanent in their character, and afford excellent water power for all manufacturing purposes, which is far from being occupied, to the extent of even the *wants* of the community. The rich, arable lands extend quite to the base of these mountains, and the country abounds with limestone and bituminous coal. The coal is mined and delivered in the towns at from two and a half to four cents per bushel. The mountains afford an inexhaustible supply of timber for building, fencing and tanning purposes. The Pennsylvania Canal, passing along the valley of the Kishkiminitas River, skirts the northern boundary of the county, affording the *means* of an excellent market for the produce of the farm. True we have the means of a good market, but we really have not a first rate market, such as you New Yorkers have. In the manufacturing and commercial pursuits we need a thorough awakening, which would stir up the agricultural community to greater enterprise. Our staples are wheat, corn and oats—horses, cattle and pork. We raise but little barley, and little wool comparatively.

With these facilities in every point of view, for cultivating the soil, for manufacturing and commercial purposes, a New Yorker will be surprised to learn that our good lands, within from five to ten miles of the Pennsylvania Canal, with good buildings, are worth only from twenty to forty dollars per acre. You will, therefore, readily perceive that this is an excellent field for enterprise in any of these departments. Particularly for men of capital disposed to engage in the iron business in any of its branches, to tanners who could commence in a considerable way, and to mechanics who could manufacture the improved agricultural implements, would this be a suitable place, and their labors and investments meet with a sure return. If one of your large nurseries, which I see advertised in the sheet connected with the Farmer could be transported here, I think it would be a good "notion," as our old orchards are about dieing off, and we are *beginning* to plant new ones. And if we could get your goodly city of Rochester set down on the bank of *our* canal, we would be willing to "pay a handsome premium."

As I am but a "new beginner" in the practical part of farming, I shall not attempt any disquisitions on that subject *now*, but at some future day I may *inflict* a communication upon you on some other subject, if this meets with your approbation. And as my farm needs many improvements I shall be very much occupied therewith, but will endeavor to find time to recommend your excellent paper to my neighbors. W. L. A. *Westmoreland Co., Penn., March,* 1849.

Public Lands.—The Commissioner of the General Land Office reports, that 10,800,000 acres of the public lands have been granted by government for public schools; 825,950 for universities, and 8,174,400 for internal improvements in the different States and Territories.

Diogenes being once asked the bite of which beast was the worst, answered, "If you mean of wild beasts, 'tis the slanderer; if tame, the flatterer."

LUNAR INFLUENCE---THE TIDES, &c.

BY PROF. C. DEWEY.

Tides—Modifying causes—Earth flattened at the Poles—Proof—High tide in Bay of Fundy—Reason—Opinion of great men.

ADMITTING for a moment that the action of the sun and moon, and chiefly of the moon, produces the tides, what might be the difference in the tides at different places? If the earth were covered with ocean some miles deep, the tides would be only two or three feet high at the greatest, and generally about two feet. The great Lakes are too small to have tides: an ocean is required to have the attraction of the sun and moon upon the waters apparent. The tides rise much higher by the waters being stopped in their course by the land of the continents, islands, &c., and by being thus accumulated along the shores.

Again: the tides rise higher in places more favorably situated for accumulating the waters. Places differ greatly in this respect, and of course, the height of the tides. Also; commonly there are two tides daily, but from their different position, some places have less than two tides a day, and some have more than two. These facts exist, and must be solved on any cause, and are consistent with the notion of lunar and solar influence.

The highest part of a tide is under the moon when she is on the meridian on the same side of the equator the moon is, and when she is on the meridian opposite, is on the contrary side of the equator. If the force of the sun and moon act together, the tide is higher, and when at right angles to each other, the tide is lower. If the wind conspires with the other forces, the tides are higher than is ordinary: if the wind acts with power against those forces, the tides are far less than was anticipated. Currents effect the tides, either increasing or diminishing, beyond what the attraction requires. In either case the effect is to be considered.

The earth is flattened towards its poles. *Actual measurement* of the length of a degree of latitude, has proved it. The same pendulum vibrates in less time in higher latitudes. Both prove that the poles of the earth are flattened. The equatorial diameter is the longest, and the polar is the shortest. The difference is about thirty-four miles. This difference of 34 miles in 8,000, will not make much difference in the attraction exerted on different parts of the earth. The northern regions being nearer the centre of the earth, the attraction of gravitation must be greater on the waters, and it must be more difficult for the power of sun and moon to raise a tide. Yet the tides are the highest of all in the Bay of Fundy. But, *as this high tide is not found along the shores northward and southward* of this Bay, it shows that this tide depends on some local circumstances. Looking to the Geography we see the Bay opening like a tunnel towards the east and southeast, so as to receive the flood of tide which has been drawn across the Atlantic, and then the Bay narrows into the neck of a tunnel, so as to give the greatest and best action to the waters in raising the tide along the narrower channel. The high tides in the Bay of Fundy are no objection to the notion of solar and lunar attraction being the cause of the tides.

Along our coast, and the coasts of other countries, the tides rise with great inequality, owing to the local differences in their situation, the capes, shoals, currents, bays, &c. These too are entirely consistent with the power of attraction in the earth, and that of the sun and moon upon the earth.

It is a great curiosity to me that all the most distinguished philosophers from Newton to this day, English, French, German, and American, should agree on the cause of the tides, and that the more fully the laws of nature and their operation are understood, the more confident and perfect should be the agreement of the greatest minds,—of those *qualified* to judge and decide—on the causes that raise the tides. How eagerly would the French and German mathematicians have seized upon any defects in the reasoning of the great Newton upon the tides, if any had been discoverable. But they have sustained his reasoning, and simply carried on its application to greater extent. Though the Newtonian theory of the tides has been slightly assailed by some who have never gone over his reasoning, not one valid objection has been made; not one distinguished philosopher has supported such objection. *Rochester, N. Y.*, 1849.

FECUNDITY OF INSECTS.

AMONG the astonishing things which present themselves to the eye of the naturalist is the wonderful fecundity of insects. This is a circumstance which would naturally follow the law by which one animal preys upon another throughout the whole animated creation. In no part of nature is this law more extensive than in the insect world, which suffers immense ravages from this cause. In order to fill the deficiences thus made, it would seem to be necessary that insects should be exceedingly prolific. Linnæus calculates that the carcass of a horse would not be devoured with as much despatch by a lion as by three of the flesh fly denominated *musca Vomitoria* and their immediate offspring. For one female fly will give birth to twenty thousand larvæ, each of which will, in a single day, devour sufficient food to acquire an increase of two hundred times its own weight, while only a few days are requisite for the production of a third generation. Prof. Ehrenberg, of Prussia observed an animalcule which he calculated to increase in ten days to one million, on the eleventh day to four millions, and on the twelfth day to sixteen millions. In another instance he supposes that a single individual may in four days become one hundred and seventy billions. The progeny of a single queen bee often amount to forty thousand, and the queen of the Termites or white ants, generally lay at an average of sixty eggs per minute, or nearly ninety thousand in the short space of twenty-four hours. According to Luwenhoek, two families of lice would in sixty days have as many as fifteen thousand descendants.

Astonishing as this increase among insects may appear, certain circumstances seem sometimes to augment it to a most extraordinary extent. In some countries the ant frequently makes its appearance in such countless multitudes, as to defy all human means to destroy them. They blacken the roads and fields for miles, destroying the cattle, and devouring rats, mice, birds, or whatever may chance to be near the scene of their ravages. They rush into the streams in such vast swarms that the tiny carcasses of the drowned form a bridge for the living, often to the depth of six inches, and extending upwards of 500 miles long, and eight or ten feet broad. This wonderful fecundity among insects is, however, exceeded by that of the cod-fish, which is said to spawn in one season a greater number of eggs than all the inhabitants of the State of New York.—*Sel.*

"BLACK LEG AMONG CATTLE."

BY S. P. CHAPMAN.

We were glad to see attention called to this fearful complaint among cattle, in the last number of the Farmer. This is one of those diseases where "an ounce of prevention is worth a pound of cure;" and although we do not believe it can be cured, we believe in a great measure it can be prevented. Let Mr. Watson, and others who are troubled with this complaint in their herds, try the following preventives: Bleed the calves and young cattle in the neck once in the fall, and again in the spring; give a teaspoon full of saltpetre once in four or six weeks; keep plenty of salt where they can have free access to it, [they should be gradually accustomed to this,] and *feed regularly.*

There is but very little danger of a young animal that is kept *steadily growing*, having this complaint. It usually attacks those that have been for a time, at least, rather low in flesh, when they are beginning to do better. It is a very common remark among those who lose cattle in this way—"They were doing well, first rate." We hope no one will be induced by the Editor's remarks, (for we do not think he would recommend it,) to keep young cattle "poor in flesh," in order to escape this disease; for they would be very liable to get a *start* sometime during the year, which, in our opinion, is the greatest predisposing cause of "black leg." Rather keep all of your young stock in good condition, (not fat,) until they arrive at full maturity; they will then be subject to but very few diseases of any kind.

Is this complaint really contagious? We have repeatedly known of an animal being lost with it, and not another one in the same herd, in the least affected: although the dead animal was suffered to remain in their immediate vicinity until a certain swinish multitude held a council, and resolved, out of pure benevolence, no doubt, to *in*-ter it in reality—a thing which should have been done long before, (we do not mean *exactly* in the same way, however,) by a certain biped, professing to be a few steps in their advance in civilization. But, nevertheless, this complaint may be contagious. At all events, it would be well to remove the affected animal from the remainder of the herd as soon as possible.

We cannot recommend the above preventives as a *perfect* security against the "black leg," for they certainly are not: but we believe if the directions were followed, it would result in the saving of at least nine-tenths of the number of animals, that are now annually lost with this complaint. *Clockville, Madison county, N. Y., May,* 1849.

WHEELER'S THRASHING MACHINE.

The question is frequently asked—Why cannot a cleaner be attached to Wheeler's Thrasher? In answer to this question I will give the reasons, as expressed by an extensive grain grower who has used nearly all kinds of thrashing machines, cleaners, &c.

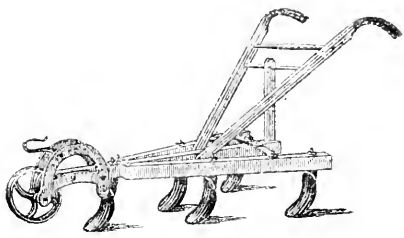
1st. Because the original cost of this Horse Power, Thrasher and Separater, together with one of Grant's largest and best fan-mills, is from seventy to one hundred dollars less than any good cleaner and thrasher combined can be obtained for.

2d. Because, when pur hased separate they can be used separately, are more portable, simple and durable; also, the fan-mill is adapted for cleaning all kinds of grain and grass seeds, and the Thrasher for thrashing clover and timothy.

3d. Because of the great simplicity and reduced friction of machinery, less power is required, no driver is needed, fewer men are necessary to attend to the whole operation, to do the same amount of work, than when the cleaner is combined with the thrasher.

4th. Because less grain is wasted—as the fan-mill, when driven direct from the power is more steady, and cleans perfectly with once going through—while, when the cleaner is combined, it derives its motion from the cylinder, which is always varying its speed as the feeder presses fast or slow, consequently blowing away grain with the straw and chaff at one moment, and leaving it half cleaned from the chaff the next—requiring, nine cases in ten, another operation by a fan-mill to prepare it for market.

5th. Because the expense of thrashing is much reduced by the great simplicity of these machines, and all can be managed by the hands usually about the farm: and in stormy weather all can be operated inside of barns, when the laborers and teams could do little out of doors to advantage. Horace L. Emery. —*Albany, N. Y., May,* 1849.



WRIGHT'S CORN CULTIVATOR.

The above cut represents "Wright's double pointed steel tooth Corn Cultivator"—an article extensively used in this section. It is well constructed and durable. The teeth are made of rolled steel, having two points, and bolted in the center to a shank of wrought iron — which latter is so protected from wearing as to last an indefinite period. When one point is worn out, the teeth are easily reversed, thus giving new points—and when both ends (or points) are worn out, new teeth can be substituted at a cost of only 25 cents each.

At the last Fair of the Monroe Co. Ag. Society, the Com. on Implements (L. B. Langworthy, Esq., chairman,) awarded a premium to the manufacturer, and thus noticed this Cultivator:—"Pardon D. Wright, of Rochester—a Corn Cultivator with reversible teeth. A perfect article, and all that can be required for the purpose."

The advantages of this implement (as stated by the manufacturer) consist in the superiority of its work, its durability, light draft, freedom from clogging, and the trifling cost of new teeth when they are required. We have no hesitation in commending it to our readers as a superior article. Manufactured and sold wholesale and retail by P. D. Wright, 120 State st., Rochester. Also for sale at the principal Implement Stores in Rochester, Buffalo, Auburn, and other places in Western New York.

Thomas Ewbank, Esq., author of "Ewbank's Hydraulics," has been appointed Commissioner of Patents, in place of Hon. E. Burke.

NATIVE Versus SHORT-HORN CATTLE.

BY WM. HANFORD, JR.

[In reply to S. P. Chapman, page 90 of present volume.]

The "facts" presented by Mr. CHAPMAN would have formed a more imposing array, and been a little more stubborn withal, had they been more definite. The information desired, in behalf of those interested, was *statistical*, not as expressed by the printer. In relation to his premium testimony, if that kind of evidence is worth any thing towards establishing the merits of an animal, or breed of animals, its value would certainly be enhanced by a statement of the number of competitors, and the preparation of animals for exhibition, as well as of the extent of territory open for competition. The cows mentioned are probably as near "right" as the skill and intelligence of their distinguished owners can well make them. I have advanced no theories—advocated no doctrines, as the result of my own observation; but I have intimated, and still hold, that the GENESEE FARMER has heretofore contained some things relative to native stock worthy of respectful consideration. "To prove *this*" I will, with your permission, present a few CASES—a few of "many recorded facts showing the *good milking* qualities" of the said stock.

We have the following account of a Sussex bred cow, owned in Lews, England, called the Cramp Cow:

"From the first day of May, 1805, the day she calved, to the second day of April, 1806, a space of forty-eight weeks and one day, her milk produced 540 lbs. of butter. The largest amount made in any one week, was 15 lbs. From May to June, she gave 26 quarts per day. From 20th June, to 20th September, 18½ quarts. In 47 weeks she produced 4,921 quarts of milk. In the next year, from the 19th day of April, 1806, the day she calved, to the 27th February, 1807, forty-five weeks, she produced 450 lbs. butter. The largest amount per week was 12 lbs. The quantity of milk for the time 4,137 quarts. During this year she was sick and under a farrier's care three weeks after calving. She went dry seventeen days only. In the third year, from the 6th of April, 1807, the day she calved, up to the 4th of April, 1808, fifty-one weeks and four days, she produced 675 lbs. of butter. The largest amount made in a week was 18 lbs. The quantity of milk given in that time, was 5,782 quarts. In the fourth year, from the 22d of April, 1808, the day she calved, to the 13th February, 1809, forty-two weeks and three days, she produced 466 lbs. of butter. The quantity of milk given in the time, was 4219 quarts. In the fifth year, from April 3, 1809, to May 8, 1810, fifty-seven weeks, her produce in butter was 594 lbs. The amount of milk given in the time was 5,369 quarts. The largest quantity of butter in any week was 17 lbs."

Now is this the whole story respecting this cow? No. All will admit that her produce was a *little* extraordinary; and it is invariably true that to do things extraordinary with *horned cattle*, they require extraordinary feed and care. Those who *think* otherwise are better prepared to *swallow* than to *digest*. My object being to elicit, and as far as I am capable, to disseminate truth, I will here insert the account of her treatment.

"In the summer season she was fed on clover, lucerne, rye grass and carrots, three or four times a day; and at noon about four gallons of grains and two of bran mixed together, always observing to give her no more feed than she eat up clean. In the winter season she was fed with hay, grains and bran, mixed as before stated, feeding her often, viz. five or six times a day, as was seen proper, and giving her food when milking; keeping the manger clean where she is fed with grains, not to let it sour; washing her udder at milking three times with cold water, winter and summer, never tied up, lies in or out of the barn as she likes; particularly careful to milk her regularly and clean."

* For a mass of information, respecting Ayr-shire, Durham and Native Stock, see New Genesee Farmer, Vol 3, pages 2 and 18—from Mr. Coleman's Fourth Report on the agriculture of Mass.

Of the celebrated Oakes Cow, the Hon. ZADOC PRATT remarks:—"Her history illustrates two things worthy of note: first, *what we can obtain from the best of our old breed*; and secondly, how much depends on *good feeding*." An account of this cow has been so frequently published, I will in this case omit it. "The Nourse Cow," owned in North Salem, made 20 lbs. of butter in one week, and averaged 14 lbs. butter per week for four successive months." I might to these add nnmerous other instances, showing what has been done by cows from the *vulgar herd*.

In his zeal to obtain evidence to sustain the issue he has thought proper to raise in this matter, Mr. CHAPMAN has called to the stand one witness, whom it will be well to cross-examine. I allude to Mr. HENRY COLMAN. How far this gentleman stands committed to the stock of Mr. PRENTICE, or to Durhams in general, a few short extracts from his writings will show. In the same article from which Mr. CHAPMAN clips his paragraph, we find the following abatement to what was there said: "I have only to desire that Mr. PRENTICE would by a lactometer, ascertain the qualities of his milk; and then that he would ascertain the actual yield in butter of several of his animals for a week or so; and when this is done, that he would show his benevolent countenance in the New Genesee Farmer, and let our readers know all about it."

Now on what grouud rests the high encomium of Mr. PRENTICE'S stock? External appearances alone,—which we all know are sometimes deceitful. But has Mr. Prentice complied with the request? Mr. COLMAN having cleared up his character for consistency, let us hear what he says about "Cream-pots." On the side of their dam, they are descended from a distinguished cow of *native* breed. Relative to this matter Mr. C. says:—"Their beautiful color is certainly derived from the dam; and as the distinguishing feature in this stock is the richness of their milk, and this being precisely the quality for which the dam, the Haskin's Cow, was distinguished above all others, and it not appearing that any stock of Coelebs *but when connected with this cow*, has ever been remarkable for this quality, it would not seem difficult to determine on which side of the house this excellence belonged." "*Truly a strain of Durham blood does not injure the milking qualities of our native stock.*"

Of Durhams in general, Mr. COLMAN says:—"Whether any thing would be gained by substituting the Improved Short-Horns for our present stock, is to say the least questionable. *The Short-Horns are great consumers.*" Has he "ever bred or owned a pure bred Durham?" One moment's patience.—"Though animals do not always consume in proportion to their size, yet this must be considered as a general rule. They require *most particular attention* and liberal *feeding* to bring them to maturity, though we admit that they arrive at maturity early. Many of the Short-Horned premium young animals which have been exhibited at our cattle shows, have had the benefit of two wet-nurses for six months." In another place Mr. COLMAN says:—"*My own experience*, either with the *full bloods* or the *mixed breeds*, has not been favorable to them for *milk* or *butter*." Is Mr. Chapman satisfied. Again Mr. COLMAN says:—"The Durham cows are large animals, and should be expected to secrete largely of milk; bnt many of them, however, are *inferior* as *milkers;* and upon as calm and impartial a view of

the subject as I can take from my own personal observation. *I cannot pronounce them* as a race, distinguished and preferable to all others for their *dairy qualities*."

Now, Mr. Editor, if these statements, which are entitled from a variety of considerations to the highest respect and confidence, be true, I submit to your grand jury of intelligent readers, whether "facts" will warrant us in paying "$200," for a "Durham Bull," or whether in doing so our cows would be much improved by the "investment."

Dryden, N. Y., April, 1849.

REMARKS.—The writer of the above will observe that we have omitted one or two sentences, and modified others which contained some remarks foreign to the subject, and unnecessary in a friendly discussion. In discussions of this nature, it is important to keep cool, and produce facts and figures which bear upon the subject. It is not surprising that well informed farmers should honestly differ as to the relative merits of the various breeds of cattle, horses, sheep, &c. Of cattle the Devons, Durhams, Herefords, and Ayrshires, as well as our Native breed, each have their advocates—and every person can furnish a "why and wherefore" for his preference. On another page of this number we speak somewhat highly of Devons, and yet we are not prepared to say that they are superior to some other improved breeds. For the dairy good cows may be found among all breeds in this country, native and foreign—and it is, as a general rule, best to secure deep milkers wherever they can be found, without regard to origin.—ED.

HEDGES vs. WIRE FENCES.

MESSRS EDITORS:—I see much said in your valuable paper about wire fence, and have been expecting to see in every number for some time, some one stepping forward to prove the superiority of *hedges* to every other kind of fence—especially when there are no stone for walls. That wire may be profitably substituted for rails, I have no doubt, and that hedge plants may be as profitably substituted for wire, I have as little doubt.

The average cost of wire fence, taking our country as a whole, may be fairly put at 60 cents per rod. One of your correspondents says, that farmers should be satisfied if they can build a *durable* fence for 50 cents per rod. But allow me to ask if farmers should be satisfied with a wire fence, at a cost even of *fifty* cents per rod, if they can build one *much more durable and beautiful* for considerably less than that sum?

I believe it is universally conceded that the *Norway Spruce* will make a *strong, imperishable and durable* fence—combining splendid appearance with perfect ability to resist all the encroachments not only of brutes, but of rude boys and men. Small plants may be had at the Mt. Hope Garden and Nurseries at $50 per 1000. These may be set 2 feet apart, which, if I am rightly informed, will answer very well, if trimming is deferred until they have attained a height of two feet. One thousand plants will set about 120 rods, which would cost, exclusive of labor, *less* than 50 cents per rod. There might, it is true, be somewhat of a drawback in a failure of some of the plants to live, but not enough we apprehend to make it any very serious objection.

If, however, the Honey Locust should be preferred, the cost per rod would scarcely exceed 25 cents.—And, taking into account its ability to bear transplanting, its hardiness and rapid growth, it might be more desirable than the Norway Spruce; and either, in my opinion, would be cheaper, much more beautiful and durable, and a more effectual barrier against depredations of every species, than fence made of wire.

The time is not distant when logs and rails and boards must be displaced by something more durable, and the sooner the practicability or impracticability of making hedges take the place of all other kinds of fence is demonstrated, the better will it be for the country. I find that there are many, particularly in this western country, who would like to see this subject discussed in the "Farmer"—as we regard that, especially, as the standard of Agricultural Orthodoxy. The citizens of our villages enclose their grounds with fences that cost from $2 to $6 per rod, where they might substitute the Italian Privet, Arbor Vitæ, Red Cedar or Norway Spruce, at a much less cost—besides furnishing something exquisitly beautiful as a perpetual feast for the eye. A. T.—*Coldwater, Mich., May*, 1849.

WE would like to hear from other correspondents on this subject—particularly those who have had experience in growing hedges.—ED.

ALARMING DECREASE OF FORESTS.

Hopelessness of the success of Hedge Fences—Nature's provision for Heat—Immense Storehouse of Coal, &c.

MR. MOORE:—Many thinking persons who are aware of the millions of cords of wood consumed annually, by its profuse use by our entire population—steamboats, railroads and manufactories—become alarmed for its results to posterity. So far as it applies to fencing and building materials their fears are justly grounded; especially in those sections of country where live hedges are a forlorn hope, owing to their destruction by mice during the period of heavy snows and drifts—an evil which it is impossible to overcome. But on the score of fuel, if they will consider that there is a single coal formation in the region, or basin, drained by the Ohio, of more than 50,000 square miles in extent, of an average workable thickness of 20 feet, their fears must subside.

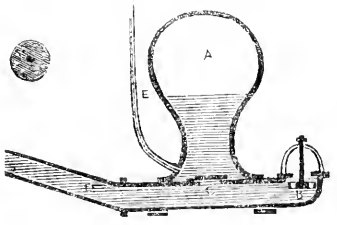
This single mass which is already accessible to railroads and canals, would give over three tons annually to every man, woman and child in the U. States for 20,000 years to come. It would form a pyramid that would shame the ancient worshippers of the sun, with a base 10 miles square and 30,000 feet high. What a vast and luxuriant vegetation of tropical, vascular and cryptogameous plants must have flourished, during that remote period of the earth's juvenility, when condensed, charred and almost chrystalized, to have formed this immense bed of coal, of which it is only one of a half dozen of nearly the same extent in the United States. All the coal fields of Europe might be taken from ours, and not be missed.

What a wonderful provision of an all-wise Creator, for the comfort and happiness, industry and wealth of a thankless race; who are far from appreciating their superiority over all created things, or the blessings provided for their exclusive use!

HAVE none but good implements—keep them in good repair, and under cover when not in use.

THE HYDRAULIC RAM.

MESSRS. EDITORS:—Few of those who might be benefitted by the use of this article, have hitherto become aware of its great utility. 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. Supposing a brief description of its construction and operation might be acceptable to those of your readers who are not acquainted with it, I submit the following to your disposal.



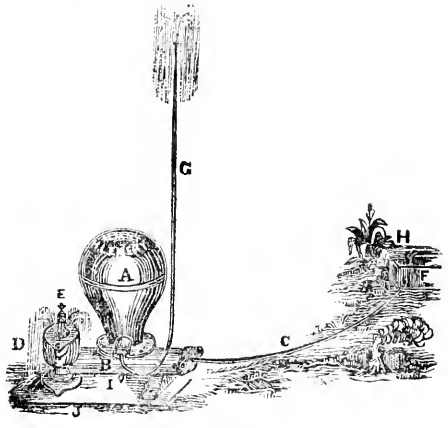
The above cut represents a vertical section of the ram. A, the air chamber—B, the waste valve—C, valve opening into the air chamber—D, the feed or driving pipe—E, pipe to convey the water where it is desired. The pipe D should be 30 to 50 feet long, and from 1 to 2 inches calibre; the pipe E any length desired, and about ½ 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 with a small space the air, which, by its elasticity, reacts upon the water, and forces it up the pipe E to any desired elevation or distance.

Thus simple is the machine, and, when once properly set, it will act for years without a penny's worth of repairs, and be as constant and regular in its duty as is the law of nature upon which it acts.

Many a farmer has a good spring or stream of water in the vicinity of his buildings, which would be to him invaluable if it could be brought to the house and barn: but being at a distance, and below the level of his buildings, it cannot be done by the ordinary means of conveying water: to such the ram becomes one of the most useful contrivances that ingenuity and science has ever furnished. Faithfully performing its work, unattended and unnoticed, with constant and regular pulsations as of life, it presents one of the most beautiful and interesting achievements that mind has ever obtained over matter.

A fall of not less than 18 inches at the spring, and a quantity of water not less than ½ 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. They are made of several sizes, and adapted to every variety of circumstances. Different manufactures number their rams without regard to the size of the corresponding number of others. The No. 4 Ram, sold at the Albany Agricultural Warehouse, is the most convenient size for common purposes, and when set according to the directions accompanying it, may be made to raise 10 to 20 hogsheads of water to an elevation of 50 to 100 feet, and carry it to any distance required. It should be remembered that the greater the fall at the spring or stream, compared with the height to which the water is elevated, the greater will be the quantity of water elevated, and that there is no limit to the height to which it may be raised, except the strength of the pipes used. W. B. E.—*May*, 1849.

REMARKS.—For the purpose of further illustrating the subject discussed by our correspondent, we add the annexed cut, which represents the hydraulic ram as it appears 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. B, D, A, E, I, the ram. J, the plank or other foundation to which the ram is secured.

In the eighth volume of the Farmer we published a series of articles entitled "Hydraulics for Farmers," embracing figures and descriptions of various water rams—to which we refer those of our readers desiring further information.—ED.

MILK AS AN ARTICLE OF DIET.—It is common to regard milk as little else than mere drink. But this is an error. Milk is really an article of solid food, being coagulated soon after reaching the stomach. New milk contains thirteen per cent. of digestible solids, and skim milk ten per cent.: that is, the former fully one-half and the latter above a third of the nutriment contained in the lean part of beef and mutton.—*Foreign journal.*

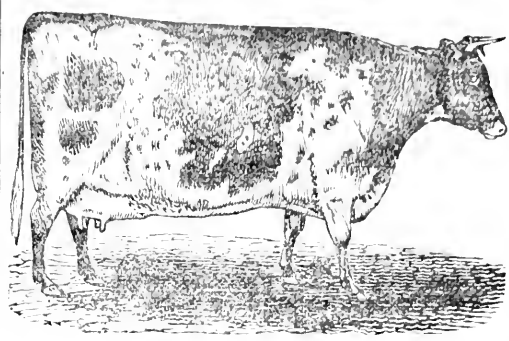
SYSTEM AND ECONOMY IN FARMING.

It was Wesley who said, "*I am always in haste but never in a hurry*"—a saying truly characteristic of the careful and prudent farmer. No moment is wasted in listless idleness; he has no time to waste in gossip or amusement during the hours of labor—but when the toils of the day are over, cheerfulness and content are his, for his duty has been accomplished. He hastened to his work, and without hurry or excitement he has seen his work done, and the sun sink below the horizon, bidding him to refreshment, domestic enjoyment, and sweet repose. System and order point out the work for every hour, and by "making haste slowly" nothing is left undone, which can be done at the time present; consequently no regrets or repinings ever disturb his comfort, or the cheerfulness of his home. When morning opens the gates of day, the wife who is as dear to him as the bright red drops of his heart—and his children, the best ornament of his power—with these around him praise and thanks are the first emotions, silently or loudly expressed. With energy and strength he goes forth, to perform no *uncertain* duty, and *never* with the inquiry as to what is to be done. No—his well arranged system leads him from day to day and from hour to hour to that particular work which careful study and thought had pre-arranged.

Thus the seasons, in all their beauty and fruitfulness fly round the circle of the farmer's life, lessening its span year by year, till, reaching its centre, he passes away full of age and happiness, the object of veneration and joyous reflections to those who remain of his contented household, and the pole star by which they endeavor to follow in the path leading to results for which every heart should pant and strive.

While we are yet young and in middle life, how often does the question arise, "*when shall we find time*" to read or study, or do some one admitted and needful duty? No sooner does this question present itself, or even the thought exist, than we should suspect error in our heads or hearts, for *there is time* for all things good and profitable. Many are the noble instances of persons in this country, who, after the usual hours of labor, between the rising and setting sun, have *then found time* to become familiar *with knowledge*, leading them to the highest honors of our nation, and well-merited applause of their fellow-men.

Where is the man who does not waste more than one hour in every day of his life?—wasted in the pursuit of unproductive amusements, or in empty idleness. Let each man scrutinize his own daily conduct and I am convinced he will admit that an average loss of time exceeding *two* hours per day has marked his every year. Suppose then we admit that *one* hour per day is saved for a life of fifty years—it gives a saving of about *four years*, a period equal to the acquisition of knowledge sufficient for success in any vocation of life, when added to the practical observations and applications of our daily work. In this respect the farmer has peculiar and extensive advantage *over every* other class of men. The very elements of creation are ever before him: the daily bread, the comfort and happiness of all other classes are dependent, under providence, on the exertions of the farmer: in this country the very government is upheld, directly and indirectly, mainly by the agriculturist. What a field, then, has the farmer for study! and what inducements has he to seek, examine, digest and thoroughly to understand the great book of knowledge thus placed in his keeping for the good of his fellow-men!—to economize his time, avoiding waste. Farmer.—*Seneca Co.*, 1849.



THE AYRSHIRE COW "AYR."

Owned by E. P. Prentice, Esq. of Mt. Hope, near Albany, is one of the most perfect and beautiful animals of that breed which we ever saw. The portrait gives a very good idea of her form, &c. She is thus described by Mr. Howard of the Cultivator, in which journal the cut originally appeared:

"She possesses in a high degree the excellent milking properties which distinguish the best of the breed to which she belongs, united to a more perfect symmetry than we have ever seen in any other Ayrshire, and which we have seldom, if ever, known equalled in any breed. Her body, (as will be seen by the cut,) is small; but her frame or bone is proportionally less. The head is small, the face dished, the forehead broad, and the eye prominent. The neck is small at the junction of the head, but pretty deep and full at its connection with the body. The back is straight, the crops fine, the ribs round, the loins broad, the flanks deep, the udder capacious, (spreading wide on the body but not hanging low,) and the milk veins large and prominent. The legs are small but strong, hard, and sinewy, like those of a deer. The great length and depth of the hind quarters might, from a profile view, give the idea that the chest was too light; but though the hind quarters are proportionally heaviest, (as we prefer to have them in a milch cow,) there is no deficiency in the fore end. The sternum, (or breast bone,) is wide, the fore legs stand wide apart, the bosom is full, and the first ribs are particularly full and wide-spread at their junction with the sternum, giving a chest of great capacity for an animal of her size. As her form and general appearance indicate, she is healthy and hardy. Her skin is of a yellowish hue, mellow and elastic; and though she does not possess the fattening quality in an *excessive* degree, or to an extent that would interfere with her dairy qualities, she thrives very rapidly when not giving milk. The quantity of milk she affords is, in proportion to her size, quite extraordinary. She has given, when on grass-feed only, upwards of twenty quarts (by actual measure) per day, and she continues in milk till near calving. No particular experiments have been made with regard to butter, but her milk has been ascertained to produce a large proportion of the richest cream."

A bright plowshare is the cheapest commodity ever used by a farmer.—*Cobbett.*

MANUFACTURE OF CHEESE.

THE following article is from the pen of Mr. A. L. FISH, one of the most experienced Cheese Dairymen of Herkimer county. It will be interesting to that portion of our hundred thousand readers who are engaged in the dairy business—a large number of whom take but one agricultural journal. We copy from the May number of *The Cultivator:*

HAVING been so frequently addressed by different persons in this and other States upon the subject of dairying, that to reply to each individually, would be quite inconvenient and burthensome, I propose answering some of the most important questions generally asked by new beginners, through the columns of your widely circulated paper,—hoping they will reach every person who deems *book farming* of sufficient importance to take an agricultural paper. At the low rate that such papers are now afforded, those who do not take one, have a poor excuse for begging information of their neighbors, to keep pace with the present tide of improvement.

"What kind of cows are most profitable in a dairy?"

It depends much upon location. If a dairyman is remote from a good grain market, where the coarser grains would bear a better profit fed to milch cows than to market otherwise, his selection should be of deep milkers, that will bear grain feed without accumulating too much flesh. If near a good beef market, where beef is worth nearly as much per hundred as cheese, look well to the size and thrift of a cow, so that if she is not a deep milker, she will turn well for beef. As a general rule, those are most profitable that are deep milkers, and will hold out a good flow of milk through the season, keep in good condition, and are quiet and gentle. He who cannot furnish plenty of good feed, should beware of such cows as have been highly fed, or his profits will be small.

"What is the best age of a cow?"

From five to ten years old. I have no objection to a cow ten years old for a season. She will consume more feed than a younger one, but her milk is richer till she begins to decline in condition, and lose strength and vigor.

"What is the most congenial feed for cows immediately before and after calving?"

Plenty of good tender hay or grass, and a small quantity, *daily*, of such other food as is best calculated to loosen the bowels and nourish the system, without creating a fever in the secretive organs. Wheat bran, oat meal, potatoes, or other roots, are deemed best for that purpose. If a cow is in high flesh, a mild bleeding from the neck, with half a pound of salts, fed in a mash, previous to calving, is good.

"What quantity of grain will a cow bear feeding, profitably, and should the kind be varied, at different periods, during the milking season?"

All cows will not bear feeding alike. Some not being deep milkers, would acquire too much flesh and shrink in milk, with the same amount of feed that others would turn to profit in milk. Hence the necessity of feeding *separately*, with close observation in regard to the constitution and capacity of different cows. A man's observation in his own practice, is generally the best test in this matter. I have long since abandoned the practice of heavy feeding before and immediately after calving. Two quarts of corn or barley meal, or four of oat meal, or six quarts of wheat bran, may be safely fed, daily, to each cow. While kept to hay, grain feed should be made into slop, and fermented before feeding. The profit of feeding grain more, or longer than to bring cows to grass healthy and strong, would depend upon the comparative value of the feed with that of the product. Nothing can be fed to a cow that will increase the quantity of her milk from plenty of good grass. The only gain in feeding slop and grain during flush of feed, is by enriching the milk and retaining the cows' appetite for it when grass fails. When first turned to grass, cows are apt to scour, and shrink in milk. Dry wheat bran, or cob meal, will then be better than slop feed. Barley and corn meal are too cathartic to feed in large quantities while the cows are at grass.

"Can all dairymen make it profitable to grow corn, sown broadcast or otherwise, to feed to milch cows?"

Where the soil is strong enough to bear a large burthen without manuring too highly, it will bear a profit, as it is the best feed that can be given to keep up the flow of milk between early and fall feed. But where the soil needs much manure, it is not good policy to manure highly a small piece of ground to obtain a large crop of any kind, to the neglect of other important crops. In other words, the dairyman would receive a greater benefit, in a long run, from distributing one hundred loads of manure on ten acres of meadow land, after harvest, or putting on that amount with the seed when stocking down for meadow, than by putting it on one or two acres to grow corn, to feed cows in summer. A small feeding of corn daily, will take the appetite from grass with little or no benefit. I have found it best to feed plentifully at evening only.

"What is the best mode of heating milk and scalding curd?"

That which will produce the most perfect equilibrium of heat through the whole mass, with the least exposure to excess of heat. A smaller vessel containing the milk or curd with whey, set into a larger vessel which contains water, through which heat is conveyed to the vessel containing the milk or whey, is the safest mode, and is now generally practiced here. The more water there is in the larger vessel, the more uniform heat is conveyed to the milk. If a large tin vat is used, set into a wooden box or vat, the tube attached to one end of the tin vat, and extending down through the bottom of the wood vat, to discharge the whey when the curd is sufficiently scalded, should be large enough to let off the whey at once, or the curd will settle or pack together, and require much hard labor, and will waste, by friction, in separating it and making it fine enough to drain and salt properly. A vat for thirty or more cows, should have a tube at least two inches in diameter, and the tin cylinder, with a tube at one end, to fit snug into the tube carrying off the whey, should be as high as the vat, and four or five inches in diameter; with as many very small holes punched in it as can be and hold together, in order to strain the whey from the curd as fast as it will pass off through the tube.

"Why would it not answer as well to pass steam directly into the milk or whey and curd, as it would save expense in fixtures?"

Because that portion coming in contact with steam, would be exposed to an excess of heat, and would not be affected by rennet like other portions which were not overheated.—Consequently, a strict affinity would not be maintained, which is necessary for a perfect coherence; and more or less would float off with the whey, or make trouble in curing the cheese.

"Is a thermometer a sufficient guide in making cheese?"

A thermometer *that is correct*, is an indispensable guide in measuring the amount of heat to be used; but the time of raising the heat and continuing its effect, must be varied to meet contingent circumstances. [*To be continued.*]

A NEW SPECIES OF COTTON, called the Prolific Pomegranate, surpassing any of the gossypium family has been grown in Mississippi, by Gen. Mitchell, of Warren county. The tops and side branches are all thickly studded with bolls. The stalk does not attain a height usually of more than four or five feet, but every portion of the plant is literally covered with bolls, which are sustained in an upright position by the strength and vigor of the stem and branches. The chief peculiarity of this plant is that the stem and branches have no *joints* as in other kinds; and although the bolls are so numerous, there can be no inconvenience in picking. The staple is beautiful, and far more silky than the best Petit Gulf. From one-third of an acre (measured) he gathered and weighed the past season 2,142 lbs. of superior cotton. One hundred pounds of the seed cotton yielded 32½ lbs. lint, and by an accurate test he found that sixty-five bolls made one pound of lint.

OLD APPLES.—The Worcester Spy gives an account of an apple more than 50 years old. It has been presented to the American Antiquarian Society, by Col. JACQUES, who received it from a young lady, a birth-day gift, in 1792. There is also, in the family of the late Mr. MORRIS DOBBS, at Northampton, N. H., an apple which grew in the year 1776, which is still in a good state of preservation. An interesting child near the hour of its death, craved the then fresh apple, and after attempting to bite it, it was thrown aside. We have recently seen it, and the marks of its teeth are still visible. It is a little remarkable that it blossomed under British government, was growing when our independence was declared, and was gathered as one of the *first fruits* of American independence. It is preserved as an interesting family relic.

Spirit of the Agricultural Press.

On Stone Fences.—The editor of "The Plough, Loom and Anvil" says:—Peter Minor, of Virginia, was a man of rare modesty, and of very rare merit [illegible] in his disposition and his example—in his extent of useful knowledge, and in his persevering manner of imparting, unreservedly, what he knew for the benefit of others. On the 1st of October, 1819, a paper was read from him to the Albemarle Agricultural Society, on the subject of *Stone Fences*. He maintained that the cost of keeping up timber fences, would, in thirty-three years, amount to more than the worth of the land, supposing it to be worth $20 an acre. The view he presented was this:—

An inquiry naturally presents itself on this subject.—What is the relative value of a farm fenced with stone, compared with one fenced with dead timber? Take the following data.

From the best accounts I have been able to obtain from others, and from my own experience, it may be fairly stated that one full month of the annual labor of every farm is consumed in the various operations of cutting, mauling, hauling, and putting up fences. This is one-twelfth of the year, or one month in the year in twelve, that is devoted exclusively to making and repairing dead fences; and as the expense is annual, it is clear that the condition of such fences is no better at the end of any year than at the beginning. Again—I think it may be fairly stated, that when the materials are in place, the expense of erecting a stone fence does not exceed that of erecting one of rails, including the various operations above-mentioned. The value of the timber, (which is not taken into the account above) and the advantages of having the land cleared of stone, will balance the expense of moving the stone three or four hundred yards. So that on a farm abounding with stone, and where the transportation does not exceed this distance, I think a fence of stone will in the first instance be as cheap as a rail one. Suppose, then, two farms of 500 acres of arable land each, in all other respects equal, except that one is fenced with stone and the other with dead timber. Each of them employs twelve laborers at $100 a piece per annum. One is at no expense, while he who fences with timber consumes one month in every year, in making and repairing fences. This is an expense of $100, being the labor of one hand during a complete year. At annual compound interest this would amount in less than 33 years, to $10,000, which is the entire price of the land, supposing the farm to be worth $20 per acre. Thus in 33 years, the one farm would be able to buy the other, from the expense saved by the different mode of fencing. It is true there are not many farms capable of being entirely fenced with stone, but there are scarcely any that do not admit of it in some degree, and the advantages would be derived in a similar ratio to any part which could be thus enclosed. P. Minor.

The Lama and Alpaca.—A communication has been received by the Paris Academy of Sciences, from M. Christian Bonafoux, giving an account of the attempt made by order of the King of Holland, to acclimatize the lamas and alpacas of Chili. Four years ago, thirty-four of these animals, males and females, were imported into Holland, and put into the royal park Scheviningen, near the Hague, where they have propagated freely. The climate does them no injury, and they merely seek the shelter provided for them, when there is snow on the ground.

Antidote for Poisoning.—A writer in the London Literary Gazette, speaking of the many deaths from accidental poisoning, remarks:—"I venture to affirm there is scarce even a cottage in this country that does not contain an invaluable, certain, immediate remedy for such evils; nothing more than a desert spoonful of made mustard, mixed in a tumbler of warm water, and drank immediately. It acts as an instantaneous emetic, is always ready, and may be used with safety in any case where one is required. By making this simple antidote known, you may be the means of saving many a fellow creature from an untimely end."

How to Get Rid of Crows.—A cotemporary says that some cute fellow "down east" has discovered a novel mode of getting rid of the crows. You must take some shelled corn, and run a horse hair through the grain with a needle, and tie a knot in the hair close to the grain and sow them in corn fields, and the crows will pick up this grain with the hair in it, and it will tickle them, and they will kill themselves a scratching. This is giving them the "Old Scratch" with a vengeance.

Thin Sowing.—One fact, says the correspondent of the Gardeners' Chronicle, is worth at least one thousand [illegible]. I therefore send you the comparative results of two experiments with five pecks of seed wheat, and eight pecks of seed wheat. This is the third year of my experiment, and as usual the smaller quantity yields the best return, besides saving the additional seed. In one case, [illegible] in regard to the rent of the land, the wheat was cut, [illegible]ed, threshed, and measured in the presence of myself and the laborers, some of whom had made bets as to the results. The ground was accurately measured. I had several pieces with only one bushel per acre, which certainly were in appearance more productive than the five pecks.

Gates.—Every field on the farm should be entered by a good self-shutting and self-fastening gate. A proper inclination in hanging will secure the former requisite, and a good latch, properly constructed, the latter. Each field should be numbered, and the number painted on the gate-post. Let the farmer who has bars instead of gates make a trial of their comparative convenience, by taking them out and replacing them without stopping, as often as he does in one year on his farm, say about six hundred times, and he cannot fail to be satisfied which is the cheapest for use.—*Thomas.*

Deep and Shallow Planting.—C. L. Shepherd, of Illinois, planted his corn-field shallow, or about an inch deep, except eight rows through the middle, which were planted two or three inches deep. The shallow corn came up first, and kept the lead through the whole season. The difference was discernible as far as the corn could be seen.

Farmers' Clubs.—We understand that an "Agricultural and Mechanical Club" has been formed in the town of Aurelius, the object of which is the free discussion of all subjects pertaining to the interests of mechanics and agriculturists. The officers are John Gaylord, President; Wm. Woods, Vice President; C. Ferris, Secretary; Joseph Swift, Treasurer. The association is considered an auxiliary to the Cayuga Co. Agricultural Society.—*Cultivator.*

Premium Crops.—The Ontario (N. Y.) County Agricultural Society, awarded premiums on crops grown in 1848, as follows:—*Wheat*, first premium to John Rankin, 45½ bushels per acre; second premium to Jared Wilson, 45 bushels per acre; third premium, 31½ bushels per acre. *Indian Corn*, first premium to Uri Beach, 103 bushels per acre; second premium to John Rankin, 92 bushels per acre; third premium to E. M. Bradley, 83 bushels per acre. *Barley*, first premium, to E. M. Bradley, 69 bushels per acre; second premium to S. B. Dudley, 43 bushels per acre; third premium to M. Adams, 45 bushels per acre.—*Ib.*

A barometer kept in the same place undergoes variations of altitude, some of which are regular and other irregular.—The former, which depend upon diurnal tides in the atmosphere analogous to tides in the sea, occur about the same time in the day; the greatest depression being commonly about four in the morning and evening, and the greatest elevation about ten in the morning and night. In summer, however, they are an hour or two earlier in the morning and as much later at night.

Large Cow—The Detroit (Mich.) Advertiser, says:—We noticed a cow in front of our office yesterday afternoon, belonging to Mr. Bigley of this city, weighing more than sixteen hundred pounds. This cow was imported by Henry Clay some years since, and is of the fine Durham stock.—She was driven into this city from Calhoun county, in this State.

To Preserve Milk.—If milk be introduced into bottles, then well corked and put into a pan of cold water and gradually raised to the boiling point, and after being allowed to cool, be taken out and put away in a cool place, the milk may be kept perfectly sweet for half a year. Or it may be evaporated to dryness, by a gentle heat, and under constant stirring. A dry mass will thus be obtained which when dissolved in hot water, is said to possess all the qualities of the best milk.

Grain raising in Cuba.—The Philadelphia North American has Havana papers to the 22d of March, in which the utility and necessity of planters devoting their attention to cereal crops, in preference to sugar, is said to be urged and argued with much force and earnestness.

Tools and Implements.—Let every description of tools and implements be examined, have those requiring it repaired, and those not in use carefully put away under cover.—Such attention saves both time and money.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

HINTS FOR THE MONTH.

Tree Department.—The earth around newly planted trees, should be kept clean and mellow all summer. *Mulching*, that is covering the earth around the tree as far as the roots extend or farther, with 3 or 4 inches deep of litter or manure, is an excellent practice. It keeps down weeds, and prevents moisture from evaporating, rendering the application of water quite unnecessary. Watering should only be resorted to in cases of extreme necessity, and when once commenced should not be discontinued until rain comes. The surface should never be allowed to bake after watering, as then the water does more harm than good. It is a good time now to rub off useless or misplaced shoots while tender; the use of the knife will not be required on them afterward, and the tree will be all the better for their timely removal, Grafted trees should be examined, and all suckers, or shoots from the stock be removed, as they will interfere with the growth of the graft. So with buds of last season; they must be looked to, and all shoots from the stock kept down.

The thinning of fruit should be attended to.—Very few people think of thinning the fruit on their trees, and the consequence is, many trees are injured, broken down or enfeebled, so as not to recover for years, if ever. On dwarf trees thinning is particularly necessary—some varieties are so prolific as to completely overbear themselves. The better way, in such cases, is to remove the fruit buds; but this not being done, the next best way is to remove the young fruit. This is a hard matter where fruit has been so anxiously looked for, but it is necessary and should be done promptly by all who value the health and longevity of their trees, or who wish, even, to raise large, finely colored and fine flavored fruit.

Birds are very troublesome to the cherry trees in some places. Some people think shooting them the most effectual remedy, but we dislike it very much—better frighten them if you can. A very successful plan went the rounds of the papers some time ago, viz: to hang bits of broken looking glass in the trees, so that they might dangle in the air. The curculio will attack the stone fruits, as usual: the thousand remedies suggested are as familiar to the readers of the Farmer as to us.

Strawberry Beds will require attention. Where the runners are not wanted for planting, they should be cut off and thrown away. The ground around the plants must be kept clean, and when the fruit is swelling, if dry weather prevails, they should be watered liberally. The strawberry very soon suffers from drought, unless in deeply trenched, moist soil. Where the plants are grown in rows, as they always ought to be, some straw or grass might be laid along each side of the row to prevent the moisture of the soil from evaporating.

Raspberry Canes should be kept well tied up.—*Gooseberries* and *Currants* must be looked to, and all superfluous rank shoots from the stem or head be removed, as they will injure the crop of fruit.

All fruit trees suffering from a poor soil, may be greatly benefitted by the application of liquid manure a few times. A few inches of the surface soil may be removed, and when the liquid has been applied, replaced. Dwarf fruit trees, with a heavy crop, would be benefitted by such an application, both tree and fruit.

Flower Department.—Dahlias may be planted out any time, now to the middle of the month. Dry roots that have been started, or young plants in pots, will bloom finely from the latter end of August till frost comes, if planted now. We prefer strong plants in pots to old roots—they are apt to give better flowers. The Dahlia should have a fresh, loamy soil, not too rich; too much manure makes rank plants, imperfect flowers, and coarse, unsound roots, that keep badly over winter. If dry roots are planted the crown, where the eyes start, should be two inches below the surface, and a neat stake four or five inches high should be set with the root, that the plant, as it grows, may be tied to it. When young pot plants are used they should be carefully turned out of the pots, without breaking the ball of earth around them, and placed in a hole prepared for them. A good watering should be given, before the earth is all filled in around, and a stake set. The after culture will consist of keeping clean around the plants, cutting off straggling branches, and keeping the plant neatly tied to the stake, for the winds soon break them.

Annual flower seeds may be sown yet for autumn flowering; and Verbenas, Petunias, monthly Roses, Salvias, Heliotropes, Scarlet Geraniums, and other plants for masses in lawns or in flower gardens, may be turned out any time. Annuals raised in the border may be transplanted in a moist day. The flower stems of all plants should be kept neatly tied up, and, when done flowering, cut down and cleared away. Walks must be kept clean of weeds, and lawns frequently mowed, rolled and kept in good order. The way to do all these matters at a trifling cost, is to do them in season.

THE SEASON, CROPS, &c.

THE transplanting season was greatly prolonged, in this section, by the coolness of the spring. Until the 15th or 16th of May we had scarcely one day of usual spring warmth—so that we may conclude that nearly all the planting intended to be done has been completed. We think too, that planters will be more successful than usual on account of the cool, moist weather experienced during the season of planting.

We have at the present moment (May 18,) a fine prospect for a fruit crop. Cherries, Peaches and Plums, are loaded with blossoms. Pears and Apples look well and will be open in a day or two. Apricots have set their fruit finely, and will be ready for the curculio in a few days; but he must be watched and kept off if possible.

The small fruits look equally promising. Mr. THOMAS stated in the April number of the Cultivator that, "through a large portion of Western New York, most of the peach crop has been destroyed by the severe cold of the late winter." We have not found this to be the case by any means, as far as we have observed; on the contrary, all looks as well as usual.

Early spring crops will be later than usual. Green peas were in market on the 15th. Asparagus, Rhubarb, Lettuce and Radishes are becoming plenty, but we have seen none of first rate quality.

The flowering season of ornamental trees and plants is later than usual. Few trees are yet in bloom; except the double varieties of fruit trees, such as the double flowering *Peach, Almond, Cherry, Sloe*, &c. These are all beautiful now. The Pyrus Ja-

ponica, and crimson and yellow flowering Currants, are also in bloom, and in a few days we shall have the Lilacs, Viburnums, and a multitude of other pretty shrubs. The Cercis Canadensis or "Red Bud" is a beautiful tree, now covered with blossoms of a rich, beautiful purple—and no sign of a leaf yet. When the flowers disappear, then comes the broad, deep, green, luxuriant foliage.

The borders are gay with *Pansies*, red and white *Daisies*, *Primulas*, and some of the dwarf early flowering *Phloxes*—such as *subululata*, *elegans*, *divaricata*, &c. *Hyacinths* are out of bloom. They have had a most disasterous season, cold and frosty, so that they have done little good. *Tulips* are just opening.

THE DEODAR OR INDIAN CEDAR.

This elegant tree has excited more interest, has had more admirers and more planters, than any other introduced within a century. In England, Scotland, and Ireland, and all over the continent, avenues and plantations of it have been formed with astonishing rapidity. Indeed it surprises us that it has been multiplied to such an extent within so short a period. But when the skill, the enthusiasm and wealth of British cultivators and planters are united, they can accomplish results truly wonderful. In this country it is now attracting the attention of all people of taste, and is being as rapidly disseminated as could be expected from its rarity and high price previous to this time. And now that its hardiness is proved satisfactorily, and the price become quite moderate, we have not a doubt but it will find a place among all collections of ornamental trees.

The Deodar or Indian Cedar.

It is described as a tree of the loftiest class, often attaining one hundred and fifty feet in height, and the trunk thirty feet in circumferance. The branches are spreading and pendulous at the ends, giving it a most graceful outline. The leaves are dense and of a bluish dark green, covered with a glaucous bloom. The wood is compact and almost incorruptible. It has been found as fresh as ever, after being upwards of two hundred years in a building in India. There is no doubt but it will yet become a tree of immense value to all civilized nations, in an economical as well as an ornamental point of view. In England, at Liverpool and around London, and in France, we saw fine specimens, some ten feet high,—and we have never seen a tree possessing greater beauty. Last June we turned out a small plant eighteen inches high into our own grounds, and although it had but a slender hold of the earth, and our winter unusually severe, it passed the winter perfectly safe, and is now starting finely; and so has the *Auracaria*—and we hope, next season, we shall be able to say as much for the *Japan Cedar*, (Cryptomeria,) and many other rare evergreen trees.

OUTLINES OF FRUITS.

Mr. Editor:—We have a perfect right to review a reviewer; and to the motion and prayer of your correspondent H. Y., in the March number, on the "*Outlines of Fruit*," I beg to record my vote in the NEGATIVE.

Your *Horticultural Department*, of which the outlines of fruit have been a prominent part, is considered by *fruit men* to be of the first class, and makes the GENESEE FARMER second to no paper in the country, not wholly a Horticultural work. You may rest assured that not every well-informed man in the country knows the value of a good apple, pear or peach; and until their value is known and appreciated, you should not attach blame because he takes no interest in, or lacks patience to second an effort on the part of others to improve the fruit of the country.

H. Y. says "—*those unmeaning uniformities. There is no individual one of them but may serve for twenty varieties.*" I have heard ideas from the *same piece*, and place them here as they should stand together. I once had a hand assisting in setting trees, some fifteen or twenty sorts, and each tree was labelled, who remarked, "this is all nonsense, so many kinds of apples; there is but two kinds, one sweet and the other sour." I have heard persons while eating an apple say "what a fine apple this is, how *mealy* and good." Once a person bought two lots of trees, from different venders, and remarked to one of them, "I like the other man's trees much the best, because they had so *few roots*. I could get them in a much *smaller hole*, and set them out *quicker* than yours."

I trust you will consult your own pecuniary interest, as well as the desire of your readers, and not destroy that department of your work by neglecting to publish outlines of fruit. E. C. F. *Seneca Lake Highland Nurseries, Catharine, N. Y.*, 1849.

OUR correspondent may be assured we shall not discontinue the outlines. Our engraver being sick and out of town has this month and last deprived us of several cuts for this department.—ED.

SPLENDID TESTIMONIAL TO MARSHALL P. WILDER.—We notice by the proceedings of the Mass. Hort. Society of May 12th, that a *Massive Silver Pitcher*, highly wrought, and chased with fruits, flowers foliage, &c., has been presented to the Hon. M. P. WILDER, who has presided over that Society for eight years. The pitcher bears the following inscription:—

HON. MARSHALL P. WILDER,
President of the Massachusetts Horticultural Society, from
A. D. 1841 to 1849.
This Piece of Plate is presented by the Society, as a testimonial of respect and appreciation of his valuable services during the above period.
January, 1849.

No tribute of esteem was ever more richly merited and we are sure the Horticulturists of the country generally who appreciate the labors of such men, will concur in this opinion.

READ TO IMPROVE.—Any young farmer who will make it a point to read a little every day, from some approved agricultural book or paper, will have profitable food for reflection as he treads the furrows—and will find his mind rapidly advancing in useful knowledge connected with his profession.

A PLEA FOR THE BIRDS.

BY L. WETHERELL.

AMONG the general laws, made by the last Legislature of Massachusetts, is one "for the better preservation of useful birds."

It is deeply to be regretted, that the Legislature of the State that has done so much for the establishing of humane institutions, should find it necessary, at this period of her history, to make a law against the *inhuman* practice of destroying "*useful birds.*" Would that there might be a similar law enacted by the Legislatures of all the States of this great Republic. This is a comprehensive law; for all birds are "useful birds"—not excepting even the *Crow*, the least beloved, and the most universally persecuted of land birds. It is true that the Crow, in his eager search for the grub and the cut-worm, has learned to pull up, or to dig up corn, in the spring; and in the autumn, from his fondness of it, and as a small remuneration for his labor of destroying myriads of worms, moles, mice, grubs and beetles, during the summer, he picks a little of the cereal which has matured by the joint labor of the crow and other birds, with that of the farmer. How much better policy to plant a little more, or to employ some of the idle boys to guard the cornfields a few days in the spring, than that these birds should be destroyed by these cruel boys, for mere amusement, or for any other purpose.

What considerate father or guardian can equip his boy with a musket to go abroad into the fields, orchards, hedges and woods to shoot birds! They go out some of them, it is true, professedly for the purpose of shooting what are called, "noxious birds." But they return and exhibit as the fruits of their success not unfrequently a collection of robins, orioles, warblers, &c., &c., which, as it would seem, none but the most heartless barbarian could be depraved and wanton enough to destroy, and yet this is styled amusement. It can be amusement it would seem to none but the grossly ignorant, or to such as are totally destitute of humanity.

The crow, the black bird tribe, the thrasher, the towhe bunting, named *pee-wink*, ground robin, tshewink, and the blue-jay, are charged with making depredations upon the corn fields. It is true that some of them must plead guilty to the charge. After the crow, the starling, or red-winged black bird, as he is better known among the farmers, has the reputation of being a great corn thief. He learned the art of pulling up corn in the same way that the crow did, [illegible], in his diligent search of grubs. Wilson, the celebrated Ornithologist, makes the computation that each red winged black bird devours, on an average, fifty grubs a day: so that a single pair, in four months, will consume more than twelve thousand of these destructive worms. Then think of the millions of these birds thus employed over the New England, Middle and Western States during the spring and summer, and that they not only destroy an incalculable number of these grubs, but what is still worthy of no small consideration, prevent their increase.

The farmer, the gardener, and the fruit culturist have a thousand times more to fear from the 600,000 species of insects, than from two or three of the 6,000 species of birds. Great numbers of these species feed almost exclusively upon insects. The cedar bird, named also the cherry bird, *so persecuted* by the gardener, because the poor harmless wanderer picks a few cherries from the trees which his diligence and labor have ridden in part from the deadly insects which would otherwise soon destroy both fruit and trees, is, notwithstanding, the gardener's co-laborer and friend.

Are fruit growers generally aware that this bird is the most efficient agent they have in destroying the canker-worm which attacks the apple tree and the elm: and also the slug, which infests fruit and ornamental trees? If they are, why then wage a war of extermination against them? A pair of cherry birds will destroy more insects during the season than two men employed for this purpose—whose efforts, though less successful, would cost the employer two dollars a day—while the birds for a remuneration pick a few cherries—*few*, indeed, compared with the quantity that would be consumed by these two men, whose employment might be the same for the season as that of the birds whose labor is gratuitous.

If then, the crows, the starlings, and the cherry birds, the first tribe, for whose destruction bounties or rewards have not been unfrequently offered by both States and private citizens, be such faithful and successful destroyers of vermin, it would seem to be a far more reasonable, and consequently a much easier and better policy, that, a severe penalty should be imposed on all persons who shall be found guilty of destroying the crows; and so of the other birds here named as well as of the many which are generally regarded as harmless, though far less the coadjutors of the tillers of the soil, than these persecuted tribes. Are there not, then, good and substantial reasons why there should be legislation for the preservation of useful birds, so long as man finds pleasure and amusement in their destruction. It would be about as wise a policy for manufacturers and merchants to pray that it might not rain again because some one or more of their number had suffered a little, or much by the flood produced by the storm, as it would be, or is, for the farmer to seek to destroy the birds, because they occasionally pick a cherry, or destroy a little corn—for it matter would little to man whether he had rain or sunshine, were it not for the birds which keep the insects in check, which would otherwise so greatly multiply as to devour every green thing upon the face of the whole earth.

Before dismissing the subject, there is one other consideration that should be mentioned as a plea for the preservation of the birds. And that is, that they do so much by their presence, and by their melodious and cheerful songs to animate the otherwise dull and lifeless scenery of earth. The voice of spring seems to be heralded forth in the notes of these sweet songters who chase away old Boreas in his, at times, rather reluctant retreat toward his home, the arctic region. What farmer's toil is not rendered more cheerful and light by seeing and hearing the brilliantly plumaged singing birds. The Thresher, sometimes called the Planting bird, sits perched upon the top of some high tree near by, pouring out as it would seem his very soul in a full, flowing, sweet and eloquent strain, as much superior to the notes of the Canary as is his position to that of being made a prisoner with the latter. So of the warblers, the oriole, the robin, and the wood thrush, whose sweet and silvery notes fill the air.

Let, then, the injunction, of "Live and let live," include birds which constitute so charming a link in that wonderful chain of animated being. Then shall this poor plea for the "birds" be fully realized.

SILK.—The quantity of silk used in England alone, amounts each year to more than four millions of pounds in weight!—for the production of which myriads upon myriads of insects are required. Fourteen thousand millions of animated creatures annually live and die to supply this corner of the world with an article of luxury. If astonishment be excited at this fact, let us extend our view to China and survey the dense population of that widely spread region, whose inhabitants, from the Emperor on his throne to the peasant in his lonely hut, are indebted for their clothing to the labors of the Silk Worm. It is truly remarked by Scott's excellent paper, "that imagination fatigued with the flight, is lost and bewildered in contemplating the countless numbers which every successive year spin their slender threads for the service of man."

THE JAPAN CEDAR

The new Japan Cedar, from a tree six feet high.

While in England we were delighted with this tree, wherever we saw it—in the open ground or in the house. We think it unquestionably the most graceful and elegant evergreen tree of the immense number now cultivated in Europe. It has proved perfectly hardy in England, and its growth is exceedingly rapid, equaling the Norway Spruce. We saw an elegant specimen in the Chiswick garden, nine feet high, that had made four feet growth last season.

The introduction of this tree is quite recent—the first seeds having been received from Mr. Fortune, in 1844. He collected them in Shangai, north of China, where it attains the height of one hundred feet. We trust it may prove hardy here, and have but little doubt it will. The accompanying cut, and following remarks, we take from the April number of the Horticulturist:

"The English periodicals abound with notices of this tree, which, along with the *Deodara*, or Indian Cedar, is decidedly the rage in that evergreen loving country.

"The Japan Cedar, *Cryptomeria japonica*, which is nearly allied to the Cypress, is one of the many treasures brought home by Mr. Fortune, the Chinese traveller, to the London Horticultural Society. As it grows in the north of China, about Shangai, where the thermometer sinks nearly to zero, and forms large forests on the mountains of Japan, at the height of more than a thousand feet, it follows that it is a hardy evergreen in all temperate climates.

"The English accounts of this tree state, that for beauty and rapidity of growth, it has no rivals among hardy evergreen trees. In the garden of the London Horticultural Society, young trees have grown *four feet* in a single season. It is described by some of its admirers as the "Queen of Evergreen Trees." Its peculiar beauty is in the *graceful droop* of its branches. It is a great favorite in China for *avenues*, growing up 100 feet high, with a remarkably straight stem, and dense and handsome foliage. The wood is said to be very hard, and elastic, and "withstands the most terrific winds or monsoons which sometimes devastate that country. It is employed in China for the high poles, which are everywhere placed at the dwellings of mandarins, to denote their rank, where it lasts for ages."

"The Japan Cedar is said to be as hardy in England as the Deodar Cedar. As the latter tree, even in young specimens, has, in this country, withstood without injury, a winter temperature of 6° below the zero of Fahrenheit, we may safely say that the Japan Cedar, or Cryptomeria, will endure the winters of the middle states, and possibly those of the eastern states, in proper situations, i. e. those sheltered from sudden thawings in winter.

"The soil considered most favorable to the growth of this tree, is a sandy loam, mixed with some peat or leaf mould. Those inclined to plant it where there is doubt of its standing the winter, will take care that the subsoil is *well drained* when preparing to plant it.

"This tree is, of course, yet very scarce in this country. Plants about a foot high may, however, be obtained of Buist, Parsons, and other leading nurserymen. Ellwanger & Barry have also, we notice, imported a few for sale, and for trial, in the interior of this State. Every amateur will be glad to make trial of a tree that promises to add so much to the beauty of our lawns and pleasure grounds; and we hope, in another season, the Japan Cedar, if found quite hardy, will be imported, so as to be afforded at a moderate price in our nurseries."

Honey Locust for Hedges.—(To A. Eaton, of Benton Centre, N. Y.) Seeds of the Honey Locust may be obtained at any of the seed stores in this city, if applied for in the fall. They may be sown in the spring, as soon as the ground is dry and warm enough to receive seeds, but should be soaked a few hours in warm water. In one year the plants will be fit for hedge rows. It grows very rapidly, and makes a strong and beautiful hedge. We know of no other deciduous plant that will make a thorough hedge fence in so short a time. The objections to it are that it grows too large, but by proper care in cutting, it will endure a very long time.

Chemistry is the key which unlocks the great laboratory of nature, and shows us how she performs her complicated processes, and produces all her wonderful phenomena.

Agricultural Societies.

NEW YORK STATE AGRICULTURAL SOCIETY.

JUDGES ON THE PREMIUM LIST.

At a meeting of the Executive Committee of this Society, held in Syracuse on the 10th of May, the following Judges were appointed for the Annual Show,—to be held in that city on the 11th, 12th and 13th days of September next:—

On Cattle.—*Short Horns*—Charles Calvert, Riversdale, Md.; R. N. Watts, Grantham, Canada East; Henry Parsons, Guelph, C. W.

Devons.—Richard Gapper, Thornhill, C. W.; John W. Proctor, Danvers, Mass.; Henry Capron, Riversdale, Md.

Hereford and Ayrshires.—M. J. Hayes, Montreal, C. E.; Ira S. Hitchcock, Oneida Castle; Edward S. Massey, Watertown.

Natives and Cross.—James Rees, Utica; Lewis Juliand, Greene; Chauncey W. Beckwith, Cedarville.

Working Oxen.—Jona. Blagden, Washington, D. C.; Israel Bois, Homer; Gideon Ramsdall, Perrinton, Mon. Co.

Three Year Old Steers.—Isaac Putnam, Danvers, Mass., J. C. Collins, West Turin; Calvin Cole, Oxford.

Two and One Year Old.—Ledyard Linklean, Cazenovia; S. W. Holmes, Chautauque; Wm. Church, Coventry.

Fat Cattle.—Aaron Clement, Philadelphia; Thomas F. Devoe, Jefferson Market, N. Y.; Stephen H. Biddlecome, Brighton, Mass.

Fat Sheep.—Clement Leach Eaton; Job Alberger, Buffalo; Robert Fowler, Batavia.

Milch Cows.—John W. Lincoln, Worcester, Mass.; Arden Woodruff, Strykerville; Alonzo L. Fish, Cedarville.

Horses—*All Work.*—Hon. Adam Ferguson, Waterdown, C. W.; Ela Merriam, Leyden; Henry Ehle, Chittenango.

Draught.—Jesse C. Dann, Sackets Harbor; Stewart Austin, Coxsackie; N. Davis, Toronto, C. W.

Blood Horses.—Francis J. Hayes, Cote St. Luke, near Montreal, C. E.; John D. Van Matter, Freehold, New Jersey; John C. Stoothoff, Jamaica, Queens co.

Three years old.—Theodore S. Faxton, Utica; John B. Wheeler, Burlington, Vt.; Henry C. Miller, Hudson.

Two and one year old.—Elias Cost, Phelps; Thomas Willis, Erie, Penn.; Abraham Per Lee, Norwich.

Matched Horses.—James D. Wasson, Albany; Harvey W. Vail, Islip; Henry Delamater, Rhinebeck.

Geldings.—T. J. Marvin, Saratoga Springs; Edward Long, Cambridge; Roswell Reed, Coxsackie.

Sheep.—*Long Wooled*—P. Reybold, Jr., Delaware City, Del.; George Miller, Markham, C. W.; Lewis G. Morris, Morrissiana.

Middle Wooled.—Isaac Dillon, Zanesville, Ohio; S. Wait, Montgomery; Ed. Halleck, Milton.

Merino.—J. G. Strein, Washington, Penn.; J. F. Gilkey, Kalamazoo, Mich.; Samuel Whitman, Hartford, Ct.; E. C. Russell, Cortland, Ohio; R. C. Otis, Southport, Wisconsin.

Saxons.—John A. Taintor, Hartford, Conn.; Roswell Carter, Chicago, Ill.; Robert R. Reed, Washington, Penn.; M. Hilldebrand, Massilon, Ohio; Robert Colt, Pittsfield, Massachusetts.

Swine.—Myron Adams, Bloomfield; John H. Robinson, Brighton, Monroe Co.; James M. Strever, Taghkanic.

Poultry.—J. D. G. Nelson, Fort Wayne, Ind.; Lewis Eaton, Buffalo; T. C. Abrams, West Troy.

Plows.—A. Van Bergen, Coxsackie; John Brawley, Erie, Penn.; John Stanton Gould, Hudson.

Plowing.—Robert Campbell, Pittsfield, Mass.; Hugh Brodel, Cote St. Peire, C. E.; Wm. Miller, Pickering, C. W.; Horace Hawks, Georgetown; John Mallory, Benton.

Farm Implements—*No.* 1.—Amos Briggs, Schagticoke; Talmadge Delafield, Oakland; Wm. Brownell, Herkimer.

No. 2.—A. Hyde Cole, Albion; Alfred Fitch, Riga; G. W. Buck, Chemung.

No. 3.—J. A. Wight, Chicago, Ill.; Geo. Buckland, Toronto, C. W.; Charless Lee, Penn Yan.

Butter.—R. Coleman, Astor House, N. Y.; Joseph Cary, Albany; E. R. Evans, Marcy.

Cheese.—Harrison Blodgett, Denmark; Thomas Burch, Little Falls; S. D. Moody, Canton.

Sugar.—Joel Woodworth, Watertown; Horace Davenport, Denmark; Wm. E. White, Walton.

Honey and Bee Hives.—Wm. Howard, Buffalo; Ezekiel Van Dezer Western; Roswell Hinman, Syracuse.

Silk and Silk Goods.—Geo Brayton, Western; John S. Walsh, Albany; H. B. Whipple, Adams.

Domestic Manufactures—*No.* 1.—J. W. Brewster, Erie, Penn.; Geo. J. J. Barber, Homer; Curtis Mozes, Marcellus.

No. 2.—E. S. Salisbury, Belleville; J. J. Speed, Caroline, Horace Moss, New Berlin.

No. 3.—E. Risley, Fredonia; Amos Jones, Hopewell; John J. Brinkerhoff, Owasco.

Manufactures.—O. Hungerford, Watertown; Ambrose Wager, Rhinebeck; Wm. Kidd, Rochester.

Shell and Wax Work.—Mrs. E. T. Martin, Willow Brook; Mrs. Eli Burchard, Vernon; Mrs. Le Roy Mowry, Greenwich; Mrs. Harvey Baldwin, Syracuse; Mrs. E. W. Leavenworth, do.; L. W. Hall, Sec'y, do.

Flowers.—A. Thompson, M. D. Aurora; E. S. Brayton, Utica; J. M. Lovett, Bethlehem.

Fruits—*Apples and Pears.*—F. R. Elliot, Cleveland, O.; J. C. Holmes, Detroit, Mich.; Chas. Downing, Newburgh.

Peaches, Apricots and Nectarines.—James Dougal, Amherstburgh, C. W.; Henry H. Coit, Euclid, Ohio; J. W. Knevels, Fishkill.

Quinces, Grapes, Melons, &c.—Thos. Allen, St. Louis, Mo.; Lawrence Young, Louisville, Ky.; H. Snyder, Kinderhook.

Foreign Fruit.—David Thomas, Aurora; B. V. French, Braintree, Mass.; P. Barry, Rochester.

Vegetables.—James Woodruff, Detroit, Mich.; Robert Harper, Albany; H. C. Tuthill, Kellogsville.

Animal Paintings, Paintings and Daguerreotypes.—T. R. Walker, Utica; E. P. Prentice, Albany; A. Stevens, New York.

Stoves.—C. C. Dennis, Auburn; W. Buell, Rochester, M. D. Burnett, Syracuse.

Miscellaneous Articles.—Joseph Dobbin, Baltimore, Md.; T. D. Burrell, Geneva; Wm. Evans, Montreal, C. E.

Discretionary—*No.* 1.—L. B. Langworthy, Greece; M. L. Dunlap, Dunlap's Prairie, Ill.; A. G. Carl, Jericho.

No. 2.—Henry Fitzhugh, Oswego; J. W. Wheeler, Hyde Park; Robert King, West Farms.

No. 3.—Tracy Pardee, Oakfield; A. Z. McCarty, Pulaski; W. Chester, Erie, Penn.

No. 4.—Musical Instruments.—Geo. Dutton, Utica; Chas. Wilson, Rochester, Geo. Denton, Buffalo.

Grain, Flour and Wool.—Jacob G. Markell, Waterloo; Moses Eames, Rutland; Augustus Sanford, Norwich.

Foreign Stock.—*Cattle.*—Charles D. Calvert, Riversdale, Md.; Richard Gapper, Thornhill, C. W.; M. J. Hayes, Montreal, C. E.

Horses.—Hon. Adam Ferguson, Waterdown, C. W.; Jesse C. Dann, Sackett's Harbor; F. J. Hayes, Montreal, C. E.

Sheep.—Sanford Howard, Albany; H. Blanchard, Kinderhook; S. H. Church, Vernon Center.

Premiums Open to All.—*Cattle.*—Charles B. Calvert, Riversdale, Md.; Richard Gapper, Thornhill, C. W.; M. J. Hayes, Montreal, C. E.

Horses.—Hon. Adam Ferguson, Waterdown, C. W.; J. C. Dann, Sackett's Harbor; F. J. Hayes, Montreal, C. E.

Sheep.—J. P. Beekman, Kinderhook; Sanford Howard, Albany; S. H. Church, Vernon Center.

Committee Reception of Guests of Society.—James S. Wadsworth, Geneseo; Col. Edward Kirby, Brownsville; Lewis F. Allen, Black Rock.

Transportation of Articles over Railroad.—Albany, E. Foster, jr., Rail-road office; Troy and Whitehall, L. R. Sargent, Troy; Schenectday, G. W. Young, Superintendent U. & S. Rail-road; Utica, T. M. Francis, Rail-road office; Syracuse, J. B. Burnet, P. N. Rust; Auburn, J. B. Dill; Geneva, John Fargo; Rochester, Joseph Alleyn; Batavia, M. Beach, Attica and Buffalo, Wm. Wallace, Superintendent Rail-road Oswego, Wm. D. Stevens.

B. P. Johnson, *Secretary.*

Fairs of County Ag. Societies.—The Fair of the Monroe Co. Ag. Society is to be held in this city, on the 26th and 27th of September.—Saratoga Co., the 11th and 12th Sept. Hon. Samuel Cheever to deliver the annual address.—Herkimer Co., the 6th and 7th of Sept.—Rensselaer Co., at Troy, on the 25th, 26th and 27th of Sept.—Essex Co., at Keeseville, 18th and 19th of Sept.—Onondaga Co., at Syracuse, 3d, 4th and 5th of October—Litchfield Co., (Ct.,) at Litchfield, 26th Sept.—Windsor Co., (Vt.,) at Windsor, on the 4th and 5th of October.

Kinderhook Wool Depot.—The attention of wool growers and manufacturers is directed to the advertisement of H. Blanchard & Co.. The business has been conducted by Mr. B. for several years, and constantly increased in public favor.

Short Horn Cattle.—It will be observed, by reference to an advertisement in this number, that Mr. Vail, of Troy, will offer a portion of his excellent herd of Short Horns, at public auction, on the 13th of the present month. No better stock of this breed can be found in the country.

Horse Powers, Thrashers, &c.—We would refer those of our readers wishing machines of this kind, to the several Advertisements of Palmyra, Albany and Rochester manufacturers.

Agents entitled to the Premiums mentioned in our May number, are requested to select the books or implements desired, and advise us how and where to forward.

Rare Evergreen Trees.

WE have fine plants, from one to two feet high, of the following in pots suitable for transmission to any part of the country at any moment. The plants are in a vigorous growing state, and may be turned out into the open ground, without the least check to their growth.

Cedar of Lebanon. [Cedrus Libani.]
Indian Cedar. [Cedrus Deodara.]
Japan Cedar. [Cryptomeria japonica.]
Chili Pine. [Auracaria imbricata.]
Rhotan or Lofty Pine. [Pinus excelsa.]
Cembran Pine. [Pinus cembra.]
*Long Leaved Indian Pine. [Pinus longifolia.]
Dwarf or Mountain Pine. [Pinus pumilio.]
Remarkable Pine. [Pinus insignis.]
Himalayan Spruce Fir. [Abies morinda.]
Douglass' Spruce Fir. [Abies Douglassi.]
Cephalonian Silver Fir. [Picea Cephalonica]
Webb's Silver Fir. [Picea Webbiana.] Pinsapo Silver Fir, or Mount Atlas Cedar. [Picea pinsapo.] *Chinese Juniper. [Juniperus siversis.] *Evergreen Cypress. [Cupressus sempervirens.] *Evergreen Weeping Cypress, (Cypressus pendula.)

(* These we presume will not endure our winters in the open air, without protection.)

☞ Plants of the above will be forwarded to any part of the country. Priced lists furnished.

ELLWANGER & BARRY.

Rochester, June 1, 1849.

Palmer's Wheat Drill.

THE subscribers have made an arrangement with Mr. Palmer to manufacture for the coming season five hundred of his new Wheat Drill, to be be sold in Western New-York. They are now receiving orders for them, and relying upon heavy sales, have determined to sell them at a small profit—at least twenty-five dollars less than any other drill capable of performing as much. The Drills are constructed under the immediate direction of the inventor, and *Warranted.*

An agricultural implement as important as this should be afforded at a rate that places it within the reach of every farmer. To accomplish this Mr. Palmer has spared no pains to become acquainted with all the Drills in use by consulting both English and American Agricultural works, and by procuring copies of inventor's claims, issued or pending in the Patent Office. He has used different kinds of drills for the past years, and has learned by practice the wants of the farmer. After repeated efforts and expensive experiments he has produced a simple, substantial Drill, which by way of eminence he calls a "WHEAT DRILL." It is vastly superior to the costly and complicated machines heretofore in use. This is the third Drill he has invented, and he has now brought it to that state of perfection beyond which it cannot be carried. It is the Ne Plus Ultra of Drills, combining all the advantages of every other, and free from their imperfections.

We challenge the world to produce a Drill equal to this in durability, operation or price!! ☞ All orders should be sent in or delivered to one of our agents as early as July to secure attention.

J. A. HOLMES & CO.

Brockport, March 15, 1849.

An Elegant Country Residence and Farm for Sale.

CONTAINING one hundred and seventy-five acres of first rate land, situated on the west shore of Cayuga Lake, two miles south of Cayuga bridge, in the town of Seneca Falls, Seneca county. There is a large brick mansion with a two story kitchen adjoining, with wash and wood house attached; out-buildings, barn, shed and carriage house; a lawn and garden in front, enclosed with a handsome fence; apple and peach orchards, with a number of cherry, plum and pear trees. The stock, crops in ground, and farming utensils, &c., will be sold with the farm. Possession given immediately. For further information, price and terms of payment, application can be made to the subscriber, on the premises, or by letter addressed to him, Oakwood Farm, near Cayuga Bridge; or to D. D. T. MOORE, at the office of the Genesee Farmer, Rochester.

[5tf] JOHN OGDEN DAY.

Kinderhook Wool Depot.

THE success of this enterprize, and the steady increase of business during the past four years has induced the subscriber to associate with him Mr Thomas M Burt, as a partner in the business. The integrity and correct business habits of this gentleman are well known to many prominent men throughout the State; and for more particular information, reference may be made to B. H. King, Esq., or to John T. Norton, Esq., of Albany.

With increased facilities for extending their business, the enterprize will be conducted on the same principle as heretofore: 1. The fleeces will be thrown into sorts according to grades and quality. 2. A discrimination will be made between wool in good or bad condition. 3. All who desire it can have their clips kept separate. 4. Sales will be made invariably for Cash. 5. The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be twenty five cents on $100 for a term of three months. 6. Liberal advances in Cash made on the usual terms.

Wool forwarded from the West and North should be marked H. B. & Co., Kinderhook, N. Y., with the initials of the owners name on each sack, and shipped to East Albany.

H. BLANCHARD.

Kinderhook, N. Y., May 18, 1849.

After the 1st of June the business will be conducted under the name and firm of H. Blanchard & Co. Reference can be had to

J. P. Beekman, Kinderhook, N.Y.		C. W. Richmond, Aurora, N.Y.
B. P. Johnson, Albany,	"	Nath'l Sawyer, Cincinnati O.
L. A. Morrell, Lake Ridge,	"	Wetman & Co. Massillon, O.
D. S. Curtis, Canaan,	"	Freeland, Stuart & Co., New York City.
C. W. Hull, New Lebanon,	"	
J. Murdock, Wheatland,	"	R. Carter, Chicago, Illinois.

J. W. Sherman's First Premium Grain Drill and Cultivator and Broadcast Seed Sower.

COMBINING three of the most useful farm implements. Superior to any other grain and seed planter for all kinds of grain or seeds; also a superior corn planter. It will sow broadcast, or in drills or hills, and cover grain, and sow plaster, ashes and all fine manure, broad-cast—or will drill it in the rows in such quantities as desired. As a Field Cultivator it works well and is believed to be superior to any other, on all kinds of ground. It sows or plants from the smallest to the largest grain and seeds, accurately. It is the most easily managed; all the tubes can be raised or lowered, or either of them, without stopping the team. Any person capable of managing a team can use this machine and alter it from one quantity to another in one minute. It is durable, permanently constructed, and not liable to get out of order. We do not boast of inventing three drills. We happened to get a good machine the first time, which is more than can be said (truthfully) of some that have invented more, who boast of their worthless articles. We cannot tell of getting 500 made this season for Western New York: it takes time to make a good article. But we will *try* to fill all orders from Western New York and other sections, and warrant our drill the best in use.

We do not tell of selling $25 cheaper than others, for we think we can sell all we can make at a fair price, and we believe our farmers are willing to pay such a price for a good article. We promise to sell as cheap as any other that has a reliable machine, that does the work up right. All we ask of those wishing Planters is to examine for themselves. We are also ready to meet any inventor of Drills on the soil. Boasting on paper is one thing; demonstration on the soil another. All we ask is a trial.

To any one wishing further information we will take pleasure in sending a descriptive sheet. We would conclude by just stating that our machine received two first premiums last fall, at the State Fair at Buffalo, on an imperfect machine, not finished. We subjoin the certificate the Committee kindly gave us:

"We the Committee on Farming Implements, No. 1, having J. W. Sherman's Field Drill and Cultivator under consideration, consider it the best implement of the class that has been presented, and have returned it as being entitled to the highest Premium. *Buffalo, Sept. 7, 1848.* A. OSBORN, *Ch'n.*

I have received the Premium in three Diplomas.

All communications should be sent to me at this place and will be promptly answered and attended to.

We shall want a number of agents to sell machines and rights to commence soon. J. W. SHERMAN.

Ontario, Wayne Co., N. Y., April 15, 1849. [5-tf]

Agricultural Warehouse and Seed Store at Buffalo.

AT the request of numerous friends, we have opened an Agricultural Warehouse and Seed Store, and have made such arrangements as will enable us to keep on hand a large and full assortment of implements of any useful kind.

We have also arrangements for Trees and Seeds equal to any other establishment in the Union. Orders and patronage solicited. Manufacturers are requested to send us samples of their implements and machines.

T. C. PETERS & BRO.,
Corner Washington and Exchange-sts.

Buffalo, Jan. 1, 1848. [1-5t]

Nursery to Let or for Sale.

THE Subscriber has a Nursery 1½ miles from the Erie Rail Road Depot, from the Chemung Canal on a Plank Road running into Pennsylvania. I propose to lease it, for a term of years, or sell it, or take a partner and carry it on.

Elmyra, N. Y., 1849. DYAR FOOTE.

Important to Farmers and Thrashers.

THE Subscribers ask leave to apprise the Public of a new Machine Shop be ng opened by them in *Palmyra, Wayne Co., N. Y.*, for the purpose of building *Jessup's New and Improved Thrashing and Separating Machine.* Said Machine having been thoroughly tested during the past season by competent and experienced thrashers, is pronounced by them to be superior to any machine of the kind in use. Its great advantages over others consists in the construction of the cylinders for carrying forward the straw, not liable to be entangled thereby; it operates from one to two horse power easier, a d will thrash and clean more grain with less waste, and do it better, than any other machine now used. Not wishing to boast for ourselves, we take the liberty to publish a *few* of the *many recommendations from others in its favor:*

RECOMMENDATIONS:

Arcadia, August 21st, 1848.

Having used Jessup's Patent Thrashing and Cleaning Machine for the two last and present seasons, I cheerfully recommend them to the use of public as being the best machine of the kind in use. Almost any desirable quantity of grain can be thrashed in a given time, with less power applied than to any other machine of similar construction now in use. This machine is peculiarly adapted for thrashing and cleaning the different kinds of grain without waste, even when the straw is damp. During the time I have used said machine, I have thrashed some fifteen or twenty thousand bushels, and given entire satisfaction

PETER VANDEWATER.

We the undersigned, being acquainted with Peter Vandewater, and having employed him to thrash our crops the present season, do cheerfully concur in his recommendation of Jessup's Patent Thrashing Machine, and believe it to be the best machine of the kind now in use. *Arcadia, August* 21, 1848.

Benj. Bailey,	David Jewell.	Silas Peirson,
Samuel Pierson.	Artemas Hyde.	S muel B. Reaves,
Charles Hudson,	Bailey Foster,	Hiram Soverhill.

We the undersigned, farmers of Phelps and Arcadia, certify that we have had our thrashing done the past season with Jessup's Improved Machine, and for doing business in a workmanlike manner we think it surpasses any machine now in use; we therefore recommend to those wishing to purchase, to examine this machine before purchasing elsewhere. In our opinion this machine runs one or two horses easier than any other separator now in use.

S. G. Averill,	John Drake,	Jesse Richards,
Wm. M. Butler,	M. A. Burly,	V. R. W. Horton,
J. M. Horton.	M. Ward,	S. Ward.
H. D. Williams,	R. Williams,	J. J. Simons,
C. H. Wirts,	John Wirts,	Moses Ray.

Said Machines are built under the supervison of Mr. Jessup, the Patentee and inventor—and will be furnished on reasonable terms.

We have also thoroughly tested a *New Horse Power*, which we unhesitatingly offer for sale in the fullest confidence of its being as goo l, if not better, than any other in use.

We also manufacture Straw Carriers, Straw Cutters, Clover Machines, Corn Shellers, and other agricultural implements.

All orders at the shop, or by mail, will receive prompt attention.

FOSTER, JESSUP, & Co.

Palmyra, N. Y., June 1, 1849. [6-1t*]

The Celebrated Horse Morgan Eagle!

THIS truly celebrated Horse will stand for Mares this season, commencing April 30th, at A. S. Davis', in East Rush, on Mondays and Tuesdays; at Sherwood's Tavern in Pittsford, on Wednesdays; at Peter Culver's, in Mendon, on Thursdays; and at Richard Peck's, two miles east of Lima village, on Fridays and Saturdays.

MORGAN EAGLE was purchased in the fall of '47, in Tunbridge, Vt., by J. Henderson, at a great price, for the express purpose of improving the stock of Horses of this country. He is about 16 hands high and well proportioned; is a bright bay, and for symmetry and action cannot be surpassed.

Morgan Eagle and the celebrated trotting Mare Lady Sutton, of New York, were sired by Old Morgan Eagle, of Vermont.

PREMIUM!

We will award a premium of $25 for the best Colt sired by Morgan Eagle this season. Competitors for the premium must exhibit their Colts on the 2d Tuesday of October 1850, at East Rush. Judges to be selected by owners of the Colts.

HENDERSON & AUSTIN.

Honeoye Falls April 23d, 1849 [42m]

Rochester Novelty Works.

WE are manufacturing a great variety of SHELF HARDWARE and heavy goods in this line, which we keep constantly on hand, all warranted, which we will sell to dealers lower than they can buy them in New York. We will also make to order any description of CASTINGS, small or large, for Agricultural Machinery, patent articles, &c., of brass or iron. We are prepared to anneal small work so that it can be finished or drilled. Our castings are very superior in style and finish, almost as smooth as if polished. All orders properly attended to, and patterns furnished if required. SMITH, BADGER & CO.,

Office and Depot No. 3 Buffalo-st.

Rochester, Monroe Co., N. Y., April 1, 1849. [4-3t]

Hathaway's Patent Huller and Cleaner,

FOR Cleaning all Kinds of Grain, Clover and other Seeds, Patented July 5, 1848. These Machines embrace most essential improvements and have been thoroughly tested by many intelligent wealthy farmers in different parts of the State, who speak of their operation in the hi hest terms of praise, and express their entire satisfaction with them.

Hathaway's Huller and Cleaner is warranted to Thresh and clean Wheat, Barley, Oats, Rye, Peas, Beans and Buckwheat without injuring the berry. It will also thresh and clean from the straw fit for use or market two bushels of CLOVER SEED per hour, on an average, without rotting the clover straw. Timothy, Mustard, and other small seeds can be cleaned with it, with unprecedented speed and celerity.

These machines will make a better and faster separation than any others now in use, and a saving of more than 150 per cent. in the expense of cleaning clover seed and in the saving of the seed compared with any oth r.

They are cheap in price—simple in construction—durable in materials—easily kept in order—handled or removed. There is nothing now in use resembling, or that can compete with them.

They can also be used as Fanning Mills, by hand power, in a barn or elsewhere.

Refer to the gentlemen whose names are attached to the following certificates. Many others might be added if deemed necessary; but those named have the machines in use and know what they recommend.

CERTIFICATES.

I hereby certify that I have used one of Hathaway's machines for three years past, and have thrashed and cleaned from three to four hundred bushels of wheat per day and have no hesitancy in saying that they will thrash and clean from three to four bushels of clover seed per hour. I have thrashed and cleaned eighteen bushels in five hours. I confidently recommend them to my fellow agriculturists.

Rock Stream, March 1, 1849. HORACE HENDERSON, J. P.

Mr. B. G. H. Hathaway—Dear Sir: The machine I purchased of you in November last, operates to my entire satisfaction. I have thrashed and cleaned from the straw twenty-five bushels of clover seed in a day; and from the chaff, five bushels per hour—also, from the straw, three bushels per hour. In thrashing and cleaning of grain, it works admirably.

Canandaigua, March 7, 1849. REUBEN J. SUTHERLAND.

Mr. Hathaway—Dear Sir: The machine I purchased of you, in December last, operates as you recommended; I have thrashed and cleaned from the straw, from fifteen to eighteen bushels of clover seed per day on an average; also, in thrashing and cleaning of grain, it gives good satisfaction. SOLOMON ERNST.

Lockport, Feb. 18, 1849.

Applications for the right to construct and vend these machines in any part of the United States, as well as all inquiries and applications for machines will be attended to as promptly as possible. B. G. H. HATHAWAY.

Rock Stream, Yates county, N. Y., April 18, 1849.

Monroe Nursery, on the Ridge Road.

THE contract between the subscriber and Naaman Goodsell, for the cultivation and management of the Monroe Nursery being now rescinded, and the relation growing out of it dissolved, the undersigned is now prepared to execute orders for trees, shrubbery, &c.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruits, to merit the confidence of his friends and the public.

The Monroe Nursery has been favorably known for a great many years, and has been in the possession of the subscriber for the last five years, during which time he has been to an enormous expense in refitting and restocking the premises with all the most desirable and modern variety of fruits. He solicits a share of the public patronage. CHARLES FOWLS, Proprietor.

Greece, April 5th, 1849 [5-tf]

Seeds and Implements.

GENESEE SEED STORE AND AG. WAREHOUSE—Irving Hall, opposite the Eagle Hotel, Buffalo-st.—Having purchased the Agricultural and Seed department of Messrs. Nott, Elliott & Fitch, we intend going more extensively into all the branches of our business. We shall keep constantly for sale, all kinds of Imported and American Field and Garden Seeds, and a large assortment of the most approved Implements and Machines used by the Gardener and Farmer. We manufacture Pennock's Wheat Drill, (the most perfect and substantial Drill in use) the celebrated Massachusetts Eagle C Flow, Drags, Cultivators, &c., &c., all of the most approved patterns and construction, and keep a full supply of all the Boston and Worcester Plows, Sub-soil, Delano's, Burrell's Shell Wheel, Anthony's Patent Index, &c., &c.

In addition to our stock of implements, &c., we think we can say with perfect confidence, we have one of the largest, most carefully grown and best selected stock of FIELD, GARDEN and FLOWER SEEDS in the country, including several kinds imported from Europe. Farmers, Gardeners and Dealers would consult their interest, and perhaps insure good crops, by calling at our establishment. RAPALJE & BRIGGS.

Rochester, May 1, 1849.

Short-Horns at Auction.

THE [illegible] having [illegible] losing of 50 acres of [illegible] for the purpose, will offer at public sale [illegible] Short-Horn Durham Cattle (being [illegible] of his present herd) on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year and three year old heifers and cows; and 11 young bulls from 10 months to 2½ years old. Great care has been observed, and expense [illegible] in selecting and breeding this stock with a [illegible] of blood and dairy qualities. The awards of the N. Y. State Ag. Society and the N. Y. American Institute, attest the estimation in which this stock is held wherever it has been exhibited for competition. About [illegible] head of the above cattle are a purchase made from E. P. Prentice, Esq., of Albany, last May, being all the Short Horns of that gentleman, and the product of his four selected cows retained at his public sale. These animals have the strain of blood of the herd of Mr. Whitaker, of England, from whom Mr. Prentice made his principal importations. The other part of the lot of young animals partake largely of the blood of the celebrated herd of Thos. Bates, Esq., of Yorkshire, England, from whom my importations have been derived, and are mostly of the get of my imported bull Duke of Wellington, and my prize bull Meteor. The heifers and cows are and will principally be in calf with these bulls.

For the information of Southern gentlemen who may desire to introduce Durham stock in that region, and who entertain the opinion that that climate is uncongenial to its successful propagation there, I here introduce an extract from a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, 2[illegible]th January, 1849:—"The bull you sold Col. Hampton of this State gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 head of his get now in his yard. They are the most superb yearlings ever [illegible] at the South."

Further particulars, and the pedigrees of the stock will be issued one month previous to the sale. A credit from 6 to 18 months will be given.

Troy, N. Y., April 1, 1849. [4-3t] GEO. VAIL.

The Genuine Morgan Horse, Gen. Gifford,

WILL stand for mares the ensuing season, on Mondays and Tuesdays at the stable of Geo. A. Mason, two and a half miles north-east of Jordan; Wednesdays, Thursdays and Fridays at the stable of D. A. Munro, in Camillus; Saturdays at the stable of D. A. Munro, in Bellisle.

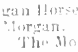
TERMS—$10 to insure. Mares that are not placed directly in in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers for 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and in style of action, *General Gifford* more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits. General Gifford was sired by the Gifford Morgan, his dam a pure Morgan. A full description of the origin of the Morgans, and pedigree of Gifford Morgan, may be found in the Albany Cultivator for 1846 page 19.

April, 1849. [4-3t] MUNRO & MASON.

The Norman Horse,



THE celebrated Norman Stage or Diligence Horse, "LOUIS PHILLIPE," will stand the ensuing season at the Spring Mills, in the Village of Union Springs, on the east side of Cayuga Lake, ten miles south west from Auburn. Louis Phillipe was raised by Edward Harris, of Morristown, N. J., from full-blooded parents, selected in France, and imported by himself, and is a perfect specimen of that class of horse, a class celebrated for their quick powerful action, great hardihood and long life. His color is a beautiful dapple gray with a splendid heavy flowing mane and tail. He is 15 hands high, 5 years old, and weighs about 1150 pounds.

THE "CAYUGA CHIEF."

At the same stand will be found this noble Horse of the Surprise and Childers' descent. A beautiful dappled bay colt just coming 5 years, over 16 hands, of powerful close make, round and admirably proportioned.

Both these horses show a fine stock of colts. Gentlemen sending mares from a distance may be assured that they will have such attention as they desire and on the most reasonable terms.

Terms—$5 at the 1st leap, and then $5 to insure, payable on the 1st of 3d month (March) following.

Communications may be addressed to ROBERT B. HOWLAND, Union Springs, Cayuga Co., and will receive prompt attention. [4-4t]

Agricultural Implements and Mechanics' Tools.

I AM now manufacturing a few of those MANURE FORKS so much sought after by the FARMERS. Also, *Hay* and *Straw Forks* of all kinds warranted. Also, full supply of *Spades, Shovels, Hoes, Axes, Scythes*, and almost every kind of MECHANICS' TOOLS always can be found at my store, No. 3 Buffalo-st., first building west of Main-street Bridge, Rochester.

[4-3t] R. D. BARTON.

The Valuable Horse, Young Morgan.

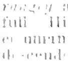
WILL stand the ensuing season on Mondays, Tuesdays and Wednesdays at the stable of the subscriber near Clyde; on Thursdays at the stable of Albert Gillett in Junius; on Fridays and Saturdays at the stable of J. Landon, in Lyons.

Terms—$8 to insure a foal.

Young Morgan is of a bright bay color without white, 16 hands high, and weighs 1200 pounds. He will be four years old next July, and is not surpassed by any horse in this State. He was sired by Morgan [illegible] owned by Wm. [illegible] of Palmyra; his dam was Noah Yale's Beauty, got by Sir Charles Duroc.

Clyde, April 1, 1849. [4-3m] [illegible] M. GILLETT.

The Imported Horse, Consternation.



WAS bred by MATTHEW HOSSEY, Esq., of Stilte [illegible], Yorkshire, England, in the year 1841. He was imported by T. C. Arbott, Esq., in the year 184[illegible]. He is now owned by J. B. Burnet, Esq., of Syracuse, and will serve a limited number of mares the ensuing season at his own stables near the village of Geddes, two miles west of Syracuse. The very best pastures, with plenty of water and the most secure fences, will be provided for mares from a distance at two shillings and sixpence per week. No mares taken except at the risk of the owner.

Consternation is a beautiful unfading dapple brown color, stands 15 hands and 3 inches high, and is a very 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 horse, yet of a *rangey* and majestic figure. His chest and flank are deep and full. 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 stud books from horses of great distinction and of the purest blood. There is no horse living that can boast a more illustrious pedigree. His immediate ancestors were of uncommon size and elegance of figure. Confederate, although an eminently successful race horse, was kept by his breeder, Earl Fitz William, to get carriage horses and hunters, for which he proved very valuable. Curiosity, the dam of Consternation, was equally large, and even handsomer than Confederate. All his ancestors were animals of good disposition and entirely free from blemishes, so far as it can be ascertained. The following is a brief copy of his Pedigree: By Confederate, dam Curiosity, by Figaro; her dam by Waxy. Confederate was bred by Earl Fitz William; got by Comus, by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Esq., Oneida Castle, Henry Rhodes, Trenton, A. Ford or John Best, Rome, and to farmers generally in that vicinity.

Terms—$5 in advance, and $5 additional if the mare is got in foal. [4-3m] J. B. BURNET.

BOOKS ON AGRICULTURE, HORTICULTURE, &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:—

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Buist's Kitchen Gardener. 75 cents.
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Chaptal's Agricultural Chemistry. 50 cents.
Downing's Fruits and Fruit Trees of America. $1 50
Domestic Animals, by R. L. Allen. Cloth, 75 cts.; paper, 5[illegible] cts.
Farmer's and Emigrant's Hand-Book. $1.
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Gardener's Farmer's Dictionary. $1 50—leather, $1 75
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Liebig's Agricultural and Animal Chemistry, (pamphlet editions,) 25 cents each
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Stable Economy, by Stewart. $1
Scientific Agriculture, by Rodgers. 75 cents
Smith's Productive Farming. 50 cents.
Treatise on Milch Cows, 38 cts. Treatise on [illegible] 25 cents.
Youatt on the Horse, (new edition,) $1 75
Youatt on the Pig. 75 cents.
Catechism of Ag. Chemistry and Geology. 2[illegible] cents
The Gardener and Complete Florist. 25 cents
Knowlson's Complete Farrier, or Horse Doctor. 25 cents

* 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.

Address to D. D. T. MOORE, Rochester, N. Y.

CONTENTS OF THIS NUMBER.

HORTICULTURAL DEPARTMENT.

ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, May 23—7 P. M.

FLOUR AND MEAL.—We notice a further improvement in the lower grades State and Western, with a fair demand for the East and local trade, and a moderate inquiry for export to complete cargoes. Sales 5 550 bbls. 4.12 *a* 4.19 for fine, 4.44 *a* 4.50 for Troy, Brooklyn and common State. 4.50 *a* 4.56 for mixed Michigan and good Oswego. 4.56 *a* 4.75 for favorite Indiana and State. 5 *a* 5 12 pure Genesee. 5 *a* 5 62 fancy Ohio. 5 37 *a* 5.62 fancy State. 5.50 *a* 5.87 extra Ohio Of the sale, some 500 bbls fine was for export. Rye Flour quiet, 2.94. Meal steady, Jersey, 2 87 *a* 2.94.

GRAIN.—Limited inquiry for Wheat, mostly for export. Sales 4.000 prime Western red, on private terms, and 2.360 prime Ohio, for milling, 1.05. Rye steady. Sales 2,500 at 58 delivered. Barley inactive, 52 *a* 54. Oats in good demand, 34 *a* 35, for river and canal. Corn fine and in good demand for export. Sales 50.000 bushels at 58 for handsome southern white, 58 *a* 60 for low to high mixed western, 60 *a* 60½ for southern yellow, 62 *a* 63½ northern and Jersey yellow, closing firm.

PROVISIONS.—Good demand for Ohio Pork. Holders able to realize better prices. Sales 1500 bbls. at 9 87 *a* 10 for mess, and 8.25 for prime. Beef without change. Market still unsettled and quotations nominal. 100 bbls. sold at 8.25 *a* 8.50 for prime, and 11 *a* 11.50 for mess Cut meats in good demand, in part for Philadelphia market. Sales 450 bbls. and tierces 4d. for dry salted shoulders, and 5 *a* 5½ for hams, and 4½ for pickled shoulders, and 5¼ *a* 5½ for hams. Beef hams 16.50. Lard firm and in poor demand. Sales 550 bbls at 6¼ a 6½ common, 6¾ primeand 7 for extra. Butter steady at 10 a 15 for western, and 13 a 17 for Orange county. Cheese steady Old and good prime, 6½ a 7½.

Rochester, May 24, 1849.

FLOUR $5 per bbl. Wheat, Western, 80 to 90 cents—Genesee $1.09. Corn 44 *a* 50c. Rye 53 Oats 31.

SEEDS.—Clover $3.75 *a* $5. Timothy $1 50 *a* $2 25. Flax $1.

PROVISIONS.—Pork (mess) $12 *a* $12.50 per bbl. Beef $4 *a* $5 per cwt.—mess $7 *a* $8 per bbl Butter in demand at 12½ cts per lb. Cheese, good, 7 *a* 7½ cts per lb. Eggs 10c

IN BUFFALO, May 22, sales of Wisconsin and Wabash wheat at 75 and 80 cents—and corn in store at 45 cents

Wheeler's Patent Horse Power and Thrashing Machine.

Woodbury's Horse Power and Separator.

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by
D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Farmer, 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 Farmer is from FIVE to EIGHT thousand LARGER than that of any other agricultural journal published in the United States.

☞ THE FARMER is subject to newspaper postage only.

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. X. ROCHESTER, N. Y.—JULY, 1849. NO. 7.

Farm Husbandry.

REARING, KEEPING AND FATTENING DOMESTIC ANIMALS.

The science of breeding, keeping and fattening domestic animals is too much neglected in the United States. Few practical farmers have the courage to take hold of the somewhat forbidding subjects of comparative anatomy, physiology and organic chemistry, with a resolute purpose to understand the living organism by which grass, hay, grain and roots are transformed into beef, mutton, pork, butter, cheese and wool. The natural machinery for effecting these important changes of vegetable into animal substances, deserves to be studied with great care, in order to make the most of the food consumed by every animal kept on the farm. There is no class that has reached perfection in yielding the largest product in flesh, milk or wool, for the aliment consumed in the course of its life time. All are fed unequally—sometimes too much and sometimes too little; and, again, they suffer from food more defective in *quality* than deficient in *quantity*. One often sees store pigs eat the dung of over-fed fatting hogs; and in this city, half-starved cows voraciously devour the solid excretions of corn-fed carriage horses. In rearing swine they are commonly under-fed about three-fourths of their lives, and over-fed the other fourth; so that in the aggregate not more than one-half as much meat is elaborated from the food taken into the stomach of pigs as might have been formed.

All animals demand a certain quantity of nutritive matter to preserve them in a normal condition, or to prevent their losing weight and becoming poor and poorer. In all cases where the object is to form meat, it is bad economy to keep animals for weeks and months, as thousands of farmers do, without gaining a pound of flesh, although they necessarily consume a large amount of food. This forms the manure: i. e. 100 lbs. of solid matter taken into the stomach yield 40 in dry dung yard and urine, and no more. If we feed much above the point of normal nutrition, a portion of the aliment fails to enter the lacteal vessels which surround the alimentary canal, and through which digested matter passes into the blood vessels to nourish the system. This excess of food, whether partially digested or not, passes on through the bowels and appears as feces or dung. There is always an immense loss in seeking to make animals excessively fat. Of course, when two or three prices are realized for such beef, mutton or pork, the loss in the waste of food, is paid by the consumer. Our object is to develope the true economy of making meat, regardless of the fact whether it is sold or consumed by the producer. This consists in providing a reliable supply of suitable food, so that the animal from its birth to the day of its being slaughtered, should steadily gain in weight. So long as it is adding to the length and size of its bones and muscles—growing—its system will be little inclined to take on fat, if not over-fed. Excessive stuffing and no exercise, bring the development of bone and muscle to a premature ripeness. They cease to expand, and you have a fat lap-dog or a pocket china pig. Habitual starving will also bring the carcass to maturity before it attains to its proper size. Skilful feeding implies that one never gives *too much nor too little*; and has the food well adapted to the constitution and habits of the animal, whether a horse, sheep, cow or swine.

This system of feeding is not so easy as some may imagine: for the quantity of grass that will grow on a given number of acres in pasture and meadow in a dry or wet season is very unequal. Hence, in the one case the farmer will have more feed than stock; and in the other more stock than feed. If one must err in the matter, it is usually better to have an excess, rather than a deficiency of forage. Grass left to rot on the ground in a pasture or meadow is far from being lost. It improves the soil.

After having taken all due pains to make two blades of grass and corn grow where only one of either grew before, the stock grower should study closely the business of breeding domestic animals.—The leading idea in this art and science is, to select the best males and females from which to propagate and improve the race. This rule applies alike to the equine, bovine, ovine and swine families. In each genus there are several species, in each species there are numerous breeds, and in the several breeds not a few varieties. It is no part of our duty to attempt to write up one species or breed of animals, whether of cattle, horses, hogs or sheep, and to write down another. Practical farmers know best what kind of stock will suit their land and markets. Our advice, if offered, would be quite as likely to miss as to hit the wants of the reader. There is more difference in the value of breeds than many are willing to admit, and less than some breeders of improved races claim. A yearling of the short horn stock, less than 13 months old, was weighed in this city a few days

since and brought down 675 pounds. This heifer which was not fat, is the offspring of Mr. CLAY's importation. Another heifer of the same family weighed 718 lbs. when 15 months old. The mother of the calf first named belongs to the lady with whom the writer boards; and this valuable cow gives some 20 quarts of rich milk a day. There are Devons near here from the herd of L. F. ALLEN, Esq., which are much admired for their beauty.

The Texas Telegraph of May 24, published at Houston, says that wool grown in that State, and sent to New York market has brought $1 25 a fleece this season. Men are buying large flocks in Mexican States, Missouri, Tennessee and elsewhere to drive into the northern parts of Texas. Sheep husbandry is beginning to excite considerable attention at the south and south-west.

Believing as we do, that this Republic is likely to enjoy great prosperity during the next ten years, and receive large accessions to its population and wealth from Europe, the demand for good breeding animals will be steady and at quite remunerating prices.—Whoever will take due pains to improve his cows, sheep, horses and swine, cannot fail to be well paid for his trouble.

LIMESTONE SOILS.

EVERY month's experience and observation increase our esteem of limestone lands. We have studied the growth of wheat and other crops on granitic and sandstone soils, and compared them with the products of lime lands, with which we have long been familiar. The latter not only contain more *lime*, but more potash, soda, magnesia, chlorine, phosphorus and sulphur—more of all the earthy elements of cultivated plants. Having become satisfied that such is the fact, we were for a time at a loss to account for the circumstance that, lime rocks yield other minerals on their disintegration as well as the one that forms the main bulk of this product of nature. The remains of animals with which they abound, that once lived in the ocean, furnish unmistakable evidence that all, or nearly all ordinary lime rocks were slowly built up in the bed of an ancient sea. The same minerals which makes the stoney covering of an oyster, serves under favorable conditions to form many strata of precipitated lime rocks in which to embed the oyter, and a thousand other animals and plants.

These depositions carry down and fix permanently in the growing rock, not only the carbonate of lime, but an appreciable quantity of all the minerals dissolved in the water of the ocean. A moment's reflection will satisfy the reader that this water must abound in all the constituents of vegetables and animals, or they could not flourish in such prodigious numbers in this medium. By analyzing water taken from the ocean, we find that it contains every substance necessary to organize either a whale, a tree, or a man. It abounds in potash, soda, magnesia, iron, chlorine, bone earth, gypsum, and compounds of carbon and azote.

When the bed of the ocean is elevated by volcanic action into islands and continents, and dry land is formed, we find the best soils for the support of terrestrial animals where marine deposits were most abundant. And these vegetable and animal remains are most abundant where sedimentary rocks were slowest in forming. Most sand rocks appear to have been deposited rapidly; for they usually contain little beside mere traces of lime, potash, soda and other minerals dissolved in sea water. Shales, such as may be seen along the terraces above Geneseo in Livingston county, and most limestones appear to have been built up very slowly. There are some fresh water deposits of lime, both ancient and modern, that contain little beside the pure carbonate of that mineral. There are one or two deposits of this character in Cattaraugus county, and one on General HARMON's farm in Wheatland. Prof. PETER of Kentucky, gives the following as the composition of the limestone near Lexington, remarkable for the excellent soil which it forms in that vicinity. He says:

During the past month or two, in my leisure moments, I have submitted to analyses, several specimens of the Kentucky Blue limestone, and have been much gratified to find my anticipations realized in relation to its agricultural value, as will be seen by reference to the results given below.

Specimen No. 1, is of the hard grey limestone; it was dug out of a well in the city of Lexington; it contains geodes lined with brown spar, pearl spar, calc. spar and fluor spar and the usual fossils; its specific gravity is 2.45 in a dry specimen. On analysis, it was found to be composed of the following materials, viz:

Carbonic acid	36.675
Phosphoric acid	1.350
Sulphuric acid	807
Lime	47.046
Magnesia	900
Alumina and oxide of iron	9 880
Fine sand and silicates	1.790
Moisture and loss	1.552
	100.000

Specimen No. 2, from the hard thin layers which are more superficial than the first in this locality, yielded:

Carbonic acid	40 53
Phosphoric acid	36
Sulphuric acid not estimated.	
Lime	50 97
Magnesia	66
Oxide of iron	32
Alumina	15
Sand and silicates	6.52
Moisture and loss	49
	100.00

In addition to these ingredients, potash and soda were obtained from the limestone, whenever the proper processes were employed; in one case as much as 0.0487 per cent of potash; in another, 0.0053 per cent.

The above extract is copied from the May number of the Albany Cultivator. In the June number of the American Agriculturist a gentlemen in Winchester, Va., says that he raised eighty-three bushels of corn per acre, without manure, on a piece of ground which had been irrigated for several years by a "limestone spring."

The rivers Euphrates and Nile, not less than the Genesee in New-York, and the Cumberland in Tennessee, run over lime rocks. These valleys are remarkable for their fertility. On the contrary, all granite regions are characterized by comparative sterility. Granite, unlike sedimentary rocks, have been melted by intense heat deep in the earth, and crystalized on cooling, under great pressure. All this class of rocks decompose slowly, and from comparatively thin, poor soils. They usually lack lime and all the other minerals held in solution by the waters of the ocean. Granitic formations show no signs of organic beings, either animal or vegetable.

The fair inference from the above remarks would seem to be, that salts of lime, potash, soda and magnesia are indispensable to the growth of crops.—Every farmer whose soil lacks lime, should take measures to remedy the defect in the cheapest way possible. In many places gypsum, common salt and wood ashes can be had on such terms as will war-

rant their use for agricultural purposes far more extensively than is now done. The salt which can be obtained by evaporating sea water, will some day be extensively consumed as a fertilizer. Nor will the salts extracted from the soil and wasted in the liquid excretions of domestic animals be always regarded as of so little value.

AGRICULTURAL EDUCATION.

BY AGRICOLA.

The subject which is now attracting much attention, not only in this State, but in many of the States of our Union, is the education of farmers' sons for their profession, that of Agriculture. The prejudice which has too long existed among farmers, and which it must be admitted, has arisen from a wrong idea of the education proposed, is fast giving away to the light which experience is bringing to bear upon this all important matter. No one thinks of preparing his son to be a Physician, Attorney, or Divine, without providing the means for his acquiring a particular knowledge of the studies best calculated to prepare him for the pursuit he is to follow. When we urge the same considerations upon the farmer in regard to the education of his son, for the pursuit of Agriculture, it is not unfrequently said—"What more is necessary than to learn the lad in the field the routine of farm labor—the practices which I have pursued as to the manner of preparing my land—the time of sowing and planting?" This is all important, and we advocate no system of education that will dispense with it. Suppose we should in the case of the physician adopt the same rule. The young man, instead of pursuing a course of study by which he is familiarly and thoroughly instructed in the complicated machinery of the human body, the laws which regulate and govern diseases, the peculiar nature and habits of disease; begins at once to visit patients with the physician, pays no attention to the teachings of science and the researches of others; he might eventually acquire information that would be useful, but how much less likely to be successful, than one who, in addition to this practical education with his instructor at the bedside, had enjoyed the benefits of a thorough education previous to entering upon the active duties of his profession. May it not safely be affirmed, that every man in community would prefer the one who had *combined with practice, the thorough preparation of himself* by all the aids which science and the experience of others had afforded him?

It can be hardly necessary in this day of light and knowledge to attempt to show that there is much for every farmer to learn from science, to aid him in his work. The nature of soils, their constituent elements, their adaptation to particular crops, the quality of manures as determined by analysis, the effect of heat and cold upon vegetation, and many other things which can be only certainly known through the agency of science. What, may it not be asked, is to prevent every farmer who shall be thoroughly instructed from availing himself for practical purposes of these advantages? The researches which have been made by scientific men, have developed many interesting and important facts—and the time is not far distant when many more will be brought to light, which will greatly lessen the labors of the farmer, and enable him with economy to adopt a system of farming that will remunerate him liberally.

Perhaps it may be asked, what system, if adopted here, would thus aid the farmer? Without at this time giving what I suppose would be a system in every respect well calculated to accomplish such a result, it may be sufficient to say—that a school to prepare young men for the duties that are to devolve upon them, should be so arranged as to give them a thorough course of education, combined with its practical adaptation to the entire work of the farm, even in the most minute portions of labor. To accomplish this, a farm of liberal extent must be connected with the institution, where experiments could in the first place be carefully made on some small portion of it, and when satisfactorily tested, be carried into practice in the general culture of the farm. An opportunity must also be furnished of testing the qualities of different breeds of cattle, horses, sheep, and swine. How little is now really known by the great body of our farmers in relation to these matters. Who is there, from actual trial and experiment, is prepared to say which, of all the breeds of cattle, is best adapted to this State, for the Dairy or for the Shambles? Has a trial and comparison been made between the different breeds called *Improved*, and the Native Stock, so that it can be said, *this* is the best for the farmers of New-York? I answer, No.—And I would ask, is it not important that these questions, so important to the farming interest, should be determined? And would not an institution, discreetly managed by a judicious, intelligent and thoroughly qualified practical man, in time work out for us a solution of these questions? So, too, with regard to horses, sheep, and swine—the above remarks are equally applicable.

There are now in this State a large variety of grains in use—each has its advocates—and yet is it not true that it was decided there are some varieties superior to others, and better adapted probably to our climate and soils? And where shall these questions be settled more satisfactorily and certainly than at an institution with a liberal farm, of different varieties of soils, where a series of experiments could be carried on with all the varied grains, for a term sufficient to test their qualities in every respect? There are other matters all important to be ascertained, and which at present are but little attended to, at least so far as the great body of the farmers are concerned. I allude to a rotation of crops, and application of manures, best calculated to give profitable returns to the farmer, while it secures to him the constant fertility of his soil. Where could this be better ascertained than at an institution where a series of experiments with different crops, in different rotations, and with varied manures, carefully analyzed, could be carried out. In each of these cases, time is necessary to obtain satisfactory results—and the State, at an institution of this kind, could secure such results as would in the end greatly add to the prosperity and success of the farmer, in the management of his farm.

Permit me to caution my readers not to expect too much at once from an institution in every respect rightly adapted to the wants of the farmer. Time will be required for it to develop its advantages. The work of improvement is not the work of a day or of a year. Experiments, to be useful, must be long continued, often repeated, before they can be relied upon—and although a young man trained in an institution thoroughly, will himself be prepared to do great good, yet the great practical benefits to the farmer as to the general course of his operations, both as to his crops, manures and animals, must be a work of time—and cannot be hastily decided with safety. Time for experiments to be thoroughly tested, time for the

investigations to be in every respect carefully made, must be allowed. Let this be borne in mind, and I doubt not an institution, under the charge of properly qualified instructors, men of mind, men of practical adaptation to the wants of the a —not mere thorists or fancy men, would eventuall secure the approbation of all, and would be cr ded with the young men of our State: and would annually send forth many in all respects well qualified to discharge their duties as farmers, and also prepared when called into public life to discharge their higher duties as representatives of their profession, the great producing class of our country.

Should I have leisure, and should you not have more important matter for your paper, I design to pursue this subject, and give in detail the course to be pursued at an institution which, in my judgment, would be well designed to accomplish the great work now needed,—the *Thorough Education of the Sons of Farmers.*

CULTIVATION OF THE MAPLE.

Each distinct species of trees, like each distinct species of animals, requires to some extent its own appropriate food. Hence a soil that will produce one kind of trees in perfection, will not always produce another. Hence, also, a young tree can hardly be made to flourish where an old one of the same kind has lived and died: because the former took from the soil the elements necessary to the growth of the whole species. (The case of a young shoot growing up from an old root, may be regarded as an exception, because here the nourishment is drawn by an old root that is constantly extending itself into a new soil.) Hence, too, a second growth of timber on the same soil, is almost always different from the first, except as above. To this may be added the fact, that the cultivation of the same kind of grain, on the same field, for several years in succession, impoverishes the soil more than if it had been subjected to a rotation of crops. And hence, again, neither a tree, nor any other vegetable, can be made to thrive in a soil which does not contain the appropriate elements, nor can fruit be raised on an inappropriate soil.

The maple it is well known contains a large amount of potash: and a soil that is destitute of this element, or that contains only a small portion of it, will never produce a thrifty tree, till the deficient element is supplied. I have known many trees to die, or drag out a feeble existence, evidently from no other cause than the want of the proper elements in the soil: and I have also known trees to flourish on an uncongenial soil when supplied with their appropriate food. A few years ago I set out several maple trees, around some of which I threw a quantity of ashes, leaving others without any. The difference in their growth was soon manifest, not only in the amount of growth, but also in the length of time that they continued to grow: the former surpassing the latter in both respects. Hence,

To promote the growth of the maple, (and other trees of a similar nature and under similar circumstances,) *give them potash.* It may be given in the shape of ashes, weak lie, soap-suds, &c., whenever there is evidence of a deficiency in the soil. If proper attention be paid to this subject, I believe we shall much less often have complants of the slow growth of the maple. H.—*Down East, April*, 1849.

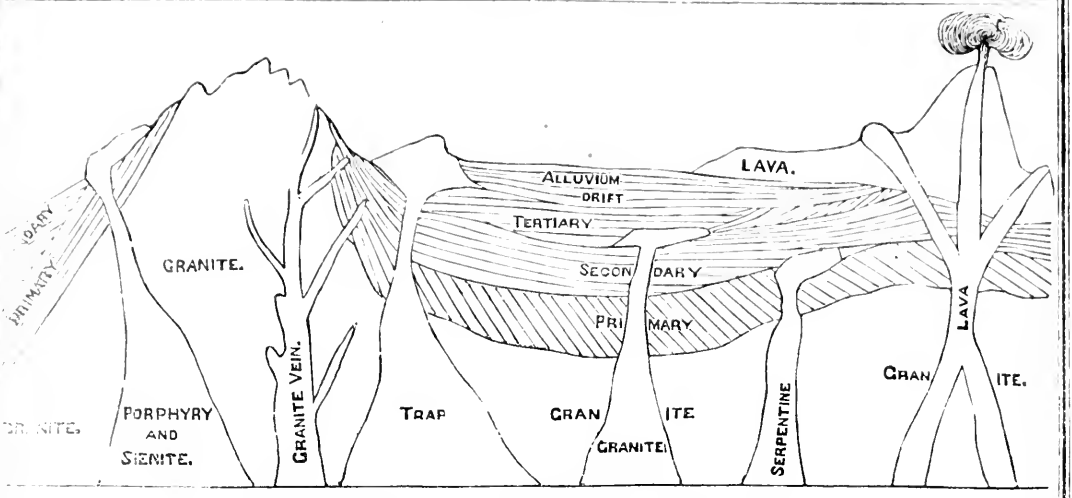
MR. VAIL'S SALE OF SHORT HORN CATTLE.

A part of the stock of George Vail, Esq., of Troy, was offered for sale at public auction, at his farm, near Lansingburgh, on the 13th ult. There was a large attendance of gentlemen at the sale.—Among others, we noticed R. L. Allen, Esq., one of the Editors of the American Agriculturist, and A. Stevens, Esq., of New York city; L. G. Morris, Morrisiania; Hon. A. Van Bergen, Coxsackie; Messrs. Prentice, Tucker, Howard, McIntyre, and B. P. Johnson, Esq., Sec'y State Ag. Society, Albany; Messrs. Kirtland and McCullock, Greenbush; T. Hillhouse, Watervliet; Mr. Ogden, Quebec; Mr. Jean, Lewis Co.; Messrs. Jessup and Drinker, Penn.; Col. D. D. Campbell, Schenectady; Mr. Starkweather, Maine; Gen. Wool, U. S. Army; Gen. J. J. Viele, Troy; Amos Briggs, Esq., Schaghticoke.

Mr. Vail gave, at his cottage lately erected on his farm, a fine collation during the progress of the sale, where every thing was in the best style, and the gentlemen in attendance were highly pleased with the arrangements, and all seemed gratified. The sales were at fair prices, and such as we presume will be deemed encouraging to breeders. We give a list of sales and purchasers, so far as obtained.—There may be one or two omissions. The numbers are from the catalogue :—

	COWS AND HEIFERS.	PURCHASERS.	
No. 1.	Sally, red and white, 9 years old,	Mr. Niles, Washington county, N. Y.,	$110 00
	Her calf, 2 weeks old.	Mr. Percival, Waterville,	37 50
" 2.	Judy 2d, white, 3 y'rs,	Drinker, Jessup & Co., Pennsylvania.	75 00
" 4.	Queen 3d, roan, 4 y'rs. old,	Col. D. D. Campbell, Schenectady,	135 00
" 5.	Countess 18th, roan, 3 years old,	Mr. Jean, Carthage, Jefferson Co.,	80 00
	Her calf, Red Lady, No. 17, 2 months old,	Mr. Jean, Carthage, Jefferson co.,	25 00
" 6.	Victoria 2d, light roan, 5 years old,	Messrs. Drinker & Co., Pennsylvania,	105 00
" 7.	Fanny 2d, Red and white, 3 years old,	Mr. Jean, Lewis Co.,	90 00
" 8.	Ariadne 4th, red and white, 2 years old,	Mr. Burguyn, North Carolina,	105 00
" 9.	Sophia 2d, red and white, 2 years old,	Mr. Burguyn, North Carolina,	105 00
" 13.	Charlotte 2d, principally red, 2 years old,	Mr. Ogden, Quebec,	100 00
" 16.	Queen 5th, roan heifer calf, 2 months old,	Mr. Burguyn, North Carolina,	50 00
	6 heifers were sold to Mr. Starkweather,—at what price, not ascertained.		
	BULLS.		
" 18.	Beppo, white, 3 years old,	Mr. Holton, Vt.,	87 50
" 19.	Brutus, red, 2 "	Col. D. D. Campbell, Schenectady,	135 00
" 20.	Belvidere, roan, 1½ year old,	Mr. Remington, Philadelphia,	150 00
" 22.	Victor, white, 2 years old,	Drinker & Co. Pa.,	90 00
" 23.	Nimrod, roan, 1½ year old,	Starkweather,	147 50
" 25.	Minor, red and white, 1½,	Harrington, Troy,	60 00
" 26.	Albion, red and white, 1 year old,	T. Hillhouse, Watervliet,	75 00
" 28.	Essex, red and white, 1 year old,	H. R. Burguyn, North Carolina,	80 00
" 29.	Lenox, white, 1 y ear old,	H. R. Burguyn,	85 00
	White Bull calf,	Mr. Jean, Lewis Co.,	30 00

Cure for the Botts.—Take a quart of sweet milk; warm it, and sweeten it with sugar or molasses, and give it to the horse. About half an hour afterwards, give a pint of strong brine. The botts, it is said, will eat the former and be distended by it, and the latter will then destroy them. H.



IDEAL SECTION OF THE EARTH'S CRUST.

Agricultural Geology.

The well-informed farmer should have some knowledge of the science of *Geology*. Without it, he can have no correct ideas as to the origin and peculiarities of soils in different localities; and of their natural adaptation to certain crops, and lack of adaptation to others. In connection with this article, the reader will see an ideal section of the earth's crust, from its surface down to the region whence melted minerals are forced up by a mechanical power, too large for circulation.

Rocks are best studied under two general heads: First, Those that were melted by heat, and cooled to attain the form in which we see them. These are denominated *Igneous Rocks*, from the Latin word *ignis*, "fire," because fire was an active agent in bringing the matter that forms such rocks into the peculiar conditions in which they appear. Second, Those that were deposited like sediments in water, compressed and consolidated by great weight into hard masses. Such are called *Aqueous rocks* from *aqua*, "water," and also *Sedimentary* rocks.

Among the igneous rocks, *granite* is generally the lowest in the earth, and by far the most abundant.—In the section which we have given granite, will be seen to underlie the several formations denominated *Primary, Secondary, Tertiary, Drift, Alluvium* and *Lava*. The latter coming from an active volcano is presumed to run down its cone and cover the highest aqueous deposite, whether it be the alluvium of a river, or other recent deposition from water. It is a singular fact that some of the best soils in the world are formed of the debris of lava, which was devoid of all organic matter, and brought up thousands of feet from Nature's mighty furnace, whose fire burns on from century to century with undiminished intensity. Taking the hint from dame Nature, agricultural chemists have burnt granite till it would crumble into powder when treated with a dash of cold water, and finally give up to growing plants its fertilizing elements.

Rocks formed by ancient volcanoes are called "*Trap*," as will be seen in the drawing. The word trap is derived from *trappa*, which means a stair or step. Greenstone and basalt belong to the trap family.

Melted matter injected into fissures in mountain masses of granitic and sedimentary rocks appears as veins of granite, serpentine, porphyry, syenite and other minerals. Syenite differs from granite in having horneblende take the place of mica. The last named mineral is called isinglass in some sections of country. Granite is composed of the three well known minerals, quartz, felspar and mica. Porphyry is distinguished by its large crystals of felspar.—There are several varieties of this famous classic rock. *Serpentine* contains about 40 per cent of magnesia. It is essentially a silicate of that base.—Among the Primary rocks *gneiss* is the most important. It is simply stratified granite—the consolidated debris (fragments) of the parent unstratified rock. When granite is decomposed, as well as disintegrated, sand, shale and slate rocks are produced—the former from quartz and the latter from felspar and mica. Primary lime-stone is also formed from the decomposition of crystaline rocks which contain that mineral.

Secondary rocks are a numerous family. They are conveniently divided into five systems: all of which abound in the well preserved remains of extinct races of animals. The lowest in the catalogue is the *Silurian* system. Above this is the Coal-bearing system; then the Salt-bearing; Oolitic, and Chalk systems. These, when entire, are several thousand feet in thickness.

Tertiary strata are divided by Lyell into four groups, to which he gives the names of *Eocene, Miocene, Older* and *Newer Pliocene*. These terms, derived from the Greek, we will not stop to define.

Above the tertiary strata lie the Drift, which is the same as the diluvium of some geologists. It is the loose earthy matter above all solid rocks, as it was left at the time when islands and continents were last elevated by volcanic action above the surface of the ocean. So far as rains, snows, creeks, rivers, and lakes, have transported this moveable earthy matter, or the debris of exposed rocks, and deposited it in new layers, since dry land appeared as we now see, these latest deposits or strata are called *alluvial* beds, or *alluvium*. Such strata abound in the remains of plants and animals now living on the continent. The alluvial and drift formations are most worthy of the attention of practical farmers.

THE HORSE.—IMPROVEMENT IN BREEDING.

ALTHOUGH the improvement in the modes of traveling, resulting from the application of steam, may in many sections of our country, diminish the use and the value of fine horses, still the horse will always be of incalculable importance to us. Any thing therefore, that may tend to enhance his worth, by improving his character, will be thought useful.

The intrinsic value of the horse, consists in his *power, speed*, and *endurance*. And as he is, to a great extent, the subject of taste and fancy, his highest value is attained, when he unites beauty of form, with these three requisites. But every farmer knows, he is not to expect the pear from the thorn bush, nor the pippin from the wild crab apple. But then these stocks will produce the pear and the pippin, if such scions are introduced. Since, then, the same expense of care, culture, feed, and time, is needed to sustain and rear a four years old horse worth $60, and one worth $100, is it not astonishing that farmers, who spare no expense to obtain the best quality of grains, grasses, and roots for seed, should still employ as sires, the low bred dung-hill at twenty shillings, instead of the brave and noble blood horse worth twenty dollars. The result in such case, as a general rule, must necessarily be, the colt will be a twenty shilling colt, instead of a twenty dollar colt, if nature proves true to her principles.

Many farmers do not reflect sufficiently, or judge correctly on this subject. They seem to think, a half blood sire, derived from a blood horse and *common dam*, may produce as fine stock, as the full blood horse himself; whereas, *he cannot half so good*. Being only a half blood himself, he can infuse into his progeny only one fourth of the good qualities of his sire. His stock is only quarter bloods. No farmer, desirous of making the greatest gain in perfecting his stock, will use any horse as a sire, who cannot claim to inherit, in the line of his dam, as well as of his sire, *Power, Speed*, and *Endurance*; the three items which give value to the horse. Hence it is, that the pedigree of our blood horses is given in the line of the dam, instead of the sire. It is to show, that the valuable blood of the horse, derived from his sire, is not deteriorated by any impure, low blood, derived from the mother. A little reflection therefore, will satisfy the farmer, not to breed from a horse, (although his sire may have been good,) in the hope of greatly improving his stock, if he cannot claim excellence also, from the blood of his dam, as well as of his sire. In this particular, American Eclipse excelled any horse of his day; and to this source was he indebted, in a great degree, for his matchless powers. His dam was got by "Messenger," whose stock, for power and endurance, has proved equal, and often superior, to that of any horse ever brought to this country. Her dam, by a son of "English Eclipse;" next to "Childers," the fleetest horse ever known. His sire, "Duroc," was by "Diomed;" the best horse of his day—deriving his excellence from judicious crosses, blending the best strains of English and Arabian blood.

It is perfectly idle for a farmer, who has a mare of good size, of fine qualities and blood, to raise a colt from a common horse worth only $65 to $80, at four years old; when he can, with the same expense of care and feed, rear one worth $120 to $150, by resorting to a better sire, at a cost of a few dollars more. And even if his mare is in some respects inferior, he should still resort to horses of high and celebrated blood,—of large size, just proportions, and fine speed,—horses, superior in those very particulars in which his mare is deficient. A half blood filly from such a cross, would probably make a valuable stock mare, producing colts of great worth, if bred from the superior blood horse.

Every farmer should have one or two good brood mares. We have the experience and testimony of intelligent men, that brood mares may be steadily and safely used until within a few days of foaling; and very soon after. They should not be improperly used and abused, by extreme, sudden, violent efforts. But it will not injure them nor their foals, to do constant, reasonable labor. In addition therefore, to accomplishing the ordinary service of a span of horses on the farm, they may produce the farmer annually, a pair of colts.

It should here be remarked, that much of the value of our colts depends on the care and keeping we give them. We err greatly on this point. Colts generally, are neglected the first winter. Their growth is retarded, and their forms are injured thereby.—They should be kept in the best manner, the first year; should be kept constantly thriving. Their forms will then be properly sustained, and their points and proportions be finely developed. Nor should they be fed on the ground, but in racks so posited, as to require them to extend and elevate the neck and head.

Dutchess County, in this State, has derived a large revenue for half a century, from the sale of her valuable horses. Spans of horses bred there, have been sold in New York, from five hundred to one thousand dollars.—And multitudes of single horses from fifty pounds, to one hundred pounds each. They secured these results at an early period, by perfecting their stock of brood mares, in the use of such imported horses as Messenger, Highlander, Paymaster, Drone, Badjazette, and others; not hesitating to pay $20 or more, to horses of such character and blood.

As "like produces like," the brave and noble blood horse is expected to give the index of his character to his progeny. To decide whether he has "power, speed, and endurance," he is put to trial on the race course. In a greater or less degree, his *courage, resolution, temper* and *constitution*, as well as his form and proportions, are imparted to his stock.—The farmer who would make gain by breeding colts, should look to these things. His colts will always sell, if they have size and speed, even if less perfect and beautiful in form. By blending the Arabian blood, with that of the English race horse, the product has been considered, as having attained the highest degree of perfection. It has united to the size and bone of the English race horse, the round, smooth, beautiful form of the Arabian, together with his hardiness, fleetness, and ability to endure fatigue. By such crosses, the fleetest and best horses have been produced, that have been ever known. And in the use of such horses can our stock be soon perfected; but it cannot be done, by a resort to low bred horses, who have no blood on the side of the dam, and who are removed to the third and fourth cross, from the pure blood sire.

There are two leading purposes for which we rear colts. One is for the plow, and one for the road. For the plow, stout, heavy, compact built horses are needed, with no special regard to fleetness. For the road, as for stages, pleasure carriages and the saddle, in

addition to size, power, and form, *high courage*, and *fleetness or speed*, are indispensable. If the farmer therefore, designs to rear a colt for market, he must resort to a sire either celebrated himself, or, in the line of his immediate ancestry, for fine action, and great speed as roadsters; in the hope that he will impart thes properties to his stock. If for the plow, he will look for a sire possessing a kind, docile, gentle temper; of good size, large bone, and great muscular powers. As the stock will be, in a good measure, characterised by the sire, he will look for such qualities in the sire, as are especially adapted to the uses and purposes he has in view. If these few hints should influence the farmer to reflect on this subject, and be the means of inducing correct impressions, my purpose will have been answered.

Rochester, N. Y., June, 1849. L.

HEAVY FLEECES, AND HOW OBTAINED.

Eds. Genesee Farmer:—I have just sheared my sheep this year, twelve in number. *The twelve sheared eighty-five pounds and four ounces.* The weight of the sheep after shorn, together with the weight of their fleeces, I send you.

Weight of Sheep.		Fleece		Weight of Sheep.		Fleece.	
No. A.	87 lbs.	5 lbs.	15 oz	No. G.	98 lbs.	6 lbs	9 oz.
" B.*	79	7	5	" H.*	73	6	11
" C.	121	10	10	" I.	87	5	5
" D.	87	5	12	" J.	88	5	11
" E.	84	5	8	" K*	87	5	14
" F.*	79	7	0	" L,	160	13	0

The whole weight of the sheep was 1,030 lbs.; which would be an average of one pound of wool, to every twelve and a half pounds live weight of the sheep. The wool was not *cleaned* of course, but was *well washed* on the sheep before being shorn. The average weight of their fleeces would be 7 lbs. 1⅝ oz. C. was a yearling buck, and L. a two year buck. Those marked *, yearling ewes, each of which has raised her lamb. The remainder were ewes, each of which raised her lamb this season. All but the yearlings were sheared last year. Thus from twelve sheep, I have 85 lbs. of good marketable wool, and ten good lambs. Seven of the above were Paular Merinoes, including the two bucks, and the remainder about half bloods. The sire of most of the above sheep was from Col. Randalls' flock of Cortland Co., owned by R. D. Palmer, Esq., of this place.

If any one wishes to know how I raised my sheep to such heavy fleeces, I would say: in the first place, I keep but few, and keep them well; and secondly, I select those that shear the heaviest fleeces every year, for myself. When I commenced, my flock would not average four pounds. But by the use of the before mentioned sire, and the purchase of a few ewes, (which would not shear five pounds each,) and always selecting the heaveist shearers for my own use, they now average over 7 lbs. I believe I can get much heavier fleeces yet. You will see my yearlings shear heavier in proportion than the older ones. One yearling ewe 7 lbs. 5 oz., which is the heaviest I have ever had, and another 7 lbs. These sheep had good pasture last summer, and in the winter good hay and two quarts of oats per day. S. P. Chapman.—*Clockville, Madison Co., June*, 1849.

The Mountains of Segar, in Arabia, produce frankincense; and those of Safra the balm of Mecca, from the amyris opo-balsamum, which in the early ages sold for its weight in gold.

LIME AS A MANURE.

The following remarks on the action of Lime, and its application to the soil, are worthy the attention of practical farmers. They are extracted from an Address before the Yates Co. Agricultural Society, by John Delafield, Esq.:—

"Lime exists in plants in various proportions, viz: 32 per cent of the ashes of oakwood is lime; 27 per cent of the ashes of poplar is lime; 14 per cent. of the ashes of peas is lime; and 4 per cent. of the ashes of our wheat plant is lime. Lime is an essential constituent of wheat. It *must*, therefore, be in our soils, or our wheat never can be matured. Lime, therefore, is a *direct food* for wheat, and so also for other plants. This important element of our soil possesses several qualities most essentially and highly beneficial to the farmer. For instance, where applied to heavy clay soils, it renders them more open and easily worked, admitting the action of the atmosphere.

In all soils containing the sulphate of iron, lime will decompose the sulphate of iron, and thereby form plaster of paris, a material well known. When we apply lime in its fresh or caustic state it acts as a solvent, destroys the texture of matter in contact with it, or changes its nature. But when by exposure to the air this power is lost and it becomes slacked, then it is food direct for plants.

Now as to the best method of using lime, farmers are not agreed; and with some hesitation, I will state my practice and give my reasons. We see and know that twenty bushels of wheat, if produced from a single acre, will take from that acre about *seven* pounds of lime; then, as a bushel of lime weighs about seventy-two pounds in a caustic state, it will weigh, when slacked, about 100 pounds by the absorption of water; therefore, *one bushel* of lime is sufficient for *fourteen acres* of wheat or thereabouts; but as this supply is for one crop only, and as weeds and other vegetation will rob the wheat of its due share, I would apply ten bushels to the acre, and feel that it is sufficient for four or five years.

It is true that farmers in this country have applied from 60 to 200 bushels per acre, and there may occasionally be a farm where such a dose may do good, but more likely to do harm; at any rate, for the reasons above stated, it seems a wasteful and expensive system. For light soils, I would recommend a mixture of lime and muck—say one bushel of lime to a cubic yard of muck—applying 20 to 25 bushels of this mixture to an acre. But never mix lime with your manure heaps; this is a ruinous practice, because it expels from your manure its chief power; it destroys the ammonia, a salt which it is our aim to preserve."

Hens eating their Eggs.—In addition to the directions given on this subject in the April number of the Farmer, allow me to add, "Give them animal food." They require animal food as well as lime. Give them scraps, offal, fish (not salted,) &c. They will eat no more than they need. It would be well if hens that are confined in a pen, or small yard, could be let out each day an hour or two before sunset, that they may pick up bugs, worms, grass-hoppers, &c. Dig up the soil in their yard and let them scratch in it. H.

Idustry.—"There is more pleasure in sweating an hour than in yawning a century."

HEDGE FENCES

MESSRS. EDITORS:—I noticed in your June number a communication headed, "Hedges *vs.* Wire Fences," in regard to which you remarked that you would like to hear from other correspondents on this subject. The writer recommends the use of Italian Privet, Arbor Vitæ, and Red Cedar, for fences. The Privet, &c., will make an ornamental hedge around lawns, as a division for gardens, &c., but the man who plants Italian Privet, or Red Cedar, or Arbor Vitæ, as a hedge to protect his fields or garden from the inroads of cattle, will learn wisdom from his sad experience, and the cattle will have the benefit of his blunder.

In another article a correspondent talks of "*the sections where live fences are a forlorn hope, owing to their destruction by mice.*" Now, I know of no such place, and if there is such an one, it must be in the "*regions of perpetual snow,*" or some other outlandish "*region.*" I believe that, in any place where trees and shrubs grow, native shrubs can be found that will make good protective Hedges. In England more than a score are used for hedging—all perhaps intermixed in the same hedge. The Alder, the Elder, the White and Black Thorn, the Bramble, and many others I have often noticed in the same hedge. In our country, so extensive, and consequently presenting such a variety of soil and climate, plants must be used suitable to the locality; and I believe, when proper attention is given to the subject, each section will furnish its own hedge plants in abundance. The editor of the Southern Cultivator says that in Georgia the Cherokee Rose makes a hedge that is a sure protection against the inroads of man and beast. The *Norway Spruce* will make a good protective hedge, and the mice never trouble evergreens.

Now, I will give you my model for a beautiful protective hedge. Plant the Norway Spruce, say three feet apart, and between each plant a Prairie or some other free-growing running rose, and I will warrant a hedge that, for strength, beauty and durability, will be unequaled by any *wire* or *rail* fence. Any attempts to go through or over it, will be truly a "forlorn hope." More anon. RUSTIC.—*Rose Lawn, N. Y., June*, 1849.

FEEDING AND MANAGING MILCH COWS.

THE grasses, particularly the clovers, are the best summer food. When these begin to fail, the deficiency may be supplied by green corn, which is very sweet, and produces a large quantity of milk, of excellent quality. The tops of beets, carrots, parsnips, and cabbage and turnip leaves, are good. Pumpkins, apples, and roots, may be given as the feed fails.—Give only a few at first, especially apples, and gradually increase.

Roots are of great importance when cows are kept on dry fodder. Potatoes, carrots, beets, turnips, parsnips, artichokes, and vegetable oysters, are good.—The last three and cabbage and turnips keep good in the ground through the winter, and are fresh and fine in the spring, before the grass starts.

Potatoes produce a great flow of milk, but it is not very rich. A little Indian meal is good with them, to keep up the flesh and give richness to the milk; and this is the case with beets and most kinds of turnips, as they tend largely to milk. A little oil meal or flaxseed is excellent, in addition to the Indian meal, to keep up a fine, healthy condition, and impart a rich quality to the milk, and gives a lively gloss to the hair of cattle, and softness and pliancy to the skin.

In all cases of high feeding in winter, particularly when cows have but few roots, shorts or bran are excellent to promote digestion and keep the bowels open. Three pints each of oil and Indian meal, or two quarts of one and one quart of the other, is as high feed in these articles, as cows should ever have. On shorts, bran and roots, they may be fed liberally. Four quarts of Indian meal, in a long run, will dry up and spoil the best cows, so that they will never recover.

Carrots are among the very best roots for milch cows, producing a good but not very great mess of rich milk, and keeping the cow in good health.—Parsnips are nearly the same. Ruta-bagas are rather rich, and keep up the condition. To prevent any unpleasant taste in the milk from feeding turnips, use salt freely on them, and milk night and morning before feeding with turnips. Cabbage turnip, (or turnip-rooted-cabbage-below-ground,) has no such effect. It resembles ruta-baga, is raised in the same way, and yields as much or more.

Some keep cows in the barn, by night, in the warm season. They are saved from storms, and more manure is saved. There should be good ventilation in hot weather. Cows are much better for being kept in the barn nearly all the time in cold weather. To drink freely of cold water, and then stand half chilled to death, is highly injurious. But they should go out a little while daily, in favorable weather, and be driven around gently, for exercise. Inaction is death to all the animal race.

Cows and other cattle are badly managed. They are not *watered*, in short days, until ten o'clock in the morning and their last chance for drinking is about four in the evening. Thus they go sixteen hours without drink, and during that time they take nearly all their food, which is as dry as husk. They suffer to a great degree from thirst, and then drink to excess. As a remedy, give cattle a part of their breakfast, and then water them, and water again after finishing their morning meal; and if kept up, water at noon, and at night. If it be too much trouble to take good care of stock, then keep less, and they will be as productive and more profitable, if well managed. We have fed sheep that had constant access to water within eight or nine rods, and after eating thirty or forty minutes in the morning, they would all go and drink.

Milch cows are injured by being driven far to pasture, especially in hot weather, and still more if hurried by thoughtless boys. — [*Cole's American Veterinarian.*

CURE FOR THE HEAVES.—Not long since, in conversation with a gentleman who was driving a fine horse, he informed me that his horse had recently been cured of the heaves, (with which he had been severely afflicted,) in the following manner: He took a quantity of rye bran, five or six quarts at first, increasing gradually to a peck, wet or moistened it with warm water, and gave it to his horse. He continued this for a few weeks, increasing the temperature of the water each day, till in a short time he applied it *boiling hot*. The horse improved in condition, and was soon entirely cured. H.

WISCONSIN has an area of 31,511,360 acres, and a population not exceeding 300,000 persons.

CHEESE FACTORIES IN ASHTABULA CO., OHIO.

The editor of the Conneaut Reporter has been out rusticating, and gives some interesting items touching dairy operations in that section. He says such is the large and growing demand for cheese and butter, that where a few years ago two or three cows only were kept, the same occupants now number their 40, 50, and 60 cows—and at this time there is an increase of quite one-half over the number last year. It appears from the editor's statement that a new system of cheese-making has been successfully established, consisting of "Cheese Factories," as they are termed. He thus speaks of two of them now in operation in the midst of the heavy dairies:—

C. C. Wick, Esq., of Wayne, one of our most enterprising and business men, has recently erected his buildings and put in operation his "dairy," for the manufacture of cheese. He commands the product of 1,100 cows, owned in that and adjacent townships, and employs men and teams, who every morning take prescribed routes varying from five to ten miles each, and gather the "curds," which are neatly sacked by the dairymen, and then brought to the factory, where the process of "cheese making" is completed.

This furnishes employ for a large number of men and women, and by the aid of recent improvements and machinery, much of the labor requisite is rendered light, more convenient and simple than the usual mode. He had last week about 3,000 cheese on hand, made within about thirty days, and for beauty and fine flavor, they are not to be excelled. The weight of "curds" daily received, amount in the aggregate to some 3,500 lbs., and the number of cheese made daily about 75, varying somewhat as regards size. They are put up in sacks, and intended for the English, West India, and California trades, and vary from 15 to 35 lbs—the former, we believe are intended exclusively for the California market.—Wayne has long held a reputation for producing cheese equal to any other township, and friend Wick intends that the products of *his* dairy shall bear impress of being equal if not superior to any that have been sent from this country. In addition to this there are many large and fine dairies among the farmers. At Richmond, Merriman Barber, Esq., has another "Factory," and situated so as to command the daries of that town, Dorset, Andover, and a portion of Cherry Valley. He receives the products of about the same number of cows, and makes about the same weight of cheese daily, and carried on in the same manner of Wicks, but his cheese are more uniform in size, averaging 26 or 27 lbs., each—are put up in the best possible manner, and will command the highest rates in the home or foreign market.

By the adoption of this system, it is made advantageous to the farmers, as they contract in the spring for their "curds," which continues for the season, and are thus enabled to estimate very nearly their amount of resources, without reference to a fluctuating market. The prices paid for curds the present season is 3½ cents per pound, deducting therefrom the expense of teams for gathering, which receive a stipulated sum.

True glory consists in doing what deserves to be written—writing what deserves to be read, and making the world happier and better for having lived in it.

PEAS AND PEA BUGS

H. Y., in the March number of the Farmer, says: "We would like to know what advantage A. H. promises himself by keeping peas corked in a bottle for two years. The objection to sowing buggy peas is not that they are distributed in the field, as the number must be utterly insignificant, but that the bug destroys the germ." &c. To this I reply that in my article in the February number, I had sowing peas in the *garden* in my mind, and not field peas—and that I do not recognize the truth of H. Y's assertion that the number must be "utterly insignificant." If sown early it is nearly equal to one bug to a pea, and if it is worth while to get rid of one curculio with a plum, it is worth while to get rid of one bug to a pea. I am not sufficiently acquainted with the natural history of the pea bug to know if it is propagated in any other way—if not, by destroying the entire brood for a year, we would diminish the number, and by a series of experiments would get rid of the evil. It would of course require more seed to be sown of the peas kept for the first two years, for the bugs would have destroyed some of the germs; but no bugs would be resown for future multiplication, and instead of the pea bug spreading from the garden to the field, if *all* would try the remedy, in a few years we should have peas without bugs, as they were formerly.

I last year sowed three kinds of peas, to determine which was the earliest variety. They were the Prince Albert, Landreth's Extra Early, and the June Peas. They were all sown on the 28th of March. The first two were gathered for the table on the fifteenth June, and the last on the twenty-third June. The Prince Albert appeared to be about one day earlier than the Extra Early; but the Extra Early is the largest, and of the two I should think the best variety for general culture.

This year I sowed on the 31st March two rows of Extra Early peas side by side, the seed in one being taken from the largest and earliest pods of last year's crop, and the seed of the other from peas taken when the vines were pulled up at the close of the season. The difference is very manifest, the vines of the first row being, at this time, full three inches higher than those in the second.

Meadville, Pa., May, 1849. A. H.

The two Systems of Farming.—Under a low standard of agriculture, the object of the farmer is to collect the natural produce of the soil with the expenditure of as little money or labor as possible. But under a high standard he does not grudge expense of labor nor of manure, in order to obtain a proportionate increase of produce; and he studies to obtain this by cultivating crops congenial to the soil by growing them in such order that its natural powers shall be turned to the best advantage.—*Selected.*

The Earth is the great nursing mother of all plants: they in their turn minister, directly or indirectly, to the nutrition and sustenance of animal life; the lamb and the kid feed upon herbage, the direct growth of the soil: the wolf and other of the carnivora feed upon the lamb and the kid—thus they derive their food indirectly from the soil.

The deeper the soil is made, the deeper the roots can go in search of food.

LIGHTNING-RODS OR CONDUCTORS.

BY L. WETHERELL.

THERE are few persons upon whom a thunder shower, when passing directly over them, does not make an impression; and some there are who suffer most intensely from fear. This fear is not without cause; for many persons, every warm season over our country, are killed by lightning. VOLNEY reports that there were in the United States, in 1797, from the month of June to the 28th of August, 21 persons struck by lightning, of whom 17 were killed. In France, in 1819, 20 persons were killed by the same cause. That there is danger then, none can deny. And the instinctive dread which man has of death, is a sufficient cause for the fear and suffering which are excited in many persons, by a thunder shower.

From the fact that many lives and much property are destroyed annually by the agency of electricity, or lightning, for these are but different names for the same powerful agent, the inquiry arises in every thinking mind, is there any way to avert this danger? because, if there be, common prudence and forethought would seem to dictate its immediate application for the preservation and security of both life and property. From the discovery of the facts by experimenters with electricity, that certain substances repel, ward off, or are non-conductors of the electric fluid, while others attract it, and are called good conductors, Dr. FRANKLIN was led to invent the lightning rod, or conductor.

This rod or conductor is usually made of wrought iron, though copper is better, because less liable to rust or melt, and is, also, a better conductor. The rod should be three-fourths of an inch, or an inch in diameter; its extremity extending above the building into the air should be finely pointed, and gilded with some metal that does not rust: and no interruption must occur from the point to the lower extremity extending into the earth. M. GAY-LUSSAC, under the auspices of the French Academy of Sciences, has presented the following instructions:—"The rod of the lightning-conductor is about 27 feet in length: it is composed of three pieces, namely, an iron rod 25½ feet in length, a brass rod of 18 inches, and a platinum needle 2 inches long: taken together they form a figure resembling a cone.—(The length must be greater or less according to the height of the building.) The platinum needle or point is soldered to the brass rod with silver, and the place of junction surrounded by a covering of copper.

The brass rod is screwed into the iron rod, and secured by transverse pins. The iron rod is often composed of two pieces in order to facilitate its transportation; one of these fastens into the other by means of a long conical projection, 7 inches in length, which is secured by a transverse pin."

Much depends upon a good connection of the rod with the earth, after it has been properly fastened or attached to the building. It should terminate in a well, or moist earth, where the rod should be divided into several branches. The part of the rod in the earth should be covered with charcoal, which is also a good conductor. It is best to connect with water when it can be done.

Experience teaches that a lightning-rod such as has been here described, protects around it to a distance equal to twice its height; or for example: when the rod is 5 feet above the roof it protects a circle whose diameter is 20 feet, or ten feet in all directions: so if the building be large, more than one conductor will be necessary to furnish protection.—The experience and observation of more than 60 years show, that, when the rods or conductors are made and put up in accordance with the direction here furnished, which is not the speculation of some abstract theorist, but truth as discovered by observation and confirmed by experiment, they will furnish ample security and protection for both life and property against the effects and perils of lightning.

ARAGO, a French philosopher, says, that it is highly probable that a *silent* and gradual discharge of a thunder-cloud is often effected by the points of lightning-rods, and thus an explosion is prevented.—He further states, that "*lightning-rods not only render the strokes of lightning inoffensive, but considerably diminish the chance of the building being struck at all.*" So it seems that the conductor so facilitates the passage of electricity between the cloud and the earth, that a discharge is much less likely to occur over a building thus furnished—but admitting that it does, the conductor renders the stroke "inoffensive."

The farmers of Massachusetts, and especially of Worcester county, called the back-bone of the Bay State, have many of them provided lightning-rods for both their barns and their houses. Many more barns than houses are annually destroyed by lightning.

Lightning-conductors furnish the very best and cheapest insurance against the perils of lightning. How much wiser and better is the policy pursued by the man who provides for the security of both life and property against the effects of lightning, than that of him who provides for the latter only, by shifting the hazard to an insurance company: so that, though he be killed by the stroke of lightning which might have been averted by a conductor which would have cost less than his insurance policy, yet his friends have the consolation of knowing, that his forecast has secured for them a sum sufficient to repair all damages done to the building by the stroke.

Will not farmers and others consider the expediency, where they have not already done it, of providing lightning-conductors immediately for their buildings, and so secure and preserve both life and property from the effects of one of the most fearful, terrific and powerful agents of this nether world?

PLOWING.—SAW-DUST AS A MANURE.

MESSRS. EDITORS:—Under the above head I wish to state a few facts, and make a few suggestions. There is one thing necessary in all grain growing countries to ensure a good crop—that there should be good plowing. The first requisite to gain this end is to have good teams; (and, by the way, it is not so expensive keeping a good team as it is a poor one.) And the second is to have a good plow, and have it well rigged, with wheel, colter, and all. When the plow is taken into the field and tried, the plowman should measure with his eye the width of the furrow, and also the lap the plow will turn, and do it well. Then he should keep it in that position as to width, and hold steady and firm, and he will thereby make a straight furrow, and the land will be even and nice. The furrows should not be less than six inches deep for spring grain, nor less than eight for winter grain. I have heard many farmers make the assertion that it would not do to plow deep always, but that it would

do once in a long time. I think they are in an error. For certainly if we plow only four inches we have only four inches of soil for our crops to grow in: while, if we plow eight inches deep, we have eight inches of soil loosened for the crop, and there is no doubt but the crop would be benefitted in proportion to the depth of the plowing.

There is another error I think farmers labor under—that is of throwing up their ground into narrow lands from three to six paces wide. The best way, in my experience, is to keep the land as level as possible; and in order to do this the lands should not be less than twelve or eighteen paces. The ground will thereby be kept level and smooth, and the grain will grow evenly over the whole surface.

But methinks I hear the farmer say, "What shall I do to keep the water off my level land, if I do not throw it up narrow?" I will tell you. Plow your ground into lands of twelve paces, and after the seed is dragged in, clean out the dead furrows—and then draw furrows at right angles with the dead furrows, the same distance apart as the dead furrows are, and you have a square of twelve paces, or about thirty-six feet. And if the main ditch and the corners of the others are well cleaned out with the shovel or hoe. I will insure you against any loss by water standing on your wheat Try it, brother farmers, and I am sure you will like the plan.

Now, Mr. Editor, I wish to make an inquiry as to your opinion whether saw dust strown on to land and plowed in would be of any benefit. We have a saw mill on our place, and considerable saw dust has accumulated around and under it, and I think of drawing a quantity of it and plowing into a summer fallow: but if you think it will not be of any material benefit, I shall not do it. Last winter I drew several loads of it, together with several loads of forest leaves, into the barnyard for the purpose of trying to make manure of them. Since I have taken the Genesee Farmer, I have come to the conclusion that manure is the true philosopher's stone—it turns all to gold it touches. FARMER OF NIAGARA.—*Pekin, New York, May,* 1849.

REMARKS.—We suppose that saw dust possesses as much value as any other vegetable matter, even the dung of animals after it is leached of its soluble salts. It is the material that forms *humus*, which is the bread and meat of plants. Its action is not immediate, except so far as it renders compact clayey soils porous, and pervious to air and water. After it has gone through a species of carbonizing process, it becomes *humus*, the material that changes the color and darkens all virgin and rich antripical soils. It cannot fail of enriching any kind of soil, particularly if the saw dust is from the hard woods. Pine, hemlock, and the whole fir family would have a deleterious effect, unless long composted, and the resinous quality destroyed by lime or natural decomposition.

WIND MILLS.—In your May number, page 109, I find an inquiry about Wind Wheels. If your correspondent in Van Buren will take the pains to inquire of Mr. TRUMAN KIDDER, of Warren, Warren co., Pa., he will obtain all the information he wishes, and find exactly the wheel he wants. SUBSCRIBER.—*Warren, Pa.*, 1849.

WHY not furnish us a brief description, price, &c., for publication in the Farmer?—ED.

NOTES FROM A WISCONSIN FARMER.

MESSRS. EDITORS:—After wishing you the success a valuable work merits, I will jot down a few rambling thoughts.

I would merely hint to Dr. HOYT that I think him ahead of the times about the potato rot. Were his statements correct a preventive is at hand, as it might undoubtedly be effected by dressing the soil or vines with lime or ashes; for I have found the application of them sufficient to expel every kind of worm from the soil and crop. A half acre near the house, I supplied so liberally that an insect is rarely seen on it; and as evidence of this, neither hen or bird attempt to find them, even when newly plowed. Yet, even in this ground, the potatoes rot; and though the worm described is found in the corn fields and elsewhere, I have not been able to detect it or any other insect in the potato vines—although I have examined them for three years past, commencing as soon as I could see they were affected, and looking often until cold weather, splitting the vines, &c. They rotted three times as much on ground plowed ten or twelve inches, as where plowed not more than six.

Speaking of plowing leads me to another topic.—I do not know but our western land may ultimately need deep tilling; at present it appears not beneficial. I know not whether we have any land that, with the best management, would produce such a crop of corn as stated by Mr. SHELDON. I have fifty acres that will produce from seventy to ninety bushels per acre, by plowing from six to eight inches deep, and hoeing, (without manuring or harrowing,) which I would like to let some of the Genesee farmers have, that they might cultivate it thoroughly and see if it would not produce as much as heart could wish, of corn, wheat or root crops. The latter, with half cultivation, are produced in astonishing quantities.

I have a little native cow that has been kept out at the stack all winter, which will give as much milk and of as good quality as any Durham of her weight; but the art of obtaining as much butter or cheese therefrom, as we read in the Farmer that some have done, I am confident we do not possess.

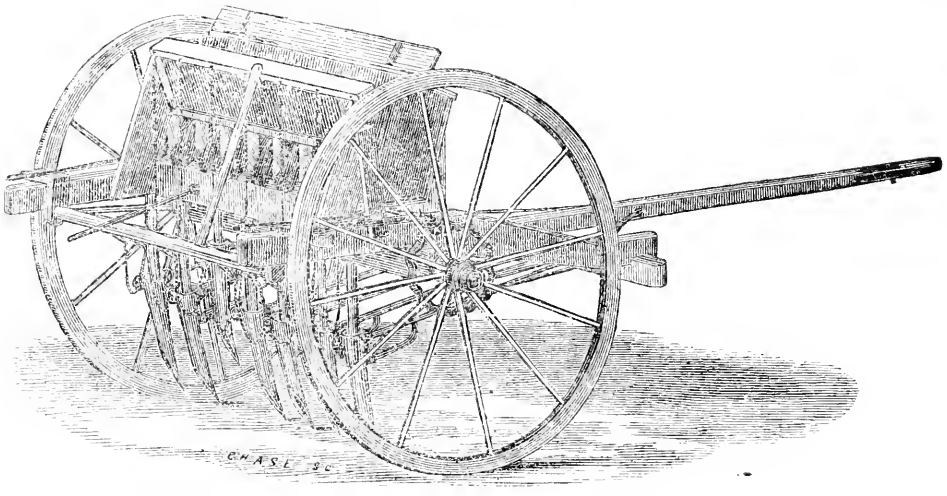
I am told that one man, a few miles from here, has commenced building wire fence, and finds it very expensive. We cannot go into it here so long as the merchants make us pay twenty-five cents per lb. for wire—and its utility and durability are doubted.

Our friend's views on "keeping the swinish multitude at home" are to the point. I intend to show the article to a well off Pennsylvania farmer, who keeps a large herd of swine and pastures them wholly in the road, in hopes that he will take the hint. That *Van* may be a decent man, aside from his politics.

The Horticultural Department of the Farmer we all much need in this section. It contains the most information on the subject of any journal that I have been privileged with reading.

Though perhaps more applicable to the farmers of New York and New England, (who farm it on a smaller scale than us westerners,) I feel disposed to continue the Farmer for the satisfaction of reading it; and learning what improvements are being made: also learning the views of many different and distant persons on various, and some very important subjects.

You perceive that I cannot write like some of your friends: but what I have written is in whole, part or none, at your service, as our Van Buren friend says. SMITH.—*Spring Prairie, Wis., May,* 1849.



SEYMOUR'S DRILL AND BROADCAST SOWING MACHINE.

MESSRS. EDITORS :—There is so much of the Baron Munchausen style in the advertisements of Drills in the Genesee Farmer, that your readers may think the effort is to out brag each other. I have no interest in bragging of SEYMOUR'S Machine. I have owned and used his broad cast sowing machine for the last eight years, and have noticed the improvements he has made in it. I have sown with it different kinds of grain, plaster, plaster and salt mixed, ashes, clover and herds grass seeds, flax, &c. At first it was an imperfect machine, but with the late improvements it works satisfactory in all respects.

The drill he has but recently attached, and I have had but little opportunity of seeing it work. I have been in several fields of wheat drilled in last fall, and have carefully examined the work. There is no intermissions or failure in the drills, but the wheat has come up uniformly in all of them. I have examined fields put in with PALMER'S drill last fall, and the year before, and have found some of the drills missing for rods together, and then a great deal too much wheat would be dropped. From the manner in which the wheat is agitated in SEYMOUR'S drill, I think a failure of dropping seed will rarely occur. I have no doubt but it will sow wheat which has been soaked and rolled in lime, or plaster, and barley and oats, although I have not seen it done. I have drilled in corn and beans, and my neighbors have drilled in beets and carrots, satisfactorily.

From what I have known of this drill and sowing machine, I have no hesitation in saying that I think it a valuable machine ; and it can be altered from a drill to a broad cast machine in a few minutes.—However popular drilling may become, some of the smaller grains, clover and grass seeds, plaster, ashes and lime, will always be sown broadcast

It is not always the horse upon which bets are the most freely offered, that wins in the race—so, don't start until SEYMOUR'S Machine is in the field. After a fair race, let impartial judges decide. At all events let the farmer be benefitted, whoever wins or loses.—MYRON ADAMS. *East Bloomfield, N. Y.*, 1849.

REMARKS.—The testimony of our valued correspondent is reliable, inasmuch as it is founded upon experience, as well as observation. We were favored with an opportunity of examining Mr. SEYMOUR'S drill, a few days since. It is well built, and possesses some improvements and advantages over many of the other drills now in use. Whether it will prove "A, No. 1," among the drilling machines recently offered to the public, is a question which remains to be determined. At any rate we think it worthy of a trial by grain growing farmers—for, whether best or second best, it will be found a valuable labor-saving (and seed-saving) article.

We will add, for the information of those who may desire to obtain this Drill, that it may be had on application to Seymour & Morgan, of Brockport; C. Seymour, of York : Anthony, Rountree & Everson, of Union Springs ; or P. Seymour, of East Bloomfield, N. Y. See advertisement in May number.

CATTLE IN CHAUTAUQUE COUNTY.

MR. T. B. CAMPBELL, of Westfield, N. Y., communicates the following to the *Cultivator* :—

The County of Chautauque, is perhaps, one of the best agricultural sections of the State of New York, and particularly adapted to the breeding and rearing of stock. Hence it has been an object among our farmers for a number of years past, to improve the breed of cattle, sheep and horses. The short horns, and that breed crossed with the common stock, have, until recently, been considered the most valuable, and yielding the greater profit. A few years since the Herford breed was introduced here, at first they did not meet with general favor; it was feared that they were too small, and that they would reduce the weight of our cattle. Experience has proved such conclusions entirely wrong. The cross with the Hereford and our cows, they being generally of the short horned descent, proves to be one of the greatest improvements in the breed of the Chautauque cattle that has yet been introduced, and will add much to the interest of the breeder and farmer. I cannot speak with as much certainty from my own experience, in regard to their quality for the diary, but those who have proved them, recommend the richness of their milk in the highest manner, and rank them in the first class for the dairy.

COST OF FENCES IN THE UNITED STATES.

BY J. S. SKINNER.

The cost of building and repairing the Fences in the United States, is enormous, almost beyond the power of calculation, and forces the enquiry, whether Legislatures ought not to be called upon to compel every man to keep his stock to himself. Then no man, who did not choose to do it, would be forced to enclose his land against the ravages of his neighbor's stock.

Mr. Biddle, a few years since, in an address before the Philadelphia Agricultural Society, stated that the cost of the fences in Pennsylvania amounted to $100,000,000, and their annual expense he estimated at $10,000,000. A distinguished writer on National Wealth, says: "Strange as it may seem, the greatest investment in this country, the most costly production of human industry, is the common fences which enclose and divide the fields. No man dreams that when compared to the outlay of these unpretending monuments of human art, our cities and our towns, with all their wealth, are left far behind. In many places the fences have cost more than the fences and farms are worth. It is this enormous burden which keeps down the agricultural interest of this country, causing an untold expenditure, besides the loss of the land the fences occupy."

Estimating a chestnut post and rail fence to last 18 years, and including inside fencing and repairs, the *annual* tax to the farmer holding 150 acres, will be $130 to $140, and judging from the present appearances, the tax is perpetual, and there seems but little hope of escape from it.

Did the intelligent farmer reflect a moment, and estimate the annual tax which his fences impose upon him, he would not rest till the system was abolished, or else the live hedge took the place of the present expensive fence of timber.

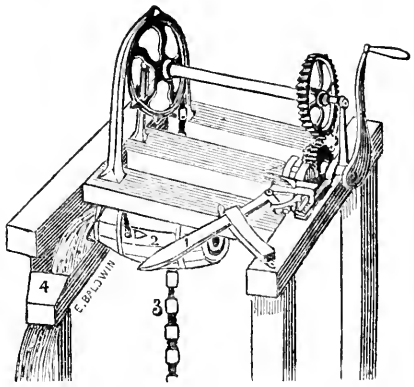
The system of compelling every landholder to enclose his property, is peculiar to the United States, with only the exception of England, where the fence nuisance appears again under the form of the hedge; and although these hawthorn hedges, when they are well tended—and not more than half of them are so—are beautiful objects, and answer all the purposes of protection against the inroads of cattle, still the public voice is beginning to cry out against them, because of the enormous amount of land required to support them. Each hedge is five or six feet wide at its base, and taking into account the amount of land they exhaust on either side, the whole space cannot be less than twelve or fourteen feet wide. When it is recollected that the divisions and sub-divisions of land in England are very numerous, the amount of arable land abstracted from the purposes of agriculture, is very great. It has been estimated at several million bushels of grain.—*Plough, Loom and Anvil.*

Wheat at the South.—This important crop has been more than half destroyed by frost, rust and insects. "Canal Flour" is coming here by the cargo. At present it is impossible to form a reasonable conjecture how much will be needed before the next harvest. Corn has been as high as 85 cents in this city, (Augusta, Ga.) It is now (6th June,) 65 cents.—Flour $7 a barrel. One thousand bundles of Northern hay landed within the last month, and is selling at $1 25 per 100 lbs. Corn promises well. Cotton less than an average crop by 20 per cent.

A NEW WATER DRAWER.

A. Green & Co.'s Self-acting, double Well Buckets.—This invention performs double the work with the same labor, that the common windlass bucket does. It is so simple in its operations that a child can as easily and safely draw water as an older person. It brings up the water from the shallowest wells without riling, and delivers it with the same certainty in the dark as in the light. From itse expedition it becomes very valuable, when large quantities of water are required for cattle, or in cases of fire.

It is a well settled fact, that all wells that are impregnated with any of the sulphurous gasses, do not give good water with the pump, owing to its taking the lower stratum of the water, which has not been exposed to the atmosphere, and lost its gasses—and from the accumulation of a mephitic atmosphere filling the closed well with its noxious properties, and surcharging the water; while the bucket, from its motion, constantly renews the air and takes the water from the surface, which has given up its gasses from their levity.



One of these machines can be seen in operation, on the farm of L. B. Langworthy, Esq., Ridge Road, three miles from Rochester—and in a few days, one will be on exhibition in this city. Messrs. A. Green & Co., of Port Byron, N. Y., are the manufacturers.

Use of Inferior Farm Implements.—We lately saw an old fashioned plow at one of our largest plow manufactories. On inquiry, we found that it was a pattern on which the proprietors commenced their business, some 15 or 20 years ago: and although a very good plow, for that period, it is superseded among all intelligent farmers, by other and more recently constructed patterns, which will do the same work, and with at least a quarter less labor.

We found that the single reason of its now being employed, in preference to others, with most of those using it is, that it has a point, or share of cast iron, costing some 15 cents each, which admits of being worn out at both ends, instead of one end only, as those now constructed. The saving of 7½ cents. in this share, determines its use: and this is saved at an additional expenditure of team power, costing not less than 25 to 50 cents per day, which, by the time the share is worn out, would amount to from $5 to $50, according to the soil. Such wiseacres are never guilty of taking nor reading agricultural papers, to teach them a better system of economy.—*American Agriculturist.*

MANUFACTURE OF CHEESE.

BY A. L. FISH.

[Continued from page 142.]

In raising the heat to scald the curd, it is not proper at all times to raise it to a given point with the same rapidity, because, sometimes when the curd appears ready to scald, a rapid increase of heat will soften instead of hardening it, owing to the rennet not having time to perform its office properly. At other times it may be necessary to raise heat speedily, in scalding, to keep pace with the effect of rennet, which is accelerated by the milk being nearly sour. The slower rennet acts upon curd the longer time is required to raise and hold a scalding heat, never exceeding one hundred degrees, Fahrenheit, except to suppress a speedy action of rennet with sour milk: then, an excess above blood heat will retard its operation and keep pace with its effect. The cheese-maker should bear in mind, that heat and rennet are the principal agents used, and success depends much upon their action being properly combined throughout.

"Are any other than calves' rennets used, and what is the best method of preserving and preparing them for use?"

Swines' rennets were formerly used, mixed with those of calves, to make a cheese soft and tender, and those of sheep and beeves were used to harden curd and keep cheese in a pressed shape; but I know of no dairyman that now uses them.

Whatever plan is adopted to preserve rennets for future use, care should be taken that the decomposing properties of the stomach do not continue to act, and the strength evaporate. When salted and dried the rennets should be kept in a dry atmosphere, or the salt in them will attract moisture, and soon destroy their best properties. It is argued by many experienced dairymen, that the stomach, with all its contents pickled together in salt, will make more cheese, and of as good flavor, as when dried without the curd. But I would ask, if meat were salted with all the blood and animal fluids in it, would it be as good flavored at the end of a year, as if well dressed and salted? And would not a quantity of food, half digested, salted with the stomach, materially effect its flavor, if kept a long time? Beef and pork are sold in market, after being in salt one or more years, at a reduced price, as "old meat," having lost its best flavor.

The flavor of cheese depends much upon the flavor of the rennet used. Therefore, I think splitting the rennet, and stretching it with sticks, so that it will be of a single thickness, and will dry quickly, is the best and surest way to preserve a good flavor.

To prepare Rennets for use.—Take as many gallons of water as rennets in number; put them in the water, blood warm; soak them twenty-four hours; stir them frequently in the time; strain the liquor and let it settle; make it as salt as possible; if any skum rises it should be skimmed off. While this liquor lasts a uniform strength may be relied upon. It should be stirred to the bottom before being used.

"Is milk more apt to sour from the effect of electricity, in tin vessels, than in wood?"

The ease with which tin vessels are kept clean, makes them preferable to wood. An opinion conceived by many, that tin vessels have a tendency to sour milk, at a season when thunder showers are frequent, is not an objection to their general use. There are other causes for milk's becoming sour, to be taken into account first. Excitement of cows from any cause will affect their milk, and they are more excitable in changeable weather, than when the weather is steady, cool or warm. In hot, damp weather, more cows will be in heat, and give bad milk, which if mixed with other milk at evening, will be a more direct cause for sour curd than any effect of electricity upon milk, after it is taken from the cow; and in such weather, milk vessels are not thoroughly dried, after being used, in which state they often get foul. An old barrel, put up in form of a leach, near the dairy room, and ashes thrown into it occasionally, and leached, and the lye used freely about cheese-cloths, press, &c., will remove one cause for sour curd. I use no wood vessels in my dairy.

"Is there danger of pressing a cheese too hard?"

Not any. If it has been over heated in the milk or curd, it may be pressed so dry that it will be a *lifeless* (tasteless) cheese, and so it would be if it were pressed lightly.

"Should the animal heat be allowed to pass off from the morning's milk?"

The most perfect affinity should be maintained among the constituent parts of milk that is curded or worked together, throughout, that it may not waste in working; and plague in curing. It is, therefore, necessary that all should be cooled and warmed alike.

A. L. Fish.—*Litchfield, Herkimer co., N. Y.*, 1849.

BENEFIT OF AGRICULTURAL PAPERS.

Friend Moore:—I send you pay for thirty copies of the Genesee Farmer. It is all I can find, in this place, that wish to subscribe for an agricultural paper; many more, I am satisfied would, were they not ignorant of its value. There is certainly a vast difference in the cultivation of two farms, and fixtures about them, where the one is done by a man who regularly reads an agricultural journal, and the other by one who reads nothing on the subject. It is a matter of surprise to me that there are so many in this county that read nothing on this subject. There are farmers of my acquaintance who refuse to subscribe for your journal for the reason that their crop of wheat failed the past year.

I know two men owning farms joining each other in the town of ———. One of them has been a constant subscriber to the Genesee Farmer for several years past. His fences, barns, stables and farming implements are as they should be; his stock well provided for; his farm produces bountifully. The other knows enough about farming without reading; or, in other words, does not wish to be a *book farmer;* and his farm shows it to any who may pass that way, for it is enclosed with the poorest fence in the town; his farming implements (what few he has) are in proportion. He has no shelter for his cattle but the broadside of his barn, or a small stack of straw; he has no grainery in either of his barns, and was necessitated this winter to loan the use of one from his better managing neighbor, to store a small crop of wheat which he did not get threshed in time for fall market. The former works upon good sound theory, and it gives him pleasure and profit—the latter, of necessity, and if he happens to have a good crop, (though he seldom does) he is a lucky man. And, friend Moore, it is universally the case, as far as my acquaintance extends, that those farmers who read the most are the closest and most accurate observers, and universally get the best pay for their labor and capital invested. A Friend of Improvement.—*Seneca Co., N. Y.*, 1849.

Spirit of the Agricultural Press.

A NEW MANURE.—Robert Bryson, Esq., of Cumberland county, about eight miles from Harrisburgh, has been experimenting for the last ten years, to make exhausted tan-bark available and valuable as a manure. Besides his magnificent farm, he likewise carries on the tanning business. Finally, after a great deal of expense and many failures, he has succeeded in discovering a method of producing from the tan, an efficient manure. This is his plan: He has his tan wheeled out on to a level piece of ground, and leveled off, two or three feet thick. Over this he spreads a layer of two or three inches of lime, and over that again a stratum of tan, then a layer of lime, and so on. He lets the beds prepared remain for two years: at the end of this time he finds himself in possession of a bed of manure, the effects of which upon the land, can hardly be surpassed for the richness of its product and the durable fertility which it imparts. —*Lancaster Co., Pa., Farmer.*

PROPER SELECTION OF STOCK.—At a late agricultural discussion in Derbyshire, Mr. G. Greaves remarked that the choice of a breed of stock was as important as the management. It seemed to him that enough attention was seldom paid to the particular kind of produce it was intended to obtain from stock. The same breed did not answer for feeding and for the dairy too; for the early maturity of stock and the propensity to fatten, were most observable whenthe generative functions were not so perfect, whereas the good milker was almost always a good breeder. For early feeding stock, it would always be advantageous to mix good nursing dames with sires that had a great tendency to fatten. He agreed in the opinion that feeding stock should be kept well when young, but calves intended for the dairy, and ewe lambs for the breeding flock, should not be made fat.—*Cultivator.*

A FREAK OF NATURE.—A communication in the Boston Courier from the late editor of that paper, Mr. Buckingham, states that Mr. William Carter, of Cambridge, has a healthy and well-formed calf, having a coat of *wool* instead of hair! There is no perceptible difference in the appearance of the animal's hide, from that of a sheep of the same age. Like the sheep, the face and lower part of the legs are covered with short and not very pliant hair; the rest of the body has a covering of wool, which, to all appearance, may afford as liberal a fleece as a true Saxon or Merino.

CAMELINA SATIVA.—Some of the Georgia planters, for want of sufficient encouragement in the cultivation of the cotton-plant, are beginning to give attention to the culture of Camelina Sativa, (or gold of pleasure,) an unctious seed resembling flax-seed, from which oil is expressed in the same manner as from flax-seed. The plant is a native of Siberia, but well adapted to our southern climate. It is an annual growing from two and a half to three feet high, and yields a large and certain crop. It is already in demand in this country.

WORTH TRYING FOR.—The London Athenæum says that the Belgian Government has instituted two prizes of five thousand francs, with a gold medal and one thousand francs respectively; the first for the best work on general agriculture, the second for the best treatise on the disease of the potatoes. Foreigners are invited to compete, and manuscripts are to be sent to the Ministry of the Interior before the 1st of January in next year.

EXTENSIVE COAL FIELD.—The great central coal field of the Mississippi valley covers an area of 70,000 square miles, or 44,800,000 square acres—six times the area of all the coal fields of Great Britain; and yet this vast supply is seldom taken into the account, when estimates are made of the coal resources of the United States.

SINGULAR MODE OF KEEPING FISH ALIVE.—Those worthy individuals who take delight in Izaak Walton's art, and who, moreover, are in the habit of sending the result of their sports to their epicurean acquaintances, must learn an indispensable piece of information, viz.: how to keep fish fresh. This may be done by soaking the soft part of bread in brandy, and inserting it into the gill of the fish, while it is yet alive, and afterwards sprinkling it over gently with brandy. Thus prepared, and carefully packed in straw, the fish will keep alive ten or twelve days, as may be proved by putting it in fresh water at the end of that time when, after a few hours' immersion, it will recover from its protracted drunkenness.—*London Literary Gazette.*

RULES FOR RAISING POULTRY.—1. All young chickens, ducks and turkeys, should be kept under cover, out of the weather, during rainy seasons.

2. Twice or thrice a week, pepper, shallots, shives or garlic, should be mixed up with their food.

3. A small lump of assafœtida should be placed in the pan in which their water is given them to drink.

4. Whenever they manifest disease, by the droopage of the wings or any other outward sign of ill health, a little assafœtida, broken into small lumps, should be mixed with their food.

5. Chickens which are kept from the dunghills while young, seldom have the gapes, therefore it should be the object of those who have the charge of them, so to confine the hens as to preclude their young from the range of barn or stable yards.

6. Should any of the chickens have the gapes, mix up small portions of assafœtida, rhubarb and pepper, in fresh butter, and give each chicken as much of the mixture as will lie upon one-half the bowl of a small teaspoon.

7. For the *pip*, the following treatment is judicious: Take off the indurated covering on the point of the tongue, and give twice a day for two or three days, a piece of garlic the size of a pea. If garlic can not be obtained, onion, shallot, or chives will answer, and if neither of these be convenient, two grains of black pepper, to be given in fresh butter, will answer.

8. For the *snuffles*, the same remedies as for the gapes will be found highly curative, but, in addition to them, it will be necessary to melt a little assafœtida in fresh butter, and rub the chicken about the nostrils, taking care to clean them out.

9. Grown-up ducks are sometimes taken off rapidly by convulsions. In such cases, four drops of rhubarb, and four grains of cayenne pepper, mixed in fresh butter, should be administered. Last year we lost several by this disease, and this year the same symptoms manifested themselves among them; but we arrested the malady without loosing a single duck, by a dose of the above medicine to such as were ill. One of the ducks was at the time paralyzed, but was thus saved.

VINEGAR.—Many families purchase their vinegar at a very considerable annual expense: some "make do" with a very indifferent article, and others, for want of a little knowledge and less industry, go without. It is an easy matter however, to be at all times supplied with good vinegar, and that too without much expense. The juice of one bushel of sugar beets, worth twenty-five cents, and which any farmer can raise with no cost, will make from five to six gallons of vinegar, equal to the best made of cider or wine. Grate the beets, having first washed them, and express the juice in a cheese press, or in many other ways, which a little ingenuity can suggest, and put the liquor into an empty barrel, cover the bung with gauze, and set it in the sun, and in twelve or fifteen days it will be fit for use.—*Farmer's Advocate.*

CHESS—TRANSMUTATION.—Reading the article with the above caption in your paper this morning, taken from the Genesee Farmer, I send you the following for insertion in the Advertiser, or for the Times, as you think proper:

In reply to H. W., of China, N. Y., I know from my own experience, and from the experience of others, that mowing or feeding off wheat in the spring will not always change it to chess, nor do I believe it ever will. I believe the wheat was mown or fed, as stated, but do *not* believe the wheat was turned to chess. I think Simeon J. Barrett mistook a small grain of shrunk wheat for chess. If you publish this, I may send you another communication on the subject.—*Detroit Advertiser.*

AGRICULTURAL FAIR IN MICHIGAN.—The State of Michigan, following the example of New York, has organized a State Agricultural Society, and the first Fair is to be held in Detroit on the 26th and 27th of September next, provided a sufficient sum of money shall be raised there to defray the local expenses. It can hardly be doubted that the amount, not exceeding $500, will be promptly subscribed. We congratulate our Michigan friends on this enterprise, and anticipate from it, if energetically and judiciously prosecuted, the most beneficial results. No State in the Union is more favorably situated for profitable agriculture than Michigan.—Her soil is fertile, her climate is mild and salubrious, and almost surrounded as she is by water, she has, in connection with her extended system of internal improvements, and navigable streams, unsurpassed facilities for sending her surplus products to market.—*Buffalo Com. Adv.*

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

HARDY FLOWERING TREES AND SHRUBS.

THIS is the season of the FLOWERS' TRIUMPH. No matter how indifferent man may profess to be to their influence; he may wish to banish them from the world as *useless*, and substitute in their place what he calls *useful*. He may boast his want of taste and refinement—his insensibility to the charms of grace and beauty—he may proclaim his own ignorance, and glory in his own shame;—yet that man remains to be found whose feelings are not touched, and his heart captivated by the lily and the rose, and their companions in beauty. He has not traveled far on his journey through life, who has not stopped to do homage to the flowers.

This is not only the season of the FLOWERS' TRIUMPH, but it is the season that awards the diligent cultivator a hundred fold for all his toils. Many who had resolved on better things, have now bitterly to lament that the spring is gone, the season of flowers come, and their grounds present the same unsightly appearance as in former years, while those of their neighbors literally "*bud and blossom as the rose.*"

The following are a few select Trees and Shrubs that have bloomed during the month of June:

The *White flowering Horse Chestnut*, is a noble tree, considered in all respects—*form*, *foilage* and *flowers*—entirely free from disease of any sort, and flourishing in all soils and situations. It is becoming more and more a favorite for street, park and door-yard planting. It is fast taking the place of the *Button-wood*, which is rapidly dying off from some disease that has been preying on it for a few years past. Nothing surpasses the beauty of a fine Horse chestnut in bloom. The dense and luxuriant mass of foilage form a rich back ground for the flowers which rise up in spikes a foot or so in length. There are red and yellow flowering species, and several rare varieties, but whilst all are desirable for large collections, none of them equal the common or white flowering for general planting. Propagated from seeds planted either fall or spring; the rare ones are budded or grafted on the common.

The *Mountain Ash* is another beautiful tree of a habit similar to the preceding—that is, with a round or regular shaped head. The foliage is small but dense. The flowers appear in umbels, like those of the carrot or parsnip, and are succeeded by clusters of reddish yellow berries, that constitute the peculiar beauty of this tree, in the Autumn. There are two species commonly cultivated, the one European and the other American. The European has the most compact and regular habit; small, but greater density of foilage, and smaller and deeper colored fruit. The American is more spreading or irregular in habit—large foilage and fruit. Each has a beauty of its own, suited to different tastes and positions in a different landscape. We like them both. They grow rapidly enough to suit any one of moderate patience. The berries are gathered in the Autumn, the pulp washed off, and the seeds buried in a dry soil or sand for a year before planting. Most of the seeds of the American species will grow the first year, if scalded. It is usually said of this tree, and truly, that "it needs no pruning and is never out of shape."

The *Flowering Ash*, (Ornus europasus.)—This tree, although long cultivated, is by no means common—yet it well deserves a place among select trees. It grows vigorously and with moderate rapidity. It forms a round dense head—foilage, deep green and glossy—and the flowers, which are of greenish white, are produced in large clusters about the middle of June. It is usually grafted on the common species of Ash.

The *Laburnum*, or Golden Chain, is one of the most elegant trees. It has a spreading, irregular habit, rich deep green foilage, and pendulous racemes six to twelve inches long, of golden yellow blossoms. There are two species, the *common* and the *Scotch*, that resemble each other; the latter flowers a week or so later. There is also a purple variety, with pendulos flower spikes like the others, but of a reddish purple color, with a yellow tinge. These three make trees twenty to thirty feet high. Of the same genus (cytussus,) there are many dwarf and pendulous growing species, with white, yellow and purple flowers, that make very pretty border shrubs, and when grafted on the common sorts, four to six feet high, make charming little trees for a lawn. Of these we have now before us the *purpureus*, with slender branches and delicate, pretty blossoms; *triflorus*, three flowered—yellow flowers in great profusion; *falcatus*, or sickle podded, also yellow. The common sort, first named, is propagated from seeds, as the locust; the others are increased by grafting, budding or layering. While speaking of these we may mention another fine plant akin to them, the common or Scotch Broom—a shrub that grows six or eight feet high, small leaves, and bright golden yellow flowers, now, (June 16,) in full bloom. Raised from seeds, also, or layers, as may be convenient.

Flowering Thorns.—These rank among the finest spring or June flowering trees and shrubs. The *Double White* has its flowers in large clusters of charming little double, pure white blossoms, changing to pink as they decay. The *Double Scarlet*, is quite rare, only different in color from the preceding. Then there is the single pink, and single scarlet; the centre of the flowers of both is white, and adds much to their beauty. They have the delicious fragrance of the English Harwthorn. We hold all these to be indispensable in a nice collection of flowering trees and shrubs. They are increased, like fruit trees, by grafting or budding on the common thorns. We see no difficulty in the way of making hedges of these beautiful thorns. They can be propagated by budding rapidly, and at one year from the bud will be fit for hedge rows; and, if mixed with *Privet*, to fill up spaces, we think that, for the enclosure of lawns, &c., where beauty would be desirable, these would be just the thing. We can imagine nothing more beautiful than a hedge of these Double White and Scarlet thorns, in full blossom, enclosing a bright green lawn.

The White Fringe, (Chionanthus virginica,) now (June 18) in full bloom—a distinct and beautiful shrub or small tree, ten or fifteen feet high, with very large, glossy foliage, and pure white, delicate flowers, resembling cut paper. It is increased from seeds, but they will lie a year in the ground before they grow. It may be grafted on the common ash. It loves a moist soil. In its own class of trees it has no rival.

The *Spiræas* are a fine class of shrubs, ranging from about two or three to twelve feet in height, and bearing immense numbers of beautiful clusters of white flowers. The *Spiræa lanceolata* is the most

charming of all. Its clusters of blossoms of the purest white, contrasting with its bright green leaves, presents a picture enough to enrapture the lover of earth's beauties, and stir a chord of feeling in the most senseless heart.

The *Rose Acacia* is a beautiful shrub, deserving a place in every collection. The *Lilacs* are well known, and the common purple and white generally cultivated. The *Persian Purple*, *White Persian*, and *Mimosa leaved* are fine and rare sorts.

HINTS FOR JULY.

See that your Dahlias are carefully tied up to stakes, and all superfluous shoots taken off. Water plentifully in case of drouth, and have an eye to the attacks of insects—and in a little while they will pay you liberally for the attention.

Plants that are headed out, in masses—such as *Verbenas*, *Roses*, *Petunias*, *Phloxes*, &c., require attention. The great object to be aimed at is to have the ground entirely covered by a mass of foliage and flowers. To secure this, the shoots must be laid down, and where necessary, staked to the ground.

Tie up neatly all Herbaceous Plants. Cut off withered flower-stems, and keep your beds free from weeds.

Fruit.—As soon as the fruit is gathered, strawberry beds should be thoroughly free of weeds, and of the runners, if the beds are young; but if old, plant out good strong runners for a new bed, and spade down the old ones. Choose damp, cloudy weather for this; and if you can find such weather, no matter how soon you "fix" your strawberry bed.

Pear trees for Pyramids, should have their side-shoots pinched to keep them in shape. It is much better than a heavy pruning in spring or winter, which induces such vigorous growth as usually retards bearing. *Dwarf* and *Pyramidal Cherries*, and indeed all Garden or dwarf trees, are much better for this summer pinching, as it in a great measure obviates the necessity of a pruning the following spring, and hastens bearing.

In raising *standard trees*, the side branches should never be wholly removed until the stem has acquired strength and proportion. When they are removed, the tree becomes *top-heavy*, and unable to support itself. Pinching occasionally these side branches keeps them in balance and assists the tree in acquiring strength where it is needed.

Effects of the cold and wet weather on the Peach.—In the month of June every year the young leaves of the peach tree, are more or less affected by changes of temperature, as we suppose. Some hold the opinion, that it is caused by insects, but we think without good reason. This season it has been much more injurious to the trees in this vicinity than we have ever known it to be before. The leaves have been wholly affected, becoming swollen, thick, heavy and crumpled, and will all drop. The trees have suffered greatly from it, particularly large trees of bearing size. In many cases the sap has become diseased and is producing what is known as the "gum," to which all the stone fruit trees are liable.

We can think of no other cause for this malady than our cold and exceedingly wet weather in May and June. Our trees in this region, passed through the severe winter unscathed. They blossomed well, set their fruit abundantly, and had commenced growing vigorously. We apprehend, however, that a great portion of the crop will be lost through this malady. Trees that have suffered in this way will require particular attention, or in many cases they may be lost entirely. As soon as the disease terminates, (which will be when the weather becomes steadily warm,) and the tree begins to grow again, the parts most affected, and all feeble or diseased branches, or parts of branches, should be removed, so as to encourage the production of vigorous, healthy wood for next year's bearing.

It may be added, that as far as we have observed, young nursery trees do not seem to suffer more than to be slightly retarded in their growth. The shoots made by the buds inserted last season are generally not affected at all.

THE NEMOPHILA.

The *Nemophila insignis* is one of the prettiest of all dwarf annuals for the border, or for masses on a lawn. Its foliage is delicate and fine, and its flowers of a beautiful blue. It blooms in great profusion, and a long time. We extract the following notice from the Horticultural Magazine (English.) There is another new and rare one, *maculata*, of a fine dark violet, with a white spot in the margin of the petal, worthy a place among the select annuals:

This is a showy annual of a dwarf growth, which soon displays abundance of small blue flowers, a little cupped, having a pure white eye, and deeply cut leaves. Its seeds may be sown at different seasons, a few in April, and a few at the end of September; for if the winter be not very sharp, they will bloom very early in spring, and those sown in the spring will come into flower by the time the autumn-sown ones decline. The young plants will bear removal, but I prefer sowing them where they are to bloom; there is, however, no harm in planting out the few that you take up from a patch when they have been sown too thickly; and some gardeners make them regularly potted plants, and therefore sow all in one place, and pot off or plant out at pleasure. They are very beautiful till they begin to straggle along the ground, when, although they still keep flowering a little, I should advise you to pull them up to make room for something better.

Apples.—(A. T., Mich.) The Mother and Melon apples are first rate; the latter, particularly, we know to be, as you say, "A, No. 1." We never thought so much of it as we do now. We have had it in fine eating on the *first of May*. To our taste, it is far superior to the "Wagoner," which is a good apple.

EFFECTS OF THE PAST WINTER ON TREES.

FROM many portions of the Western States we have information that the severity of last winter has been exceedingly distructive to trees. A friend in Illinois, says :—"*All* of our orchard peaches, and *most* of our choice cherries, (and we had 'a good few' of them, as our Yorkshire neighbor says,) are dead—defunct, *winter-killed* ; not blighted a la——, but killed by cold. And many, too many, of our pears are in the same fix, and *eke some*. Our two or three years old nursery peaches mostly dead, and one year old two-thirds dead, and last years buds half dead. Most of the *native seedlings still alive*, and on the lower limbs (which were buried in snow,) there were abundance of flowers, and will be some fruit. Mr. ——, of Wisconsin, writes me that nearly all of his pears and plums in the nursery are dead, and also many apples."

The nursery business here has quite enough of toil and trouble for us, but in a climate like that of portions of the west, how must it be? What a thorough cure such experience as the above would be for some persons who seem to be laboring under a delusive idea that the nursery business is one of the most lucrative and delightful in the world. Before they get into it they dream of Fruits and Flowers, pleasure and riches ; after they get fairly embarked in the matter, they sometimes dream of *excessive cold, heat, frost, snow, hail-storms, blight, insects, rain, drought*, and a thousand other things that annoy the poor cultivator.

In Western New York we had a remarkably severe winter, but vegetation seemed to suffer very little. We have not seen a single tree, old or young, winter killed. Pawlonias, Ailantus, Catalpas and other tender trees are quite uninjured. Young Deodar Cedars, Auracarias, and other evergreens planted out last summer, and not protected at all during the hardest part of the winter, are perfectly safe. Roses generally, had more of their tops winter killed than usual, but this has done them very little harm.

Fruit trees are very promising, as we stated in the June number. Apricots, Nectarins, Peaches, Plums, Apples, and indeed all the fruits, are bearing at this moment, an abundant crop. The young trees in the nursery never looked better. The buds of peaches, pears, plums, and indeed all the fruits look unusually well. This is a great contrast with the state of things in Illinois, Wisconsin, &c., which our friends communicate.

CULTURE OF ORCHARDS.—It is an indispensable requisite, in all young orchards, to keep the ground mellow and loose by cultivation ; at least for the first few years, until the trees are well established. Indeed, of two adjoining orchards, one planted and kept in grass, and the other plowed for the first five years, there will be an incredible difference in favor of the latter. Not only will these trees show rich dark luxuriant foliage, and clean smooth stems, while those neglected will have a starved and sickly look, but the size of the trees in the cultivated orchard will be treble that of the others at the end of this time, and a tree in one will be ready to bear an abundant crop, before the other has commenced yielding a peck of good fruit. Fallow crops are the best for orchards, —potatoes, vines, buckwheat, roots, Indian corn, and the like. An occasional crop of grass, or grain may be taken.—*Downing*.

ANSWER TO CORRESPONDENTS.

DEGENERACY OF APPLES BY CONTINUED GRAFTING.—I have been informed by some of our oldest inhabitants, that the uniform effect of grafting successively from a graft, is, degeneracy of the fruit; that the degeneracy commences with the third remove from the parent stock, and is increased with each successive departure: Thus the fruit of a graft taken from a seedling stock, is better than the original that the fruit of a graft taken from this graft, will be about equal to the preceding; but that the fruit of a graft taken from this latter, will be inferior to the preceding; and that the next will be still worse, and so on indefinitely. *Query.*—Is it always so? H.

No, not *always* so, nor so in any case. What would be the natural result of this law of *degeneracy?* Why, it is plain that our best apples would, in perhaps fifty years from the seed, be no better than crabs. Bad modes of propagating, the use of bad stock, bad culture, &c., &c., causes degeneration in trees and consequently in the fruit, but grafting alone, under proper circumstances, does not, nor never has, caused degeneracy. On the contrary it may, and in many cases does, greatly contribute to the amelioration of fruits, as most cultivators very well know.

GARDEN SNAIL OR SLUG.—Can you inform us of any remedy for the snail? Many of our gardens in Palmyra are badly infested with them. They cut down our cabbage plants, tomatoes, cucumbers, squashes, corn, pumpkins and choice flower seed plants, almost as fast as we can get them out of the ground. They appear early in morning and evening, by hundreds. The first we saw of them was last season, destroying our cabbages.

We have tried ashes and lime, and for a time it makes them writhe in pain, but soon appears to loose its strength and they cease to mind it. Our borders are also troubled with black ants, large and small. Any information in the Farmer will greatly oblige many here, and elsewhere as I learn. R. G. PARDEE.—*Palmyra, N. Y.*, 1849.

AIR-slacked lime can hardly fail to destroy the slugs. It should be applied early in the morning, in the evening, or after a rain. Lime water and other caustic solutions are used sometimes with success. We have seen it suggested somewhere to place at short distances through the garden, small heaps of bran. The slugs assemble round these and on the more easily be killed. During the heat of the day a great many may be destroyed in the shade of garden fences, plants, or other objects about the garden.

Ants are destroyed by inundating their retreats with *strong salt water, boiling water*, or *water and oil*. To prevent them from injuring fruit, a ring of some sticky substance like paint, may be put around the tree, and renewed, to prevent their ascent—or a band of wool, or some such material, will effect the same object. If they once get into a tree they can be trapped with vials of sweetened water hung among the branches.

EARLY RICHMOND CHERRY SEEDS.—(I. F.) We know of no reason why good well ripened seed should not grow. Your failure may be owing to some mismanagement in saving the seed ; sometimes we fail entirely with the Mazzard and others. The seeds of all cherries should either be sown immediately when gathered, or be cleaned of the pulp and put away in earth or sand till planting time.

THE APPLE TREE BORER.—(A Subscriber, Windsor, N. Y.) This is no doubt, the insect you have found in your trees. The larvæ is thus described by Harris, in his "Treatise on Insects" —"Whitish grubs nearly cylindrical, and tapering a little from the first ring to the end of the body.—The head is small, horny and brown ; the first ring much larger than the others, the next two are very short and with the first, are covered with punctures and very minute hairs; the following rings to the tenth inclusive, are each furnished on the upper and under side, with two fleshy warts situated close together, and destitute of the little rasp like teeth that are usually found in the grubs of the other capricorn beetles; the eleventh and twelfth rings are very short, no appearance of legs can be seen, even with a magnifying glass of high power." The larvæ state continues two or three years. The safest and surest method to get rid of them, is to cut them out carefully with a knife, or they may be killed by a wire thrust into their holes.

PARADISE STOCK.—(T. H., Richfield.) The usual method of propogation is by layers. Those used in this country have so far been mostly imported.

BOTANY.

STRUCTURE AND FUNCTIONS OF THE STEM.

PLANTS are divided into *exogenous* and *endogenous*.

The *exogenous* are those which grow by accumulation, or layers of matter from the outside. This class includes nearly all forest trees and most shrubs and herbaceous plants of temperate climates.

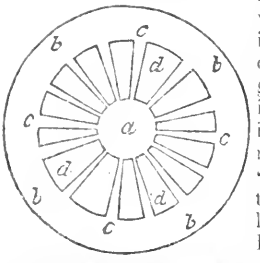
The *endogenous* plants are those which grow from the inside, or by accretion of matter within that already developed. Most of the bulbous plants of temperate regions, all the grasses, and the palms, cane, &c., of tropical countries, are endogenous.

The *exogenous* stem consists of bark, wood and pith.

The *pith* is a light spongy substance, at the centre of the stem; it is composed of cellular tissue, and seems to exercise its peculiar functions only during the earlier growth of plants. (Wood.)

The *wood* is composed of cylindrical or concentric layers, intersected by medullary rays, which are those thin dense plates of wood dividing the "grains," and are large and easily seen in a piece of beech or oak wood which has been split. The pith, together with the first layer which incloses it, are the product of the first year's growth; one new layer is formed every succeeding year,—so that the number of rings or "grains" at the base of the stem indicate correctly the age of the tree.—Each layer is composed of woody fibres, vasiform tissue and ducts.

Fig. 1.



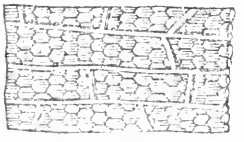


Fig. 2.

[Fig. 1 represents an exogenous stem of 4 year's growth. a, pith; b, bark; c, medullary rays; d, woody bundles of fibre. Fig. 2, lactiferous vessels of the bark.]

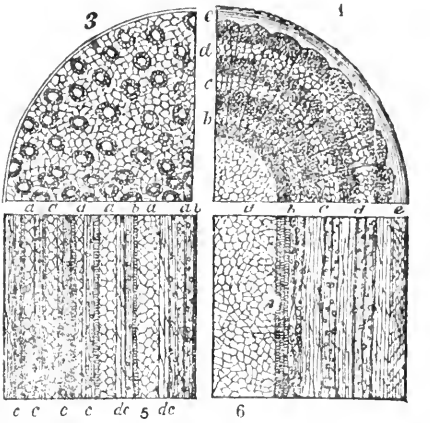
The outside, lighter colored layers constitute the *alburnum* or "sap wood;" the brownish layers inside are harder than the sap wood, and are hence called the *duramen*.

The bark forms the external covering or integuments of the stem and root. The bark consists of three distinct layers: the outside covering is called the *epidermis*,—this layer is sometimes covered with a coating of gummy, oily or resinous matter. The middle layer is the *cellular integument;* and the inner coat the *liber*. The two outer layers are of cellular structure, while the inner one is both cellular and woody.

The *sap* is carried by the vessels through the alburnum to the leaves, with the vessels of which they communicate; while in the leaves, the sap undergoes some changes, (not well understood,) by means of the air and light, by which it is converted into a fluid called *later*. From the vessels of the under side of the leaf, it descends by the vessels of the inner bark; part of it is carried inwards by the pores of the medullary rays, and diffused through the stem, while the remainder descends to the roots, and is distributed through them. Sap is milky, gummy, saccharine bitter, &c., in various plants.

At the end of spring a portion of the descending sap, which is now transformed into a viscid glutinous matter called *cambium*, is deposited between the liber and the wood, becomes organized into cells, and forms a new layer upon each. Soon afterwards, the new layers are pervaded by woody tubes and fibres, which commence at the leaves and grow downwards.—"The number of layers in the bark and wood will always be equal." (Wood.) The outer bark of young twigs seems to perform the same function as the leaves; in the cactus, staphelia, and other plants which produce no leaves, the bark must perform the same office as the leaves do in plants which produce them. (Johnston.)

Fig. 3



[Fig. 3.—3, horizontal section of an endogenous stem, exhibiting the bundles of woody fibre, spiral vessels and ducts, irregularly disposed in the cellular tissue. 5. a, a, cellular tissue; b, spiral vessels on inner side of dotted ducts. c, c; d, woody fibre on the exterior side. 4, stem of three year's growth; a, pith; e, bark; b, c, d, successive annual layers; 6, a, pith; b, spiral vessels of the medullary sheath; c, dotted ducts; d, woody fibre; e, bark.]

The *endogenous* stem exhibits no distinction of bark, wood and pith,—and no concentric annual layers or grains. It is composed of cellular tissue, woody fibres, spiral vessels and ducts, the same as that of exogens. The cellular tissue exists equally in all parts of the plant; the rest are in bundles, imbedded in the stem: "each bundle consists of one or more ducts, with spiral vessels adjoining their *inner* side next to the centre of the stem, and woody fibres on the outside, as in the exogen.

"A new set of these bundles is formed annually, or oftener, proceeding from the leaves, and passing downwards in the *central* parts of the stem, where the cellular tissue is most abundant and soft. After descending awhile in this manner, they turn outwards and interlace themselves with those which were previously formed."—*Rodgers' Scientific Agriculture.*

WEEDS IN GRAVEL.—For more than ten years past, says a recent writer, I have used salt, (but not in solution,) for destroying and keeping down weeds in my gravel walks, with perfect success, and without perceiving that the application acted as a stimulant to reproduction. The contrary is the case. I sow the salt by hand in dry weather, and sweep it about thin, and as regularly as possible. I have seldom occasion to do this more than once in twelve months.

Never court the favor of the rich, by flattering their vanity and their vices.

Ladies' Department.

DOMESTIC EDUCATION.

The time is coming, when domestic duties are expected to be performed upon scientific principles; and we are bound to employ every means in our power to make ourselves acquainted with the sciences pertaining to our domestic affairs. A knowledge of chemistry and dieteties, in a cook, is invaluable to a family. Information regarding the laws of health, and life, and mental philosophy, is absolutely necessary to the proper rearing of children. The suffering I have seen and experienced for want of knowledge, and the almost incredible advantage gained by the application of a few practical ideas, makes me very desirous for others, as well as myself, that we should have "more light."

I think, however, it is not proper that we should always be in performance of the sober duties of life. Nature does not bestow all her care on the sturdy oak and mountain pine, but adorns the landscape with an endless variety of fanciful colors and forms, enlivens the whole music, and the frolicsome play of animated beings. Nor did she fail to implant in the human mind faculties harmonizing with the beauty, melody, and gayety of external nature, which find a legitimate sphere of action in ornamental horticulture, vocal and instrumental music, &c. AMANDA.

FEMALE CULTURE.—The great entertainments of all ages are reading, conversation and thought. If our existence after middle life is not enriched by these, it becomes meagre and dull, indeed—and these will prove sources of pleasure just in proportion to the previous inteliectual culture. How is that mind to have subject matter of pleasurable thought during its solitary hours, which has no knowledge of the treasures of literature and science, which has made no extensive acquaintance with the distant and the past? And what is conversation between those who know nothing? But on the other hand, what delight is that mind able to receive and impart, which is able to discuss any topic that comes up, with accuracy, copiousness, eloquence and beauty? The woman who possesses this power can never fail to render herself agreeable and useful in any circle into which she may be thrown, and when she is so, she cannot fail to be happy. A full mind, a large heart, an eloquent tongue, are among the most precious of human things. The young forsake their sports and gather round, the old draw nigh to hear, and all involuntarily bow down to the supremacy of mind. These endowments add brilliancy to youth and beauty, and when all other charms are departed, they make old age sacred, venerable, beloved.

INVENTION FOR THE LADIES.—A lady in this State is about to apply for a patent for an invention which is at once ingenious, useful, and exhibits inventive qualities of no common kind. It is an article of domestic furniture, which answers for a cradle, a baby jumper, a table for the child to amuse itself with its play-things, and it can be transformed in a moment, to a seat with castors on it, by which the child can by its own power, use it as a walking chair, and move it from place to place simply by pushing it.

TO DRESS RICE.—A lady recommends to us the following: Soak the rice in cold salt and water for seven hours—have ready a stew pan with boiling water, throw in the rice and let it boil for ten minutes, then pour it in a cullender, cover it up hot by the fire for a few minutes, and then serve. The grains are double the usual size, and distinct from each other.

Boys' Department.

PREMIUM ARITHMETICAL QUESTIONS.

THE following letter from Mr. CLARK, shows that only one of the Premium Questions published in our February number has been correctly solved:—

MR. MOORE:—I have just finished perusing the package of letters that you forwarded to me at Geneseo, and which only reached me last week. After examining them all I do not find one correct answer; and as but one answer has been received, I will announce that as the successful one.

Solution of First Premium Question.—The premium for the solution of the tree sum has been awarded to D. M. BERRY, of Holley, Orleans county, N. Y. Mr. B. has not only given the correct answer, but the *only correct answer* that has been received. The answers are,

57.09÷
92.91—

I have received some two hundred or more letters giving answers to this question.

The other questions have not been solved, and will remain open for solution. ISAAC A. CLARK. *Wunda, N. Y., May* 21, 1849.

ERRATA.—The illustrations given to my rules for finding the square of any series of numbers, (in the April No. of the F.) are rendered unintelligible by the omission of the proper signs. Please insert the following:

For Rule 1st,—12^2 is equal to 144; and twice twelve increased by one, is 25; which, added to 144, will make 169, the square of 13, the next higher number, &c.

For Rule 2d, 12^2 is equal to 144; and twice twelve, diminished by one, is 23; which, taken from 144 will leave 121, the next lower number, &c.

H.

MORAL CHARACTER.—There is nothing which adds so much to the beauty and power of man as a good character. It is his wealth, his influence—his life. It dignifies him in every condition and glorifies him at every period of his life. Such a character is more to be desired than every thing else on earth. No servile tool, no crouching sycophant, no treacherous honor seeker ever bore such character. The pure joys of righteousness never springs in such a person. If young men but knew how much a good character would dignify and exalt them, how glorious it would make their prospects, even in this life, never should we find them yielding to the groveling and baseborn purposes of human nature.

SPOKEN AGAINST.—What if people do speak against you? Let them feel that you are able to bear it. What is there gained by stopping to correct every word that is whispered to your discredit? Lies will die, if left alone. Slander never kills a sterling character.

NEVER GO BACK.—Never go back—never. What you attempt, do with all your strength. Determination is omnipotent. If the prospect is somewhat darkened, put the fire of resolution to your soul, and kindle a flame that nothing but the strong arm of death can extinguish. Energy and perseverance are more potent than the gold of drones.

Editor's Table.

ERRATA.—In the article on Devon Cattle in June number, page 131, the printer added an extra cypher to the weight of oxen—making thousands, instead of hundreds. The intelligent reader would of course discover the unintentional blunder.

WISCONSIN FARMER.—We have received the first five numbers of a new journal, bearing the above title, published at Racine, Wis., by MARK MILLER, Esq., late of this city. The Farmer makes a very creditable appearance in all respects—being well conducted, neatly printed, and "done up" in the best form, *octavo*. The work merits, as we hope it will receive, the cordial support of the farmers of the thriving and productive State in which it is published. Monthly—50 cents per annum, in advance.

THE HORTICULTURIST.—The June number closed the third volume of this journal, and the fourth commences with the present month. It is to continue under the editorial supervision of A. J. DOWNING, Esq., and the public have the assurance of the veteran publisher, that the reputation and high character of the work will be sustained. Published monthly, 48 pages octavo, at $3 a year. Address LUTHER TUCKER, Albany, N. Y.

"THE PLOUGH, LOOM AND ANVIL."—This sterling work merits an extensive patronage. It is conducted with signal ability by the pioneer agricultural editor, J. S. SKINNER, Esq. The second volume commences this month, and the present is a favorable opportunity to subscribe. Terms, $3 a year; two copies for $5, and five copies for $10—in advance. Address J. S. SKINNER & SON, Philadelphia, Pa.

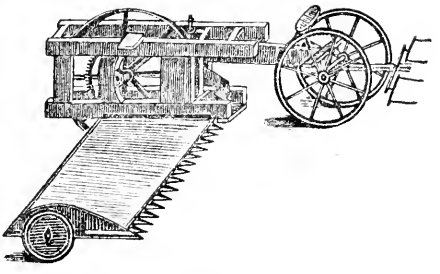
THE AMERICAN FARMER also commences a new volume this month. It ranks among the best journals in the country. Published monthly, at $1 a year. A. SANDS, Baltimore, Md.

JEFFERSON CO. AG. SOCIETY.—This is one of the best sustained Societies in the State. The officers for the present year are—MOSES EAMES, President; Edmund Kirby, Benj. Maxon, Charles Wilcox, Edwin Carter, Alvin Coolidge, J. N. Rettier, David Montague, J. C. Cooper, Nathaniel Utley, and Hiram Hubbard, Vice Presidents; O. V. Brainerd, Treasurer; John C. Sterling, Cor. Sec'y, E. S. Massey, Rec. Sec'y.. Next Annual Fair to be held at Watertown, Sept. 26th annd 27th. The premium list is extensive and liberal.

HUSSEY'S REAPER.—It will be observed, by reference to an advertisement in this number, that Messrs. RAPALJE & BRIGGS, of this city, are agents for the sale of this valuable machine in Western New York and Canada.

STEREOTYPING.—We would direct those wishing any thing in this line to the establishment of Messrs. JEWETT, THOMAS & Co., of Buffalo. The present volume of the Farmer is being stereotyped by them—to whom we are, in a great measure, indebted for the neat appearance of the numbers already issued. The conductor of their foundry, Mr. E. F. BEADLE, is one of the best stereotypers in the State.

WESTWARD HO!—We have just received a list of subscribers to the Farmer from *Minnesota Territory*.



HUSSEY'S REAPING MACHINE.

TO THE FARMERS OF WESTERN N. Y. AND CANADA.

WE would respectfully call the attention of Farmers to the fact, that we have the exclusive agency and exclusive sale of the above named Reaper, in all that part of the State of New York west of a line running north and south through Canandaigua; and also in Canada. We sell the Reapers at the manufacturers prices, adding cost of transportation. They can be examined at our store.

All who design purchasing, are earnestly requested to hand in, or mail their orders at once. This will enable us to have on hand in season, all that may be required for the above named territory, and prevent any being disappointed, as might be the case if orders were delayed till the harvest had begun.

That it is the best Reaper 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

RAPALJE & BRIGGS,
Genesee Seed Store & Ag. Warehouse,
Rochester, July 1, 1849. Rochester, N. Y.

CERTIFICATES.

AUBURN, February 17, 1847.

MR. THOMAS R. HUSSEY:—I have used one of your Grain Reapers for three years, which cuts five feet. I can cut fifteen acres in one day, and in doing so, I gather the grain as clean as it can be done with a sickle. I much prefer it to any other mode of cutting grain. J. M. SHERWOOD.

MR. THOMAS R. HUSSEY:—Sir: I have used your Reaping Machine for six years, and consider it one of the most profitable Machines that can be used on a farm, and could not be induced to do without one. I can cut from fifteen to twenty acres in one day, and can get lodged grain better than in any other way. I can recommend this Machine to all farmers, as a cheap and expeditious way of getting grain. Scipio, March 6, 1847.

ISAAC AKIN.

John Delafield, Esq., of Oakland Farm, near Seneca Lake, has this season cut 104 acres of wheat in eight days, with Hussey's Reaping Machine, at cost of,

1 man and team,	1.50	per day.
Boy to drive,	50	do.
	$2,00	do.
8 days,		$16.00
Interest on cost of Machine ($100) one year,		7,00
Total,		$23 00

The same work would have taken six cradlers eight days: this, at $1.50 a day, board included, would amount to $72, showing a saving by the Machine of $49; which Mr. D. justly remarks, is nothing, compared to the anxiety which every large farmer suffers from the paucity of good cradlers, their selfish caprice and their extortionate prices during the wheat harvest. Many a farmer, with an excited, wo-begone face, have I seen this season, riding about in search of cradlers; 'tis true, he could find plenty of wild Irish and others, who, like Highland Willie, could "neither say nor do;" but experienced cradlers were few indeed; and when found, only think, the price of two bushels of wheat for a single day's work.

This Machine is drawn by a pair of horses on low wheels; it cuts a swarth five feet wide with twenty knives, working horizontally, which are to be sharpened once a day with a whetstone.—A man sitting on the side of the platform, pushes off the cut grain with a rake, to the binders. The work was done expeditiously and neatly—not a waste head was to be seen. A field of oats had been cut with the same result.

My faith in the Machine was secured the moment I heard Mr. D. dilate upon the case of both body and mind with which he had compassed his present harvest; when I saw the execution it had made, I had no longer a doubt of its economy and usefulness. It is one of the few patented articles of the present day which is no humbug.—[*Genesee Farmer.*

The Committee on Agricultural Implements regret that farmers and mechanics have been so remiss in not bringing out valuable implements, known to have been put in successful operation, within a few years, in different parts of this country and this State—among which are,

1st. Hussey's Reaping Machine, upward of thirty of which are owned in this county. Twenty of these were introduced the last harvest. The work done by them has been eminently satisfactory the past season. Mr. Bryan Jackson and Col. J. W. Andrews report that they cut, with one of the largest size, 54 acres of wheat in two days. Mr. William Bowman reports that he cut 14 acres in half a day. These are extra days' work and can only be accomplished with good horses, and at good speed. From 15 to 20 acres may be deemed a fair days' work.—[*Extract of a Report from the Newcastle Co., Delaware, Agricultural Committee.*

MR HUSSEY—Sir: It is with pleasure that I send you my certificate to recommend your valuable Wheat Reaper to the public.—I have now used it four seasons, and am satisfied that where the ground is free from large stones and stumps it is more expeditious, cheaper, and will save from one-half to a bushel of wheat per acre more than the common way of harvesting; and it is not more than three quarters as much work to thrash the same as when cut by cradles; and can cut from 15 to 20 acres per day.

Scipio, March 12, 1847. BENJAMIN OLNEY.

THOMAS R. HUSSEY, Esq:—I have used one of your Reaping Machines this season, with great satisfaction, and consider it one of the most valuable labor-saving Machines in use. I cut my whole wheat harvest (one hundred and fourteen acres) with it this season. It gathers the grain clean and saves from one and a half to two bushels an acre over the cradle. I cut *twenty-five acres* of wheat with it in eleven hours and a half. I consider it *the* Machine—and there is no other that can be compared with it. The principle of it is right, and I can cheerfully recommend it to all farmers, as a labor and money saving Machine.

Seneca Falls, Aug. 15, 1848. G. V. SACKET.

[From the Genesee Farmer]

MR. EDITOR:—In the midst of the wheat harvest, in the month of July, I paid a visit to Prairie Ronde, in this county, and have had an itching ever since to send you a description of the way they do up the harvesting on a large scale—promising that the prairie contains about 24,000 acres of plow land literally as level as the house floor, of the richest quality.

I saw Hussey's Reapers cutting thirty acres per day, with four horses, employing nine binders. The farmers thrash much of their wheat in the field from the shock, with a machine which gears on one of the wagon wheels. There were six thousand acres of wheat on the prairie, and five-sixths of it was cut by Hussey's and Moor's Reapers, and it will average 20 bushels per acre.

Yours, respectfully, KALAMAZOO.

Prairie Ronde, Kalamazoo, August 19, 1845.

TO THE EDITOR OF THE AMERICAN FARMER:—Dear Sir: Some months ago I received a letter from you, making enquiries of me relative to Hussey's Reaping Machine. When your letter reached me I was on the eve of leaving home for the summer, and since my return home, my engagements have been of such a character as to cause me until the present to neglect replying to it.

I have used one of Hussey's Machines one season, and though under circumstances not very favorable for the Machine, I take pleasure in stating that its operation was satisfactory. During my harvest, which was about three weeks' duration, this Machine was kept constantly at work, with the exception of a day and a half; yet I did not ascertain how many acres it would reap. Mr. Collins, of Lake Scuppernong, also used one last season, and from him I learned that he had cut upwards of twenty acres a day.

There is certainly much less wheat left in the field by one of these Machines than is by the ordinary method of reaping by the scythe or reap hook; it cuts close, lays the straw smoothly, thus rendering the tying of sheaves much easier.

Edenton, N. C., Jan. 28, 1848. TH. D. WARREN.

[From the Richmond Planter]

The following communication is strongly in favor of Hussey's Reaping Machine:

I have had in operation on my plantation, this year, both Hussey's and McCormick's Reapers. Now, as you have asked me to furnish the "Planter" with the result of my own experience, and opinion as to the comparative merits of the two Machines, it is now at your service. I have had them both in operation (as the weather would permit) for the last fortnight, and have cut with the two upwards of two hundred acres of wheat. Both Machines have been, I think, very fairly tested, in all qualities of grain, from wheat five feet and more in height, both standing up and lodged and tangled, and averaging, as is supposed, from thirty and forty bushels, down to light, thin wheat, not averaging more than four bushels, (being some gullied hills,) and I am candidly and decidedly of opinion that Hussey's Machine is superior. So well pleased am I with its performance, that I have ordered another Machine of Hussey for my next harvest, and probably two, for my father's plantation. I consider this Machine invaluable to the grower of wheat, and would recommend every farmer who grows even fifty acres of wheat, to purchase one. He may rest assured that he will be pleased with his purchase. I shall probably be in Richmond shortly. J. FOLLOK BURGUYN

Occonichee Wigwam, near Halifax, N. C., June 20, 1846.

☞ For further information relative to above named Reaper, see July number of the Genesee Farmer for 1848.

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HORTICULTURAL DEPARTMENT.

LADIES' DEPARTMENT.

BOYS' DEPARTMENT.

ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, Thursday, June 21.

FLOUR AND MEAL.—The market for Flour is without marked change but rather heavy. At the close, however, there was rather more firmness. The receipts are still very moderate. The sales are 7,500 bbls. of which 3,500 were fine at $4 06 *a* 4 12½ with some at 4 18¾. The range for superfine is 4 37½ *a* 4 50 for common and good State; 4 50 *a* 4 62½ for good and straight Western, and 4 87½ *a* 5 for pure Genesee—fancy 5 12½ *a* 5 37½. There were also sales within a few days of 5,000 or 6,000 bbls, sour at 3 87½ *a* 4, for shipment including a large portion of the quantity on the Market. Of the sales to-day, 5,000 bbls were for export The sales of Southern are 600 or 700 bbls at 4 87½ *a* 5, mostly at $5. Meal is firm at $3 for Jersey, with sales 400 bbls, and 500 do. Brandywine at 3 06. Rye Flour is $3 *a* 3 06, with sales 1,000 bbls.

GRAIN—For Wheat there is but a moderate demand, with large supplies. The market is heavy. We hear of no transactions.—Corn is also heavy, with sales 65,000 bush at 53c. for damaged, 59c for Jersey round white, 59 *a* 59½ for mixed Western, and 62½ *a* 63½ for round Northern, closing at about 63c. The market stands 1c a bushel below yesterday's rates The quantity offering is large. Sales 3,000 bush. Rye at 58 *a* 58½c delivered Oats are 34½ *a* 36, and in fair demand. Sales 15,000 bush.

PROVISIONS—The Pork market is heavy, mess at $10 37½, and prime at $8 81¼ *a* 8 87½. The sales add up 500 bbls, at these figures At the close, mess was dull at $10 57½. In Beef there is a moderate inquiry, with sales 200 bbls, at $11 50 for country mess, $12 50 for city, $12 50 *a* 13 for extra Ohio and Chicago, and $9 25 for prime. Sales 500 bbls Lard at 5¾ *a* 5¾c, for grease, and 6¾ *a* 7c for Fair and prime. In cut meats there are but 350 bbls and tcs at 4¾c for Shoulders and 5¾ *a* 6⅞ for Hams Good demand for Smoked Beef at 11 *a* 11½c. Butter is heavy, with sales Western at 10 *a* 14c—but few lots bring over 12½. Ohio 7 *a* 9c

ASHES Are $5 50 for Pearls, with sales 150 bbls Pots are $5 56 *a* 5 62½, with sales 50 bbls.—*Tribune.*

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Farmer, 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 Farmer is from FIVE to EIGHT thousand LARGER than that of any other agricultural journal published in the United States.

☞ THE FARMER is subject to newspaper postage only.

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. X. ROCHESTER, N. Y.—AUGUST, 1849. NO. 8.

IMPROVEMENT.—THE DUTY OF FARMERS.

The spirit which animates our people, is that of progress—improvement. Ever since the Declaration of Independence, *enterprise* has been a distinguishing trait of the American character—and at no period of our nation's history have the skill and industry of our population been more wisely and profitably employed than at this moment. Look at the progress which has been made during the past ten years—the improvements now being introduced into almost every department of Agriculture and Manufactures, Trade and Commerce—and consider the vast influence which this rapid and mighty change must have upon the destiny of our people and country! It is true that this spirit does not wholly prevail, especially among agriculturists; but the period is fast approaching when those farmers who now stand aloof from the aid of science, will be compelled to adopt the inventions and improvements of the age, in order to compete with the more shrewd and enterprising. For example: If A, by the adoption of a superior mode of culture and the use of labor-saving implements, can produce 100 bushels of wheat at an expense of $50, while the same number of bushels costs B $75, it is clear that the latter cannot successfully or fairly compete with the former, in the same market.—And so also in the raising of stock, the growing of wool, and the production of pork, butter, cheese, &c. Those who produce these articles, at the least expense, will ever be the most successful in the accumulation of wealth.

Admitting the correctness of our premises, it is the bounden duty of American farmers to adopt every improvement within their reach—a duty which they owe equally to themselves, their children, and country. The responsibility which rests upon our rural population, is one of great importance, and from which none can shrink blamelessly. As the motto of the age is "Onward," so also should be that of individuals. Each and all should work, both individually and collectively, for the advancement of themselves and their profession.

As an individual, the farmer can do much towards the introduction of improvement in neighborhoods and communities. By a careful study of his profession—the adoption of improved modes of culture and management of crops and stock—the use of judicious labor-saving implements, and a wise economy in all branches of husbandry—any farmer can arouse a laudable spirit of inquiry, which must lead to improvement among those engaged in the same calling in his immediate vicinity. But he can accomplish still more in another manner. By communicating the results of his well directed efforts to the agricultural press, thousands, instead of dozens, would be benefitted by a knowledge of his management and success. The introduction of agricultural books and journals among his neighbors, will likewise prove beneficial to community.

In a collective capacity farmers can exert a powerful influence for improvement, and also promote their individual interests. And here let us for a moment consider the importance of Agricultural Associations, as a means of improvement. Are not the State and County Societies, now in operation, advancing the true interests of the farmer?—And if so, is it not all-important that these associations be well sustained, and others organized throughout the country? We think every intelligent reader will answer these questions affirmatively; and we beg to suggest that they have a duty to perform in this matter. It may truly be said of many farmers, concerning this as well as various other subjects, which demand their attention, that

> "They know the right, and they approve it too,
> Condemn the wrong, and still the wrong pursue."

They admit the benefits of association, but year after year decline or neglect to become active, interested members of the Societies and clubs in their localities. Friends, we respectfully but plainly remark that *you are not discharging your duty in this matter*—and beg you to consider whether some action is not necessary. The present is a favorable time for exertion in the direction indicated. The annual exhibitions of the various associations are to be held soon, and your aid and influence would add to their interest and value. No matter if you have nothing to exhibit this year—go and see what others have accomplished. Attend the Fair of your County Society, and you will not fail of learning something useful while mingling with others of the same calling and witnessing an exhibition of the products of their skill and labor—and do not forget to enrol yourself as a regular, paying member of the association. In this manner you can essentially aid in promoting the laudable objects in view.

There are various other means of improvement familiar to the intelligent farmer, that should neither be neglected or overlooked by those who desire to keep pace with the progressive spirit of the age.

EDITORIAL CORRESPONDENCE OF THE FARMER.

The Cherokee Country — Inducements to Emigrants — Crops — Price of Lands — Kinds of Timber — Wool Growing — Labor necessary at the South, as elsewhere.

TUNNEL MOUNTAIN, Ga., July 4, 1849.

If the reader will look on a map of the United States, he will see that the Tennessee River approaches very near the Atlantic in its southern detour into the states of Georgia and Alabama. The railroad constructing by the State of Georgia through the far-famed Cherokee Country, which is to connect the navigable waters of the Tennessee and the Mississippi with the seaports of Charleston and Savannah, approaches its completion. This is a noble Work; and at no point from the Tennessee river to the ocean, do the gradients exceed 33 feet in a mile.—The writer has recently passed over the whole of this line of railroad, being 445 miles from Charleston to Chattanooga, in Tennessee, and on the river by that name. The Tunnel at this place will be the last to be completed, requiring the labor of four or five months. It is 1,475 feet in length, of which 450 remain to be blasted in blue Helderberg lime rock. This dips to the south at an angle of some 75 degrees, at the point in the mountain where the miners are now at work. It is the glory of this age that man is able to drive his steam-chariots and fire-horses, not merely over and around, but *through mountains*, with the speed of the wind.

This region abounds in mineral springs, and is becoming a great resort as the summer residence of planters, in all the low country from North Carolina to Texas. I regard the "Cherokee Country," nineteen-twentieths of which is still in a state of nature, or as the Indians left it, as presenting strong inducements to emigrants from Europe and the northern states to settle upon and improve its fertile lands.—It was surveyed by the state into tracts of 160 acres; and these were drawn by its citizens, in a lottery, paying a few dollars, for the survey and deed of each lot. They are being resold by the holders to actual settlers, and at all prices, from ten to one thousand dollars a lot. For the production of corn and grass, the growing of cattle, mules, sheep and swine, they are not surpassed in the United States. With fair tillage, the uplands yield 50 bushels of corn per acre. For some reason, these limestone lands are not quite so well adapted to wheat culture as I expected to find them. Whether the defect is in the soil or its cultivatien, I am at present unable to say.

Late and extraordinary frosts have quite ruined the wheat crops of this season. Farmers will have to send to Tennessee for their seed. Clover does remarkably well with gypsum, and indifferently without it. Timothy, red-top, and blue-grass flourish admirably on the natural soil, as do oats, peas, beans, millet, potatoes and turnips. It is high enough above the ocean for apples, pears, plums and cherries to do well. It is above the fig climate, and the home of the peach and the vine. To raise apples and pears for the low country, on the line of the railroad, would be a profitable business. I was offered yesterday two lots (320 acres) within a mile of the depot, 45 miles south of this, for $100. I went over the tract. It can all be plowed; is covered with oak and hickory, and wild grass, and has a lime and flint soil.

As in portions of Michigan and Wisconsin fifteen years ago, one can drive a carriage almost anywhere through the Indian burnt forests. I visited a limestone spring eight miles from Oothcaloga Depot, large enough where it issues from the ground, to drive three pairs of millstones. It is in this region that one sees horned cattle, which are *cattle*—a sight which in 18 months' residence at the south, had not before met my eye. Oak is the principal timber, with an occasional pine, black and white walnut, beech and white maple, along the banks of streams. Hickory, white ash, black cherry, and many other kinds of forest trees are met with in riding over the country. These lands are worth about Congress price. Improved farms on river and creek bottoms sell at from ten to twenty dollars per acre. White men everywhere work in the field as they do at the north. It is not a cotton growing region, but strictly a farming climate.

My friend, R. PETERS, Esq., from Pennsylvania, has sheep that clip over seven pounds of wool per fleece, and hundreds of acres of the best upland corn in Georgia. I predict that this will soon become a most prosperous wool-growing district. The range for stock is almost unlimited; and the facilities for transporting fat cattle, sheep and hogs to the seaboard are as good as any one need ask for.

I do not wonder that the Indians left this their home, and the tumuli where rest the bones of unnumbered generation, with extreme reluctance. I have visited several mounds in Georgia, but leave the discussion to learned ethnologists. Unlike the African race, the Indian spurned the blessings and industrious habits of civilization; and he is fast disappearing in all the late border states, while the hard-working African multiplies with extraordinary fecundity. Being well and regularly fed, as well as worked, the negroes of the south present a striking proof of the value of temperance and industry in promoting sound health, and the rapid increase of the human family. They are rising both physically and mentally, while those that foolishly disobey the command of God to eat bread in the sweat of their faces, are going the other way.

If a person expects to escape work by coming south, or going west or to California, let him disabuse his reason at once. As a people, Providence has blest us with agricultural, civil and religious favors above all other nations: but *the duty to labor* is as incumbent upon Americans as on any other portion of the descendants of Adam. The cheerful discharge of this duty is the doctrine the writer preaches, practices and believes in. Had the aborigines of this continent adopted the rural and mechanical industry of the Europeans when the latter came among them, their posterity would this day rule the land from the Atlantic to the Pacific. The emancipated negroes of St. Domingo refuse to till the earth and they are going back to barbarism, pagan darkness and brutality. Labor is the grand humanizer of our race. Without it, man never rises but a single step above the speechless beasts of the field. With it each generation may excel all prededing ones to the end of time. L.

THE American Farmer very justly remarks that, "Farmers and planters have too long looked supinely on, while power was being stolen from them, to aggrandize other classes, less entitled than they to the fostering care of Government."

AGRICULTURAL EDUCATION.

BY AGRICOLA.

That a system of Education may be adopted, that will give to the Sons of the farmer such information as will be of advantage to him in all the future of his life cannot, I think, be questioned. Difference of opinion will doubtless exist, as to what that education should be. In order to open the way for the examination of this subject, I propose to make some suggestions, as noticed in my former communication.

The student, at his entrance, should be well versed in the common branches of an English Education—and he will then be prepared to enter upon a course of studies that will, if properly attended to, fit him for the active duties of his profession. Let it here be understood, that the pupils are to be employed upon a farm connected with the School, during the entire course, and in their last year each is to be placed in special charge of the various departments of the farm, to test his capacity for management, when he is to leave the school.

The course of instruction which I would recommend, should occupy at least three years—and it should ever be kept in view that the instruction is to be conducted in such a manner, that while the student is thoroughly instructed in the principles of each science, its relation with agriculture are to be specially understood, and their practical application fully carried out in the operations of the farm. The farm should be arranged into separate divisions, so that the different rotations of crops may be pursued, and the advantages or disadvantages of each be fully and practically illustrated for the benefit of the students. A portion of the farm should be allotted for experiments—to be fully carried out under the direction of the teachers, and of which an account should be given to the public as often as deemed necessary. It must be apparent that many experiments, to be of any practical value, must be continued through a series of years, before any final decision can be had.

Without descending into a detail of studies to be pursued, it will suffice to say, that the education should be thorough in every respect—including the modern languages, Chemistry, Mineralogy, Botany, Horticulture, Surveying, Agricultural Engineering, Mechanics, Keeping Farm Accounts, Veterinary Instruction, management of manures, &c., all to be of a practical character, after the manner of the Polytechnic Schools. The teachers to deliver lectures to the students, to accompany them when necessary to the fields, and in every part of their course, to give them a thorough practical knowledge of every thing incident to the management and successful prosecution of the labors of the farm. The farm to be under the direction of a practical farmer, thoroughly versed in every thing that relates to the best method of cultivation suited to this State, and the students to be under his direction, when engaged in the labors of the field.

It appears to me that an institution may be so arranged as to become what all desire—a thorough educator for the farmer's son, fitting him for his profession, and for all the duties of life to which he may be called. This, too, can be done in a manner to lead the student to appreciate his noble pursuit: it will enable him, when he leaves the institution, to feel that he is upon an equality with the students of any other seminary, and that on the great theatre of public life, he is as well prepared as they are to enter, and that without fear of the competition. I am aware that some of the institutions of our country are conducted upon the principle that there is nothing new worth having in education—but we must plod on in the same old line which was laid down by monks in ages gone by. But I am also aware, that we are fast breaking the chains of bondage in which we have so long been bound—and though no prophet or the son of a prophet, I venture to affirm, that those institutions which do not adapt themselves, and that speedily, to the movements of this advancing age, in a practical, useful direction, will soon be numbered among the *things that were*. There is a feeling abroad among the friends of existing institutions adverse to a thorough agricultural institution. They seem to foresee, that if such an institution should be founded upon a scale worthy of the Empire State, that its practical character would soon attract to it, the students from every direction, and the numbers now educated at theirs would soon diminish. It may be so; but if it should, what, I ask, is to prevent us from obtaining a better system, and one that will secure to the largest portion of our citizens an education adapted to their profession in life, for which there is now no adequate provision? As well might the owners of the old sail-boats on the Hudson cry out against the improvements of Fulton, or the driver of the Canastoga wagon, against the lightning swift engine as it speeds in hours through our state, instead of weeks, as he was in the practice of doing. It will alter the character of our seminaries—but it will alter them in accordance with the spirit of the age, and with the genius of our institutions, and all that is necessary for existing institutions, is to adapt themselves to the times, so far as may be necessary for their institutions of a general character, and they need not fear but that they too, will be supplied with students who do not design to make the pursuits of the farmer theirs through life.

Permit me to urge this matter of education upon the consideration of farmers. To you must we look for aid in this matter—and let it not be said, (as it has been in days gone by, and with how much truth I will not say,) "that if any thing is wanted for the improvement of the agricultural interest, you must call upon professional men, *not farmers*, in the Legislature." With the improvements which are taking place in our State—with the intelligence which exists among farmers in every part of this State—I will not for a moment doubt that you appreciate this subject, and that you will be prepared to make your wishes known, in a manner that shall secure the action of your representatives. What subject of more importance to you, I ask, can be brought before the Legislature, than the education of the farmer's sons of our state—and if none more important can be, may I not urge you, to see to it, that a matter so vitally important shall not fail for want of your support—your open, active, and efficient aid?

If a railroad is wanted, how quick are the feelings and interest of farmers on its route enlisted. They can expend money and time to secure its charter and to complete it—and when the education of their sons to fit them to usefulness is proposed, can they be unmindful of how much more importance it is to cultivate the immortal mind, than to add even to their wealth, by these increased facilities of communication? It is often said, that farmers know enough already. This may do for those to say, who boast themselves of their superior acquirements—but I

trust no American farmer will rest satisfied with his acquirements, while there is a field of useful knowledge before him to be explored, or a single truth to be ascertained that can add to his store of knowledge, or contribute to the elevation and advancement of his profession. I have long felt that we need, as farmers, opportunities for preparing our sons for their pursuits as they should be prepared. I rejoice that the day seems to be dawning for the accomplishment of the object, and I am desirous, nay anxious, to engage with my brethren in hastening forward this all-important work.

THE SEASON—FRUIT—CROPS—INSECTS, &c.

The last winter in Western New York was decidedly an open one, with little snow, and one or two cold days, such as has not been chronicled in this region for the last twenty years. The thermometer sunk to nine degrees below zero at Rochester, and at the distance of twenty miles from the lake, to twelve and even fifteen degrees in some locations.

Ten degrees below zero begins to affect the fruit bud of the peach, and fifteen is totally fatal to it, at any period during the winter. In this region, about two-thirds of the buds blossomed, but a wet, rainy, and cold period, with an east wind, set in, and immediately after the petals of the flower cast off, the entire leaves of the trees were affected with the *curl*, an enlargement and thickening of the center parts, and they all fell to the ground; and consequently there were no organs to carry on the circulation—the sap gummed and oozed through the bark, and a great portion of the fruit was lost. All those branches that put out the terminal bud again were sound—the others died, so that there is not a quarter crop of that delicious fruit.

The same continuous wet and cold weather in the latter part of May, destroyed the apple, either by a disturbance of the process of impregnation, or a degree of cold that disorganized the tender germ.—They all fell, and many trees cast a good part of their first leaves, as though caused by an early frost.—There is no orchard, that we are advised of, that will produce ten bushels, where it should have produced one hundred. It is a total failure.

Wheat is a great crop, and if the present drought does not continue too long, corn and potatoes will be an average. Hay is a full medium yield, and has been secured in excellent order.

There is an anomaly existing with respect to insect life. The apple tree worm has lately disappeared, as have the black, squash and striped bugs; and the May bugs were scarcely seen. The rose bug is greatly increased on light lands, and the curculio generally. Not one in ten bee hives have thrown out swarms this year.

The *Fire Blight* has attacked the pear tree extensively this season, and is destined to destroy that variety of fruit. It has also affected the apple and quince, but it is never fatal to them, only killing the small branches, as the *virus* is never carried to the body or main branches. The cause of this disease seems to be inscrutable to mortal vision. It is a subject that has excited more discussion than any other vegetable subtilty, except the chess question.—We were for many years a believer of the doctrine of a plethora of sap, more than the leaves could elaborate; but from a daily examination during its operation for some years past, we are disposed to attribute it to a disease, or injury of the bark and outer vessels of the body or large limbs, by the winter or other cause, whereby the sap which rises in the alburnum or sap wood; is unable to return through and between the epidermis and wood; it consequently sours, decomposes, and one day's sun blackens the leaves, and destroys the branch, and finally the whole stock, if not cut off absolutely below the least discoloration.

THE WHEAT CROP.

From information received from different sections we believe the present wheat crop of Western New York will prove far superior to any preceding one for several years. In this county, the crop is much better than was anticipated before harvesting commenced, and many farmers think it the greatest ever produced here. The berry appears unusually bright and plump. We have heard some complaints of the weevil in Seneca, Cayuga, and adjoining counties, but learn from reliable sources that no material damage has been caused.

We have unfavorable reports of the crop in some sections of the west and south-west. The Ohio Cultivator of July 15, says:—"From all the information we can gather, it appears quite certain that throughout a large portion of Ohio the wheat harvest is sadly deficient, owing to the damage by *rust* and the *wheat insect*. A few only of the more northern counties, we believe, have escaped these evils, and are harvesting nearly a fair average crop; but taking the state at large, we are of opinion that full one-half the crop has been destroyed—which is equal to *twelve millions of bushels!* This is an immense loss to our farmers; but we trust they will not be disheartened, especially as the corn and other crops are now quite promising. * * * It is too early, as yet, to form an opinion in regard to the full extent of the damage sustained by the wheat crop, or the effect it may have on prices. In the markets of this region, flour has advanced full one dollar per barrel, but this will not probably be sustained if the accounts from New York and other large wheat-growing States yet to be heard from, should prove favorable." The Cincinnati Gazette of a later date, says, "the deficiency in the wheat crop of Ohio this season, it is now pretty satisfactorily ascertained, will be about one-third, or from 7,000,000 to 8,000,000 bushels."

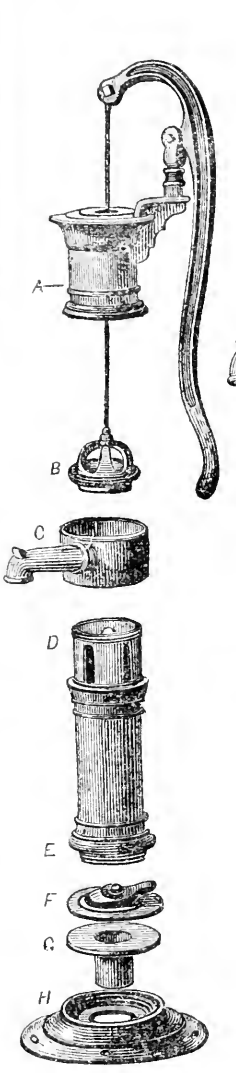
The Indiana State Journal of the 16th ult., thus speaks of the crops in the southern portion of that state: "The continued rain has almost entirely destroyed the wheat crop in this region. Many farmers have turned their hogs upon the fields—the wheat being so much injured as to be unfit for cutting. It is estimated that the crop will not be more than sufficient to supply the demand for home consumption. As a consequence, the price of wheat has raised to eighty cents, and is still going up. Flour has gone up to $5 50 per barrel, and is rising."

The crop in Michigan is said to be good—and the yield is probably above an average one. The news from Central and Northern Illinois and Iowa, is favorable.

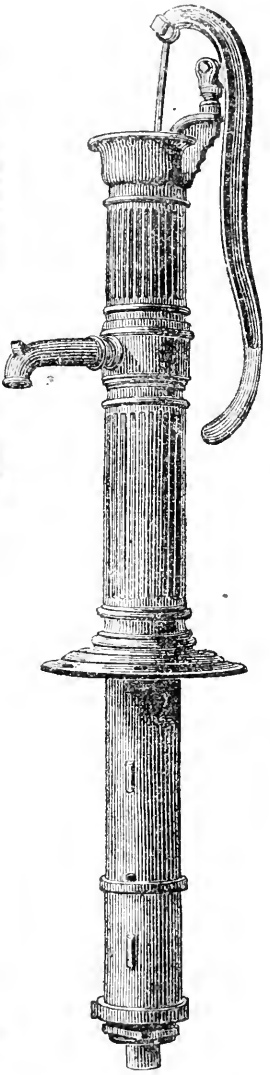
We also have favorable reports from Pennsylvania, Maryland and Virginia. The Richmond Whig states that in all Virginia east of the mountains, the wheat is generally harvested, and that though the crop suffered first from April frosts, and subsequently from rust, yet "it will exceed an average one."

IMPROVED WELL AND CISTERN PUMPS.

While spending a few hours in Seneca Falls, some two weeks ago, we were surprised at the extent of its manufacturing business. Among other establishments, we passed through the extensive Pump Factory of Messrs. Downs, Myndhersе & Co., and were so well pleased with the style, construction and appearance of their improved Pumps, that we requested a description of them for publication in the Farmer. In compliance with the request, Messrs. D. M. & Co. have furnished us with the annexed figures and description, which we present for the benefit of all interested:—



Cistern Pump. Fig. 1.



Well Pump. Fig. 2.

Fig. 1 exposes to view the different parts of the Pump. A represents the cap, or top part of the pump. B, the Plunger or Piston, which contains a Tube Valve, made of brass, and nicely fitted. C, the spout. D, the end of the cylinder which passes up through the ring of the spout, and screws into the cap, A. E, the lower end of the cylinder, which screws into the base, pressing the lower valve, and securing it in its place. F, the lower valve. G, the brass tube to which the lead pipe is soldered. H, the base of the pump. The tube, C, is placed through the base, H, thus forming a brass valve seal, which is important, as it will not corrode, and renders the leather valve much more durable than if placed upon iron, as is usually the case.

It will readily be seen by the construction of these Pumps, that they may be easily taken apart, and access gained to each and every part without disturbing the pipe or platform upon which the pump stands, and that without the use of either screw driver or wrench. By loosening the upper part of the pump, the spout may be revolved around to any desired position, and firmly secured by screwing the cap down on to the ring of the same—thus enabling the Pump to be placed in the corner of a room without the brake or spout interfering or coming in contact with the wall on either side. By raising the brake to its relative height, the water may be let back into the reservoir, thus preventing the pump from freezing in cold weather—and the water may be recovered by a few strokes of the brake. The pump will draw water as well horizontally as perpendicularly.

Fig. 2 represents a large and strong pump, made of iron, and is designed for wells, or an out-door Pump. The construction is the same, being similar to the one described above. The piston and valves of this Pump are located in the lower end of the set length, which runs down three feet below the base. At the upper end of the cylinder, we make a small hole which allows the water to escape from the Pump when it is not in motion—thus preventing it from freezing up in winter. To get at the piston and upper valve, it is only necessary to screw off the top of the pump above the spout, and pull the piston out of the top, which may be done and replaced without taking up the pump or pipe. These pumps we arrange for lead or wood pipe, as may be desired. The whole pump being made of iron, renders it a durable article, as no part can decay, and it will throw water with great ease and rapidity.

It is now several months since the above described pumps have been introduced to the public, and the demand for them is rapidly increasing daily. In all cases where they have been thoroughly tested, they have proved to be a superior article.

Woodbury's Horse Power and Separator.—These excellent machines are very highly esteemed wherever they are introduced. In the Boston Cultivator of last week, Messrs. T. & C. H. May, of Woodstock, Ct., published a letter stating that this horse power, in their opinion, is one of the best in use, that it is capable of doing more work with less power, than any other with which they are acquainted; requiring the power of only three horses to saw from twenty to thirty cords of hard wood, twice in two in one day, and with ease.

The letter states it to be their opinion that Woodbury's Horse Power and Seperator, for threshing and cleaning grain, cannot fail to give satisfaction to those possessing the power of three horses only, to thresh and clean from fifty to a hundred bushels of oats per hour. This is high testimony indeed.—Our readers will remember that both of these machines are now manufactured at Rochester, N. Y. —*Scientific American.*

Improved Stock.

SHORT-HORN AND NATIVE CATTLE.

BY S. P. CHAPMAN.

[Reply to W. Hanford, jr., page 133 of present volume.]

We regret that our former article was not *definite* enough for our friend Hanford. We gave, as we supposed, a very accurate account of the productions of a few Durhams for the dairy, [and we could easily increase the number if necessary,] and in nearly every instance, the keeping of said cows during, and in some instances previous to the time of trial. If we were deficient in not stating the *exact amount* of food consumed, we would say that it would be very difficult to do so, *especially* when cows are at grass pasture, as was the case with all the examples given, with one exception.

But what we regret still more is, that our friend should write as he did about "premium testimony." When individuals from different parts of the Union and from other countries, too, selected on account of their supposed good judgment in the matter to be decided, having all the facts as to the age, keeping, and management of the different animals offered, fully subscribed and sworn to by their respective owners, give in their decisions, we are free to acknowledge that such decisions has some weight with us, "towards establishing the merits of an animal."

Friend Hanford had no occasion on our part, at least, to have resorted to *any* testimony to prove that there are good milkers among our native cows, for it is something we have never in the least doubted or denied; and least of all had he any occasion for resorting to a "*Sussex bred cow*, owned in Lews, in *England*," "to prove *this*." The ground taken by our friend, in his very excellent and able article of February last, and to which we took exception, was, [unless there had been error in his instruction,]—"That full-blooded Durhams, *wherever* found, were deficient in one, and that the most important qualification," and that they were *great consumers*, requiring an extra *quality* of food. Now, whether we proved that such instructions, (*if* any such were ever given in the Genesee Farmer,) were incorrect, we leave for its readers to decide.

Friend Hanford, after presenting us with a very interesting account of the Sussex Cow, says: "All will admit that her produce was a *little* extraordinary; and it is invariably true that to do things extraordinary with *horned cattle*, they require extraordinary feed and care." With all due respect for the opinions of our friend, we will, with leave, present him with a short extract from a letter recently received from Mr. Vail, of Troy, N. Y. Mr. Vail's cattle, it is true, have generally "short horns"; but we believe, nevertheless, they are classed "*with horned cattle*." Perhaps if they were *longer* horns however, our friend's "invariable" rule might prove a *little* more correct. Mr. Vail says: "I have a full blood Durham Cow, Eunice II., now about seven years old, of my own breeding, which has made this spring, on *grass pasture only, nineteen and one-fourth pounds of butter in one week*. On the 9th day of June ultimo, the milk drawn from her on that day was accurately weighed, and the quantity yielded was 71½ lbs, equal to 35½ quarts, wine measure. Her keep was no better than that of the other cows, and was grass pasture only. I own the dam of this cow, and she gave in one day 32 quarts of milk, wine measure." If the produce of the Sussex cow was a *little* extraordinary, we think the produce of Eunice II, and of her dam, would be considered at least *extraordinary;* and we do think grass pasture is not extraordinary feed.

We commenced a trial with "Ruby," (the heifer purchased of Mr. Vail, and formerly referred to,) the 30th of last month. She produced in one week thirteen pounds and three ounces of butter. She is now 4 years old, and was kept last winter on barley straw until the first of February. During this month, she had hay and straw, mixed whole in about equal quantities. After the 1st of March she was fed good hay, until turned to grass pasture, since which time she has had no other food. The greatest quantity of milk yielded in any one day was 47½ lbs.

That Mr. Colman should have requested Mr. Prentice to put some of his cows on trial, and furnish the readers of his paper with the result, we do not consider as any "abatement" in the least of his high and just encomiums of that noble stock; for it is well known that Mr. P. had some *excellent milkers* in his herd, and Mr. Colman was probably well aware of this fact, when the request was made.—We regret that we have not this entire article of Mr. Colman's. Our extract was taken from the "Cultivator," in which it appeared, taken from the New Genesee Farmer. As to the bull Cœlebs, we certainly wish our friend had commenced his extract just three and a half lines sooner; it would then have read—"Mr. Jaques is of opinion that the *excellence* of his cream-pot breed is *principally* to be ascribed to a *cross with Cœlebs*, but on what rational grounds, it is difficult for me to discover. Their beautiful color," &c. Now, whether Col. Jaques, (whose opinion Mr. C. honestly gave,) who owned this bull, and was well acquainted with every individual in his entire herd, or Mr. Colman, who could evidently have had no such favorable opportunities for forming his judgment, were most likely to be correct, we think is very evident. In relation to the *stock* of Cœlebs, Col. Jaques in a letter to the editor of the "Cultivator," in 1845, page 75, says: "Mr. Leonard Stone, of Watertown, one of our *best* and wealthiest farmers, says he had two cows by I. Coolidge's premium bull, (a son of Cœlebs) that proved the best milkers he ever had."—And the editor previously remarks, "*Many* of his (Cœlebs') progeny were *remarkable as milkers*."

"Has he (Mr. Colman) ever bred or owned a pure bred Durham?" Don't know. Has he? and if so, how many? He might have been unfortunate in his selection, (if he ever owned any,) for we are free to acknowledge that *all* Durhams are not of the same quality. A breed of cattle that contained *none* but *good* ones, would certainly be a desideratum.

"Is Mr. Chapman satisfied?" With what? Our Durhams? *Yes*. With our friend's article? We have no fault to find. That Mr. Colman was not favorable to the Durhams? We were perfectly well aware of this fact before we read our friend's able article, and all we can obtain from one *opposed* to a thing in its *favor*, we think must have some weight. Hear what Mr. C. says in the *same* article extracted from by our friend. [See Gen. Farmer, 1842, pages 3 and 20:] "In addition to these [importations of Durhams] we have had a valuable bull imported by a merchant of Boston * * * and the superior bull "Bolivar," imported by John Hare Powel, of Pennsylvania, from I. Whittaker's stock, in England, *cele-*

brated for its extraordinary dairy properties."—Again same article of Durham cows "in general," Mr. C. says: "The Durham cows *in general*, and especially the selected ones which have been imported on account of these qualities, are *large milkers;* but their milk *seems,* [not *is,*] generally inferior as to richness, or butyraceous properties." That the milk from Durham cows is *rich,* we believe is now very universally admitted. It is well known that the Durhams generally are *good handlers,* and a cow that is a *good* handler, is almost sure to give good milk. We have yet to see a single exception to this rule. We have one full blood cow, "Flora," that gave one pound and one ounce of butter from twelve quarts of milk. This cow gives from 18 to 19 quarts per day, and at the above rate would make over eleven pounds per week. She is an imported cow, and *twelve years old,* and has given milk this year since the 20th of March. She has had no feed but grass pasture for the last eight or ten weeks.

That as a general rule animals consume in proportion to their size, is probably true; but it is subject to very many exceptions. That two horses used in the same team, and weighing nearly the same, do not require an equal amount of food, almost every farmer knows. The one will consume nearly one-third more than the other, and not keep in as good condition. The greater or less consumption of food is owing, after all, much more to the *make* and *build* of an animal than its size [weight.]

"I cannot pronounce them, as a race distinguished and preferable to *all others,* for their *dairy qualities.*" Here, friend, take our hat! We won't say any more—until we get ready.

We do not feel in any mood to quarrel with any one for liking another breed of cattle better than the Durhams, for all who choose, have a most undoubted right so to do. And it would afford us much pleasure to see the pages of our various agricultural journals, contain more respecting the merits of all good breeds of cattle. Can't a Short-horn or Hereford owner read a good account of a Devon without flying into a passion? If not, he is certainly unfit to own good stock, for we should really pity the poor animals under his care. We always did believe there was more than one good thing in this great world of ours, and we also believe that there is more than one good breed of cattle. And when some of our friends tell us they have a good Native or Hereford cow, does that prove any thing against the Durhams or Ayrshires?

Bring on, then, those beautiful Devons, with their fine glossy coats—those noble Herefords, with their clean white faces—those fine Ayrshires, with their udders almost as large as their little bodies—those *good* Natives, that should shame all the rest of their breed out of existence—and we'll agree for it the stately Durhams will not be wanting, and let us screw some good brass nobs on their horns, so they shall cease goring each other, and those miserable *scrubs* that now infest our country would soon be among the things that were.

And now, Mr. Editor, in conclusion, will you permit us to ask you one question? You say in substance, in your remarks, "That it is best as a general rule to secure deep milkers whenever they can be found, *without regard to origin.*" Now what we wish to know is, if you were offered a choice of two cows of equally good appearance, and equally good milkers, the one descended from ancestors all celebrated for their *extrordinary milking qualities,* and the other descended from poor milkers generally, or perhaps nothing is known of her ancestry, which would you prefer? We fully agree that it is best to secure deep milkers, but in order to *establish* this good quality in our herds, we think it is necessary to know *something* of the origin or ancestry of an animal. *Clockville, Madison Co., N. Y., July,* 1849.

Remark.—In the case cited above, we should of course prefer the cow "descended from ancestors all celebrated for their extraordinary milking qualities."

RECENT IMPORTATION OF SHORT-HORNS.

BY A. STEVENS, OF NEW YORK.

Eds. Genesee Farmer:—On my return from England last spring, I brought with me for account of Col. Sherwood, of Auburn, N. Y., and myself, a short-horn Durham Bull, and three short-horn Heifers; and one short-horn bull calf for J. P. Sheafe, Esq., of Dutchess Co., N. Y. Col. Sherwood, and myself, have had so many inquiries as to these cattle, that I ask a notice of them in your journal.

The bull is "3d Duke of Cambridge;" his portrait and pedigree may be seen in the 4th volume of the English Herd-Book, page 614, (No. 5,941.) He was bred by that distinguished breeder, Thomas Bates, Esq., of Kensington, Yarm, England, who is well and widely known, both in England and America.

The heifers and bull calf were bred by John Stephenson, Esq., of the county of Durham, England, well known as the owner of the superior and famous Princess Tribe of Short-horns.

In the execution of the commissions of Mr. Sheafe and Col. Sherwood, I was left to my own discretion, they trusting to my judgment. I made a thorough examination of the various herds of Short-horns in England, and from among them selected such animals as I thought would meet the views of my associates, and satisfy the critical scrutiny of American breeders.

These cattle have now been in America five months, and have been seen by hundreds of persons, including many of our best judges and breeders. It gives me great pleasure to say they have met the approbation of all who have seen them. The universal testimony is that in every respect, they are the best short-horns ever imported into America. The vessel which brought them over, encountered weather of great severity, and the voyage was both long and tempestuous, indeed, for twenty days, there was a continued hurricane. The cattle were worn out and reduced. They are now all recovered except one heifer; she is ill and was knocked all to pieces, and has not yet regained her form, and I fear may not.—She was the best of the three heifers before sailing.

The origin of the cattle is this. The late Sir Henry Vane Tempest, of Wynyard Park, county of Durham, England, owned a herd of short-horns, known for its wonderful and unsurpassed excellence. They are designated in England "the Wynyard Breed," or "Princess Tribe." In 1800, Sir Henry bought the original of his herd, the cow Princess, of Robert Colling. After the death of Sir Henry, the Wynyard herd was sold, and the cow Angelina, (a granddaughter of Princess,) became the property of John Stephenson, Esq. From Angelina are descended the animals which I brought over. * * *

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 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.*

From the various expression of approval received I select the following. The writer, Lewis F. Allen, Esq., is well known as an extensive breeder of short-horns and as a judge. No person in the United States, has had a more intimate knowledge of the short-horns in our country for the last twenty-five years. He is author of the American Herd Book:—

"Since I saw him, I have thought much on your bull, 3d Duke of Cambridge, and in comparing him in my mind with *all* the bulls I have ever seen, I am more and more impressed with his superior value to any thing *yet* brought into the United States. In short, he fills my mind entirely with all the qualities which a *perfect* short-horn should possess; and I don't know but the heifers are *quite* his *equals* in style, quality, &c. I hope you will have all the success both in their increase, and in the sale of their produce, which you deserve, for our country has *never* before, within my knowledge, received such an acquisition in the stock line as in these cattle. You deserve much for your enterprise, and Stevens a great deal for his judgment in selecting such animals.—They far exceed my anticipations; although I am free to say, I anticipated much from Stevens' selections, with all England for a field to choose in."

This opinion was entirely unsolicited on the part of Col. Sherwood or myself, and wholly voluntary on the part of Mr. Allen.

Steps have been taken to have a portrait of the 3d Duke of Cambridge engraved for publication in the Genesee Farmer for September or October, and of Princess 2d in some future number.

These animals are now at Col. Sherwood's, Auburn N. Y. where they may be seen. It is now designed to show them at Syracuse at the great cattle show of the State Society, in September next. Col. Sherwood and myself invite the attention of breeders and amateurs to them. A. Stevens.—*New York.*

Culture of Grapes in Ohio.—It is stated in the report of the Agricultural Society for the county of Hamilton, O., that not less than five hundred bushels of Catawba and Isabella grapes, were sold at Cincinnati, during last season, for "table use." The price is three to four dollars per bushel. But the quantity sold for the table is said to have been inconsiderable, compared with the quantity used in the manufacture of wine. The grape culture is profitably carried on in the vicinity of Cincinnati, on the roughest hill-sides, which are of but little value for the ordinary purposes of agriculture.

Gold Fish in Hudson River.—About ten years ago a few gold fish were thrown into Matteawan Creek, which empties into the Hudson near Newburgh, and have so multiplied as to fairly stock the creek and river in that vicinity. These fish, originally from China, are rare in this country.

BLACK SKINNED BARLEY.

Last winter, while on the Atlantic, I promised my fellow-passenger, P. Barry, Esq., that I would send to the Genesee Farmer an account of the discovery, &c., of the Cheltenham Six-rowed Black-skinned Barley. Various circumstances have prevented my doing so until now. I have a beautiful sample now in ear, which I intend to take to the State Fair. I transplanted some, but owing to the dry weather it did not succeed as well as it would otherwise have done; still, from that the promised yield will be larger than the commonality of barley.

Mr. Vaughan, a tobacconist of Cheltenham, England, having by accident discovered three grains of this extraordinary barley, he planted it in January, 1843, and its produce was 3,610 corns or grains.—Mr. Churchill, of the Plough Hotel, of that place, having been favored with a few grains, planted them in December 1843, '44, and '45. The Black Barley, notwithstanding the severe frosts and cold winds, and the extreme drought in part of 1844, flourished and yielded a very extraordinary crop. Mr. C. was induced to drill several acres on the 14th of February, 1846, allowing five pecks to the acre, which he reaped on the 4th of July. Its produce was 52 bushels and 2 pecks per acre; weight, 55½ lbs. per bushel—when hummelled, 58 lbs. The same land was sown with whitestone turnips on the 10th July, which were large, and fit for the table by the 2d September. Mr. C. drilled in Jan. and February, 1847, several acres, allowing six pecks to the acre; the produce averaged 63 bushels to the acre, and weighed 57½ lbs. to the bushel, before hummeling.* Mr. C. drilled, in October 1847, several acres with and without vetches. He mowed the barley and vetches when in ear, for his cattle and working horses, during April and May; the produce averaged 12 tons, 2 cwt. (27,104 lbs.) per acre, and from its superiority of feed, was a saving of 3 lbs. of beans to each horse per day.—That planted without vetches was harvested on the 10th July, and the land sown with whitestone turnips and fit for sale in September. A small portion of barley was mown in May; the stubble was let remain for a second crop, and was reaped on the 23d August, producing 37 bushels and 2 pecks to the acre.

Mr. Churchill malted 100 bushels and found the vat cast more than any other barley.† When the barley is ground and mixed with wheaten flour, it produces good sweet bread.

It is recommended to be sown in October or November, for green food in the spring, either with or without vetches, and not later than February for harvesting or seed, allowing to good lands about 84 lbs. to the acre, and for middling land, 100 lbs. It is better drilled or dibbled. The straw is very strong, fine and fit for plaiting; all sorts of cattle are very fond of it when cut into chaff. So hardy is the plant that a gentleman in Wolverhampton raised a few corns in his hot-house, and during the severe cold ordered it to be transplanted into the open ground, where it came to great perfection.

Mr. C. says it does better on poor than on highly manured lands. I sowed late in March and April.—I put the grains six inches apart, and found they were much too close. W. M. Beauchamp.—*Skaneateles, N. Y., July*, 1849.

*An acquaintance of mine planted one peck, and reaped the same season from the same, 46 bushels.

† I do not recommend it for distillation, or in any other way that may augment the curse of drunkenness.

LETTER FROM FAIRFAX CO., VIRGINIA.

Messrs. Editors:—Having recently become a subscriber to the Genesee Farmer, I must say I prefer it to all other agricultural documents that I ever perused. I have shown it to my neighbors around me, and asked them to subscribe. They say that it is published too far off—that the system of farming carried on in New-York will not answer for the soil and climate here. Now I wish to know the reason, for they are unable to give me a satisfactory one.—Will any one of the readers of the Farmer give the reason, if any, why the northern practice of farming will not do in many sections of the south? Having been born and raised in Madison county, New-York, (from which I came to this place about two years ago,) I am satisfied, from my own knowledge, that the southern practice of farming would *not* do at the north.

Nature has done every "needful thing" for this country, while it has been the work of the white man and his slaves to mutilate and destroy. We have many advantages over Western New York. We have Washington and Alexandria, which are better markets for produce than any in Western New York—and the Potomac river, with vessels on her that will take our surplus to any part of the world.

I wish to turn some of the farmers of New-York this way, instead of their going to the west. Land within three miles of Washington varies from $10 to $30 per acre, the price depending upon the quality of soil and location; and in my own neighborhood, which is ten miles from Alexandria and three miles from Mt. Vernon, (on part of the estate formerly owned by Gen. Washington,) land can be purchased at from $5 to $15 per acre. * * *

All this part of Virginia wants, in my humble opinion, is enterprising northern farmers to settle here, and it will become one of the gardens of the world. In the luxurient valley of the Genesee, there is no end to wheat and corn—while the valleys of the Potomac river are grown up to pines and cedars; the planters having left them, the deer and wild turkey have taken possession, and roam unmolested. I long to see the "Old Dominion" stand first, as of right she ought, among her sister States; and northern emigration would soon place her in that proud position.

The soil here is easily improved, and the water good—and in fact there is every inducement that a northern farmer could ask for. Where sown, clover grows luxuriantly, and lime acts well on the soil.—Indeed I see nothing to hinder a northern farmer, with northern enterprise and the northern mode of farming, from doing well here; and I advise all unsettled farmers who wish to locate permanently, to emigrate to Virginia instead of going to the west.

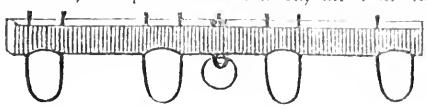
Any one wishing to know more about lands in Fairfax county, may direct their letters to me, and they shall be accommodated. S. N. Wright.—*Accotink, Fairfax Co., Va., May*, 1849.

Remarks.—We publish the above because we think its statements will prove interesting to many of our readers. If the section mentioned possesses "many advantages over Western New York," we see no good reason why it should remain in a wild and uncultivated state. We hope to receive articles from other sections of the south and west, containing facts of general interest to agriculturists—such as soil and climate, staple products, price of land, &c.

BREAKING STEERS.

An Alabama correspondent of the *Southern Cultivator* gives the following plan for breaking steers. It strikes us as being quite practicable. He says:

"Make a yoke four feet longer than usual; give room to put four bows instead of two, as represented in the annexed figure. Hitch a pair of well broke steers, one at each end of the yoke, leaving the two middle bows for your unbroke steers. Now hitch to your cart, and put them at work, all four in the



A D, old steers. | B C, young steers.

same yoke, and abreast. They may cut some antics at first, but they will soon find it best to obey the word of command. Dont suffer them to be whipped, as is common in breaking mules and oxen. Treat them gently while you have them hitched together, and you can break them with or without lines. You will find this plan to be much better than having a half-dozen negroes about them, beating and thumping, whooping and bawling for a week or two, if you manage them rightly for two or three weeks.—Should a neighbor wish to borrow the gentlest yoke of oxen you have, you would hesitate to say which was the safest. The steers you have thus newly broken would be without tricks."

TO THE WOOL GROWERS OF THE UNITED STATES.

A purse of $100 having been offered for the best 25 Merino Ewes, and the best 25 Marino lambs under one year old—by a private gentleman—the exhibition to be at the Fair of the New-York State Agricultural Society, I propose to be a competitor in that exhibition against any and all flocks of Merino sheep that may be brought against me. I give this out, not as a challenge, but simply as a proposition, which shall call forth my brother farmers throughout the length and breadth of the land. My object is to convince myself where the best Merino sheep are—if I have not got them—for I am resolved to improve from the best, whatever may be the cost.—By a fair and manly competition, we may compare the best specimens from the best flocks—and by that means may learn where the best sheep are to be found.

For a series of years, I have spared no pains or expense to possess myself of the best sheep of the pure merino race, that the United states could afford, or to be found in the old world. It remains to be seen whether these efforts have been successful: and to this end I earnestly invite the merino wool-growers throughout the Union to meet me on the show ground at Syracuse, next September, in honorable competition, to compare the best 25 ewes and 25 lambs from our respective flocks, and thus add another most interesting feature to the somewhat National Exhibition which will be made at the New York State Fair. A. L. Bingham.—*Cornwall, Vt., July*, 1849.

Oak leaves, says Thaer, are not easily decomposed, and contain an astringent matter which is highly injurious to vegetation as long as the leaf remains undecomposed.

THE 'RHUS IN HERE;' OR HINTS TO VILLAGERS.

[Though many of the following hints are unseasonable at this time, the article will keep quite as well in print as in our pigeon hole—and perchance prove valuable to those who preserve the Farmer.—Ed.]

As more than a *pro rata* portion of the readers of the Farmer live in villages—and as it is a very thankless task, however irrepressible your enthusiasm may be, to write for the benefit of those of the country who only call you a pretender or an empiric—I will now say a few words for the benefit of the villager who delights in growing his own corn and cabbages.

Cabbage Plants.—Never attempt to grow cabbage plants in any thing but a loose vegetable mould—here the roots will grow large and strong, so that when transplanted they never fail to grow with rapidity. I have often heard it said that a cabbage planted by a Dutchwoman was sure to live and thrive. One-half the secret of her success is that her plants have large spongioles: the other half is in the early hoeing they receive at her hands: for vegetable, like animated nature may be improved by female culture.

The Time to Plant.—When a farmer tells you to wait for the new or old of the moon before you sow or plant, don't mind him, unless your faith is as expansive as his own; but plant early if all things are right—and the moon, crazy as she is, will not molest your crop.

Onions.—Few people in Western New York know the true value and culinary office of onions: still fewer know how to grow them aright. If you want early onions, plant the black seed after the summer droughts are over, take them up in November and put them in the cellar—in April, set them out in beds. They will soon mature, and are much better than what are vulgarly called top onions. If you have a few small onions in the ground all winter, they will come forward very early in the spring, and may be eaten as a salad, tops and all. For the main crop of onions, always plant *new* black seed in March or April; the surplus young onions will pay for the thinning and weeding. They may be used in soups and stews, or eaten *en salade*, tops and all.

Indian Corn.—For early green corn, plant a row or two of some early variety, then plant sweet corn in rows 2½ feet apart, once every two weeks, until July; thin the plants to six or eight inches in the row, pull or cut off the suckers, and as the corn begins to ear, cut out barren and diseased stalks. You will then have a supply of green corn from July until October, and sweet corn to cure for winter's use, to boot. Select the largest ears for seed from two or three eared stalks. The soil for corn can hardly be made too rich. Hoe as soon as the plant appears above the surface. Some suppose that when corn is planted early, comes up and turns yellow, it is stunted, and will be overtaken by the thrifty plants of a later growth. No such thing; the early plant is often gaining root when the top is stationary, so that its growth will be much more rapid in the succeeding warm weather, than that of even thrifty later grown plants.

Beans.—Being tender plants, they must be planted later than most other seeds. Pole beans, though not as early as bush beans, are much more palateable in the green state. No man can have any pretension to the character of an epicurean, who says it is too much trouble to pole beans.

Radishes.—Early planted radishes grow so slow that they are injured by worms on a manured soil; a virgin sandy loam is the best for early radishes.—Later in the season they grow so rapidly in a rich soil, that they outstrip the worms.

Cucumbers.—Manure prepares the best soil for cucumbers. Whenever I see a farmer's wife with a barrel of cucumber pickles for sale, I instinctively feel, before I make the inquiry, that the stumps have not yet rotted in her garden. A virgin soil, composed by nature's unerring hand, is best for all the delicate feeders of the whole vegetable kingdom. Corn and roots are gross feeders not easily cloyed.—Potatoes want a moist, cool climate, and moist, rich soil. When potatoes fast for want of due moisture, Indian corn luxuriates.

A WORD ABOUT TREES AND SHRUBS.

Let every villager who takes the Genesee Farmer, read, learn, mark and inwardly digest its Horticultural Department, by P. Barry. He will there find that Mr. B. did not go to England to eat turbot, nor to Paris to hurry through the *Jardin des Plants*, to eat oyster soup at the *Rocher du Concati*. The Yankees who first began to build villages in Western New York, extirpated every tree that the farmer's axe had spared, as though a forest tree was the natural enemy of civilization. Stingy of every inch of ground, their houses were built out flush with the street, so that when the village grew into a city, they might sell the rear at a high price. To copy the worst example of the city, or of the decayed New England town, seemed to be their highest ambition; hence, instead of those indigenous trees, shrubs, flowers and creepers (call them not parasites,) which now adorn the villager's home, little of the kind was to be seen ten years ago, except now and then a starveling exotic in a pot, stuck out on a window sill, or the door step, bringing to mind the little disconsolate flower in Picciola's prison yard.

Great has been the progress of sylvan and floral embellishment in our villages, in the last two or three years, and choice fruit trees and vines begin to abound. Next to our favored climate, many thanks are due to D. Thomas, Downing, Barry, and other late writers on horticulture, for such a rapid consummation. But much still remains to be done. Little money is needed to effect it; all that is necessary to promote such improvements, is some reading, the cultivation of a correct taste, some care and attention; but no more time is required than that which is daily passed in idleness—and what is the labor to him or her who loves nature for herself! S. W.—*Seneca County, N. Y.*, 1849.

THORN HEDGES.

Messrs. Editors:—As you expressed a wish in your last number of the Genesee Farmer, to hear from such of your correspondents as have had any experience in growing hedges, I beg to send you a litte account of my experience on the subject.

Five years ago I procured from the Botanical Gardens of Messrs. A. J. Downing & Co., of Newburgh, N. Y., a quantity of young plants of that variety of thorn called the Newcastle Thorn (*Cratægus Crus-galli*)—a native, as Mr. Downing informed me, of New Jersey, and much better adapted to this climate than the English hawthorn. I planted them a foot apart in a single row, and as they were charged six

dollars per thousand the thorn plants for each rod of hedge cost me only ten cents. When they had grown two years, each thorn was cut down so as to leave only three inches of the stem above ground.—This had the effect of causing several shoots to spring up from each root: these have grown, and now the hedge presents a vigorous appearance, varying from four feet to six and a half feet high, and it promises to make a very good fence in two or three years from this time. The land on which I planted the hedge varies in quality:—that on which it has attained the height of six feet and a half, is a good mellow loam, but that on which it is only four feet high, is a stiff hard clay. If I plant another hedge, I shall plant the thorns eight inches apart, and previously manure the land.

I think it cannot be doubted that we have several species of thorn indigenous to this country which would under proper management, make admirable hedges: for I believe that, all things considered, nothing will be found comparable to the thorn for hedge or farm fences, whether we consider its hardiness and durability, its habit of growing in such close proximity, one to another, as to constitute, from its formidable and numerous spines, an impenetrable barrier, its adaptation to the climate of all the northern and middle states, and perhaps to some of those in the south, and its ease of propagation by seed, and consequent cheapness. Dr. Beck, in his Botany of the Northern and Middle States, enumerates eight distinct species of native thorns. I have noticed five or six varieties of the thorn scattered over my own farm, several of which would apparently, from their low, bushy growth, make excellent hedges: and it is to be hoped that ere long our enterprising nurserymen will so test all the native sorts of thorn as to be able to point out such kinds as are best adapted to the purpose of making good permanent farm fences. I may add that although mice are numerous in my field, yet they have not attacked the Newcastle thorn planted by me. This is not the case with the English hawthorn (*Cratægus Oxyacantha*) planted at the distance of a few miles, where, during the winter, the mice frequently girdle the plants and do much injury. H. R.—*Varick, Seneca Co., N. Y., June,* 1849.

WOOL GROWING.—LARGE FLEECES, &c.

Messrs. Editors:—In looking over the old numbers of your valuable paper, I find several statements from those engaged in the growing of wool. My attention was particularly drawn to the statement some gave of the great weight of fleece from their Merinos. Now, sir, my sheep quite come up to some of the Merino flocks, they being of the Merino grade. I have at present 118, including old and young—38 lambs. The fall of '46, I purchased, at the State fair at Auburn, of Reed Burritt, of Burdett, Tompkins county, a Merino buck lamb, one of the five that took the first premium at the said fair. The aggregate weight of his fleeces is 23½ lbs. His first fleece weighed 7 lbs., second 7⅜ lbs., third 8½. I have 70 of his stock, including 28 lambs. Two 2 year-old ewes, with lambs by their sides, clipped 12¼ lbs. of well washed wool. My 51 old sheep clipped 4 lbs. 3 oz. per fleece; forty of them are ewes; yearlings average four lbs. per head.

Last fall, at the State Fair at Buffalo, I purchased a yearling Merino buck of J. D. Patterson, of Westfield, Chautauque county. He is a noble sheep, good sire, well formed and well wooled; his fleece weighed 8¾ lbs. well washed. I have ten lambs of his stock, which bid fair to make the right kind of sheep.

I have brought my flock up to what they are, without the expense of purchasing high priced sheep at home or abroad; indeed, I have purchased none but the two above mentioned. The improvement has been made by a proper selection of bucks, changing them every or every other year, and breeding from my best ewes. I thought if I could get up a flock of sheep that would average 4 lbs. per fleece, I would be satisfied—but my ambition goes beyond that. I anticipate getting up a flock that all over one year old will average 5 lbs., and lambs 4½ lbs. I feed no grain to my old sheep; I give a few oats in the sheaf to my lambs, during the first four weeks of feeding hay.

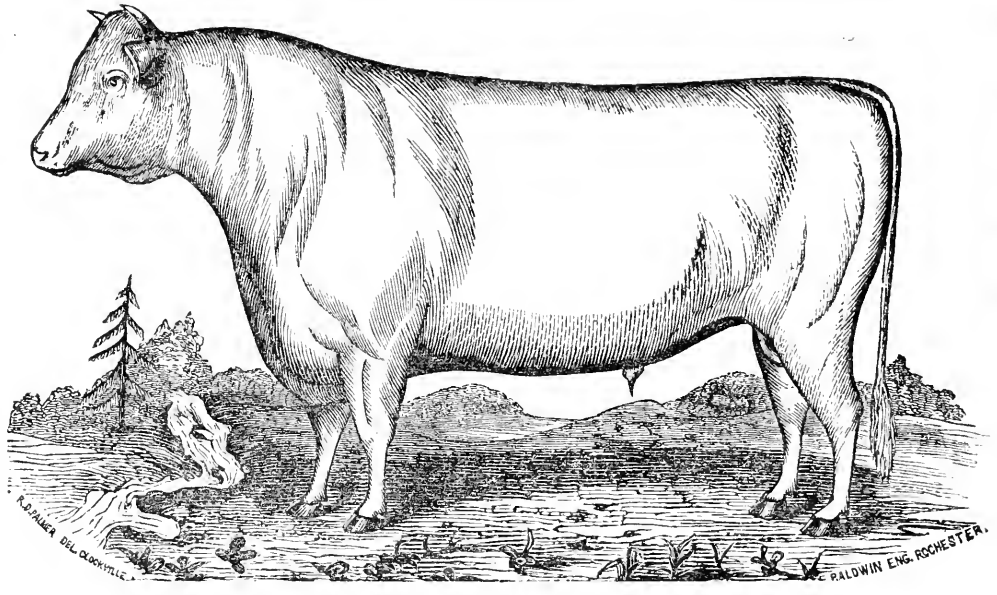
If any one who may read this article has a flock of Merinos that come to the last above figured, they will much oblige one of the many readers of your paper by making it public through its pages. Samuel Emerel.—*Milo, Yates Co., N. Y., June,* 1849.

A CHEAP BEE-HIVE.

Messrs. Editors:—In getting up the plan of a bee-hive to meet the wants of the farmer and mechanic, there are several things that should be well understood—the object being profit and economy.—A large hive seldom swarms much after the first season of swarming, if they have a plenty of room for their increase. I have always found those hives the most profitable that hold only what honey it requires to winter a midling sized swarm, and comb enough to raise their young in. I have used board, tub and straw hives, and have examined most of the patent hives that have been offered in this vicinity.

Three years ago I got up a hive that I think is the nearest what the farmer wants, of any I have ever seen. I will endeavor to describe how it is made.—I select two suitable boards, one inch thick—one of them thirteen, and the other fifteen inches wide. I saw two pieces from the one 13 inches wide, for the front and back part of the hive, twenty inches long; then two more fifteen inches wide, the same length; then I measure off 10¾ inches on one side, and 11 on the other side. Strike lines across, and saw them into by them, to make the sides of the main hive and sliding doors. For the chamber to set the boxes in, take the two pieces 11 inches long, nail them to the boards 13 inches wide, the longest sides out; then a square piece from the board 13 inches wide, makes the floor between the main hive and chamber. From the edges next to the front and back boards, I cut out a strip two or three inches long, sufficient for the bees to pass from the main hive to the boxes. I then nail the floor firmly, level with the longest edges of the side boards. A board 17 inches square makes the top of the hive, with some gimlet holes to slip nails into to hold the sliding doors in their place, completes the hive, except four sticks through the main hive, two each way, to support the comb.

To make boxes, select good house siding, wide enough to use six by eight window-glass for the ends; plain them to ⅜ of an inch thick; make the boxes 12½ inches long; cut the edges of two of the boards to make a place for the bees to enter it from the main hive; nail them together with inch brads. Two boxes will stand in the chamber, and hold 16 lbs. each, when well filled, and seldom any thing in them but the clear honey and white comb. Alvin Wilcox.—*West Bloomfield, N. Y., April,* 1849.



IMPROVED SHORT-HORN BULL "BUENA VISTA,"
OWNED BY S. P CHAPMAN, OF CLOCKVILLE, MADISON COUNTY, NEW YORK.

THOUGH we never "bred or owned a short-horn," we *do* like to see and handle them—and when we can not have that privilege, we e'en like to look upon such a "counterfeit presentment" as the portrait here given. Indeed, we admire a beautiful, well formed animal of any breed, and have little sympathy with those specimens of the *genus homo*, who can find nothing worth seeing, at a "cattle-show."

We congratulate Mr. CHAPMAN upon the possession of so perfect and noble an animal as the one above represented; and we are assured that "Buena Vista" is equally as good, if not "better looking," than the engraving. His pedigree shows him to be among the choicest of the breed to which he belongs, and we are confident that while under the care and management of his present owner, his good qualities will be fully retained. Mr. CHAPMAN seems determined to keep pace with the improvements of the age, and we consider his example well worthy of imitation by other practical farmers and breeders.—The success which has thus far attended his efforts to improve the quality and augment the produce of his stock, (both sheep and cattle,) proves that he understands the subject—and we presume he fully comprehends its importance. We trust his labors will be adequately rewarded.

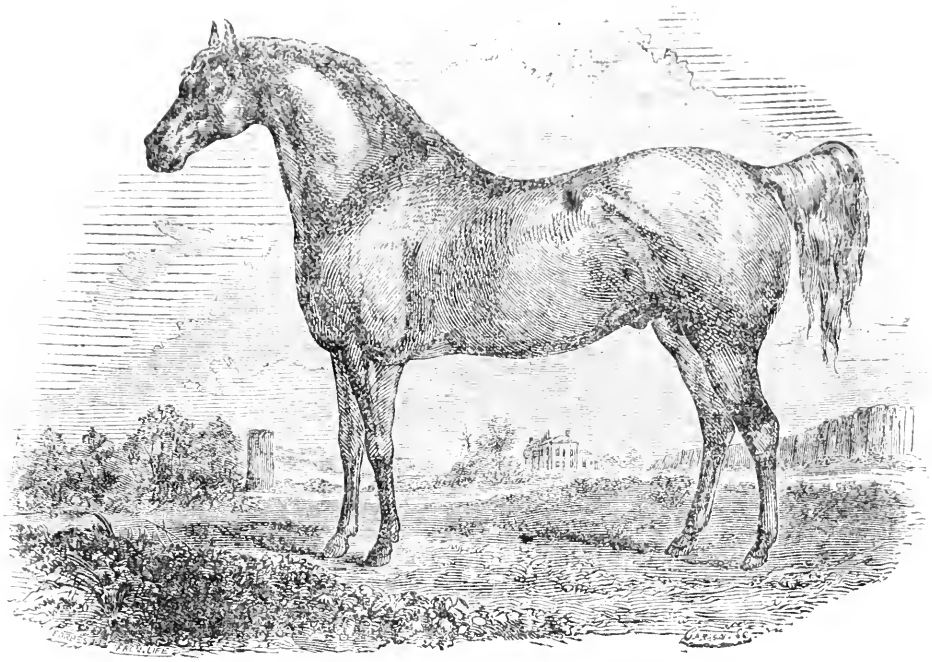
We annex the pedigree of "Buena Vista:"—

Pedigree.—White—bred by GEORGE VAIL, of Troy, N. Y.; calved 10th April, 1845. Got by Meteor, 104, [bred by Mr. Vail, from an imported cow and bull, bred by Thomas Bates, Esq., of Yorkshire, England,] out of Queen II., by Charles Henry Hall's Meteor*—Queen I., by Monarch, 105, [bred by Mr. Hall,]—Young Princess, by Regent, [imported by Mr. Hall in 1821,—Old Princess, [imported by Edward Prince in 1825, bred by Robert Colling,] by Lancaster, 360,—Golden Pippin by North Star, 458,—by Favorite, 252,—by Hubback, 319.

* Mr. Hall's Meteor was sired by Harlem Comet, 71, by Wye Comet, [imported by Gov. Lloyd, of Maryland,] dam Lily by Regent, [imported by Mr. Hall, in 1821,]—Blanche [imported by Admiral Sir Isaac Coffin, in 1823,] by a son of Comet, 319. The *dam* of Meteor, Snow-drop, by imported Regent; g. d., Old Snow-drop, got in England, out of Blanche, [imported.]

THE SHORT-HORNS.—In his "Compend of American Agriculture," Mr. ALLEN says:—

"The Short-horns or Durhams are decidedly the most showy and taking among the cattle species.—They are of all colors between a full deep red, and a pure creamy white; but generally have both intermixed in larger or smaller patches, or intimately blended in a beautiful roan. Black, brown, or brindle are not recognized among pure bred short-horns. Their form is well spread, symmetrical and imposing, and capable of sustaining a large weight of valuable carcass. The horn was originally branching, and turned upward, but now frequently has a downward tency, with the tips pointing towards each other. They are light and comparatively short, clear, highly polished and waxy. The head is finely formed, with a longer face, but not so fine a muzzle as the Devon. The neck is delicately formed without dewlap; the brisket projecting, and the great depth and width of the chest giving short, well spread fore legs. The crops are good; back and loin broad and flat; ribs projecting; deep flank and twist; tail well set up, strong at the roots and tapering. They have a thick covering of soft hair, and are mellow to the touch, technically termed *handling well*. They mature early and rapidly for the quantity of food consumed, yielding largely of good beef with little offal. As a breed, they are excellent milkers, though some families of short-horns surpass others in this quality.—The short-horns are assigned a high antiquity by the oldest breeders in the counties of Durham and Yorkshire, England, the place of their origin, and for a long time, of their almost exclusive breeding."



THE STALLION "MORGAN HUNTER."

[For the above beautiful engraving we are indebted to the owners of the animal it portrays. As we have never seen "Morgan Hunter," we are unable to speak of him from personal knowledge — and therefore copy the following notice from the July number of *The Cultivator:*]

It has been well remarked that, though a picture may convey too favorable an idea of a defective animal, yet it is impossible to portray all the excellencies of a good one. Making due allowances for the latter difficulty, the above figure may be considered a correct likeness of the horse from which it was taken.

"Morgan Hunter" is six years old; was bred, as we are informed, by Mr. Exwell, of Springfield, Vt.; was got by Gifford Morgan, dam by the same horse. He was sold by F. A. Weir, of Walpole, N. H., in May last, to Messrs. Hackley & Gilbert, of East Hamilton, Madison County, N. Y., and stands the present season at the stable of S. A. Gilbert, in that town. He is a capital specimen of the Morgan family of horses. In his general form, he possesses, in a remarkable degree, what Youatt lays down as the most important requisite in a stallion—compactness—"as much goodness and strength as possible, condensed in a little space." His head is fine, and his eye large and brilliant; his chest capacious, barrel round, loin very broad, back short, quarters long and muscular, flanks deep and full, limbs short-jointed, flat and sinewy. In temper and spirit he exhibits the intelligence and docility which characterize most of his near relatives. Like the high-mettled Arabian, he unites the playfulness and good humor of a pet lamb, with the courage and power of the war-horse—whose "neck is clothed with thunder,"—"who rejoiceth in his strength," and "mocketh at fear"

The history of the Morgan horses has been fully given in previous pages of The Cultivator. Some people, however, who have not fully investigated the matter, seem to entertain the idea, that they originated with a cross of the French or Canadian horse. We have never seen the least evidence that the original, or as he is called the Justin Morgan horse, possessed any of this blood; and of the four stallions which were kept of his get, we believe the Bulrush or Chelsea Morgan, was the only one that inherited any French blood through the dam.

We notice various advertisements and cuts of horses, as "Morgans," in the papers of the different parts of the country. A comparison of those descriptions and their originals, with the cut at the head of this article, may serve, in some degree, to show whether the animals truly represent the stock whose name they bear, or are only counterfeits.

Instinct of Plants.—Hoare, in his treatise on the vine, gives a striking exemplification of the instinct of plants. A bone was placed in the strong, dry clay of a vine border. The vine sent out a leading, or tap root, directly through the clay to the bone. In its passage through the clay the main root threw out fibres, but when it reached the bone it entirely covered it by degrees with the most delicate and minute fibres, like lace, each one sucking at a pore in the bone; like a litter of pigs at their dam as she lies down on the sunny side of the farm-yard. On this luscious morsel of a marrow bone would the vine continue to feed as long as any nutriment remained to be extracted. What wonderful analogies there are running through the various forms of animal and vegetable creation, to stimulate curiosity, to gratify research, and finally, to lead our contemplations from nature, in a feeling of reverence, "up to nature's God."

As to the vine spoken of by Hoare, it is worthy of remark that the root went no further than the bone.

MAKING AND PRESERVING BUTTER.

The following article was communicated to the Farmer's Monthly Visitor, by one of the sisters of the United Society of Shakers at Canterbury, N. H.—The excellent economy of this Society gives an importance to their recommendations:—

"The pans or other vessels in which the milk is to be set, should be made perfectly sweet by scalding, previous to putting the milk into them. A room in a basement story, where the air will circulate freely, is preferable to a cellar for setting milk; forty-eight hours is a sufficient length of time to raise cream for making butter to keep through the winter season.

"After this cream is taken off, the milk may stand the same length of time, but the cream that rises after the first forty-eight hours, will not make butter so palateable as the first which rises, and should be churned separate.

"As soon as the cream is taken from the milk, it should be put into a tin pail, and set into a kettle of scalding water, taking care to stir the cream after, otherwise it will turn oily at the top. It should remain in the kettle till the cream is scalding hot, being careful to place it in a tub of cold water immediately. Stir it often until it is nearly or quite cold: if it remains long after hot, it will be injured much It will be necesary to change the water once or twice before the cream can be perfectly cold. It may then be kept three or four days without injury. After churning, the buttermilk should be partially worked out; then add one and one-half ounce of salt to one pound of butter.

"It may then be covered tight and stand till the following day; then work it over again, taking every care to work out all particles of buttermilk, which will prevent the butter from growing rancid by age. It may then be formed into cakes, or packed solid in a cask, which should be perfectly sweet and well dried.

"The inside should be sprinkled with a little fine salt. After the cask is filled, dip a cloth in melted butter, and spread it snugly over the top—cover it with fine salt, and fasten up the cask sufficiently tight to keep out the air: it should then be set in a cool place, to remain through the winter.

"A cask made of red oak staves is preferable to any other, for preserving the original sweetness of butter. It will add to the flavor of butter to work in a little sugar at the last working over—say a tablespoonful to every four or five pounds of butter."

A SUGGESTION FOR AGRICULTURAL CLUBS.

The "New York Columbian Farmer" suggests what is, one might suppose, not only wise, but very practicable for all who have the self-command and resolution to *do any thing* for improvement in their line of business. It says:

Let each member of the club procure a good sized blank book; commence, say in the spring; write down all matters which relate to the operations of the farm, viz.: number of acres, the soil, manner of tillage, quantity and kind of manure; the time of seeding of all kinds of grain and vegetables, quantity of seed per acre; the situation of the land, as to wet or dry; making suitable entries during the season, as to the weather, the growth of crops, whether doing well or not, and the probable cause: the time of harvesting, yield per acre; if good or poor, the probable cause; the time of selling, the price, high or low. A memorandum somewhat similar as to the stock; the disease with which they are attacked, if any, the remedy used, and the effect. Let an exact account be kept of the outgoes and incomes, and a balance be struck at the end of each year: taking special pains through the year to ascertain causes and their effects; and be not afraid of writing too much. By this course they would soon acquire the habit of putting their thoughts on paper in a systematic way. At the end of each year, these papers could be presented to the club, and examined by a committee; and all matters worth remembering, put into a condensed report, and recorded. By this course, a comparison could be made between the different systems practiced, and the best could be adopted. By this it is believed every important improvement would soon become general; errors would be detected and abandoned.

PASTERNS OF THE HORSE.

The following sensible remarks, on the form of the pasterns, are copied from Youatt's work, "*The Horse.*"

"In proportion to the obliquity or slanting of the pastern, will be the stress on the fetlock-joint, and, therefore, the liability of that joint to injury and strain: and also the liability to 'sprain of the back sinews,' from the increased action of the flexor tendons: and likewise to injuries of the pastern-joints, for the ligaments will be weak in proportion to their length. The long and slanting pastern is an excellency in the racehorse, from the springiness of action, and greater extent of stride by which it is accompanied. A less degree of it is necessary in the hunter, who is to unite continuance of exertion with ease of pace, and who, in his leaps, requires almost as much springiness as the racehorse: but for the wear and tear of the hackney, a still less degree of obliquity should be found. There should be sufficient to give pleasantness of going, but not enough to endanger continuance and strength. Experience among horses will alone point out the most advantageous direction of the pastern, for the purpose required: but the slightest observation will prove the necessity of considerable variety in the structure of this part. Let the reader imagine the heavy dray horse, with his short and upright pasterns, contending in the race; or the race-horse with his long and weak pasterns, endeavoring to move some heavy weight. The concussion is little in a cart-horse, because his movements are slow, and therefore the upright and strong pastern is given to him, which he can force into the ground, and on which he can throw the whole of his immense weight."

Guano.—The most economical application of guano is directly under or upon the seed where the roots will be sure to find it. It should be covered with earth, and slightly separated from the seed. Sowing broadcast, in damp weather, upon the growing grasses or grain, is a good mode of application, but it should first be intimately mixed with several times its bulk of garden mold or well-rotted peat, swamp muck, and some plaster.

Save the Urine.—The urine from cattle is worth as much as the solid droppings. Any farmer can easily secure the whole, both in summer and winter, by having a bed of turf or vegetable matter deep enough to catch and retain the liquid. The watery portion soon evaporates, while the solid matter, amounting to about 12 per cent., is incorporated with the turf, and held till needed for use.

Spirit of the Agricultural Press.

New Mode of Building.—A small house may be built in the following manner, with a saving of expense, wherever lumber is as plenty and as cheap as in this city, and where planing can be done by machinery. Take two inch plank, plane them on one side, and tongue and groove them. Provide good sills—and I erect the building by setting the plank upright, and battening the joints with strips of half-inch stuff—the strips two inches wide. This forms the outside wall. Furr out on the inside, with half-inch stuff, and lath to that. The half-inch furring gives sufficient room for the plastering to clinch, yet leaves the space too narrow for mice. For small one story houses, this is a very pretty mode of building, cheaper than by studs and clapboards, and in many respects better. Several such houses have been built in this city, and give good satisfaction.—*Prairie Farmer.*

Smoking Potatoes for the Rot.—A correspondent of the *Cultivator*, writing from Green Bay, Wis., says:

"I have been informed by a gentleman of my acquaintance, that he stopped his potatoes from rotting by smoking them. After the potatoes were dug and placed in the cellar, (an out door cellar,) he built a smoke and continued it eight or ten days, when affected part dried up, and the rest of the potatoe remained sound and good through the winter. The remedy was discovered by placing fire in an unfinished cellar, to prevent the vegetables from freezing—immediately after which it was found that the potatoes had stopped rotting. He says he has tried the experiment for two or three years past and has never known it to fail of arresting the disease immediately."

Fowls.—It is a common error to feed young fowls immediately after being hatched. Any person who has examined eggs in the various stages of incubation, sees at once the folly of this practice, for the last process, before leaving the shell, is the absorption of a good portion of matter, by the almost perfect fowl, which serves as nutriment, so that the young fowls, like bees which leave the hive in swarming, have full stomachs to sustain them a day or two; hence, in both cases, that quietness and good humor that generally prevail.

From this wise provision of nature, the chick that first latches is supported until the last of the brood is ready to leave the shell, which is frequently twenty-four hours later. —*N. E. Farmer.*

To Have Fine Mutton.—The sheep, as soon as killed, should be disemboweled. It is the neglect to remove the entrails at once, and not the meat being touched by the wool, which imparts to it that strong mutton taste. The reason of this is, that the warmth of the body, carried off by the loss of blood, is for a time supplied from the warmth of the bowels, and thus the objectionable taste is created.—*Ib.*

Arabian Cattle Introduced.—Lieut. Lynch, of the late Dead Sea Exploring Expedition, brought home a bull and calf of the Khasis breed of Arabian cattle, and presented them to the State of Virginia. By a resolution of the Legislature they are transferred to Col. James Castleman, of Clark county, with a view to the propagation of the breed. They are said to be very beautiful animals, with limbs as delicate as those of the gazelle, yet strong and well set.—When full grown they stand 7 feet high, and the cows are said to yield milk abundantly. The pair were exhibited in Washington a few days, and much admired.

Suspension of Land Sales.—The Commissioner of the Land Office gives notice that the sales directed by the President of the States, dated 27th February, 1849, to be held at the Land Office at Saulte St. Marie, on the fourth and eighteenth day of June, and third day of September next, will be suspended, until the United States Geologists shall have fully closed up their operations and surveys, and designated the mineral from the agricultural lands, of which due notice will be given.

New Cure for Bots.—Give the horse some molasses and milk, then put about a half a pound of tea in one quart of water, and draw it as you would for the table, and when partly cool, give it to him, and it will soon relieve him.—*Prairie Farmer.*

New Gate.—A Patent has been issued at Washington for an improvement in the way of opening gates, by which the inventor proposes to "turn them up vertically by a parallel movement of the rails, instead of swinging each way, as in the ordinary manner."

Power of the Soil to Absorb Odors.—It is well known that onions, if buried in the earth for a few days previous to being cooked, will have lost much of their rank flavor.—Cabbages, which are often too rushy in flavor to be good, may be rendered much more palatable by being wrapped in absorbent paper and buried in the ground for a few hours.—Dried codfish loses much of its austerity of flavor (if we may coin a term) by similar treatment. During the plague in Europe, clothing was often buried for a time, to disinfect it. This absorbent property of the soil is due to the presence of carbonaceous matters; for clean sea beach sand will produce no such results, while pulverized charcoal will act with much greater energy than common soil. On this principle, animal matter coated with unleached ashes, and then buried in pulverulent peat or muck, will not only decompose without giving off offensive odors, but the muck will also, by absorbing the resulting gasses arising from decomposition, be rendered highly valuable as a fertilizer. Dr. Dana says that a dead horse, if cut in pieces and treated as above, will render twenty loads of muck equal in quality to the best stable manure.

A Nut for the Curious.—Lord Lindsay, in his travels, writes, that while wandering amid the pyramids of Egypt, he stumbled on a mummy, proved by its hyeroglyphics, to be at least two thousand years of age. In examining the mummy, after it was unwrapped, he found in one of its enclosed hands hands a tuberous or bulbus root. He was interested in the question how long vegetable life could last, and he, therefore, took that tuberous root from the mummy's hand, planted it in a sunny soil, allowed the rains and dews of heaven to descend upon it, and in the course of a few weeks, to his astonishment and joy, the root burst forth, and bloomed into a beautiful dahlia.

American Oranges.—The Mobile Herald says that since the destructive hurricane in Cuba a few years ago, the Mobile fruit market had been supplied chiefly with Creole oranges now raised in that neighborhood, Pascagoula, and on the coast, near New Orleans. These oranges are generally larger than those raised in the neighborhood of Havana, and much superior in flavor. The Herald contends that a number of locations might be selected on the bay and neighboring islands, where the orange would thrive admirably, and scarcely ever be injured by frost. It instances the case of a person who realizes from 500 to $1,000 annually, from about 30 orange trees cultivated in a garden near that city.

Advice for Summer.—Major Noah says: "Don't gormandize. We hate a glutton at all times, but especially in summer. It is monstrous to see men, when the mercury is up to 90, cram a pound of fat meat down their throats. Don't you know that animal food increases the bile? Eat sparingly, and be sure and masticate well what you eat. Don't bolt your food like an anaconda. Take exercise in early morning. Ah! what fools we are to sweat in bed, when the cool breezes of the morning invite us forth, and the birds, and the dew, and the streams are murmuring, in their own quiet way, pleasant music, which arouses a kindred melody in the soul.

"Be good natured. Don't get into an angry discussion on politics or religion. There will be time enough to talk the former over when the weather becomes cooler, and as for the latter, the less you quarrel about it the better. Religion is a good thing; but when you fight in its name, you show yourself ignorant of its principles, and unswayed by its influence. Bathe often, three times a week, every day. The expense is nothing to the benefits derived. If you would enjoy good health, have a clear, a sweet stomach, a cheerful disposition, put your carcasses under the water every day, and when you emerge use the brush vigorously for five minutes. There is nothing like the pure bracing water.—We never dip beneath its surface without thanking God for having placed such a health-promoting element within our reach."

How to Prevent the Cholera.—A correspondent of the Journal of Commerce says that a town in Tennessee has entirely escaped the scourge of the cholera the past winter, not a case of it having occurred there, notwithstanding every town in the vicinity suffered from it severely. This has been attributed, and no doubt correctly, to the free use of quick lime, fresh from the kilns, which was scattered through the gutters, cellars, privies, and yards. Its disinfecting properties seizing with avidity on all impure and deleterious gasses are well known, and where plentifully used will, no doubt, under ordinary circumstances of prudence and cleanliness, preserve the health of any cities and villages in the United States.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

NEW SEEDLING STRAWBERRIES.—PRODUCTION OF SEEDLINGS.

Public attention is so generally turned to fruit culture, that great improvements must be made in every department. The *Strawberry*, the most important of all the small fruits, will undoubtedly, in common with other things, undergo a great improvement. A few years ago the Messrs. Hovey, of Boston, produced two seedlings of great merit; and they were disseminated with astonishing rapidity. In three or four years from the time they were first announced for sale, hardly a respectable garden in the country, but had its *Hovey's Seedling* and *"Boston Pine."* Next Mr. Burr, of Columbus, Ohio, is fortunate in obtaining from seed a few fine sorts. We see them at once spread over the country, so that in two years from the time of sending out, they are reported on the tables of all the Horticultural Societies in the country. Meantime, large numbers of European Sorts, of high character, are imported and tested. This shows the estimation in which the strawberry is held, and the degree off attention bestowed upon it by American cultivators. This is not surprising, for the healthiness and delicacy of this fruit render it the favorite of all ages, classes, and conditions of people who can get it.

It is needless for us to say that among all the foreign sorts, not one has yet been found well adapted for marketing. The *Swainstone*, the *British Queen*, *Black Prince*, &c., are large and delicious, but the crops are small and uncertain, and they are entitled to a place *only* in the collection of amateurs, and there they ought to be.

The large *Early Scarlet* in Western New York, is yet the staple sort for market. It, however, must, soon give place, we think, to better sorts. A few years ago, we thought of trying our luck in raising seedlings. We had an idea that something might be produced as prolific as the Early Scarlet, and with larger size, and better flavor. We took seed from *"Hovey,s Seedling," Ross' Phœnix, Large Early Scarlet, Duke of Kent and Austrian Scarlet*, and *Boston Pine*, that were all grown in adjoining beds, and from this seed we raised in 1847, several thousand plants. These we put out in beds, and in 1848 they bore, and we selected some twenty-four plants that we considered well worthy another trial. The crop of fruit on some of them was enormous, and the plants combined with this great vigor and hardiness. We planted these 24 selected plants out and again this year they have borne—some of them so profusely as not to be equalled by any we have seen this season. This has been the opinion, too, of others who have seen them. They received no extra culture; indeed, the culture was not so good as it ought to have been. The ground was an old rasberry bed, worn out. The plants were dug up on the first of July, last year, and the ground manured and spaded—and on the 3d or 4th the strawberry plants were planted in it, and since then have only been kept clean of weeds. Every runner has been allowed to grow so that the ground around the plants has not been stirred. We have selected five varieties that we believe will rank at least among the best and most prolific varieties now grown. [See the report of the Committee, who have examined their merits carefully.] We are continuing our experiments. We have immense numbers of seedlings coming in, and we venture to anticipate something fine.

We are glad to learn that others are engaging in similar experiments.* There is something so delightful, so exciting about the raising of seedlings, whether of fruits or flowers, that one finds ample compensation, if they succeed in raising one good thing among a thousand poor ones. Last year we raised some of the finest verbenas now cultivated, among them two or three real novelties—striped and clouded. We also obtained some very pretty Petunias, equal to any of the best English sorts we have seen. At this moment we have in full bloom a bed of seedling picatees that are scattering their odor over all the garden, and delight all who see them, with their gay and varied colors. Of pansies we are always getting something new and pretty from seed. The following artiele responds so faithfully to our own feelings on this subject, that we cannot refrain from hanging it to our own remarks:

The Gratifcation Derived from Raising Seedlings.—All nature has an inclination to vary; even the acorn from the evergreen oak, which we shall take for our first subject, yields us fifty differently formed leaves, although we could see no difference in the seed. If we sow a thousand acorns from the evergreen oak, we shall not have two plants with foliage strictly alike, but many will differ so much that they far more nearly resemble holly than oak; we have seen a number of varieties so striking, that we have determined on werking each distinctly and separately and so perpetuating about ten of the oddest looking leaves we ever saw. There is hardly any thing more gratifying, certainly nothing more interesting, than the sowing of seeds, if we but take the pains to examine the results.—We have seen a seedling oak with round leaves, with prickles all around, like those of the holly, but in form, the leaf is as unlike both oak and holly as if it were a separate genus. In a quantity of seedling berberries there is a most extraordinary diversity of form and eolor. In a patch of laburnums some of the racemes of flowers are as long again as others; in half a dozen walnut trees not two bear nuts alike; and if we were to watch any thing that comes from seed, we should often discover a thing worth saving but which, for want of observation, is lost altogether.—Take eare of things raised from seed; we once picked out half a dozen Rhododendrons, from a lot of seedling Catawbiense, and they proved to be worth grafting, an l are now figuring among the most popular by some half-dozen names. We have not alluded to seed raised by crossing or artificial impregnation, but raised in the ordinary way; and if that will, as we know it will, yield great variety occasionally, how much more would seed do so when saved from particular sorts associated together for the purpose, and those of so opposite a character as to present every charm? We wish all who sow seed would look more to the result.

PROGRESS OF FRUIT CULTURE.

We are happy ot note the steady and rapid increase of choice fruits in this vicinity. Last year we had the pleasure of reporting great improvement in Strawberry culture, and this year has brought that branch of cultivation to a state of advancement that compares favorably with any other part of the country.

The varieties recently produced by Mr. Burr, of Columbus, Ohio, have been produced in large quantities by M. G. Warner, Eaq.. who has from the beginning, cultivated these varieties with great

* We noticed, a few days ago, a bed of strawberry seeds just planted by Messrs. Bissell, Hooker & Sloane.

success. He is well satisfied with the results of another year's experience. The NEW PINE has borne large crops, and has proved of delicious flavor—ranking No. 1 for a table fruit. The size has not been as large as last year's, on account of the condition of the beds. The plants had grown together, covering the whole ground, and the foliage was very dense. The Rival Hudson, Mr. W. thinks much of—being very prolific, fine and excellent for preserving. He has also had a fair crop of Hovey's Seedling—his specimens of this variety have surpassed any other here. Mr. Warner's crop was all sold at about 18¾ cents per quart.

Messrs. BISSELL, HOOKER & SLOANE have also supplied the market largely. In a little over two weeks they have sold about two hundred bushels of fruit, notwithstanding the cautions of the "Board of Health." Their varieties for marketing were *Hovey's Seedling, Crimson Cone, and Large Early Scarlet*—the latter being their standard sort, according to their experience, by far the most profitable. From a bed measuring 119 rods of ground, they have picked upwards of 109 bushels of this fruit. They have also produced fine specimens of *Black Prince, Myatt's British Queen*, and some other varieties.—Messrs. B., H. & S. have also erected within the past year, a vinery 56 by 24 feet, with borders 20 feet wide and three feet deep, made in a thorough manner. Their vines are thriving admirably, and will next season be in a fruiting condition. Mr. BISSELL has also a fine garden of dwarf Pears, designed to supply the market with choice fruit. We hope such instances of successful enterprise will induce others to turn their attention to these branches of culture, that have heretofore been overlooked in this region.

THE PLUMBAGO LARPENTÆ.

(LADY LARPENT'S LEADWORT, OR PLUMBAGO.)

IN 1846 Mr. FORTUNE found this beautiful plant on the ruined ramparts of Shanghai, in China. In July 1847 it was exhibited in bloom before the London Horticultural Society.

All who have seen it describe it as one of the most charming blue flowering plants now known for bedding out in masses, as we do the verbena, petunia, &c. The *Plumbago capensis* is a well known useful plant for bedding out, but it seems to be the opinion of cultivators that this new one entirely supersedes it. It will undoubtedly prove much better adapted to our climate, and answer bedding purposes better from its compact and bushy habit. It is described as having obovate pointed leaves, finely serrated and fringed with hairs on the margin, as will be seen by the cut. The flowers are produced in terminal clusters, and are clear deep blue, or intense violet color, with a tint of red in the throat, increased by cuttings of the young wood. An idea may be formed of the profusion of its blossoms from the fact that a single plant has borne 4000 blossoms.

The London Horticultural Magazine says:—

"The Plumbagos flourish in any light, porous, turfy soil, but in none better than where sandy loam preponderates.—The present species must be particularly well drained, and not too freely watered. It may be propagated by cuttings planted in sand, and set in a mild hot-bed: these cuttings should, as in the case of other bedding plants, be planted in the latter part of the summer, and kept over the winter in greenhouses or dry frames, until the following spring.

For pot culture it will doubtless prove a very desirable subject. It must, in this case, be regularly shifted into pots containing a compost in which turfy loam preponderates, not using very large pots, and having these drained in an efficient manner. The plants should, while young, be well

stopped back, the point of the shoots being removed as soon as practicable, after they reach from two to three inches long. This is to be continued until a good round head of branches is produced, and the plant should then be allowed to grow on for flowering. An allied kind, *P. capensis*, forms a very elegant plant under good management, and becomes a really desirable object for greenhouse decoration, from the distinct and soft pale blue color of its blossoms; this species being, moreover, of rather straggling habit, may be used as a semi-climber; trained against the upright pillars of a conservatory, in situations pretty well exposed to light, and where its roots are in a healthy medium, it becomes very ornamental. Whether or not the new species will assume any of this habit, we know not; but the plant which appeared at one of the metropolitan exhibitions certainly indicated a more compact and bushy habit. Of course as a pot plant, it must be very carefully watered."

GRAFTING THE GRAPE.—Can cultivated grapes be grafted or inoculated (or both) into wild grape stocks with success?—and if so, at what seasons of the year? R. B. WARREN.—*Alabama, N. Y.*, 1849.

THE grape may be grafted successfully at the season when other grafting is performed, or sooner. A correspondent of the Ohio Cultivator states that he had great success in grafting in February. The grafts were inserted in the stock three inches below the surface of the ground, and no plaster used, but the earth simply pressed around them.—Grafting by approach, that is if the stock or graft be in a pot, may be done now. Budding we have not practiced, but presume it had better be done in the spring.

THE MELON APPLE.—A friend has placed on our desk to-day, (July 12,) two specimens of this apple, as fresh, juicy and sound as they were in December last. We have never before known the excellent keeping qualities of this fruit, till this season. It has been described as an October or November fruit, but the fact is, it keeps nearly as well as the Northern Spy. It is so delicious in the winter, however, that very few are disposed to test its keeping qualities.

THE NEW YORK AND BUFFALO FRUIT CONVENTIONS.

From the various articles which have appeared in the Horticultural and other periodicals, it appears quite evident there is a very erroneous opinion abroad, as to the friendly attitude of these two conventions. From individual knowledge of both, we believe the assertion may be safely made, that not five persons, having any connection with either, desire any rivalry, or wish to assume any hostile attitude toward the other.

Both conventions had been proposed some months previous to their actual session, and both were very interesting and important bodies. The writer, who took a much more active past in that at Buffalo, will not, from this fact, be accused of partiality, when he states that the New York Convention embraced by far the largest number of eminent pomologists, and for this alone, must, by common consent, be regarded as the leading pomological organization in America. It is but justice to those who took an active part in the convention at Buffalo, to state that nearly if not quite all of them so regard the New York organization. And with this general feeling pervading all parties, I cannot but believe that the approaching convention at Syracuse, will adopt such a course as cannot be construed into an assumption of any hostile bearing.

A single explanation as to the propriety of two distinct organizations, one each for the east and the west, as supposed to be demanded by the difference of soil, climate and locality. The following facts would indicate that the difference is overrated. Of the twenty seven varieties of the apple, recommended by the Ohio Fruit Convention as *first rate* for their region, all except *four* are cultivated in the Eastern States, where one or two even, of these four originated. As for the Buffalo Convention being peculiarly adapted for the west, as has been intimated, it may be stated that by far the best and most extensive collection of pears exhibited there, came from Robert Manning, Salem, Massachusetts; the most extensive collection of plums, altogether so, was from Charles Hamilton, Orange county, N. Y.; and the largest collection of apples, I think, was from Charles Downing, of Newburgh, N. Y. It will hardly do, yet, for either section to cut loose from the other. J. J. Thomas.

Remarks.—We give place to the suggestions of Mr. Thomas with great pleasure. They supply the place of a few remarks of similar import we had prepared for this number of the Farmer. We hope to witness the meeting of the friends of pomological reform at the two great assemblies to take place the approching autumn, not in a spirit of *rivalry*, but of *unity*—not as *western* men or *eastern* men, but as American Fruit Growers, aiming at the same end, and animated by the same spirit. Thus, and thus only will these bodies prove themselves alike honorable and useful to the whole country.—Ed.

Industry.—If industry is no more than habit, it is at least an excellent one. "If you ask me which is the real hereditary sin of human nature, do you imagine I shall answer pride, or luxury, or ambition, or egotism? No. I shall say indolence. Who conquers indolence will conquer all the rest." Indeed, all good principles must stagnate without mental activity.

TRANSPLANTING FRUIT TREES.

BY J. FULTON, JR.

Anxious to receive and diffuse light, I was glad to read the article of A. Bryant, in the Farmer for April, taking exceptions to a method pursued by me in planting out an apple orchard, as indicated in the February Number of the "Horticulturist." Should A. Bryant re-peruse the latter article, he will notice that the plan pursued was not offered or urged upon the acceptance of any, nor quite as *my* "(his) method" of "planting an orchard," well settled in my own mind, and tested by experience, but rather as *a method* adopted on this occasion, and defferentially submitted to the judgment and the opinions solicited of the experienced editor of the Horticulturist, "for the benefit of myself and other *beginners* in fruit culture."

This method was not the fruit of my own judgment, for I had not had the *experience* necessary to an intelligent judgment in the case, but the fruit of *some* pomological reading, and the counsel of *many* nurserymen's catalogues, each and all of whom must give a chapter "on transplanting."

Confessing my ignorance, classing myself with "*beginners*," and asking for light, as I did in that article, disqualifies me from seeing so readily how the article in question would be so likely to "mislead the *inexperienced*;" for with all my inexperince and ignorance upon the subject, I should be slow to follow the counsel, or "method" of any one who was himself ignorant and seeking light in the matured experience of others; and I therefore cannot but think that it was the brief endorsement of that method by A. J. Downing, which was, in the eye of A. Bryant, "calculated to mislead the inexperienced." But if this inference be legitimate (and I can conceive of no other cause for his fears) then his controversy is with A. J. Downing, and not with me; and I am anxious to direct such an intelligent pen to a foe worthy of his steel, and I promise him, no one will witness the conflict with more interest than myself. Let us have light, then: "the method" is no pet with me. I am always in search of a *better*.

Nor can I see with the horticultural editor of the Farmer, in his response to his correspondent, how "deep holes" imply deep planting. Our ground is high and dry, and the trees are set above the level of the ground, and not deeper than they originally stood in the nursery; and they are *now*, (July 7th) *every one* of them growing *finely*, without either "staking" or "mulching"—"wetting stem and branches," or "watering the roots." They were all two years old trees—were headed back pretty freely—planted the 15th and 16th of December, and many of them have made shoots of more than a foot in length at the present time.

Still, I am by no means certain that the course pursued was the best—nor that the views presented by A. Bryant are not sound and deserving of general acceptance,—and as we wish to enlarge our orchards this fall, and plant a large additional number of apple as well as other fruit trees, I should be glad to have the views of men of experience upon this important subject; and if this article should be the occasion of directing the attention of such men to this point, I shall be richly paid.

Allow me to add, that I have, since planting, purchased one of Nourse & Mason's sub-soil Plows, and have pretty thoroughly used it among the young trees, and contemplate using it on the adjoining land this

fall *before* planting the trees, which I shall do without "digging deep holes," so that I may test by experiment, the comparative merits of both plans.

Of a large lots of plum, cherry and pear trees received from Newburgh and Flushing, together with a quantity of others of our own raising, transplanted this spring, and treated with "deep holes" and compost, all are growing finely, excepting a few pear trees, with fine heads which were not cut back, while all the others were—planted from April 5th to 7th. The cherries even, rather difficult to transplant with safety, have all made a good growth without wetting stem or branch—mulching or staking. *East Flowerfield, Chester Co., Pa., July*, 1849.

We are glad to have such excellent cultivators as Mr. Fulton discuss these topics in our columns.—They cannot fail to do good—Ed.

TREES, INSECTS, WIRE FENCES, &C.

Mr. Barry:—I am glad to see so many friends besides yourself, laboring, through the Farmer, with the brethren, about setting trees and flowers. If there is any thing that can add a charm to home, 'tis surely these. Who ever saw a pleasant dwelling place without them? I almost doubt if there could be one! To be sure, they are not essential to the accumulation of wealth, but certainly they lead a shorter and more certain way to happiness. We find a few men, (and *only* the men, I am happy to say,) who will have neither flowers or trees about their homes; these are generally worshipers of mammon. We also find some who say they like to see them; *but* they would have a different kind of trees from others, and plant them differently, and so on; finding fault with the good that others do; *these* are the ones that plant neither for fruit nor the other; the very slaves of indolence. Enough of this.

For common shade trees, I think none are better than the *Elm* and *Hard Maple*, though I like to see variety. The *Butternut* should also be set, as it affords both nuts and shade. I would object to setting fruit trees in front of a house for shade, if there is room for them elsewhere, as they do not grow large enough, and are apt to get injured in getting the fruit; but have them *somewhere*, and take care of them too. Trim them, manure them, and keep all insects off. Simply whitewashing will keep off many insects. Last season I had a nice young cherry tree that was infested with scores of worms and other insects. I cleared them all off, and then applied a mixture of sulphur and soft grease for three or four inches on the body of the tree. They crawled up as far as this, but not one would cross it. I think it is an effectual remedy against all "creeping things."

I see the subject of wire fence is attracting much attention, and hope it may induce experiments. I have for some time been thinking of a way of making wire fence, particularly for road fences. It is to set trees for posts; take trees about ten feet high and three inches through, set as near as would be necessary, and perhaps a post at intervals of twenty or thirty rods to stretch the wires upon. The wires are to be fastened to the trees with large wire staples. The trees would perhaps not be fit till two or three years after planting out. I would set low trees with little top, that the wind might not affect them till they get firmly rooted. If trees would answer for posts, it would be a desirable combination of ornament and use. This is only theory. But I would like to know the opinion of others on it. F. R. Miller.—*Sugar Grove, Warren Co., Pa.*, 1849.

NEW SEEDLING STRAWBERRIES.

The Committee on Fruits of the Horticultural Society of the Genesee Valley, examined, July 5th, 1849, some seedling varieties of the Strawberry—selected from plants grown by Elwanger & Barry—and report as follows:

The plants are said to be selected from some thousand varieties, all grown from seeds *bred* between the Hovey's Seedling, Ross' Phœnix, Duke of Kent, and a few plants of the Boston Pine. The soil had for several years previous, borne raspberries, and was evidently in good condition, though Messrs. E. & B. stated that it had received no more than ordinary culture, and some of the varieties, we think, showed as fine fruit, all the desirable qualities being considered, as we have seen grown in this section of country.

1. Is staminate, has a peculiar sweetish flavor, is a moderate bearer.

2. Pistilate, immense bearer, pale scarlet color, form flushed, good fruit for market, shape round, more than medium size.

3. Staminate, large size, sweet and juicy, many of the berries coxcombed, rich flavor, a valuable berry.

4. Staminate, a very juicy fruit, but a shy bearer.

5. Pistilate, a very large fruit, color a light scarlet, with dark seeds, shape mostly round, very juicy, immense bearer, (103 berries were counted on one root) a first rate berry, thought by some of the committee the best of the lot.

6. Pistilate, regularly round shaped, much like the last, thought as good a bearer, and as juicy, but not quite so fine flavored.

7. Staminate, a fair sized, long-necked fruit, but not a first rate bearer.

8. Pistilate, a high-flavored, rather tart, rich fruit, full medium size, an excellent table fruit.

9. Pistillate, a great bearer, juicy and high-flavored, a deep, bright, glossy scarlet, an excellent table fruit.

10. Staminate, a dark berry, long, fair sized, and for staminate a fair bearer, evidently belongs to the Pine class.

11. Pistilate, medium size, very dark scarlet, very juicy, high and somewhat musky flavor, good table fruit, medium bearer.

12. Staminate, a juicy and excellent flavored berry, moderate bearer.

13. Staminate, tart and dry, not a good bearer.

14. Pistilate, a great bearer, short-necked, high-flavored, very juicy, size above medium, thought the best of all the varieties.

16. Pistilate, flavor much like No. 14.

17. Pistilate, tart, rather dry fruit.

18. Pistilate, good bearer, rather late, a fine flavored fruit.

19. Staminate, a large, excellent fruit, high flavored.

20. Staminate, large, neck-shaped fruit, curiously angular in form, some appearing double, tripple, and quadruple.

21. Staminate, long necked, high colored, resembling the Duke of Kent, but much larger, and more tart, an excellent fruit.

22. Color a beautiful orange scarlet, an excellent table fruit, being tart, very large, and a very good bearer, and valuable for its lateness.

The committee were very highly gratified with the success of Messrs. Elwanger & Barry, in their attempt to enlarge the number of varieties of good strawberries adapted to our soil and climate.

Samuel Miller, Ch'n,
J. A. Eastman,
James M. Whitney,
James H. Watts.

Rochester, July 5, 1849.

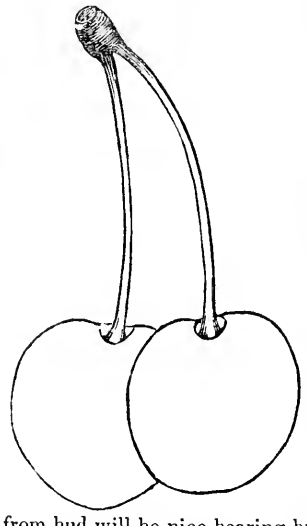
From the above collection, Messrs. Elwanger & Barry have selected five sorts, which they consider eminently worthy of cultivation, combining large size, fair quality, with extraordinary productiveness.

They have borne for two years beside the best known varieties, and under the same conditions, and have, so far, surpassed them all in productiveness. They cannot say how they may succeed in other localities, but here Messrs. E. & B. feel confident they will prove valuable.

The following are the names of varieties chosen: No. 6, Monroe Scarlet, 14, New Necked Pine; 16, Climax Scarlet, 22, Orange Prolific.

THE REINE HORTENSE CHERRY.

Fruit large, roundish oblong. Stalk about 1½ inch long, and rather slender. Skin very waxy—pale red, similar to Belle de Choisey.—Flesh pale amber colored, tender, juicy and sweet. Stone medium size. Tree bears very early and abundantly; in its growth similar to May Duke—is very hard, and will prove valuable for Northern localities. Ripens from the beginning and middle of July; began to ripen about the 4th this season, and on one tree was wholly ripe on the 9th. It is one of the best for dwarfs. Cultivated on the Mahaleb, trees two years from bud will be nice bearing bushes.



This is the second year this fruit has borne with us, and we are glad to say that it sustains, much better than many others, the high character which the French and some English cultivators have given it. We can recommend it among the smallest assortment of garden trees.

A FEW HINTS FOR AUGUST

The most important operation during this month is the increase of trees and shrubs by *budding* and *layering*. Much of this has already been done, but there is, no doubt, a great deal yet undone. Plums are usually budded first, as they are apt to cease growing early, and the bark will not peel. Indeed, unless in a particular case, if not done now it can hardly be done this season. Pears should come next, lest leaf blight may check the growth so much as to prevent the bark rising. Cherries should be done at once, as the young wood is now ripe enough to take buds from. Apples, peaches, apricots, nectarines, pears on quince stock, or cherry on mahaleb stock, may all be budded any time between now and the middle of September, as the stocks all grow till late in the season.

Rose or other buds put in early in July should now be opened, as the bandage will become too tight; if necessary they might be retied.

Layering of Roses, Carnations, &c.—Various ornamental trees and shrubs that produce little or no seed, and do not strike easily from cuttings—quinces, grape vines, gooseberries, and a multitude of other thing may now be increased by this operation.

Strawberries.—New plantations may be made now at any moment of suitable weather—damp and cloudy if possible. Old beds should have a dressing, all the runners cut off, and cleared of weeds. The soil for strawberries should be well trenched and manured.

Raspberries should have the old canes that bore this year cut away as soon as the fruit is gathered.—This allows the young canes for next year's bearing to strengthen and ripen fully, and pass through the winter more safely than if left crowded up, as is usually the case.

Pyamidal Pear Trees, &c., will require to be looked over now and again, all this month; the desired form of the tree must be maintained, and the head kept open by stopping some branches, encouraging others, and removing some entirely, or at least cutting them back to within two or three eyes of the old wood.

Nursery trees should not be pruned up to single stem till strong enough to stand straight. Young peach trees of this season's growth should have the side branches shortened, or the ends simply nipped off. All crooked growing sorts should be kept tied to a suitable stake, as, if allowed to bend over, the course of the sap is interrupted, and growth directed to a wrong point. Grafts of last spring should be looked over again, and any shoots that have grown out from the stock about them removed.

Dahlias.—Thin out surplus and weak branches, and keep neatly tied to stakes. They are easily broken by the wind. All other flowreing plants should be kept neatly tied up, and flower stems should be removed as soon as the flowers droop, as they become unsightly.

Young plants for next seasen's bedding out may now be propagated from cuttings of Pansies, Petunias, Verbenas, Scarlet Geraniums, &c.

In view of the Pomological Conventions that are to be held this fall at Syracuse and New-York, we are anxious to collect as much information in regard to the fruits of this region as possible. The *Strawberry, Currant, Raspberry, Gooseberry* and *Cherry* season is about closed with July, and we will feel greatly obliged if any of our friends who may have made notes respecting particular varieties, will furnish us a copy. With August we get our *Apricots, Early Pears, Apples, Peaches* and *Plums*, and we hope that as they ripen they will be critically examined.

We are indepted to Mr. Mr. Zera Burr, of Perrinton, for specimens of his seedling Cherry, described in our last volume, about a year ago. It is a handsome, delicious fruit, and the tree is quite remarkable for its luxurient foliage and upright, compact growth, surpassing even the Black Tartarian. It grows late in the season, when all others have stopped, so that in the autumn months it may be distinguished by its freshness of foliage.

Erratta.—On page 170 of last number, the word "plums" was left out after "eke some," leaving the sentence, as our correspondent has remarked, "on one foot." Again, on the preceding page, in "Hints for July," "Plants that are *headed* out," should read "plants that are *bedded* out. On page 168, there are several errors that show great carelessness on the part of the printer. *Foliage* is given *foilage* in half a dozen places; *Europæus* is printed *Europasus; Cytissus, Cytussus; Hawthorn, Hawrthorn*, &c.

It is a truth well established among cultivators, that land planted with fruit trees of good varieties, will yield more to the acre, for man and beast, than any other crop, with less labor.

FOREIGN MARKET FRUITS.

We are under much obligation to Mr. Rivers for the following interesting and valuable notes on fruits, which have proved valuable for general cultivation. —*Editor Horticulturist.*

Rivers' Early Prolific Plum.—(Rivers' Early, No. 2.)—Our plums failed last year, so that I have nothing new to record. But I ought to except my seedling—No. 2—or *Early Prolific*. This plum *always* bears, and always commands a good price. It has sold in Covent Garden market these three seasons past, for 7s. per half seive, which is 15s. (about $3,75)per bushel, or as nearly that as possible. Although in that market it has to compete with foreign plums, its bloom is so fine and its quality so good, that it is always the first sort sold. I mention this as it will, of course, do as well in your fine plum country, and make the fortune of some orchardist there. My market salesman sent me word last season that I ought to plant *acres of it*, for no early plum could compete with it. [This plum is now considerably disseminated in this country. It bore last year, both in Mr. Manning's collection at Salem, Mass., and in our own garden; and in both cases, as far as an opinion could be formed upon a single year's bearing, promised to justify Mr. Rivers' high commendation.—*Ed Horticulturist.*]

Reine Claude de Bavay—is a most prolific and excellent *late* plum. It also will be found worthy of attention by your orchardists. This and *St. Martin's Quetsche* may be planted by the acre with the certainty of a profitable remuneration. In August, and early in September, when plums are in full season, there is such a glut in the markets that they become nearly unsaleable. Green gages, therefore, I have known sold at 1s. 6d. [34cts.] per bushel. The plum orchardists must on this account, avoid planting many of these mid-season sorts, and cultivate chiefly *very early* and *very late* varieties.

Coe's late Red is a most abundant bearer, but not so large or so good as St. Martin's Quetsche. By the way, I have never yet found this latter plum on the Continent. The "St. Martin's" there, as is well known, is Coe's late Red, and is always a purple plum.

Dwarf Plums.—I have, I think succeeded in dwarfing the plum. I have plants of the Green Gage, only 10 *inches high*, full of blossoms; and some in pots, under glass, not more than a foot in height, with their fruit set. They are grafted on the Sloe, or Blackthorn (*Prunus spinosa.*) This grows abundantly on the clay banks in this neighborhood, for it seems to flourish naturally only on poor, calcareous, clay soils—i. e. white clay, full of chalk stones. This species of Prunus, or wild plum, has long attracted my attention, for I have observed that it never forms a tree, but always remains a shrub of some six or eight feet in height. I also found it most impatient of removal, unlike other plums, and therefore thought it might be easily kept in check by root pruning. I have, accordingly, had a few of each of our finest plums grafted on stocks raised from seeds of this species, and am happy to find them easily kept in check, and quite inclined to make exceedingly pretty dwarf trees. The graft unites well, but is rather shy of "taking," as not more than three out of five have hitherto succeeded. Budding may do better, but has not as yet, succeeded as well as grafting.

Apples, in England, are, in most seasons, so sharp as to scarcely pay for gathering. Yet there are some few kinds that remunerate the orchardist. I grow but two varieties for market crops; vis., the *Sturmer pippin* and *Dumelows' seedling*. These are both favorites in Covent Garden: of the former I have about 2000 trees, from 3 to 10 or 12 years old —a partial crop last season has given me 150 bushels or more. These are now making in Covent Garden market, from 10s. to 16s. ($2,50 to $4) per bushel, and will make a better price at the end of the next month. Dumelow's seedling is much esteemed for its acidity and *falling* properties [as a cooking apple, we suppose. Ed.] This is generally sent to market in February and March, and makes from 6s. to 8s. per bushel.

Mr. Barry, of Rochester, who was here in December last, kindly brought me a basket of Northern Spy and a few Melon apples. They were all delicious. *Your* apples—such as these—I can eat, as they are tender—almost melting, and easy of digestion. Our apples, with few exceptions—such as Reinnette de Canada, and one or two others, are too crisp and hard for delicate stomachs like mine.

I am, my dear sir, yours truly, Thomas Rivers.—*Sawbridgeworth. Herts, England, April* 28, 1849.

Items and Extracts.

Agricultural Shows for 1849.—Annual Fairs of State and County Agricultural Societies are to be held the ensuing fall as follows:—

New York State,	Syracuse,	Sept. 11, 12 and 13.
Cortland County,	Homer,	Sept. 26 and 27.
Delaware "	Delhi,	Oct. 3.
Essex "	Keeseville,	Sept. 18 and 19.
Herkimer "	———	Sept. 6 and 7.
Jefferson "	Watertown,	Sept. 26 and 27.
Livingston "	Geneseo,	Sept. 4 and 5.
Monroe "	Rochester,	Sept 26 and 27.
Onondaga "	Syracuse,	Oct. 3, 4 and 5.
Oneida "	Hampton,	Sept. 26 and 27.
Rensselaer "	Troy,	Sept. 25, 26 and 27.
Saratoga "	Mechanicsville	Sept. 11 and 12.
Seneca "	Ovid,	Oct. 4 and 5.
Washington "	Whitehall,	Sept. 19 and 20.
Michigan State,	Detroit,	Sept. 26 and 27.
Maryland State,	Baltimore,	Oct. 10, 11 and 12.
Worcester Co. (Mass.)	Worcester,	Sept. 20.
Middlesex "	Concord,	Oct. 3.
New Haven, (Conn.)	New Haven,	Sept. 25, 26 and 27.

Drought.—The Owego (Tioga county) Gazette of July 20, says:—"There has not been rain enough during the last four weeks, in this region, to put in a tea pot. We hear of showers now and then, at some little distance off, but in this neighborhood everything is as dry as powder, and the crops, especially corn and potatoes, are suffering from this cause beyond any former season within our recollection."

We have similar reports from other locations, and of much damage has been caused by the unusually dry weather of the past few weeks. The St. Lawrence Mercury of the 18th says:—"Never before since our recollection has this section of country suffered so much from want of rain. The grass crop in all this county must be extremely light, and many wheat fields are ruined past all recovery. Rain soon, may save corn and potatoes, but grain must, even with immediate heavy rains of which there seems, however, no prospect at present, be very light indeed many places not worth the harvesting."

The State Fair.—We learn that extensive arrangements are being made by the officers of the State Agricultural Society, and the citizens of Syracuse, for the September Exhibition—and it is believed the Show will be better, and more largely attended, than any preceding one.

Guano and Bone dust.—(E. B. Monroe, O.) You can probably obtain both of these articles of A. B. Allen & Co., 189 Water street, New York. We believe neither are for sale in Buffalo or this city

Gigantic Hemp.—A new kind of hemp has just been introduced into France from China. It is called the *Lomacorchasus*. It is represented as growing twenty-four feet high, and the stalks from five to six inches in circumference. It produces seed abundantly, and each plant will furnish fibre enough to make a yard of superb lawn.

It ripens its seed well in the south of France, and of course will be at home in some parts of the southern states; and if it be half as profitable a plant as is represented, would be a valuable acquisition to that section of the Union. Some allowance must be made for French enthusiasm. They always crack up their new acquisitions higher than any body else, and will make the *tallest* display with the least capital, of any body on earth.—*Maine Farmer.*

Georgia Burr Stone.—The Savannah Georgian notices the existence of a burr-stone quarry, in Burke county in that state, near the line of the Central Railroad leading to that city. The stone obtained from the quarry, is said to be equal, and in some respects, superior to that of the French quarries. A company has been organized in Savannah, who are preparing to go extensively into the business of manufacturing millstone from it, and expect to be able to supply the demand of this country with as good an article as is now procured from France.

Hereford Cattle.—We would direct attention to the advertisement of the Messrs. Bingham, of Vermont, who propose to sell at public auction, at our State Fair, some noble specimens of this breed of stock. They will also offer, at private sale, pure bred Merino Sheep.

Ladies' Department.

TO PRESERVE TOMATOES.

Six pounds of tomatoes first carefully wipe,
Not fluted nor green, but round, ruddy and ripe;
After scalding, and peeling, and rinsing them nice—
With dext'rous fingers 'tis done in a trice—
Add *three* pounds of sugar, (Orleans will suit,)
In layers alternate of sugar and fruit.
In a deep earthen dish, let them stand for a night,
Allowing the sugar and juice to unite
Boil the sirup next day in a very clean kettle,
(Not iron, but copper, zinc, brass, or bell metal,)
Which having well skimmed, till you think 'twill suffice,
Throw in the tomatoes, first adding some spice—
Cloves, cinnamon, mace, or whate'er you like best—
'Twill add to the flavor, and give them a zest.
Boil slowly together until they begin
To shrink at the sides, and appear to fall in;
Then take them up lightly, and lay them to cool,
Still boiling the sirup, acording to rule,
Until it is perfectly clear and translucent—
You skill will direct you, or else there's no use in t—
Then into the jars, where the fruit is placed proper,
Pour boiling the sirup, direct from the copper.
After standing till cold, dip some paper in brandy,
Or rum, or in whiskey, if that is more handy;
Lay it over the fruit with attention and care,
And run on mutton suet to keep out the air;
Then tie a strong paper well over the top—
And, "now that I think o'nt, the story may stop."
If you'll follow these rules, your preserves, never fear,
Will keep in good order till this time next year.

Washington, October, 1848. A. B.

Who is this Fair Lady?—A late number of the Horticulturalist contains the following sketch of a paragon:—"In the midst of the richest agricultural region of the Northern States lives a lady—a young unmarried lady, mistress of herself, of some thousands of acres of the finest land, and a mansion which is almost he ideal of taste and refinement. Very well. Does this lady sit in her drawing room all the day to receive her visitors? By no means. You will find her in the morning either on horse back or driving a light carriage with a pair of spirited horses. She explores every corner of the estate; she visits her tenants, examines the crops, projects improvements, directs repairs, and is thoroughly mistress of her whole demesne. Her mansion opens into the most exquisite garden of flowers and fruits, every one of which she knows by heart. And yet this lady, so energetic and spirited in her enjoyment and management of out-of-door matters, is in the drawing-room the most gentle, the most retiring, the most refined of her sex."

Home.—The ordination of Providence, says a distinguished writer, is that home should form our character. The first object of parents should be to make home interesting. It is a bad sign when children have to wander from the parental roof for amusement. A love of home is one of the strongest safeguards against vice—not to children only, but to men. Men who delight in their own firesides, are never seen lounging about bar-rooms and oyster saloons. Make home attractive to your children—so that they will leave it with regret, and return to it with joy—for this is a mighty preservative against vice.

Mulled Wine.—One pint of wine and one pint of water.

Beat eight eggs and add to the above while boiling, stirring rapidly. As soon as it begins to boil it is done.

Boys' Department.

Correct Speaking.—We advise all young people to acquire in early life the habit of using good language, both in speaking and writing, and to abandon as early as possible, the use of slang words and phrases. The longer they live, the more difficult the acquisition of such will be; and if the golden age of youth—the proper season for the acqusition of language—be passed in its abuse, the unfortunate victim of neglected education is very probably doomed to talk slang for life. Money is not necessary to procure this education. Every man has it in his power. He has merely to use the language which he reads instead of the slang which he hears, to form this taste from the best speakers, writers and poets of the country: to treasure up choice phrases in his memory, and habituate himself to their use—avoiding at the same time that pedanic precision and bombast, which bespeak rather the weakness of a vain ambition, than the polish of an educated mind.

Reading.—A proper and judicious system of reading is of the highest importance. Two things are necessary in perusing the mental labors of others:—namely, not to read too much, and to pay great attention to the nature of what you do read. Many people peruse books for the express and avowed purpose of consuming time; and this class of readers form by far the majority of what are termed the "reading public." Others again read with the laudable anxiety of being made wiser; and when this object is not attained, the disappointment may generally be attributed, either to the habit of reading too much, or of paying insufficient attention to what falls under their notice.—*Selected.*

Spare minutes are the gold dust of time; and Young was writing a true as well as striking line when he affirmed that "sands make the mountain, moments make the year." Of all the portions of our life, the spare minutes are the most fruitful in good or evil. They are gaps through which temptations find the easiest access to the garden.

Wheeler's Patent Horse Power and Thrashing Machine.

HAVING increased facilities for the manufacturing of the above Machines in this city the public can be supplied with them at short notice at wholesale and retail.

To those farmers who wish the machines to sell, and I will put them into use, in their vicinities, a fair discount will be allowed.

For certificates and conditions of sale, and warranty see the Albany Cultivator, Genesee Farmer, Prairie Farmer, and American Agriculturist; also, certificates and circulars of the Albany Agricultural Warehouse and Seed Store.

These machines are now allowed by all who have used them, and having been extensively used since 1841, are known to be durable—and have been improved in several respects.

The cost of threshing with these machines has been variously estimated, but from one-half to one-third that with the ordinary sweep powers.

Annexed is a statement of expenses of operating a two horse machine, connected with the ordinary kind, as given by an extensive farmer in Illinois, the past season:

Five men in thrashing time to thrash and clean, averaging 200 bushels per day for market,	$5 00
Two horses,	1 00
Boarding 5 men and two horses, at 38,	2 63
	$8 63

Amounting to a little over 4½ cts. per bushel—while he was enabled at all times to take advantages of prices, seasons, &c., and to do his work without being dependent upon others for labor or machines.

While his expenses, when he hired machines were never less than the following:

For thrashing 250 bushels per day, at 5 cents,	$12 50
Furnishing four horses of six, (2 belonging to machine,)	2 00
Six men, (besides two with machine,)	6 00
Boarding all hands and horses,	5 25
	$25 75

Amounting to about 10¼ cents per bushel. And if to this be added the average loss by imperfect thrashing and separation of grain from straw, more than with Wheeler's Thrasher and Separator of not less than five per cent of grain at one dollar per bushel, would amount to nearly 15½ cents per bushel, or more than three times the expense with Wheeler's machine. To say nothing of the delays and losses consequent upon depending upon others, &c.

The foregoing is but a fair statement of the expenses of the majority of grain-growing farmers for thrashing; and where labor and grain are valuable, these savings are well worth counting.

All orders and communications are solicited, and will receive prompt attention. HORACE L. EMERY,
No. 369 & 371 Broadway, Albany, N. Y.

Seeds and Implements.

GENESEE SEED STORE AND AG. WAREHOUSE.—Irving Hall, opposite the Eagle Hotel Buffalo-st.—Having purchased the Agricultural and Seed department of Messrs. Nott, Elliott & Fitch, we intend going more extensively into all the branches of our business. We shall keep constantly for sale, all kinds of Imported and American Field and Garden Seeds, and a large assortment of the most approved Implements and Machines used by the Gardener and Farmer. We manufacture Pennock's Wheat Drill, (the most perfect and substantial Drill in use) the celebrated Massachusetts Eagle C Plow, Drags, Cultivators, &c., &c., all of the most approved patterns and construction, and keep a full supply of all the Boston and Worcester Plows, Sub-soil, Delano's, Burrall's Shell Wheel, Anthony's Patent Index, &c., &c.

In addition to our stock of implements, &c., we think we can say with perfect confidence, we have one of the largest, most carefully grown and best selected stock of FIELD, GARDEN and FLOWER SEEDS in the country, including several kinds imported from Europe. Farmers, Gardeners and Dealers would consult their interest, and perhaps insure good crops, by calling at our establishment. RAPALJE & BRIGGS.
Rochester, May 1, 1849.

An Elegant Country Residence and Farm for Sale.

CONTAINING one hundred and seventy-five acres of first rate land, situated on the west shore of Cayuga Lake, two miles south of Cayuga bridge, in the town of Seneca Falls, Seneca county. There is a large brick mansion with a two story kitchen adjoining, with wash and wood house attached; out-building, barn, shed and carriage house; a lawn and garden in front, enclosed with a handsome fence; apple and peach orchards, with a number of cherry, plum and pear trees. The stock, crops in ground, and farming utensils, &c., will be sold with the farm. Possession given immediately. For further information, price and terms of payment, application can be made to the subscriber, on the premises, or by letter addressed to him, Oakwood Farm, near Cayuga Bridge; or to D. D. T. MOORE, at the office of the Genesee Farmer, Rochester.
[5tf] JOHN OGDEN DAY.

Agricultural Books.—A large assortment of Books on Agriculture, Horticulture, &c., for sale at this Office.

BACK numbers (and volumes) of the Farmer promptly supplied to all new subscribers.

Choice Strawberry Plants for Sale at the Mt. Hope Garden and Nurseries.

AUGUST and September being the best time for forming Strawberry Plantations we offer for sale on reasonable terms the five varieties now cultivated. At the head of the list we place BURR'S NEW PINE, which, (size, flavor and productiveness being taken into consideration) is perhaps the best Strawberry yet produced. Also,

Myatts' British Queen,
Bishop's Orange,
Boston Pine,
Burr's Rival Hudson,
Burr's Columbus,
Black Prince,
Hovey's Seedling,
Large Early Scarlet,
Princess Alice Maud,
Swain Jone's Seedling,
Deptford Pine,
Ross's Phœnix.

And a variety of others, such as Alpine Red Bush, Alpine White Bush, Alpine Red Monthly, White do., Wood Pea and White, and a variety of others, to which we invite the attention of all who intend to plant the Strawberry. A good article costs but little more in the first place than a poor one, and repays tenfold.
Rochester, July 1, 1849. ELLWANGER & BARRY.

Palmer's Wheat Drill.

THE subscribers have made an arrangement with Mr. Palmer to manufacture for the coming season five hundred of his new Wheat Drill, to be be sold in Western New-York. They are now receiving orders for them, and relying upon heavy sales, have determined to sell them at a SMALL PROFIT—at least twenty-five dollars less than any other drill capable of performing as much. The Drills are constructed under the immediate direction of the inventor, and *Warranted*.

An agricultural implement as important as this should be afforded at a rate that places it within the reach of every farmer. To accomplish this Mr. Palmer has spared no pains to become acquainted with all the Drills in use by consulting both English and American Agricultural works, and by procuring copies of inventor's claims issued or pending in the Patent office. He has used different kinds of drills for the past years, and has learned by practice the wants of the farmer. After repeated efforts and expensive experiments he has produced a simple, substantial Drill, which by way of eminence he calls a "WHEAT DRILL." It is vastly superior to the costly and complicated machines heretofore in use. This is the third Drill he has invented, and he has now brought it to that state of perfection beyond which it cannot be carried. It is the Ne Plus Ultra of Drills, combining all the advantages of every other, and free from their imperfections.

We challenge the world to produce a Drill equal to this in durability, operation or price! ☞ All orders should be sent in or delivered to one of our agents as early as July to secure attention. J. A. HOLMES & CO.
Brockport, March 15, 1849.

Wheelers' Patent R. R. Horse Powers and Threshing Machines.

THE attention of Farmers is solicited to the following extract from a communication of J. N. Rottier, Esq., of Lafargeville, N. Y., June 6, 1849, concerning Wheelers' Patent Horse Powers, &c.

To H. L. EMERY:—"The fact is, the whole of the Machine is an admirable simple contrivance, and that any improvement could be made to it would seem incredible to me, if I had not your word for it. Practically a farmer, I have used these fourteen years, a great variety of Threshing Machines, Horse Powers, &c., but with none am I as well satisfied as with yours, purchased of you two years since. One year more and mine will have paid for itself, and then I would not take $200 00 for it and do without another like it. With a change of horses in the afternoon and hands enough to stack or take away the straw, I believe I can thresh with it as much per day as with any large six horse machine, and with as much ease for the horses. But then we do not want all the neighbors to help us, as three of us generally thresh from ten to twelve hundred sheaves in a day, beside taking care of a large stock of cattle, &c. It is in fact the very machine which should stand on the barn floor of every farmer, or where the farm is not large enough, two or more farmers should join and own one together—change works and do their own threshing. J. N. R."

Woodbury's Horse Power and Separator.

THE Subscribers, having erected extensive works, for manufacturing WOODBURY'S PATENT IMPROVED HORSE POWER AND SEPARATOR, are prepared to furnish a machine to order, combining greater simplicity, durability, and operating much easier than any other in use. The Horse-Powers are mounted, and operated on wheels, thereby saving three-fourths the usual time in setting up—and we will warrant it, together with the Separator, superior to any in use.

Communications for further particulars, (post-paid,) cheerfully responded to. J. & D. WOODBURY.
Rochester, N. Y., June 1, 1849. (5-3t*)

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HORTICULTURAL DEPARTMENT.

LADIES' DEPARTMENT.

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ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, Saturday, July 21.

Ashes—Are 5 62½*a*5 69 for Pots, and $6 for Pearls, with sales 125 bbls.

Flour and Meal.—The market is again easier for the low grades of flour, but good and sound parcels are firm, with rather an upward tendency. The supplies of low Flour is large, and sales are making at a decline. The transactions add up 7,500 bbls. including 1,800 bbls. fine, and sour at $4*a*4 25 for sour, and 4 12½*a* 4 31½ for fine. The amount of fine on the way is considerable. The quotations are 4 75*a*4 87½ for common State, 4 62½*a*4 75 for common Western, 4 87½*a*4 94 for good and strait Western, 5*a*5 12½ for good Ohio and favorite Indiana, 5 06*a*5 12½ for pure Genesee, 5 25*a*5 50 for fancy Western. A sale of 2,000 Canadian was made at 4 50 in bond. The export sales are 4,000 bbls. In Southern, the market is firm, with sales 400 or 500 bbls. at 5 12½*a* 5 25 for common and good brands, and 5 50 for new Brandywine. A sale of 300 or 400 bbls extra Southern made at 5 62½. Meal is dull at 2 94 for Jersey, with sales 200 bbls. Sales 200 bbls. rye Flour at $3.

Grain.—The market for wheat is rather more active, but generally prices are heavy. A cargo of new Southern is on the market. Sales 3,800 bushels prime Ohio at 110c. Corn is held at previous prices, with moderate supplies. The foreign news has had no effect. The sales are 55,000 bushels at 52c. for damaged, 55*a*56½c. for mixed, 57c. for yellow, 55c. for round mixed, 59*a*59½ for round yellow. Sales of 2,000 bushels Rye at 57c. delivered.—Oats are plenty and dull. Sales at 34*a*35½ of 20,000 bushels.

Provisions.—Pork is held higher by the dealers, but buyers do not come in freely. The sales are 400 or 500 bbls. in lots at 10 75 *a*10 81, and $9 for Prime. Mess at the close was held at $11.—About 200 bbls. beef sold at 11 50 for prime, $12 for railroad and 13 50*a*$14 for Mess. Within some three weeks about 1,600 tierces, Prime mess, have been sold, including 500 previously reported at 16 50*a*17 25. The buyers repacked this beef, and sold it in barrels. Lard is firm, with sales 100 tcs. and bbls. at 6¾*a*7c. Cut meats are firm, with sales 350 tierces at 6½*a*7c. for pickled hams, the latter a good parcel. Butter is doing better. Sales Ohio at 7*a*11c. Western tubs 10*a*14c. Cheese is in fair demand at 2*a*6½ cts.

Hemp.—American is now in pretty good supply, but the views of holders are for the most part above those of buyers, and we have only to notice sales of 100 bales Dew rotted, in lots on private terms; nothing done in Foreign.

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, Editors.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

Five Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

Advertisements.—A limited number of short and appropriate advertisements will be given in the Farmer, 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 Farmer is from five to eight thousand larger than that of any other agricultural journal published in the United States.

☞ The Farmer is subject to newspaper postage only.

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

GENESEE FARMER.

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

VOL. X. ROCHESTER, N. Y.—SEPTEMBER, 1849. NO. 9.

EXPORT AND PRESERVATION OF BREADSTUFFS.

The export of Breadstuffs from the United States to Great Britain and Ireland is steadily on the increase. From September 1st, 1848, to July of the present year, the export of corn was 11,472,017 bushels against 3,386,636 during the corresponding period of the year previous. In the quantity of wheat and flour sent to England, the gain is equally large. Whatever competition the latter may encounter in British markets from continental or home grown wheat, American corn and meal if delivered in good order, must be cheaper, one year with another, than any other article of human food of equal nutritive value. In 100 pounds of potatoes there are 75 pounds of water. This renders potatoes more liable to rot, and a more precarious means of subsistence than the seeds of cereal plants. The latter will alone form good bread; and hereafter they must constitute the main dependance of the poor and laboring people of Ireland and Great Britain for daily consumption. All parties there now concede that the lower classes should be provided with ways and means, *somehow*, to command more of the comforts of civilization than they hitherto have enjoyed. We have great faith in the maxim, "where there is a *will* there is a *way*." The British empire is undergoing a social revolution of no small moment to the agricultural interests of this country. It is barely possible that the production of public paupers on a magnificent scale may continue a year or two longer; but the *turning point*, if not already reached, soon will be.

Blackwood's Magazine for July contains an interesting and instructive article under the expressive title: "The Crowning of the Column and *the Crushing of the Pedestal*." From this we learn that the poor rates of England have reached the immense sum of £7,000,000 a year; and that one seventh of its entire population are now supported by the parish rates." The whole poor rates for England, Scotland and Ireland for the last year were £9,460,757; or about forty-seven and a half millions of dollars. "The poor rates of Glasgow, which five years ago did not exceed £30,000 a year for the parliamentary city, have now reached £200,000: viz., Glasgow parish £90,000; Barony £70,000; Gorbals £40,000; total £200,000." Let the independent and comparatively untaxed American farmer realize the condition of society in a city where *one million of dollars* are required to support its public paupers a year!

Had American corn meal arrived at British ports in a sound condition, and in no degree impaired by kiln-drying, the consumption of this food would be double what it now is. To learn a nation to eat and love this great staple of the Union, with which it is unacquainted, we should not begin by sending sour and musty meal, to offend both the taste and smell of our new customers. Nor should its panification, or ability to ferment and make light bread, be destroyed by overheating and partial cooking in drying corn by steam, boiling water, stoves or furnaces. Incalculable damage has been done by processes of this kind. Wheat and corn, flour and meal naturally contain from eleven to thirteen per cent. of water, about one half of which must be expelled and the flour or meal well packed in good barrels or water-proof sacks, to exclude both moisture and common air. It does not require that water should be up to a boiling heat to cook flour, meal, meat, eggs, potatoes and corn. This remark applies alike to *starch*, *gluten* and *albumen*. Hence, in drying the seeds of cereal plants, and meat, the temperature should never be raised much above the heat of a summer's sun; say 130 degrees. This is abundant in Georgia, and will be in every other state for drying corn. By taking a little more time to drive off the moisture at a comparatively low temperature, not the least chemical change or cooking takes place. The natural flavor and fermenting properties of the meal are fully preserved. This is a matter of great importance.

Instead of placing corn, wheat or meal on heated iron cylinders, plates, or brick, it should be desiccated by hot and dry air sent up through the grain and carrying off its dampness without heating a single kernel more than 130 or 140 degrees. The shallow bins which hold corn or wheat should have a fine wire seive-like bottom, resting on a strong frame so as to permit heated air to pass upward through the seive and yet hold the grain. These drying bins should be made to tip like a common cart body, and deliver well dried grain in a storage room, which should be in the drying house to prevent the re-absorption of moisture from the atmosphere, before the corn or wheat is ground and put up in barrels. In an ordinary room, perfectly dried meal or flour will imbibe from the air, from eight to ten per cent. of water in twenty-four or thirty hours, according to the weather. It is obvious this tendency must be guarded against. Grain should be ground as soon as may be after it has been dried, and the meal or flour be well put up for market. The drying building

should have a double wall to keep out damp; it should be well ventilated above, with tight shutters, and heated by large stoves or furnaces in the basement to the proper temperature, under all the grain in the establishment. In this way common merchantable grain can be economically dried so as to keep in tight barrels for any length of time in any climate, without the least deterioration to the meal or flour.

Water-proof hats are made by dissolving gum shellac in alcohol, and working this gum, which is insoluble in water, into the body of the hat. Heavy cotton bagging is generally cheap in Georgia, and is used for sacking flour and meal. To prevent dried meal from imbibing dampness through these bags, at our suggestion, they are partially saturated with this gum. Perhaps India rubber or gutta percha would be better as well as cheaper. Grain, flour and meal must not only be fairly dried (not contain over five or six per cent of water,) but it must be kept in that condition, whether in a damp cellar, in the hold of a ship, or elsewhere. Millers should have their flour barrels as tight as they well can, and learn to test the quantity of water in 100 parts of wheat, corn, flour and meal. One hundred grains of ordinary flour or meal put on a piece of white paper five or six inches square, and this placed on a plate in a stove as hot as it can be and not burn or scorch the paper; and then if stirred a little with the point of a dry, clean knife, it will lose some ten per cent. of its weight in thirty or forty minutes by drying. A little practice will make one familiar with the operation, and the dampness of breadstuffs.

In hot climates grain can be dried sufficiently in the sun to keep well, if immediately excluded from the surrounding atmosphere. This object has long been attained in Spain, Egypt and parts of Asia, by burying wheat in pits dug into the dry earth, which are closed with tight covers, pitched over to exclude the air. A large cement cistern quite impervious to water, if filled with dry wheat, corn or meal and hermetically sealed, would retain its organized food *without change*, for indefinite ages. Air-tight, cool, earthen reservoirs which will hold from 500 to 10,000 bushels, will soon be constructed in all cities, if not by farmers, for keeping grain, apples, potatoes and provisions. The science of preserving human food is in its infancy. Some of our readers know the advantage of burying potatoes and apples in dry earth three or four feet deep, where they remain nine months, or longer if need be, without heat, air, water, rotting or sprouting. To preserve vegetables, butter, lard and meat is much easier in New York than in Georgia; but it can be done in both States and in all climates. The subject, however, is very little understood either by farmers or provision dealers.

DEEP AND SHALLOW PLOWING.—Some of your correspondents recommend deep plowing, while they say nothing about the depth of the soil. Now it is well known that some soils will bear plowing eighteen or twenty inches deep without injury, nay, with decided advantage; while others, if plowed to the depth of *six* inches, will be rendered worthless, without the addition of a large amount of vegetable matter. In such a soil, subsoiling would be higly beneficial; deep plowing, of itself, ruinous. Hence, plow deep, or not, according to circumstances.—Knowing the depth of his soil, each farmer should be guided by his judgment and experience. H.

AGRICULTURAL SOCIETIES.

BY AGRICOLA.

As the season for the meeting of these associations is at hand, I have thought it might be useful to farmers to say a word or two in relation to their importance, and the duty of farmers and others to sustain them. No one who has watched the progress of the Societies in this State since 1841, can doubt that they have accomplished much for the farmer. Not only have those been benefitted who have taken a part in their proceedings, but others who have stood aloof have indirectly received permanent benefit. The object of these associations is to bring the farmers together, compare their views on matters of deep practical interest to them—to discuss questions appertaining to their own farms and firesides—and thus from the experience of each other, secure an improved system of operations that will eventually greatly add not only to their comfort, but to their prosperity and pecuniary advantage. But to make these associations in every respect what they should be, it is all important that they enlist the whole agricultural community. To every man who cultivates the smallest portion of land they are important. However small his domain, he has an interest in the advancement of his profession, and he should by his presence and his efforts, give aid and encouragement to an association designed to benefit him.

The MECHANIC is deeply interested also in these associations. Who does not know that the demand for the work of the mechanic has a direct and most important connection with the prosperity and advancement of the farmer. No mechanic, therefore, should look upon these associations in any unfavorable light. He should encourage them by his presence and also by the exhibition of the work of his hands.

The MERCHANT too, has an interest in the prosperity of these associations. Who does not know that in proportion as agriculture improves every other pursuit is prospered. The improvements in the farms and dairies of our State, the choice and valuable cattle, sheep and swine which have been the result of these associations, all tend to the benefit not only of the farmer, but of the merchant also.

The PROFESSIONAL MEN have also an interest in sustaining these associations, and I am glad to be able to say that, so far as my observation extends, they have ever been active and efficient promoters of our county and state organizations.

The spirit of improvement and competition which has been enlisted by these annual gatherings has been most salutary, and we trust that an increased interest will be manifested in them, until every town and every county in our State will so feel and realize the importance of the subject as to enlist their energies to sustain and support them. I am aware that there are objections against these associations—generally made by those who take no active part in them, and who do not personally interest themselves in their operations. These objections are various, and many of them may have more or less foundation—but let me ask, would it not be the part of wisdom, if you see things that are not in all respects as you could wish, to come up yourself to the aid of others, and by your advice and example assist in correcting these things, and thus add to their efficiency and usefulness? It may be that your influence is the very thing that is wanting, and instead of complaining, act for the good of others—for the advancement

of a cause which you admit is all important—and render it as perfect and as successful as any thing can be in this imperfect world. This would be wise; this would be noble; this would be worthy of an American Farmer.

I have a word for those who are officers and managers of these associations. In every thing pertaining to your duties, see that the most rigid rules relating to the awarding of your premiums is observed. Endeavor faithfully to award your premiums for articles of real merit, so that it may never be said, the *exhibitor*, and not the *article exhibited*, received the award. In regard to grain crops be particularly careful to receive evidence of the quantity raised that will stand the test of examination. Remember that there are many who are watching with careful, perhaps I may say with *jealous eyes*, to see how you will conduct your operations. Be careful then so to manage your business in relation to crops, that you can before the world show that you have taken such precautions that when you award a premium, every one will be satisfied that the crop was actually raised for which the premium was given.

A word to the Farmers of New York. The season for your annual shows is at hand. Will you, this year, by your presence, by the exhibition of the products of your farm—your dairy—your orchard—show that you still feel an undiminished interest in the great cause of agricultural improvement? To those who never yet enlisted their energies with their brother farmers, I would say, come up this year to their help. You have your stock, or choice dairy products: why not let them be seen in competion with those of your neighbors and friends? It may be you have better than others; if so, by all means exhibit. But you may feel that others may possibly excell you; by all means *then* exhibit. If any one has better than yourself, you want to know it; for if you have not the best, you surely desire to have; and how, except by comparison and competition, will you ascertain it?

Let me say to every one—you have a duty to perform in relation to the improvements in your own town, in your county, in the state. Have you in every respect discharged those duties as connected with the agricultural associations around you, as you should? If not, let me urge you not to let this season pass by, without giving your personal attention to this subject. Become a member of your County Society—exhibit your articles—enlist the females of your household, which will be no difficult matter—attend with your family—and if you do not at the close of the exhibition admit that you have been amply repaid for your trouble and expense, then I will concede that, for once, I have been mistaken. And do not forget that the State Society has an exhibition, where you may meet the ten thousands of farmers and others who will gladly welcome you to their gathering—show you the fine animals—the choice and beautiful handiwork of the farmer's wives and daughters—the new and useful agricultural implements, that will lighten your toil, and increase the rewards for your labor. And this is not all: your mind will be improved by intercourse with intelligent and liberal minded men—your own happiness will be promoted—your capacity for usefulness increased—and you will return to your own home a wiser man, better to discharge the various duties that devolve upon you in the field of operations which you have selected as the business of your life.

FAIR OF THE STATE AGRICULTURAL SOCIETY.

We hope to see a very general attendance of the best farmers of the Empire State at the great Rural Jubilee in Syracuse. Being held near the center of the State, it is accessible to all. Much will be expected by thousands of strangers from other States, Canada and Europe; let not these expectations be disappointed. For the information of competitors and others interested we annex the following particulars from the show-bill of the Society:

Annual Exhibition at Syracuse Sept. 11th, 12th and 13th, 1849. The amount of premiums offered exceed $6,000. Articles should be entered with the Secretary on or before Monday, Sept. 10th.

The Grounds selected contain about *eighteen acres*, including a fine grove of several acres. The Society's *Large Tents*, with commodious buildings, will be arranged for the exhibition of Fruits, Flowers, Vegetables, Domestic Goods, Implements, &c.

The Executive Committee will meet on the show ground, at the Large Tent, on *Tuesday* at 12 o'clock—and the Judges are desired to be present, as vacancies will then be filled. The *First Day*, (Tuesday, 11th,) will be devoted to examinations by the Judges; and the Grounds will only be open to Officers, Guests, Delegates, Members, Judges and Exhibitors. On Wednesday the Exhibition will be opened to the public, and continue open for two days.

The *Annual Address* will be delivered on *Thursday*, at 3 P. M., on the Show Grounds, by Prof. James F. W. Johnston, of Durham, England.

The President and Vice President of the United States, and the Governors of several of the States are expected to be in attendance. *Meetings* will be held each *evening*, for free conversation on the subject of Agriculture, Pomology, &c.

Articles designed for exhibition will be transported over the rail-roads without charge, and visitors will be furnished with tickets at half the usual rates, enabling them to return at any time during the week of the Show. Fees of Members, $1. Single Tickets for admission to the grounds, on and after Wednesday morning, *one shilling*. Tickets to drive a carriage round the enclosure, $1, *in all cases*, except the inmates are members of the Society. *Badges* for Members will be furnished by the *Secretary* at the *Business Office*. Single Tickets will be furnished at the Treasurer's Office on Wednesday morning.

Exhibitors of Stock should give at least one week's previous notice of their intention, to the person at the Station from which their stock is to be sent: To E. Foster, Jr., Railroad Office, Albany; L. R. Sargeant, Supt. Troy and Whitehall Railroad; G. W. Young, Schenectady; T. M. Francis, Railroad Office, Utica; W. D. Stevens, Oswego; J. B. Dill, Auburn; John Fargo, Geneva; Joseph Alleyn, Rochester: M. Beach, Batavia; Wm. Wallace, Supt. Attica and Buffalo Railroad; P. N. Rust, and J. B. Burnet, Syracuse.

Articles designed for exhibition should be carefully labelled with the owner's name and residence, and may be directed to P. N. Rust, J. B. Burnet, Roger Billings, or B. F. Colvin, Syracuse. *Entries* may be made at the office of the Secretary at Rust's Hotel, Syracuse, and fees of membership paid *after* the 1st of September. On Monday (Sept. 10,) the business office will be open at the Show Grounds, and all entries must then be made there.

Gentleman from a distance, Guests, Officers and Delegates from State or County Societies, are requested to enter their names at the Rooms of the Society at Rust's Hotel. The Executive Committee will be happy to meet gentlemen at their rooms during the show. A meeting of the Executive Committee will be held each evening; and the President and other Officers will take great pleasure in extending every attention in their power to gentlemen in attendance.

Sales of Improved Stock will take place on *Thursday*. Choice animals from the celebrated *Short-horn* herd of Col. J. M. Sherwood, and *Devons* from H. N. Washburn and others, will be offered for sale; and also selected sheep from several choice flocks. J. B. Burnet, Esq., of Syracuse, will offer for sale several blood mares, fillies and colts—the mares in foal by the celebrated imported horse *Consternation*, and most of the colts sired by him. W. Thompson, Esq., of Onondaga Co., will offer for sale the well known entire horse *Mambrino*, sired by Thorne's Eclipse, a horse of remarkable speed and power. Geo. Vail, Esq., of Troy, intends to have at the Show a two year's old bull, out of his premium imported cow *Hilpa*, sired by his premium bull *Meteor*, which he will offer at private sale for $300.

The North American Pomological Convention will open its session on Friday morning, Sept. 14th, at Rust's Hotel. Preliminary meetings will be held the day and evening previous. Articles designed for exhibition, directed to P. N. Rust, will receive attention. Delegates and others are requested to enter their names at Rust's Hotel, Syracuse House, or Globe Hotel, on their arrival, where notices will be found of the time and place of meeting, and arrangements for the Convention.

Prices of Entertainment. — The keepers of the public houses and boarding houses at Syracuse, have agreed to charge only a specified price for each day's board during the week of the Fair — the different houses ranging in price from 75 cents to $2. This agreement gives assurance that accommodations will be furnished to strangers at satisfactory prices.

CROPS IN THE SOUTHERN STATES.—Corn is generally good, and promises more than an average yield. The wet weather in all the month of July has injured it more or less on bottom or low lands, where corn is usually planted. In Georgia, particularly in the Cherokee country, and in portions of South Carolina, Tennessee and Alabama, the wheat crop is nearly a total failure. Cotton is very backward, and much depends on the character of the season from this to December, in determining the amount of this crop. Since the severe frosts in April, it has doubled in its market value, and made fortunes for a few large holders. A short crop is expected. Rice is doing well; and sweet potatoes promise a fair harvest. Peaches, grapes and figs are scarce, owing to untimely frosts.

Irish potatoes have been worth in Augusta over two dollars a bushel for the last four months; and new apples are just reduced in price to a dollar a bushel. New cheese is selling in the up country at from twelve to fifteen cents a pound.

There has not been a well authenticated case of cholera in Georgia this year, up to the 1st of August; nor can we learn of a case of fever of any kind in the city of Augusta, in July. Within 30 days over 13 inches of rain water have fallen, and thoroughly washed and purified the town. L.—*Augusta, Ga.*

CONSTRUCTION OF THE DAIRY HOUSE.

AMONG the numerous practical papers in the Transactions of the New York State Ag. Society for 1848, one of the most valuable is the Report on Dairies. From it we make the following extract on the construction of the Dairy House; and regret that we are compelled to defer until next month other portions which contain important suggestions to all engaged in butter making:—

"ON the proper construction of the dairy house much depends. It should contain suitable apartments for milk, for the butter in churning, and for the implements. The structure should be such as to secure uniform temperature, both in summer and winter; and when all this is completed, unless the utmost neatness is observed in every utensil and article in use, as well as the floors and shelves of the dairy house, it will be impossible to produce first rate butter.

The following description of a cow house and dairy as used in Holland, is taken from the Farmer's Library, Vol. 1, pp. 94–5:

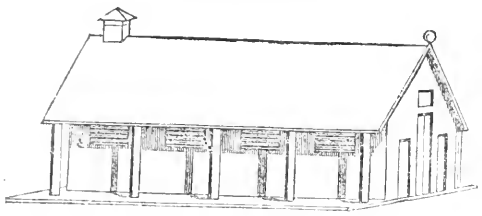
It is a building about sixty feet long, by thirty wide, with a vernandah running three sides of it. The dairy room is sunk below the level of the soil, and is paved with bricks: the sides are covered with Dutch tile, and the arched roof with hard cement. The cow house has a broad passage in the middle, and the cows stand with their heads towards this passage, which is paved with bricks set on edge. Their tails are towards the wall, along which runs a broad gutter, sunk six or eight inches below the level of the place on which the cows stand. This gutter slopes towards a sink covered with an iron grate, which communicates by a broad arched drain, with a vaulted tank, into which all the liquid flows. The gutter is washed twice a day before the cows are milked. The cows stand or lie on a sloping brick floor, and have but a small quantity of litter allowed them, which is removed every day, and carried to the dung heap or the pig sties, to be more fully converted into manures. When the litter is removed, the bricks are swept clean, and in the summer washed with water. The manner in which the cows are fastened is worthy of notice: two slight pillars of strong wood are placed perpendicularly, about two feet distant from each other, so that the cow can readily pass her head between them; on each of these is an iron ring, that runs freely up and down, and has a hook in its circumference: two small chains pass from these hooks to a leathern strap which buckles round the neck of the cow. Thus the cow can rise and lie down, and move forward to take her food, which is placed in a low manger between the pillars; but she cannot strike her neighbor with her horns. The mangers or troughs are of wood, or of bricks cemented together, and are kept as clean as all the rest of the cow house.

The food is brought in carts, which are driven between the cows, whose mangers are thus conveniently supplied; what is not wanted is stored above, and when wanted is readily thrown down to the cows. By this plan much trouble is saved, and one man can attend to many animals. From November till May the cows never leave the cow house. In summer, when they are out, if they are in adjacent pastures, they are driven home to be milked; but if the pastures are far off, they are milked there,

and the milk is brought home in boats; but this is not thought so good for the butter, which is then always churned from the *whole* milk without taking the cream rise. The finest and best flavored butter is always made from the cream as fresh as possible; and to make it rise well, the milk should be set as soon as drawn, and agitated as little as possible. The greatest quantity is seldom obtained where the quality is finest. Where great attention is paid to the quality, the milk is skimmed about six hours after it is set, and the cream then taken off is churned by itself. The next skimming makes inferior butter. It is in fact essential that the dairy house should be as near as possible to the cow house. In Holland the milk is carried in brass vessels, exquisitely clean.

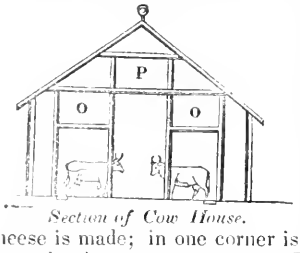
The subjoined plans will convey a clear idea of the Dutch cow house and dairy above described:

DAIRY HOUSE.

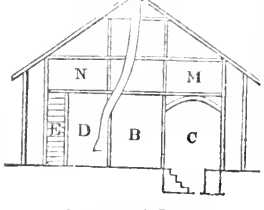


Side View.

A. A. A. Passage through the cow house and dairy 10 feet wide, paved with brick set on edge. The food is brought along this passage in a small cart, and distributed to the cows. B. part of the passage above mentioned, closed in with doors, and forming a vestibule to the dairy: C. the dairy room in which only milk, cream and butter are kept: it is sunk three feet under the level of the cow house, and covered with a brick arch; it has one latticed window, and several ventilators, on a level with the place on which the milk vessels are set. D. the room where the utensils are scalded, and where cheese is made; in one corner is a fire place, with a large kettle or a copper set. E. stairs to go up to cheese room M., and the loft N. F. Calf pens, in which the calves are tied up to fatten, so that they cannot turn to lick themselves; there is a small trough with pounded chalk and salt in each pen.

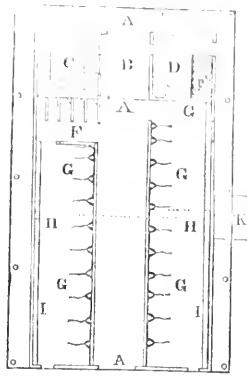


Section of Cow House.



Section of Dairy.

G. the place for the cows without partitions, each cow being tied to two posts by small chains and rings which run on the posts; the chains are fastened to a broad leathern strap, which is buckled round the neck of each cow. H. H. two sinks or drains, with iron gratings over them, to catch the fluid refuse from the gutters I, I, which run along each side of the cow house; K. the tank for the refuse, vaulted over with a door L, to clear it out, and a pump to pump up the liquid manure; O. O. in this section are places where the green food or roots are deposited for the day's consumption.



Ground Plan.

With respect to the fluid manure, of which the Dutch and Flemish are so careful, it is generally wasted by the dairy farmer of England—and almost without exception by the dairy farmers of New York. Yet as a manure for gardens, &c., it is very valuable; and in Belgium would return by contract, an average of £2 (or $8.88 per cow,) by the year. Four hundred cows would thus produce £800 ($3,552) per annum in this manure alone—good interest for the outlay of constructing the vaulted tanks for its reception!"

Growth of Plants in Confined Air.—It is now well known that a plant flourishes as well or better when grown in soil in a transparent vessel with the external air excluded, than when exposed to its influence. Mr. Leeds, druggist, corner of Atlantic and Court streets, Brooklyn, has a monthly rose in a large glass jar, planted in the usual soil. This jar is hermetically sealed, and yet the plant has flourished, its leaves being of a healthy green, and it grows faster and blossoms earlier than any similar plant exposed to the atmosphere. It has been kept more than two years in this state, having been opened only twice to clean out the grass, which grows, also, more rapidly from the pots exposed.—*Mr. Patridge.*

If the above is correct in all its statements, the experiments, reasons and theories of vegetable physiologists are blown to the winds. It has ever been held, and such we still believe to be true, that plants inhale and exhale the gases composing the atmosphere. Some plants are capable of drawing their whole nutriment from the air, as the Japan Air-plant, and others in a great degree. We should like to learn the advantages of the plowing in of the green crop to enrich soils, if they only derived their contents from the earth. It would be only returning the same materials back, that had just been taken from it, without any gain or addition. There must be some error in the experiment. We should like to know what Mr. Patridge calls "hermetically sealed." We suppose he won't pretend that the jar was melted and the glass joined together like the stem of a thermometer. Nothing short of that is hermetical sealing, or will exclude the air. We presume the jar was closed with a cork, and waxed, which, as to excluding the air, would be an entire fallacy. We should like to be informed, also, how they admitted water for its subsistence during its two years' imprisonment, without admitting air: and where the oxygen was procured to convert the *humus* of the soil into carbon, for the leaf, woody fibre and flower. *

Effects of Certain Manures on Plants.—As a general rule, nitrogenous manures force the green leaf and stalk; the phosphates dispose to seed: the sulphates and salt to solidity: and potash to healthy and vigorous growth.

EDUCATION FOR THE SONS OF FARMERS.

BY J. A. KENNICOTT, OF ILLINOIS.

EDS. GEN. FARMER:—Your ever welcome little paper has shown its cheerful August face to its friends in Northern Illinois; and, as an early settler on the "Holland Purchase," I may perhaps venture to say, that I have read with much pleasure, and more hope, your own and your correspondents' remarks on the "spirit of the age," and the necessity of association, and a sustained *esprit du corps* among farmers—and more especially "Agricultural Education" for the sons of farmers. This has long been a growing, though quiet and unobtrusive hobby with me. I have said little about it, because I much distrusted my abilities, as well as my prejudices, and thought it best to bide the proper time; and that time has not yet arrived in the West. We are now engaged in, it is to be hoped, successful attempts, to systematize Common School Education.

But in New York the case is different—common schools are approximating a reasonable perfection—and it will be a glad day for me, and a proud one for New York, when I see an Agricultural College, with a large farm attached, and such a man as DAVID THOMAS, or LEWIS F. ALLEN, for instance, at the head of it, in the Western part of my native State—which, even I can remember, as almost a wilderness. Such an institution would be worth all the purely literary ones in the State. It would send out *practical* men—and give TONE, and STANDING, to the profession of Agriculture.

Colleges of this nature—compared with our present irregular and uncertain facilities—would be to the farming and mechanical interests, what medical schools are to the profession of medicine and surgery, cotrasted with the old mode of studying with a country doctor. And yet, it may be said, that some of these village bred students have become eminent physicians. True; and so, up to the present day, have merely "book learned farmers" become our best, and most successful agriculturists. But, how many of his blunders has the silent grave covered, in the one instance—and how much useless expenditure, and how many fields reaped without profit, could the others tell of, in his first attempts to go beyond the usual routine—which a practical education would have obviated?

Your correspondent, "Agricola," is right with respect to the spirit of the age. Useless learning will not much longer form a great portion of "a liberal education," in this utilitarian age. Two or three years thrown away, in the study of dead languages, will not be tolerated in the latter half of this nineteenth century. Life, in our day, is not too long at the best, and many of us, in the most senseless manner, are doing much to shorten its natural period—though scientific medicine has, of late years, wonderfully diminished its liability to accidental termination, and thus aided to swell the current population of our earth. And yet, were we sure of forty years, on an average, can there be any good reason why we should spend a tenth of the flower of our days, in acquiring that which, at the best, is but a barren accomplishment, if not a criminal waste of time, and wear of intellect?

Brother Farmer—my worthy and ambitious friend—you who sent your son to college because you could afford it, and wished to do for him, what your father could not do for you—now answer me candidly, although you are very proud of his learning, has he in reality gained anything useful by his four years' expensive application? Is not this favored son, (doubtless a lad of promise once,) a mere drone?—a dreamy book-worm?—or worse, a self-sufficient ass!—with all his Greek and Latin, and ancient literature, (none of the purest,) and old monkish learned lumber—oppressing and obfuscating the brain, without leaving a trace of useful knowledge, or a single new idea, worth a pinch of snuff.

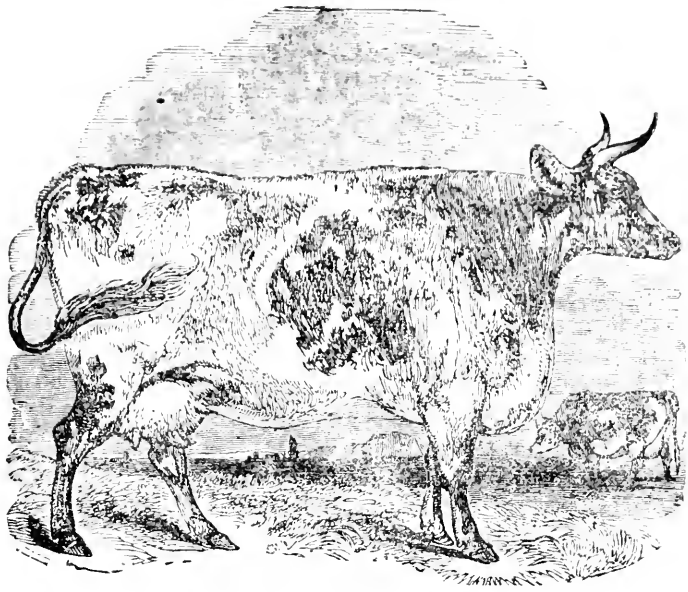
I will venture a prediction: In 25 years there will not be ten colleges in the Union requiring the study of the *dead languages* as a part of a regular course of education. The reign of sanctified error is drawing to a close. This is the age of mind, and the republic of knowledge, in contradistinction to the empire of mere learning—and the sons of farmers know the value of time, and seldom have much to spare. But should they possess a taste for languages, and great facility in acquiring them, they can study French and German, and find their account in it. These languages are as useful now as was the Latin once; and even the Spanish is worth more than Greek, in these golden days.

HORTICULTURE, though not in name, does now, in reality, form a part of a liberal education; and an English education is incomplete without a knowledge of natural philosophy and chemistry—and a farmer should study geology, mineralogy, botany, entomology, &c.,—and anatomy and physiology, as well as these—provided always that he has time, and taste therefor; and if he has taste, he will find time.—And, what is more, he will find pleasure in learning to know himself, and the nature of things, animate and inanimate, which surround him, and which, for good, or for evil, influence the success of his pursuits.

Agriculture and the Mechanic Arts go hand in hand, and are reciprocally dependant on each other; and commerce ministers to both—bankers and traders are our factors—"professional men," our natural dependants, and our "necessary evils"—politicians (generally demagogues,) *call* themselves our "servants," and *act* as the arbiters of our destiny—ever an age behind the spirit of the times—and why is this? and in what are any of these superior to the farmer? Not in worth—not in usefulness, surely—but in mere learning, and station, which old custom and our folly have, heretofore, accorded them, and pardonable combinations and their "esprit du corps" have enabled them to maintain.

The new race of PRODUCERS will remedy all this, and the educated Farmer, or Mechanic, will rank, "FIRST IN HONOR," and first in station, as he has ever been first in usefulness and necessity. J. A. K.—*The Grove, Ill., August*, 1849.

APPLICATION OF MANURES.—The question relating to the application of Manures, appears to be a very simple one. A dead animal left to decay on the surface of the earth, will, as decomposition proceeds, nearly all escape into the atmosphere, in the shape of gases. The same is true of a heap of vegetable matter. Ashes, lime, (in any of its forms,) soda, and all the mineral salts, absorb from the atmosphere, and in wasting away descend and mingle with the soil. Hence in applying animal or vegetable manures bury them *in* the earth. (unless in a liquid state,) that on decomposing, the elements may in their ascent, be absorbed by the soil and be food for the plants. In the use of mineral manures, place them *on* or near the surface, that on decomposing they may *descend* to the roots of the plants. H.



HOLDERNESS COW.

Improved Stock.

COWS FOR THE DAIRY.—HOLDERNESS BLOOD.

BY ARKWRIGHT.

The question has recently appeared on the pages of this journal, "What kind of cows shall the farmer keep?" It will doubtless be expected that an answer to this inquiry should suggest, what breed of cows may justly be considered most profitable for the dairy. We have many excellent cows of the native breed: and by persevering and intelligent culture, such as was devoted to this object by Mr. Bakewell in England, we might unquestionably have, in all respects, a superior breed of native stock. But such, at present, is not the fact. Our native cows, to a great extent, are in many respects, an inferior breed; and instead of improving our own, we have resorted to foreign stock.

There was a time when the Devons were all the rage. Their color, a rich mahogany red, was captivating: and their neat and finished forms—their beautiful horns—their sprightly, active spirits—conciliated great favor. But they were generally rather small; and, as a breed, often not deep milkers. To these the Short-horn Durhams succeeded, and have borne the palm for several years. During this period, a man would almost have been thought beside himself, to have said aught to their disparagement. But the homage paid to them has, in a measure, subsided.—And the fact, becoming evident in the experience of the farmer, that the object for which they were first cultivated in England—"profit for the butcher's stall, rather than for the dairy"—has diminished their value as dairy stock; the disappointed and dissatisfied now venture to urge the inquiry, "What kind of cows shall farmer's keep?"

In the hope, or at least, in the desire to obtain something better than was already possessed, importations from England have been made, within a few years past, of other breeds considered to be valuable. But I have yet to learn, if any thing has been obtained, that promises great and general benefits. The question still recurs, and with increased interest, "What kind of cows shall the farmer keep?"

Now, I have no expectation of answering this question, to the satisfaction of any whose interest and partialities are already enlisted in behalf of some favorite blood. With *such* persons, I have no controversy, no argument, although I may advocate a different breed. I have neither the design nor desire to disparage their favorite stocks; but cheerfully concede to them, whatever of excellence and value they possess. And I readily accord to others, that which I also claim for myself, a perfect right to entertain, each his own preferences. We are respectively, both ready and willing, of all such preferences, to abide the results. I propose, merely, to make a few plain statements, in regard to a breed, with which I have been long acquainted, and which I highly prize: and to state a few, out of many facts, within the compass of my own knowledge and experience. The farmer then can draw his own conclusions. I allude now to the "Holderness" blood. And here I take the liberty to remark, that I have seen in this county, and in some counties east of us, a breed of red cattle called "Holderness," which I do not consider to be even remotely allied to that blood; nor, indeed, ever to have proceeded from that blood, at all.

In addition to their color, a striking characteristic of this stock is, to be exceedingly thick and full built in the hind quarter: especially the upper part of the thighs, and around the rump; so as often to exhibit a very singular appearance. I have known this stock for more than twenty years: have taken pains to ascertain its origin: and so far as it had any alliance to foreign blood, have, satisfactorily to my own mind, traced it back to stock in no way connected with the Short-horned blood.

Now the Holderness are pied cattle, generally a deep red and pure white, the same as the Durhams: although, as among the Durhams, occasionally one may be entirely red, or entirely white. But the leading

characteristic of both breeds as to color is the same —"marbled, mottled, spotted, red and white." The Holderness have exceedingly neat and beautiful horns. And one striking characteristic in their form, so far as I have known them, is, *great length of body.*— As to size, they are about equal to the Durhams, some of them being large, but generally, of finer bone and more delicate appearance.

I first saw the imported bull, "Holderness," about the year 1829. He was purchased in England, as stated, at a cost of $1000, and imported into this country by GORHAM PARSONS, Esq., of Brighton, Mass., then President of the Massachusetts Agricultural Society. In color, he was deep red and pure white, the red predominating. In form, he was very perfect—deep in the brisket, round in the chest, with fine straight limbs, heavy quarters, and great length of body. His weight in ordinary flesh was 3,000 lbs.

The English Enclycopedia, in speaking of this stock, says—"They are large, fine boned, possess great aptitude to fatten: their beef is fine; they have both size, strength and speed for labor, and their shoulders are well posited for the draught. Being beautifully variegated in color, marbled, spotted, speckled red and white, they make elegant 'Park stock,' (witness the Earl of Chesterfield's dairy;) and in one, perhaps the most important respect, *great milking*, they stand unrivalled; the cows giving from 24 to 36 quarts of rich milk per day."

In a trial, on the farm of the Earl of Chesterfield, of seven cows, consisting of three celebrated varieties, with crosses upon them, the Holderness cow giving 29 quarts of milk, produced 38½ ounces of butter per day, being 6 ounces more than was produced by any other one.

I understand the history of both Holderness and Durham cattle to be this: originally, they were the same stock—large, thrifty, pied cattle, brought over to England from the rich meadow lands of Holland, by the Durham and Holderness farmers. With the latter, *profit from the dairy* was the leading object; and they bred with especial reference to this result. With the Durham farmers, early maturity, rapid, large growth, and aptitude to fatten, was the aim; their leading object being, the "butcher's stall." It has hence resulted, that the leading characteristic of the Holderness cows has been, excellence for the dairy; while, at least one leading characteristic of the Durhams has been, excellence for the slaughter.

In 1830 I purchased from the owner of the imported bull, a full blood calf, and bred from him about ten years. Like his sire he was pied; a deep red and pure white, and very perfect in form. At four years old his girth was 7 feet 3 inches. At five years old his weight was 2,200 lbs. And the length of his body, from where the horn crosses the head, correctly and accurately measured on the line of his back, was 8 feet and 4 inches. His equal in length I never saw, except his imported sire.

For several years, there were brought to him from sixty or eighty to over a hundred cows. And in all my acquaintance with the stock, I never knew an instance where the cow proved an inferior milker. They were uniformly an improvement on the common stock, *in every particular*. I bred from a small, first rate native cow, a heifer that I afterwards sold, that produced a calf each year at three, four and five years old, and gave milk every day during the whole period of the three years. Her calves were purchased before two weeks old, the first at $40, and the others at $50 each. Her mess was 44 quarts of rich milk per day, in the best of the season. One hundred dollars were often refused for her. I bred from him a cow that took the first premium at the cattle show in this county, in 1844, giving 40 quarts of milk per day. A two year old heifer also took the first premium for those of her age, giving 24 quarts of milk per day. I sold at $50, a cow 4 years old, giving 30 quarts per day. Her first calf was dropped on the 1st of November, she being then 2 years old. Her mess the middle of November was 16 quarts per day, and the cream taken from 5 measured quarts of the milk produced 7 ounces of butter, nearly equal to 1½ lbs. per day for her whole mess. Ten pounds of butter per week, for a 2 years old heifer, on the pastures of November, is a result not often reached.

My herd of 6 to 8 cows, kept for many years for family use, averaged not less than 24 quarts per day to each cow in the best of the season. The cow still retained in use, now 15 years old, has given annually from 24 to 28 quarts of the richest milk per day, when the grass has been fresh and abundant. She was milked during the season when she was 2 years old, beginning in May, giving a good mess, although she had never had a calf, and did not calve that season until the month of October. I mention this fact, singular as it is, though perhaps not unprecedented, merely as indicating the tendency of the breed to milking properties.

I have seen no oxen of any breed larger, finer, fleeter, or better in any respect, than those of this stock, and rarely have I seen their equals. And whether they can compare with other celebrated breeds for the slaughter, may, in a measure, be inferred from the fact, that a pair of steers bred by my neighbor, with no other care and keeping than that given to his entire herd, were sold to the drover at 2 years old, for $80; and at 5 years old were sold for the slaughter for $500—their average weight on foot being, as stated, 3,000 lbs.

With these suggestions, I submit to the grazing and the dairy farmer, whether it might not be well to make trial of this stock, either by importing it from England, which might speedily be done, or by purchasing for the dairy, Holderness cows of the *genuine blood*, if at this time such can be obtained in this country. *Rochester, N. Y.*, 1849.

SUBSOIL AND SUBSOIL PLOWING.—I have sometimes heard the inquiry made, whether the subsoil contains any strength, and what is the use of disturbing it? Now the *strength* of a soil, as the term is generally understood, may depend upon one, two, or three things, viz: the amount of animal, the amount of vegetable, or the amount of soluble mineral matter (of the right kind,) that it contains; or any two of these, or, all combined. But a proper subsoil contains very little, perhaps often none, of the first and the second in a permanent state; but may contain any amount of the third. The percolation or infiltration of water may, however, carry down some of each in solution when applied to the surface. Hence a subsoil may, and generally does contain much of the *strength* of the soil, and doubtless the very elements required for the perfection of the plant, but unavailable to it on account of the impenetrability of the subsoil by the roots of the plant. (See this subject further discussed in some of the former numbers of the Farmer, on "Subsoil Plowing.") H.

EXPERIMENTS WITH NEW VEGETABLES

1st. I bought a few "Early Emperor Peas" of THORBURN, New York, at $1 50 per quart, early in May, and planted 10th of May. Without any extra care, they were ready for the table on 15th June,—35 days. The Early Prince Albert Peas I planted on the 8th of April, side by side, and they were not fit for table use till the 13th of June,—one month difference in time; but allowance must be made for bad weather in April.

2d. I bought, at the same time and place, one "*Early Sovereign Potato.*" Planted 10th of May. They *ripened, sound,* (and tops dried, although in a damp spot,) as early as the 17th of July—2 months and 7 days.

3d. I also got one ear of a new kind (I did not get the name, but will yet do so,) of *sweet* corn, *very superior,* which ripened ten days before the common Early Canada. The Canada is early, but hard and not good, you know.

4th. "Wait's Queen of Dwarf Peas," which I also bought of Thorburn, at $1 50 per quart, prove to be of the *first* quality, and *great bearers,* although the vines do not grow over 9 to 12 inches high with good care,—yet the vines are so stocky that it will not do to drop the peas nearer than a single pea from 6 to 8 inches apart. I think these and the "Early Emperor" pea will be valuable kinds to cultivate here. Yours, Respectfully. R. G. PARDEE.—*Palmyra, N. Y., August,* 1849.

DRILLING IN WHEAT.

WE are convinced that putting in wheat with a drill is not only the preferable plan, but that a great saving of seed may be effected by it, *and an increased produce obtained.* To sow a 100 acre field *broadcast,* as it ought to be, will require 200 bushels of seed: whereas 125 bushels, if put in with the machine, will answer fully as well, thereby saving 75 bushels in 100 acres. The ridge raised by the machine protects the plants through the winter; and in spring, if the roots should be thrown out, many, if not most of them, will be covered by the crumbling down of the ridges. All that would be necessary to render this certain, would be, in the spring, to pass a roller over the field, as soon as the frost was out of the ground and the soil dry, as the pressing down, or compression of the ridges, would necessarily cover up most of the roots that might be found exposed upon the surface, and thus ensure their taking root and growing. Besides the interval between the drills would secure a free circulation of air through the plants while growing, and be particularly serviceable in preserving, to a very great extent, the grain from rust. If the cause of this disease be atmospheric, and we believe it is, the free circulation of air could not fail to be productive of the good we have claimed for it.—*American Farmer.*

INDIAN CORN.—To show the increasing demand for our Indian corn in Great Britain, we would state that by the official report, as it appeared in the N. Y. Shipping List, the quantity of corn exported in June, was 1,287,369 bushels, which is greater by 550,486 bushels than in the month of June, 1847, when prices ranged from 83 to 117 cts. per bushel, and greater, we believe, than was ever shipped in any previous month.

CULTURE OF PLUMS. THE CURCULIO.

MR. EDITOR:—Your correspondent in May number has been very fortunate in discovering, in sulphur, an effectual remedy for the Curculio. I tried the experiment the present season, on plum trees of several varieties, and although not without effect, yet the result was not entirely satisfactory that sulphur is a sure preventive. Perhaps this may, in some measure be owing to the sorts or varieties; mine were the Imperial Gage, Duane's Purple, Washington and others. I find some sorts are far more liable to be stung than others—among which I may name Duane's Purple and Huling's Superb, both fine large varieties. The insect is rapidly increasing here. It is not until within a few years that they have meddled with our peaches: the present season being a scarce one, they are mostly cut off by the insect. Even the common hog peaches are not excused. Your correspondent was right in stating that DOWNING said he never knew an instance of their being troublesome in a heavy soil. He does so state, page 267. I can assure him it is no exception here. The abundance of the insect here is owing to the fact that no means are employed for their destruction. Many are ignorant of the real cause of their plums falling off, and farmers are usually too busy to attend to it. The general lack of Agricultural and Horticultural knowledge is another cause of this evil. If such works as the Genesee Farmer were more generally introduced into families, an interest would be awakened, that would have the effect of making people bestow a little extra trouble for the sake of having fine fruit.

J. H. W. will oblige by stating the particular time he applied the sulphur, with any other information he may possess on the subject. WM. WYLDE.—*Vermillion, Erie Co., Ohio, July,* 1849.

REMARKS.—We have no faith whatever in *sulphur* as a remedy for the Curculio. Wherever practicable stone fruits should be planted in a separate enclosure, and pigs and poultry be kept among them to consume the fallen fruit. This in a short time, will destroy the insects. The Curculio has not done as much mischief as usual in this vicinity, the present season. Our plums and apricots are very fine and abundant. In small places, paving around the trees answers a very good purpose.—ED.

BOTANICAL TERMS.

MESSRS. EDITORS:—I wish to express my decided disapprobation of the use of the terms *male* and *female,* to distinguish the two classes of organs that are found in flowers, called the organs of fructification. Whatever cause may have operated with the founder of our present system of Botany, for the introduction of these terms, that cause does not now exist. There is not the shadow of a necessity for the continuance of their use in a science now abundantly supplied with technicals; the terms *staminate* and *pistillate* answering every purpose that can be answered by the others. The teacher who undertakes to instruct a mixed class of intelligent, and perhaps, inquisitive pupils in Botany, will find it very difficult. If these terms must be retained (for which I can see no necessity,) let them be confined to those treatises that are designed exclusively for the use of the learned. Nothing should be admitted into a text-book for schools, or a reading-book for families, which can awaken the least shadow of indelicacy, or wound the most delicate sensibility. n.

THORN HEDGES.—THE OSAGE ORANGE.

BY J. DINSMORE, OF KENTUCKY.

MESSRS. EDITORS:—In the June number of your valuable paper you invite correspondents, who have had experience in growing hedges to communicate the results. I have been making experiments for several years, principally with the Osage Orange, with the most flattering prospects of success.—Among the plants I have seen tried for hedging are the Cherokee Rose, the Osage Orange, the Honey Locust, the Hawthorn and the Buckthorn. The former, in the States south of Tennessee, makes an excellent and highly ornamental hedge. I have tried it here, but it is too tender for this latitude. In Louisiana it forms a hedge, which is impassable to the wildest animal, but the planters complain that it affords a harbor for multitudes of rats, snakes and wasps. The objection to the Honey Locust is that it is of too large a growth and difficult to be kept down. The Hawthorn is devoured by insects, and soon perishes.

The Osage Orange I consider the *beau ideal* of hedge plants. It is a native of Louisiana, and is stated to be hardy at Boston, and will undoubtedly succeed from the Gulf of Mexico to the Lakes. In my opinion it would be difficult to estimate the value of this plant to the United States too highly. Englishmen have confessed to me, that they have no plant in Europe to be compared to this, for hedging purposes. I know of no plant, excepting the willow, that is more easily propagated. A piece of the root 3 or 4 inches long planted in a bed, with the top a little below the surface, will produce a plant, in one season, from 2 to 6 feet high.

There is some difficulty in growing plants from the dry seeds, without preparation. If planted dry, not one in twenty will grow. When taken fresh from the half decayed ball or fruit they will grow as readily as peas. If dry, soak them a few hours in milk-warm water; pour off the water and stir in fresh ashes, and let them remain moist three or four days.—Then sow in drills an inch deep in rich and well prepared ground, and when the plants appear keep them clear from weeds. I find it is better to let them remain two years in the nursery. They then grow off vigorously, and give a good supply of roots for planting. When you wish to plant in hedge, cut off the top two inches above the ground, take up the plants, cut off the principal roots, leaving the main tap root 8 inches long. Plant in two rows from 6 to 12 inches apart, and keep the ground clean. The spring following, cut down the plants to 6 inches. The second year leave them a foot high and leave a portion of the largest shoots to be interlocked with each other. The third year leave them 2 feet, and the fourth 4 feet high. After this you may regulate the height to suit your fancy. The hedge will then present a dense mass of shoots covered with thorns, almost as sharp as needles, and averaging a thorn for every inch in length of the branches.

I have not observed that any insect preys on this plant, but Dr. WHITE, of Ohio, informed me that the largest cocoons he had ever seen were from silk worms fed on its leaves. I have supposed, that its exemption from injury by insects was owing to the acrid milky juice, which the leaves exude. I have a hedge around my vineyard, a part of which is of four years growth. Not a plant has died out, and it presents an impenetrable mass of branches, thorns and glossy leaves, which is truly beautiful. It will afford a most efficient protection to a fruit garden or vineyard, and I cannot conceive a more embarrassing situation for a vagabond, than attempting to pass through such a hedge with a fierce dog at his heels.

It is probable that the tops of the plants would be killed by the frost in New York the first winter, but that would do no permanent injury. The wood of the Osage Orange is exceedingly strong, elastic and durable, and is used by the Indians of the West for bows, whence the French name of *Bois d'Arc* by which it is known on Red River. J. D.—*Boone County, Ky., July*, 1849.

"POSTS INVERTED."

NOT long since in conversation with a gentleman on this subject I stated some facts which he said he would not believe, even if he should see them himself; that there was no reason, no philosophy in the thing, &c.; nor would he listen to any attempt at an explanation. Yet this man boasted of being a philosopher!

First, the facts. I have seen hemlock stakes set in the ground, some in their natural and some in an inverted position. After a few years the inverted ones were found to have decayed on the *outside*, while the central part was sound and dry, even below the surface of the ground. Of the others, not only had the part that entered the ground decayed entirely, but the end was hollow several inches above; the central part having "rotted out." Again: a gentleman on whose word I can rely, told me, that he had seen old trees lying on a black ash swamp, some with the root or lower end in water—others with the top or upper end, where they had lain for years. On chopping the same for fuel, the former were found to be saturated with water and partially decayed *above* the ordinary water level; the latter were sound and comparatively dry, even *below* the surface of the water.

Second, the philosophy; the theory. It is a well established fact in vegetable physiology, that the sap of a tree in ascending from the root to the branches, passes up through the *alburnum*, or sap wood, (and the whole body, or stem, of the tree has been such, each concentric portion in such succession,) and having undergone the digestive process in the leaves, returns between the wood and the bark of the tree, depositing in its course the substance called *cambium*, or the new wood. Hence the theory explains the facts. The moisture passes naturally in the direction of the sap. *Down East, July*, 1849. H.

BURNING STRAW IN THE FIELD.—If the soil contains already a superabundance of vegetable matter, no advantage is gained by spreading the straw over the field, except for the mineral elements it contains. If the straw, therefore, should be burned, and the ashes spread evenly over the field, the soil would sustain no real loss from the absence of the other elements it contained, and the next crop would be equally good as if the straw had been mixed with the soil; for all that portion of the straw, (or the elements that composed it,) that escaped into the atmosphere during the combustion, will be derived again from the same source by the growing crop. As there are, however, portions of every farm that would be benefitted by the addition of the straw, the practice of burning it may, under any circumstances, be considered at least injudicious. H.

Wool and Wool Growing.

WOOL.—WEIGHT OF FLEECE, CARCASS, &c.

BY W. D. DICKINSON.

Messrs. Editors:—In late numbers of your paper I notice some accounts of large fleeces, taken from Merino sheep and their grades. Now, this is all right, so far as it goes: but, in order to form a correct opinion of the value of the animal, we should know not only something about the size of the sheep, but the value of the wool per pound. I think it will not be disputed that the cost of keeping is in proportion to their weight, or that one sheep weighing 120 lbs. will consume as much fodder as two of the same age weighing 60 lbs. each. I usually winter about 200 sheep. My wethers over two years old, together with my oldest and coarsest ewes, are separated from the rest of the flock in the fall and fattened, and generally sold previous to shearing. The remainder, consisting of stock bucks, ewes, yearlings and two years old wethers, generally average about 4 lbs. per fleece. When I have sheared my fat sheep, the average has been from 4½ to 4¾ lbs.

My sheep are all numbered, classed and registered, so that by referring to my book, I can ascertain the connection existing between any individuals—their age, grade of wool, weight of fleeces and carcass, &c., for the last three years.

I sent my clip of wool last season to the wool depot at Kinderhook, where it was assorted and sold as follows:—Super 60 cts. per lb.; Extra 46; Prime 39; No. 1, 35; No. 2, 33; No. 3, 26. The last grade was sold in October, which will account for its selling so much lower than No. 2. The remainder was sold in February, at the same time and to the same individual. My present clip I sent to the same place, where it remains as yet unsold. My average weight of fleeces this year, with the value per fleece at last year's prices, is as follows:

	Weight.	*Price.*	*Amount.*
Extra,	3 lbs. 3 oz.	46 cts.	$1 61
Prime,	3 15	39	1 51
No. 1,	4 1	35	1 72
No. 2,	4 3	33	1 38

For the last three years I have weighed my sheep as the fleeces were taken off, and find the live weight in proportion to the weight of fleece between the different grades nearly the same—although the difference between individuals of the same grade is frequently great. In 1847 I sheared two sheep of the same age and grade, and wintered in the same yard: the difference in the live weight was only 3lbs., whilst that of the fleece was 3 lbs. 3 oz.—one shearing 3 lbs. 3 oz. and the other 6 lbs. 6 oz. I find that yearlings consume the most food and produce the most wool in proportion to their weight, and breeding ewes the least.

It will be seen that my finest grades, although they yield the lightest fleeces, produce the most money. They are likewise equally hardy, and raise as many lambs as the coarse grades. I have spared no pains in having my wool clean and in good condition. It was examined this year by an extensive dealer in wool, and one who has perhaps purchased more wool for the last 10 or 15 years than any other individual in this section of country, who said it was in the best condition of any he had ever seen in Western New York. W. D. D.—*Victor, N. Y., Aug.*, 1849.

MERINO SHEEP.—MORE LARGE FLEECES.

BY REED BURRITT.

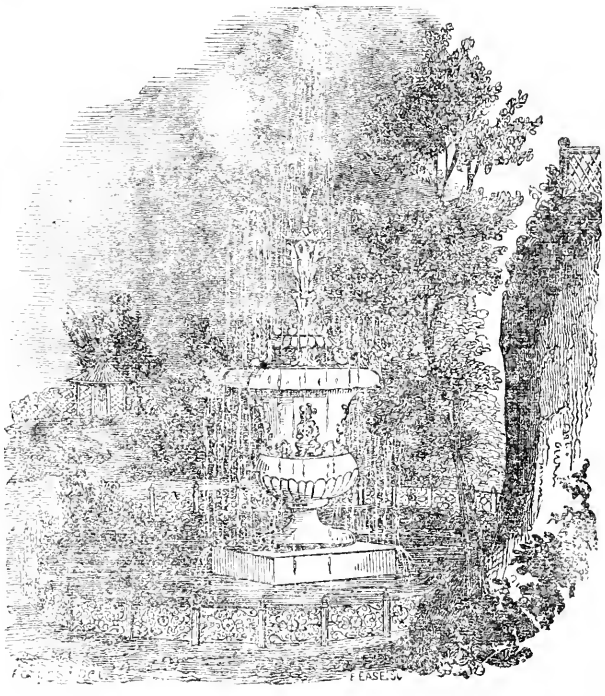
Messrs. Editors:—I have been calculating to send you my annual report concerning my Merino sheep, the weight of their fleeces, &c., for some time, but being cumbered with many things have deferred it. On seeing a communication from Mr. Embree, in your last number, (page 187,) in which he requests that if any had come up to 5 lbs. per head, they would make it known through the Farmer, I thought that I would wait no longer.

Last spring I sheared 25 *full blood* Merinos, which averaged a trifle over 5 lbs. per head, being no more than a common yield. My breeding ewes averaged 4 lbs. 13 oz., and my ewe lambs averaged 4 lbs. 11 oz., and a few bucks, which gave of course heavier fleeces, brought the whole over 5 lbs. per head. I have about 115 that are high crosses of the Merino with some Saxony, and some native, which gave lighter fleeces. I had 236 fleeces in all, which weighed 1,044 lbs., and I sold it for 35 cts. per lb., cash. I am calculating to increase my flock to 300, and have them all pure bred Merino, as soon as I can raise them myself—though the frequent applications that I have for my full bloods prevent my increasing my flock as fast as I should if I could keep the whole: and when I sell my ewes for from $5 to $10 per head, I must sell the good ones, and keep the poor ones, which prevents the improvement of my flock. Could I keep all my best, and sell the poorest, I would soon have a flock of 300 that would average 5½ lbs. per head. One ewe at my last shearing, with a lamb by her side, gave 6¾ lbs., and one ewe lamb (yearling,) gave 6 lbs. 6 oz. The buck that I have improved from for several years past, shears, when thoroughly washed, 8½ lbs., a sample of which I enclose—also a sample of the ewe lamb that sheared 6 lbs. 6 oz.

In December, 1847, I purchased a buck lamb of Stephen Atwood, of Watertown, Conn., having the choice of his entire flock. His dam sheared 6 lbs., and his sire 10 lbs. 7 oz. I of course calculated on a 10 lb. fleece when he came to maturity; but I was unfortunate in getting him home. He was shipped in April, 1848, but on account of breaks in the canal, and other hindrances, he was 22 days on his passage, and in a small cage; he lost his appetite, got very poor, has grown but little since, and I fear that he will never be common size. His first fleece weiged 7 lbs. 14 oz., well washed on the back: his second weighed only 7½ lbs. I feared his being so dwarfed would affect his stock, but it does not: his lambs are large enough, and I think the best that I ever saw. We had 133 of his getting, and raised 130 of them. I paid Mr. Atwood $50 for him.

I cannot say, as Mr. Embree does, that I have paid no high prices, as I have paid for two bucks $50 per head; for 14 ewes, $25 per head: for 11 ewes, $20 per head; and for some 20 ewe lambs, $10 per head. For five years past, I have spared neither pains nor expense—calculating to have as good a flock of pure blood Merinos as could be found any where. R. B.—*Burdett, Tompkins Co., N. Y., August*, 1849.

Wool Growing is becoming an extensive business at the West. We have accounts of large and profitable clips, the past season, in various sections of Ohio, Michigan, Illinois, Wisconsin, and other western and south-western states.



ORNAMENTAL FOUNTAINS.

BY J. VICK, JR.

"And in the midst of all a fountaine stood,
Of richest substance that on earth might bee,
So pure and shining that the silver flood
Through every channel running one might see."—SPENCER.

FROM the time when a "river went out of Eden to water the garden"—that earliest and best of gardens, in which grew "every tree that was pleasant to the sight and good for food"—running water has constituted an important feature in ornamental gardening. Although the skill of man has been exerted to its utmost in devising means to adorn and beautify the garden and park, that skill and exertion has produced nothing that imparts such life, such a sense of sympathy and companionship, as the sight and sound of moving waters. In the trees we hear the voice of nature loud and deep—the shouting of the tempest in their lofty tops—and feel its sublimity: or its shrill solemn voice in the firs, depressing us with a feeling of loneliness. But in the moving and rippling of waters there is a spirituality—an angel's voice—that soothes the feelings of the beholder, and gives life and pleasure to all within the sphere of its attraction. Take from the above garden view the FOUNTAIN, and how tame and lifeless it will appear—the matter without the mind, the body without the soul. Running water in the form of cascades or jets not only gives animation to the scenery, but in warm climates is almost indispensable, as well from the refreshing sense which the sight of running water always affords, as from the actual coolness it diffuses around.

FOUNTAINS—ANCIENT AND MODERN.

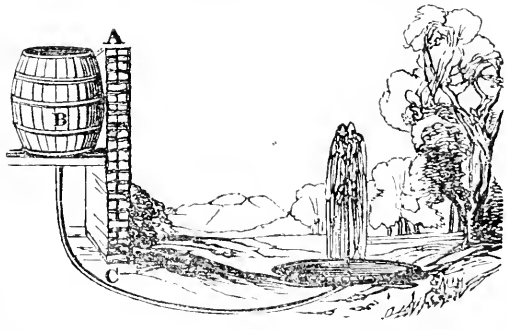
Artificial fountains and jets are of great antiquity, and were highly esteemed by the ancients, who showed the greatest skill in their design and decoration. Sometimes the pipes terminated in statues of men, women, animals, birds, fishes and gods, and from them the fluid spouted high in the air. Various automata were often put in motion by mechanism concealed in the base or pedestal. The water issuing from these fountains was perfumed on particular occasions. This fact is alluded to by Lucan in the following passage:

"As when mighty Rome's spectators meet
In the full theatre's capacious seat;
At once by secret pipes and channels fed
Rich tinctures gush from every antique head:
At once ten thousand saffron currents flow,
And rain their odors on the crowd below."

For the last century the taste for waterworks has been on the decline. The manufacture of fountains of cast iron, recently commenced, and the low price at which they are now furnished of the most beautiful patterns, is favorable to their general introduction to public favor. The beautiful specimen at the commencement of this article costs $35, and the one on the next page $15. We would advise none to be frightened, however, even at this expense, as we will tell them in the proper place how to make a fountain so beautiful as to be worthy the notice of all, and yet so cheap as to be within the means of the poorest.

We know of no part of ornamental gardening so sadly neglected in this land, and while such an increasing interest is manifested by our countrymen for improving and embellishing their homes, we hope the FOUNTAIN—so simple—so beautiful—so grateful to almost every sense—will not be forgotten. Every village favorably situated for water should have its public fountain. We know of many in this section of country where fountains could be kept constantly playing, without expense or trouble, when once constructed.

MODE OF CONSTRUCTION AND COST.



MANY are deterred from constructing fountains from erroneous ideas in regard to expense, a notion that a great quantity of water is needed, and ignorance of the proper mode of construction. It shall be my object to present the readers of the Farmer a little light on this subject. To those who have a natural head of water, the directions will be applicable with the exception of the water-butt or cistern, and they will also be saved the trouble of raising water.

Place a barrel near your well or at some place convenient for filling, and at a considerable elevation. It should be out of sight—as behind a wall (as seen in above figure,) or over an arbor, or summer-house, hid by vines and creepers—and having a lead pipe from the bottom leading to the place designed

for the fountain. In the preceding diagram A is section of wall, B butt, C lead pipe under ground. Place the pipe low enough to be out of the way of frost, and as straight as possible, as all elbows and bendings diminish the force of the water. The height of a jet does not depend upon the quantity of water, but upon the height of the head or barrel. By having the jet close to the surface of the ground the stream of water is lengthened; for if there was a design of two feet, or any other height, it would be so much taken from the height of water. The rise can be added to by sinking the ground into a hollow around the fountain. The pipe at the fountain end must be contracted to one-fourth its size, and a tube of a few inches in length attached, and the water will rise nearly as high as the head. The barrel can be filled by a force-pump, or in any way preferred. In preparing the basin for a fountain—first, choose a location either in the garden or in the "*lawn*" or "*yard*" in front of your house; drive a stake for the center, and with a line and stick sweep a circle the size you wish the basin—take out the ground from the center outward, forming a basin ten or twelve inches deep. The earth taken out should be removed, as a raised bank around a fountain does not improve it. By cutting the circle through the turf you will have a handsome grass edge around the basin. The bottom and sides may be lined with water cement, which will be but a trifling expense. In using cement, mix one-third clear coarse sand with it, and put it on with a trowel, having first rammed the ground hard. Next get clean white pebbles to cover the inside of the basin, and surround the pipe with stones, no matter how rough, in the shape of a cone, something like the pile of rocks forming the base of the above figure.

About twenty-five gallons of water a day is sufficient to supply such a fountain, and as it can be stopped at any time by simply turning a cock, which must be placed in the pipe, it need not play in cool or stormy weather, and only at such times as may suit the convenience or taste of the owner. In this way a very small amount of water will answer.

In regard to the cost—to the man who has a little time on his hands, and a little wits in his head, the cost of the pipe will be the principal expense. Lead pipe one inch in diameter, which is the proper size for a small fountain, can be purchased for less than a shilling a foot; so if the water has to be conducted forty feet the cost will be but $5. If the beautiful little design above is added the expense will be increased $15—the price charged for the fountain.

WATER JOKES.

In concluding this article perhaps we could not do better than to give the following from Chambers' Edinburgh Journal, showing how completely water is under the control of man, how willingly it does his bidding, and administers alike to his wealth or amusement, when he rightly understands the laws by which it is governed.

"At Easton, in Oxfordshire, in the gardens of a certain worshipful gentleman, are the most artistic water ingenuities it has been our lot to meet a description of as existing in this country. They even drew down the marked approbation of royalty itself. On approaching the spot, a venerable hermit rose from the ground, and after entertaining us with a "neat and appropriate speech," sank down again like a Jack-in-a-box. There was a small rocky island in the midst of a lake, which was full of watery tricks. The visitor was politely invited to walk up and view this spot; and after satisfying his curiosity and proceeding to walk down again, the fountaineer would bob down, turn a cock, and send, we dare not say how many, *jets d' eau* flying on all sides of the victim, one stream having for its object his legs, another his loins, another his head. After this funny reception, he was conducted to look at a spaniel hunting a duck by the force of water; the automata diving and pursuing each other by turns. Beyond was the grotto; a hedge of sparkling jets of water rose from the ground to guard it, mimic cascades foamed down its tiny cataracts, and countless streams shot up, and appeared to lose themselves by being caught in their return, and not suffered to fall down again. Here too, a nightingale discoursed very liquid music, and an arched jet of water played with one another, and now and then with the visitor, all hope of egress being destroyed by the sudden pouring down a heavy rain in the doorway. The sport this caused was thought to be well worth the wetting. Probably the magnificent gardens at Chatsworth are the only places where anything at all similar to the above is now to be found. There are some practical wet jokes even here; and country bumpkins in their native innocence, may be found willing to pay a visit to the weeping tree. This visit is never repeated."

Remarks.—The author of the preceding article has heretofore furnished us several valuable papers which have been published over the signature of "Rustic." Confident of his ability to add interest and value to its pages, we gladly welcome Mr. Vick as a regular contributor to the Farmer.

SINGULAR MORTALITY AMONG SHEEP.—INQUIRY.

MESSRS. EDITORS:—I have a mystery that I cannot solve in farm operations, and wish to call the attention of some of your wool-growing correspondents, thinking perhaps some of them may have had *luck* of the "*same sort.*" On the 16th of July, at evening, I turned a flock of sheep, bucks and wethers, from a grassy fallow of thirty acres—the flock not being large enough to keep the grass down. The next day at 2 o'clock P. M. I turned in about 120 ewes and 80 lambs. On the 18th they were seen, and turned out about sunset, 28 ewes having died in about 30 hours. I have been unable, as well as all my neighbors, to ascertain the cause of their death. No poisonous plant could be found, and the idea of poison seemed unreasonable, as the first flock had been confined to the same field for some three or four weeks previous, and were again put in about two weeks after—not an individual manifesting the least symptoms of disease.

The ewes had been kept in a field about one-half in fallow, the other half in clover, good feed, and all the sheep healthy and in good condition. They were immediately turned back to the clover field, and no signs of disease have been seen since they were taken from the *field of death.* The dead were found scattered promiscuously over the field, most of them remaining in a position of rest, with their feet under them. I am unable to describe the symptoms or the effects of the disease upon the body, as none of them were examined. There were no visible signs of diarrhœa, or discharge of mucus from the nose. I can find no disease described by any author that I have yet read, that rages with such fearful mortality. If any of your numerous readers have had any such *experience,* and ascertained any cause, I should like to hear from them through the Farmer, if you can spare a corner. NORMAN J. KELLOGG.—*Avon, N. Y., August,* 1849.

WARTS ON COWS' TEATS.—We give the following from "Allen's Domestic Animals," in answer to an inquiry on the subject by a subscriber to the Farmer at Cazenovia, N. Y.:—

WARTS are of two kinds; the first, on the outer skin, may be removed by rubbing with camphorated olive oil. The others penetrate into the flesh, and may be removed by a ligature of fine twine, or silk, or india-rubber drawn into a string, and tied tightly around the wart, which falls off in a few days.

Remedies.—Nitrate of silver, (lunar caustic,) applied to the wart, will remove it, but it produces a sore.

Apply a strong wash of alum.

Rub with the juice of milk-weed.

Poultice with grated carrot.

Cut off the wart with sharp scissors, when the cow is dry. It will bleed little, and soon heal.

SORE TEATS may be healed by rubbing with goose oil, cream, new milk; or make the same applications for it as for caked bag. The bag and teats should be well cleansed with warm soft water, if to be followed by any ointment.

The following application is recommended by Youatt: One ounce of yellow wax and three of lard; melt together, and when cooling rub in one quarter ounce of sugar of lead, and a drachm of alum finely powdered.—*Ib.*

CATTLE TRADE OF THE WEST.

AN interesting account of the cattle trade of the Western States, especially that portion of it which centers in the Scioto Valley, Ohio, is given in the annexed extract from one of Mr. MANSFIELD'S letters to the Cincinnati Atlas. Though a very important branch of our productive industry, the *modus operandi* of this business is not generally understood. It is, however, conducted with much system, and is yearly becoming of greater extent and importance. Mr. M. says:—

"While at Yellow Springs, I saw a fine drove of cattle, which were driven from the Wabash. I was told that about twenty-five thousand head a year passed that point—that being a common route from Illinois and Missouri to the grazing lands of Madison and Fayette. This is an immense business, and employs four classes of persons.

1. The raiser of cattle, who sells his animals at one or two years old, or even three, to the grazer. The raisers are chiefly in the great prairies of Illinois, Missouri and Iowa.

2. The grazers are chiefly the owners or renters of the great pastures of Madison, Fayette and Union counties, Ohio.

3. The cattle feeder, (who is the corn raiser,) who takes the cattle in the autumn, and feeds them on corn till they are fat enough for the markets of the Atlantic cities. Sometimes two of these occupations are united, but not often.

4. The fourth class of business which arises out of the cattle trade, is that of the banker, who furnishes the funds. The banks of Chillicothe, Circleville, Columbus, and Xenia, taken together, do more of this sort of business than any other. It is the most profitable banking business done in the State. The cattle trader about to buy a drove of cattle to fat with his corn, applies to the bank for a loan. For this he gives a bill of exchange on Philadelphia or New York, at four months, which the bank discounts—receiving the funds when the cattle are sold, and getting both interest and exchange, which brings the profit to about ten or twelve per cent. But this is not all. The cattle feeder receives the notes of the bank, which are paid to the grazer, who pays them out for cattle through the entire Western States. In this manner, the circulation of the bank is kept out. These transactions are as truly commercial and safe as they can be possibly made; for they are all based on the actual sales of cattle in the Atlantic cities. I suspect the sales of cattle in the counties of Ross, Pickaway, Franklin, Madison and Fayette, amount to near a million of dollars, and which, therefore, supply that amount of bills of exchange."

EFFECT OF SALT ON WHEAT.—The Rochester American, of a recent date, says:—Some of our readers may recollect that last fall we mentioned an experiment made by Mr. John Park, of Gates, by sowing a barrel of salt to an acre upon a summer fallow. The ground was plowed once the preceding fall, plowed again in May, and salt sowed thereon as above; and afterwards plowed twice before seeding. On the 1st and 2d of September, wheat was sown, two bushels to the acre. The crop has just been harvested, and Mr. P. is confident will yield 40 bushels to the acre. The berry he considers equal to the finest English wheat.

Spirit of the Agricultural Press.

Test for good Limestone.—The best lime for agricultural purposes is that which is lightest, whitest, and softest to the touch, the purest and strongest lime is always found the lightest. If then by calcination limestone loses much of its weight by the process; if the lime-shells are extremely light, and require, for slacking them fully, a large portion of water; if they are a considerable time before they begin to fall; if, during the process of burning, the limestone is not disposed to run, or become vitrified, if it increases very much in bulk by slaking, and the lime is of a pure white, and fine and light to the touch, it may be set down as very good, and should be used in preference to other lime not possessing the same qualities.—*English Paper.*

Drill Husbandry.—At one of the celebrated sheep-shearings that used to be given by Mr. Coke, of Norfolk, afterwards Earl of Leicester, at which hundreds congregated and remained for days together, he mentioned a fact that is not generally alluded to, as being founded on the observation and practice of his manager, Mr. Blaikie, a man of great sagacity. It was that a field with a southern aspect, if rich, should be drilled north and south; but if DRY, and in want of shade, should be drilled east and west. It is easy to see that, in the latter case, the crop would shade the land from the influence of the sun, and counteract the effect of drought.

Potatoes in India.—The potatoes from Bombay, Darjeeling, and Cherra Poonjee seed, were wonderfully fine and healthy, and to enable the public to form some idea of the state of perfection this grand and staple vegetable has been brought to in this district, it is here recorded that 40 potatoes out of one garden weighed 20 lbs. The skin of all delicately white and fine, and every potato free from knots. —*Journal of the Agricultural and Horticultural Society of India, May,* 1848.

Wool Growing in Western Pennsylvania.—The amount of wool annually grown in Washington county exceeds one million pounds. In 1847, according to the Washington Reporter, the clip averaged 40 cents per pound, and brought *four hundred thousand dollars!* During the last year the average price was not so great, and, perhaps, will not be so great this year. The most of the wool grown in this State is of very fine quality, and some of it, probably, the finest grown in the United States. The farmers of Washington, especially, have taken great pains, and spared no expense, in improving their stock. The average price of the clip this year may not go above 30 cents per pound; but many farmers who have choice flocks are holding on to their clips, and asking from 50 to 60 cents per pound.

Besides the wool grown in that vicinity, Washington is the depot for a great deal of the wool grown in the adjoining counties of this State, and the bordering counties of Ohio, which is brought thither for sale.—*Pa. paper.*

Vermont and Wisconsin Sheep.—Timothy Underwood, of Hardwick, has had this year from his entire flock of fifteen ewes, twenty-nine lambs—all having had twins but one; twenty-eight of them are alive and doing well—one having frozen to death. Wisconsin papers please copy.—*North (Vt.) Star.*

The Waukesha (Wisconsin) Democrat checkmates the Vermont man thus:

"That's nothing. Jeremiah Older, of this county, has this year from his flock of five ewes and seven bucks, *seventeen* lambs, and none of them were frozen to death. Will the North Star please copy?"

Cotton Mattresses.—Having been applied to several times during this warm weather for information respecting the mode of making cotton mattresses, we think it would be proper to republish an article on the subject, which was in the Farmer last summer, as follows:

First Cost of Cotton Mattresses. Thirty lbs. of cotton, at eight cents per lb., $2 40; twelve yards of ticking at a shilling a yard, $2; labor, thread, &c., &c., $2 75 more, making a total of $7 15.

Mode of Making. Take layers of cotton batting, and place them between envelops of calico or muslin. An improvement has been suggested of gumming or glazing each side of these layers, as wadding for cloaks is prepared. A patent has been taken out for making them with a layer of hair between the battings; whether it is much of an improvement, we cannot tell.—*Maine Farmer.*

Profits of Farming.—The July number of the American Farmer contains a highly interesting communication on the above named subject, from Edmund Ruffin, Esq., of Virginia, author of a well known and highly esteemed work on "Calcareous Manures," and one of the most distinguished practical farmers in the Ancient Dominion. Successful in all his own efforts in the renovation of old exhausted lands, Mr. R.'s experience is the more authoritative, as well as interesting, and his account is a very encouraging one of the profit that may be actually realized in the intelligent pursuit of those rural occupations, which, in other respects, are known to yield such goodly returns of health, independence, and happiness. Mr. Ruffin gives the results of his farming operations for five years, the profit and loss account of which is as follows: For the first year, there was a small loss of 27-100ths per cent.; second year, a net profit of 8.46 per cent.; third year, a profit of 12.61 per cent.; fourth year a profit of 22.36 per cent, fifth year, a profit of 20.10 per cent. The average profit for the whole five years years was nearly 13 per cent.; and all this exclusive of the enhanced value of the property from improvement of soil, &c., &c. We suppose it is not every farmer who can do so well as this; but industry, intelligence, and business habits and principles, always command success in town and country.—*Philadelphia North American.*

English Shows.—The agricultural show at Southampton was a remarkable occasion. I met a number of Americans on the ground, and was told that there were several others looking for me; but it was exceedingly difficult to find one, unless by mere accident. There were a great many farmers' wives and daughters, as well as a great many of the noblesse, in the yards, inspecting the implements and cattle, with catalogues in their hands, and showing the remarkable points of the animals, with as much skill and sagacity as if they had been experienced breeders of live stock; some of them are, and also competitors for the premiums. One of the largest exhibitors of farming implements, was a woman who had succeeded to her deceased husband's concerns, and manages a large establishment with much success.

The English women and ladies, to their praise be it spoken, while they are as far from anything indelicate as any persons I have seen, have no sickly appreciation of modesty, and do not die at once at the sight of a cow or a bull. The show occupied four days. On Tuesday, was the trial of implements; on Wednesday, was the exhibition of implements and machinery; on Thursday, the exhibition of cattle and implements; and on Friday, the public sale. Half a crown was required for admission to the yards, from Wednesday to Thursday noon, and after that a shilling; and the sum received for admission, during those days, was £3,000, or $15,000.—*Colman's European Life and Manners.*

A Cow worth having.—Mr. George B. Brinkerhoff, of Owasco, made from one cow, five years old the past spring, 18 lbs. 2 oz. of butter for the week ending Saturday, June 30th. This quantity she averages during the summer season. The summer she was three years old, she made 18 pounds per week, and she would have made more for the above week, but for the fact that three of the very hottest days of the season were included in it. In flavor and color, it was equal to any we ever ate, and we doubt if it be excelled by the celebrated Orange county butter. The cow can be bought for $100.—*Auburn Journal.*

Bloated Cattle.—A friend of ours, who, by the way, is a person of much observation, and, withal, has had considerable experience in the management of neat cattle, informs us that he once noticed one of his young cattle much bloated, evidently in great agony, and groaning loudly at every breath. His first movement was to cut off a small portion of her tail. He then administered a strong dose of thoroughwort, with a small quantity of tansy, which immediately started the wind; a second bottle was then poured down, and the animal turned into the yard, and driven briskly about for a few minutes, when the bloat wholly disappeared, and the animal was in a short time as well and hearty as ever. This is a very simple remedy, and we have frequently heard others assert, generally, if not always, an efficient one.—*Maine Farmer.*

Cider.—Here is a recipe worth to farmers the price of our paper for a year: "Take a pint of pulverized charcoal and put it in a small cotton bag, and then put it into a barrel of new cider, and the cider will never ferment, never contain any intoxicating quality, and the longer it is kept the more palatable it becomes."

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

SEVERAL communications, and answers to correspondents, intended for this department, are necessarily deferred until next month.

STRAWBERRIES.

THE interest felt at the present moment in the cultivation of this fruit is greater than it has ever been before. Evidences of this are to be found in the multitude of inquiries daily made with regard to the merits of particular sorts, as well as in the great demand that exists for plants of such as prove to be *first rate*. Soils, seasons, climates, &c., have great effect upon the quality and productiveness of all sorts of fruit, and the strawberry in particular; hence, we find the most opposite and contradictory statements and opinions, from respectable and reliable sources, respecting the merits of certain varieties. Besides the influences we have already alluded to, individual tastes and partialities, and, we may add, *prejudices*, contribute, in no small degree, to these differences of opinion. On the whole, it appears to us, that cultivators are just about as much united on the question of the individual merit of varieties, as they were, for a long time, on the *sexual* question, which, fortunately, seems now to be pretty well determined. For instance: if a person, whom we will suppose entirely ignorant of the merits of varieties, wishes to make a selection, and will turn to the horticultural journals, and the proceedings of societies, he will find that, at Boston, Mr. HOVEY maintains that his seedlings, the "Hovey's Seedling" and the "Boston Pine," are superior to any others. From Cincinnati, the President of the Horticultural Society says:—"*Our old Hudson still stands unrivaled.* Mr. ELLIOT, of Cleveland, Ohio, says: "I regard the variety known as the 'Willey' superior in all respects for general cultivation." Mr. DOWNING has expressed his partiality for the *Black Prince*. At Albany, the first premium was awarded, at the late exhibitions, to *Burr's New Pine*, it being pronounced the best exhibited, all its good qualities considered. At Rochester, nearly all the varieties of any note have been tested; and, if we understand correctly the opinion of cultivators, it is that *Burr's New Pine* is the best strawberry,—being hardy, productive, good size, and fine flavored. Hovey's Seedling is a splendid, large fruit; and when a dish of them is presented, picked specimens, they usually carry off the premium; but this is by no means a test of the real value of a variety for general cultivation. In 1848, at the exhibition in Rochester, the premium was awarded to Hovey's Seedling, as being the *best quart*,—but there were other varieties, such as *Burr's New Pine*, *Black Prince*, and *Swainstone Seedling*, higher flavored and finer in quality than Hovey's; but there was not a quart of any of them, and therefore they were excluded. At the late exhibition, the first and second premiums for the best dishes were awarded to *Hovey's Seedling*. Dr. BAYNE, of Alexandria, D. C., an extensive cultivator, writes in the last number of Hovey's Magazine, that "Hovey's Seedling stands yet unrivaled."

The cultivators of this place, who are capable of judging, and have tested all the leading sorts, side by side, under the same culture and management and on the same soil, agree in pronouncing the *Large Early Scarlet* as the most profitable under all the circumstances for market purposes. It is very hardy, always bears a large crop, and, though not first rate in quality, finds ready sale. *Burr's New Pine* is as large, nearly as productive, and far superior in flavor. The *Rival Hudson* (BURR's,) is hardy and prolific, firm, and excellent for preserving. Mr. WARNER, of this place, pronounces it a most valuable variety. We think it would be of great service to cultivators if horticultural committees would examine strawberries in the beds, and, before awarding premiums, consider all their properties.

For small collections, we cannot err in recommending Burr's New Pine, Boston Pine, Hovey's Seedling, Large Early Scarlet, Rival Hudson, and Bishop's Orange. A few of the Monthly Alpines might be added: for a smaller collection, we would recommend *Burr's New Pine*, *Large Early Scarlet* and *Hovey's Seedling*. The Scarlet should be mixed with the others to impregnate them. It must be remembered, however, that whatever kinds be cultivated, they must have rich, deep and mellow soil. The long continued drouth we have had here has prevented the growth of young plants, and rendered planting up to this time impossible. Recent rains, however, have brought both plants and soil to a proper state, and all through this month beds may be made — later, we would not advise. For directions in detail, we can now only refer to past volumes of the Farmer, or to other works that may be at hand.

LATE CHERRIES.

WE are inclined to pronounce the *Belle Magnifique* the best among late Cherries. We had it this year in perfection from the 1st to the 15th of August. Fruit large, almost round, slightly heart-shaped, dark red, tender, juicy, and rich sub-acid. We have had it bear the second year from bud on *Mahaleb* stock. The tree is of slow growth, like the May Duke, or even more so.

Carnation, ripe last of July, and first of August: a beautiful and excellent Cherry; slightly acid, (less so than Belle Magnifique.) It seems to be the connecting link between the sweet and acid varieties. It is well adapted for dwarfing on the Mahaleb stock.

Tradescant's Black, or *Elkhorn*, is a superb fruit, quite as large as the Black Tartarian, but a month later—ripening about the 1st of August.

Gridley is a very valuable cherry, in our opinion, being an immense bearer, and the fruit is very hard and fine for market. It is called the Apple Cherry at the east. The fruit is rich, having just acid enough to give sprightliness. The tree is a rapid, free grower; ripe after *Downer's Late*, latter part of July.

THE FRUIT AND GARDEN CROPS.—In this region the crop of apples, pears and peaches, is smaller, we think, than we have known it in ten years—owing to the long continuance of cold and wet weather after the fruit had set. Plums are unusually plentiful, as far as we have seen, and apricots have been the same. Garden vegetables and flowers have suffered from a drouth which prevailed through much of June, all of July, and part of August. Trees transplanted last spring have suffered severely. Many that had made six inches and upwards of growth, have died off.

HORTICULTURAL MATTERS IN CANADA.

A short time ago we made a journey across Lake Ontario and down the St. Lawrence to Lower Canada, and intended to notice some interesting matters that attracted our attention at the various towns we visited by the way. Indeed, we had notes pretty fully written out for the last number, but they were necessarily set aside; now many of them are out of season, and we can only extract a portion. We cannot omit saying that a more delightful mid-summer trip than this cannot be made. The St. Lawrence presents such an exciting and charming variety. At one place, it is broad and placid, like a calm lake —at another, narrow and fearfully rapid. In one place it seems to be carrying you through an old and populous country — houses, gardens and green fields to the very water's edge. In other places the unbroken forest only is seen, with a rude canoe, perhaps, darting over the water, and you are then reminded of forest life. The "Thousand Isles," of which every body has heard, are alone worth a visit. They are not rocky, forbidding looking islands, but spots of delightful, refreshing verdure, like the outskirts of a well kept park.

At Kingston we noted many interesting things. It is unfavorably situated for gardening purposes; generally speaking, the ground is rocky and ungenial, but on the road leading along the lake shore, where most of the Government offices and institutions are located, there are many gentlemen's residences kept in elegant order. Here we saw some as fine thorn hedges as we have any where seen in America. Three miles out in this direction we visited the residence of the present collector of the port, Jas. Hopkirk, Esq., who is well known as quite an enthusiast in gardening matters. The management of his place might serve well as a model for many. Some five or six years ago he purchased this place—20 acres of land, and an old, dilapidated frame dwelling. The ground about the house, and between the house and street, was a bare rock—not a tree had been planted; the whole affair, judging from a drawing made by Mr. H., presented the most dreary and forbidding aspect. Now, that bare rock is a very pretty plantation of forest trees, and a lawn, through which the carriage road leads to the house. The soil which covers the rock was taken from other places, where excavations were necessary, and was done gradually with the ordinary help of the farm. The trees were mostly taken from the woods, of large size, but so carefully that all have grown well, and look like a plantation of some twelve or fifteen years growth. The dwelling has been remodeled. An old verandah is converted into a green-house, now well stocked with plants; several additions have been made to it, and all around are cheap and simple rustic verandahs, the pillars of which are garnished with climbing plants of various sorts. In addition to the verandahs of the house are several little arbors, erected for comfortable promenades in hot weather, as well as for protection to plants that require it. Mr. H. showed us a drawing made by himself, of the place as it now is, and it really was a pretty picture; and all this has been accomplished by the simplest and cheapest means, and this it was that chiefly struck us. With less taste it would have cost a vast sum of money to have worked such beauty and comfort out of a very desert. There are thousands of persons all over the country, who might, at the cost of a few days or weeks work, effect wonderful change in their residences, and such changes as would give themselves great satisfaction and be the means of inculcating a taste for the beautiful in their families.

Montreal.—The land around this city, unlike that in the neighborhood of Kingston, is very fertile and well adapted to gardening: indeed, the island on which Montreal is situated, formed by the St. Lawrence and Ottawa rivers, has been usually called the "*Garden of Canada.*" There are some fine gardens about the city, those of private gentlemen, as well as those connected with the religious institutions, seminaries, &c.; but gardening has been greatly retarded by the continued agitation of violent opposing political parties. Hundreds of gentlemen have, from year to year, been deterred from carrying out their desired and contemplated improvements. A Horticultural Society was recently organized, and we believe is tolerably well sustained. At the time of our visit, vegetation was suffering from a severe drouth. Behind the city there is a mountain, some 500 feet high or upwards, and a drive around this mountain is really delightful; no stranger can with propriety dispense with it. The view from its summit is extremely grand and picturesque—a charming panorama. There you look down on the whole city and suburbs, with its many glittering roofs and spires; and see the St. Lawrence for miles above and below the city. You see many villages on the other side of the river; and, away, far in the distance, the mountains of Vermont and the northern part of this State. Around the base of this mountain, the chief improvements in the way of gardening seem to be going on. Several gentlemen of taste have erected themselves dwellings here, and many others are now building, so that in a few years the fine situations that are now lying unoccupied will be covered with suburban dwellings and rich gardens. Nature seems to have intended the place for such purposes.

An acquaintance of ours, Robert McKay, Esq., who has just completed an elegant and commodious residence here, and has his grounds already in fine order, informed us that the top of his terrace in front of his house was 30 feet higher than the towers of the Cathedral, which are 220 feet high. Mr. McKay is a sort of pioneer in this mountain settlement. His friends wondered what he meant when he first talked of building here; but now they know what he meant. They have seen how much of beauty and of comfort he has assembled around him — what a charming prospect and what pure air he enjoys — and they are fast following him. The style and finish of Mr. McKay's house, outside and in — his grounds, gardener's cottage and all, are in excellent taste, and if we had space now to spare, we should speak of them in detail, for the benefit of those who may purpose building or improving.

J. E. Guilbault, Esq., who has for many years carried on the Gardening and Nursery business in the city, has removed to his farm at *Cote de Neige*, over the mountain. He has a fine collection of poultry there, and intends to cultivate trees and plants as heretofore.

The principal seed business is carried on by Mr. Geo. Sheppard, who has a fine establishment in Notre Dame street, and enjoys largely, as he deserves, the confidence of the public.

Attend to your strawberry beds, this month.

MANAGEMENT OF FRUIT TREES.

THE annexed communication, which we extract from the August number of the Horticulturist, touches upon one or two points on the Management of Fruit Trees, that we conceive to be of great importance to the cultivators of this country generally, but particularly to the South and South-west. It is well known to those who read the horticultural publications of the day, that in all the Western and South-western States, great difficulty is experienced in the cultivation of the *Cherry*, on account of the bursting of the bark on the trunk and large branches of the tree. Prof. TURNER, of the Illinois College, has written for the Horticulturist and other papers, some very able and interesting articles on the subject, that we have intended to review if we could find leisure. His theory is, that the corticle of the bark is so strong as to prevent the tree from expanding in the natural way, and the consequence is, that the sap vessels become gorged with the return sap, and finally burst through the corticle, by mere mechanical pressure. He proposes as a remedy for cherry trees thus suffering, to peel off the corticle, or tough outside bark, entirely; and as preventives, "a poor soil, low culture, and above all, to allow *all the limbs* to grow as nature indicates, from the ground up, so as thereby to increase as much as possible the ratio of the surface for the descending sap." This is Prof. TURNER's theory. We cannot adopt it without great modification.

The idea of trees being hide-bound is old enough, to be sure, and scoring and skinning them, too, has been practiced time out of mind—but we do not believe in either the cause or the cure. Nor can we advise with Prof. TURNER, "poor soil and low culture;" but we unite with him heartily in recommending that form or mode of culture that allows the trees to branch low—and this we recommended long before Prof. TURNER's articles appeared. By referring to the volume of this paper for 1847, page 196, in some notes of a tour we were then making in the Western States, it will be seen that we noticed this malady of the cherry tree, and wrote as follows:

"We suggest as a remedy, *that the trees be not pruned up as they usually are, but be allowed to branch out near the ground.* The trunk will be thus protected, which seems to be all that is wanted. In Cincinnatti, we are informed, they have almost abandoned the culture of the cherry, they are so much discouraged. We think that the trees grown as dwarfs or pyramids will suffer less, if they suffer at all. At any rate, the experiment may be tried. We consider it a great error to expose the trunks of cherry trees to the height of five, six and eight feet, in that climate."

Since we wrote the above we have seen many instances of success in this mode of culture. In our own climate indeed it is quite preferable, where circumstances will admit—and we predict that in less than ten years people will not so generally look for trees with naked trunks as far up as one can see. The same principle holds good in regard to all trees, but particularly the more tender ones. It is not only the heat of summer, but the sun of winter, and the sudden freezing and thawing, that deranges the sap vessels in the trunk and large branches.

We think that the choice of a suitable stock will be of great importance, too, in this matter. Where cherry trees are desired of branchy habit and less vigorous or rank in growth, the *St. Lucie* or *Cerasus Mahaleb* should be used instead of the Mazzard, which is a rank free grower. But we shall say more on this point at another time:

HOW TO MANAGE FRUIT TREES.—I have gained two pieces of information from your journal, which I consider invaluable; and as I fear some of your readers may not have been so much struck with their importance as myself, I shall venture a few words to call attention.

I allude to the absolute neceesity, in this climate, of shading the trunks of fruit trees; and the no less important fact, that the mulching the soil greatly promotes the health, vigor, and longevity of a tree.

My eyes were first opened to the great value of *protecting the trunks* of trees, by allowing the trees to form *low heads*, as close to the ground as possible, by reading the masterly article on "Vitality and Longevity of Trees," by Professor TURNER, at page 130 of the last volume of your journal. That able correspondent proves, conclusively, to my mind, (and I have by many observations since very fully verified his theory,) that just in proportion to the heat of the climate the trunk of a tree needs shelter; that in a state of nature, all trees which grow alone, and not in woods, where they are sheltered by others, put out branches near the surface, so as to hide and shelter the trunk; and finally, that all fruit trees would do the same if left to themselves, and not continually mutilated and robbed of their fairest proportions by the saw and knife of the "trimmer."

What, indeed, can be more rational? A few days since, we had four successive days when the mercury in Fahrenheit's thermometer stood above 90 degrees all day long in the shade. I took the trouble to hang the glass at midday against the trunk of a peach tree in the full sunshine, when, to my surprise, it rose to 130 degrees. Now, it is next to impossible that the sap-vessels should not become almost baked; and it is not a matter of the slightest surprise to me, that we find the trunk and principal branches oozing out *gum*, and the tree looking feeble and sickly.

Nature has fitted the upper surface of *leaves* to bear the most powerful sunshine; and the constant perspiration through this upper surface of the foliage keeps them comparatively cool. But it is not so with the bark; and if the stem of a delicate tree is exposed to those intense rays of the sun, feebleness or disease must inevitably follow.

I have had a striking proof of this truth before my eyes the past month. Bordering my garden walk are two rows of fruit trees,—each row containing six apricots and twelve peaches. They were both planted five years ago. One of these rows had been headed back, so as to keep the trees quite bushy and low,—the lower branches starting out within a few inches of the ground. (This was done to test more completely the shortening-in pruning, and before I knew the value of shading the roots.)

The other row has been grown in the usual way, as standards; that is, the trees have been trimmed nearly as high as one's head, so as to leave the trunk and lower branches fully exposed to the sun for a good part of the day.

The difference between those two rows of trees is a very remarkable one, even to the general observer. The low headed trees, in the first place, are unusually full of foliage; the leaves themselves are large, and the shoots luxuriant; and the trees have that dark green look, which is the unmistakable sign of good health. The crop of fruit is healthy, hangs on well, and promises to be large and excellent.

The high-headed trees, whose trunks are exposed, are some of them in excellent health; but none of

them compare in richness of foliage with the low-headed ones; and about two-thirds of them have a stunted and feeble appearance. Two of the peaches and three of the apricots have died with "gum;" and they all show a meagre growth, when contrasted with those in the other row. Besides, I find, since the two "spells" of very hot weather that have occurred this summer, these bare stemmed trees are gradually shedding a considerable portion of their fruit.

To satisfy myself more completely of the positively injurious effect of the sun on the trunks of trees, and on the roots where the soil is not shaded by the spreading branches, I covered the ground beneath one of these bare stemmed trees with litter four inches thick, and bound a few handfuls of straw around the trunk, to guard it from the sun.

I find this tree more healthy than any other in the row, making luxuriant shoots, and holding its fruit well, and not appearing in the least affected by hot or dry midsummer.

I am, therefore, a warm advocate of the practice of giving all small fruit trees *low heads*, so as completely to shade both the trunks and roots. And I offer you the foregoing facts for the consideration of your readers; [which we are certain they will profit by.—Ed.] A Pennsylvania Subscriber.

CONSTRUCTION OF ICE-HOUSES.

Eds. Gen. Farmer:—Can you publish in your next number, a description of the most approved method of constructing an Ice House? Your subscribers here would be pleased to obtain some information upon that subject. H. H., P. M.—*Town Hill, Luzerne Co., Pa., July*, 1849.

Our correspondent will find the information desired in vol. viii, page 26, of this journal. But as our list of subscribers has more than doubled since the article was published, perhaps we cannot do better than to give the substance of it again.

Ice is a cheap luxury in this country, and the *Ice House* very justly begins to be reckoned one of the necessary buildings on every complete farming establishment. Indeed it is indispensable to the proper preservation of the products of the Dairy and the Garden, as well as of meats, pastry, &c. It would be a gain to many a family, in one year, of what one that would answer every purpose would cost. We recommend the matter, at once, to the attention of our readers.

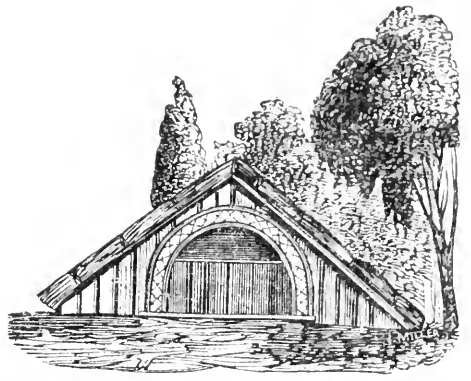
The following excellent suggestions on Ice Houses are extracted from the Horticulturist:—

To build an ice house in *sandy or gravelly* soils, is one of the easiest things in the world. The drainage there is perfect, the dry porous soil is of itself a sufficiently good non-conductor. All that it is necessary to do, is to dig a pit, twelve feet square, and as many deep, line it with logs or joists faced with boards, cover it with a simple roof on a level with the ground, and fill it with ice. Such ice houses built with a trifling cost, and entirely answering the purpose of affording ample supply for a large family, are common in various parts of the country.

But it often happens that one's residence is upon a strong loamy or clayey soil, based upon clay or slate, or, at least, rocky in its substratum. Such a soil is retentive of moisture, and even though it be well drained, the common ice house just described will not preserve ice half through the summer in a locality of that kind. The clayey or rocky soil is always damp—it i always an excellent conductor, and the ice melts in it in spite of the usual precautions.

Something more than the common ice house is therefore needed in all such soils. "How shall it be built?" is the question which has frequently been put to us lately.

To enable us to answer this question in the most satisfactory manner, we addressed ourself to Mr. N. J. 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, he for many years, having had the construction and management of the enormous commercial ice houses near Boston—the largest and most perfect known.



THE COMMON ICE HOUSE BELOW GROUND.

We desired Mr. Wyeth's hints for building an ice house for family use, both above ground and below ground.

In the beginning, we should remark that the great ice houses of our ice companies are usually built above ground; and Mr. Wyeth in his letter to us remarks, "*we now never build or use an ice house under ground;* it never preserves ice as well as those built above ground, and costs much more. I, however, send you directions for the construction of both kinds, with slight sketches in explanation." The following are Mr. Wyeth's directions for building:

"1st. An Ice House *above ground.* An ice house above ground should be built upon the plan of having a double partition, with the hollow space between filled with some non-conducting substance.

"In the first place, the frame of the sides should be formed of two ranges of upright joists, 6 by 4 inches; the lower ends of the joists should be put into the ground without any sill, which is apt to let air pass through. These two ranges of joists should be about two feet and one-half apart at the bottom, and two feet at the top. At the top these joists should be morticed into the cross-beams, which are to support the upper floor. The joists in the two ranges should be placed each opposite another. They should then be lined or faced on one side with rough boarding, which need not be very tight. This boarding should be nailed to those edges of the joists nearest each other, so that one range of joists shall be outside the building, and the other inside the ice room or vault.

"The space between these boardings or partitions should be filled with wet tan, or sawdust, whichever is cheapest or most easily obtained. The reason for using *wet* material for filling this space is, that during winter it freezes, and until it is again thawed, little or no ice will melt at the sides of the vault.

"The bottom of the ice vault should be filled about a foot deep with small blocks of wood; these are levelled and covered with wood shavings, over which a strong plank floor should be laid to receive the ice.

"Upon the beams above the vault, a pretty tight floor should also be laid, and this floor should be covered several inches deep with dry tan or sawdust. The roof of the ice house should have considerable pitch, and the space between the upper floor and the roof should be ventilated by a lattice window at each gable end, or something equivalent, to pass out the warm air which will accumulate beneath the roof. A door must be provided in the side of the vault to fill and discharge it; but it should always be closed up higher than the ice, and when not in use should be kept closed altogether.

"2d. An Ice House *below ground.* This is only thoroughly made by building up the sides of the pit with a good brick or stone wall, laid in mortar. Inside of this wall set joists, and build a light wooden partition against which to place the ice. A good floor should be laid over the vault as just described, and this should also be covered with dry

tan or sawdust. In this floor the door must be cut to give access to the ice.

"As regards the bottom of the vault, the floor, the lattice windows in the gables for ventilation, etc., the same remarks will apply that have just been given for the ice house above ground, with the addition that in one of the gables, in this case, must be the door for filling the house with ice.

"If the ground where ice houses of either kind are built, is not porous enough to let the melted ice drain away, then there should be a waste pipe to carry it off, which should be slightly bent, so as always to retain enough water in it to prevent the passage of air upwards into the ice house."

HORTICULTURAL EXHIBITIONS.

We had prepared short notices of the Exhibitions of several Societies for last month's paper, but it was found necessary to leave them over to give place to other items, supposed to be of more general interest.

The June Exhibition of the Genesee Valley Society was in a great measure satisfactory to those present. The collections of Strawberries were fine. M. G. Warner had 13 varieties; Charles Paulk, of Honeoye Falls, 7 varieties; Bissell, Hooker & Sloane, 10 varieties; besides many other contributors. *Hovey's Seedling* took the prize for the *best quart*—this, however, is no test of the value of a variety for general cultivation. Fine specimens of Northern Spy Apple were shown by J. H. Watts.

In the Flower Department there was a fine show of Roses, Verbenas, &c. Those that struck us as most worthy of mention was a collection of 30 varieties of Verbenas, and 30 of Roses, arranged in 7 baskets and 3 vases by Miss Whitney. A fine collection of Roses, Phloxes, &c., by Samuel Shadbolt, Esq., of Scottsville. A superb new Herbaceous Pæony, pure white and fragrant, said to surpass Whittlejii, named *Major Williams*, raised and shown by John Donnelan, of Greece. Mr. D. has raised several other fine seedling Pæonies, but the Major is the best. Very fine collections of Herbaceous Plants and Roses were shown by J. J. Thomas, of Macedon, Ellwanger & Barry, and J. W. Bissell, of Rochester. The next exhibition will be held in September.

ALBANY AND RENSSELAER SOCIETY.

The June Exhibition of this Society, judging from reports of the committees, was very fine. *Strawberries* and *Roses* were the prominent articles, though there were a great many other interesting productions.

Some 18 or 20 varieties of Strawberries were shown by the various contributors, including Boston Pine, Hovey's Seedling, Ross' Phœnix, 4 or 5 of Burr's varieties, and many others; and the premiums were awarded as follows:

For the best and finest flavored variety, to B. B. Kirtland, for Burr's New Pine—a delicious, hardy and productive variety, but comparative moderate size, $2 00

For the second best, with same requirements, to Luther Tucker, for Royal Scarlet—a large and delicious as well as beautiful variety, and but little inferior to the above, - - - - - - - - - - 1 00

The following are the premium Roses. Our friend Wilson maintains his pre-eminence in this department:

For the best 12 varieties, viz.: Princess Lamballe, Beauty Etheriel, Violateum, Madam Audot, Kean, Lady Stuart, Bourbon Moss, D'Agesson, Schon Brun, Blanche Superb, London Pride and Violateum, to James Wilson, - - - - - - - - - - $2 00

For the best 6 varieties, viz.: Persian Yellow, Lansaseur, Leda, George the 4th, Tri-Color, D'Orleans, and Princess Clementine, to Jas. Wilson, - - - 1 00

Dr. Wendell exhibited Hoo-Sung, a newly imported Chinese vegetable, and some fine specimens of large Early Asiatic Cauliflowers, the seed of which was forwarded to Dr. Wendell from the London Horticultural Society. It was sown 15th of March, and the plants set out in May.

The same Society, (Albany and Rensselaer,) held an exhibition on the 25th of July. The collections of Cherries, Gooseberries, Currants and Raspberries appear to be unusually fine.

The following are the varieties to which the premiums were awarded:

Cherries.—For the best three varieties to Dr. Herman Wendell, for Elkhorn, Yellow Spanish or Graffion and Wendell's Mottled Bigarreau, - - - - $2 00

For the best variety to Dr. Herman Wendell, for Wendell's Mottled Bigarreau, - - - - - - - - - - 1 00

Gooseberries.—For the best and finest flavored variety, to Henry Vail, for Compton's Sheba Queen. 2 00

For the second best variety to Henry Vail, for Lady of the Manor, - - - - - - - - - - - - - - 1 00

Currants.—For the best and finest flavored variety to James Wilson, for Knight's Sweet Red, - - - - 2 00

For the second best variety to Henry Vail, for White Dutch, - - - - - - - - - - - - - - - - 1 00

Raspberries.—For the best and finest flavored variety to Henry Vail, for Fastolff, - - - - - - - - 2 00

For the second best variety to Henry Vail, for Franconia, - - - - - - - - - - - - - - - - - 1 00

And special premiums of one dollar each, to Ely Young, for Peach Apricots, to B. B. Kirtland, for Citron des Carmes Pears, and to Ezra P. Prentice, for Yellow Harvest Apples.

There were also very good collections of Verbenas, Perpetual Roses, Carnations, Dahlias, &c.

The Fruit Committee remark that "Henry Vail, Esq., of Ida Farm, Troy, exhibited 17 varieties of Gooseberries, of very large size and entirely free from mildew. This is attributable to thick layers of salt meadow hay under the bushes."

Fruits Recommended by Com. of N. Y. State Ag. Society.—We are indebted to B. P. Johnson, Esq., Secretary of the N. Y. State Ag. Society, for a copy of the Transactions for 1848—a splendid, large volume, of nearly 1,000 pages. We have had time to examine only the part relating to fruits.

"Dr. Wendell, from the committee on fruits, reported that the committee beg leave to suggest to the Society, to be added to the lists of varieties heretofore recommended by them for general cultivation, and which were described in the Transactions of the Society for 1846 and 1847, the following, viz:

Apples—American Summer Permain, Eary Rose, Pomme Royale, Norton's Melon, Mother, Autumn Strawberry, and Wagener.

Pears—Tyson, Rostiezer, and Golden Beurre of Bilboa.

Plums—Red Gage and Purple Favorite.

Peaches—White Imperial and Cooledge's Favorites.

Apricots—Moorpark and Breda.

Nectarines—Downton and Boston."

Outlines and minute descriptions of the apples, pears and plums are given, and descriptions of the others:

"The Wagener Apple, from Caharlys Lee, of Yates county, to which the second premium of the Society, for seedlings, was awarded at the annual meeting in 1843, was again presented for competition, in accordance with a suggestion of the committee for that year, they being then unable to decide on its merits as a long keeper, owing to the fact of its having been bruised on the passage to this city, in consequence of being badly packed; and therefore, not wishing to award it at that time more than the second premium. The fruit is this year presented under more favorable circumstances, and from its beautiful appearance, good size, tenderness of flesh, and delicacy of flavor, as well as from information before the committee, which fully establishes its character as a long keeper, they have concluded to recommend that it be placed in the *first class* of apples, and that an additional sum of $5, and also a diploma, be awarded Mr. Lee for it."

Several other seedling apples were presented, but all ranked below the Society's standard. A seedling winter pear was offered for examination by Chas. Paulk, of Mendon, but was pronounced *far* below the standard rule.

Editor's Table.

Correspondents and others interested are reminded that articles, notices and advertisements, should be mailed on or before the 15th of the preceding month, in order to secure insertion in any specified number of the Farmer. A number of valuable communications, &c., were received too late for publication this month.

In consequence of unavoidable delays, caused by sickness and breaking of the steam press upon which the Farmer is printed, the August number was not mailed to a portion of our subscribers until after the tenth, though we *commenced* printing and mailing before the first of the month. Our present number is issued earlier than usual, however, and we shall endeavor to be equally prompt in future.

Transactions.—We are indebted to the Secretary, Col. B. P. Johnson, for a copy of the Transactions of the N. Y. State Ag. Society for 1848. The volume is larger than any preceding one, numbering nearly one thousand octavo pages. In addition to the doings of the Society, and reports of county societies, it contains valuable essays from several practical and scientific gentlemen who have devoted much attention to improvements in Agriculture and Horticulture. It is also embellished with numerous engravings, illustrative of practical subjects—not mere fancy sketches. The work is worthy of the institution from which it emanates, and highly creditable to Col. Johnson, under whose supervision it has been published—for we rarely find so large a volume equally unexceptionable in matter and arrangement. We shall extract liberally from the work, for publication in this and future numbers of the Farmer.

—Our thanks are due to J. W. Proctor, Esq., for a copy of the Transactions of the Essex Co. (Mass.) Ag. Society for 1848—a handsome octavo volume of 130 pages.

State Fair.—President Taylor has left Washington on his tour through Pennsylvania and the New England States, and will arrive at Syracuse on *Monday, the 10th of September,* and attend the Fair. The Hon. Henry Clay is also expected. Gov. Fish, and the Governors of several of the other States, will be present. Every thing indicates that this will be the largest exhibition ever held by the State Society—and no doubt thousands of our citizens will avail themselves of the occasion to pay their respects to the President of the United States.

The Canada Provincial Ag. Fair is to be held in Kingston on the 18th, 19th, 20th and 21st days of September. Great preparations are being made for the exhibition. Over $6,000 are to be distributed in premiums. Articles from the United States intended for competition, will be admitted *duty free.* We hope to see a good attendance of American farmers and manufacturers, with their products, implements, &c.—particularly from the more northern counties of New York, bordering on the Lake and the St. Lawrence.

Samples of Merino Wool.—We have received from Mr. John D. Patterson, of Westfield, Chautauque Co., N. Y., fine samples of wool from fleeces of a yearling buck and ewe of Mr. Taintor's importation. The fleece of the buck weighed 14 lbs. 3 oz.—that of the ewe, who bred a lamb, 10 lbs. 10 oz. "Their wool was well rubbed with soap, then thoroughly washed in a clear stream of water, and sheared as soon as they were dry." These lambs were noticed in our volume for 1848, page 228—and we are glad to record the above facts. Mr. P. has one of the best flocks in the State.

—We have also received handsome samples of Merino wool from Mr. Reed Burritt, of Burdett, Tompkins county—referred to in an article by Mr. B., on page 210, of this number.

Mr. H. E. Hooker, of the firm of Bissell & Hooker, of the Rochester Commercial Nursery, sails on the 1st of September for Europe. He intends visiting some of the principal establishments in France and England, during the months of October and November, and will probably return in December. He has our best wishes for a safe and pleasant journey.

Portrait of Buena Vista.—We have received a line from Mr. S. P. Chapman, stating that the portrait of his Short-horn bull "Buena Vista," given in our August number, does not do the animal justice. "Buena Vista" will be exhibited at the State Fair in Syracuse, and (we infer from Mr. C.'s letter,) offered for sale.

Agricultural Shows for 1849.—Annual Fairs of State and County Agricultural Societies are to be held this fall as follows. The list includes all the Societies, in this and other States, from which we have yet received definite information—

New York State,	at	Syracuse,	Sept. 11, 12 and 13.
Cortland County,		Homer,	Sept. 26 and 27.
Chemung	"	Horse Heads,	Oct. 17 and 18.
Delaware	"	Delhi,	Oct. 3.
Essex	"	Keeseville,	Sept. 18 and 19.
Genesee	"	Batavia,	Oct. 4 and 5.
Herkimer	"	Herkimer,	Sept 6 and 7.
Jefferson	"	Watertown,	Sept. 26 and 27.
Livingston	"	Geneseo,	Sept. 4 and 5.
Monroe	"	Rochester,	Sept 26 and 27.
Orleans	"	Albion,	Sept. 27 and 28.
Onondaga	"	Syracuse,	Oct. 3, 4 and 5.
Oneida	"	Hampton,	Sept. 26 and 27.
Rensselaer	"	Troy,	Sept. 25, 26 and 27.
Saratoga	"	Mechanicsville	Sept. and
Seneca	"	Ovid,	Oct. 4 and 5.
Suffolk	"	Greenport,	Oct. 2.
Wayne	"	Palmyra,	Sept. 26 and 27.
Wyoming	"	Warsaw,	2 and
Washington	"	Whitehall,	Sept. 19 and 20.
Yates	"	Penn Yan,	Oct. 5 and 6.
Michigan State,		Detroit,	Sept. 26 and 27.
Maryland State,		Baltimore,	Oct. 10, 11 and 12.
Provincial, (Canada,)		Kingston,	Sept. 18, 19, 20, 21.
Worcester Co. (Mass.)		Worcester,	Sept. 20.
Essex County	"	Salem,	Sept. 27.
Middlesex	"	Concord,	Oct. 3.
New Haven, (Conn.)		New Haven,	Sept. 25, 26 and 27.
Medida county, (Ohio,)		Medina,	Sept. 26 and 27.
Ashtabula	" "	Jefferson,	Sept. 13.
Geauga	" "	Burton,	Sept. 19 and 20.
Portage	" "	Ravenna,	Sept. 26 and 27.
Mahoning	" "	Canfield,	Oct. 2 and 3.
Clinton	" "	Wilmington,	Oct. 17, 18 and 19.
Trumbull	" "	Warren,	Sept. 25, 26 and 27.
Ross	" "	Chillicothe,	Oct. 5 and 6.
Licking	" "	Newark,	Oct. 3 and 4.
Delaware	" "	Delaware,	Oct. 2 and 3.
Clermont	" "	Batavia,	Sept. 25.

Alexander Walsh.—We regret to announce the decease of this distinguished and ardent friend of improvement.—He died at his residence in Lansingburgh, N. Y., on the 3d of August. Mr. Walsh was one of the earliest and most active friends of Agriculture and Horticulture in this State. He will be remembered by many of our readers as a valuable contributor, some years ago, to the agricultural journals, and as one of the first members and promoters of the N. Y. State Ag. Society.

National Economy.—An eminent member of Congress from the West, writing to a friend in Massachusetts, says: "A vigorous effort will be made at the next session of Congress to disband our army, and to lay up most of our ships, and discharge most of our seamen. I am advising our people to petition for these objects. If it should meet the views of our New England friends, would it not be well to send on petitions to Congress?"

Yes, disband or at least diminish the army and navy, that the millions annually squandered to sustain them may be saved or appropriated to more useful objects. Let the Farmers of America petition for retrenchment in the above named departments, and demand, as a right, appropriations for the promotion of Agriculture and its kindred arts and sciences.

Crops, &c., in Alabama.—A friend writes us from Talladega county, Ala., under date of Aug. 7, as follows:—"We have had rain almost daily for the last two months. Should it continue so much longer, there will not be over half a crop of cotton made; as it is now, it must fall short one-third. All the low lands have been inundated. The corn crop will fall short one-third, owing to the the great loss on the low lands."

Correction.—In my communication on the subject of Wool and Wool Growing, I stated, or should have done so, that my 54 old sheep clipped 4 lbs. 9 oz. of wool each—instead of 4 lbs. 3 oz., as printed in the July number of Gen. Farmer, page 187. Either the printer or myself has made a mistake. Please correct in your next number, and much oblige one of your readers. Samuel Embree. — *Yates County, N. Y.*

Ladies' Department.

DOMESTIC ACCOMPLISHMENTS.—In the domestic relationship there ought to be no selfishness. Whatever elegant acquirements we may chance to have made, instead of being reserved for rare occasions, should be suffered to shed their softening influence on every-day experience. The prints should not be carefully kept out of sight of the children of the family, and turned over only for the benefit of the stranger; the picture should not be curtained except when there is company; or the piano be dumb because there is "no one but ourselves" to listen. There may be less triumph, but there is surely equal if not greater happiness in singing by the fireside than in warbling in the saloon; and though the thanks of the father or brother be homely in expression, there is more sweetness in them than in all the studied common place of society. A sadder sight can scarcely be conceived than that of the spirit of dulness taking possession of the family circle. We see it in the husband, who, hour by hour, gazes moodily by the fire; in the wife, who occupies herself with her mechanical employment, without seeking to break the enchanted silence. Neither entertains the intention of injuring the other, and yet they are mutually defrauded of the happiness they ought to enjoy.

HOW TO MAKE IMITATION WAX CANDLES.—Throw a quantity of quicklime into melted mutton suet; and when the lime has settled in the bottom, so as to leave the suet pure and clear, dip off the suet very carefully. To every pint of this suet add the same quantity of real wax, and you will have a pretty white and firm candle. The candle may be improved by adding a double quantity of wax. The wick of these candles should be harder twist and not so large as those used for common beef tallow candles.

TOMATO CATSUP.—First bake your tomatoes, then squeeze them through a sieve. Add to six quarts of juice an equal quantity of wine vinegar; boil slow until it begins to thicken; then add cloves, allspice and pepper, half an ounce each, cinnamon, one-fourth of an ounce, and two nutmegs, all finely powdered. As it thickens, add four spoonfuls of salt, and when done, pour out in an earthern dish to cool. Bottle, cork, and seal, and it will keep years in a warm climate.

BOILING.—Dr. Webster, in his Encyclopedia of Domestic Economy, directs that meats for boiling should be put into cold water, and heated together with the water. Liebig gives a different mode, viz: that they should be put into boiling water, in the manner as directed for vegetables. The reason given is, that if put into cold water, the juices of the meat, on which the flavor depends, will be gradually solved, and go to enrich the soup instead of being retained in the meat. All authorities recommend the use of hard instead of soft water for meat, unless soup is to be made.

THE neatest way to separate beeswax from a comb is to tie it up in a linen or woolon cloth or bag with a pebble or two to keep it from floating; place it in a kettle of cold water, which hang over the fire; as the water heats, the wax melts and rises to the surface, while the impurities remain in the bag.

Boys' Department.

A TEXT FOR YOUNG MEN.—A better subject for young men to discourse about, and to meditate upon, was never written than the following by Swift: "No man ever made an ill figure who understood his own talents, nor a good one who mistook them."

Young men do not fail in the pursuits of life because they lack ability to succeed, half as often as from a misdirection of talents. A right use of a moderate capacity will accomplish much more than a wrong application of the most brilliant qualifications. Study therefore yourselves. Aim to find out the actual talents you possess, and then endeavor to make the best possible use of them, and you can hardly come short of making a good figure in the world, and what is more, being one among those who lived not in vain.

IMPORTANCE OF STUDY IN YOUTH.—If it should ever fall to the lot of youth to peruse these pages, let such a reader remember, that it is with the deepest regret that I recollect in my manhood the opportunities of learning which I neglected in my youth; that through every part of my literary career, I have felt pinched and hemmed in by my own ignorance: and I would this moment give half the reputation I have had the good fortune to acquire, if by so doing I could rest the remaining part upon a sound foundation of learning and science.—*Sir Walter Scott.*

AIMING AT PERFECTION.—There is no manner of inconvenience in having a pattern propounded to us of so great perfection as to be above our reach to attain to; and there may be great advantages in it. The way to excel in any kind is to propose the brightest and most perfect examples to our imitation. No man can write after too good and perfect a copy; and though he can never reach the perfection of it, yet he is likely to learn more than by one less perfect. He that aims at the heavens, which yet he is sure to come short of, is like to shoot higher than he that aims at a mark within his reach.

ORDER is the sanity of the mind, the health of the body, the peace of the city, the security of the state. As the beams to the house, as the bones to the microcosm of man, so is order to all things.—*Southey.*

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ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, August 21.

ASHES—The market is dull for both sorts at $6 06¼.

FLOUR—There is but little doing in State flour. Demand has fallen off for the East, and the market for the low grades favors the buyer. Sales 2000 bbls at $5 37½a5 44 for common State—$5 50a5 56 for straight State—$5 62½a5 75 for favorite Indiana and pure Genesee, and $5 75a5 81 for good Ohio. Rye flour is scarce at $3 31a3 37. Jersey corn meal is wanted at $3 44. Generally held at $3 50.

GRAIN.—The market is without change for wheat. There is considerable new Southern on the market and the tendency is downward. Rye is scarce and nominal. 63a64c Oats are plenty and steady at 38a40c. Extra lots held higher. Corn is rather easier to purchase. Demand for the East moderate, with sales 15,000 bu. at 62a63c for western—63a63½ for round Southern and flat yellow.

PROVISIONS.—Holders of pork are rather firmer. Demand steady for the home trade $10 81a10 87 for mess and prime at $9. Beef is steady and saleable at $13 50a$14 for mess. Cut meats are inactive at 7c for hams—shoulders 5. Lard is firm at 6½a7c for good to prime, and dull. Butter is dull and more plenty at 7a11 cents for Ohio, and 10a14c for western and state. Cheese is very plenty and is steady at 2a7c.

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by
D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

FIVE Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

ADVERTISEMENTS.—A limited number of short and appropriate advertisements will be given in the Farmer, 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 Farmer is from FIVE to EIGHT thousand LARGER than that of any other agricultural journal published in the United States.

☞ Advertisements, notices, &c. should be forwarded on or before the 15th of the preceding month, to secure insertion in any specified number.

☞ THE FARMER is subject to newspaper postage only.

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. X. ROCHESTER, N. Y.—OCTOBER, 1849. NO. 10.

Rural Science and Economy.

ANALYSIS OF MAIZE, OR INDIAN CORN.

Prize Essay. History and Chemical Investigation of Maize, or Indian Corn. By J. H. Salisbury.

Mr. S. deserves the gratitude of his country for increasing its knowledge of an indiginous plant, which is extensively cultivated and more valuable than any other grown in the United States. Thanks are also due the New York State Agricultural Society for its liberal premium of $300, which has elicited so important a contribution to Rural Science from an indefatigible American chemist. It is the privilege of practical farmers to avail themselves of the material facts disclosed by these researches; and it is to aid them in that regard that the present review of the labors of the author is written.

The Essay forms over 200 pages in the volume of Transactions of the State Society for 1848; and is equally large when published separately, in which form the author has very properly secured a copy right. The work deserves and will command an extensive sale.

In the first twenty pages, we find an exceedingly interesting history compiled from authentic sources, of *Maize*, or *Indian Corn*, showing it to be a native of American soil, and unknown in Europe, Asia or Africa before Columbus discovered the New World. Maize was extensively cultivated by the Indians alike in North and South America and the West Indies, at the time Europeans first visited and planted colonies in this hemisphere. The vast and peculiar capacity of this plant, which belongs to the cereals and family of grasses, to sustain a dense population, is hardly begun to be appreciated. As the human race increase on the earth and acquire a higher standard of comfort, calling for more breadstuffs, meat, butter and cheese, the superiority of Maize over all other plants, whether for its forage or its seeds, will be seen and acknowledged by all. So long as our soil and climate shall produce cheap corn, and cheap cotton, human food and raiment must greatly abound in the land. These will command beyond all contingency, a population more numerous than any thing which Egypt, Asia or Europe has ever witnessed. Providence has given to the New World agricultural capabilities, peculiar and superior in many respects, for the economical production of bread, meat, milk, wool and cotton. As a people, a peculiar destiny awaits us; and that destiny has for its broad, enduring and honorable basis, *the science and the art of agriculture*, wisely adapted to American sunshine, seasons, plants, and the wants of civilized man. But we wander from our text. Let us return to the Chemical Investigation of Indian Corn.

Till it approaches maturity this plant contains a large per centage of water in its stems and leaves. When ten days above ground, young plants yield over 89½ per cent of pure water, if cut off even with the earth and perfectly dried. 100 parts of dry plants give over 13 of ashes. At 25 days from planting, the proportion of water was less than 87 per cent; and the ash 10.7 per cent. Young corn stalks gave 94 parts of water in 100. The more rapidly any plant grows, the larger the proportion of water which it contains and also of alkaline and earthy salts. The crop planted on the 3d June gained most in the week preceding the 16th of August, when the ears were forming. The gain in weight in seven days was 2953 grains in a single plant; equal to 436 grains a day and 18.16 per hour. At this period in its development Mr. S. found 91 per cent. of water in the stalk; 83 in the leaf; 89 in the sheath; and 64½ in the tassel. Calculated dry, the stalk gave 10.7 per cent, ash: leaf 11.16; husks 6 per cent.

From observation and experience, we have long been in favor of partly drying green corn, rye and clover, before feeding either to milch cows, horses, oxen or mules. There is an excess of water in such food which should be evaporated by the skillful and partial curing of green forage. The addition of a little salt will render it more digestible and nourishing to the system. Corn is a valuable grass and hay plant in every State in the Union. In this relation it has not received that careful study and attention which its importance demands.

One of the most interesting features in the growth of Maize, as disclosed by the admirable researches of our author, is the great change in its incombustible elements at different stages in its life. Up to July 19, the stalks were quite brittle and had but a small quantity of silica or flinty covering around them. After the time named, silica increased rapidly in the stalk and gradually in the leaf. On the 12th July the leaves gave their maximum of phosphates. These diminished as the kernels were organized. As silica (flint) is of no account in the animal economy, and the raw material for forming seeds exists diffused through the plant when the kernels

begin to grow, then is the time to cut and cure it for forage. After the maturity of the seeds, the leaves contain only one fourth as much of the phosphates and nutritive matter as they did before. This remark is particularly designed for our Southern friends, who waste valuable time in "pulling fodder;" when more and better food for stock might be had for half the labor.

The change in the amount of potash, soda, magnesia, lime, sulphur, phosphorus, chlorine, &c., are curious, and highly interesting to the critical student. For these, we must refer the reader to the Essay itself. Allowing 3 plants to a square yard, white flint corn will take in round numbers 382 pounds of earthy minerals from an acre in a crop. Omitting fractions, as we do, the figures stand thus:

Silica,	153 lbs.
Phosphates of Iron and Magnesia,	72
Potash,	48
Soda,	47
Lime,	12
Magnesia,	7
Chlorine,	15
Sulphuric Acid,	23
	382

Analyses of the ash of the kernel at different stages, of the cob, stalk, husks, sheath, roots, leaves, silk, tassel, &c., are given, which we pass over to notice briefly the "Proximate Organic Analyses of the several parts of the plant at different stages of its growth." It should be stated that the seed was planted on the 3d of June; that the crop was ripe on the 18th of October; and that the nutritive elements were searched for mostly between August 2d, and October 18th. On June 21st, when the plants were 10 or 11 inches high and made up of leaves, they contained 33 per cent of sugar and extract, calculated on the dry matter. The sugar and extract amounted to over 25 per cent on the 2d of August. From August 23d to October 18th, the decrease was about 19 per cent. The ripe sheaths are richer in nitrogen than the unripe ones, but contain less sugar extract and dextrine. "The plant during the period of tasselling, owing to the very large per centage of sugar and extract, with the respectable quantity of albuminous matter and dextrine which the stalk, leaves and sheath contain, must afford very palatable as well as nutritious fodder." In kernels there is a gradual and very uniform decrease of sugar and extract from their earliest growth till they mature, and a corresponding increase of starch. Albuminous matter also gradually increases, as the kernels advance, and at the same time casein (cheese) diminishes.

September 6th kernels are in the early stage of milk. Cob at this period is rich in albumen, casein and dextrine. These bodies accumulate at the base of the young seeds. As the kernels grow the albumen, casein and dextrine decrease rapidly in the cob. In comparing the leaves, sheaths (which surround the stalk,) stalk and cob with each other, if we judge of the value of each by the per centage of matter soluble in water and alcohol, then in nutrient bodies leaves rank first, sheaths second, stalk third, and cob fourth. Of the latter, Mr. Salisbury speaks in terms more favorable than our observations have led us to believe were strictly warranted.

We have given but a meagre synopsis of this most compact and valuable Essay to which we shall often have occasion to turn for reliable information.

AGRICRLTURAL CHEMISTRY.

One of the most useful and scientific lecturers on Agricultural Chemistry in England, is J. C. Nesbit, Esq., F. G. S., etc. Speaking of farm yard dung, feeding sheep, and plowing in green crops, &c, he offers the following important suggestions:—

"Let us begin with the far-famed farm-yard dung, which is supposed to be so superior to all other things. It is that which grows the crops, and which, in the estimation of the farmer, is not surpassed by any possible combination of substances. Now, what is this farm-yard dung? It is formed by acting upon vegetable matter in some way or other. You either take a quantity of vegetable matter, and pass it through the stomachs of animals, where it is acted upon and the refuse pass out, or you put vegetable matter—as straw, or litter—in the yards, and allow the excrements of animals to be mingled with it, and a slow decomposition to take place. The whole being commingled and mixed together is known by the name of farm-yard dung. Now, a very little consideration will show that the whole of the material which is found by you, gentlemen, to be practically so useful on the farm is merely derived from vegetables; so that you are, in fact, applying the remains and refuse of vegetables to renovate the land. This is the whole secret of farm yard dung: it is vegetable matter, which, when partially decomposed, is re-applied to the land, where it forms vegetables over again; so that you are continually working as it were in a circle. Thus the same particles of matter imported on the farm perhaps in the shape of oil-cake, first re-appears in the shape of a turnep, again as barley, now as beet-root, now as wheat—the cycle of changes continues until the identical particles are exported from the land as beef or mutton, or as grain.

Now I hope I shall be able to offer one or two ideas with respect to the origin and nature of this farm-yard dung; and let me say we can never have our ideas too near the truth respecting the origin and nature of that which is so constantly under our notice. Some gentlemen have got an idea that animals have a mysterious power—of what nature it is impossible to say, but they imagine that it really exists—a mysterious power, by means of which they can change a turnep, or a quantity of oats or greens, into a superior manure for land; and that food must have passed through the animal before it can be really useful on the land. That is the idea entertained on this subject by ninety-nine farmers out of a hundred. I must proceed this evening to disabuse your minds of that erroneous notion: I must inform you that the manure obtained from animals is always dependent as regards its value on the food which the animal eats, and that the excrements of animals are always less valuable, and less powerful in manuring principles, than is the food consumed by those animals while producing the manure; that green food plowed into the land, will give more manure to the land than the same food eaten by animals. Not that I would recommend you, as a rule, to plow in your vegetables; but I wish you to remember that your sheep can deposit nothing on the land but what they have first received from the food, and that under all circumstances, the amount deposited will be less than that received. Now let us look a little at this point. You know that in one of our ordinary fire-places, when coal, are put into the grate and a light is applied to them, an action takes place which makes the air above different from that below the fire; without any mention of the name of a single chemical element, you have only to apply your plain common sense in order to be aware that an action takes place between the air and the coals, producing heat, and that the air above the coals (in the chimney) is very different from the air below the coals, which enters at the grate. Now you give an animal a certain amount of food; that food is taken into the system; the constant action of the lungs, which inspire and expire the air, has the effect of bringing into the system a large amount of air. This air acts upon the food which is taken into the system. By the combustion or burning of a certain amount of that food, animal heat is produced, which keeps up the temperature of the animals, so that they get a higher temperature than the surrounding atmosphere. The expired air contains the result of that combustion, and resembles in composition the air of the chimney; another portion of food not used for producing animal heat is laid upon the bones, forming muscle, or fat: and what the bullock itself has no use for is cast out of the system. Now, you observe at once that the animal,

by acting in this way on the food, actually deprives it of certain constituents, and at the same time makes it less in amount, so that, in fact, the only real action is one which takes away certain portions of the food and renders the others more quickly soluble. All the soluble parts of the food are passed out in the urine, and all the insoluble parts in the excrements. There is a regular process performed in the laboratory of the stomach, the effect of which is what I have thus described. Now, the same thing takes place in the decomposition of vegetable matter. You lay down a large quantity of straw, and you let the water fall upon it, as well as the excrements of animals. You all know what takes place. The heap gradually heats, and the gradual heating is nothing more than the effect of the gradual action of the air upon it. Certain portions of the vegetable matter thus acted upon by the air are consumed and taken away, and the bulk becomes less; so that, even in the process of acting on vegetable matter, you lose a portion, and it goes off into the air, just in the same way as the solid parts of coals pass into the air by means of the chimney. You all know that the solid parts of coal disappear and leave nothing but ash behind. The two cases are, in fact, identical. I may refer you to the case of a hay rick put up in too damp a state. In that instance, an immediate action takes place from the contact of the air with the moist hay, and that action continues increasing, until, at last, the whole bursts into a flame. Now, gentlemen, in either case, in the making of manure, there is a diminution and a loss. You must have seen the steam going off from the dung-heap, and there are other substances which also disappear in the air which you cannot see. If what I have stated be true, you will draw the conclusion for yourselves, that vegetables plowed at once into the land furnish a greater amount of the substances adapted for the vegetation of plants than they would supply if passed through the stomachs of animals—that is to say, to give a plain, practical illustration of my meaning, if you chop up an acre of turnips, making them sufficiently small for decomposition, and plow that acre of turnips into the land, you will have more manure in the soil than if you fed a flock of sheep upon it, without the addition of oil-cake or any other extraneous manure.

Again, take any other green crops, such as rape, and plow them in, and you will have a larger amount of substances calculated to bring forth the next crop than if you passed that acre of rape through the bodies of animals. You may call this theory, but it is absolute fact: there is no theory about it. It has been tested by practical men, and I could give you one or two instances. A gentleman heard me make this statement when I was lecturing at Marlborough—and let me remark that the gentlemen who composed my audience on that occasion were not quite so demonstrative as you gentlemen have shown yourselves this evening—for I heard some of them call what I said "gammon." (laughter.) Now, notwithstanding is being "gammon," a certain gentleman determined to try whether or not the case was so. I will represent. A gentleman named Mr. W. Tramp, of Dorney, near Windsor, having twenty acres of rape, plowed in one or two acres in different parts of the field. The rest was fed off by sheep. These sheep were fattening every day on a beautiful meadow adjoining, and were folded at night on the rape. I was invited last midsummer but one to see the effect of this experiment, and about twelve gentlemen were invited to meet me upon the occasion. The land was gone over, and I could point out exactly where the rape had been plowed in. The wheat stood eight or ten inches higher than the rest; and in the judgment of the practical men there was more than a quarter of an acre difference between the places where the sheep had been fed off. More than that, I happened to meet Mr. Tramp at the annual dinner of the Reading Farmers' Club, when he told me the turnip-eaten sure-eding was much better, and he fully expected to see it in the barley.

Now, there can be no doubt, the plowing in of turneps will have a similar good effect, and perhaps many of you gentlemen have in your recollection certain instances in which, owing to the severe frost, rotting the turneps it was necessary to plow them into the land, and when, contrary perhaps to the expectation of the farmers, a capital crop of barley was the result. I would not recommend you to forsake the feeding of sheep. I am now merely dealing with the facts of this case. It is a question of pounds, shillings and pence, whether it is best to feed the turneps off or to plow them in, and therefore a case for the exercise of your individual judgments. In the instance of which I was speaking at Maidenhead it was found more favorable to plow in than to feed off, as that year the crops were excessive and the sheep high in price. A gentleman there was actually offering to give £2 an acre to any person who would send a flock of sheep on the farm to feed off the turneps. I at once saw it would be better to spend £5. per acre for plowing in, and £5. in guano, as the crop of barley would assuredly be better. Now, gentlemen, at the end of the lecture I shall be happy to hear any observation which may occur to practical men on this point, and to answer any objections which may be urged, and it must be particularly noticed that I have out of the question for the present the mechanical action of sheep in treading the land, so necessary on some soils, and speak merely of the absolute amount of manure. To pursue the subject of this manure a little further, you see at once that the manure will vary as the food varies. If you use straw, or oil-cake, or turneps, the quality of the manure will vary accordingly, as the composition of these substances varies; and it will vary because the animal takes away only a certain proportion from each of these, and casts out the remainder as excrements. But the manure will vary not only as the food varies, but according to the age of the stock."

Young animals extract more nutriment from their food than old ones, especially if the latter be fatted. But it is more profitable to have the grass, roots and grain eaten by an animal, transformed into *flesh*, by its growing and gaining in weight, than to have the elements of flesh in richer manure. The difference between feeding 1000 pounds of clover, rape or turneps, (estimating the crop dry.) to sheep or cattle, and plowing in the dung and urine yielded by the quantity of food named, and plowing in the crop without being eaten at all, is this: In the latter case, the soil below the surface gains 1000 pounds of vegetable matter: in the former case not far from 400 pounds including the salts in the urine which falls on the ground. Although 2000 lbs. of dry forage will yield only some 800 of solid excrements: yet the latter are worth more for all agricultural purposes than 800, or even 1,200 pounds of the vegetables from the consumption of which the dung and urine were derived. It will take at least 500 lbs. of dry corn or wheat to form 100 of the dung of pigeons. Their dung is the *ash* of the seeds consumed which like wood in a stove were literally burnt in their capacious lungs and circulating blood.

The true rule in reference to feeding off clover and grass, or plowing them in without feeding is this: When a soil is reasonably rich in mold, (organized matter,) it is good economy to pasture clover or grass, closely, before breaking up for wheat or other grain crops—leaving the droppings of the animals on the land to fertilize it. On the contrary, when the soil is thin and poor in vegetable mold it is sound economy to turn in all the grass, clover, pea vines or buckwheat one can. A friend of the writer will plow in three crops of buckwheat this season: and another capital farmer will turn under a crop of winter rye, one of oats and another of peas, to enrich the soil.

Some apply a coat of caustic lime to sweeten the decaying vegetation. We have so often explained in public lectures and agricultural journals, the process by which cultivated plants draw their mineral food from the sub-soil and their organic nutriment in a good degree, from the atmosphere, that it seems unnecessary to repeat the story. And yet, the great body of American farmers, both North and South, have hardly commenced enriching their estates by fertilizers taken from the air above and the earth below, which a bountiful Providence has furnished ready to their hands. Here and there one has stum-

bled on the discovery that the lifeless earth thrown out of a well, a cellar or deep ditch, has fertilizing qualities. Such marls without vegetable matter will often grow grass, wheat and corn—evidently deriving carbon from the atmosphere, in rains and dews. The riches in the sub-soil, which deep draining and sub-soiling will develope, are not at all appreciated.

FAIR OF THE STATE AGRICULTURAL SOCIETY.

In many respects the Fair at Syracuse excelled all preceding ones of the Society. Several thousands of visitors were in attendance more than were ever seen at any previous Rural Festival in this State, or the Union. The general and deep interest taken in these annual exhibitions of the choice products of agricultural and mechanical skill, indicates a juster appreciation of the character and importance of the Farmers and Mechanics of the country. Instead of being looked down upon with ill-concealed contempt, as something servile, by the learned, the wealthy and the distinguished, productive industry is now beginning to be looked *up to* as the source of all power and property in the land. This is looking in the right direction. The union of highly cultivated intellect with manual labor, successfully exerted in the field, the garden and the work-shop, makes a new era in the history of agriculture and the mechanic arts.

To foster both mental culture and artistical improvement, annual Fairs are of inestimable value. They furnish cheap and agreeable facilities, by which fifty or one hundred thousand people may teach each other a thousand useful lessons. Farmers see, and have an opportunity to purchase, hundreds of new contrivences for abridging human toil in all tillage, haying and harvesting operations. Improved implements of husbandry constituted a prominent feature of the exhibition at Syracuse. Manufacturers and dealers from Boston, Albany, Geneva, Rochester, and other places, made a large and attractive display. It is impossible for us to give full particulars, where the articles exhibited are so numerous, and often complicated in their structure. We shall publish a list of the premiums, which will give names, residences and opinions of competent judges.

Several Agricultural Warehouses were very fully represented. Rapalje & Briggs, of Rochester, exhibited a great variety of superior implements, machines, tools, &c. They received the premium for the greatest collection—embracing implements of husbandry of all descriptions. The Albany Agricultural Warehouse, (H. L. Emery,) was largely represented, as usual. Among the implements from this establishment we saw, in successful operation, the one and two-horse Railroad Powers, threshing grain with the well known overshot thresher—sawing wood with the portable Saw-Mill, and cutting stalks, hay, straw, &c.—without any apparent exertion of the horse, except keeping in motion on the inclined plane. Mr. E. also exhibited some 30 plows, 18 hay cutters, 6 corn shellers, and 12 churns of different patterns and prices; two of Emery's corn and seed planters, and any quantity of Partridge's celebrated cast-steel hay and manure forks, many of them of extraordinary high finish. The articles from this Warehouse amounted to upwards of $2,200, over $1,600 of which were manufactured in this State. The proprietor has put in operation, during the past season, one of the most extensive machine and implement manufactories in this country, which is now so pressed with work as to be in constant operation, day and night. E. J. Burrall, of Geneva, exhibited a large assortment of well made machines and implements—among them some new inventions and improvements, which we think will prove of great value. He obtained the premium for the greatest and best collection manufactured within the state.

Of Neat Cattle the show was highly creditable, there being some 300 on the ground. Mr. Hiram Sheldon, of Cayuga, exhibited a fat ox which weighed 3,400 lbs. Others only a little smaller were present. A fat cow which had been spayed, weighed 2,200 lbs. There were several yokes of matched oxen which attracted much attention. Mr. L. G. Morris, of Westchester, had 11 head of grades and pure blood cattle at the show. Mr. Sotham, of Black Rock, had a fine lot of Herefords. The Devons, however, were more numerous than any other breed, and seemed to be quite popular. Those exhibited by Messrs. Bingham, Washborn, and others, attracted much attention. The short-horn Durhams appeared to good advantage, and we believe sold well. Mr. S. P. Chapman, of Clockville, exhibited several very fine animals—among others, his bull "Buena Vista," (portrait and pedigree in our August number,) and cow "Charlotte." Col. Sherwood exhibited the animals imported by Mr. Stevens, and noticed in August number of Farmer. Messrs. Z. B. Wakeman, of Herkimer, Bell of Westchester, and other gentlemen, contributed to the show of short-horns. We were not present at the sale of stock.

The show of stallions, brood mares and colts, and of matched and single horses, was decidedly the best that we have ever seen in the State. We regret that we are unable to particularize.

Of Sheep we counted some fifty pens, and altogether the number on exhibition was unusually large. Merinos, Saxons and Southdowns were most numerous. Some of these were choice animals. There were a few mammoth Leicesters from Canada.

Swine were not numerous, nor particularly noteworthy. There were a few extraordinary fat pigs and large hogs, of both sexes.

In Poultry the show was barely respectable.

Dairy products were less, in the aggregate, than we have witnessed at preceding Fairs. The cheese looked tempting, but we did not belong to the "tasting committee" in that department. The butter was small in quantity, although handsomely put up.

In wheat flour there was a pretty sharp competition: but in corn meal the Georgia State Fair would have beaten the samples out of sight.

Stoves, household manufactures, needle work, and other fabrics of fancy or utility were almost endless in variety and beauty.

Floral Hall was neatly arranged, and embraced a fine display of fruits, flowers, vegetables, &c. This department, and the Pomological Convention, is more particularly noticed in our Horticultural pages.

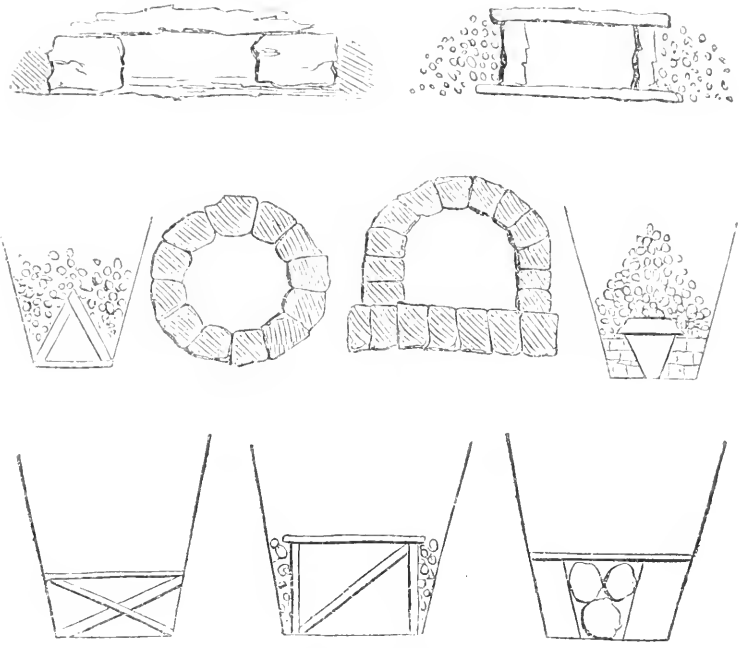
We did not hear the address of Prof. Johnston—although, by competent judges, it is spoken of in terms of the highest praise. Of course it will be published.

Many gentlemen of distinction from abroad, were present—and all with whom we conversed, expressed themselves instructed and gratified by what they saw at the Fair. The grounds and buildings, tents, &c. were well arranged: and good order was preserved, considering the unusually large number of persons in attendance—reflecting much credit upon Col. Johnson and other officers of the Society.

THOROUGH DRAINING.

One of the most valuable papers in the large volume of Transactions of the N. Y. State Agricultural Society for 1848, (which volume is an honor to the Society and Country,) is an article on the subject of *Thorough Draining*, from the pen of John D'Arcy, Esq., of Seneca County. Our columns are too much occupied in this number to admit the re-publication of all that Mr. D. has written on this subject in the work before us. He gives a lucid and interesting account of the geological character of the soil and rocks of his county, and clearly indicates, from personal observation and experience, the necessity of under draining to remove the excess of water in the subsoil, which greatly impairs its adaptation to wheat culture. After stating that all main drains should be at least *three feet deep*, and lateral ones thirty inches, he adds:

"Many and various are the contrivances used in the construction of drains, and as usual, in all projects used as *expedients*, they are faulty, and soon become useless. Among the most approved are the following:



Drains made by masonry are intended for *mains*, but they are too expensive for our farms. The square stone and the triangular stone drains are probably the best, where stone of proper dimensions can be procured on the field to be drained. If however, stone is to be hacked from any distance, then a tile drain, which will be described presently, is much the best and cheapest. The other drains, as figured, have been used with success, *while they lasted:* but few ever perform their duty above two or three years.

In all matters affecting our property, any prospect for its improvement needs a very scrutinizing examination, that we may first be assured of its necessity, and then the best and cheapest manner of accomplishing the change. The necessity for improvement by draining has, I hope, been clearly demonstrated; and the best method for locating and opening drains has been indicated; it is now intended to draw your attention to the most approved drain of the present day.

When you have judiciously marked out your field to be drained, and staked the course of the several trenches, let them be accurately dug at least three feet deep, and not over thirty feet asunder, for thorough draining. The trenches or ditches must run *down* the slopes, and *not across* them, that the water may go off freely. Dig the trenches as narrow as may be, so that a man can clean out the bottom and construct the drain; the width at bottom for the main drains need not exceed ten inches, and for all other drains not to exceed seven inches. Be careful to have the grade on the fall of the water not less than one foot in one hundred—remembering that a greater fall will more readily prevent the accumulation of sediment. Cut the main trench first all the way through the field, and do not lay in the materials until you have ascertained that the dimensions and grade are correct throughout. You are now ready to construct the drain *with tiles* of a semi-cilindrical form. These tiles are made of burned clay of various lengths, from 12 to 13, 14 and 15 inches, the width and height being 2½ by 3½ inches, and 4 by 5 inches. When these tiles are well made they are smooth and heavy, and ring when struck with a hard substance. They are so strong that a man may stand or leap on them without breaking them. The drawing now exhibited will explain the form of the tile, and the manner of laying them in the trench:

You will perceive that the tiles are laid upon flat tiles, called soles, and this is brought to your notice,

because in this country, drains have been made without any support for the tile, where the bottom has been a hard clay. This practice does well for a few years, but it must be evident, that if the drains ever carry a rapid run of water, the tiles must inevitably sink, more or less, by the wearing of the bottom, and thus in time destroy the drain. To prevent this mischief, soles are made of convenient widths and lengths on which to set the tiles, taking care to avoid placing the joints in contact, by which arrangement the tile has a firm and uniform bearing. Having your tile conveniently placed along the trench, they must be laid with due care, first cleansing the trench, so that the soles may lay solid. The tile being laid, it is best to cover the whole with a turf sod, and fill the trench with your plow or shovel, as may be most convenient. Many use straw to cover the tile, but a turf cut about 18 inches long and 12 inches wide, will just fit and perfectly cover them with the grass side down. The larger and smaller drains are all thus constructed, and when properly made, will never need repair or further attention.

You must have noticed that for thorough draining the trenches are directed to be dug at distances thirty feet apart: and this is probably the greatest distance at which drains will act so as to *draw* the water from the earth; in this respect we must be guided by the character of the soil, and experience will probably teach us that a distance of forty feet is an extreme limit for *very thorough* draining.

This is the method of draining now so extensively used in other countries, and about to be extensively adopted in our own; and these tiles are found to be far superior to masonry, to stone, to wood, or any other kind of drain hitherto tried. It is this system or method which has enabled the farmers of England and Scotland, of late years, to raise twice the numbers of bushels of wheat from an acre, more than we do. It is true, necessity has claimed from them great exertions to feed their over populous islands; and *necessity* being a sharp master, has elicited, and will continue to bring forth, every talent useful for the comfort of man. Let us for a moment examine the action of this master motive among English farmers: and we learn from our talented countryman, Professor NORTON, now attached to the chemical and agricultural department of Yale College, that he spent much time in Great Britain examining their agricultural systems. Since his return, he tells us he visited the farm of Mr. Dudgeon of Spylaw, at Kelso: the surface of his farm was still, the subsoil a close clay. Mr. Dudgeon had drained about 300 acres!! making a distance of drains equal to 300 miles! he erected a tile work on his own farm, which turned out not less than 400,000 tiles in a year. The drains which he laid raised the rental of his land immediately, from $2.50 to $5.00 per acre, and after enumerating other successful results from tile draining, Mr. NORTON says, "I have known instances in Scotland, where the *first crop* repaid the whole expense of the improvement." And again, at an agricultural meeting held at the farm of Sir Robert Peel, a farmer declared that "he could not afford to deprive himself of the benefits of drainage; for he had drained portions of his ground at a cost of from $8 to $12 per acre, five feet deep, with one inch pipes, and the very first crop of wheat remunerated him for the whole cost." So also, close at home, gentlemen, we have an instance of very successful drainage: one of our own enterprising farmers has done nearly as much in point of value, though less in extent.

The inquiry as to the expense or cost of these drains, now demands our attention. Not long since, pattern tiles for drains were procured from Great Britain, and tiles of two sizes have been made and used in Seneca county. The cost has been at the rate of twenty cents per rod for the smaller size, and forty cents per rod for the larger tile; soles have not been used.

We have seen that thorough draining requires drains at parallel distances of 30 feet; let us say of two rods or 33 feet, then an acre would need seven drains of 13 rods each in length, in all 91 rods; this at 20-100 for the tile gives, say - - $18 20
Add for discharge, laying, &c. 18-100 per rod, 16 38

Making the lowest cost per acre, . - - - $34 58
and 38 cents per rod."

Before we proceed, let us examine and compare the cost of making a common stone drain, the stone being on the field to be drained. Thus, a man and team will draw stone in one day sufficient to build about 5 rods of drain, - - - - - - - - $1 50
Cost of laying the stone at 6-100 per rod, - 30
Cost of the trench at 18-100 do. - 90

Cost of 5 rods common stone drain, - - - $2 70

or 45 cents per rod, thus shewing a difference of 16 cents per rod in favor of the drain tiles. To facilitate your calculations of cost of the tile, I would state that for every acre, drains cut

	12 inch tiles.	13 inch.	14 inch.	15 inch.
At 15 feet apart, require,	2,904	2,681	2,489	2,323
30 do. do.	1,452	1,340	1,245	1,162
33 do. do.	1,329	1,218	1,131	1,056
36 do. do.	1,210	1,117	1,037	968

The great cost per acre under either of these systems, requiring capital for the outlay, and notwithstanding the rapid return of the cost by the additional products, presents a serious impediment to their general adoption, and compels us to seek some method for the more economical supply of tiles. This can and will be done, and in the course of another year these tiles will be afforded at a cost of 15 cents per rod or less. This is to be accomplished by machinery, and I am pleased with the authority to say that a machine is now making in England for use in this county (Seneca) which will make from 8 to 10,000 tiles per day of perfect form and solidity. The most eminent agriculturists of Great Britain have been consulted in reference to this particular machine, and no doubt is entetained, but it will lead the way to an economical supply of tiles for draining. Labor in this country is too costly in proportion to the products of our farms. We are now, and for a long time will be, compelled to tax our ingenuity to place the farmer on a level with other pursuits, where the profits are larger, admitting higher prices for labor. Let us however, be thankful and content, for if our profits are not so large, we have reason to believe they are more sure and enduring than is derived from other professions.

Machinery is to accomplish our much desired object, and we will close this too extended notice by exhibiting a few results to be derived from it. Supposing that as farmers we are as intelligent as the English and certainly not less industrious, if, then, we determine to drain by means of tiles, a field of ten

acres, and that the machinery about to be introduced, or any other machine, enables us to procure tile at a cost of 12 cents per rod, the cost of our drains made in a lasting and perfect manner, would be at the rate of 30 cents per rod, or $27.30-100 per acre.

A field thus drained and cultivated may reasonably be expected to yield an increased ratio, equal to an English field, all things else being equal. Then, if our average crops have been 20 bushels per acre, (and many of our farms range much higher,) we shall now receive 10 bushels. But suppose we obtain only 30 bushels per acre, you will easily see that the profit has been increased from about $8 per acre, to $18 per acre. In other words, the field of ten acres, at a cost of $273, gives a return in nett profits of $180.

One acre yielding 20 bushels at $1 - -	$20 00 undrained
Cost of cultivation, - - - - - - - -	12 00
Profit. - - - - - - - - - - - -	8 00
Increase product by draining say 10 bu.	10 00
Total profit when drained - - -	$18 00

Then 10 acres will give $180, a ratio which soon returns the outlay. There is room here for large deductions, and yet leave us well satisfied with the benefits of thorough draining; and from the facts given every man can make his own estimates as to the value of the benefits claimed.

In conclusion, let me say, that your plants when thus protected from excess of moisture, will obtain a more vigorous growth with a firm straw, preventing in a great degree its lodgment by storms. The grain becomes more plump; it ripens *uniformly*; and of course it is heavier per bushel. The straw possesses the elements of better fodder for your cattle and sheep, and makes better manure. Your fallows will be more easily and earlier worked; they will be less infest- with weeds, and your plow may run much deeper.

Such, gentlemen, are the advantages which have been again and again derived by others. Why then may not each one of us, be at least as fortunate? It may be urged that few farmers can spare so large an outlay on their farms, as we have spoken of; true, I admit it; but let us remember that our freedom was not obtained in a day, nor do I believe in the benefit, comfort or advantage of steam car speed in our farming operations. Caution is always necessary, and I would not advise any farmer to undertake the draining of more than one or two acres at the outset.—Sure, from what I have seen and learned, that he will double the quantity every spring or autumn, until his farm shall always blossom and bear fruit, from every acre, far beyond his needful wants."

CASTOR OIL PLANT.—(Bicinus Communis.)

BY WILSON HOLT, OF ILLINOIS.

The territory of country engaged, even partially, in the cultivation of this vegetable is quite limited—being confined for the most part to Southern Illinois and a small part of Missouri, with perhaps an isolated county here and there in some of the Southern States. This narrow territory is not the result of uncongenial climate, for it can be successfully grown as far north as Maine, where it is sometimes seen in gardens as an *ornamental plant*. The cause of the circumscribed territory is partially the result of want of information on the subject of growing it, but more particularly the limited demand, which is often more than supplied by the small section of country in which it is known and raised. It is cultivated entirely for the seed, no other part of the plant being of any use except for manure, perhaps, which is not here regarded.

The season of planting ranges somewhere between the middle or perhaps the first of April and the early part of May. The earlier the better, if the season be favorable, as it is killed by the first frosts of autumn. The crops, therefore, depend very much upon the time the season of harvesting commences. The ground in which it is planted should have a deep rich soil, deeply and thoroughly plowed, and the surface finely pulverized. After it is well prepared, it should be laid off in parallel rows both ways, not less than four feet each way, and every fifth row six feet one way for the convenience of harvesting. If the seed be good, four beans in a hill are enough to plant unless there is a prospect that the cut-worm will be troublesome, in which case eight or ten will not be too many. At the end of two weeks after planting, now and then one will be seen pushing its way through the earth to the light, and in four weeks nearly all will appear. Some practice soaking the seed three or four days before planting, which practice is a very good one. It brings forward the crop, which is an important consideration. When the plants are about six inches in height, the hoe and plow should be often and thoroughly used among them, that the earth may be kept loose, and the grass and weeds in due subjection. Twice hoeing is commonly sufficient, and even one may do very well in clean ground if one be skilful in the use of the plow.

The labor of raising the Castor Oil Bean up to the period of harvesting is about the same as is required by corn. The appearance of the plants at first is very diminutive, bearing no sort of comparison to their ultimate height and magnitude. They often attain the height of eight feet, and with their numerous branches and massive leaves present quite a formidable appearance. I have many plants on my farm that now measure full eight feet in height, and promise yet greater elevation.

The number of plants allowed to remain in a hill should not exceed two, and many who have had much experience in the business say that one in a hill is enough. Mine, this season, were thinned down to one, and in many parts of the field are nearly as dense as a cane brake. I am of the opinion that, as a general thing, one will be found more profitable than two. Two may produce more beans in the fore part of the season, but take the whole season as a criterion, one will give the larger crop. One throws out far more branches in proportion, and produces much larger cones of bolls.

The harvesting season usually commences about the middle of August, and continues until "Jack Frost" summarily despatches the whole crop remaining. At the first the labor of harvesting is comparatively light, but when the season fairly sets in, four acres will keep one hand quite busy. The process of harvesting is usually as follows:—a plat of ground several yards square is cleaned off and made as nearly smooth as can be, called the "popping ground," where the beans are taken to be "popped out." A horse attached to a one horse slide or sled is driven along the wide spaces already mentioned, and the beans gathered and taken to the ground. The beans do not grow in long pods like most beans, but in diamond shaped bolls, generally containing three beans each, attached to a stem like grapes.

Many of the clusters of bolls are twenty inches long, and I have seen those that measured two feet; and all are nearly in the form of a perfect cone. The beans in the bolls are separated from each other by a thin membrane, and the bolls are armed with very flexible spikes. The clusters are cut with a knife, and when the beans are ripe the bolls contract, when the beans "pop" out with a smart report, often shooting several yards. After all have been gathered and popped out, they are separated by passing them through a fanning mill. Thus ends the labor of harvesting.

The average yield is sixteen bushels, and twenty-five is a good crop. The price per bushel may be set down at $1, though it often varies both above and below. Last year as high as $1,40 was paid, and $1,75 has been paid this year for old beans. The price will be good this year owing to the ravages of the cut-worm among the plants in the spring. The oil is extracted from them by means of screw presses similar to those used in extracting oil from flax seed. I believe two gallons is the produce of a bushel of beans. When beans are worth a dollar per bushel, oil sells at one dollar per gallon at the mill.

Now for a brief botanical description of this plant. The leaf is palmate, simple, with lanceolate lobes acutely serrate on the margin. Position of the leaf horizontal on a strong, round petiole. Connexion of petiole with the leaf, peltate. Culmor stem articulated and branching. Root palmate. The Castor Bean is about the size of the common garden bean, of a brownish color mottled with darker spots. It has neither the taste or smell of Castor Oil. To the taste it is a little sweetish, but not unpleasant. Thus endeth what I have to say of the *Ricinus Communis*. *Holt's Prairie, Perry Co., Ill.*, 1849.

Hints for October.—Those who wish to sow wheat after corn should do it early. Cut up your corn, and remove it entirely from the field—or adopt the plan suggested in our October number for 1847.

Potatoes and other root crops should be dug and properly secured before freezing weather sets in. If dug early, before the fall rains, and kept dry, potatoes will be much better for table use, and comparatively free from rot. Most garden vegetables should be secured, during the month.

Winter apples should be gathered before any severe frost. Those intended for long keeping, or marketing, ought to be carefully *hand-picked*, or with a fruit gatherer. If you make cider, put a pint of mustard seed into each barrel, (or pulverized charcoal, in a cotton bag, as recommended in our last number.) The mustard improves the cider greatly; it fines beautifully, and will not become hard.

Select your seed corn, if not already done; and save other seeds, such a cucumber, melon, lettuce, &c.

Hogs intended for fattening should now be shut up, and their feed increased. They will fatten twice as fast in warm as in cold weather—so hurry up the materials for pork during this month and November. Give them good shelter and dry beds.

Do up your fall plowing for spring crops at once, where you have no June or other foul grasses; but if these pests, or the wire worms are in your soil, don't plow until late—just before freezing up. (See reasons for this advice in Farmer for October, 1847.) On all soils that require and will bear it, put in the plow beam deep, and bring up the riches of the subsoil.

N. Y. State Agricultural Society.

PREMIUMS AWARDED AT THE N. Y. STATE FAIR, Held at Syracuse, September, 1849.

CATTLE—Short Horns.

Bulls over 3 years old.—Best, J. M. Sherwood, Auburn, "2d Duke of Cambridge," $25,00; 2, Thomas Bell, Westchester, 15; 3, S. P. Chapman, Clockville, 5.

Bulls 2 years old.—Best, William Fuller, Skeneateles, 20; 2, A. G. Percy, Wayne Co., 10; 3, J. B. Burnet, Syracuse, 5.

Bulls 1 year old.—Best, L. G. Morris, Westchester, 15; 2, S. P. Chapman, 10.

Bull Calves.—Best, L. G. Morris, 10; 2 J. M. Sherwood, Trans and 3.

Cows over 3 years old.—Best, S. P. Chapman, "Charlotte ——," 2, L. G. Morris, 15; 3, J. M. Sherwood, 5.

Heifers 2 years old.—Best, F. Rotch, Butternuts, 20; 2, L. F. Allen, Black Rock, 10; 3, F. Rotch, 5.

Heifers 1 year old.—Best, Ambrose Stevens, New York, 15; 2, J. M. Sherwood, 10; 3, S. P. Chapman, 5.

Heifer Calves.—Best L. F. Allen, 10; 2, J. M. Sherwood, Trans. and 3.

Devons.

Bulls over 3 years old.—Best, R. H. Van Rensselaer, Otsego Co., 25; R. M. Remington, Cayuga, 15; J. Blakesly, Westchester, 5.

Bulls 2 years old.—Best, D. S. Earll, Salina, 20; 2, H. N. Washbon, Otsego, 10.

Bulls 1 year old.—Best, H. N. Washbon, 15; 2, David C. Bowe, Cayuga, 10.

Bull Calves.—Best, E. P. Beck, Wyoming, 10; 2, H. N. Washbon, Trans and 3.

Cows over 3 years old.—Ambrose Stevens, $25; 2, H. N. Washbon 15; 3, E. P. Beck, 5.

Heifers 2 years old.—Best, L. F. Allen, $20, 2, E. P. Beck, 15; 3, do, 5.

Heifers 1 year old.—Best, H. N. Washbon, $15; 2, E. P. Beck, 10; 3, R. H. Van Rensselaer, 5.

Heifer Calves.—Best, H. N. Washbon $10; 2, A. Stevens, Trans and 3.

Herefords.

Bulls 2 years old.—Best, Allen Ayrault, Genesee, $20; 2, W. H. Sotham, Black Rock, 10.

Bull Calves.—Best, W. H. Sotham, $10; 2, Allen Ayrault, Trans and 3.

Cows over 3 years old.—Best, Wm. H. Sotham, $25; 2, Allen Ayrault, 15; 3, L. F. Allen, 5.

Heifers 2 years old.—W. H. Sotham, $20; 2, Allen Ayrault, 10.

Heifers 1 year old.—2d best, W. H. Sotham, $10; 3, L. F. Allen, 5.

Heifer Calves.—Best L. F. Allen, $10; 2, W. H. Sotham, Trans and 3.

Ayreshires.

Bulls over 3 years old.—Best, E. P. Prentice, Mt. Hope, $25; 2, L. G. Morris, 15.

Bull Calves.—Best E. P. Prentice, $10.

Cows over 3 years old.—Best, E. P. Prentice, $25; 2, R. Rome, Mt. Morris, 15.

Two years old Heifers.—Best, E. P. Prentice, $20.

One year old Heifers.—Best, E. P. Prentice, $15; 2, R. Rome, 10; 3, L. G. Morris, 5.

Heifer Calf.—Best, E. P. Prentice, $10.

Grade and Native Cattle.

Cows over three years old.—Best, D. S. Earl, $20; 2, S. P. Chapman, 12; 3, L. G. Morris, 4.

Heifers two years old.—Best Chauncey C. Cook, Oneida, $15; 2, David S. Earl, 10; 3, L. S. Bundy, Otsego Co., 3.

Heifers 1 year old.—Best, E. Sheldon, Cayuga co., 10; 2, P. B. Williams, Onondaga co., 8; 3, R. M. Remington, 3.

Heifer Calves.—Best, C. Merriman, Madison co., 5; 2, S. C. Parker, Trans.

Working Oxen.

Best team of 20 yoke, (Cortland co.) J. Barber and others, $50; Best single yoke of Oxen, E. Sheldon, 25; 2, do. J. Bryden, Oneida co., 15; 3, do. Hiram Cleft, Onondaga, Trans and 5; Disc. Best Trained Cattle, J. B. R. Church, Vernon, Sil. Medal.

Steers 3 years old.—Best single yoke, H. H. Eastman, Marshall, 10; 2, E. Sheldon, 8; 3, L. S. Bundy, Trans and 3.

Steers 2 years old.—Best yoke, B. H. Streeter, Wayne co.

$10; 2, do. I. S. Bandy; 3, do. H. Sheldon, Cayuga co. Trans and 3.

Steers 1 year old.—Best, James H. Sherill, New Hartford. $5; 2, H. Sheldon, 5; 3, J. Muir, Sen. Madison co. Trans and 3. Boys' trammg steers, D. Maine, De Ruyter, Madison co., Sil. Medal.

FAT CATTLE.

Best pair of fat oxen over four years old, L. Doty, Wyoming co., weight 5,241, $25; 2, L. Sheldon, weight 4,850, 15; 3, Asa Nowlen, Liv. co. weight 5,235, 10. A pair of cattle belonging to Clement Leach, Madison co. were the heaviest on the ground, weighing 5,140 lbs., but were not sufficiently fattened. They are entitled to special commendation.

Best single ox over four years old, Edmund Munson, Cayuga Co., weight, 2,502, $15; 2, H. Sheldon, weight 3,145, 10.

Best fat cow over 4 yrs old, Clement Leach, weight 2,066, $15; 2, Robert Rome, weight 1,726, 10; 3, do. weight 1,942, 6.

Best pair of fat steers under 4 years, R. Rome, weight 4,038, $15.

Best single heifer, J. Barber weight 1,466, $10.

Grass fed.—Best pair of fat oxen over four years old, E. P. Beck, weight 3,464, $20; 2, Israel Boles, Cortland co., weight 3,398, 12. Best steer under four years, E. Sheldon, weight 1,564, $8; 2, John Reeves, Lysander, weight 1,831, 3; 3, J. R. Barnett, Syracuse, Trans. Best cow over 4 years old, R. Allen, Syracuse, $10.

FAT SHEEP.

Middle Wooled over two years.—Best, J. M. Sherwood, $5; 2, do. 3.

Coarse two years.—Best, Z. B. Wakeman, Herkimer, $5; 3, Thos. Terry, Mt. Morris. Merrell's Shepherd.

Long-Wool over 2 years.—Best, John Reeves, $5; 2, do. 3; 3, do. Morrell's Shepherd. No. 202, a Long-Wooled Sheep, owned by James Bicknell, Erie co, entitled to special notice. Recommended for a premium.

HORSES—*for all Work.*

Best Stallion over 4 years old, Wm. Ferguson, Marshall, "Bay Kentucky Hunter," $20; 2, Nottingham & Allen, Palmyra, "Young Norman," 12; 3 Bay Horse, owner's name not ascertained, 8; 4 O. Howland, Owasco, "Sir Henry," Vonatt.

Brood mares and foal.—Best, Reuben R Burt, sorrell Mare and Colt, $20; 2, Edward Munson, Cayuga co., bay Mare and Colt, 12; 3, Anthony Decker, Skaneateles, chestnut Mare and Sorrell Colt, 8; 4, Wm Prior, Elbridge, bay Mare and Colt, Vonatt.

Draught Horses.—Best Stallion over 4 years, Nottingham & Allen, "Young Sampson" $20; 2, Cornelius Schoby, Springport, "Young Alfred," 12; 3, John D Spinner Herkimer "Sir Henry Eclipse," 8; 4, J. S. Thompson, Camillus, "Young Sampson," Vonatt.

Brood mare and foal. 2, David Wemple, Mohawk, 12; 4, J. H. Lansberson, Van Buren, Vonatt.

Blood Horses.—Best Stallion over 4 years, W. W. Huff, Buffalo, "Lance" $20; 2, Dow, Clark & Earl dark gray Stallion, 12; 3 Simon Schermerhorn, Rotterdam, "Young Waxy," 8; 4, Pardon Austin, Marlius, "Young Eclipse," Vonatt.

The thorough bred horse "Consternation," owned by J. B. Burnet, Syracuse, to whom was awarded the first premium at Utica, in 1848, was shown, and the committee consider him one of the best horses which came under their observation.

(The horse "Mohs" owned by Mr George Parish, of Ogdensburgh, was exhibited without being entered; the committee would have awarded him the second premium, if properly entered.)

Three year old Stallions and Mares.—Best Stallion, A. Butler, Wolcott, "Young Mogadore, jr., $15; 2, E. Moore, Cherry Valley, 10; 3 H. S. Marsh, Syracuse, Vonatt; 4, W. Norton, Wayne co., Trans.

Mares.—Best, Elias Thomas, Oswego co., $15. No others exhibited deserving of a premium.

Two year old Stallions and Mares.—Best, Frank Brown, Ridgway, $10; 2 R. O. Arthur Ticonderoga, 5; 3, J. Van Hoesen, Augusta, Trans.

Mares.—Best, John J. Bushart, Fonda, $10; 2, N. R. Williams, Oneida co., 5; 3, J. N. Holmes, Hastings, Trans.

One year old Colts.—Best Stallion, J. Muier, sen., Hamilton $5; 2 J. Hansenfratz, Vonatt; 3, Nathan Souls, Clay, Trans.

Mares.—Best, N. B. Van Slyke, Sennett, $5; 2, S. A Gilbert, Hamilton, Vonatt.

Matched Horses.—Best pair, Harvey Gould, (bay Horses,) Orleans co., dip and $15; 2, Thomas S. Clark, (bays,) Orleans co., 10; 3, Amos Lewis, (bay browns,) Tompkins co., 5; 4, H. Otis, Jordan, $5.

Geldings.—Best Gelding, dapple gray owned by Arden Merrill, Penn. to whom the first premium was awarded at Saratoga, in 1847, and a certificate is now given pursuant to rules of society.

1st Prem., H. L. Barker, Clinton, dip and $10; 2, S. S. Vaughn, Jackson, Mich., 8; 3 John Legg, Skaneateles, 6; 4 Nelson Boomer, Jefferson co., 4; Dist. to John B. Miller, Utica, for his bay horse Vol. Trans; Wm. H. Sanders, Clyde, Wayne co., sorrell Colt, do; W. C. Chapman, Aurelius, gray horse, do.; H. Eaton, Syracuse, gray horse, do; all of these last being excellent horses and worthy of the notice of the Society.

SHEEP. *Long Wooled.*

Best Buck over 2 years, Geo Swails, Sodus, $10; 2 Lewis P. Allen, S. 3 Charles N Herbon, Onandaga county 5. Best Buck under two years, Thos Terry, Mt. Morris, $10; 2, W Bathbone Springfield 8, 3, Charles N. Hudson, Onondaga co., 5.

Best pen five ewes over 2 years, Thos Terry, $10; 2, W. Bathbone, 8 Best pen five Ewes under 2 years Geo Swails $10.

Best pen five Buck Lambs, Lis Bicknell, Aurora, $8; 2, Thos Terry Morrell's Shepherd and 3.

Best pen five Ewe Lambs, Charles N Hudson, $8.

Middle Wooled. Best buck over 2 years, Z. B. Wakeman, Herkimer, $10; 2, J. M Sherwood, Auburn 8; 3, L. F. Allen 5.

Best Buck under two years, J. M. Sherwood $10; 2, Wm Robson, Westmoreland, 8; 3, Z. B. Wakeman, 5.

Best pen five Ewes over 2 years Wm Robson, $10; 2, Z. B. Wakeman, $8; 3 J. M. Shrwood, 5.

Best pen 5 ewes, Z B Wakeman, $10; 2d E. R Dix, Vernon, 5.

Best pen five Buck Lambs, Z. B. Wakeman, $8, 2, W. Robson, Morrell's Shepherd and 3.

Best pen five Ewe Lambs, Z. B. Wakeman, $8, 2, Wm. Robson, Morrell's Shepherd and 3.

Merinoes.—Best Buck over 2 years old, N. M. Dart, Harpersfield, $10; 2, Joseph Blakesley, North Salem, 8; 3, J M Sherwood 5.

Best Buck under 2 years J. D. Patterson, Westfield, $10; 2, D. S. Curtis, Canaan, 8; 3, J. M. Sherwood, 5.

Best pen five Ewes over 2 years, J. M. Sherwood, $10; 2, N. M. Dart, 8; 3, Randall & Milliman, Clay, 5.

Best pen five Ewes under 2 years, J. Eb Wesley, $10.

Saxons.—Best Buck over 2 years, S. H. Church, Vernon, $10; 2, S. B. Crocker, do., 8; 3, S. H. Church, 5.

Best Buck under 2 years, S. B. Crocker, $10; 2, R. J. Ransom, Hoosick, 8; 3, Joseph Haswell, do., 5.

Best pen five Ewes over 2 years, S. H. Church, $10; 2, S. B. Crocker, 8; 3, Randall & Milliman, 5.

Best pen five Ewes under 2 years, R. J. Ransom, $10; 2, S. H. Church, 8; 3 Randall & Milliman, 5.

Shepherd's Dogs.—Best Shepherd's Dog, "Cammer," M. Bingham Vt., 5.

Samples of Wool from the late importations of Messrs. Catlin & Smith, of Wolcottville, Conn., (from the flock of Baron de Spark) were exhibited, and for *evenness* of *fiber*, *fineness* and *thinness* of *fleece*, they are beautiful indeed.

The Connecticut Premium of $100 for the best 25 Merino Ewes and the best 25 full blood Merino Lambs less than one year of age, was awarded to A. L. Bingham, of Cornwall, Vermont.

SWINE.

Second best boar over 2 years old, H. N. Washburn, Otsego $5, 2d best 1 year old, David Preston, Elbridge, 5. Best boar over 1 year old, James Gilkeson, Homer 10; 2, B. Williams, Onondaga, 2d best 6 months old, C. R. Nichols, Bethany, 3. 2d best breeding sow over 1 year old, F. Thayer, Darien, 5; 2, do over 5 months, F. Thayer, 3. Best lot of pigs, Rufus Cossett, Onondaga, 10; 2, H. N. Washburn, 5.

FOREIGN STOCK—*Cattle.*

Hereford.—Best Bull, L. G Bingham, Vermont, dip. and $25.

Devon.—Best Bull, R. C. Gapper, Thorn Hill, C. W., dip and 25.

Best one year old Bull, M. Bingham, Vermont, dip, and 10. Best Bull Calf, Devon,) R. C. Gapper, dip, and 5. Best Cow over 3 years old,(Sally) L. G. Bingham, dip and 25; 2, (Cherry) L. G Bingham dip and 15.

Horse.—Best Stallion over 4 years old, (Morgan Grey Hawk,) L. D Harlow, Hartland, Vt., dip, and $20; 2, I Ashford, Toronto, C. W., dip and 15; 3, Calvin Blodgett, (maj. Gifford,) Chelsea, Vt., dip and 8; 4, G. F. Wheeler, Middlebury, Vt., (Morgan Horse 5 years old) Vonatt.

SHEEP.

Long Wooled.—Best Buck, Geo. Miller, Markham, C W, dip and $10. Best pen five 5 Buck Lambs, Geo Miller, dip, 5. Best pen 5 Ewe Lambs, G Miller, dip and 5.

Merinos.—Best Buck, E Robinson, Addison co, Vt, dip and $10. Best pen 5 Ewes, M Bingham and E Robinson, dip and 10, to be divided between them. For 2 very fine Ewes, L G Bingham, dip.

PREMIUMS OPEN TO ALL.

Horses.—Grey Stallion, "Young Norman," owned by Nottingham & Allen, diploma. Best Breed Mare, chustnut, "Morgan Mare," C H Blodgett, diploma.

SHEEP—*Long Wooled.*—Best Long Wooled Buck, Geo Miller, dip, Best pen 5 Buck Lambs, Geo Miller, dip.

POULTRY.

Best lot Poland Fowls, S J Cheeseboro, Syracuse, $3.
Best large fowls, J J Bushart, Fonda, 3.
Best Muscovy Ducks, C N Hudson, Onondaga, 3.
Best pair Large Geese, "Brumen," D Cossett, Onondaga, 3.
Best Java Bantums, E E Platt, Albany, 3.

FARM IMPLEMENTS.

Best Farm Wagon, D W Seely, Carlisle, Sco Co, Diploma and $6.
do Harrow, V H Fitch, Liv Co, dip and $3.
do Corn Cultivator, Jeremiah Fusk, Lysander, dip and $3.
do Fanning Mill, Jacob Clapper, Fort Plain, dip and $5.
do Corn Stalk Cutters, J C Rich, Penfield, Mon Co, dip & $5.
do Straw Cutters, J C Rich, dip and $3.
do Corn and Cob Crusher for power, H. L Emery, dip & $5.
do Clover Machine, Rapalje & Briggs, Rochester, dip & $5.
do Ox Cart, Paris Barker, Homer, Cort Co, dip and $5.

[*To be concluded next month.*]

FARMING LANDS IN EASTERN VIRGINIA.

BY S. S. GRISCOM, OF PETERSBURG, VA.

Eds. Genesee Farmer:—A few days ago I received two numbers of the Genesee Farmer, one of which contained an article from Fairfax, Va., describing that section of country, and inviting northern farmers to settle there—with an editorial note, asking further information from different sections of the South and West.

As I have spent several years in making myself acquainted with this section of country, I gladly avail myself of so good an opportunity as your valuable paper presents, to give to your readers some information respecting this section of Virginia, which I believe to to be the finest portion of the United States, for agriculturists.

If any one will examine any good map of Virginia, he will see at once that no section of the globe of the same extent, is so remarkably furnished with bold, navigable rivers. The Potomac the Rappahannock, the York, and the James, with their numerous branches, penetrate the State, from the Ocean into the mountains, and their head waters interlock with those tributary to the Mississippi. The tide flows in them from one hundred to near three hundred miles from the Ocean, and they are navigable for the largest ships, all this distance. Above the tide, on the main streams, and their thousands of tributaries, they furnish immense water power for all sorts of machinery. The soil generally, is not surpassed for natural fertility—and having seen all the eastern and northern States, I am of the opinion that there is less poor soil, and land incapable of profitable improvement in eastern Virginia, than in any State north of it. The middle portion contains lime, gypsum coal, salt, iron, &c., &c., in the greatest abundance—while the whole tide water section is underlaid with immense deposites of fossil marine shells and animals, furnishing what is called calcarious marl, rich in lime, containing sometimes as much as 90 per cent of that essential element in grain producing soil.

My attention has been chiefly confined to the tide water region, because of the great facilities for shipment of produce to all the markets of the world, at the smallest possible cost. For altho' canals and railroads are indespensable to render the products of the Farmer and Manufacturer of the interior of any value, they can never compete with the great highways which nature has made. There are in this State, now unoccupied, excellent lands, and unopened mineral and manufacturing resources, sufficient for the maintenance of a population greater than that of the whole U. States at the present time. And I am well convinced, there is no portion of the earth which offers fairer inducements to farmers and manufacturers, than this. I think it can easily be shown, that farming here is more profitable, and pays a better interest upon capital employed in it, than in any other section of our country. This assertion does not rest upon conjecture, but can be readily proven from unquestionable data, which I can easily produce from farmers who keep accurate accounts of all their operations, and who while pursuing acknowledged imperfect systems, and have only *begun* to pursue an improving system at all, make from 12 to 22 per cent and upwards, upon the capital invested, after deducting every expense. One of the most intelligent and respectable farmers in the State, who makes no assertion without good data, told me that he could purchase lands in the marl region, and make one hundred per cent, in perpetuity, upon the capital invested, and I think his experience warranted the assertion. I am aware that all this looks like painting high colors, but I assure you, I believe it to be sober truth, and invite intelligent farmers from the northern States, to come and see for themselves. A thorough examination will at least gratify them, and I can promise to any intelligent, respectable men, who desire to be informed, a reception by the farmers of Virginia, as cordial as they can desire.

After much careful examination, I have chosen the country bordering on the James and York rivers, as offering the strongest inducements to those who desire to settle in this State—for here the soil is superior to that of many of the more northern counties, and much of it equal in natural fertility, and susceptibility of high productiveness, to the very best in the world. Almost every where marl is superabundant. On the rivers lime, for those who prefer it, is delivered on the farms, at 6½ cents per bushel. The winters are so mild, that there is scarcely a week when the plows are stopped by frost. Cattle and sheep live well with very little provender, and I have no where seen finer cattle and sheep than here. The country is healthy, and as the land is more opened and limed, it will be improved in this respect. It is also well watered, abounding in fine springs and streams of pure water. Figs, pomegranites, peaches, apricots, melons and apples grow in great perfection, and ripen a month or six weeks earlier than in your country. Much cotton and tobacco are raised in the southen counties, but most farmers, who are beginning to improve, are confining their attention to wheat and corn.

The facilities for the shipment of grain from this region are equal to any, and superior to most. There is scarcely a farm in this region more than 3 or 4 miles from good navigation, and thousands that have good landings on them. A friend of mine is just now shipping his crop of red wheat, about 12,000 bushels, for which he gets 104 cts. per bushel, cash, at his wharf. Excellent lands in this region, most eligibly situated, and some of them on the rivers of surpassing beauty—often with good buildings and abundance of the finest timber, which can be shipped to the northern cities at great profit—can be purchased at prices ranging from $5 to $50 per acre. In many instances the the timber judiciously managed, may be made to pay for the land two or three times over. In the lower counties, the finest oysters, fish, wild geese, ducks, turkeys, deer and other game abound.

Those persons who are afraid to live on tide water, may find lands from 10 to 30 miles west of this town, of excellent quality for grazing or agricultural products generally, in a very healthy country and often with spacious buildings and fine improvements, at prices ranging from $1,50 to $10 per acre.

I make it a part of my business, and it will give me pleasure to impart to any who desire it, more particular information respecting any section or tract with which I am acquainted. The owners have placed a very large number of farms in my care for sale, many of which are very desirable and cheap. I desire those who are seeking new homes, to come and take time to examine the whole region thoroughly—promising them all the aid in my power.—Samll. S. Griscom.—*Petersburg, Va., 9 mo. 12th,* 1849.

LANDS IN WESTERN N. Y. AND VA — COMPARATIVE VALUE OF RICH AND POOR SOILS.

BY CALEDONIA.

Messrs. Editors:—In perusing the Genesee Farmer, I noticed a communication from a correspondent of Fairfax Co., Va., in which he solicited the farmers of Western New York to emigrate to Virginia instead of going West. The principal reasons assigned, are on the account of its easy access to good markets, the low price of land, and the soil being easily cultivated.

These reasons are among those of these first magnitude to the farmer; but it matters very little how convenient to market lands are located, that will not produce more than the cultivator requires for his own use. Hence a good and convenient market is of no benefit or utility, unless the lands will produce a surplus beyond what the agriculturist wishes to consume; but on the other hand a good and convenient market is of the greatest importance to those who have productive lands, which not only enhances their intrinsic value, but renders them always saleable. It does not augment the price of unproductive land, by its being situated adjacent to navigable waters or a good market, for agricultural purposes; but those lands which are easily wrought, and on which good crops of all kinds grow in abundance, the facilities to market make very desirable; they are eagerly sought for, and will always command good prices.

There are some men whose means are comparatively small, who think it injudicious and hazardous to purchase our best and most productive farms and pay a price corresponding to their productions, location, &c. They will buy third rate land because it may be purchased for $20 or $30 per acre, and will not involve them in debt but a few hundred dollars; whereas, if they had bought the first quality of land, every foot of which is, or easily may be, under a high state of cultivation, it would make the debt as many thousands. Now from which farm would a judicious farmer extinguish the debt for his land first, from the low priced or the other? The $20 farm in the first place has an inferior soil by nature, and by tillage it has become less productive than at first; therefore, in consequence of the uncertainty or failure of a crop, the owner fails to pay even the hundred dollar payment which is due—and in the deficiency of the crop, arising from the inferiority and unproductiveness of the soil, it deranges his pecuniary affairs, from which he seldom or ever recovers. The farm which is highly cultivated, can be relied upon; nothing to do but put in the crops, harvest and market them; no expense in fetching the land up, or in making repairs; every dollar obtained goes towards the extinguishment of the debt;—often has the case been where two installments have been paid of one thousand dollars each, from the productions of one year, which will extinguish the debt of several thousand dollars in a few years, and his farm growing better.

In order to substantiate the above, I will state, that I am acquainted with a farmer in this town who purchased a choice wheat farm some two years since. The farm contains 96 acres of improved land, and from 8 to 15 acres of timber. The purchase money amounted to $13,100. There was 85 acres of wheat on the ground, which he harvested, the sale of which amounted to $2,593 73—reserving 105 bushels for seed, and some 65 bushels for bread. The wheat was sold for 10s. 1d. per bushel. The barley sale was $60 25, and the wood and fat sheep amounted to $77 37; which constituted all the sales for that year. The whole aggregate amounts to $2,761 35. He kept an accurate account of all expenses for the year, and they amounted to $523 87; this includes farm labor of all kinds, mechanics' bills, and family expenses, which leaves a net revenue from the farm of $2,237 48. And in addition to this he had 70 acres of wheat growing for the next season, and the cost of putting this in is included in the above expenses. The next season he harvested 15 acres less of wheat, but obtained a better yield. From the 70 acres he sold 2,006 bushels, sowed 117½ bushels, and kept for bread 67 bushels. The wheat was sold for 9s. 1d. per bushel; 450½ bushels barley at 4s.; 100 bushels corn at 4s.; and 332 lbs. wool at 31 cents per pound. The sales for the second year were $2,634 92, and the expenses amounted to $492 83—leaving a balance in favor of the farm of $2,142 09. In the item of expenses there is included the putting in of 80 acres of wheat which he has harvested the present season.

With this array of facts, which would be the most advisable for a cultivator of the soil, with only a few thousand dollars, to lay it out for a farm in this healthy and productive country, where the markets are convenient and good, or to go to Virginia and purchase those cheap lands which are so impoverished, the productions of which at present but a little more than pay for cultivation? Some four or five crops in this country will pay $55 or $65 per acre, and pay the expense of growing the same. I think I am justified in making the assertion that it will require some four or five years to put those worn out lands in Virginia under a tolerable state of cultivation, and at the same time it is attended with much labor and expense. *Caledonia, Liv. Co., N. Y., Aug.*, 1849.

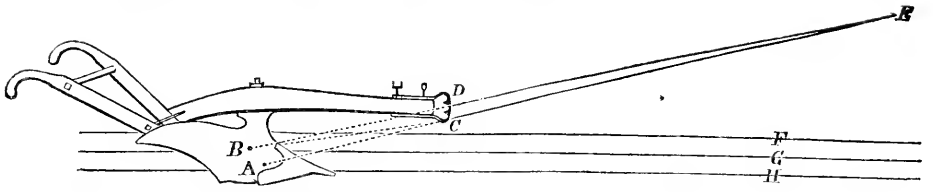
WIRE FENCES.—GROWING THORNS FOR HEDGES

Messrs. Editors:—I see in the August number of the Genesee Farmer a communication of F. R. Miller of Pa., recommending the setting of trees for the support of Wire Fences. I have had a similar idea, and would suggest, for that purpose, the use of the Chesnut, as the wire will not corrode within that tree; and it may be continued through the whole line of the fence, by merely boring a hole of the requisite size through the trees successively. Whether Chesnut posts will answer the same purpose I am not certain, as I do not know whether the dry wood has the same preservative effects on iron with the living tree.

I take the liberty of inquiring, if it be in your power to inform me, what is the contractive effect on wire of the cold of winter over the temperature of a hot sun in summer; that is, how much a piece of wire which is a rod long in the summer heat, will contract in the cold of winter? and whether the inconvenience attending the changes of temperature, may not be obviated by spiral steel-wire springs, at stated distances, and at what cost?

H. R., of Seneca County, in recommending our native thorn for hedges, speaks of its ease of propagation "by seed." I have planted a great many of the berries or apples, but have never yet had one to spring from them. What is H. R.'s system by which he causes them to vegetate. L.—*Tompkins Co., N. Y., Aug.*, 1849.

The Plow.—Its History and Improvements. No. 3.



PRINCIPLES INVOLVED IN THE CONSTRUCTION AND OPERATION OF THE PLOW.

BY HORACE L. EMERY, OF ALBANY, N. Y.

Friend Moore:—As I some months since commenced a series of notices concerning the Plow, and promised to continue them, I now forward you a few cuts, with my own explanations of the power and draft, as connected with the Plow.

Having before written concerning its form and construction, I will now continue, with the remark, that probably few subjects are less correctly understood, not only by plow makers but by the plowmen themselves, (who of all others are most interested,) for as much depends upon the proper attachment of the power as upon the proper construction of the Plow, to cause it to do its work properly, and with the least expenditure of power of man and team.

From the complex construction of plows, as also the manner in which circumstances oblige us to apply the motive power, many different theories and misconceptions have arisen as to the proper mode of application of the draft to effect the desired operation of the plow.

To better illustrate the subject, a reference to the above drawing, with the explanations will be of service to all concerned.

1. All plows, when in operation, meet with resistance, caused by friction in the soil, and which is increased by the weight of the furrow-slice, as well as the tenacity of the soil or sward.

2. All plows, when in operation, have a right line of draft, (often miscalled center draft,) which may be defined by drawing a direct line from the fixed point of the motive power, (as for instance, the ring of the hames in the harness of the horse, or the ring of the yoke, with oxen,) to the center point, or place of the resistance of the work upon the mould-board of the plow,—or as may be seen in cut, from E to A or E to B.

Were it not for considerations of convenience, a chain firmly attached to the body of the plow at A or B, in the direction of this line of draft to E, would answer all purposes better perhaps than the wood beam, as now constructed.

Now, as the chain, if placed as above described, would obstruct the proper working of the plow, we are compelled to apply the power indirectly to produce the desired effect—the power of draft being the means by which the end is accomplished; it is by the use of the present framework of the beam (connected firmly and unyieldingly to the body of the plow,) that the desired end and object is attained. Therefore, when the beam is constructed properly, the effect produced by the application of the force at the point of the beam at C or D, is precisely the same as if attached to the chain, firmly fixed to the mould-board at A or B, as before described. This much for the line of draft.

The point or center of resistance upon the plow, is on the forward part of the mould-board, and a little lower than the surface of the ground being plowed, and about midway of the width of the furrow slice. This center of resistance is varied by circumstances, as for instance, let the plow in above figure be set into the furrow to the depth as represented by the two lines G and H, the center would be near the point on the mould-board marked A. In this case, the draft is represented by the line A to E, and to secure the proper working of the plow, and preserve this line it becomes important that the force be applied to the beam at the point C. But should the plow be set deeper in the ground, and as shown by the lines F H, the center of resistance would be higher up the mould-board, or at B, thereby changing the line of draft from A E to B E, and requiring the power to be applied to the beam at the point D, instead of C, as before.

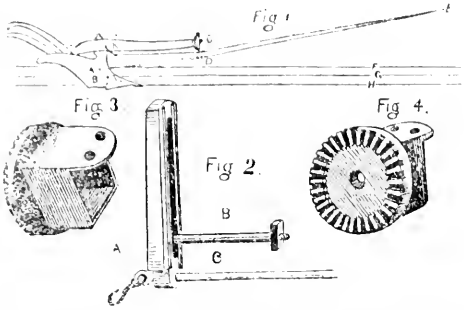
From the foregoing, it will be readily seen, that the line of draft is changed as often as the center of resistance is changed by deep or shoal, as also wide or narrow furrows; or as often as the point of draft of the team is changed by tall or short horses or oxen, long or short traces, or long or short yokes. In order, therefore, to preserve the line of draft, it is necessary to have an adjustable clevis at the end of the beam, that the plowman may regulate the same to accommodate the circumstances of the case.

Should the plow incline to raise at the point, and require an exertion of the plowman to keep it down, it follows that the power is applied too low in the clevis to accommodate the line of draft; as for instance, the center of resistance being at B in the cut, and the attachment to the clevis being at C, the power being at E, the plow would tend to rise at the point C until it intersects the line B E. This would probably throw the plow out of the ground, or lessen the depth of its work. By the simple arrangement of the clevis, and attaching the power to the beam at the point D, the steady, easy and uniform motion of the plow is obtained and preserved, and the same rule for regulating or applying the draft holds equally true in all cases, as width, depth, &c.

If a plow is properly stocked, the clevis giving the variations to the extent of the square of the end of the beam, is sufficient for all practical purposes; but as it often happens that from want of skill in the construction of the plow, or the condition of the land, or when two or three horses abreast are used, or when it is desired to have the beam work upon the solid ground in plowing bogs, &c., it is all important that a clevis be so constructed that it may be susceptible of sufficiently wide range of variations.

Many different kinds of attachments have been invented—some simple and good, while others are heavy, cumbrous, and inconvenient. The best now before the public is that called the *Dial Clevis*, with the draft rod, known as J. M. C. Ramsay's Patent

of December, 1845. It is strong, instantly adjusted to any degree of nicety, and capable of a greater variation than any other kind, without the least endangering the strength of itself or the other parts of the plow. Below are cuts showing the parts of this detached, as also their application to the plow, with its use, as before explained, in obtaining and preserving the line of draft.



C and K, fig. 1, shows plow with dial clevis with rod attached, and position of plow in operation, line of draft, &c., &c.

A, fig. 2. The guide or movable plate which is confined across the end of the beam.

B, fig. 2. The joint bolt and nut which confines the guide to the end of the beam.

C, fig. 2. A section of the draft-rod passing through the guide, and to which the power is applied.

Figs. 3 and 4. The cast iron cap fitting the end of the beam, and through which the joint bolt passes, and to which the guard is confined by means of the bolt, and cogs or teeth on it, fitting into ribs upon the guide.

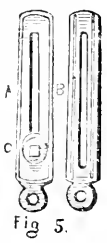


Fig 5.

A, fig. 5. Shows the front view of guide, and head of bolt confining it.

B, fig. 5. The back view of guide with splints or ribs which fit the cogs on the cap, as seen in fig. 4.

This clevis is light as any ordinary clevis, and costs but fifty cents more than a common wrought iron one.

The rod is made of the best wrought iron and extends back underneath the beam any distance, at the pleasure of the maker. As shown in fig. 1, it is attached at K, or near the coulter bolt.

At an early day I intend to take up the subject of the public trials of plows, as generally conducted, and show the advantages to be derived therefrom, as also to point out some of the errors and their cause, by which the public are often misled—also, their remedies. H. L. E.—*Albany, N. Y., Aug.*, 1849.

The Harvest in Canada is favorably spoken of by the Toronto Globe, which says:—The fall wheat harvest in this neighborhood is now almost gathered, and we are happy to say that the yield is most abundant—greater than for many years past. We hear of thirty, forty, and even fifty bushels to the acre on many farms.

Onondaga Salt.—The activity in the salt manufacture has not been surpassed in any former year. The quantity manufactured since 1st January, is given by a Syracuse paper at 1,171,136.16 bushels, or an increase of 401,488.38 over the previous year.

IMPORTANT DISCOVERY ABOUT PEAT.

A discovery has been made in Ireland which is likely to be more important than the discovery of gold in California to America. It is a discovery which, if it be truly represented, must open in the United Kingdom mines of wealth worth a thousand Californias—mines of wealth having these extraordinary properties, that all the cost of exploring them will be clear gain to the people, while the place from which the treasure is to be withdrawn will be enriched by its removal.

Lord Ashley's statement of the amount of valuable materials into which 100 tons of peat was convertible—100 tons of peat which cost £8, and the labor of converting it about £8 more, contained:

	Lbs.	*Value.*
Carbon of ammonia,	2,602	£32 10 2
Soda,	2,113	8 16 6
Vinegar,	600	7 10 0
Naptha, gallons,	30	7 10 0
Candles,	600	17 10 0
Camphene Oil,	600	5 0 0
Common Oil,	800	3 6 8
Gas,		8 0 0
Ashes,		1 13 4
		£91 16 8

Mr. Owen, he said, had tried this experiment not merely on one hundred tons, but on thousands of tons of peat during the whole of the last twelve months. He had expended his capital on it and had received his remuneration, and was ready to stake his character and fortune on the issue. He (Lord Ashley) wished to add, that after the peat was cleared away the soil beneath was found fruitful beyond all description, because it was absolutely saturated with ammonia; and consequently, not only would the country be enriched by the conversion of the peat into valuable materials, but the soil itself would afterwards be found in a far more cultivatable condition.

The introduction of steam navigation, railroads, agricultural chemistry, the application of the electric fluid (itself unknown 200 years ago) to uses unimagined 20 years ago, and in many other new applications of physical power, afford pregnant proof of the inexhaustible resources of material nature.

If the above be true, says the New York Express, the discovery will be of immense advantage to the United States. There is already a handsome business done in Massachusetts and elsewhere in New England—and for aught we know in other parts of the country—in the cutting and drying of peat for purposes of fuel. New value will at once be given to this enterprise, should the above prove true.—*Ex.*

Mediterranean Wheat.—A correspondent of the Winchester (Va.) Republican states that in that part of Virginia the Mediterranean wheat escaped rust better than any other variety. The wheat crop of Washington county, Pa., it is said, was not more than half an average yield this year, in consequence of rust. A good deal of the Mediterranean was sown the past season in that county, and, notwithstanding the damage done to the other varieties, the Washington Reporter says that "all of this," so far as it can learn, "has turned out well."

Cheap Mode of Fattening Hogs—Allow them to run at large, and teach them to break into your neighbor's corn field every night.

CIRCULAR FROM THE PATENT OFFICE.

We are pleased to receive the following circular, issued by the Commisioner of Patents. The enquiries are directed to the most important subjects, and are so framed as to elicit the principal facts relating to each. If properly responded to, as we trust they will be, they will bring out a mass of valuable information in regard to the agricultural resources of the different sections of our country :—

The Commissioner of Patents, *in execution of acts of Congress, desires to procure information from Planters, Farmers and others on the following, and any other points that may occur to you, connected with agriculture:*

Wheat.—Your experience as to varieties, difference in weight, and of time in ripening; enemies and diseases, soil and manures best adapted to.

Oats.—What varieties have you tried and with what results, particularly as to the time of ripening; with their estimated value as compared with corn as food; is the cultivation of the oat becoming more or less popular, and for what reason?

Rye.—Have you knowledge of any new and valuable variety; to what use is it applied; have crops diminished of late years, without any apparently corresponding diminution in the fertility of the soil, and to what influence is it supposed to be attributed?

Barley.—Have any new varieties been tried, and with what results; to what uses is this grain applied in your State: if not cultivated, is it forbidden by your soil and climate?

Maize, (Indian Corn.)—What varieties most esteemed and for what reasons: what the difference in time of ripening; is it liable to change of character and climate, and other influences, and your observations on that point: give the estimated value of the husk as compared with the blade, and of both as compared with good hay, weight for weight; what is the value of green corn for soiling cattle, and especially for producing milk; your experience as to feeding grain, whole or ground, cooked or raw?

Rice.—Variety cultivated: describe any new and valuable process for its cultivation or preparation for market.

(Note.)—As to all these grains, please state the cost of production and usual weight, and the probable average per acre and actual aggregate product, if known, of each in your State; whether the average product per acre has increased or diminished; whether the weight per bushel of the various grains is fixed by law in your State; and what weight is prescribed for each.

Hay.—State the comparative value as food for stock, of clover, timothy and mixed hay; the grass seeds preferred in laying down meadows; the average yield per acre; describe any new process in curing; have meadows been irrigated in your State and with what effect?

Peas.—For what purpose cultivated in your State; for food or for improving the soil; estimated value as food for stock, compared with Indian corn; the most esteemed variety for field culture; average product per acre; value of haulm or vines compared with other fodder; average price per bushel in the last year.

Root Crops.—Irish and sweet potatoes, turneps, carrots, beets, mangel-wurtzel, artichoke, and other varieties: comparative value; cost of production: weight per bushel; and the average per acre, and aggregate produce for your State.

Cotton.—Average yield per acre and per hand in your State; aggregate yield of the whole State for 1849; describe new varieties and processes of cultivation: manures best adapted to; cost per pound or bale, of production; freight, charges, commissions &c. paid by the planter.

Sugar.—Whether of cane or maple; the product per acre: describe any new process of cultivation or manufacture; variety of cane cultivated; its enemies and diseases: cost of making sugar: freight, charges, &c., paid by the planter.

Hemp.—On this head give any information that you may deem valuable and new as to varieties, processes of cultivation and preparation for market; soil and manures best adapted to; cost of production.

Butter.—Quantity made in your State; average annual produce per cow; are cellars or spring houses preferred?

Cheese.—Same questions.

Horses and Mules.—Number raised in your State; average value of each; comparative value for farming purposes; where is your market for them?

Number of Horned Cattle in your State; average value of at three years old; where driven to market: cost of keep per head per year: which of the improved races is preferred?

Sheep Husbandry.—What the prevailing races: what the condition of this branch of industry: amount of wool clipped in the year, and average weight of fleece of different races; cost of keeping sheep through the year per head; where your markets: what your system of selling; have you wool depots, and are they found advantageous for wool grower and manufacturer; what number killed by dogs in your State?

Hogs.—Average weight at a given age; average weight consumed per head; proportion of live to nett weight, and cost of production per pound.

Rain.—Time and degree of highest and lowest range of thermometer, and the mean temperature of the year; also, inches of rain water in each month, and aggregate for the year.

Labor.—Cost of, with and without boarding, and cost of boarding.

Tar and Turpentine.—Quantity and value of, produced per hand.

Plaster and other Fertilizers.

Lime.—If used as an improver in your State, how much is thought to be best per acre, and how often applied?

Orchards: *fruits, transplanting of trees, &c.*—Information on these and kindred matters will be of universal interest.

On the cultivation of the Vine, on Grapes, and American Wines, communications are particularly solicited.

P. S. Please answer this as soon as convenient after you procure the information, and before the 1st of December; and, in the mean time please name any one to whom this circular may be sent in the hope of fuller information. If not room on the circular, please reply on a separate paper, referring distinctly to the queries. Thomas Ewbank.

United States Patent Office, Commissioner.
Washington, July, 1849. §

Attend your County Agricultural Fair, and take such animals and articles as will add interest and value to the exhibition.

DEATH OF MR. BATES, AND SALE OF HIS HERD.

Eds. Gen. Farmer:—Allow me herewith to furnish you for publication, in the Genesee Farmer, an extract of a letter I received from England, by the arrival of a recent steamer, addressed to me by Robert Bell, Esq., dated Kirkleavington, August 22, 1849. He remarks:

"It is my painful duty, to announce to you, that our late much esteemed friend, Thomas Bates, Esq., is no more. His spirit returned to God who gave it, on the 29th July last, after an illness of six weeks. It may be said of him, in his death, his country has met a great loss; more particularly its agricultural community, as he was a practical agriculturist of a discriminating mind and great experience. He more particularly excelled in the science of breeding, especially in the breeding of short-horn cattle. He early in life evinced a lively interest in this department, and by nature he seemed highly qualified not only to become conspicuous, but successful, in this branch of his profession; and the result of his sixty or seventy years of daily practical application, has, beyond the question of a doubt, placed him in the front ranks of the most successful breeders England has ever produced.

"The wide spread reputation and standing of his Duchess herd of short horns is well known and appreciated. The public will now have an opportunity to judge of their merits, as they will be offered for sale, at auction, probably next spring or summer. The time of sale is not yet fixed, but as soon as it is, I will take the earliest opportunity of informing you. I intend offering part of my herd, and that of my brother at the same time—probably the number offered will amount to 150 head."

Having myself, sold in your vicinity, as well as in other parts of the United States and in Canada, many cattle possessing the blood of Mr. Bates' herd, I presume the intelligence contained in Mr. Bell's letter will be highly appreciated by these gentlemen: hence allow me to ask its insertion in the Genesee Farmer. Geo. Vail.—*Troy, N. Y., Sept.*, 1849.

Too Hot for the Apples.—That very hot week in June was a little too strong for many of the apples in our vicinity. One hundred and one degrees of Fahrenheit in the *shade*, is a little too much free caloric for fruit of that description.

It fairly *cooked* some of the *outsiders*, and hence in many orchards we have noticed a great thinning out of the fruit, which had set abundantly, and which promised to give an abundant crop. The crop must, of course, be not a very great one. Friend Cole says we never have a great crop in "*odd years.*" It is *odd* to have such hot weather in June as we have had this year, and it is *odd* to have baked apples so soon after the blossoming. This is an *odd* year to all intents and purposes, and the *odds* are against the apples.—*Maine Farmer.*

Munificent Bequest.—The late Mr. Theodore Lyman has bequeathed a legacy of $50,000 to the Reform School, at Westborough, Mass., of which he was the founder. He has also given $10,000 to the Boston Farm School, of which he has been an active officer for several years, and $10,000 to the Massachusetts Horticultural Society, in whose labors he always took a deep interest.

AMERICAN BUTTER IN ENGLAND.

Speaking of American Butter, the London Commercial Journal has the following remarks:

"At a public sale of American butter at Liverpool, it fetched for best sorts, (one hundred and twelve pounds,) eighty-four shillings; second, seventy-two to seventy-four shillings, duty paid, while inferior only sold at forty-three shillings in bond, of which the parcel chiefly consisted. The quantity arrived at the London market shows the same results, the principal part being sold for grease purposes. The American makers of butter are very far behind the Irish, English or Dutch from the first operation to the last, all seems to be done without system or care, the same materials would, if managed by experienced hands, fetch in this market twenty-five shillings or thirty shillings more money; there is no attention paid to the making, salting, putting down or packing."

Disagreeable to our national pride and self esteem as the above statements are, we copy them nevertheless, for the purpose of correcting the defects in American butter. It gives us pain to know that so many citizens of this free and enlightened country "are behind the Irish, English and Dutch in making butter"—that where provisions are so scarce and dear as in England, none will eat common "American butter," but it goes, alas, for *soap grease!* For the credit of our rural population, we invite all our readers to aid us in putting an extinguisher on the manufacture and exportation of mean and nearly worthless butter. The production of so much "grease" of this kind, is alike unprofitable to the farmer and disreputable to the United States. The evil is in truth as unnecessary as it is disgraceful. It costs but a trifle more to make a firkin of clean, sweet, pure butter than one of rancid, curdy, filthy grease, fit only for the soap boiler. The former will bring a fair, remunerating price, (and it costs no more to transport it to Liverpool,) while the latter will hardly pay freight, insurance and commissions.

All the first rate butter and cheese which our enterprising dairymen can send abroad will be bought and consumed with avidity. They are great luxuries as well as valuable and wholesome articles of food.

Rule for Constructing Chimneys.—A very erroneous practice prevails, among chimney builders, of contracting the passage for the smoke at the lower part near the fire-place. "This," says Treadgold, "is like contracting the aperture of a pipe which supplies a jet." Chimneys, to draw well, should be contracted at the top. The rule for ascertaining the required degree of contraction is as follows:—

Let 17 times the length of the grate, in inches, be divided by the square root of the height of the chimney, in feet, and the quotient will be the area in inches, of the section of the aperture at the top of the chimney. For example, a grate 15 inches in length, with a chimney 36 feet high, to which the contracting top is required—17 multiplied by 15 gives 255, which number divided by 6, the square root of 36, gives 42½ inches for the area of the top.

Shoeing Horses.—At a meeting of the Royal Agricultural Society of England, some time since, Professor Sewel remarked, that he frequently found old horses shod with a layer of leather, forming an artificial sole between the hoof and the shoe, recovering from severe affections, causing injury to the hoof—such for instance, as contraction, brittleness, and cracks, or even diseases of the foot itself, as thrushes, corns, cankers, etc., and permanently regain their original elasticity and firmness.

Domestic Economy.

LARD LAMPS.—IMPROVEMENT IN MAKING.

BY A FARMER'S WIFE.

Messrs. Editors :—Can you inform me where the lard lamps are manufactured? (I mean britannia lamps (*a*)—those made of tin are liable to leak if set too near the fire, or from turning in hot grease.) My husband purchased one of a pedlar some five years ago, merely for the purpose of testing its value. We were very much pleased with it, but have never been able to purchase another.

I have experimented a little with my lamp, and find it consumes less grease than a common mould candle, while it gives more light than two. It burns with a clear steady light, and if the grease is clean, and the wick properly trimmed, it will require no more attention during the evening. Tallow, or any kind of house grease properly clarified, will burn equally as well as lard. I wish also to suggest a little improvement in their construction. Instead of removing the top when the lamp is to be filled, which with the utmost care is apt to disarrange the wick, there should be a tube on one side, rising as high as the top, to be secured with a screw cover.

I have heard some object to the lard lamp on account of the trouble of fitting and putting in wicks; but I have never heard these objections from persons who were ever obliged to make candles, clean candle sticks, or find their own lights. With clean grease a wick will last a month. I once burned one every evening for seven weeks, and I consider it less trouble to fill a lamp, (with a lamp filler, and no person who owns a lamp should be without one,) than to take care of a pair of candlesticks, and snuff candles. Candles are necessary when a light is required only for a short time, as in the morning; but if a light is wanted during the night, by picking down the wick of the lamp it will consume but a small quantity of grease, and require no snuffing. They should be manufactured from the best of britannia, as that article requires very little polishing to keep it looking as well as new. *Onondaga Hill, N. Y., Aug.*, 1849.

(*a*) Mr. J. Kedzie, 11 State-st., Rochester, has a few Britannia Lard Lamps for sale. They are (or were formerly) manufactured at Auburn, N. Y.

How to Render Cloth, Silk, &c., Water-Proof.—Take one pound, each, of common alum (sulphate of alumica,) and sugar of lead (acetate of lead,) and dissolve them in six quarts of boiling water, well mixed by stirring. When cold, the top portion of the mixture should be poured off for use, as the sediment consists of sulphates of lead, potash, &c. Any article of dress, no matter how slight the fabric, if well saturated with this liquid, and allowed to dry slowly, will bear the action of boiling water, and not permit it to pass through it.

To Preserve Clothes.—As clothes, when laid up for a time, acquire an unpleasant odor, which requires considerable exposure to the atmospheric air to remove, it can be prevented by laying lumps of recently made charcoal between the folds of garments; and even when the odor is already fixed, the charcoal will absorb it.

To Clean Knives.—Charcoal, ground to powder, is one of the best things ever used for this purpose.

Veterinary Department.

Warts, Wens and Tumors on Animals.—Mix tar and salt, and apply them; continue the practice, renewing the application frequently, until a cure is effected.

As a remedy for wens, some cast the animal and cut out the wen, then fill the cavity with powdered rosin and salt, well mixed; and carefully bring the skin back to its place and sew it up. Or wash the wen often, and for a long time, with warm vinegar, saturated with common salt. We have known large wens cured by warm salt water alone. Or put a hair seton through those that are not sitfasts, or a wolf on the jaw, when they appear to be ripe, and wash them daily in soft soap.

For warts, cut them open, and apply blue vitriol, *(sulphate of copper,)* in powder. A physician was induced to try this, (and it was attended with excellent success,) from learning that a boy had many warts cured on his hands from sorting brass nails, from the influence of the copper in the brass.—Neither the cutting or the application is painful. Or apply to warts raw grated carrots, mixed with salt. Warts are sometimes cured by the application of spirits of turpentine, or lunar caustic.—*Cole's Veterinarian.*

To Cure a Biting Horse.—Biting is a bad and dangerous habit. It is said that the bite of a horse that is not mad will sometimes produce madness. The following is regarded as an effectual remedy; but it is to cure a savage habit. A horse would better burn himself than bite people repeatedly. Roast or bake a piece of meat, and present it hot as he attempts to bite. Be cautious lest he bite a piece of *live* flesh instead of *hot* meat.—*Ib.*

Gestation.—The time that animals go with young is called their period of gestation; and this, as is well known, differs materially among the several kinds domesticated by man. Thus, the period of gestation in the mare is about 330 days, that of the cow 280 days; that of the sheep 154 days; and that of the hog 114 days. A most extensive series of experiments on the period of gestation has been made at the governmental farms of France, and on the farm of Lord Spencer in England. From these it appears that in the case of the mare and the cow, very great deviations from the average time occurred, amounting in the extreme to nearly two months. In the case of the sheep and swine, the deviation was less, but still considerable. The times stated above are the average of the whole; and will probably be found as nearly correct a guide for the breeder of these animals as the circumstances will admit.—*Gaylord.*

The Time for Taking Sheep from the Pastures.—This must depend on the state of the weather and food. Severe frosts destroy much of the nutriment in the grasses, and they soon after cease to afford adequate nourishment. Long exposure to cold storms, with such food to sustain them, will rapidly reduce their condition. The only safe rule is to transfer them to their winter quarters the first day they cease to thrive abroad.—*Allen's Dom. Animals.*

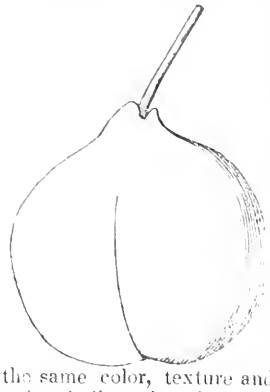
For Costiveness or loss of appetite, sulpher is a good remedy, given in a light mess, for swine.

HORTICULTURAL DEPARTMENT.

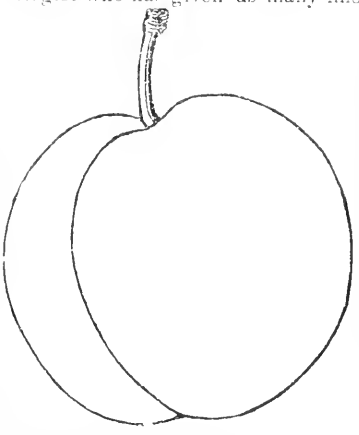
EDITED BY P. BARRY.

DESCRIPTION OF TWO NEW AND FINE PLUMS

MAMELONEE. *(Sagaret.)* This is a curious plum, raised by Mr. SAGERET, near Paris. It takes its name from its form—the French word *mamelon* signifying nipple or peak. We imported it from France with the *Reine Claude de Bavay*, and some other new varieties, four years ago. This year a three year old graft bore a fine crop that ripened with the Green Gage, about the 20th of last August. With the exception of the remarkable nipple at the base of the stalk, it would pass for a good sized Green Gage. It is of precisely the same color, texture and quality, and the tree is quite similar, though rather more vigorous, and the shoots are more gray. Its unique, and altogether distinct form, with its excellent qualities, make it a very desirable variety. It is very productive.



REINE CLAUDE DE BAVAY. This rare and excellent variety was originated not many years ago, by the late Major ESPERIN, of Malines, in Belgium, an enthusiastic pomologist who has given us many fine winter pears—not yet generally known in this country.—He considered this plum one of the finest of all his productions, and from what we have seen of it we think it well worthy of a place with our finest sorts.—This is the first year we have had it in fruit, and we are not sure but ours is the first fruit grown in this country.



The old Green Gage and Coe's Golden Drop have both been sent to England for this variety, according to the statements of Mr. Rivers; but we have been fortunate in obtaining the genuine article from the beginning. Our fruit were produced on a graft set 3 years ago on one of the top branches of another tree. It bore about 30 well-grown specimens; besides many that were stung with the curculio and dropped. On vigorous trees we suppose it will attain a larger size. Medium specimens measured 5⅛ inches in circumference; roundish, very slightly oval, resembles the Washington, with a well marked broad suture extending round one side. Stalk about half an inch long, in a pretty deep cavity. Skin pale greenish yellow, occasionally like the Green Gage, tinted with red when well exposed to the sun; thinly coated with whitish bloom. Flesh yellowish green, firm, juicy, rich and sweet; adheres to the stone. Ripens from the 15th to the last of September—later than most of the fine plums, and hence very valuable. Shoots moderately stout and smooth; leaves oval, glossy, and of medium size, not unlike those of the Yellow Gage. Tree exceedingly productive.

Mr. RIVERS says that he visited the parent tree in October, 1847, and on the 12th of that month ate of the fruit produced on a dwarf standard, preserved under muslin, perfectly fresh and unshrivelled. He said the parent tree then was about 15 years old, and was covered with fine fruit; they were indeed more numerous than the leaves.

STATE FAIR AND POMOLOGICAL CONVENTION

ENGAGEMENTS at home prevented us from reaching Syracuse until the last day of the Fair, and then we found ourselves in fact "a day after the Fair"—for Floral Hall was being swept out for the great ball; and we were deprived of a sight, even, of the fruits and flowers that had been collected there from various parts of our great State. The season, however, has been exceedingly unfavorable in all parts of the country, and this rendered the show less varied and extensive than it otherwise would have been. Still we are informed that it was very good, and great credit is due to the Committee who arranged and arranged the beautiful tent. We must refer our readers to the reports of the Committee for a detail of the exhibition.

The Pomological Convention assembled in the City Hall. There was a fair display of fruits, considering the season, and a numerous attendance of nurserymen and fruit-growers from various sections. Dr. J. A. KENNICOT, of Illinois, was chosen President, and B. HODGE, of Buffalo, and P. R. ELLIOTT, of Cleveland, Ohio, Secretaries—CHAS. DOWNING, of Newburg, S. B. PARSONS, of Long Island, and P. BARRY, of Rochester, a Committee to bring fruits before the Convention for discussion. During all the forenoon, an interesting discussion was sustained on such fruits as had not been passed upon by the Convention of last year. Among those who participated in the discussion were C. M. Hovey, of Boston, Chas. Downing of Newburgh, S. B. Parsons of Long Island, B. Hodge of Buffalo, Jas. Dougall of Canada, J. W. P. Allen of Oswego, A. Saul of Newburgh, David Thomas of Aurora, &c. We shall refer to the discussion at a future time. Among gentlemen of distinction from other States, we noticed C. M. Hovey, Esq. of Boston, Prof Mapes of New Jersey, Hon. Adam Ferguson of Canada, M. B. Bateham, Esq. of Ohio, besides others from other States.

In the afternoon the discussion on fruit was continued, and Dr. Wendell of Albany, introduced a resolution, That a committee be appointed to attend the approaching sitting of the National Congress of Fruit Growers at New York, with a view to merging the two societies or bodies into one. We regret that we have not a copy of the resolution. It was well received and unanimously adopted. Reports from several State Committees were handed in, but not read.

After raising a fund to defray the expenses of the Convention and the publication of its proceedings, the meeting adjourned in the best spirit. The session was short, but pleasant, profitable and harmonious, as all such assemblages ought to be.

THE AMERICAN FRUIT CULTURIST—Containing directions for the Propagation and Culture of Fruit Trees in the Nursery, Orchard and Garden; with descriptions of the principal American and Foreign varieties cultivated in the United States. By JOHN J. THOMAS. Illustrated with 300 accurate figures. Published by DERBY, MILLER & Co., Auburn, N. Y. 12 mo.—410 pages.

Mr. THOMAS' original little volume, "*The Fruit Culturist*," published some three years ago, was well received and widely circulated among the farmers and fruit growers, and has no doubt aided in diffusing much valuable information. The moment we first saw it we predicted its success and usefulness, because it was an unpretending, cheap little treatise, giving plain directions for the culture and management of fruit trees, with familiar descriptions of a few select varieties—just what was wanted by thousands of the country people, who had little or no experience in tree culture, and who have no relish for large volumes, high prices, or complicated scientific or technical details.

We hope this enlarged edition will be equally successful. It has cost Mr. THOMAS a vast amount of care and labor, for which we hope he will be fully compensated: but we confess that it disappoints us, and we apprehend will disappoint others. It is easy, we know, to find fault with, and suggest improvements, upon what may have cost long and weary days, weeks and months of thought and labor: and we reflect on this work of our friend with a great deal of reluctance, and only because we are compelled to utter our honest convictions. We hope the book will appear to the judgment of others more favorable than to our own. The great error which Mr. THOMAS has committed, and which we consider, has greatly injured his book, is the attempt to do too much—to compress a great deal of matter in a very small space. If he had confined himself to his original plan, and enlarged upon it, treating only of cultivation in all its branches, in full and explicit details, and of all the truly fine varieties *worthy of cultivation* in the garden or orchard—giving full and particular accounts of them *in all respects*—then he would have given us a book of great value, without a doubt—such a book as we have not at present. This was what we have expected of him. But instead of confining himself to this department, he has attempted to epitomise the whole subject of pomology, and make his book not only a manual for the mere gardener or orchardist, but a book of reference for the pomologist. This no man could do satisfactorily in so small a volume, nor should it be attempted.

To show what an amount of superfluous and almost useless matter there is in the volume, we will refer to the matter itself. Sixty pages are devoted to the descriptions of 250 varieties of apples—only 12 of these are distinguished by CAPITALS, as having been admitted as eminently worthy of cultivation in many different parts of the country; 50 others are distinguished by SMALL CAPITALS, as being next in value and quality; while all the other 200 sorts are superceded or unworthy of cultivation. Sixty-seven pages are devoted to the mere description of 250 varieties of pears, only 11 of which are designated by capitals, as above, and 22 in small capitals, while the other 200 are stated to be unworthy of cultivation, except in the collection of the pomologist.

Upwards of 100 varieties of plums are described, only 5 in large capitals, and 19 in small—leaving three-fourths of the whole number among the indifferent or rejected sorts. Now we do not think that the mass of cultivators will feel much interested in these 200 apples, 200 pears, 75 plums, &c., &c., all superceded, or unworthy of cultivation in their grounds. Would they not have thanked him to have left them out entirely, or given them simply in a list, and to have given more complete and full accounts of those that he did honor with large and small caps? For instance, the Swaar apple, which he says is "esteemed by many as the finest winter table apple." Instead of pointing out its particular excellencies and defects, and stating, as far as may be known, where, and under what circumstances it had, and had not succeeded, he very vaguely says, "not successful in all localities—fruit apt to be scabby on old over-loaded trees." A couple of pages might very profitably have been devoted to such a fruit as this. The cultivator ought to have been told how to remedy this production of "scabby fruit." The other leading fruits are passed over in the same unsatisfactory manner. The descriptions in Downing's Fruits and Fruit Trees are far more full and complete, and the particular excellencies and defects much more satisfactorily treated of—so that even the practical man must still refer to this book.

Mr. Thomas has, with a view to correctness, introduced certain descriptive terms that will not, for some time, be easily or well understood, except by those who have had some scientific training. Some of his descriptions will read harsh, we think; for instance, the *Beurre Knox Pear* is described as "large, oblong-obovate, obconic, acute." The *Gendesheim* pear is "large, often only medium, obtuse-pyriform, rather irregular, approaching obtuse-obconic." The *Bonchretien Fondante* is "roundish, slightly oblong, rarely short, obovate, obtuse." Such strings of scientific terms will appear as jargon to most people, and in our opinion will be more embarrassing than advantageous. Accuracy and precision is of great moment, to be sure, but we like to see every thing in its place, and we think these "obconics" have found their way into the wrong book.

Full sized outlines of a number of the best fruits are given, but these do not, as in Downing's, accompany the text, nor is reference even made to them in it, so that they are of comparative little value for ready use. Comparative forms of a number of apples and pears are given, in a scale one half the diameter; but unless to convey an idea of form, these are of no use, as no one who is not possessed of some mathematical information and instruments can work out the natural size. We consider the whole outline matter as a great loss, or at least a great misapplication of labor.

As a work of reference for the nurseryman or pomologist, we consider the book still more defective than for the cultivator, as there is a lamentable want of that detail of synonyms, history, local value, &c. Mr. Downing's descriptions are here much more valuable; not perhaps in the correct description of the fruits—Mr. Thomas' descriptions are exceedingly precise—but in the historical and other important detail. For instance, take the Golden Beurre of Bilboa Pear. Mr. Downing tell us that it was imported 18 years ago from Bilboa, Spain, by Mr. Hooper, of Marblehead, Mass., and that its European name is unknown. Mr. Thomas says, "a native of Bilboa, Spain." By the way it took us a long time to find this variety in Mr. Thomas' index, as he has it, "Bilboa, Golden Beurre of" —instead of "Golden Beurre," or "Beurre Golden," which we naturally

[illegible] Berries, Mulberries and Nuts, that are hardy natives, very commonly cultivated, are left out entirely, as well as Figs, *Pomegranates*, *Olives*, *Oranges*, &c., which are or may be cultivated in some parts of the United States.

Such are the principal objections we have to the plan of the work, and which compel us to think that Mr. Thomas, with a good intention to make a book that would be valuable and acceptable to all, has made one that will be of very partial utility to any.

As regards the *matter* of the book, we have not had time to give it a very close examination. The first part, of 1[illegible]0 pages, treating of "General principles and practices," is very good—better we think, than the same part of any other book of the kind we have. It contains the latest experiences of the author, and cultivators generally, gleaned from the best periodicals of the day, arranged in a compact and convenient manner. This part of the book will be worth much more to the cultivator than all the rest, and will not be too dear at the price of the book, for those who are without a guide in those matters. We have noticed a few errors that it would not be proper to pass by. On page 28, on "the production of new varieties," the word "inoculated" is frequently used, instead of fertilized or impregnated; "inoculated", is never used in speaking of the application of the pollen of one flower to the stigma of another, but is used generally as synonomous with budding. This is a trifling error but worthy of correction.

The classification of the different varieties strikes us as very good. It is the same as that adopted in some European treatises. Apples are separated into three divisions—*Summer*, *Autumn* and *Winter;* each division into two classes, *sweet* and *acid;* each class into two sections, color *striped with red*, and color *not striped*. This last division of color we have not met that we remember in any other book, and although not objectionable, will be of little service. We think the distinctions would have read more correctly in this way, "color with more or less red" and "color without red"—because some apples are wholly red or washed with red and not "striped," and those "not striped" might be wholly of any color, like Black Detroit, or Red Astracan. Pears are arranged in three divisions, *Summer*, *Autumn and Winter*. Each division into three classes, "Distinct Pyriform," "Obscure Pyriform," and "Roundish or Oblate;" each class, into three sections, large, medium, and small. In a scientific work these would be very well; but for practical uses, the divisions, as season of ripening and uses, table or cooking, would be more simple and valuable. The cooking varieties should certainly be classed separately, as they have now become quite numerous and distinct, and the distinction is observed by all cultivators.

The article on pruning is quite meagre and faulty, particularly that "to promote fruitfulness," and "pyramidal trees." At the present moment these two branches of pruning are among the most interesting subjects connected with tree culture, and Mr. Thomas has said but very little about them, and that little is neither explicit nor correct. We could extract an article from a late number of Hovey's Magazine worth ten times as much. Indeed Mr. Thomas is evidently in the dark on this subject. No man, however much he may have read or thought on the subject, or how intelligent he may otherwise be, can communicate intelligible or reliable information on pruning, until he has used his knife for a long time, and observed well and extensively the effect of every operation. The pruning of pyramidial trees, and pruning to promote fruitfulness, require care, skill and caution, and if directions are given they should be fully and explicitly stated. We shall have more to say on this subject at another time.

In speaking of the culture of dwarf pears, page 196, it is stated that the orange quince had proved the best for stock. Now this is a great error. A similar statement was made by Mr. Downing some two or three years ago, in the Horticulturist, and the confidence placed in that Journal induced the general belief that this was so; consequently a great many nurserymen commenced raising seedlings of the orange quince to work the pear, and in most cases that we know of it has proved a failure. A neighbor of ours, an excellent nurseryman, tried it, and had to pull up and throw away his young trees at two years old. He would not impose on his customers by selling them, and he is now supplying his nursery with the French stock. This is an error that will lead to serious consequences we apprehend, and we are astonished that Mr. Thomas' great caution should have led him to hazard such an opinion.

There are many little matters through the book we should like to notice. For instance the *Carnation Cherry* is described as "yellowish white, mottled and marbled with fine orange red; leaves resembling those of a heart cherry." When mature the Carnation is light red, marbled with deeper red, and the leaves are distinctly of the Duke or Morello classes, though large.

There is an indefiniteness about the terms used to denote the seasons of the ripening that will not be found convenient to everybody. Instead of saying "wheat harvest," "autumn," "mid autumn," "early," "late," "rather late," "season medium," &c. we would greatly prefer to have the months or parts of months designated. It would take some people a considerable length of time to figure up the exact date of "wheat harvest," "mid autumn," or "medium season."

In the latter end of the book we find a chapter on the pronunciation of foreign names, or rather a half way attempt at anglicising them. Beurre is here made to rhyme with hurry—thus, "burry." This is quite new indeed. We should be much pleased to have all foreign names anglicised, if it could be done properly; but until we can have an English name in reality, let us have the *true* French pronunciation, at least in books.

We trust that what we have said will deter no one from purchasing this work; for, although it is not what we expected, nor what, in our humble opinion, it ought to be, it is a book of great value, and we hope will find its way into the hands of every professional and amateur cultivator in the country. It costs but a dollar and there is many a dollar's worth of useful matter in it, not in other similar works. This much we feel it our duty to say.

Transplanting.—Autumn transplanting is to be preferred for all hardy trees and shrubs, except when soil may be wet as in the very northern extremities of the United States and Canada.

Trees planted carefully—properly, as soon as removal is practicable, will be nearly a year ahead of those not planted till the following spring.

THE BAILEY (OR EDGERLY) SWEET APPLE.

BY F. K. PHOENIX, OF WISCONSIN.

Mr. Editor:—You published not longsince an outline and description of a fine sweet apple from Perry, Wyoming Co., N. Y., which you called the "Bailey Sweet"—stating on, "good authority," that it originated with C. P. Bailey, Esq. of that place. Having been acquainted with that fruit for the past 18 years, and esteeming it very highly, I have propagated it extensively in my nursery, and not being able to identify it with any book variety, I have felt very desirous of ascertaining its origin. Last fall when at the east, I stopped some time at Perry, my native place, and while there took much pains to trace out the source of this fruit, but could only learn the following facts:

They first appeared in the orchard of T. Edgerly, Esq. and his father in that place, from scions set 25 or 30 years since by some traveling grafters. Where they came from, or where they obtained that fruit, was alike unknown to my informant, Mr. E. Edgerly, a brother of T. Edgerly. Hence you will observe that it did not origiuate with Mr. Bailey—who, however, afterwards came in possession of the original orchard, and being a zelaous amateur horticulturist, and withal very liberal, disseminated it widely—and to whom therefore, the public is much indebted, as also to the Messrs. Pattersons of the same town. I have called it the Edgerly Sweet as first appearing with that family, and as having been so called to a considerable extent in that vicinity—though known by both names. Having given you the facts you can judge for yourself which is the correct name.

I fully acquiesce in the character given it in your description. It is by odds the finest sweet apple I ever saw of any season. The trees are productive and in the nursery very hardy and thrifty, and generally upright, though slender, and on poor soils sometimes straggling. Wood remarkably dark. F. K. P.—*Delavan Nursery, Wis., Sept.*, 1849.

This apple has been described under the name of "Baily Sweet," and considerably disseminated since under that name. That name was adopted because in most general use. We do not think that any other could be adopted now, with propriety.—Ed.

Notes on Cherries.—We consider cherries that ripen during the last of July and first of August very valuable. Some people think that because the cherry season is short, it is not important to select varieties with regard to their season of ripening; but they are greatly mistaken. If we are to have a dozen cherry trees, instead of selecting only two or three popular sorts, such as *Black Tartarian, Yellow Spanish, Black Eagle, Knight's Early Black, Elton,* &c.—all first rate to be sure, but ripening about the same time, or varying not more than a week—we should make some such selection as the following: *Bauman's May,* or *Early Purple Guigne,* both very early, (say 10th to 15th of June in this region,) and about equal in quality, *May Duke, Knight's Early Black, Black Tartarian, Elton, Napoleon Bigarreau, Belle de Choisy, Sparhawk's Honey, Downer's Late Red, Elkhorn, Belle Magnifique.* Here we have a dozen trees that will supply fruit from the tenth of June (in some seasons earlier,) until the middle of August; and if we would add one or two late Morellos, we might extend the cherry season nearly three months.

PEAR TREE BLIGHT.

Mr. Barry:—Having witnessed the effects of Blight in pear trees, and the almost certain destruction of them in our immediate region, I have taken no small pains to enquire of growers of them in different localities near us what the cause was, and remedy, if any. Premising that the pear tree naturally is a lopg lived one, I have found that where they have been grown in land where the grass has been suffered to remain in heavy turf around them, in close, compact, heavy soil, little if any blight has been seen. This culture prevents a too rapid growth of the young and tender shoots, consequently the *hot* sun's rays does not check the circulation of the sap, to burn and blight them. I find many persons who say that trees of theirs, growing under these circumstances, rarely blight; while others, who dig round the roots and give them strict attention, only find disappointment in *blight.* I am satisfied that had I not spaded round a large tree this season, around which I found the earth had packed and grass well grown and matted, that I should not have lost it.

My advice is to plant the trees in good heavy soil and pack it round, even to stamping down, and then put leached ashes around them. Then we shall have slow growing, long lived and sure bearing pear trees. I should be glad to have some one or many give their experience in this matter, and tell the public through the Farmer, whether I am right or wrong in my conjectures. James H. Watts.—*Rochester, N. Y., August,* 1849.

Remarks.—We shall be glad to hear the experience of fruit growers on this point. The same view has very generally been taken of *blight.* A connection has been supposed to exist between rapid growth and blight, but from very extensive observation we are inclined to doubt it. We have seen old and slow growing trees, on hard and dry soil, just as much affected as rapid growers on a damp soil. One thing however is true, that it is more difficult to save a tree growing rapidly when it is attacked, on account of the more rapid circulation of the juices, and consequently the disease. As far as our observation has extended, there has been very little blight this season. Indeed we have seen none whatever in any of the nurseries here—nor in private gardens, except in cases where trees had been previously attacked. It is evidently disappearing.

Culture of the Plum.—"An old Digger." in the *Horticulturist,* says: "Plum trees like a moist soil. I have found that covering the ground four inches deep with old spent *tan-bark,* is a good way of preserving the moisture, and keeping the tree in health. I scatter fresh lime thickly over the surface of the tan every year, as soon as the green fruit begins to fall. This kills every curculio that attempts to enter the ground. The tan prevents the weeds from growing, keeps the roots cool, and insures me good crops of plums. I spread it as far as the roots extend, and it wants renewing, or adding to, once in three or four years."

Fruit Trees may be transplanted successfully, in this and most other sections, any time from the 1st of October until the ground is frozen. The trees should be well secured, and a few inches of manure or litter spread around the roots.

Editor's Table.

ACKNOWLEDGEMENTS.—We are indebted to M. B. BATEHAM, Esq. editor of the Ohio Cultivator, for a copy of the "Third Annual Report of the Board of Agriculture of the State of Ohio." It is a work of over 200 pages, and contains much valuable statistical matter relative to Ohio Agriculture, together with several well written essays on practical and scientific subjects. We shall endeavor to give, in future numbers, some extracts from its pages.——To DERBY, MILLER, & Co. for a copy of "The American Fruit Culturist," by J. J. THOMAS. See review of this work, page 212.——To the proprietors for a "Descriptive Catalogue of Garden Seeds cultivated at the Wethersfield (Conn.) Seed Garden, by COMSTOCK, TYREE, & Co."—containing much useful information on gardening, &c., &c.——To the proprietor for "Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs and Plants, cultivated and for sale by DANIEL MILLER, Jr., at the Cumberland Nurseries, near Carlisle, Pa."——To the Secretary for the "Third Annual Report of the Mahoning Co. (Ohio) Agricultural Society"—containing the Address of JOHN M. EDWARDS, Esq., and other interesting matter.——To several unknown friends for pamphlets and papers embracing reports and proceedings of various Agricultural Societies, &c. &c.

OBITUARY.—It is with much regret that we announce the recent decease of several prominent and ardent friends and promoters of agricultural improvment—men who have accomplished much for the benefit of mankind and their country. Among others, we notice the death of HENRY COLMAN, Esq. author of "European Agriculture and Rural Economy," and formerly editor of this journal; ELIAS PHINNEY, Esq. of Lexington, Mass.; Dr. H. GATES, of St. Louis, Mo., senior editor of the Valley Farmer, and formerly editor of the Iowa Farmers' Advocate; Col. EDMUND KIRBY, of Brownsville, Jefferson Co., N. Y.; Hon. E. MACK, of Ithica, N. Y.; and THEODORE LYMAN, of Boston. We regret that lack of space prevents a more particular notice in our present number.

AGRICULTURAL FAIRS.—So far as we have ascertained the Agricultural Fairs held in the month of September, have been unusually well attended. We have only received full reports from two or three counties. The Livingston County Show, held at Geneseo on the 4th and 5th, is described as being all that could be expected from the farmers and friends of improvement in that noble agricultural district. The exhibition of stock was highly creditable—the best, probably, ever witnessed at any County Fair in the State.

The Monroe Co. Fair is being held to-day. (Sept. 26.) Though only stock, implements, &c., are exhibited on the first day, the number of people in attendance is much greater than at any previous Fair of the Society. The cattle, horses, sheep and swine are better and more numerous than we anticipated. The display of implements and machines is good, as usual. Among the latter we notice that our enterprising friend EMERY has his Railroad Horse Power and Thresher in operation and working to a charm.

CREDIT.—The wholesale manner in which the Farmer is copied from, and no credit given, by several agricultural and other leading and influential journals, induces us to again protest against the neglect or unjustness of those who thus appropriate the labor and property of others. We observe in the Working Farmer for August, an article on "Agricultural Education," by our able correspondent AGRICOLA, credited to the *Washington Republic*. As it originally appeared in the Farmer, we ask the usual credit—though we are glad that an article so able and important is receiving such extensive circulation. We have some twenty different journals now on our table, which contain articles originally published in the Farmer, (some of which cost us and our correspondents much time and labor) without the least acknowledgement. To promote the cause we are very glad to have our articles copied, but when editors who boast of their talents and enterprise make use of our humble lucubrations, to enhance the value and popularity of their respective journals, we respectfully submit whether they are not unacquainted with, or heedless of, the commands of the Decalogue.

THE LIST OF PREMIUMS awarded at the State Fair in Syracuse, was received so late that we are unable to publish it all this month. We make room for a part of it, and will endeavor to give the remainder in our next.

AGRICULTURAL SHOWS.—Annual Fairs of State and County Agricultural Societies are to be held this month as follows:—

Chemung County,		Horse Heads,	Oct. 17 and 18.
Delaware	"	Delhi,	Oct. 3.
Genesee	"	Batavia,	Oct. 4 and 5.
Niagara	"	Lockport.	Oct. 16 and 17.
Onandaga	"	Syracuse,	Oct. 3, 4 and 5.
Seneca	"	Ovid,	Oct. 4 and 5.
Suffolk	"	Greenport,	Oct. 2.
Wyoming	"	Warsaw,	Oct. 2 and 3.
Yates	"	Penn Yan,	Oct. 5 and 6.
Maryland State,		Baltimore,	Oct. 10, 11, and 12.
Middlesex, Mass.		Concord,	Oct. 3.
Mahoning Co. Ohio,		Canfield,	Oct. 2 and 3.
Clinton	" "	Wilmington,	Oct. 17, 18 and 19.
Ross	" "	Chillicothe,	Oct. 5 and 6.
Licking	" "	Newark,	Oct. 3 and 4.
Delaware	" "	Delaware,	Oct. 2 and 3.

Buffalo Nursery and Horticultural Garden.

THE Proprietor of this old establishment offers for sale a very large assortment of FRUIT AND ORNAMENTAL TREES, FLOWERING SHRUBS, &c. The Fruit Trees are very vigorous and healthy. His whole stock has been propagated with the greatest care, and mostly from bearing trees growing on his own grounds.

Apple Trees of some many of the most choice sorts, including Northern Spy, Roxbury Russet, &c., &c., by the thousand at very reduced prices. Dwarf Pears, a fine assortment of beautiful trees. *No fire-blight in these nurseries.* 8000 Peach Trees, of the very best sorts; fine trees and free from all disease. Cherries; a fine collection grown with low heads. Also, a good assortment of the Plum, Pear, Apricot, Nectarine, Quince, and all the smaller fruits.

The assortment of Ornamental Trees, Flowering Shrubs, &c., comprises almost every desirable article. Annual importations are made from Europe of new and rare varieties of Fruits, Roses, &c. Apple, Pear, Quince and Plum STOCKS by the quantity, and Nurserymen supplied with trees of large or small size at low prices.

Orders by mail or otherwise, and letters of inquiry will receive prompt attention. Every article carefully labelled, securely packed and forwarded agreeable to order, and with the least possible delay.

☞ Descriptive Catalogues sent gratis to all who apply (post paid,) and every article will be sold at the lowest nursery prices.

Buffalo, N. Y., Sept. 1 1849. B. HODGE.

Walworth Nursery.

GREAT INDUCEMENTS TO PURCHASE FRUIT TREES.—I propose to sell at my extensive Nursery about 20,000 good thrifty grafted Apple Trees four years old at very reduced prices by the thousand. Being engaged in other business that requires mostly my attention the present season, I am disposed to offer rare inducements to those who wish to purchase in large quantities.

The Apples consist mainly of Baldwin, Rhode Island Greening, Roxbury and Golden Russets, Esopus Spitzenburg, Talman Sweeting, Golden Sweeting and many other sorts in smaller proportions.

Also, for sale a good assortment of Pear, Cherry and Peach Trees of the most desirable sorts. G. T. YEOMANS.

Walworth, Wayne Co., N. Y., 1849. [10-3t]

Seeds and Implements.

GENESEE SEED STORE AND AG. WAREHOUSE—Irving Hall, opposite the Eagle Hotel, Buffalo-st.—Having purchased the Agricultural and Seed department of Messrs. Nott, Elliott & Fitch, we intend going more extensively into all the branches of our business. We shall keep constantly for sale, all kinds of Imported and American Field and Garden Seeds, and a large assortment of the most approved Implements and Machines used by the Gardener and Farmer. We manufacture Pennock's Wheat Drill, (the most perfect and substantial Drill in use,) the celebrated Massachusetts Eagle Plow, Drags, Cultivators, &c., &c., all of the most approved patterns and construction, and keep a full supply of all the Boston and Worcester Plows, Sub-soil, Delano's, Burrall's Shell Wheel, Anthony's Patent Index, &c., &c.

In addition to our stock of implements, &c., we think we can say with perfect confidence, we have one of the largest, most carefully grown and best selected stock of FIELD, GARDEN and FLOWER SEEDS in the country, including several kinds imported from Europe. Farmers, Gardeners and Dealers would consult their interest, and perhaps insure good crops, by calling at our establishment. RAPALJE & BRIGGS.

Rochester, May 1 1849.

Palmer's Wheat Drill.

THE subscribers have made an arrangement with Mr. Palmer to manufacture for the coming season five hundred of his new Wheat Drill, to be sold in Western New-York. They are now receiving orders for them, and relying upon heavy sales, have determined to sell them at a saving price—at least twenty-five dollars less than any other drill capable of performing as much. The Drills are constructed under the immediate direction of the inventor, and *Warranted*.

An agricultural implement as important as this should be afforded at a rate that places it within the reach of every farmer. To accomplish this Mr. Palmer has spared no pains to become acquainted with all the Drills in use by consulting both English and American Agricultural works, and by procuring copies of inventor's claims, issued or pending in the Patent Office. He has used different kinds of drills for the past years and has learned by practice the wants of the farmer. After repeated efforts and expensive experiments, he has produced a simple, substantial Drill, which by way of eminence he calls a "WHEAT DRILL." It is vastly superior to the costly and complicated machines heretofore in use. This is the third Drill he has invented, and he has now brought it to that state of perfection beyond which it cannot be carried. It is the Ne Plus Ultra of Drills, combining all the advantages of every other, and free from their imperfections.

We challenge the world to produce a Drill equal to this in durability, operation or price! ☞ All orders should be sent in or delivered to one of our agents as early as July to secure attention. J. A. HOLMES & CO.

Brockport, March 15, 1849

MOUNT HOPE GARDEN AND NURSERIES,

ROCHESTER, N. Y.

THE proprietors invite the attention of Fruit Growers, Nurserymen, and dealers in trees to their present stock now offered for sale. By recent large importations from Europe, and an extensive scale of propagation at home, we have obtained a stock of nursery articles as complete as any in the country, and we offer them to purchasers on the most liberal conditions.

The well known health, vigor and hardiness of the trees raised here, and the undivided and scrupulous attention given to every department by the propietors in person, offer great inducements to purchasers.

STANDARD FRUIT TREES.

Consisting of all the best varieties of the *Apple, Pear, Plum, Cherry, Peach, &c.*, of suitable age and size for orchard planting. The principal stock is made up of the well known popular sorts, but all the new American and foreign kinds are in our possession, and can be furnished.

PYRMIDAL AND DWARF TREES,

Consisting of select varieties of Pears on Quince, Apples on Paradise, and Cherries on St. Lucie, or Mahaleb stocks, for gardens, and limited grounds; and for nurserymen and others who wish to obtain fruit from their trees at an early day. We have for many years given special attention to this department, and therefore believe we have probably the largest and best stock in the Union.

GOOSEBERRIES, RASPBERRIES, CURRANTS, ETC.

Of these we have a large and complete assortment, and can supply them by the 100 or 1000. The best English Gooseberries are imported every year. All the new Currants can be supplied.

ORNAMENTAL TREES, SHRUB ROSES, ETC.

All the leading sorts, such as Horse Chesnut, Mountain Ash, Ailantus, &c., can be furnished by the 1000 or 10,000 at much below ordinary rates—besides a large collection of new and rare Trees, Shrubs, Roses, &c., recently imported.

HEDGE PLANTS.

Buckthorn 2 and 3 years from seed; Osage Orange, 1 and 2 years; Privet; besides Evergreens, such as Red Cedar, Hemlock, Norway Spruce, Arbor Vitæ, &c., can be furnished to any extent required.

STOCKS AND YOUNG WORKED TREES FOR NURSERYMEN.

Pear Seedlings, 1 and 2 years transplanted; Plum do., 2 years from seed bed; Paradise Stocks, for Dwarf Apples; Mazzard Cherry Seedlings, 1 year; St. Lucie, or Mahaleb Stocks, for dwarf Cherries; Quince Stocks, of sorts commonly used.

Young worked tres for distant transportation.

NEW UPRIGHT QUINCE the most easily propagated, and freest grower. We have now obtained a pretty large stock, and can supply them in moderate quantities.

Wholesale Priced Lists and General Catalogues forwarded to all post-paid applications.

Sep. 1, 1849. ELLWANGER & BARRY.

Albany Agricultural Warehouse,

No. 369 & 371 South Broadway.

THE Subscriber having during the past season suffered in common with many of his fellow citizens—his warehouse being consumed, &c.—has procured the spacious new store erected for his business, No. 369 and 371 South Broadway, where he has an extensive assortment of all the best and leading AGRICULTURAL IMPLEMENTS and MACHINES in use. From his long and successful experience in the manufacture and sale of articles in his line, he flatters himself that he can suit the wants of the farming public to the best of its kind, and on as favorable terms as any other manufacturer in the States.

Among his assortment are his celebrated Horse Powers, Threshing Machines and Separators.

Smith's Patent Cornshellers, for horse power.

Clinton Hand Shellers, single and double hopper; Grant's Patent Premium Fanning Mills, for power and hand, &c., &c.

Also a complete assortment of Garden, Field and Grass Seeds.

[9-tf] H. L. EMERY.

DR. KITTRIDGE'S

CELEBRATED SPRAIN & RHEUMATIC LINIMENT.

NO better preparation was ever offered to the public for the following complaints:—Rheumatism, Lame Backs, Bruises, Sprains, Stiff or Contracted Tendons, Swelling, Stiff Neck, Nervous Headaches, Earache, &c.

This Liniment is likewise excelled by none in its uses upon Horse and other Animal Flesh, for curing Spavins, Sprains, Sweenies, Galls and all flesh wounds.

Price Fifty Cents per bottle. Prepared and sold, wholesale and retail, by A. GRANT,

No. 43 Exchange-st., Rochester, N. Y.

Agents—Isaac Mitchell, East Bloomfield; S. D. Lundy, Waterloo; W. P. Matison & Co., Seneca Falls; E. W. Cheney & Sons, Canandaigua; Clark & Pierce, Livonia; H. Tilton, Moscow; Whitney & Laffin, Mt. Morris; Ely & Co., Clyde.

October 1, 1849. [10-tf]

Agricultural Books.—A large assortment of Books on Agriculture, Horticulture, &c., for sale at this Office.

CONTENTS OF THIS NUMBER.

HORTICULTURAL DEPARTMENT.

ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, Sept. 24.

Ashes.—Market very firm with a good demand, but sales are restricted owing to a limited receipt. Pots firm at $7 and Pearls steady at $6 50.

Cotton.—Rather better on the medium grades. In some instances ⅛c better. Sales 3,000 bales.

Flour & Meal.—Market for Western and State Flour is again 6d better with a good eastern and home demand, particularly for new western. Moderate demand for inferior grades for export, and for this description the market is unchanged Sales 6,000 bbls at $3a4 for uninspected fine, 4 87 a $5 for common State and mixed Mich old, $5a5 12 strait State and old Western, 5 18a5 31 for new Michigan, 5 31a5 44 pure Genesee. Sales 140 bbls Jersey Meal at 3 18.

Grain.—Market better for Wheat. Sales 3,300 bush prime Genesee at 1 20a1 21. 1200 bu inferior Chicago at about 67 and a cargo of new southern on private terms. Corn 18,000 bu at 58a59 western mixed, 60a61 flat and round yellow. Oats 37a38 for old, and 35a36 for Jersey.

Provisions.—Ohio pork is heavy with a fair demand from the trade: sales 800 bbls at 10 for mess and 8 50 for prime, and 9 13 four mess. Dressed hogs in good demand at 6a7c. Lard heavy with fair demand; sales 700 bls at 6a7 for good to prime. Beef steady; sales 250 bls at 13a14, for mess and 75 bls prime at 9 50. Butter heavy. Ohio 7a10 and 10a14 for state. Cheese saleable at 4a6 and arriving freely.

To Advertisers.—The Publisher of the Farmer begs to remind all interested, that his terms for advertising, as well as subscription, are *cash in advance*. Those who wish to avail themselves of the superior advantages of the Farmer as an advertising medium, should send requisite payment with their orders, *to secure attention and insertion*; and those whose notices do not appear, will, with this explanation, understand the reason.

In most cases, in which we have, in order to accommodate distant friends, (?) published notices without a rigid adherence to advance terms, vexation and loss have been our reward for the favor extended. We have hundreds of dollars due us, which we are unable to collect by ordinary means Many to whom we send bills, requesting payment, give the matter no attention whatever—and thus, after being *largely benefitted* by our extensive circulation, either *refuse* or *neglect* to be———. This is pleasant—very. However, some of these silent gentlemen may possibly soon receive a benefit through the pages of the Farmer in the shape of an *entirely gratuitous and conspicuous notice*—the only way perhaps in which we can square accounts!

Back numbers and volumes of the Farmer promptly supplied to agents and new subscribers.

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by
D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, Editors.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

Five Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

Advertisements.—A limited number of short and appropriate advertisements will be given in the Farmer, 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 Farmer is from five to eight thousand larger than that of any other agricultural journal published in the United States.

☞ Advertisements, notices, &c. should be forwarded on or before the 15th of the preceding month, to secure insertion in any specified number.

☞ The Farmer is subject to newspaper postage only.

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. X. ROCHESTER, N. Y.—NOVEMBER, 1849. NO. 11.

THE PREVENTION OF DISEASE.

On no subject do people at large more need instruction than on that of preventing disease, or of *preserving health*. Believing that a cheap publication placed within the reach of all, is the proper medium through which to enlighten the popular understanding, we shall offer no apology for introducing the discussion of this important topic in our columns. The writer has spent the two last summers in the Southern States, and has very recently visited the western country, and searched after the causes of cholera in the cities of Detroit, Sandusky, Springfield, Chillicothe, Portsmouth, Cincinnati, Maysville, and elsewhere. There is a large farm on the Scioto bottoms, between Columbus and Circleville devoted to the cultivation of broom corn, on which thirty-five hands were attacked with the cholera, which proved fatal to thirty-four of their number. The fatality at Sandusky was only a little less, when the pestilence was at the acme of its intensity.

We had occasion to study this malady during its prevalence in the city of Buffalo in the years 1832 and '34, as a practicing physician. It is not our purpose to write an article for the perusal of the profession: nor to review any of the several ingenious theories invented to account for the production of this or any other malignant disorder. It is enough to say that we do not believe that any excess or deficiency in atmospheric electricity, nor the growth of microscopic fungi in the human system, will account for the killing of thirty-four persons out of thirty-five attacked with cholera on one plantation, and the escape of all others on healthy farms hard by. In a word, we believe that cholera, plague, ship fever, yellow fever and fever and ague are the results of *local causes*, which in most cases can be removed to the inestimable advantage of the human family. There has not been a single case of cholera in any city or village in the large State of Georgia this season. Something like this complaint has prevailed on one or two rice plantations in the Savannah swamps. Cholera was very severe early in the summer on the Mississippi from New Orleans upward.

In 1817, says the London Times, "the overflow of the river Ganges had swelled to a greater height than usual the annual inundation of the marshy plains adjacent. Cities and villages appeared like houses in the midst of a temporary ocean, covered with innumerable boats, and traversed even by vessels of 100 tons burthen. The whole country round Jessore was one sheet of water, and those jungly marshes, known as the Sunderlands, which are intersected by the numberless streams forming the delta of the Ganges, lay steaming in a moist calm air, neither quite overflowed, nor yet quite dry, a hot-bed of putrescent miasma.

"It was under such circumstances, aggravated by the heats of August, that the first seizure occurred at Jessore. The mortality spread rapidly among the population, afflicting chiefly the miserable Pariahs, who earn, by excessive toil under a vertical sun, only about 2½d a day, and who live in squalid hovels, crowded and damp, in the filthiest quarters of the town. In a few weeks 10,000 souls, a sixth of the population, had perished. The civil courts were closed, business was suspended, and the wealthier inhabitants fled in crowds to the country. Within a month the disease broke out in Calcutta, about 100 miles to the south-west, brought, as some say, by fugitives from Jessore: originating spontaneously, as others suppose, from the same cause in both places. Here, also, it committed fearful ravages, destroying daily 200 persons. Its migratory character soon became terribly apparent; within a few weeks it had devastated every town and village within an area of several thousand square miles, from Sylhet in the east, to Cuttack in the west, and from the mouth of the Ganges upward to its confluence with the Jumna."

In coming from Southern to Northern cities, we were forcibly struck with the lack of cleanliness in the latter where cholera has most prevailed, as compared with the neatness of those at the South where rigid sanitary measures have *prevented* the disease. It is not pleasant to speak in terms which imply censure of one's fellow citizens in any city or place; but when he sees his neighbor's house on fire, and knows that the whole family are asleep under its roof, it is his duty to cry aloud, even if it shall disturb the quiet slumber of the whole neighborhood. The germs of pestilence in a city are precisely like sparks of fire on the roof of an old building, or "like the little leaven which leaveneth the whole lump."

Many a good man and many a good family have been poisoned to death within the last six months by drinking impure water and breathing impure air, which impurities were as removable as they were fatal. It was *bad water* more than a contaminated atmosphere that killed the thirty-four persons on the Scioto farm which we visited. If one were to immerse rotten potatoes or spoilt meat in water, and

then drink it, or use the water for culinary purposes, the common sense and general observation of all would lead them to expect sickness to follow such a course of conduct. Now, in hot climates and in the summer season in cold ones, the earth is covered with decaying vegetable and animal substances. To speak plainly, in cities, villages and in and around many houses, barns and stables, these organic matters are concentrated till they become hot-beds of pestilence. As the elements of disease are invisible, are volatile, and often not appreciated by any sense, families may poison themselves and neighbors without knowing it We spent a day in exploring the by-ways, alleys, back yards, cellars of unoccupied dwellings, ponds and pools of Sandusky. It stands on a level, or nearly level plain, and is underlaid with strata of lime rock, which comes near to the surface. When full justice shall be done to lime that abounds in organic remains, in producing a luxuriant growth of vegetables for sustaining animal life, the discovery will be made that inasmuch as plants and animals do not live always, their decomposition must in the end be equal to their organization. In a word, without the light and aid of science, to modify and control the decay of animal and vegetable substances, all rich farming districts must be sickly in summer and autumn.

There is a great deal of well water in this city, (Rochester,) and Western New York, which is not so good as filtered rain water for domestic use. If drank or otherwise taken into the stomach, it should be first purified. How this can be most economically done, will be fully explained in future numbers of this journal. Good health is above all price in value. Whole communities should cordially unite in all wise measures for its preservation. Believing, after considerable study and close observation, that half or three-fourths of the summer complaints, if not those of winter, *may be prevented*, we shall take pleasure in developing those physical laws of the human system and of the organized matter by which it is nourished, free from all medical technicalities. Few have duly considered the very limited knowledge of poisons, which the masses in any country now possess. This popular ignorance of the Laws of Health should be banished from this Republic, for it leads to sad and deplorable results.

PREPARE FOR WINTER.

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 all means keep your dung heaps under shelter, that they may lose nothing by leaching. Cattle, horses, hogs and sheep are most profitable, when one is sure that he saves from the possibility of loss all the matter voided by them in the course of the fall and winter.

The excretions formed by the consumption of 100 pounds of corn, oats or hay, will add 150 to 200 pounds to the corn, oat or hay crop of the next year, if skillfully managed. The first thing is to save and make all the manure which one reasonably can, and then study to obtain the largest practical gain from this raw material applied to the soil. Not a year passes in which fertilizers worth several millions are not wasted in the United States. Think of these immense losses, and set a better example to your brother farmers. Demonstrate to them that you save every pound of dung and urine that falls in your stables, yards and fields.

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.

OXALIS CRENATA.

A paper was recently read before the London Society of Arts, received from Baron de Suarce, on the Oxalis Crenata, specimens of which were exhibited.

The Oxalis Crenata has been known to the scientific agriculturists of Europe for some years. It is a tubercle, the culture of which, however, upon a large scale, has been little practiced. This tubercle is stated by Baron de Suarce (who has cultivated about two acres and a half of it upon his own estate in the south of France,) to possess a larger degree of nutriment than most of the farinaceous plants which form the basis of human food in our climate. The total weight of the crop produced upon two acres and a half cultivated by him, was ten tons. from which three tons of flour were obtained.

From the stems of the plants, which may be cut twice a year, and may be eaten as a sallad or spinach, ninety gallons of a strong acid were obtained, which, when mixed with three times its bulk of water, was well adapted for drink. The acid, if fermented and brought to an equal degree of acidity with vinegar, is superior to the latter when used for curing or preserving meat, as it does not render it hard, or communicate to it a bad flavor.

The flour obtained from the Oxalis Crenata is superior to that obtained from the potato, maize or buckwheat, as it makes an excellent light bread when mixed in the proportion of one-fourth with corn flour; this is not the case with potato, maize or buckwheat flour.

The Baron concludes his paper by expressing his willingness to make any further communication to the society on this subject that they might desire, as he would consider it a great happiness to be enabled, with the aid of the society, to introduce into England the culture of the tubercle, which seems destined to become a source of food for the lower classes, more precious perhaps than even the potato.

In reply to a series of questions, the Baron stated that the Oxalis Crenata came originally from South America—that it is hardy and unaffected by change of temperature, and grows readily in any soil, it being difficult when once introduced to eradicate it.

The thanks of the meeting were presented to the author for his communication.—*Artisan.*

THE PHILOSOPHY OF TILLAGE.

One of the editors of this journal contributed to the Transactions of the New York State Agricultural Society for 1848, an essay on the "*Philosophy of Tillage*," which it is believed will be read with interest by thousands of our subscribers who do not have access to the Transactions, if copied into the Farmer. Most of the essay, if not the whole of it, will appear in this and the succeeding number. Its design is to prompt young persons *to think*—to reason —to study questions of great practical utility. Young friends, go beyond the mere surface of your profession. Dig into it with a resolute purpose to achieve distinction, and master the several sciences that relate to rural affairs. Investigate the nature and properties of *things*, and the natural laws that govern them, whether they exist in the form of solid rocks, of invisible gases, loose friable soils, growing plants, walking animals, or rotting manure. It is *things* and *natural laws* with which the farmer has to do. Read carefully, understand these, and your honest toil will be more agreeable, more honorable and more useful to yourself and to the world.

THE PHILOSOPHY OF TILLAGE.

BY DANIEL LEE, M. D.

The art of transforming soil into bread, is one of the oldest in the world. Old as it is, the operation has hardly begun to excite that deep interest and universal study which all bread-eaters, at some future day, will bestow on a subject of such vital importance. Americans now experience no pressing necessity for improving the art of tillage. Although not urgent, this necessity really exists, and it is growing upon the country much faster than is appreciated.

After taking a calm survey of our farming operations in the southern, western, middle and northern States, I am constrained to believe that two-thirds of the tillage now in progress throughout the Union, is conducted on a system which, slowly or rapidly, as the case may be, impairs the natural fertility of the soil. In the planting States, the process of exhaustion is greatly promoted by excessive plowing and hoeing, and an increased degree of solar heat and light, which hastens the decomposition and consumption of vegetable mold, and of all the soluble mineral elements of cultivated plants. Improved plows, cultivators, and other implements, have been placed in the hands of millions of industrious laborers, to scratch, skin, and bleed the virgin soil for a few years, which, with the assistance of a bright, burning sun, and washing rains, soon consummates a very satisfactory degree of general desolation. When one plantation ceases to yield a profit on the labor employed in its culture, it is deserted, and a new one opened by felling the native forest.

This impoverishing system of agriculture is by no means peculiar to the cotton and tobacco growing States. No State in the Union is exempt from its blighting effects. Everywhere farmers claim, and freely exercise the right to skim the cream off their lands, and pick the bones of their mother Earth, for the sake of the almighty dollar. "Posterity has done nothing for them;" and their duty to leave the soil in any State, as rich as they found it, to feed and clothe an ever increasing population, is not generally recognized. The twenty-two millions of people now in the United States, act on the principle that it is wise and just to compel the forty-four millions that will be here twenty-five years hence, to give twice as much hard work for their bread, wool, cotton, flax, and hemp, as their fathers gave; or to emigrate into the wilderness, as many of their fathers did. Nothing is better known to practical farmers, than the fact, that the poorer land is made by excessive and unwise cropping, the more labor it takes to grow one hundred bushels of wheat, or one hundred bales of cotton. Any system of agriculture which impairs the productiveness of a field in the course of twenty-five years, will compel the next generation to give more sweat for bread; or seek new fields over which the plowshare of industrious, semi-savage money-hunters, has never passed. Is it not plain, that if twenty millions of people may now rightfully exhaust, to the last possible degree, one-third of the farming lands in the States, forty millions, a quarter of a century hence, may rightfully exhaust the other two-thirds.

Great industry and mechanical skill, in consuming and wasting the elements of bread and meat which a kind Providence has placed on and near the surface of the earth, are more praised than they deserve. We are too much mere physical machines; at once over-working our hands and brutifying our intellects, to the positive injury of the human family, and for no real benefit to the inheriters of our property. If we can contrive to leave our children a reasonable surface of good farming land, we need not be at the trouble of converting its soil into current gold for them. Give them a thorough knowledge of the laws of nature, by which one kernel of corn produces a thousand, and the toil required to effect this result, will be no more than the laws of health, of bodily strength and comfort, demand. A reasonable amount of manual labor, a little sweating of the face, will sweeten the bread and sweeten the sleep of any person

It is difficult to study closely the agriculture of a nation and the philosophy of tillage, and not be deeply impressed with the importance of developing *aright* the moral and intellectual as well as the physical Man. It is not enough that a few cultivators in every State be well educated, in the largest and best sense of the term. The whole rural industry equally needs the direction of cultivated reason. Without this, there will be a prodigious waste of muscular strength, and a still more disastrous loss of the elements of all crops. That portion of the substance of a soil which enters the roots of cultivated plants, circulates through their capillary tubes, and is finally assimilated into their tissues, stems, leaves and seeds, is very liable to be lost, by something like "a slip between the cup and the lip." Without some knowledge of the science of rural economy, and of the philosophy of tillage, no one can duly appreciate the extent of this loss of fertilizing atoms which in truth never enter into the composition of the crop. It is the leading object of this essay to explain how this loss of the elements of bread and meat takes place: and to suggest the best process for avoiding it.

In the first place I desire to impress upon the mind of the reader the fact, that the plow, the harrow, the cultivator, and the hoe, with which the earth is tilled, neither add any matter to, nor take any away from the surface operated on. And yet, without plowing, or tillage of some kind, no one can long grow cereal plants, potatoes, cane, tobacco, or cotton. Tillage, as is apparent, does work indirectly a material change in the soil, although nothing is added directly

to it by the hand of the cultivator. What is this important *change*, which so uniformly follows the skilful use of rural implements, and which would not ensue, if no plowing or tillage was performed? The proper answer to this question, is the first thing we have to study.

Before plowing, the ground is comparatively compact and impervious to air. After it has been well plowed and harrowed, it is exceedingly porous and mellow, to the depth which the implements have penetrated. The atmosphere over every field and elsewhere, always contains several gaseous bodies, called oxygen, or vital air, nitrogen, or azote, carbonic acid, and occasional traces of ammonia, and volatile compounds of phosphorus, sulphur and chlorine. These gaseous substances, with the addition of a few earthy substances, like pure flint, iron, lime, potash, soda, and magnesia, make up the whole weight of all vegetables and animals. Technically speaking, *a soil* is formed by the intimate union of pure mold, derived from partially decayed leaves, trees, grass, weeds, the bodies of insects, and all other vegetable or animal matters, with pure clay, sand, and other incombustible earths. The proportions of mold, sand, clay, &c., vary indefinitely. Experience has demonstrated the interesting fact, that a soil which is annually plowed and hoed, and from which all the plants that grow are removed, loses its mold, or organic matter quite rapidly. If the ground be well cultivated, and no vegetable whatever be allowed to grow therein, the consumption or decomposition of the remains of former vegetation, will still go on quite as fast as it would, provided the surface were shaded by a crop. Indeed, my own opinion is, founded on what I have seen in Georgia and South Carolina, that organic matter in a naked plowed and hoed field, will be consumed, literally burnt up, much faster than will mold, or similar organized matter, shaded by a forest of trees, or a forest of thick corn or cotton. How tillage hastens the consumption of mold, and the solution of the before comparatively insoluble salts, which appear as *ashes* when we burn wood or cultivated plants, deserves particular notice.

A cubic inch of hard wood, like a cubic inch of hard earth, will imbibe little or no gas or air. By a curious law of nature, a cubic inch of charcoal will absorb and condense within its innumerable cavities, ninety cubic inches of ammonia. It will also condense other gases and vapors. In garden culture, and first rate field tillage, the soil is thoroughly mellowed, and rendered remarkably *porous*.

Now let us see what nature does, man having done his part. The atmospheric air, which is twenty-one per cent of oxygen, penetrates as far as the plow did, and is largely condensed in the pores of the soil. During the day, if the air is comparatively dry and the sun shines, a pretty rapid evaporation will ensue. Instead of drying a well cultivated surface, as it would a compact one, moisture freely ascends from the subsoil, by capillary attraction, to fill the void above. In this ascent of water, is brought up whatever soluble gases, mold, and salts of potash, lime, etc., rain or snow water had taken out of the surface soil in its previous descent. If the ground be covered with vegetables, a large share of this ascending water will enter their roots, ascend to their leaves, and there escape as a vapor into the atmosphere; leaving behind those salts and gases required to organize and bring up the plant. If no vegetation exists and covers the ground, the water evaporates as it reaches the surface, leaving all involatile salts behind, and discharging all gasses into the air. At night, and when the atmosphere is quite damp and the soil dry the latter condenses dew or vapors, as the case may be, preparatory to feeding crops.

A due degree of solar heat, light, moisture, and of *condensed* oxygen, around minute particles of the debris of plants in tilled ground, greatly promotes the chemical combination of this oxygen with the carbon in the mold, or the remains of plants.

When mold is thus consumed, this oxygen and carbon form the gas called carbonic acid: the presence of which in water enables it to dissolve common limestone. This mineral (carbonate of lime) is quite insoluble in distilled water. All rain water contains a little carbonic acid as it falls, which prepares it to dissolve the inorganic food of plants. To raise large crops, it is needful for water to have a little more of this gas than the atmosphere can furnish. Manure and decaying vegetables will yield this in mellow soils.

As not far from one-half of the dry weight of all plants, and some forty per cent of all animals is *carbon*, it may be a favor to readers whose knowledge of chemistry is very limited, to say a few words about this element. If wood, straw, coffee, wheat, sugar, oil, starch, or lean meat, be slowly burnt, with the air nearly all excluded, on the principle of a coalpit, *coal* will be formed. This coal is *carbon*. The simple element is the same in anthracite and bituminous coal, as in coal produced from a crust of bread. In burning, this carbon unites chemically with vital air, called oxygen, in the proportion of six parts by weight of carbon, to sixteen of oxygen: which, together make twenty-two parts of an invisible, heavy gas, called *carbonic acid*.

If we examine the air thrown out of the lungs of a man or other animal for this gas, it will be found to contain one hundred times more carbonic acid, than it did when inhaled into the lungs. As animals breathe night and day during their whole lives, and are ever expelling carbon from their organs of respiration, it is obvious they must supply carbon to their circulating blood, in their food, at short intervals. On comparing the dry weight of all the matter excreted from the system by the bowels and kidneys, with that taken into the stomach, the weight of the latter exceeds that of the former by more than half.

From some experiments which I have made, I have reason to believe that the excretions of birds when dried, do not exceed twenty per cent of the dry matter eaten by them. If we examine the bubbles of gas that rise so freely on the surface of fermenting beer, in the large tubs of breweries and distilleries, it will be found to be carbonic acid: and it is often used to convert pearlash into saleratus; or the carbonates of potash and soda into the bicarbonates of those alkalies.

There is then, a natural tendency, or rather a natural law, by the force of which oxygen gas combines with carbon in the combustion of carbonaceous bodies, in all respiration, in all fermentation, and in the rotting of all organized substances. The reader will get a clearer idea of the part which carbon plays in the economy of vegetable and animal life, by a short explanation of the other constituents united with it, in organizing the seeds and other parts of plants. The other elements of what is called "organic matter," are nitrogen or azote, hydrogen and oxygen;

although phosphorus, sulphur and chlorine might with propriety be included among the volatile or gaseous elements of bread and meat. I am not entirely satisfied with all that books say on this subject: but I do not wish to discuss debatable points in this connection.

Woody fibre, gum, sugar, starch and oil, which constitute so large a portion of all vegetables, are composed of carbon and the elements of water alone. The elements of water are oxygen and hydrogen, chemically combined in the ratio of eight parts by weight of the former to one of the latter. And here permit me to remark that, to secure perfect *uniformity* in the properties and character of all chemical compounds, like pure water, all acids, alkalies, pure alcohol, and such organized bodies as starch, wood, sugar, oil and gum, the quantity of elementary atoms which enter into the composition of each compound substance *must be fixed* by a uniform and ever active law. For the proper government of matter, the Creator has established many laws, and among others that known as "chemical affinity." In the growth or organization of all living things, and in the dissolution or disorganization of the same, the natural affinity of elementary atoms, by which they unite and form various compounds, presents to the intelligent farmer a most useful and interesting study. As all natural laws which govern the results of tillage, are in truth the unchanging and ever enduring laws of God, I have long felt it to be a duty to impress upon the minds of my fellow citizens, in more States than one, the importance of teaching the Sciences which elucidate these laws, to every child that has a life to support or health to preserve. It is difficult for me to witness the decay of vegetable and animal substances, even now in the winter season at the South, and mark the bilious diseases, *cholera* and other destroying maladies, engendered by poisoning the atmosphere and rendering the water impure, and not feel deeply on the subject of removing the popular ignorance of the laws of vegetable and animal life. This ignorance is as unnecessary as it is deplorable. As a native son of New York, I beg permission to express at this point, the pride and glory I have in common with others, which are so justly awarded to the Common Schools, Public Libraries, and all other educational institutions of the Empire State. The noble liberality of her citizens can only be appreciated when seen at a distance, and surrounded by shades and influences which I shall not describe.

Beside carbon and the elements of water, all plants and all animals contain more or less of the simple gas called nitrogen in an organized form, in their respective *tissues*. Organic chemists and physiologists are still disputing the question, whether this element, which constitutes 71 per cent. of common air, is derived by growing plants and animals in any degree, directly from the atmosphere. The weight or balance of evidence is against the supposition: although there are not wanting facts and circumstances sufficient to raise a reasonable doubt in the matter. However this question may be ultimately decided, there is no dispute in regard to the fertilizing power of nitrogeneous compounds, among practical farmers. Nor is it improbable that nascent nitrogen, evolved from decomposing mold, vegetables, and manure in soils, whether combined with hydrogen to form ammonia or not, is better suited to the nourishment of plants than is atmospheric nitrogen. The progress and presence of one chemical action, like the rotting of vegetables in soils, will induce others that would not occur under different circumstances. Before studying the process by which decaying mold and other organic substances, render common limestone and the before insoluble silicates of potash, soda and magnesia, soluble in water, I desire to call attention to the fact, that sulphur, phosphorus and chlorine in combination with hydrogen, are apt to rise into the atmosphere from rotting substances, and become lost to the agriculturist. As a general rule, cultivated plants, and all vegetables contain a small per centage of sulphur, phosphorus, nitrogen and chlorine. The cabbage tribe, the seeds of leguminous plants, like peas and beans, and those of wheat, rye, corn and other cereals, most abound in the simple elements named. In an egg these elements are more concentrated than in any other organized form. A bad egg loses weight rapidly, notwithstanding its stoney covering. Its shell is really perforated with pores: and the expansion of the gases, eliminated by the decomposition of its contents, forces them through these minute apertures. In the course of time very little beside the shell will be left. That rotten eggs, when broken, will emit very offensive gases, every farmer's son knows. These gases are compounds of sulphur, phosphorus, nitrogen and chlorine with *hydrogen*, which is the lighest known gas. It is well to consider all these exceedingly volatile atoms, which can all escape from the shell of a hen's egg without breaking it, in the form of a live chick, just hatched. When the bird comes out of the shell, no phosphorus, no sulphur, no nitrogen, no chlorine is left. If this chicken be killed and placed to rot under a hill of corn, and there emit its gases in well mellowed earth, these gases would aid much in making corn, out of which a hen would rejoice to make a new egg. Matter is wholly indestructible: and it will always require lime to form the shell of an egg, and all the precise elements found in the little bones, flesh, brain, nerves and downy covering of the bird, to organise this living being, to the end of time. I desire every school boy to understand *why* a hen can make worms, grass hoppers and mice into good eggs, and cannot do as much if fed upon white pine saw dust alone. Saw dust is organized matter, but not the organized elements of a chicken. It contains not the lime to form a shell, and not the sulphur, phosphorus and nitrogen demanded in an organized condition to form the egg and make the chicken.

No cultivated plant needs richer land than cabbage: and no one organizes more nitrogen, sulphur, phosphorus and chlorine in its tissues. When it rots no plant more contaminates the atmosphere. Hens, turkeys and ducks rejoice to eat it. Without smelling the fumes of muriatic and sulphurous acids, I think the reader should be satisfied that compounds of chlorine and sulphur, as well as those of nitrogen and phosphorus, are quite volatile, and liable to waste.

It may be interesting to a few readers, to know that, some swamps in Georgia and the adjoining States are comparatively healthy, and some extremely sickly. A chemical test for sulphuretted hydrogen in the air near a swamp, determines its salubrity or unhealthiness. If plants analagous to cabbage flourish and rot there, poisoning the atmosphere like an ocean of liquid, decomposing eggs, the settler must retire from the presence of sulphuretted hydrogen,

and other mephitic gases. On the contrary, if cyprus, pine, and plants that contain but a trifle of nitrogen, sulphur and phosphorus, grow and decay, there is little or no danger. The same vegetable and animal substances that poison the air when they rot, will poison water with equal facility. All gases that escape into the atmosphere from decomposing mold or vegetation, which often cause sickness where large tracts of prairie are broken, are condensed, or soluble in rain and other water. If tillage did not largely increase the decomposition, and of course consumption of organic matter in soils, it is inconceivable how the plowing of prairies should augment disease. [*To be Continued.*]

NOTES FOR THE MONTH.

Horace Greely, at our State Fair says, "it was sad to see so many unintellectual faces there." One would have supposed that after having escaped the *cearments* of the city, friend Greely would have felt in such good humor with the throng at our great rural festival, as to have formed a more liberal judgment, the more especially, as it is but a few short months since Mr. G. complained how hard it was to find an honest face, even among his own political associates. But I would ask if Cockneyism with full cribs of corn, beef and pork in the cellar, and no notes in the bank, would not put on as unintellectual a face as Ruralism. It is the province of fruition to make man look dull, as it is of care and doubtful success to give mental lines to his countenance. 'Tis true that farmers lack the furbishing of that daily social intercourse which give colloquial facility to the gregarious town's people, neither are they accomplished with that mental sharpening, so inseparable from him who wins his daily bread by practicing the tricks of trade. But who would have the farmer thus improved, at the expense of his honest, independent face? Surely not the philanthropic editor of the justly famed New York Tribune.

That both farming and farmers are in a more rapid state of progress at this time in these United States, than at any former period, every man must be convinced who examines the reports of the various agricultural societies, now organized throughout the length and breadth of our land. 'Tis true that every man who ives by tillage cannot be induced, as Mr. G. would have him, to think, read and reflect. But the number of those who do keep up with the improved theories in manuring and culture, is sufficient to enlighten, by their example, all those of their own calling who are not utterly impracticable. Hence it is that at this time the theory of farmingis much better than the practice. Perhaps there is no trade or calling in the land in which practice is so far below theory as in farming: "the spirit is willing, but the flesh is weak." There is not one intelligent farmer but will confess that he cultivates more land than he works well; having a large breadth of field, he prepares the soil and puts in his seed indifferently, trusting to Providence to give him a good season and a fair crop—very much like the man who trusts to luck when he buys a ticket in a lottery. But as there is no error without palliation for its consequences, the slovenly farmer is not slow to charge each failure of crop to the ravages of insects, or the untowardness of the season.

Our Seneca County Agricultural Fair, held at Ovid, on the 4th and 5th of October, is represented to have been much more interesting and more numerously attended than any one of our previous fairs. Very many thanks are due to our masterly President, John Delafield, Esq., the light of whose countenance is sufficient to make every man put his shoulder to the wheel of progress and reform. I am proud to say that many of our farmers attended this fair and were pleased, who heretofore had lived so deep in the rut of tradition that they could not see out on either side.

Every crop in this county is good this season. Pasture, and in some instances Indian Corn, have suffered from the extreme hot weather and continued drouth. Potatoes in August were supposed to be done for by the heat and drouth, but the September rains have induced a continued growth in this root. I have not heard a single complaint of rot up to this, (13th October.) Pink Eyes and Mercers have again caught their original flavor, and are no longer waxy and tasteless. The supply will be short, as many farmers, discouraged by previous rot, have planted only for their own use.

Anecdote of Draining.—Last spring several gentlemen called to see the justly celebrated farm of John Johnston, in Fayette. In going over the premises Mr. J. purposely omitted to tell them which wheat field was under-drained, and the better to elicit their surprise, he led them over one wheat field where the wet, heavy, unctuous soil adhered to their boots, much to their annoyance; then crossing the fence to another wheat field, of like soil and formation, they one and all uttered their surprise at its dry and mellow surface. "Gentleman," exclaimed Mr. J., "you are on my tile." These tile are laid twenty to thirty inches deep. They were made by Mr. Wharteney, in this village, (Waterloo,) with the aid of a machine imported for the purpose from England, by Mr. Delafield. S. W.—*Seneca Co., Oct.*, 1849.

BURRALL'S SHELL-WHEEL PLOW.

Eds. Genesee Farmer:—In your May number, I find an article by H. L. Emery, purporting to be a history of the Plow and its improvements, containing statements which I deem incorrect, and injurious to me.

I cannot, for a moment suppose that you would do me an intentional injury; but having made valuable improvements by a series of laborious and expensive experiments, I am unwilling to have them kept back by the expression of hasty opinions, or incorrect statements of those who have but partially examined, or are interested in misrepresenting them. Such I deem to be the case with the writer above referred to.

He says, "in theory, by the use of a revolving landside a saving of power is obtained." &c.: "but when the earth is mellow and constantly giving way to the pressure of the wheel, *this* saving of power is *more than counterbalanced*, by the increased resistance to be overcome."

Now, without examining his theory, which has no foundation in truth, I speak only to the fact which is known to the public by repeated and careful experiments, that in all soils, and in all conditions, there is a manifest saving of power in the draft of the plow, by the use of the wheel. The average gain in the use of the wheel by Wilkie, nearly thirty years since, (as stated by Loudon,) was about thirty per cent, and the most careful experiments with mine, have given about the same result. It is therefore too

late for Mr. EMERY to say that in mellow ground the saving of power is more than counterbalanced by the increased resistance to be overcome.

Again, he says "the more *complicated construction*, and the *constant wearing* of the axis and revolving parts, has retarded its very general use." These facts are *both* assumed. The plow has *fewer* parts, and is *less* complicated than the self sharpening plow which he commends in the very next paragraph—while the *axis* and revolving parts have less friction, and wear longer than the common landside. The wheels of all those sold by me have been warranted to wear as long as the mould-boards, and of two thousand sold, not an instance has occurred to my knowledge, in which the axis has worn to injure it. On appealing to Mr. EMERY to correct his statements, he reiterates them, and I must therefore request you, as you have given currency to them, to insert the following certificates. Yours, &c.,

Geneva, Oct., 1849. THOS. D. BURRALL.

"I have used one of Mr. Burrall's Wheel Plows four years; have cultivated about 150 acres per year, and this plow has run nearly all the season each year, being used more than any other on the farm, from the fact that it *run lighter and made better work* than any other plow on the farm, and has plowed over 500 acres. It is now worn out completely in the *mould-board, landside*, and *face* of the wheel, while the *axis* or bearings of the wheel remain as perfect, apparently now, as when first put in use. My farm consists of clay and loamy land, and a part stoney, with gravel. In all soils it works perfectly well. Many of these are in use in my neighborhood, and highly approved by all. JOSEPH PLATMAN.—*Benton, June 5*, 1849."

"I have used one of Mr. Burrall's Wheel Plows on my farm until the mould-board is worn entirely out, while the journals of the wheels are apparently as good as when first taken from the shop. I am now obtaining a new set of castings for the wood, believing it to be the best plow in use. STEPHEN SHEAL.—*Geneva, Aug.* 13, 1849."

"I have been in the employment of Mr. Burrall ever since the commencement of his experiments with the Wheel Plow, in getting up the patterns for the same, amounting to more than twenty different kinds. There has never, to my knowledge, been an instance of failure in the axis of the wheel, though I have repeatedly seen the mould-boards brought in as old metal, completely worn out. ELIAS SMITH.—*Geneva, Oct.* 12, 1849."

"For the last five years I have been in the employment of Mr. Burrall as a wood workman, most of the time in wooding Wheel Plows. I have never heard a complaint of the wearing of the axis of the wheel, nor have I ever seen, heard or known of an instance of a new wheel being called for in place of one worn out. NICHOLAS H. KIP.—*Geneva, Oct.* 12, 1849."

"Ever since the invention of the Shell Wheel Plow, I have been engaged in Mr. Burrall's shop, in setting up the castings for the Wheel Plows—have broken up a great many worn out mould-boards and landsides, but have never seen a wheel so much worn in the axis as to render it unfit for use on a new mould-board. SAMUEL PRICE.—*Geneva, October* 12, 1849."

REAPING MACHINES.—The Priarie Farmer says: "McCormick's Reaper has been now sold in the west for three seasons extensively, and somewhat before that. The sales amount, say to the following figures: for the year 1847, to 500; the year 1848, to 800; and 1849, to 1500; total, 2800. Of Esterly's Harvester, the whole number in use this harvest may reach 180. Other kinds, say 100. These all do the work of nearly 17,000 men."

Hussey's and McCormick's Reapers are the principal ones used in Western New York. Who can inform us how many of each have been sold in this State?

JUMPING AT CONCLUSIONS.

BY A YOUNG "DIGGER."

MOST men are not content to travel the road of reason to a careful and safe conclusion, even at a railroad speed, but they go it with a jump. This jumping at conclusions—hit or miss—right or wrong—is quite an easy, if not a very profitable operation. It is altogether different from the out and out slow process, and is characteristic of this "go ahead," steam and lightning age. Perhaps to no department of science is this system so generally applied, and the practice of thousands so seriously affected, as to Agriculture and Horticulture.

A farmer, during the prevalence of "*potato rot*" plants a "patch" early, and digs them early—they happen, from some cause or other, to be sound, and he concludes at once that it was prevented by early planting and digging, and he of course has discovered "*a remedy for the potato rot.*" Another discovers a worm in the tops, and he proclaims to his neighbors and the world, that he has found out "*the cause of the potato rot.*"

I have often searched for worms or insects in the haulms of rotting potatoes without being able to discover any. For the purpose of testing the matter a little, the two last seasons, I planted potatoes on the *fourth of July*, and dug them on *election day*, the first Tuesday after the first Monday in November, and found them as little rotted as the same sorts, on the same soil, that were planted the 1st of April and dug early in September. Still, I am far from jumping at the conclusion that there is no advantage in early planting.

The farmer or the horticulturist examines the "*knots*" on the branches of his plum trees; he detects an insect, and immediately proclaims that "*the black gum on plum trees is caused by an insect*"—not waiting to examine very closely whether the insect was really the cause of the evil, or whether the diseased state of the branch merely furnished it a congenial home.

One of your correspondents last month took quite a jump into the turf, when he discovered that "*permitting the grass to grow around the roots of pear trees will prevent the fire-blight*"—because trees thus treated, or ill-treated, have not been subject to the blight this season: forgetting that the blight has done but little injury the present year, in this section of country. And even in previous seasons many trees and plantations of trees, under a high state of culture, escaped uninjured, while others in the immediate neighborhood fell a prey to the blight. On examining my young pear trees, about twenty in number, after reading the communication referred to, I found that the only one affected by blight was the last one in the row; and the one most completely surrounded with "turf." That tree, however, may have been predisposed to the disease; or its position may have had some influence in favoring the attack.

I once knew a man who declared that soot put around the roots of foreign grapes subject to *mildew*, was a sure preventive—because he happened to throw the soot from his stove-pipe around a young vine, which that season produced a crop of fine fruit. The next year, and ever after, the mildew destroyed the entire crop in spite of the soot.

I might enlarge and show the injury thus done to the cause of Agriculture and Horticulture; but a word to the wise will suffice for the present. J. V. —*Monroe Co., N. Y., Oct.*, 1849.

TRIAL OF PLOWS.

THE following Report of the Judges on the TRIAL OF PLOWS near Geneva, in August last, contains facts and suggestions worthy of particular attention. It will be read with interest by farmers and plow manufacturers generally—and we trust its publication will induce similar trials in this and other sections of the country. We are indebted to JOHN DELAFIELD, Esq., President of the Seneca Co. Agricultural Society, for the Report :—

To the President and Members of the Seneca County Agricultural Society :

GENTLEMEN :—When we received the notice of our appointment, to act as Judges at "*The Trial of Plows*," in Seneca County, we felt in common with our farming community, the importance of the movement, and the benefit to arise from a careful and judicious accomplishment of the purpose.

As practical farmers, accustomed to the Plow and its use, we feel justified in presenting a few remarks, in connection with the matter before us, for the consideration of the farmers, and the mechanics who are disposed to aid us in the proper arrangement of of the implements we need in our vocation, and more especially the indispensable and important instrument, the PLOW. We think it has been long evident that caprice and accidental circumstances, have given rise to a large catalogue of Plows, which, upon trial, have disappointed the hopes, and wasted the means of the purchaser: of this class of plows, few perhaps have been constructed by makers, having a knowledge of the *use* of the implement, and but little of the skill or science necessary for the construction of a *good* plow.

There seems to be another error, also, quite prevalent among plow-makers generally—too often adopted by our farmers, boding evil to our agricultural success, or at least, to a thorough and proper tillage of the soil. We allude to the frequent attempts to produce plows, which shall, by turning broad furrows, work over two acres per day—*gaining* time at the *expense* of the necessary breaking up, and essential pulverizing of the soil. Thus farmers are tempted with plows, to turn furrow slices of 14 to 16 inches in width, while the depth rarely exceeds 6½ inches. We will not deny that circumstances *may* exist when a broad furrow of 12 inches and more in width, *may* be useful; but, as a general principle, greater *depth* with pulverization, should be the main object of the plow-maker; the second effort being to overcome resistance with the least power.

We feel strong in the opinion, that large masses of soil turned over in furrows of fourteen inches wide, by six inches deep, must require a large outlay of subsequent labor, to render the soil friable, and in fit condition to receive manure in a well mixed state. Neither will the land so treated be in a state to afford thorough nourishment to the seed deposited, from the manures intended for it. The gain of time, therefore, in rapid plowing by broad furrows, may be, and oftimes is, an expensive system.

Another error in the manufacture of Plows, from which, as practical farmers we are called upon to suffer inconvenience, is, the imperfect line of draft presented to our teams, not only because this line is not preserved at right angles with the shoulders of our horses, but also because of the arrangement of the beam as attached to the iron frame of the plow body. In this latter arrangement much difficulty appears to exist, and fancy has too much sway. The obliquity of the beam to the line of the land-side may be necessary in some degree, to produce a direct line of draft from the true point of resistance: but, as practical men, we have reason to object to the too frequent need of shifting our guide bolts, and the use of other expedients to accommodate the erroneous line of draft adopted by the makers. We feel well assured that our agricultural mechanics are abundantly skillful, and possess sufficient science to correct this inconvenience, when brought to their notice.

When we consider the object or intent of the plow, we arrive at the fact that it is to perform in the hands of the farmer the same operation, and produce the same effects as the spade in the hands of the gardener; that is, to turn over and *thoroughly pulverize* or break up the soil. Now the man and his spade, acting together, is a most complex and perfect tool, but the time is yet to come when a simple machine shall be produced, to accomplish with equal excellence the same results as the man and the spade. We may not doubt, however, from the vast improvements of late years, that such machine will in time be constructed; the talent and science of our agricultural mechanics fully justify such expectations, and the rapidly increasing attention of farmers to the study of their vocation, will act as a stimulus to the inventor, and a check upon his visionary attempts.

With these prefatory remarks we now present a report of facts, connected with the trial of Plows—facts which offer to every man of thought and observation, much matter of reflection. On the morning of Thursday, the 30th of August, 1849, we reached the ground selected for the trial of plows. The field presented a generally uniform appearance, gently sloping from east to west: the soil was a clay loam, rather tenacious, as is most of the wheat land of the fertile county of Seneca. The sod was of Timothy, with a mixture of clover, and had not been plowed for several years. It should here be mentioned and remembered that, since the month of May last, but little rain had fallen in this section of country, which was made manifest by reference to a meteorological table, as well as by the condition of the soil. Nevertheless, as the soil was uniform in its nature, so the resistance offered was relatively the same to each plow, and the trial was alike to all, and under like circumstances.

A stationary power had been well placed, midway between the eastern and western extremes of a plat of ground, 150 feet long; a traveller or guide was prepared to bear and direct the rope, in order that each Plow might be directed with precision. Furrows had been previously opened six inches deep; the plows were entered on the Secretary's books in numerical order, and called to the trial in the same order. A substantial dynamometer was placed in our hands, with a certificate from the proper officer, that the same had been tested and proved by the State standard and was correct, indicating power as high as one thousand pounds. An extent of ground was carefully surveyed and marked into spaces of 30 by 300 feet, for the purpose of exhibiting the manner in which each plow could perform the work required.

With these and other arrangements our duties were comparatively easy, and no haste or hurry was permitted. We continued our labors through two

successive days, strengthened by the hope and belief that we were entering upon a system which, if continued, from year to year, would in due time work a large and positive benefit. The following table gives a full and particular statement of the trials—classifying the implements in order, from the lesser to the greater power required to overcome the resistance offered.

BY STATIONARY POWER.

Depth of Furrow, 6 *Inches*—*Width of Furrow*, 12 *Inches*.

1.	Burrall's Wheel Plow, No. 2,	290 lbs.
2.	Burrall's Wheel Plow, No. 3,	295
3.	Lamport Iron Beam, from Ovid,	310
4.	Burrall's Wheel Plow, No. 4,	315
5.	Penn Yan Plow,	355
6.	Burrall's Wheel Plow, No. 5,	356
7.	Buck Eye, Iron Beam,	372
8.	Crane Plow, with Cutter,	415
9.	Burrall's Landside,	427
10.	Dundee Plow,	441
11.	Burrall's Landside, No. 5,	485
12.	Crane Plow, with Coulter,	493
13.	Waterloo, [withdrawn.]	
14.	Pastern, [not regularly entered.]	

BY HORSE POWER.

Depth of Furrow, 7 *Inches*—*Width of Furrow*, 13 *Inches*.

1.	Burrall's Wheel Plow, No. 3,	439 lbs.
2.	Penn Yan Plow,	493
3.	Burrall's Wheel Plow, No. 5,	511
4.	Burrall's Wheel Plow, No. 4,	519
5.	Lamport Iron Beam, from Ovid,	520
6.	Dundee Plow,	520¼
7.	Burrall's Landside, No. 2,	524
8.	Crane Plow	533
9.	Burrall's Landside, No. 5,	673

The trial by horses having been made on the second day, several owners of plows entered did not appear in time

The plowing performed by the several implements was good and uniform, evidencing much skill on the part of the plowmen. Understanding that the chief object of of the trial was to ascertain the true and reliable estimate of the *power* necessary for good work, we do not deem it necessary to particularise the work of any one plow; all were good, and the facts set forth in the above table will enable every man to draw right conclusions and safe estimates. Among other facts presented to our notice were two frames of the Sheel-wheel Plow, which had been used for several years. They were worn through the mould-boards, and the wheel had yielded on its margin, being the substitute for a landside; on examination, the journals, or points of the axle of the wheels were sound and perfect.

Having witnessed the excitement among men of science, as well as among a large assembly of practical farmers, convened on this occasion, we respectfully urge upon the farmers of this State, and upon agricultural mechanics, frequent meetings and interviews upon the plan of, and with similar objects to, this meeting in Seneca County. The true interests of both will be substantially promoted, and science will be more kindly courted, to deepen our furrows, to pulverize our soils, and thus add to our general prosperity.

B. B. KIRTLAND, Rensselaer Co.,
ELIAS COST, Oaks Corners, Ont. Co.,
JOHN MALLORY, Penn Yan, Yates Co.,
Judges of the Trial of Plows.

Saturday, Sept. 1, 1849.

THE cultivation of the soil, in a free country, is the highest and noblest profession in which man can be engaged—as it is the foundation of all true wealth.

HEMLOCK, HEMLOCK SOIL, AND TAN AS MANURE.

BY ELIPHAS.

HEMLOCK seems to be ill-fated, in describing localities, with such other qualifiers as would give to the novice or stranger the notion, that in its natural state it has neither its due proportion of light or heat, or that it is usually found where nature is in her loveliest pranks. We also associate with it the idea of sterility, barrenness, and of desolate swamps. But in all this we mistake—and for underrating one of Heaven's gifts, and one of earth's ornaments. Go if you please where wild nature does command attention in romantic scenery, and you will find it. In the park it is indispensable, and for the ornamental hedge its bright evergreen leaves cannot be surpassed. Its timber is excellent feed for the iron horse; its lumber is valuable for the builder, the bark for the tanner—as are also the bark, gum, oil and boughs for the physician.

But can we speak thus favorably of the hemlock soil? I think if we look to the pioneer for an answer, it will be a prompt and decided NO. It seems to be rather an uphill business to commence making a farm of land covered with hemlock. It is not unfrequently the case, that the pioneer, after taking a hemlock sweat of ten or twelve years, gets discouraged, or gets the *western fever*, sells out at a loss, and goes west. His successor, having come from the worn out lands of the east, takes hold with high hopes, and is determined to prove to the world that he has made a good bargain. His first crop is not first rate, the second is better, the third is still an improvement, and in a few years we find his name is registered among the competitors for premium crops. Although this is but a fancy sketch, yet is a true picture of thousands of cases in our country. Hemlock muck, as is illustrated in the tanning process, by its miserly astringency, absorbs and holds the *gelne* of the soil, *(which is the nutriment of the plant.)* for at least ten or fifteen years; after which hemlock land may be considered good. Now it seems to me to be a great while to wait; and if any of your scientific writers will tell us of a shorter way to come at the availability of hemlock soil they will do a great public favor.

In the last number of the Farmer, page 244, on the culture of the plum, spent *tan-bark* is highly recommended for mulching. In Cole's American Fruit Book, page 234, Messrs. A. D. WILLIAMS & SON, of Roxbury, Mass., are quoted as having made very successful use of spent tan-bark in invigorating old and decaying cherry trees and improving young ones. Although the application was a decided benefit to the cherry trees, yet the writer gives us a caution, and recommends experiments on a small scale, on account of the injurious effects of tan on vegetation. I think if the tan is *thoroughly saturated* with animal matter there will be no risk; but on the contrary, would be a slow but valuable manure. And as hinted above in reference to hemlock soils, if some application could be made to hasten the decay of tan, it might be found to be a valuable manure. *Hinmanville, N. Y., Oct.*, 1849.

IT should be a fixed principle never to suffer the soil to deteriorate; for, as it costs as much to cultivate a soil producing only half a crop as a full one, it is perfectly clear that it is the interest of the cultivator to keep his land always in a good state.

N. Y. State Agricultural Society.

PREMIUMS AWARDED AT THE N. Y. STATE FAIR,
Held at Syracuse, September, 1849.

[*Continued from October number, page* 233.]

FARM IMPLEMENTS.

Best farm wagon, D. W. Seely, Carlisle. dip. and $5.
Harrow, A. H. Fitch, Liv. Co., dip. and 3.
Corn Cultivator, Jeremiah Fink, Lysander, dip. and 3.
Fanning Mill, Jacob Clapper, Fort Plain, dip. and 5.
Corn Stalk Cutter, J. C. Rich, Penfield, Mon. Co., dip. & 5.
Straw Cutter, J. C. Rich, Penfield, dip and 3.
Corn and Cob Crusher, for power, H. L. Emery, dip. & 5.
Clover Machine, Rapalje & Briggs, Rochester, dip. and 5.
Ox Cart, Paris Barber, Homer, Cort. Co., dip. and 3.
Horse Rake, R. H. Chase, Me., dip. and 2.
Ox Yoke, Uticon Hotchkis, Windsor, dip. and 2.

Carriage Harness, Moses Cherry, Utica, dip. and 3.
Saddle, B. Stair, Chemung, dip. and 2.
Dozen Axes, D. R. Barton, Rochester, medal and 2.
Churn, E. R. Dix, Vernon, Oneida Co., dip. and 2.
Cheese Press, Potter's Patent, L. Raymond, O., dip & 2.
Grain Cradle, Charles Clow, Port Byron, dip. and 2.
Six Hand Rakes, H. L. Emery, Albany, dip. and 2.
Six Hay Forks, J. Van Orman & Co., Vt., dip. and 2.
Six Grass Scythes, (Dunn's,) H. C. White, Agent, Mohawk, dip. and 2.
Six Cradle Scythes, Rapalje & Briggs, dip. and 2.
Six Manure Forks, (Patridge's,) Rapalje & Briggs, dip & 2.
Hay Raking, J. M. Ransom, Onon. Co., dip. and 2.
Six dozen Corn Brooms, E. W. J. Brownson, dip. and 2.
Saddle exhibited, of superior finish and workmanship, R. T. Norerove, Syracuse, silver medal and diploma.
1½ dozen [Patridge's] Potato Hooks, Rapalje & Briggs, dip.
Refrigerator, Rapalje & Briggs, Transactions.
Horticultural Tool Chest and Tools, Rapalje & Briggs, dip.
Wooden Scoop, Rapalje & Briggs, Trans.
Six Ox Bows, do. do. Trans.
Three Clark's O'S Hoes, H. H. Babcock, Otsego Co., dip.
Fence Cap Auger, J. P. Hitchcock, Cort. Co., dip.
Sausage Meat Cutter, Burdick & Cushing, Glen's Falls, dip.
Corn and Cob Crusher, Butterfield & Greenman, Utica, dip.

Horse Power for general purposes, L. B. Benton, Penn Yan, dip. and 5.
Iron Horse Power, H. E. Smith Fowlerville, dip.
Threshing Machine, B. G. H. Hathaway, Starkey, Yates Co., dip. & 10.
Seed and Corn Planter, for hand or horse power, [H. L. Emery's] Rapalje & Briggs, dip. and 3.
Corn Planter, [Bachelder's] Rapalje & Briggs, dip.
Wheat Drill, Aaron Palmer, Brockport, dip.
Wheat Drill [combining a new principle,] D. W. Yeoman, Cairo, Greene Co., dip.
Grain Drill, with apparatus for manure, P. Seymour, East Bloomfield, dip.
Grain Drill and Corn Planter, of high merit, J. Atkins, Brockport, dip.
Broad Cast Sower, Silas S. Sage, Windsor, dip.
Wheat Cultivator, D. B. Rodgers, Seneca Falls, dip.
Portable Saw Mill, H. L. Emery, dip.
Corn Shellers, horse power, [Smith's] H. L. Emery, dip.
Corn Sheller, hand power, D. W. Harris, Yorkshire, dip.
Southern Corn Sheller, Rapalje & Briggs, dip.
Vegetable Cutter, Ruggles, Nourse & Mason, Boston, presented by Emery and Rapalje & Briggs, dip.

Best and most numerous collection of Agricultural Implements, Rapalje & Briggs, dip. and 20.
Best and most numerous collection of agricultural implements manufactured in the State by exhibitor, E. J. Burrell, Geneva, dip. and 20.
The collection of implements by H. L. Emery, though not the most numerous, are recommended to the Society as worthy of special notice for their excellent quality and superior finish, dip.
Horse Power of G. S. Barber, Lyons, entitled to special notice.
Best Grain Reaper for general purposes, E. J. Burrell, dip.
C. H. M'Cormick's Virginia Reaper, very highly recommended for large farmers, dip.
Ketchum's Mowing Machine, [having received the first premium before] certificate.

PLOWING MATCH.

1st Premium, E. Davis, Watertown, $10; 2d, W. G. Brainerd, Rome, 8; 3d, Samuel Phillips, Onondaga, 5; 4th, H. D. Preston, Elbridge, trans.

Transactions were also awarded to the following competitors:—Samuel Lyderman, Geneva; Enoch Marks, Fairmont; O. Howland, Cayuga, Thomas Miller, Homer; J. F. Mosher, Clay; Wm. Miller, Onondaga; Robert Taylor, Skaneateles, Thomas Mix, Auburn; N. Griffin, Scipio; John Baker, Parish; J. Potter, Onondaga Hill, I. T. Hill, Lenox, Wm. Heining, Onondaga; John Morris Onondaga.

BUTTER.

Best lot from 5 cows in 30 successive days, Nelson Van Ness, Mayville, Chau. Co., $25.
2d, John Holbert, Chemung, 15.
Best 25 lbs. made in June, John Shattuck, Norwich, 10.
2d, John F. Clark, Onondaga, 5.
3d, Abram Adams, Preble, Cort. Co., trans.
Best 50 lbs. made at any time, Horace Clapp, Turin, 15.
2d, John Holbert, Chemung, 10.
3d, John Shattuck, Norwich, 5.
4th, Noah Hitchcock, jr., Homer, Cort. Co., trans.

Girls under twenty-one years of age.

Best, Miss Bardwell, [14 years of age,] Otisco, silver cup.
2d, Miss Susannah Van Ness, [13 years of age,] Mayville, Chau. Co., pair of silver butter knives.
3d, Miss M. E. Hopkins, Cordandville, set tea spoons.

CHEESE.

Cheese one year old and over.—A lot of Cheese designed for exhibition under this head was shipped from Buffalo and taken to Albany, and was not returned before the close of the Fair; belonged to George A. Moore, of Buffalo.

Less than one year old.—Best 100 lbs, R. D. Brown, Fairfield, $15. 2d, P. Carter, Lysander, 10. 3d, Samuel Mathews, Litchfield, 5. 4th, James P. Hitchcock, Truxton, trans. Dolph & Barber, Richmond, Ashtabula Co., Ohio, sample of "English Dairy," Cheese; 12 cheese, very fine, calculated for warm climates, from 800 cows, dip.

SUGAR.

Best 25 lbs., Peter Mitchell, Meredith, Delaware, $10. 2d, Charles W. Taylor, Cortland Co., 5. 3d, Luman Shepard, Skaneateles, Onondaga Co., 3. 4th, E. R. Dix, Vernon, Onondaga Co., trans.

HONEY.

Best 20 lbs. of honey, Aaron Goodwin, Brownville, $5.

BEE-HIVES.

Dugdall's Patent Moth Proof Bee Hive, Thomas McClintock, dip.

SILK.

Best Reeled Silk, [name not ascertained,] dip. and $5.
2d, N. M. Coburn, Stockbridge, Madison Co., 3.
Best Sewing Silk, Jeffery Hutchinson, Riverhead, L. I., 8.
2d, Parmelia Staats, Buffalo, 5. 3d, N. M. Coburn, Stockbridge, trans.
Cocoons, but one lot exhibited, and not of sufficient merit to receive a premium.

FLOWERS.

Professional List.—Greatest variety, &c., of flowers, James Wilson, Albany, $5. Of Dahlias, same, 5.
Best 24 Dissimilar Blooms, Wm. Newcomb, Pittstown, 3.
Greatest variety of Roses, Ellwanger & Barry, 5.
Best 24 Dissimilar Blooms, James Wilson, 3.
10 varieties of Phloxes, Ellwanger & Barry, Rochester, 3.
Seedling Phlox, James Wilson, 2.
Greatest variety of Verbenas, J. Wilson, 3.
Best 12 varieties of Verbenas, Ellwanger & Barry, 2.
Seedling Verbena, J. Wilson, 2.
Collection of German Asters, Wm. Newcomb, 2.
and greatest variety of Pansies, Ellwanger & Barry, 3.

Amateur List.—Greatest variety of flowers, Mrs. E. T. Martin, Willow Brook, silver medal. Of Dahlias, M. Wells, Jamaica, silver medal.
Best 12 dissimilar blooms, Mrs. W. Newcomb, 3.
Greatest variety of Roses, Mrs. E. B. Morgan, Aurora, med.
Best 12 Dissimilar Blooms, Mrs. David Thomas, 3.
6 varieties of Phloxes, Mrs. E. T. T. Martin, 3.
Greatest variety of Verbenas, do. 3.
Best Seedling Verbena, Mrs. Prof. Jackson, Schenectady, 2.
12 varieties of Verbenas, Miss L. G. Whitney, Rochester, 2.
Collection German Asters, A. Le Coteleux, Buffalo, 2.

and greatest variety Pansies, Dr. A. Thompson, Aurora, 3.
12 varieties Pansies, Dr. H. Wendell, Albany, 2.
General List open to all competitors.—Best collection of Green House Plants, Ellwanger & Barry, silver medal.
Best Floral Design, Mrs. C. B. Sedgwick, Syracuse, medal. 2d, Mrs. W. Newcomb, 3.
Best Floral Ornament, Mrs. Prof. Jackson, silver medal. 2d, Mrs. E. T. T. Martin, 3.
Best Hand Boquet, flat, James Wilson, Albany, 3. 2d, Herman Wendell, 2.
Best Hand Boquet, round, J. Wilson, 3. 2d, Mrs. White, 2.
Best Basket Boquet, with handle, Dr. A. Thompson, 3.
For the most beautifully arranged Basket of Flowers, Dr. H. Wendell, Albany, dip.
To Aurora Horticultural Society for best exhibition, Hovey's Colored Fruits.

FRUIT.

Apples.—Greatest and best variety, Benjamin Hodge, Buffalo, Dip. and Hovey's Colored Fruits. 2d, A. Bryant, Buffalo, $5.
Best 12 varieties table apples, B. Hodge, 5. 2d, A. Bryant, trans. and 2.
Best 6 winter apples, B. Hodge, 3. 2d, A. Bryant, trans. and 2.
Pears.—Greatest number of varieties of good pears, John Morse, Cayuga Bridge, Dip. and Hovey's Colored Fruits. 2d, B. Hodge, 5. 3d, J. W. P. Allen, Oswego, trans.
Best collection of first-rate autumn pears, John Morse, dip. and 5. 2d, J. W. P. Allen, trans. and 2.
Best collection of newly introduced pears, Dr. H. Wendell, Dip. and Hovey's Colored Fruits.
Peaches.—Best 12 varieties, John Morse, dip. and 5. 2d, J. M. Whitney, 2.
Best 6 varieties, Ellwanger & Barry, 3. 2d, H. G. Dickinson, Lyons, 2.
Best 12 Peaches, B. R. Norton, Syracuse, [Crawford's Early,] 2. 2d, Abram Vail, Waterloo, trans.
Plums.—Best collection 31 varieties, Dr. H. Wendell, dip. and 5. 2d, fifty varieties, Isaac Dennison, Albany, 3.
Best 6 var. Ellwanger & Barry, 3. 2d, C. S. Wilson, 2.
Best 12 plums, choice varieties, R. Woolworth, Syracuse, 2. 2d, H. G. Dickinson, trans.
Nectarines.—Best and greatest number, John C. Hastings, Clinton, Oneida Co., 3.
Grapes.—Best and most extensive varieties native grapes grown in open air, John C. Hastings, Clinton, 5. 2d, Daniel Ayers, Amsterdam, 2. ,
Best three varieties grown under glass, W. R. Coppock, Buffalo, 5. 2d, John C. Hastings, Clinton, 2.
Best dish of native grapes, (Isabella,) Rufus Cossett, Onondaga, trans.
Disc. Best grown and matured specimens, [Muscat and Black Hamburg,] ——— Downing's and Am. Fruit Cult.
Three specimens of grapes, Joseph E. Bloomfield, Mexico, Oswego co., American Fruit Culturist.
Two bottles of white and red champaigne wine, B. Poppe, Syracuse, Downing.
Specimen of port wine from native grapes, Charles A. Peabody, Columbus, Georgia, diploma.
Melons.—Best specimens of water melons, H. N. Langworthy, Rochester, $3.
Best specimens musk-melons, H. N. Langworthy, 3.
Quinces.—Best 12 Quinces, Ellwanger & Barry, 3. 2d, Lewis Eaton, Buffalo, 2.

FOREIGN FRUITS.

Apples.—Best exhibition of apples, E. Harkness, Peoria, Ill., Dip. and Trans. 2d, James Dougall, Amherstburgh, C. W., American Fruit Culturist.
Pears.—Best exhibition, F. R. Elliott, Cleveland, Ohio, dip. and trans. 2d, James Dougall, C. W., Am. Fruit Cult.
Grapes.—Best exhibition, James Dougall, dip. and trans.
Disc., Dr. J. A. Kennicott, Elm Grove, Ill., for a fine exhibition of western apples, Downing's Fruits.
Mr. Overman, Canton, Illinois, for a fine display of apples, Downing's Fruits. And same for an exhibition of pears, American Fruit Culturist.
F. R. Elliott, Ohio, fine display new western apples, F. Cul.
J. Gallup, Cleveland, fine exhibition fruit, Downing.
J. C. Holmes, Detroit, Mich., fine exhibition of apples, Am. Fruit Culturist.
A full list of the varieties exhibited will be given hereafter.

VEGETABLES.

Best 12 carrots, C. F. Crosman, Rochester, $3.
12 table beets, do. 2.
12 onions, N. Culver, Arcadia, Wayne co., 3.
12 Tomatoes, C. F. Crosman, 3.
3 heads of cabbage, N. Culver, 3.
12 sweet potatoes, do. 3.
2 purple egg plants, C. F. Crosman, 3.
half peck Lima beans, Jason W. Seward, Rochester, 3.
bunch double parsley, C. F. Crosman, 3.
three squashes, do. 3.
Largest pumpkin, H. N. Langworthy, Rochester, 3.
Best 12 ears of seed corn, N. Culver, 3.
seedling potato, Hamilton Morrison, Montgomery, 3.
and greatest variety of vegetables raised by exhibitor, C. F. Crosman, 5.
Disc., half peck Lima beans, J. P. Fogg, Rochester, 3.
Three squashes, Lewis Eaton, Buffalo, 2.
do. C. F. Crosman, 2.
Large pumpkin, N. Culver, 2.
Sweet corn, C. F. Crosman, 2.
Table potatoes, Richard Chaney Syracuse, 2.
Seedling potatoes, Luman Shepard, Skaneateles, 3.

GRAIN, FLOUR AND WOOL.

Best sample of winter wheat, one barrel, (white Blastem,) Timothy Judson, Portland, Chau. co., $5.
Second, Hamilton Murray, Oswego, 3.
Best sample oats, one barrel, E. R. Dix, Vernon, 5.
Best barrel flour, Olmitt & Stone, Rochester, diploma.
Second, Wm. H. Hanford, Honeoye Falls, transactions.
Best fleece fine wool, J. G. Strean, Washington, Pa., dip.
John Holbert, Chemung, two butter firkins, dip. & trans.

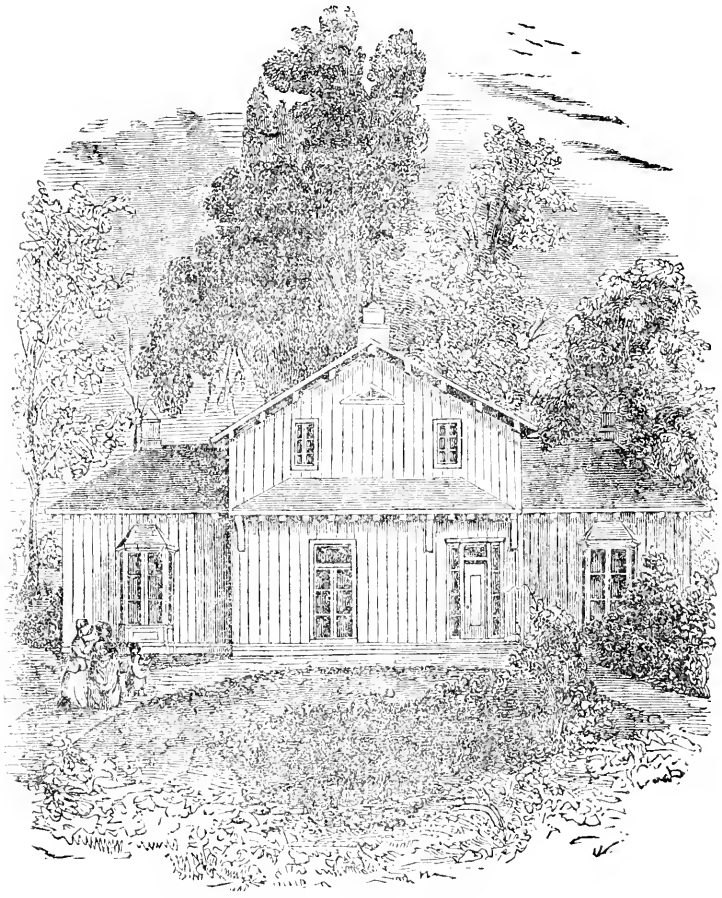
[We omit non-enumerated articles, and fancy and needle work, &c., for want of space.—Ed.]

☞ It is not improbable that inaccuracies have occurred in the names of persons in the foregoing list, which has been copied from entries in the Secretary's books. It is requested that all errors discovered be reported to the Secretary of the Society without delay, that they may be corrected before the final publication of the awards in the Transactions of the Society.

All information in relation to premiums may be obtained from the Secretary, who will give prompt attention to all inquiries. B. P. JOHNSON,
Ag. Rooms, Sept., 1849. *Secretary.*

OXEN Vs. HORSES.

Edward Stabler, Esq., of Montgomery county, Maryland, writes to the editor of the *Plow, Loom and Anvil*, that in 1822 or '23 he commenced the substitution of oxen for horses on his farm. He began in midsummer to break up a field for wheat. For a day or two the oxen suffered greatly with the heat, in the middle of the day, but by rising early, and resting two or three hours at noon, and feeding on dry food, he was able to plow nearly as much with a yoke of oxen as with a pair of horses, and the work was quite as well done. The horses consumed about one bushel of grain per day and the oxen none. He found the result, after a thorough trial, so much in favor of oxen, that he has ever since continued their use. For many years there was not a furrow plowed on his farm except by oxen. He observes that oxen, if properly broken, quite as readily, if not more so, take to and keep the furrow, as horses. His rule is to keep two yoke of oxen on the farm to one pair of horses. He well remarks, that—"to judge of the capabilities of the ox, by the badly-used, houseless, over-tasked, and half-fed animals we sometimes see in the yoke, is doing him great injustice. Treat the horse in the same unfeeling manner, and where would be his high mettle and noble spirit? He would speedily arrive at a premature old age, valueless to his owner, and a cast-off to feed the carrion crows. That the ox can better stand this harsh usage, is certainly no valid or sufficient reason, that he should be subjected to it. Use him with equal care and humanity, and he will last as certainly, and with more profit, repay it to his owner."—*Cultivator.*



DESIGN FOR A FARM OR COUNTRY HOUSE—WITH GROUND PLANS, ELEVATION, EXPENSE, &c.

BY F. R. ELLIOTT, OF CLEVELAND, OHIO.

In offering the accompanying plan for a cheap and commodious country house, I do not lay especial claim to originality in all particulars, although I do not know of one exactly like unto it ever having been published or built.

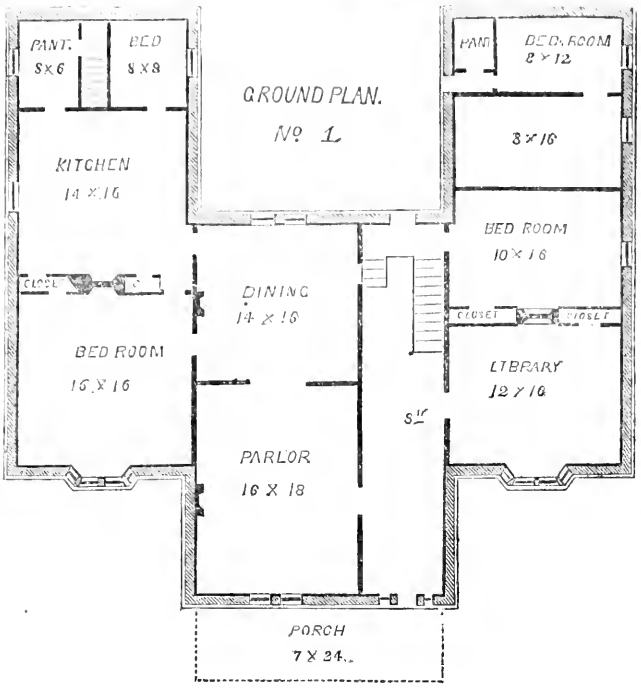
The elevation and ground plan marked No. 1, comprise the house as I myself prefer it.

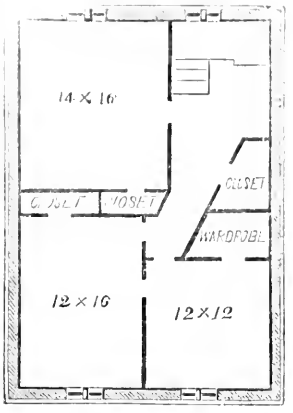
I will confine myself to the elevation and ground plan No. 1. It is particularly designed to point either north or west, and should, if possible, be placed upon a slight rise of ground from the adjoining public highway or surrounding grounds.

The value of land in the country, as compared with the disadvantages of basements for kitchens, etc., should not receive a thought: and while this plan may be said to cover a large area of ground, I trust to be able to show that it can be built for a much smaller amount of money than any plan of equal convenience, room and character yet published. A free circulation of air, connected with large and convenient rooms, are material points, and in this they may be had. The size of cellar may be according to the wishes of the builder, but my estimate and plan is for a cellar only under the wing in which is the kitchen, that being of size sufficient to hold all vegetables, &c., that will be required for the consumption of a large family. Vegetables for stock should, for easy access in feeding, as well as the injurious effects sometimes resulting from a too large quantity stowed in the house cellar, always be confined to the barn cellar.

The main house is 24 by 32 feet, with 18 feet posts, and having a porch 7 feet wide in front, supported with brackets. The wings are each 16 by 40 with 11 feet posts, and falling back 12 feet from the front of the main building. Of the first story front, the main building has a single panel door, and one large window, opening each way inside upon hinges. The wings have each an oriel or bay window, projecting one foot, and having the center lights of glass hung upon hinges, to open inside. The second story front, the two windows, like the one below, are divided by a heavy style, and open inside. The covering, as indicated in the elevation, is to be of inch pine boards that have been run through a planing machine, and cut to a width and thickness. These battened with half inch stuff three inches wide. As the lower story of the main building, as well as the wings, are all designed to be 11 feet high in the clear, it is evident that the best length of boards will be 12 feet, as they will allow of no waste.

The estimate of cost here given is for plain but good work. No mouldings, turnings or carvings, as all such only add to the labor of the housewife in





keeping them clean, and are really no ornament, as taken in keeping with other articles usually accompanying the country.

The fire place in the parlor is designed to be carried to a level with the chamber floor, and then carried horizontally along the side of wall until it reaches the partition of chambers, when it may rise diagonally to the center. Some may prefer a sheet iron flue, which could, like a stove pipe, be removed from the chamber during the summer months. In the elevation No. 2 the chimney rises direct. Some may prefer that, as tending to break the uniformity, which by the way, seems among architects of the present day to be more the intention in their designs, than to give positions suited to the real wants of daily life.

That my estimates of costs are correct, I can only say that they are such as I have contracted in building this house, (plan No. 1,) and are therefore reality and not fiction or supposition.

Permit me now to take you through the rooms, entering, as we should, at the main or front entrance. First, we have a hall 8 feet wide, running the entire length of the main house. From this hall, 13 feet from the rear, commence the stairs, ascending 8 feet, to a platform of 4 feet wide, where they turn, and again rise to the chambers. Upon our left, as we enter the hall, is first the parlor, 16 by 18 feet, and next adjoining it the dining room, 16 by 14. Opening from this, we have the front of wing, 16 by 16, a large bed room; and from this, as also from the dining room, are doors to kitchen, 14 by 16; a fire place in both bed room and kitchen, and connected with that in the latter, should always be built a brick oven. The dining room may be warmed by a stove, grate, or fire place, and may be carried to the chimney from the kitchen, or a hot air drum may be placed in the chamber overhead, and the heat pass that way, and so conduct on to the chimney in the center of the main house. The pantry is shown from the kitchen, the cellar stairs, and also a small room for servants; or where no servants are kept, the latter may be left for a wood house.

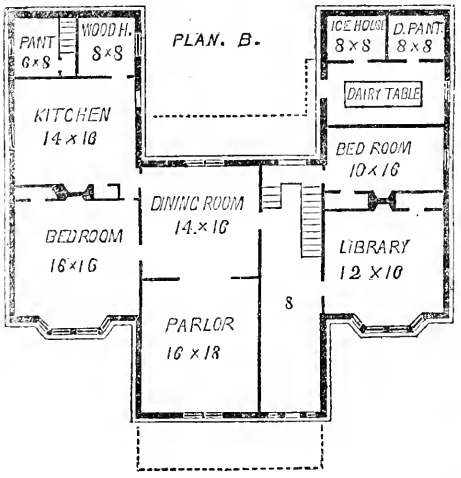
The conservatory or green house in rear of the dining room may or may not be constructed, as taste and means indicate; if it is, the window should be built the same as that in front. This dining room and parlor are separated by folding doors upon hinges; as not often expected to be wanted, and as costing less than when constructed to roll or slide, the latter is, of course preferable. The cellar is designed to be 7 feet deep, and the whole house to stand 18 inches from the ground.

A closet is seen by side of chimney in kitchen, the lower part of which is designed for kettles, etc., and the upper for crockery or china closet. The closet opening into the bed room I think should contain a bath tub, and be so arranged that warm or cold water could be received from the kitchen. Wardrobes, separately built, and placed each side of the bay window would be suited to the room.

Let us now go back to the hall. On the right, just at the foot of the stairs, we enter the library, 12 by 16 feet, having a fire place and a closet, as seen in the plan. In the rear of this, is again a bed room, 10 by 16, opening from the hall, and also with a fire place and closet. The rear of this I would cut off from the rest of the house by a continuous partition; and in large families, where much help is kept, a door should open from the outside into a small hall, 4 by 4, as shown, and then a bed room 8 by 12; and again two bed rooms 8 by 8. These furnish suitable rooms for farm laborers, and save the travel and dirt through the main hall, and so up stairs. The same also of the bed room for servants, in rear of kitchen. It is near their work, and no excuse can be offered to pass through any rooms, except to sweep them, &c. The bed room in rear of library

is so distant from all others, and having a fire place, as to render it suited to sickness. If desired, a passage way may be made through the closet, connecting it with the library.

For large dairies, I would construct the rear rooms, heretofore mentioned for farm laborer's bed rooms, as shown in the rough plan accompanying, marked B.



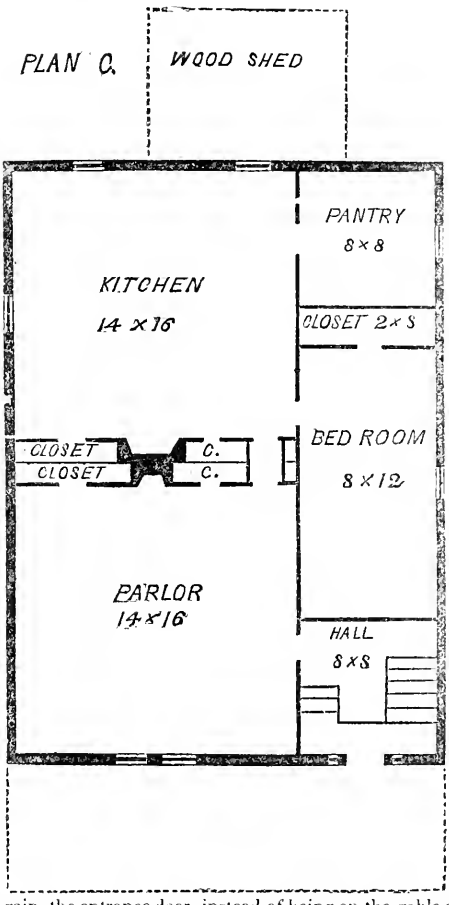
ESTIMATE OF COST.

1,000	feet hewed timber, at 2c,	$20 00
4,134	" inch pine boards planed, 10½c.,	44 65
4,100	" roof boards, at 7c.,	28 70
1,200	" ⅜ inch for battings,	12 60
500	" 1¼ inch, second clear, at 13c.,	6 50
200	" 1¼ " " say,	3 00
182	" 1½ " for water table,	1 75
21,000	shingles at $2,50,	52 50
968	feet, or 66 pieces 4 by 4 scantling, 11 feet long; 320 feet, or 24 pieces, 10 feet long; 171 feet, or 8 pieces, 16 feet long; 168 feet, 3 by 4, 14 feet long; 576 feet, or 32 pieces, 2 by 4, 18 feet long; 330 feet, or 30 pieces, 2 by 4, 11 feet long; 176 feet, or 16 pieces, 2 by 4, 11 feet long; 184 feet, 2 by 4, long as possible; 113 joists, 2 by 8, 16 feet long, 16 joists, 2 by 8, 10 feet long. 54 joists, 16 feet long; —for ceiling joists. Estimate all the scantling at	50 00
Joiner work, to frame, enclose, make sash, &c.,		200 00
Glass and putty for windows,		20 00
Nails,		15 00
Door and window swings,		10 00
		$464 70
This is exclusive of the cellar wall and under-pinning, which, with the chimneys, may be [inclusive of materials,] made for,		125 00
Flooring,		20 00
Inside joiner's work and lumber,		150 00
Lath and plastering,		200 00
		$959 70
Extras,		40 30
		$1000 00

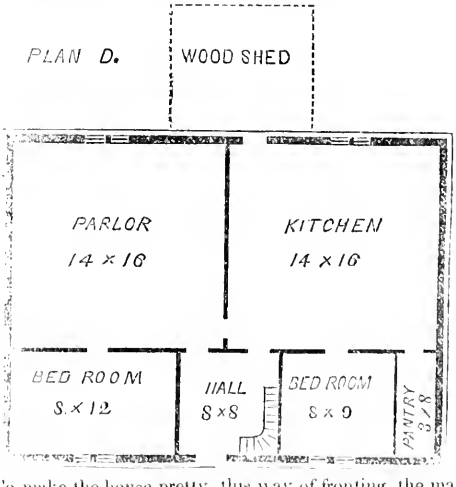
This of course does not allow for the digging of cellar or hauling of lumber,—that must be calculated according as the distance is far or near. The green house is of course extra, as that does not properly belong to the house, but is a luxury which, if the house fronts to the north, could be constructed at a small expense—say thirty dollars.

Should any person, from want of means at command, desire only to build the main house, with intention at some future day, if desirable, to add the wings, I would offer the ground plan No. C, in which the front and outward appearance of house is retained, except the wings. The stairs from hall, which will be only 8 feet square, will have two foot landings, and rise so as to bring the platform of turning directly on a level with the top of front door.

Such a house may be constructed on the plan as described, at from 5 to 600 dollars—as lumber and labor can be obtained.



Again, the entrance door, instead of being on the gable end may be as in plan D. The hall being in center of house, the stairs to chamber would have to be a half-circle. The stairs might be reversed, and the room now 8 by 9, made 8 by 12. So *vice versa*, and then open the room to be 8 by 9 from the hall, and use it for a library, or office, as might be required.



To make the house pretty, this way of fronting, the manner of finish would have to be more expensive, and a gable should be raised from the roof, and a window to correspond be introduced over the entrance door, or a projecting porch forming the hall might be constructed.—*Transactions N. Y. State Agricultural Society for* 1848.

DUTY OF THE AGRICULTURAL PRESS.

Mr. Editor:—It is not my intention at this time to depreciate this truly valuable class of prints; far from it. I regard them as the leaven which is ultimately to leaven the whole farming community, and work that reform in the department of agriculture, which shall effectually tell upon the interests of the whole civilized world. But I wish to make some suggestions, (if I may be allowed to do so,) which would essentially increase their value and usefulness to the farmer.

The reader of agricultural journals will observe that the efforts of such prints are almost exclusively directed to improve the producing art, and increase to the greatest possible extent, the amount of farm products; while the art of marketing those products advantageously, (a matter of no small importance to the farmer,) receives little or no attention. To secure the first, it is true is the all-important object, but to effect the latter is sufficiently so to require more attention than it has heretofore received. Is it not the province of the agricultural press to look after all the interests connected with the pursuit of farming? Then the farmer not unreasonably asks of these journals, the necessary information in regard to the markets, present and prospective, which will enable him judiciously to dispose of his produce. The farmer may be perfectly skilled in producing, and yet fail to realize the full profits of his skill, for the simple reason that he has not the means of knowing how and when to market his produce advantageously.

Now, is it not clearly within the sphere of the agricultural press to collect and spread before the farmer correct information respecting the circumstances and causes which control the markets, that he may form an intelligent judgment in the case, and act understandingly in disposing of his produce. I am aware that it is utterly impossible to foresee all the fluctuations incident to the markets, when a spirit of wild speculation is rife; yet a correct knowledge of the causes which operate to graduate the scale of prices, uninfluenced by speculation, is attainable. It is perfectly apparent, that the supply of any particular article, as a general rule, determines the price. So when the supply is equal to the demand, we have the medium price: when the supply is greater than the demand, prices are depressed; and when there is a deficient supply, prices are proportionally high. Now the farmer wants to be informed, so far as it is possible, of the present and future supply of the articles he produces, that he may judge correctly of the value of his property. This is a general rule; but there are other things which many times greatly modify its results. There may be, for instance, a scarcity in some one article of provision, but an abundance of all the rest. Now though there may be a deficiency of this one article, a very high price will not be realized because the abundance of the rest creates the supply. But if the deficiency in one or more is so great as to make a deficiency of the whole, then the price of each must be higher. And so it will be with all other classes of articles where one article may be substituted for another.

The comparative abundance of money also has an influence on prices. A scarcity of the circulating medium proportionably paralyzes business operations, and reduces prices, while plenty of money invites to speculation, and prices go up.

Other things might be noticed on this subject, but all I intend is to invite attention to it, and ask that while other interests of the farmer are attended to, this may not be forgotten. It may be said we have all that is practicable on this subject in the record of commercial transactions, and prices current. I think not. We want reliable information, so far as may be, of the supply on hand, and of the probable future supply, and the demand for every particular article we produce. It may be said this is asking too much, and more than is practicable. But might it not be accomplished through the aid of reliable correspondents in the farming interest, located in different parts over this country, and foreign countries which compete with us, or consume our products. W. H. —*Livingston County, N. Y.*, 1849.

Remarks.—It is comparatively easy to state what an agricultural journal *should be*, but quite another and more difficult matter to accomplish the object.—We fear that our correspondent will have to "wait a little longer" before he can obtain a paper which will furnish all the information he desires. For obvious reasons it would be impossible to give, in a *monthly* of the dimensions of this journal, such reports of the markets, &c., as our friend suggests.—But if the farmers of Western and Central New York were willing, as they are abundantly able, to support a *weekly agricultural newspaper*, they would soon be furnished with a journal containing the most reliable intelligence of the crops and home and foreign markets—together with much other information particularly valuable and interesting to farmers, but which is not given in our agricultural monthlies nor the the political weekly papers of the day. We believe the day is not "afar off" when agricultural *newspapers* will be sustained in New York and the Western and Southern States, as they now are in New England and Europe—and when that time shall arrive, the desideratum mentioned by our correspondent will no longer exist.—Ed.

To Cure a Stifled Horse.—J. B. Goddard, of Norwich, Connecticut, writes to the American Agriculturist, as follows:—

Take one gallon of urine, and put therein a small handful of junk tobacco; boil down to one quart; then add two ounces of oil of spike, one ounce of oil of amber, two spoonfuls of spirits of turpentine, and two spoonfuls of honey. Put it into a jug, and cork it tight for use. Process of application: rub the stifle-bone hard with the mixture 15 or 20 minutes; then dry it in thoroughly with a red-hot fire shovel; then ride the horse forth and back one hundred yards. Repeat the above two or three times, and the cure will be effected.

Butter Making.—Those who only make a small quantity of butter, and of course do not churn every day will find the following very important: When the cream of each day is put into the jar or pot in which it is kept, let the whole be *stirred together thoroughly*. If this is not done, the cream of each day will remain in layers as it is put in, and the lower strata will become sour and bitter, and when the churning is done, will taint the whole. So says a butter maker of the class alluded to.

The "Mameluke Wheat," noticed so favorably in some papers recently, is a humbug.

STIMULATING MANURES.—EXPERIMENTS.

BY M. S. GALLUP.

Messrs. Editors:—In nothing do we witness such a perfect recklessness and entire want of economy on the part of the tillers of the soil, as is exhibited in the waste of those substances which tend to the nutrition, or the stimulus of plants. What a vast amount of these is yearly and daily wasted, which might, by proper economy, be made subservient to the most salutary and beneficial results! Farmers are, generally, too remiss by far in the preservation of manures.

It is a matter of no ordinary moment, to preserve and apply whatever can possibly tend to increase a crop. Yet very few act upon this principle. Indeed, a great majority of our farmers neglect to attend properly to this matter, and suffer serious losses on that account. Most especially, is it too true that, by many farmers, ashes are not saved and applied to the production of vegetable substances. Some sell this valuable manure to ash-pedlars for an insignificant sum; others suffers it to remain about their premises unused. Either course exhibits a lamentable want of economy on their part.

Were our farmers aware of the value of both leached and unleached ashes as a stimulating manure, it does seem that they would not be guilty of such superlative folly as selling them for ten cents per bushel: or letting them go entierly to waste. Ashes, on most soils, and in most seasons, has not its equal in the whole catalogue of stimulants. "We speak what we know, and testify what we have seen."

During the past seson, I have made some experiments, testing the real value of ashes as a manure. For this purpose, I selected four consecutive rows of corn planted upon soil of equal fertility: and each of which received the same care and attention in tillage. To the *first* I applied *unleached ashes*—to the *second leached ashes*—to the *third, unleached ashes* after hoeing the first time, and to the fourth no ashes. The ashes were applied to the first two rows as soon as the spires made their appearance. Note the result:—I harvested the corn about the 2d of September, and ascertained the respective amounts as follows: from the row to which unleached ashes was applied, I obtained 32 pounds of ears of corn. From the row to which leached ashes was applied I harvested 35 pounds. From the row to which unleached ashes was aplied after hoeing the first time, I got 26 pounds. And, from that to which no ashes were applied, 24 pounds of corn.

From these experiments we deduce the following facts:—1. That *leached* ashes are more valuable as a manure than *unleached* ones. But I applied double the amount of the former. All things considered, a bushel of leached is equal to a bushel of unleached ashes. 2. That ashes is not far from being one-fourth better to be applied as soon as the spires appear than after hoeing the first time. 3. That the application of ashes at a proper season will increase a crop of corn nearly one-third. It is true we must take into consideration the counteracting influence of season, soil, and such like. The past season has been favorable to the use of this manure.

The soil, too, being a loam, interspersed with gravel, is well adapted to ashes. Upon a wet, clayey soil, or in a wet season, such results might not be obtained. But, as a general thing, the result will not vary materially from the above.

If what I have stated be correct, does it not behoove our farmers to save carefully and apply ashes to the production of corn? Is it not really worth their pains? Is it the part of wisdom to waste this valuable manure? Or, rather, is it not the part of wisdom to preserve it? Judge ye.

I have likewise applied ashes to potatoes, and find it highly beneficial. It may be advantageously applied to the raising of garden vegetables, also to pasture. Spring wheat may be materially benefitted by using ashes. It should be applied as soon as the spires appear. In this section of the country, this crop is very often injured by worms. The application of ashes, in this case, is an effectual remedy.—*Busti, Chaut. Co., N. Y., Oct.*, 1849.

Domestic Economy.

A New Kind of Cheese.—An esteemed friend, in whose *recipes* we have great confidence, has kindly furnished us with the following method for making good cheese: Boil good white potatoes, and when cold, peel and mash them till not a lump remains. To five pounds thus prepared add a pint and a half of sour milk, and as much salt as may be deemed necessary to season the mass. Having worked it well, let it be covered, from two to four days according to the state of the weather; then work again, make the cheese the size you like and then let them dry in the shade. After they have become sufficiently dry, place them in pots or pans, and let them remain a fortnight or more. In this way cheese of a most excellent quality may be made and what is of no small consequence, it can be kept for years without the slightest deterioration from the effects of age, provided it can be kept dry. A friend who has had the pleasure of eating cheese prepared in this manner, speaks of it in the highest terms.—*Maine Farmer.*

Savoy or Sponge Cake.—Take twelve fresh eggs, put them in the scale, and balance them with sugar; take out half and balance the other half with flour; separate the whites from the yolks, whip them up very light, then mix them, and sift in, first sugar, then flour, until both are exhausted: add some grated lemon peel; bake them in paper cases, or little tin moulds. This also makes an excellent pudding, with butter, sugar, and wine for sauce.

A Substitute for Tea.—Dr. Graham, an old and experienced physician in London, says—"I may state, on very respectable authority, that the first leaves of whortleberry, properly gathered and dried in the shade, cannot be distinguished from the real China teas."

Cleansing Paint.—The best thing for cleansing oil paint is a sponge dipped in Ammonia which has been copiously diluted in water. Soap dissolves the turpentine as well as the linseed oil, and not only destroys the smooth and shiny surface, but exposes also the lead to the influence of the water and air, and is, therefore, not practicable.

Shrinking of Flannel.—Enclose new flannel in a bag; put it into a boiler with cold water; heat and boil it. It will never shrink any more after this operation, and should then be made up into garments.

To learn, willingly and promptly to do whatever is right, simply because it is so, is a great acquisition.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY

THE CONVENTION OF FRUIT GROWERS.

This body assembled in New York on the 2d of October, and held a session of two days. The attendance was not quite so large as last year, but was made up of men well informed on the subject, from many parts of the Union. The collection of fruits was much larger and better than we had reason to anticipate, but still greatly behind that of last year. The subject of a union between this body and the "North American Pomological Convention," was brought forward at an early stage of the proceedings, and after a conference between committees from each, it was unanimously resolved that the Associations be united under the name of the *American Pomological Congress*—that the first meeting be held at Cincinnati, in 1850, and that the meetings afterwards be held biennially—Philadelphia being designated for 1852.

The chairman of the General Fruit Committee reported a long list of rejected fruits, besides a list of varieties for general cultivation. We intended to give this list in the present number, but have not been able to get it in a complete form. We shall give it in our next, with further remarks on the doings of the Convention. The proceedings were marked throughout with regularity and harmony, and now that this Congress is so well organized, it cannot fail to render great service to the country in this important branch of culture.

PEACH CULTURE.

The peach crop through many parts of New Jersey and Delaware has been very good the past season. We saw it stated in the Journal of Commerce, some time in September, that 15,000 baskets were brought in one week, by one steamer alone, from New Brunswick, and an equal number by others; and in one day 3474 baskets at an average price 70 cents per basket. Many of the farmers have netted from one to $2,000. In the last of September, when we were in New York and Philadelphia, a basket of about three pecks of *Heath's Cling*, or *Crawford's Late Melocoton*, could not be bought from the market dealers for less than $4. Fine late peaches were both scarce and dear in our markets, and our cultivators would do well to turn some attention to this point. At present few, except early varieties, are grown to any extent.

In answer to inquiries from a Staten Island correspondent, on this subject, the editor of the Horticulturist says:—

"The choicest late peaches for profitable market culture are the following: Morris White, Crawford's Late, Heath Cling, Druid Hill, Snow Peach, Old Mixon Freestone, La Grange, and Ward's Late Free. In planting an orchard of 2000 trees in your neighborhood, we should choose the above in about equal proportions, giving the preference to Morris White and Crawford's Late, as the most uniformly productive. Sixteen or eighteen feet apart each way, is the usual distance; but you may plant them twelve feet, if you keep them low and bushy, and shorten-in the tops every year, by which means you will have the finest fruit. Above all, be careful to get trees of healthy constitution, free from all hereditary suspicion of the *yellows*. The size and quality of your fruit depend almost wholly on the *depth* and goodness of your soil."

ANSWERS TO CORRESPONDENTS.

We have several matters of this kind on hand, that ought to have been attended to this month, but we have been so much from home and so much engaged when at home, that we have found it really impossible to give them proper attention. Several communications are on hand also, and will receive attention next month.

Wintering Verbenas, Carnations, Salvias and other Tender Plants.—(F. K. P., Wisconsin.) Where there is no green-house, a *cold frame* will answer the purpose. Take a common hot bed frame—dig a pit two to three feet deep, in a perfectly dry soil, and set the frame in it and fill in the earth around perfectly close, and put some manure around to exclude the frost; have the sashes to fit closely, and cover all with leaves, pine branches, &c., two feet deep. Plants will winter well in this way. They should be aired in fine, mild weather, and a sharp look out be kept for mice. Next to this a good dry cool cellar, where there is some light admitted occasionally, will answer. The plants should be stored away dry, and be kept as free as possible from moisture or decaying portions of leaves or wood.

Your other questions will be answered next month.

ACKNOWLEDGMENTS.

Our thanks are due to Stephen Hull, Esq., of Clyde, for some grains of an *early white table corn*, which he says is very superior—and for remarks on the culture of the pea nut, which we shall give in next, or a future number.

—To E. A. McKay, Esq., of Naples, Ontario Co., for a box of Isabella Grapes, from his vineyard.

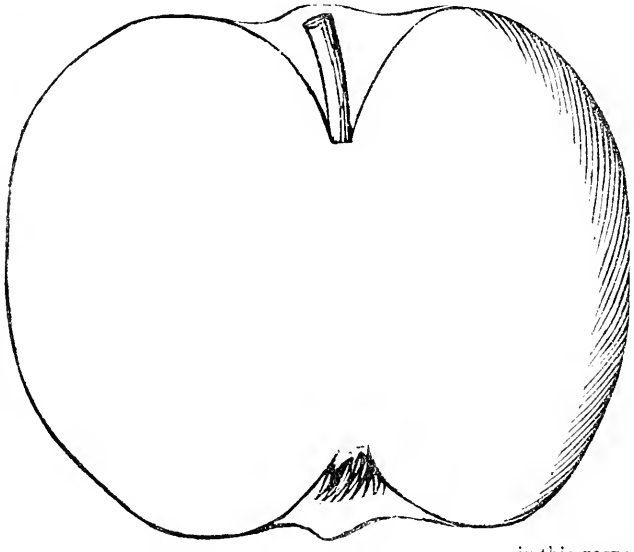
—To Jas. H. Watts, Esq., for fine specimens of *Ribston Pippin* and other apples.

—To Mr. Ira Thurston, of Hemlock Lake, for very fine specimens of *White Doyenne* pear.

—To W. G. Verplanck, Esq., of Geneva, for half a bushel of *White Doyenne* pears, as fine as we have ever seen. This fruit attains its highest perfection in that vicinity, and is cultivated more extensively there than in any other part of the State.

Apples as an Article of Human Food.—The importance of apples, as food, has not hitherto been sufficiently estimated in this country nor under-stood. Besides contributing a large portion of sugar, mucilage, and other nutritive matter, in the form of food, they contain such a fine combination of vegetable acids, extractive substances and aromatic principles, with the nutritive matter, as to act powerfully in the capacity of refrigerants, tonics and antiseptics; and when freely used at the season of ripeness, by rural laborers and others, they prevent debility, strengthen digestion, correct the putrefactive tendencies of nitrogenous food, avert scurvy, and probably maintain and strengthen the powers of productive labor.

The French and Germans use apples extensively; indeed, it is rare that they sit down, in the rural districts, without them in some shape or other, even at the best tables. The laborers and mechanics depend on them, to a very great extent as an article of food. —*Selected.*



THE GRAVENSTEIN APPLE.

This is one of the finest of all foreign varieties of the Apple that have been introduced to this country. It appears as far us we know, to be esteemed as excellent wherever it has been tested. Downing, in his Fruits and Fruit Trees says:—"A superb looking German Apple, which originated at Gravenstein, in Holstein, and is thought one of the finest apples of the North of Europe. It fully sustains its reputation here, and is unquestionably a fruit of first rate quality. Thomas, in his American Fruit Culturist says—"Productive, handsome and excellent. Fine in all localities." Cole, in his Fruit Book says—"one of the handsomest and best for all parts of the country, holding an equally high rank with the Porter; some prefer it."

Our own experience with its culture here enables us to endorse cheerfully these various commendations—and we notice it now to bring it more prominently to the attention of planters. It has yet found its way into comparatively few collections, while it should be in every one, great or small, in the whole country. It is one of the most vigorous and beautiful growers of the hundreds of kinds in cultivation. It makes a round, regular and well shaped head, without any care or pruning, and this, with its great hardiness and productiveness, render it a most valuable variety for the farmer's orchard, who has not the leisure or inclination to bestow much care on on his trees. It makes a beautiful and profitable Dwarf tree on the Paradise stock, for the fruit border in the garden.

Fruit large, roundish, slightly flattened. Skin pale yellow, striped and mottled with bright red. Stalk short and stout, in a deep cavity. Eye open, large, in a pretty deep and broad basin. Flesh white, fine grained, juicy, sub-acid, rich and pleasant. In use here during all the month of September. Wood is stout; bark smooth, dark brown and bright; foliage large and luxuriant.

We should be glad to see our markets well supplied with such apples as this, the *Dyer*, *Hawley* and *St. Lawrence*, after the *Early Harvest* and *Strawberry* are gone, and before the *Fall Pippin* comes in.

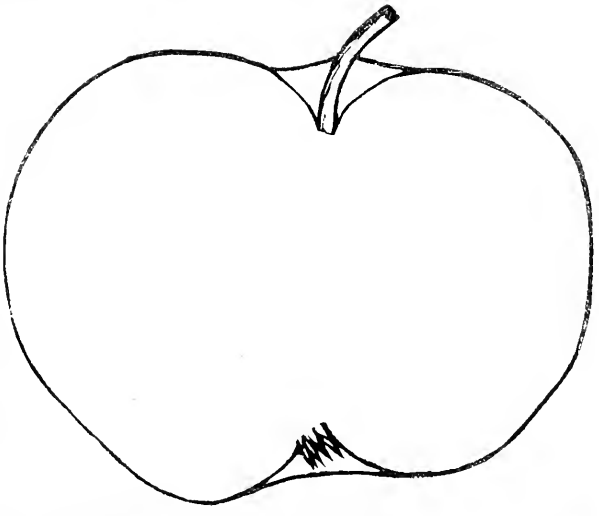
HAWTHORNDEN APPLE

The Hawthornden is a famous Scotch apple, and in all the British fruit gardens it is placed at the head of the list of kitchen or cooking varieties. As far as we are aware it is no better there than here. We have seen no other tree so loaded with fruit this season as a little tree of this sort in our garden. The branches were literally covered with fruit, and so beautiful that every one who saw them said they would cultivate it "if only for ornament." The tree is naturally dwarfish, but a strong grower nevertheless, and bears most abundantly when very young—similar in this respect to the *Keswick Codlin*, another famous English kitchen apple.

This apple originated at Hawthornden, the birthplace of the poet Drummond, and Downing calls it "an excellent bearer, a handsome fruit, and good for cooking or drying."

Fruit is about the size of the Early Harvest, quite flat, very regular. Skin smooth, of delicate pale yellow, often flesh color, with a bright red or crimson cheek. Flesh soft, juicy and acid; excellent for cooking. The Maiden's Blush is much similar in appearance, but the tree of Maiden's Blush is more erect and slender, the wood lighter colored, and the fruit harder.

We would particularly recommend this apple to those who are procuring dwarf apples, for garden culture, as its great beauty and early bearing, as well as its productiveness, render it eminently worthy of a place among a dwarf garden collection. As such trees are generally planted in gardens of small dimensions, surrounding the houses and homes of our citizens and villagers, some little regard should be had to the beauty of the tree and fruit.



HORTICULTURAL PARTY.

The following notice, which we extract from the Horticulturist, will show something of the Horticultural spirit in Philadelphia. We have been assured by many of the guests that this was one of the most delightful fetes they ever participated in: and how could it be otherwise?

Horticultural Party.—We learn that our friend, Dr. Brinckle, whose zeal and knowledge place him among the foremost of amateur horticulturists, held at his residence in Girard Square, Philadelphia, on the evening of the 13th September, one of the most agreeable horticultural *soirees* ever enjoyed in this country. Had we been able to accept his kind invitation, we would gladly have noticed this reunion more fully; but we now are forced to content ourselves with the following memoranda, kindly sent us by one of the guests.—Ed.

During the horticultural exhibition, we have had rather more than the usual supply of fruits and flowers; but the climax of the gala was last evening, when Dr. Brinckle, to do honor to the occasion, and to exhibit some remarkable fruits and wines that had been provided by his liberality and that of his numerous friends, gave a "Horticultural Party" at his elegant and hospitable mansion in Chestnut street, where were assembled the amatuers, the gardeners, and the friends of liberal culture. J. P. Cushing, Esq., of Boston, kindly forwarded a liberal supply of his best grapes, pears, &c., and the tables were in addition, ornamented with every flower now in bloom, the whole forming a fete such as the writer would be glad to see frequently repeated. As an evidence of the good things of this region, I beg to insert in the pages of the Horticulturist the following list of fruits exhibited at a private evening party on this single evening:

Oranges and Figs. *Citron melons*, two varieties.
Water melons—Mountain Sweet, Mountain Sprout.
Flowers—Very beautiful pyramids and basket bouquets for the table, from Messrs. Bissett, Kilvinger & Raabe.
Chinese Preserves—Finger fruit, Mangostan.
Native Wines—Longworth's Sparkling Catawba, Longworth's Catawba or Hock, Buchanan's Hock, Resor's Cape.
Foreign Wines—Washington Morton's Champagne, Geisler's do., Wirts & Co., do.: Hockheimer, two vintages; Weinmengen; very superior Hock presented by Mr. Lennig. Chambertin, Port, Sherry, Maderia.
Grapes—Black Hamburgh, very large, Hanstrell, do., White variety. *Nectarines*—New White, Early Violet.
Pears—Bartlett, Golden Beurre of Bilboa, Flemish Beauty. All the above from Mr. Cushing.
Grapes—Cashmere's Seedling, Chasselas de Fontainbleau, Muscat Muscadine, White Frontignan, Grizzly Frontignan, Raisin des Carmes, Decan Superb, Cambridge Botanic Garden, Victoria, Black Hamburgh, Black Prince, Fromental, Frankenthal. The above from Mr. Buist. Many other fine varieties were presented by Messrs. Cleveland, Baxter, Johns and Copia.
Pears—Petre, Chapman, Lodge, Pennsylvania, Moyamensing, Hanover, Seckel, Seckel from original tree, Autumn Bergamot, Zantzinger, White Doyenne, Gray Doyenne, Chancellor, Orange, Steimmentz' Catherine, D'Angouleme, Julienne.
Peaches—Many varieties.

An interesting item in the evening's proceedings consisted in testing the American wines. The labels from these and the best foreign brands were removed, and private marks attached. The best judges in the city were present, and the result would have been exceedingly gratifying to Messrs. Longworth, Buchanan and Resor, had they been present, and I may add, will do much in introducing the Cincinnati wines into use in this region. Yours, S.

GRAPE CULTURE.

We are glad to observe that the culture of the Grape is making rapid progress in our State. At the State and County Fairs this season, the quantity and quality of the Grapes presented have far surpassed anything we remember to have seen in former years. At our County Show we had Isabellas from Mrs. E. F. Smith, of this city, Zeri Berr, of Perinton, Mr. Ainsworth, of Bloomfield, and others, that in size, color, &c., approached bunches of Black Hamburg, raised under glass. Johnny Bull may turn up his nose at our "American sour grapes," but we have great reason to rejoice that we have a soil and climate where such grapes as these can be grown with comparatively no care at all

We have on our table a box of *Isabellas*, presented us by David McKay, Esq., of Naples, Ontario Co., from his young vineyard, as fine as Dr. Underhill ever gathered in his famous Croton Point Vineyard, and fit to appear in the dessert of the daintiest republican in the country. Mr. McKay designs supplying our market with grapes. His vinepard is in a very promising condition, and will no doubt yield him a handsome revenue.

It is almost incredible what a quantity of grapes a single vine of the Isabella will produce. A mechanic of this city planted a vine some seven or eight years ago, and now it covers one end of his house, gives him a delightful arbor, and this year has yielded about seven bushels of fruit. The man who has a place for a vine to run cannot invest fifty cents better than in planting a good Grape Vine.

The cultivation of Foreign varieties in cold vineries is also attracting much attention. These structures may be very cheap and simple, and yet answer every purpose. We copy below a notice of a very complete establishment of this sort, from the Horticulturist, and we may add that we saw exhibited at the American Institute, splendid specimens of *Queen of Nice*, *Muscat of Alexander*, *Black Prince*, and *Black Hamburg*, from the Clinton Point Vinery.

THE VINERY AT CLINTON POINT.

Our frontispiece is intended to convey to the reader some idea of the very complete vinery at Clinton Point, the residence of our neighbor, Philip S. Van Rensselaer, Esq., near New-Hamburgh, on the Hudson. [We omit cut of vinery.—Ed. Gen. Far.]

The effect of this vinery is so excellent, and its adaptation to the intended purpose so complete, that we consider it the best model for a cuvilinear house that we have yet seen. The general plan is not unlike that of many vineries near Boston; but in simplicity and nicety of construction, it far surpasses all the curved roof vineries that we have seen there, and was designed by Mr. Van Rensselaer after a thorough inspection of the best vineries in the country.

The house is built entirely of wood: and while it has an exceedingly light and pleasing effect, is at the same time very strong and durable. The view of the interior shows that the roof is supported by three rows of light posts, to which, in a very simple manner, the effect of clustered columns is given.

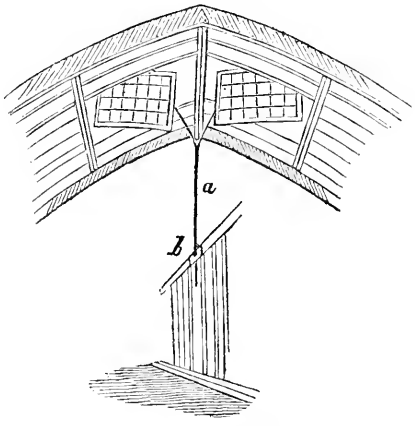
The house rests on *locust* posts, which are as durable as a stone wall while they offer no impediment to the free passage of the roots of the vines through the border on the outside or inside of the house.

In the ventilation of this vinery, Mr. Van Rensse-

laer has especially improved on other structures of the same kind, which we have seen elswhere. The current of air follows the same course as usual in houses of this kind; that is, it enters at the openings in the low wooden wall below the sashes, (boards hung on hinges,) and escapes at the movable sashes at the top of the roof; a mode which passes a stream of fresh air, entering at one's command, over the whole growth of the vines, from the floor to the topmost branch.

These movable sashes are swung on centre pivots; a mode allowing them to be more easily opened and shut than sliding sashes. Usually, sashes of this kind are opened and shut by means of *cords*, which, owing to the expansion and contraction of the material, effected by the atmosphere, is found a most imperfect mode.

Mr. Van Rensselaer has ingeniously obviated this difficulty, by employing a forked iron rod, (see figure,)



Section of Vinery.

a, for opening and closing the sashes. This rod is about half an inch in diameter, plays, perpendicularly, up and down, through an iron socket, *b*, in the top rail of the trellis in the middle of the house. There is a thumb screw in this socket, which presses against the rod and fixes it at any desired height. Each branch of this ventilating-rod, where it is divided at the top, is only about a fourth of an inch in diameter: so that the fork is so elastic as to give it sufficient play to allow the sashes to rise and fall easily and freely, while, by means of the thumb screw, they can be held firmly in any position.

We have omitted to say that this is a "cold vinery;" that is, one in which no fire heat is employed,—a species of structure every day coming into greater favor in this part of the country. To grow the foreign grape in the highest perfection, it is only necessary to have the temperature of the house at that command which the full sunshine, and the admission or exclusion of the outer air, gives, without resorting to fire heat; and so abundant and powerful is the sunshine in this latitude that the Muscat of Alexandria, which in many sesons requires fire heat to mature perfectly in Boston, ripens regularly and fully on the Hudson in a cold-house.

The vinery at Clinton Point is, a span-roofed house 80 feet long, 18 feet wide, and 14 feet high. Mr. Van Rensselaer has deviated from the usual course, in placing it on a north-and-south, instead of an east-and-west line; and the results shows how wisley, for this climate, as the vines on both sides are equally exposed to the longest influence of the sun,—enjoying it from rising to setting; while at the hottest time of the day they are all far less likely to be injured by any excess of heat than vines on the sunny side of a house facing directly south.

We have, so far, only spoken of the vinery itself: but, as we are always inclined to judge of the tree by its fruit, we may add that all that we have said of the merits of the structure, is fully sustained by the extraordinary growth of the vines, and the magnificent grapes which they have produced this season. We have only seen them equalled in one instance, that of G. R. Russell, Esq., of West Roxbury, whose fruit bore off the palm at the Massachusetts horticultural exhibition last year.

The vines were only planted a year ago last July, and, of course, have not been allowed to bear a full crop this season; but the strong, vigorous, healthy wood with which they have filled the house, and the wonderfully fine clusters of fruit, of the highest flavor, which they have produced, show the advantages of the best structure and the best culture. The *border* in which they grow affords, indeed, a supply of food which explains, in part, the extraordinary growth of the vines,—since it runs under the whole house, and extends over a wide space all round it, being 80 feet wide and 120 feet long, by nearly 3 feet deep, and very thourougely manured.

The house contains a very complete collection of grapes, obtained from Mr. Buist, of Philadelphia, and we were glad to learn that every vine had proved correct. Besides the standard varieties, we noticed *Deacon's Superb*—perhaps the most beautiful of all new white grapes,—the clusters very large, berries oval, and closely set. *Reine de Nice*, (not ripe when we saw it,) was also laden with large clusters of very handsome fruit. *Xeres*, another white grape, also attracted our attention by the size and beauty of its clusters; while some bunches of the *Palestine* grape, more than 2 feet long, made us comprehend the biblical account of the grapes of the land of Canaan.

Camomile.—A few roots of this plant should have a place in every garden. Not only are its medical qualities highly valuable, but its presence among vegetables is supposed to be an Ægis of protection aganist many diseases to which they are subject. It should be transplanted into warm and rich soil, early in the spring, and be assisted, during its early development, by copious manuring and frequent pressure. When plants, late in the season, exhibit symptoms of decay or general debility, the planting of a small root of camomile in their vicinage is frequently the most speedy and efficacious remedy that can be applied. The odor, or aroma, diffused by this plant, is also known to be highly repellant to many kinds of winged insects, and its presence among those species of plants and vegetables infested by such enemies, will protect them more effectually than almost any other agent known, and at comparatively small expense.—*Selected.*

Cleaning Trees.—Trees and vines which are kept the cleanest, bear the best: like the human body, the pores of their skin become clogged with dirt, and retain gases which should escape. Trees, the bark of which has been scraped and scrubbed, become more thriving, and more vigorous.

Editor's Table.

DRAIN TILES, &c.—We have received from Mr. ALVIN WILCOX, of West Bloomfield, specimens of horse-shoe Tile, and Pipe, of his own manufacture. They are made of excellent material—the best fine clay. The pipes left with us have been in use two seasons, (buried three feet deep,) and appear to be as good as when first put down. The samples of both Tile and Pipe can be seen at this office.

"MARTHA WASHINGTON GRAPE."—We are indebted to Mr. S. H. ARNOLD, of West Bloomfield, for several clusters of very fine Isabella Grapes. If Mr. A. is as successful in other matters, as in grape culture, he deserves success in the nursery business.

JEFFERSON CO. FAIR.—The proceedings at this Fair, held at Watertown on the 26th and 27th of September, have been received, and speak well for the farmers of Jefferson. The show was superior in most respects, and the number in attendance, as usual, large. The Address was delivered by the President, MOSES DAMES, Esq., of Rutland, one of the most enterprising friends of improvement in the State. It is one of the best, most practical and sensible addresses which we have ever read—and we shall endeavor to give some extracts in a future number of the Farmer.

THE MICHIGAN STATE FAIR, we learn by Detroit papers, as well as from gentlemen who were in attendance, was much better, in every respect, than had been anticipated. The exhibition was good in each department, the attendance large, and the arrangements excellent. We know something of the enterprise and spirit of the farmers of Michigan, and expected a favorable report from the first Show of their State Society; and we doubt not the interest excited will be most salutary in promoting improvement throughout that fair and fertile Peninsula.

MARYLAND STATE FAIR.—An attentive friend and correspondent who was present at this Fair, held in Baltimore, on the 10th, 11th and 12th of October, has favored us with particulars—but his letters did not reach us in time for publication. He speaks of the exhibition as highly creditable. The show of Stock was remarkably good, and the display of implements, &c., quite respectable.

PREMIUMS OF STATE AG. SOCIETY.—Persons in this vicinity, who are entitled to Premiums, &c., from the State Ag. Society, can obtain them on application to the Assistant Secretary, JOSEPH ALLEYN, Esq., of Rochester.

TO SECRETARIES OF AG. SOCIETIES.—The Secretaries of County Ag. Societies will oblige us by forwarding papers or pamphlets containing proceedings of their Fairs, election of officers for 1850, &c.

RED ROOT SEED.—We are requested to state that Mr. M. F. REYNOLDS, No. 17 Buffalo-st., Rochester, will pay 25 cents a bushel for all the Red Root Seed which may be delivered at his store. Farmers who wish to dispose of a pest and get pay for the same, will please note the offer, and act accordingly.

CONTENTS OF THIS NUMBER.

ILLUSTRATIONS.

Market Prices of Agricultural Products.

New York, Oct. 24.

Ashes—Market better for Pearls with a fair demand, and sales 40 bbls at 6 12*a*6 25. Pots in good demand and steady at $7.

Flour & Meal—Western and State Flour quite active and for good market is 6c better. There is a speculative demand in expectation of enhanced prices by the steamer now due. Sales 15,000 bbls at $3*a*3 25 for uninspected, 3 62*a*4 12 for sour, $4*a*4 37 for fine, 4 62*a*4 75 old common state, mixed western and Canadian, 4 75*a*4 87 new common State and old strait western, 4 87*a*5 for strait and very good state, 5 12*a*5 25 mixed, strait and favorite Western, 5 12*a*5 25 pure Genesee. Meal steady and quiet. Sales 350 bbls Jersey at 3 12.

Grain—Holders of Wheat are pretty firm. Fair demand for milling. Sales 3,000 bu prime Genesee at 1 21, Canadian in bond, and 3,000 white on private terms, 3,300 prime white southern 1 15. Corn is again rather better with a good demand, part speculative and for export. Sale 59,000 bu at 62½*a*64 southern mixed, 64½*a*65 western yellow, and 65*a*65½ northern yellow.

Seed—Market very quiet for flax; small sales Canadian at 1 37 and Jersey 1 40 per 56 lbs.

Wool—Market has been very quiet for the last three days; sales 40,000 lbs at full quotations, which are for common 30c, ¼ blood 34c, ½ and ¾ blood 30*a*32, full blood Merino 40, Saxony 45; sales of pulled 20,000 lbs since last report at 28c for No. 1 city pulled, 31 for superfine do, 34*a*35 extra do, 32 for No. 1 country pulled, 35*a*36 for superfine, and 40 for extra do.

To Advertisers.—The Publisher of the Farmer begs to remind all interested, that his terms for advertising, as well as subscription, are *cash in advance*. Those who wish to avail themselves of the superior advantages of the Farmer as an advertising medium, should send requisite payment with their orders, *to secure attention and insertion*; and those whose notices do not appear, will, with this explanation, understand the reason.

In most cases, in which we have, in order to accommodate distant friends, (?) published notices without a rigid adherence to advance terms, vexation and loss have been our reward for the favor extended. We have hundreds of dollars due us, which we are unable to collect by ordinary means. Many to whom we send bills, requesting payment, give the matter no attention whatever—and thus, after being *largely benefitted* by our extensive circulation, either *refuse* or *neglect* to be———. This is pleasant—very. However, some of these silent gentlemen may possibly soon receive a benefit through the pages of the Farmer in the shape of an *entirely gratuitous and conspicuous notice*—the only way perhaps in which we can square accounts!

Bound copies of the present (tenth) volume of the Farmer will be ready for delivery on or before Dec. 1. Price 50 cents in paper—62½ cts. in boards and leather. A very liberal discount to Agents, Booksellers, &c.

Back numbers and volumes of the Farmer promptly supplied to agents and new subscribers.

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, Editors.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

Five Copies for $2, and any larger number at the same rate, if directed to each subscriber. Eight Copies for $3, if addressed to *one person only*—and any larger number, directed in like manner, at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

Advertisements.—A limited number of short and appropriate advertisements will be given in the Farmer, 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 Farmer is from five to eight thousand larger than that of any other agricultural journal published in the United States.

☞ Advertisements, notices, &c. should be forwarded on or before the 15th of the preceding month, to secure insertion in any specified number.

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

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[illegible] ROCHESTER, N. Y. — DECEMBER, [illegible]

TO THE READERS OF THE FARMER

[illegible] of the Genesee Farmer to Dr. [illegible] Lee, in connection with the undersigned, as [illegible] Editor of the same, [illegible] the present number and volume. The occasion [illegible] announcement necessary, will [illegible] a brief review of personal efforts, without [illegible] the writer to the charge of possessing an [illegible] of egotism.

For the past four years my time and energies have been exclusively devoted to this Journal and the interests it has sought to promote. Aside from personal [illegible] heart has been ardently engaged [illegible] Improvement and Progress — and for its advancement I have hopefully and cheerfully labored. However humble the instrument, or feeble the capacity, the objects in view were most worthy, and the efforts put forth have been earnest [illegible]. When the Farmer passed into my [illegible] friends [illegible] that it could be resuscitated and established upon a permanent basis — and nearly all considered the enterprise [illegible]. But, confident and enthusiastic [illegible], and determined to succeed [illegible]. To accomplish an object so [illegible] personal ease and pleasure were disregarded, and whatever industry and ability I could command [illegible]. The result proves that my [illegible] misplaced, and that the labor bestowed [illegible] the work by its conductors, has met with [illegible] in the substantial and unexpected [illegible] received. And it affords me pleasure [illegible] connection, what I trust will prove [illegible] to its readers, that the Genesee [illegible] a greater circulation than ever [illegible] days — and that, [illegible] to rank at least equal, in [illegible] usefulness, to any of its able and [illegible] contemporaries.

The [illegible] and popularity of the Farmer, [illegible] acquired by the writer and [illegible] Genesee [illegible] entitled to equal if not greater [illegible]. As Publisher, particularly, I have been constantly aided by numerous influential persons residing in various sections of the Union. Indeed, they have seconded my efforts, and responded to my requests, in every appropriate manner — in the capacity of Contributors, Agents and Subscribers — and it is to them, rather than to any talent or exertions of my own, that the public are mainly indebted for [illegible] benefit may have accrued to the agricultural community through the [illegible] persevering labors. [illegible] of enterprise [illegible] localities, and actuated by liberality [illegible] — the Farmer would never have [illegible] and profitable as it now is, or [illegible] existence. To each and all those [illegible] in any manner contributed to the success [illegible] — either by communicating the results of their observation, study and experience [illegible] or in augmenting its subscription list — I tender [illegible] and grateful acknowledgments of an [illegible] heart, not only for kindness extended to me [illegible] but for the exercise of that spirit of liberality and [illegible] patriotism which has induced them to accord support to a publication designed to promote the most prominent interests of our wide spread Republic.

To the [illegible] for many friendly notices and favors. This remark applies particularly to the Press of Western and Central New York, to the conductors of which I am under especial obligations for personal kindness and courtesy on all occasions. To all members of the brotherhood, near and distant, cordial thanks are tendered for past favors — with an assurance that the acquaintance which has proved so pleasant to myself will ere long be renewed. May they all use wisely and successfully the power they have to enlighten and instruct the heart and mind — to direct and control public opinion and character. May usefulness guide them continually, and honor and prosperity attend their future efforts and progress.

In reviewing my editorial career [illegible] comparatively little that I should wish to undo, [illegible], however, has been omitted. The printing and publishing of the Farmer has necessarily occupied a great share of my attention, and (Dr. Lee being absent much of the time, engaged in other important duties,) the editorial department [illegible]. Indeed, I do not claim to have [illegible] fully and well the duties of an Editor — and have certainly fallen far short of my own standard, and conception of what ought to be accomplished. It has been my constant aim to keep the pages of the Farmer free from error and imposition of any and all kinds, and to render every line reliable and useful to its readers. How well I have succeeded in this honest endeavor each subscriber must judge for himself. But I trust my efforts have not proved worthless to those for

whose benefit I have labored, and that the back volumes of the Farmer are worthy of preservation and valuable for present and future reference. I leave the publisher's desk and editorial chair with the consciousness of having endeavored to perform aright the duties that have devolved upon me—the conviction that I have dealt uprightly, and that the pages of the Farmer have been kept comparatively free from matter offensive to good morals, correct taste, common sense, and practical and judicious husbandry.

Although no longer connected with it my good wishes for the success and usefulness of the Genesee Farmer, will not, I trust, diminish. My connection with the paper has been pleasant and not unprofitable—and in leaving it I fervently desire the prosperity of my successor. Dr. Lee has recently returned from the South, and will hereafter devote his principal time and attention to this Journal. To those who have perused his able articles and essays, or listened to his eloquent lectures, it is unnecessary for me to speak of his superior abilities. But in order that the agricultural community may receive the full benefit of his services, every reader of the Farmer should lend a portion of influence in its behalf. And I will here ask all the friends of the paper to continue and increase their generous exertions to augment its subscription list, and likewise to be liberal in their contributions to its pages. While I desire that its circulation and consequent power for good may be greatly increased, I hope the paper will continue to be an organ through which sound practical farmers and men of science will impart their experience and wisdom to all reading and thinking cultivators.

In retiring from the Farmer I shall not dissolve my connection with the Agricultural Press, nor abate my efforts for the promotion of Rural Improvement. My labors will be equally earnest, and more frequent—devoted to a *weekly*, instead of a *monthly* periodical. If any desire to continue the acquaintance, I shall be most happy to receive and respond to orders for Moore's Rural New-Yorker, for Prospectus of which see advertising department of this number.

It is with emotions of no ordinary character that I take leave of the readers of the Farmer, and add *finis* to my humble but well intentioned labors as connected therewith. To all subscribers and friends I wish success commensurate with their skill and perseverance in enriching both the soil and the mind. That they may reap from the former most abundant harvests, and that the latter may ever abound with the imperishable fruits of knowledge and wisdom, are my fervent aspirations.

D. D. T. MOORE.

The undersigned has purchased the type, good will, patronage and subscription list of the Genesee Farmer, and will hereafter *publish* as well as *edit* the paper. Although one half of the subscription right has belonged to me since the close of the year 1844, yet it is due to Mr. D. D. T. Moore that I should say, in parting with him, what is strictly true, that the unparallelled success of the Farmer under his administration is mainly to be ascribed to the ability, fidelity and indomitable perseverance of that gentleman. In whatever enterprise he may embark, I trust he will command, as he will unquestionably deserve, equal, if not greater success.

It is much pleasanter to speak of others than of one's self. But duty calls, and I shall speak plainly what I feel. Born and reared among the farmers of New York, and having ever labored to promote their educational, their agricultural, and other common interests, why should I be compelled, when over forty-five years of age, to go a thousand miles South to earn bread for my family? Before regarding this step as absolutely necessary, I prefer to make one appeal, and *only one*, to the readers of the Genesee Farmer, and wait the result.

There are now some twenty-two millions of people in the United States, more than two-thirds of whom are farmers, or belong to the families of farmers. I deem it as a matter of inestimable moment to our republican system of government and the good of all classes, that *these millions*, however diffusely scattered and settled soon begin to cultivate a taste for rural literature and science—a love for agricultural reading and books. To promote this object, my feeble pen and feebler tongue have toiled hopefully for years. My son will soon be taught to set up all the type used in printing this cheap Agricultural Journal; and the little savings of a life time will go to pay for a small steam engine and a good power press, which can work off 2,500 sheets of the Farmer in an hour. It will, as hitherto, be sold to clubs, at the pittance of thirty-seven and a half cents a volume, or a year.

Mr. Barry will continue to conduct the Horticultural Department; and no pains will be spared to render the work a favorite among all who wish well to the cause it advocates. It will be handsomely illustrated with new and elegant engravings. It is my purpose to *condense* into a small space much information culled from foreign and American journals. In this way, by the liberal expenditure of personal toil, a volume of rare excellence can be produced.

I disclaim all wish to compete with the proprietors of other similar journals; and I urge my friends to disabuse their minds of the too popular error, that a farmer who reads one book or one periodical, devoted to the several arts and sciences which pertain to rural affairs has no occasion to read another book, or another periodical, to make him wise and accomplished in his important profession. While the three millions in the thirty States who read nothing, had better subscribe for the Genesee Farmer, and begin to learn *a little*, those that are more advanced may profitably extend their studies to other and more expensive works. In a nation of farmers so prosperous as this, what is fifty cents a year to any one, whether male or female, who really desires to improve a farm, a garden, or an orchard; or to enlarge the minds of the several members of a family who possess these things? This journal ought to have a circulation of fifty thousand copies, and if it fails to reach that figure, it shall not be my fault.

Kind friends, I rely on you to aid in a work in which I must unavoidably give much labor for little pay. It can only prosper by the gratuitous assistance of all that wish well to the Cause, in which this paper has served as a pioneer for twenty years. I have faith to believe that it is destined to do vastly more good within the next twenty, than it has during the last. My arrangements for correspondents and foreign periodicals are such, together with my personal attention, as must greatly improve the future volumes of the Farmer. Send forward then your long lists of subscribers, and I will see how good a volume I can send you in exchange for your money.

DANIEL LEE.

AGRICULTURAL EDUCATION

We are happy to say there is every reason to expect that the Legislatures of New York and Massachusetts will each establish an agricultural school at its approaching session. Public sentiment at last, has been brought not only to *tolerate*, but to demand the professional education of young farmers. Those that have labored long and against a mountain of prejudice to achieve this result, may well rejoice at the success of their indomitable efforts. Glorious will be the day when the noble arts of Tillage and of Farm Economy, shall fairly emerge from the *empiricism* of unnumbered ages. Science and Literature have often wandered far, and to little purpose. They are now returning like the prodigal son, tired of feeding on husks, to make an enduring home in the peaceful dwellings of American farmers. The generous soil of this young Republic is destined to produce something better than luxuriant crops of grass and grain, fine sheep, cattle and swine. It will yield a bountiful harvest of *men*, improved to the highest attainable point, in all the knowledge, and in all the virtue most useful to intellectual and moral beings.

We thank our Maker that this production of noble men is likely to be as much esteemed in our lifetime, as are bulls and boars, rams and breeding mares. Of all domesticated wild animals, the genus *homo* is most neglected on many farms. England awards premiums of fifty guineas for rearing well formed calves; while she permits unsightly children to be educated for the poor house and the prision. Of all things pertaining to the well-being of society and government, that of training up children in the way they sould go is most important. We take the liberty to offer a few hints on this subject in connection with what we regard as a good Agricultural Education. To attain this object, boys must be educated on well-cultivated, well-managed farms. This will withdraw them from many temptations, alike adverse to sound morality and injurious to physical health and mental vigor. The chief corner stone of human improvement lies in obedience to the letter and spirit of that simple prayer—*"lead us not into temptation"*. Lead children not into temptation; and even adults had better keep as far removed from it as practicable.

A school on a good farm will possess many advantages beside its exemption from all the bad examples and immoral influences of cities and villages. Pupils can be boarded much cheaper on the soil that produces their daily food, (not a little of which may be the fruits of their own skill and industry,) than they can be elsewhere. The fact is not to be disguised, that to impart a large mesure of literary and scientific knowlege to the sons and daughters of a whole community, involves considerable expense, which somebody must pay. Therefore, the writer has long studied to economise in every practical way, the whole art and science of thoroughly educating every child in a State.

Boarding and tuition are the principal items of expense. The cost of tuition can only be justly reduced, by so arranging pupils in large classes that a competent and skilful teacher may instruct many at a time; and of course, at a small fee for each person taught. This implies the existence of large schools and several departments in each—a university in miniature. Western New-York should have a Normal School located on a good farm, with a view to economy in living, and to realise the many incidental advantages connected with the arts of agriculture, horticulture, fruit and arbor-culture. But as this may not be the proper time to urge the founding of such an institution, we will give a brief outline of an Agricultural School which will, in our humble judgement, most benefit the great farming interest of the country.

1. There should be a professorship of Geology in its application to agriculture.

2. One of Analytical Chemistry and Meteorology.

3 One of Botany, Vegetable Physiology and Entomology.

4. One of Veterinary Surgery including the Anatomy and Physiology of domestic animals.

5. One of Practical Horticulture, Fruit and Arbor-culture.

6. One of Practical agriculture and farm economy.

A smaller educational force than the above will be too feeble, and must work at great disadvantage. Instead of diminishing it, we should prefer to add a professorship of mathematics with a view to teach practical surveying, teh plotting and mapping fields, bevelling for drains, &c. A professorship of modern languages would also be useful.

It has been found necessary to divide the labor of theaching the Healing Art among six or seven professors in all the medical schools of the United States. Having been regularly through one of these doctor factories, we speak understandingly when we say that, as much science, learning and study are required to form a thoroughly educated farmer as to make a thoroughly educated physician and surgeon. Now, we do not propose to force the study of any branch of natural science upon the young men who are to follow the profession of agriculture through life. Those that prefer ignorance to knowledge, poverty to competence, need have no fears that *they* will not be permitted to enjoy their tastes and their predilections. All we desire is, that so many as wish to become familiar with the laws of nature, which govern the improvement and deterioration of soils, the improvement and deterioration of cultivated plants and domestic animals, and the improvement and deterioration of *men*, shall have a fair opportunity to gratify so laudable a desire.

There are so many seekers after information of the character named, that no one school can do more than prepare well qualified teachers of the various sciences most intimately connected with agriculture and rural economy, to be employed in the great State of New York. It is a capital mistake to suppose that any graduate of a literary or medical college can teach successfully agricultural geology and chemistry, comparative anatomy and meteorology — not to name the practical part of the farmer's profession. To qualify a person to teach any art or any science, it is indispensable that he shall have studied it long and well, and have experience in its practical details. It is an imposition for one to assume to communicate information on any subject to others, of which he is himself ignorant. A studious person who provides himself with suitable books may master in time almost any science, without the aid of any other instruction. This however, is far from being the easiest way; but it is better than to remain in profound ignorance of useful sciences and valuable arts.

That young men have the capacity to improve themselves, as well as the soil and its vegetable and animal products, it is now too late to deny. Let us then give them the best chance for obtaining useful

[illegible] Nothing [illegible] [illegible] will be [illegible] [illegible] agricultural and [illegible] American [illegible] with any other for high [illegible] will [illegible] [illegible] legislative [illegible] numbers in the State and [illegible]! It will not do, in this go-ahead [illegible] could be carried [illegible]

[illegible] Hitchcock's Geology [illegible] [illegible] a well [illegible] library [illegible] good education. There is something in them good, and society will certainly find it out. Every year increases our means of improvement. Every year strengthens the influence of cultivated intellect, and the power of mind over matter. We should be watchful of the signs of the times, and [illegible]

PATENT OFFICE AGRICULTURAL REPORT.

The senior editor of this paper has consented to take charge of the Agricultural matters in the Patent Office, and prepare a Report to Congress at its approaching session. To further this undertaking he [illegible] information on all topics appro[illegible] and particularly in refer[illegible] commerce of the country. The [illegible] product on [illegible] rivers, canals and railways is a subject of interest to all intelligent farmers and business men.

[illegible] in regard to the quantity of grain and other [illegible] grown in the current year, can possess but little value [illegible] in the [illegible] of the U. S. Census [illegible] taken. Improvement in the [illegible] in the science of agriculture are objects of great interest at this particular time. The public mind is now more engaged in the work of improving lands, and educating young men not less thoroughly to be farmers than doctors or lawyers are professionally educated, than at any earlier period. The [illegible] begin to appreciate the fact that no [illegible] of earth can possibly contain an unlimited quantity of the atoms necessary to form good crops of grain, cotton, tobacco or potatoes. The elements of bread and meat in any given soil or field being quite limited, the waste of these elements, when extended over many millions of acres, becomes a matter of paramount national importance. That the quantity of atoms in every cubic foot of soil or [illegible] can be transformed into [illegible] [illegible] If this were the [illegible] [illegible] of varying fertility, [illegible] [illegible] supply of [illegible] [illegible] The use of [illegible] the whole story—that the elements of bread and meat may be used up—wasted—utterly lost to the husbandman and the world. How much [illegible] to the [illegible]! Who can tell?

[illegible] the American navy of [illegible] in which beef, pork and butter are put up for [illegible] tropical climates [illegible] [illegible] is not [illegible] butter and cheese. [illegible] is desirable.

Information on these and other subjects is sought not only at home, but from foreign nations with which we have commercial and diplomatic intercourse. The collection and diffusion of useful knowledge in the cheapest possible form, are labors in which [illegible] participate.

Should not the young men of America be reminded of their duty in this connection? Look on the broad surface of the Union, and mark the millions of acres of native forests which have fallen and disappeared at the approach of the [illegible] and his axe. [illegible] earth nearly the whole wealth of the country. If no damage had been done to the lands under cultivation, our admiration of the industry, enterprise and success with which they have been plowed, hoed and harvested, would be unmingled with regret. But, unfortunately, many millions of acres of American soil have suffered incalculable, if not irreparable injury. The economical renovation of partially exhausted fields, and the cheap improvement of all farming lands that need it, are objects to which much time and study may be profitably devoted.

A Word to Subscribers and Friends.—The publication of the Genesee Farmer will be continued at the old office, in Talman Block, [illegible] and be printed [illegible] the same [illegible] To prevent [illegible] persons wishing to [illegible] subscription, or on any business with [illegible] should be careful to address: "Daniel Lee, *Publisher of the Genesee Farmer, Rochester, N. Y.*"

Garlic.—To eradicate Garlick or Wild Onion, Mr. Leavwith writes to the Albany Cultivator to the following effect:—"I have [illegible] summer [illegible]; say, one year corn, [illegible] potatoes, next oats, with clover seed, seeding pretty heavily, and plastering the clover. Let it lie one year—then repeat the same course. [illegible] a field very [illegible] which I treated as above mentioned, and at the end of the second year the plant had entirely disappeared."

THE PHILOSOPHY OF TILLAGE.

BY DANIEL LEE, M. D.

[*Continued from [illegible] number, page 254.*]

Having [illegible] the [illegible] of the organic elements [illegible] atmosphere by tillage, let us now [illegible] in [illegible] they [illegible] lost by [illegible] their [illegible] elements [illegible]. This done, we shall be prepared to consider the best [illegible] and means to prevent loss in either [illegible]. The end aimed at is, to accumulate [illegible] meat in the soil, like gold in the mint ready to be coined, a little faster than children multiply and [illegible] from Europe, to be fed.

[illegible] dominant mineral in the earth is flint or silica, which forms sand and will melt into glass if pure,—[illegible] that is promoted by the combination of [illegible], soda or lime. Silica constitutes an important element in the stems of all cereals like wheat, rye, oats, corn, &c. Pure silicious sand is remarkable for its insolubility. It is in truth an acid formed by the union of 24 parts of oxygen with 18 of an earthy base called silicon. This acid combines chemically with alumina, which is the next most abundant mineral in nature, being the basis of clay. Silicic acid also unites with iron, lime, potash, soda and magnesia. Having a weak affinity for these alkalies, and alkaline earth, carbonic acid in water from decaying mould, vegetables or manure, attacks the insoluble silicates of potash and soda, and forms carbonates of these alkalies. These, like pearlash, are very soluble; and what is particularly worthy of note, they are capable of dissolving silica. Thus if we boil finely powdered glass, which is an insoluble silicate, a strong solution of potash, or of potash and soda, the glass will be dissolved, and may be applied to the roots of corn or wheat in a way to enter their roots and go to make the hard glassy covering on the stems of those plants. It is curious that these soluble silicates which contain an excess of the alkali should be changed into insoluble silicates of potash or soda in nature's laboratory within plants, by separating [illegible] the silica deposited in the cuticle. The potash so liberated returns to the soil and there dissolves more of [illegible] to impart strength to the stem of the plant; precisely as bones enable animals to stand up on the earth.

It is worthy of remark in this connection, that many soils which [illegible] in sand, as in parts of Maryland, Virginia, North and South Carolina and Georgia, [illegible] soluble silicates of potash, soda, [illegible] lime, to a degree. To such soils, it is [illegible] not only ashes, leached or unleached, [illegible] leaves and such vegetable substances [illegible], as well as the other earthy [illegible]. [illegible] will [illegible] yield more potash to a soil than a [illegible] wheat straw. Indeed, the [illegible] of all crops, should [illegible] by husbandmen. A vast [illegible] in gathering poor or defective [illegible], where good ones might be obtained at [illegible]. I have briefly alluded to nitrogen, sulphur, phosphorus and chlorine as volatile constituents of vegetable and animal substances, which combined with hydrogen [illegible] the atmosphere. [illegible] mineral acids in rocks and earths.

[illegible] parts by weight of oxygen combine chemically with fourteen of nitrogen, fifty-four parts of *aqua fortis* (nitric acid) are produced. This acid combined with potash [illegible] salt petre, or nitrate of potash. This salt, as well as nitrate of soda, are involatile; and both are found in considerable quantities [illegible], where [illegible] and [illegible] that electricity [illegible] to combine the oxygen and [illegible] to form nitric acid, which falls to the earth in rains. Compounds of this acid are quite soluble, and in all well drained soils, nitre and all nitrates are prone to be washed away.

Twenty-four parts of oxygen combine chemically with sixteen of sulphur, and make forty of sulphuric acid, or oil of vitriol. Unlike nitric acid, this exists in granitic and other rocks, as well as the common loose earths. Its salts are very numerous. Combined with alumina and potash, it forms alum; with iron it produces copperas; with soda it gives glauber salts; with magnesia, epsom salts; with copper, blue vitriol; with zinc, white vitriol; and with lime, gypsum. The sulphate of lime, or plaster of Paris, being less soluble than the other compounds of sulphuric acid, we usually find more of this mineral in soils,—especially such as are properly drained,—than alum, copperas, glauber or epsom salts. *Sulphur* being an indispensable element in all crops and all flesh, I attribute the value of gypsum mainly to the sulphur which it yields to clover, peas wheat and other cultivated plants. In 100 lbs. of wool or hair, there are five of pure sulphur. If the food consumed by sheep and other animals, contained not an atom of this ingredient, how could their wool, hair, muscles, brains and nerves all abound in this element? Minerals that contain sulphur should be well husbanded. All sulphates are involatile; but most of them are extremely soluble.

Five atoms of oxygen combine chemically with one of phosphorus to make an atom of phosphoric acid. The atomic number of phosphorus is not clearly settled; some chemists making it 31.4, and others only half that number.

Phosphoric acid exists in earths as a phosphate of alumina, iron, lime, magnesia, soda and potash, and often as double salts. Some of these salts are quite soluble,—others not. The phosphate of lime, or bone-earth, is the most important. Suppose nature should organize crops of grass, grain, potatoes, and all the plants which we harvest, as well without a particle of bone-earth as with it? Living on bread, milk, and other food alike devoid of this [illegible] mineral, phosphate of lime, which *alone can make bone*, no child could have a bone in its body. I desire to impress on the mind of the reader this truth: a kind and all-wise Providence does not permit cereal and other plants [illegible] as food for man and the higher classes of animals, to grow one degree beyond the supply of bone-earth in the soil. Such food would be worse than useless. If animals fail to find their proper nutriment in one place, God gives them power of locomotion to walk, fly or swim to another place, and seek for it there. But when a stalk of corn has organized a cob and a few kernels at its base, if the stock of raw material fails, no more kernels can possibly grow. If they did, and lacked the elements that [illegible] it would be mighty poor [illegible] for pigs or children to eat for bodily nourishment.

In 100 pounds of dry common salt there are about 60 pounds of chlorine. When free, it is a heavy, green, and very pungent gas. Some 36 parts of this

combined with one of hydrogen, form in water, muriatic acid, or hydro-chloric acid, as it is now more commonly called. As a class of minerals, the chlorides or muriates are very soluble, like the chloride of sodium, or common salt. They do not abound in soils. Common salt has been used as a fertilizer some three thousand years—both soda and chlorine entering into the composition of all or nearly all crops. Most quadrupeds are extremely fond of salt; and all civilized people season their daily food with it. It is curious that potatoes and wheat cannot be salted enough while growing; and that no degree of salting a fatting steer will suffice, so that a little added to a fresh steak will not be an improvement. "Ye are the *salt* of the earth," has not less an agricultural, than a moral meaning.

With regard to the value of lime, magnesia, potash, soda, and iron, in organising cultivated plants, perhaps nothing need be said. I have never analyzed a soil that lacked iron: like silica, iron is not always in a soluble and available form. The practical farmer should understand, that such constituents of plants as are always soluble, a few year's tillage and fair drainage render scarce; and such as are ordinarily insoluble, without the aid of decomposing mould or vegetables, cease in a great degree to yield their nutritive atoms to famishing crops. Bear in mind that between forty and fifty cubic inches of water fall on every square inch of surface in the course of twelve months. If the ground has been cultivated, and really contains the food of plants in a soluble condition, this water will of course dissolve alike the organic and inorganic elements of vegetables. I have frequently washed from ten to fifty pounds of soil in pure rain water as it falls from the clouds, and then filtered and evaporated the water to see what substances were held in solution. I have never failed to get both combustible and incombustible elements, and often nearly equal parts of each. By leaching fifty pounds of soil a few weeks with warm rain water, and then analyzing the matter dissolved out, one can judge with some confidence of its defects and productiveness.

In studying the various processes by which the fertility of a cultivated field becomes impaired, I have been led to believe that much depends on the proportion of the water that evaporates on the earth where it falls, and that which runs off, either on the surface or under it, into springs and rivulets, to form creeks and rivers. Deeply tilled land will absorb twice as much rain water as shallow tilled will; and the former will retain twice as much to carry the crop through a drouth, for evaporation at the surface of its numerous leaves, as will the latter. But most of the cultivated lands in the United States are neither tilled *deeply*, nor uniformly covered with *growing* vegetation, to absorb and fix in its tissues the dissolved food of plants.

The more a soil is stirred with the hoe, cultivator, or plow, the faster the elements of crops are set free by chemical action, and will be lost by solar evaporation, washing and leaching, if such elements are not taken up by growing plants and retained in them. Berzelius found two organic acids in clear spring water, to which he gave the names of "crenic," and "apocrenic," from *krene*, the Greek for a "spring." River water always contains both the organic and inorganic food of plants. The quantity of the fertilizing atoms which is wasted in the planting States, is infinitely larger than one man in a thousand ever suspects. As a similar waste prevails at the North, only much less in extent, I desire to give a clear exposition of my views on this, the practical part of my theme.

Although both cotton and corn are planted early, and often gathered late at the South, yet cotton and corn plants do not gain much in weight beyond four months for the former and three months for the latter. During the first four or five weeks after the seeds germinate, the young plants are too small to imbibe any considerable quantity of nutritive matter of any kind, from the soil. As they approach maturity, they gain less and less in weight, and of course abstract less and less fertilizing matter from the earth or atmosphere. During the past season I have watched with lively interest, the organization or growth of corn which yielded from five up to fifty bushels per acre. If I express the opinion that a crop of five bushels exhausted the soil about as much as one of fifty, some will esteem the remark about as sensible as to say that five sheep will eat as much food as fifty. The cases are not parallel. If a crop of corn, equal to the production of five bushels per acre, does not exhaust the soil as much as it would if ten times larger, the only reason that can be assigned is, that the elements of corn plants are in truth not present in the sterile earth, to be removed. On poor land it is found necessary to give each stalk three times more surface of earth to imbibe nourishment from, than on good land. When there is but a single plant to twenty-four square feet of surface, and that plant a very small one, my impression is that even during the period when it grows the fastest, it fails to take in at its few small roots, more than a third of the available atoms evolved by the decay of the organic and the solution of earthy food of the plant, within the square which it occupies. I will not say that all the gases and earthy salts derived from rotting mould and vegetables, and from dissolved lime, potash, soda and magnesia, which fail to enter the corn plant, are lost. But this I will say, that I see no reason to doubt the loss of most of these volatile and liquid atoms. I would about as soon have a field cropped ten years, and all the corn or cotton entirely removed, root and branch, as to have it well plowed and hoed ten years, and no vegetable whatever premitted to organize carbon, nitrogen, and the elements of water, and the minerals which form the ashes of corn, cotton, and wheat, in the field.

There are some seven millions of acres planted in cotton in the United States, every year. As the plant is little used to feed domestic animals, and most of its seeds are returned, after rotting, as manure, no crop should injure the soil so little. But the clean culture, and long tillage which it demands, make it the most exhausting crop that is grown in the Southern States. As now cultivated, it wastes three times more food than it eats. And such is my judgment in regard to not a little of the corn and tobacco culture which I have seen. I come now to the consideration of preventives and remedies.

To save from waste and loss the constituents of bread and meat, as they are eliminated by tillage, *they should be immediately organized in some living vegetable.* This is the process employed by Nature to renovate soils that have been impoverished by unwise cultivation, or by other means. It is the only way in which a soil can be made to increase in fertility, without adding fertilizers from elsewhere to it. Much has been written on the subject of renovating

poor lands, which have been injured by excessive cropping, and improving such as are naturally defective, the subject is very little understood. I have in my eye an old field which was scratched with the "bull tongue" plow and the hoe, a little longer than any crop would grow, and till its surface was as bare the year round, as the desert of Sahara. A thin, spindling grass, a few stunted weeds and young pines, have begun the work of making a new soil on this sterile waste. In this natural process of renovation, the *pine* is the king of plants. Nature has provided its seed with an apparatus which serves the the same office performed by the down on the seed of thistles, *i. e.*, to enable it to be borne a great distance by winds in all directions. The seed of the pine no sooner germinates, than it extends its small tap root deep into the ground, in search of a very little of the alkalies and alkaline earths, without which it can not organize carbon and the elements of water into woody fibre. Supplied at first with two green leaves and a small root, and mainly from nutriment stored up in the parent seed, it is prepared to perform the legitimate functions of all growing plants, viz: to decompose carbonic acid and water by the aid of solar light, and with a little available nitrogen, potash, etc., to organize its tissues and gain in weight and substance. In forming ten pounds of common pine wood, nature deposits in its tissues, and consumes from the earth, not more soluble salts, or *ashes*, than can be got from a single pipe full of tobacco. And yet, wonderfull to tell, I find four per cent of ash in the dry leaf of the long-leaf pine. But all these numerous and weighty leaves annually fall on the surface of the ground, to rot and form——what? Why, a *mould*, rich in organized carbon; rich in salts of lime, potash and magnesia; the former taken from the atmosphere, and the latter from the subsoil.

Here is the first letter of the alphabet in the science and the philosophy of accumulating bread and meat in the surface soil. Study the ways of Providence; wisely imitate His example, and a barren plain can be converted into a fruitful garden. The pine is an evergreen, and grows the year round.

The first thing I did when I came to Georgia, a year and a half ago, and saw the extreme nakedness of the land, was to recommend the seeding with rye, at the last plowing in cornfields, or soon after the crop ceases to grow, with a view to have this winter plant gather up from August till March, whatever available atoms might be within reach of its roots and leaves. As the earth does not freeze, and heavy, washing rains fall in winter, "the fat of the land" is largely consumed, and is either lost, like a burned candle, in the atmosphere, or carried like water from a dung heap, into ditches and "branches." Barley, oats, and wheat, all do well here sown in November or December. It is now the 6th of February, 1849, and I have this day seen a field of oats which has been cut in part for soiling, for some weeks. Another in barley, is so stout as to fall down or lodge.

Winter pastures of rye are very valuable for stock of all kinds, although there are some clayey soils that the treading of cattle and sheep injures.

Acting on my theory of keeping the earth always covered with some growing vegetatien, Mr. M. B. Moore, of this city, (Augusta) raised last season 34½ bushels of wheat from one ot seed, which was harvested about the 20th of May; then a crop of hay, equal to a ton and a half to the acre, which was mown in August; and then a crop of peas which was harvested in November; all from the same land. The land is now in wheat, to be harvested in May next, as before. There is no difficulty in growing three crops of small grain in a year at the South, if one is cut green for hay, as oats, peas, barley and rye are often cut. To enrich the soil, I assume that the manure derived from both the grain and straw, or of the green crops is all carefully saved and duly applied to the land. As about 60 per cent. of the hay and other food eaten by a cow, sheep or horse, is lost in vapor and carbonic acid, thrown out of the lungs in the process of breathing, and through the pores of the skin in insensible perspiration, one will increase organic matter in a poor soil much faster to plow in clover, peas, timothy and rye, than to feed these to domestic animals, and apply all their excretions to the land.

I am well aware that clover has long been used in connection with wheat culture, to enrich cultivated earth. It was a knowledge of this that led me to believe that to sow rye in corn, potato and oat fields in autumn, to be plowed in for the feeding of the next summer crop, would be useful any where, north or south. I find that a kernel of rye will organise from October till the first of April, a plant which when dry, will weigh 100 times more than the parent seed. I call this gain of 99 parts for one, cheap manure, which is already evenly spread over the rye field, and ready for the plow in the spring. A man's farm is in truth a chemical laboratory; and he should study to turn the frosts of winter, the sunshine of summer, the rains of spring and the dews of autumn, to the best possible advantage. Very late plowing to freeze compact earths, and very early seeding, are worthy of attention at the North. I am in favor of pretty thick seeding and planting, partly as a better covering and protection to the soil, and partly because I have generally found the best practical farmers to concur in recommending it. Under our present exhausting system of tillage, there is far more land under the plow in the United States than is really desirable or profitable. The correction of the evil of running over a great deal of surface to produce a little corn, wheat, cotton or tobacco, is not to be expected during the life-time of the present generation. Boys may be made to understand that it is much cheaper to make 500 bushels of corn on ten than on one hundred acres; but few men forty years old that practice the exhausting system now, will ever pursue any other. Talk to them about carbon and the subsoil, and they will soon fill both ears with cotton. Persons twenty years younger, are generally willing to learn why 100 lbs. of pea vines will make richer vegetable mould than a like weight of bullrushes. Seeing that an acre of tilled soil, which gives but 15 bushels of corn, has the same sunshine, and an equal amount of rain and of atmospheric gases that fall upon an acre that yields 60 bushels, young men will study closely the slight difference in the two soils in their mechanical texture, the solubility of their fertilising atoms, and in the abundance or scarcity of each constituent element. If *tillage, as an art*, was all that is required to give abundant harvests, then equal culture should be followed by equal crops on fields that produce, the one five and the other fifty bushels per acre. No uniformity and thoroughness of tilth can work a uniformity in the growth of plants in soils that unequally abound in the precise things demanded by nature to organise the crop. To aid in decomposing insoluble silicates of potash, and in

[illegible] in compact, impervious clay. I have seen no one mineral [illegible] better than lime. This is coming into pract[illegible] the renovation [illegible] Gov. Hammond [illegible] a few miles [illegible] Augusta, on the South [illegible] river, has used over [illegible] within the last [illegible] years. I have witnessed its effect, the past se[illegible] Cornwall's marsh swamp, [illegible] most marked and ancient; although [illegible] The [illegible] preliminary to the improvement of [illegible] that needs it. [illegible] his farm near [illegible] are largely [illegible] enrich land, by [illegible] them under [illegible] are grinding in the public [illegible] every month. Domestic animals are fed and kept much under shelter [illegible] skillful farmers, in order to save all their liquid and solid droppings from waste by solar evaporation [illegible] by rain. [illegible] in the state of [illegible] fertilizing [illegible] elements in nature.

Good husbandry implies the faithful husbanding of all the elements of bread, milk and meat, in every [illegible] form which these are created [illegible]. Man is [illegible] of creating one new atom, or of making an atom of sulphur perform the functions of an atom of phosphorus, or [illegible] the duty of an atom of lime or silica. If one-third of the [illegible] that [illegible] to [illegible] and the other two-thirds [illegible] dustry in the United States [illegible] it now does. It is [illegible] to go over [illegible] valuable elements [illegible] land in pasture and [illegible]

[illegible]

without some hindrance.

The [illegible] the [illegible] productions of the [illegible] results closely connected with the operations of agriculture [illegible]

A Cheese was exhibited at the New York State [illegible] Fair, made from one day's milk of [illegible] A. E. Ayers, [illegible] Ashtabula Co., Ohio, which weighed 203[illegible] pounds.

SALTING STOCK

Messrs. Editors:—This subject has been broached [illegible] An article [illegible] (page 127, vol. 9,) on the impropriety [illegible] The same article was [illegible] correspondent of the Louisville Journal, signed G., (page 247, same vol.) [illegible] questioning the propriety of salting [illegible] I have been patiently waiting [illegible] hoping that some of our [illegible] farmers would comply with G.'s request and give the benefit of their results. [illegible] numbers of the Farmer are at hand [illegible] of salt [illegible]

Salt is beneficial to stock—for [illegible] it, and would recommend it pretty freely, yet seasonably.

1. When given satisfactory [illegible] to the properties of their milk, [illegible] 2. Salt [illegible] when their food is not of that [illegible] effect the purification of their [illegible] alleviating some internal or external [illegible] strengthening and invigorating [illegible] and general system. Of this last [illegible] with the same effect upon both horses [illegible] These conclusions I gather not from [illegible] but from experience, the sciences, and common sense.

Having given a synopsis of [illegible] of salting, I shall proceed [illegible] as follows: To every [illegible] (4 quarts) of salt. [illegible] each week. To other stock [illegible]

[illegible] is very kind. It delights me to visit a flock of sheep [illegible] [illegible] it truly does [illegible] by [illegible] with the cold that they [illegible] salt in their [illegible] would salt [illegible] would [illegible] the chance [illegible] had [illegible] particularly if very cold weather followed.

Connected with this subject [illegible] suggestion to make, that is—[illegible] should always be at the option of all animals that are salted. L. D. [illegible]—*East Bloomfield, N. Y.*, 185[illegible]

Remark.—The above was received nearly a year ago; but, being reserved for publication at a more appropriate season, has been overlooked until the present time.

[illegible]CIENCE AND PA[illegible] FAR[illegible]

BY WILLIAM GARBUTT.

MESSRS. EDITORS: The exhibit at the State Fair was a cheering prospect for the improvement of [illegible]. [illegible] opinion patronize the plow, and the cultivators of the soil will increase their diligence [illegible] will enlighten their path [illegible] productions, the [illegible] life be increased, social and rational happiness [illegible] plenty around. But [illegible] the barrister and the poet. To [illegible] experience, is the proper sphere [illegible] cultivators of the soil.

[illegible] much, and yet has much to do [illegible] of Agriculture, but the practical [illegible] man of [illegible] knowledge; he must think, examine [illegible] judge for himself, and test by experience the [illegible] which [illegible] direct him in his various [illegible]. As our distinguished visitor truly says [illegible] that theories can ever be successfully [illegible] the importance of experiments in practical agriculture."

The chemist can give valuable suggestions, but the farmer must test their general result by experience. The time was when it was not known that [illegible] would [illegible]; and when the [illegible] it was of immense value; but the [illegible] cultivator. [illegible] Hence the necessity of each farmer being an experimenter, and each one's farm an experimental [illegible]. [illegible] cultivator ought to allow a season to pass without testing carefully some of the various operations of his multifarious pursuits; and it can easily be done without incurring much expense, for a half or a quarter of an acre is sufficient to test an experiment, if it is performed with care, and close observation.

Our fields are generally cultivated in ridges of equal width; and how easily can a farmer test the value of various manures, by applying the fermented and unfermented, the compost or pure barnyard manure, or any of the numerous fertilizers, on different ridges in the same field? And also test the various modes of cultivation; let one ridge be plowed only once, and thereafter culture be done with the cultivator and harrow; another ridge plow twice, and a third one three times;—and with equal care he can ascertain the quantity of seed that is best to apply, together with the relative value of the numerous varieties of each kind of grain. But he must be attentive, and watch carefully the operation of all his experiments; and ascertain the result with accurate certainty—*not guess at it.*

All experiments ought to be continued for a series of years in succession. For one trying is not a sufficient test, even to a *probability*, so numerous and various are the causes which affect the productions of the soil—causes, too, which are beyond the control of the cultivator, so that he cannot always know how much reward he will receive for his labor. A great proportion of the very bountiful crops that are recorded, are the result of circumstances, which the cultivator cannot foresee, nor control, and are not a fair [illegible] skill or good management. For instance, A. sows a piece of ground with wheat, which is very rich. His neighbor, B., sows a piece that is very poor. The season is very vegetative, which makes [illegible] growth of straw, but little wheat; and B.'s poor ground yields [illegible] crop. But had [illegible] would have been a [illegible]. And so it is [illegible]. There is [illegible] the richness of the soil— [illegible] occasional wonderful [illegible] severe tax on the credulity of the [illegible] that it is necessary in testing [illegible] continue them for a series of years, to [illegible] arrive at any degree of certainty. [illegible] necessary to have a statement [illegible] crops for a number of years [illegible] his practice, [illegible]. [illegible] *N. Y., Oct.*, 1849.

MORE LIGHT [illegible]

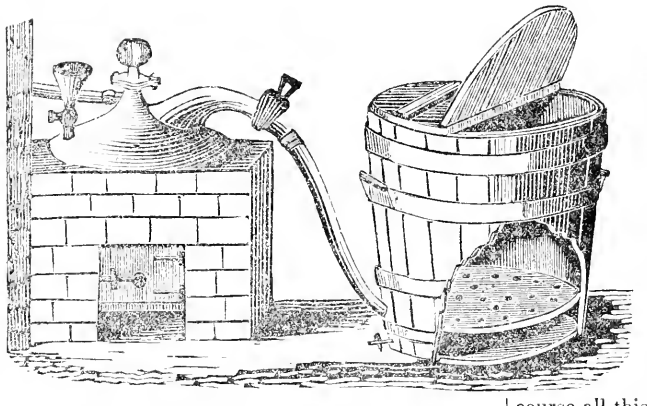
MESSRS. EDITORS:—In the October [illegible] Genesee Farmer was a [illegible] giving the products of [illegible] improved land in that town. [illegible] 85 acres [illegible] 175 bu[illegible] amount to $1,3[illegible]7[illegible]. [illegible] yields [illegible] els barley, 100 bu[illegible] how much stock he kept [illegible] increase and [illegible] nothing about what [illegible] fences. Full [illegible] farming might satisfy the [illegible].

[illegible]

PEAR TREE BLIGHT.

THE "*Young Digger*" in your November number has attacked correspondents [illegible] who by observation and experience have been [illegible] trying to find the causes of [illegible] on plum trees, and wheat, though [illegible] on Pear Trees—and he [illegible] himself to be for a youngster a "*very sure*."

Would that he could [illegible] the Blight in Pear Trees. [illegible] I am after. His criticisms [illegible] what they are worth. It is [illegible] Mr. BARRY, [illegible] to notice my article on "*Pear Blight*" and also to find many *old diggers* to say that in the main I was right in my ideas of the cause and remedies for it. Perhaps the blight will [illegible] after this year—[illegible] the Young Digger [illegible] something else. I will leave him with the "potato rot." JAMES H. WATTS. *Rochester, Nov.*, 1849.



STEAMER.—COOKING FOOD FOR STOCK.

The following remarks in reference to the plan of steamer above represented, and cooking food generally, are taken from the American Agriculturist:

"If food is to be cooked, on a small scale, boiling may be cheapest; if on a large scale; steaming is not only cheapest, but infinitely more compact; for the former would require a very large, or several furnaces, for different sets of kettles, whereas, the latter may be done with one small furnace, steamer, and pipe, as shown in the cut, with any reasonable number of vats or tubs surrounding, in which to steam the food. In order to do this, the steam pipe must be made moveable, with a screw, flexible, or be composed of some material that when the food is cooked in one tub, the pipe can be turned and inserted into another. We have seen no less than five tubs, holding 150 gallons each, surrounding a small steamer, all of which could be filled with food and cooked within twenty-four hours. Three tubs, however, are usualy sufficient for a large stock, in which the food of the first may be cooking, that in the second cooling, while that in the third is being fed out. A single person may be able to oversee, and efficiently manage all these operations.

The furnace, steamer, and tub, are so plainly delineated in the above cut, that they need no explanation. In cooking potatoes and other roots, the tub should have a false bottom (as represented,) perforated with numerous small holes, and set resting on blocks from 3 to 4 inches above the true bottom. The steam-pipe should enter the tub nearest to the true bottom. The steam is thus introduced between the two bottoms, quickly rises upward, and is evenly diffused through the whole of the food. While the cooking process is going on, the top of the tub should be kept down as tight as possible, so as to prevent the escape of any steam. In cooking grain or meal, the false bottom must be taken out and the tub filled with water, as the steam heats the water and brings it to a boiling point as readily as a blaze or hot coals around a kettle.

Steaming is said to do its work more thoroughly than boiling, as it is so insinuating, it easily enters and bursts all the minute globules in the grain and vegetables. Be this as it may, certain it is, that either process renders the food more digestible, and easier assimilated by the absorbing vessels, and therefore more economical.

The following table in the Edinburgh Journal of Agriculture, shows very nearly the increase of bulk of different kinds of grain boiled to bursting:

4 meas.	of oats	increased to	7	meas.
4 "	barley "		10	"
4 "	Indian corn	increased to	13	"
4 "	wheat	"	10	"
4 "	rye	"	15	"
4 "	beans	"	8½	"
4 "	buck wheat or bran		14	"

Boiled food, especially in winter, is much more nutritious, if fed as nearly blood warm as possible. If quite cold, or above all, if in the least degree frozen, we doubt wether it is so beneficial as if uncooked—grain and meal we are certain are not; for animals will eat the raw, cold, more greedily than they will the cooked. Stock fed upon cooked food will eat more of it than if uncooked, and lie quicker to rest. Of course all this is better for them, as they will thrive faster, look finer, and do more work. It is particularly beneficial to give hard-working horses or oxen, just as much wholesome cooked food, as they can eat, soon after coming in at night. Toiling all day in the open air, man apreciates and knows well the benefit of a warm, hearty supper. Let him remember, then, that a warm mess and abundance of it, is equally beneficial to the animals which a kind Providence has given him as efficient aids in his arduous labor. If southern planters also would give their mules cooked instead of raw food, at noon and night, we are persuaded it would put an end to the colic, so often destructive among them. Cooking would also considerably economize the food."

SALT FOR SWINE.

Eds. Gen. Farmer:—I notice that some of your correspondents doubt the propriety of giving salt to hogs—some going so far as to imagine that it will kill them. This does not accord with my experience. My hogs get salt in their slop while pigs, salt once a week while grazing on clover during the season previous to fattening in the fall, and after they are put up to feed, salt twice a week till driven off. None of them die or are made sick by it. On the contrary, I notice that they eat corn for a while, then go and take a little salt, then a little water, and back to the corn again.

If hogs are not accustomed to the use of salt it will make them vomit once or twice at first, but this does them no harm. Salt them regularly, a dessert spoonfull to the hog twice a week, and a table spoonfull or two of wood ashes, unleached, and they will more than pay for the trouble and expense. L. M. *Bourbon Co., Ky., Oct.*, 1849.

Galls from Harness or Saddle.—"A Volunteer" tells the New England Farmer that the following remedy was found to be invaluable in the fatigueing marches in Mexico:

White lead, finely pulverized, is the most effective application. Rubbed on dry, or made into a paste with milk, and applied a few times; it will also prevent white hairs growing on galled places.

To Cure Bloating or Hoven in Cattle.—A table spoonful of spirits of hartshorn, for an ox or cow, or a teaspoonful for a sheep, will afford instantaneous relief. It should be diluted with water or milk. It acts by decomposing the gas generated in the stomach, which is the cause of the disease.

MODEL LETTERS.

Among the various *models* offered to the public "about these days," we beg to contribute our mite for the benefit and edification of all interested. Our object in giving the annexed Letters, which are certainly models of taste and brevity, is two-fold. First to present those who wish to "go and do likewise" with an excellent example—and secondly, to assure all such that we can promptly fill, and shall be most happy to receive similar orders for back volumes of the Genesee Farmer. The valuable reading and instruction on Agriculture and kindred subjects, embraced in the five volumes of the Farmer published in octavo form, (from 1845 to 1849 inclusive,) is worth far more than cost to any practical, thinking farmer or horticulturist—and the same amount of like knowledge can no where else be obtained so readily and cheaply. But, to the "models":—

Mr. D. D. T. Moore:—Enclosed I send $5 on the "Market Bank," Boston, Mass., for which send me the back volumes of the Genesee Farmer—6, 7, 8 and 9. The remaining $3 I wish to make me a subscriber for the next eight years—commencing 1st January, 1849.

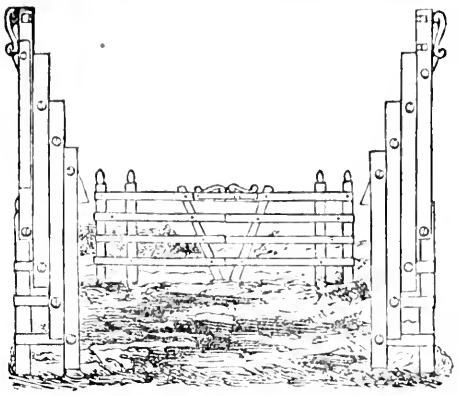
I hailed with joy the appearance of your advertisement in our principal paper, and trust that many of our farmers will answer the call. I have thus far endeavored to procure no subscribers, knowing that with a single number of your valuable paper in my hand, I can do more in an hour than I could otherwise in a week.

The farmers of central Indiana are beginning to cheer up since the rail road has been completed to the Ohio river, and I have no doubt but that your subscription list will be increased from this quarter. Calvin Fletcher, Jr.—*Indianapolis, Ind.*, 1849.

Mr. Moore:—I send you $3 enclosed for the Genesee Farmer. Please forward volumes 6, 7, 8 and 9, bound—volume 10 when bound, and volume 11 as published. Send the four volumes that are bound by Express—the other volume and numbers by mail. Hutchins Wight. *Waterloo, Seneca Co., N. Y., Nov.* 1, 1849.

Weevil. — *Caution to Farmers.*—The Hon. E. Blackman, of Newark, N. Y., exhibited to the writer samples of Timothy Seed obtained by him at Buffalo, which was literally alive with weevils. The seed was understood to be from Ohio; and most of the seed from many parts of that State, having been obtained from grass in the wheat crop, the weevil falls into their timothy seed and thus is sown broadcast over the land. As the insect lives through winter, or, in some other way appears in the same locality every season, it may be possible that the sowing of this seed containing them may hasten the general prevalence of that dread scourge throughout the entire wheat growing section of our State. Ought not farmers to be on their guard against thus distributing destruction to their crops of wheat? W.

Agricultral Papers. — Every farmer can well afford to take a good agricultural paper, to assist him in the erection of suitable buildings and fences; the making and saving manure; the selection of agricultural implements; the best kinds of stock and fruit; the feeding and fattening of cattle; the management of his land and crops—thus obtaining the united wisdom and experience of the best practical farmers, not only of our own country, but of the civilized world. I have known farmers to lay out through mismanagement, within the short period of a year, enough to pay for *one hundred* copies of any agricultural paper published in the land. L. Freeman Thurber.—*Washington, Vt.*, 1849.



SMITH'S VERTICAL GATE.

The attention of the public is requested to the above gate, recently invented and patented by Lorenzo Smith, of Easton, Mass. The above cut represents a large gate open and a smaller one shut. This gate does not *swing*, but opens *vertically* by a parallel movement of rails. Its superiority to the gate in common use may be readily seen. As it does not swing, there can be no sagging; thus avoiding a great objection to the swing gate. It requires no ground to swing upon; consequently it can be opened or shut while teams, carts, or carriages are standing close to it, or with a snow bank on both sides of it. It is opened and shut much quicker than the ordinary gate, and a man on horseback can open it without alighting. For very heavy gates it is designed to have weights attached to the ends of the rails, to assist in raising them; but gates of ordinary size do not require weights. This gate is more especially intended for carriage ways, but is admirably calculated for the doors of stables, and other places where the common gate cannot be used, and also may be made single for footpaths and narrow passages. It costs no more than the swing gate, (including the posts,) and is less liable to get out of order, and more easily repaired, if repairs are needed. The practical operation of the Vertical Gate has been thoroughly tested, and, so far as known, meets with universal favor.—*New England Farmer.*

Husk Beds.—Now (the husking season) is the time to secure the best and most durable under beds. All the inner husks of the corn should be saved for this purpose. True, it takes a great many to make a bed, but when once the sack is filled, it is a bed for life, and it is the lightest and softest thing of the kind that one could desire. The husks curl up and they dry and never mat down afterwards. Moreover no insects ever lodge in them, as vermin do in straw. They are perfectly cleanly; and being of a stong and tough texture, they will not wear out for years. We regard a good husk bed as cheap at $5. A young married couple, to the end of life, however long, will have no occasion to fill a new under bed, if they once have their sacks filled with good, soft, well-dried corn husks. We had all ours filled fifteen years ago, and they are to this day "good as new."—*Maine Cultivator.*

'The tree is known by its fruit." The only exception to this is the *dog*-wood, which is known by its *bark!*

A [illegible] FROM A MANUSCRIPT WORK.

What [illegible] in a heap of wheat or other [illegible] to [illegible] its [illegible]?

[illegible] *air* and *moist*[illegible] the *starch* [illegible] converted into *sugar.* The quantity [illegible] sufficient to make bread [illegible] made of wheat which [illegible] a little grown."

[illegible] important substance in the economy of [illegible]?

[illegible] properties, and component parts [illegible] carefully studied.

How many single elements enter into the composition of starch? Three.

What are they?

Carbon, Oxygen and Hydrogen.

What are the proportions of carbon oxygen and hydrogen in 100 lbs. of starch?

According to Dr. Prout 100 parts of starch dried at 212 [illegible]:

[illegible]	[illegible]	[illegible]
[illegible]	5.8	" " 1 "
Oxygen	49.8	" " 10 "
	100	

In what respect does the composition of sugar differ from that of starch?

Starch and sugar are composed of the same simple elements, [illegible] the same proportions, and yet starch and sugar are different substances.

How is that?

[illegible] *form* and *proper-ties* [illegible]

[illegible]

[illegible] exist in the form of [illegible] or *sugar.*

What [illegible] plant is carbon and [illegible]?

[illegible] per cent.

What [illegible] the proportions of oxygen and hydrogen [illegible]?

If [illegible] oxygen gas be mixed with one of hydrogen [illegible] they will explode and condense into [illegible] of water.

Suppose 10 lbs. of oxygen be mixed with one of hydrogen [illegible] will take place?

Only 8 lbs. of the oxygen will unite with the hydrogen, leaving 2 lbs. of oxygen [illegible] floating [illegible] air above the [illegible] water.

To what general law is this result [illegible]?

It is attributed to what is called the "Law of Definite Proportions."

Explain what you mean by the "law of definite proportions?"

You will see in the above table of the [illegible] elements which make starch that while six and [illegible] per cent. of hydrogen make 10 atoms in the compound substance called starch, 49.8 per cent. of oxygen make precisely the same number of atoms.

How do you explain this result?

This result arises from the fact that eight ounces or pounds of oxygen are *equivalent* to one of hydrogen. In other words one atom of oxygen is eight times heavier than one atom of hydrogen. Hence if we divide 49.8 — the proportion of oxygen in starch—by 8, the product will be very nearly 6.2, or the proportion of hydrogen.

If *one* is the proportional number of hydrogen, and *eight* the proportional number of oxygen, [illegible] proportional number of *carbon* which you [illegible] other constituent in starch, woody fibre, [illegible] and sugar.

Six is the proportional or equivalent number of carbon.

How do you prove this?

If 6 ounces of carbon is burnt in 16 ounces of oxygen—2 [illegible]—the carbon and oxygen [illegible] and [illegible] 22 ounces of carbonic acid. All chemical combinations are governed by the law of definite proportions; otherwise neither water [illegible] common salt, nor other compound body would be uniform in character.

[illegible]

[illegible]

[illegible]

Correspondents.—[illegible]

Messrs. E[illegible]—Will you [illegible] [illegible] it should read [illegible] difference. Reed Burritt.—*B*[illegible], N. Y. 1849.

[illegible]

... more than we could name 50 other ... 100 other ... equally, and in some ... [illegible]

... it should be well understood that these ... rejected varieties were made out ... [illegible] ... the Chairman of the General Fruit ... [illegible] ... such as the Vandervere and White Apples ... [illegible]

... the Cheese Pearmains ... Fruit Com... varieties ... known ... would have ... [illegible]

... Convention ... Committee had an ... to recommend it, or ... than ... objection ... [illegible]

... for the sake of ... been done, but ... and ... Fruit Committee ... large, ... local ... [illegible] The ... highly ... in most parts of ... [illegible] ... Any variety that a ... against, was struck out.

The ... qualities of fruits, their ... in various localities, ... cultivators; ... is the ... and as soon [illegible]

... for the benefit of the ... [illegible]

[illegible]

Prest.	[illegible]
Pear, New Pine.	[illegible]

[illegible]

Gloucester White.	[illegible]
[illegible]	[illegible]
Lord Nelson's ...	[illegible]
Wadsford's ...	[illegible]
Gold ...	[illegible]
[illegible]	Sydon.

PEARS.

... Castle.	Green Sugar.
Alexandre ...	Green Pl...
Admiral.	Green Chisel.
Aston Town.	Hay...
Autumn Bergamot.	...'s Seedling.
D'Araire.	Horticulture.
Angers.	Festiven.
Beurre d'Ambrizere.	Ipswich Holland.

Beurre Sentin,
Beurre of Beswiller,
Bon Chretien d'Esperen.
Bon Chretien of Brussells,
Bergamotte Sylvange,
Bergamotte Fortunee,
Beauty of Winter,
Belmont,
Bezi Vact,
Bruno de Bosco,
Elaugent a longue guene,
Bingo Master,
Cuvelier,
Chat Grille,
Chain a Dame,
Charles Van Mons,
Cassolette,
Compte de Fresnel,
Copea,
Caillat Rosat,
Clara,
Clapp,
Citron de Sierens,
Dearborn of Van Mons,
Downton,
Duquesne d'Ete,
Doyenne Mons,
Deschamps' New Late,
Dunbarton,
Doyenne Diere,
Endicott,
Elton,
Frederic of Prussia,
Famenga,
Forme Urbaniste,
Fantasie Van Mons,
Forme des Delicas
French Iron,
Green Zair,
Grise Bonne,
Garnstone,
Green Catharine,
Jargonelle, (of the French)
Kramelsbrine,
Lincoln,
Louis of Bologna,
Lederbrine,
Louis Bonne,
Lansac,
Madam Vert,
Millar's Seedling,
Marquis,
Marcelis,
Navez,
Orange,
Orange Tulippe,
Phillips,
Pittfow,
Platt's Bergamot,
Passe Long Bras,
Princes Portugal,
Pope's Scarlet Major,
Pitt's Marie Louise,
Royal d'Hiver,
Rouse Lench,
Rousselett St. Vincent,
Sans Pepins,
Swan's Egg,
Surpass Meuris,
Saint Bruno,
Swiss Bergamot,
Sousreine,
Sickler,
Thompson of N. Hampshire,
Tucker's Seedling,
Trubserherdz Dulle,
Whitfield,
Winter Orange,
Wurtzer d'Antomne,
Yutle,
Crassane.
Winter Crassane,
Citron of Bohemia,
Madotte.

HINTS FOR THE SEASON.

Up to this time, (Nov. 16,) the weather has been remarkably mild here. Many border plants, such as Monthly Roses, Scarlet Geraniums, Phloxes, Salvias, Pansies, Mignonette, and many late blooming annuals, are yet in full bloom—looking better, indeed, than at any previous period this season. Dahlias even were not injured till about a week ago, and this is quite unusual with us. But with this mildness we have had immense quantities of rain; every third or fourth day has been rainy since about the first of October. Just at this time the weather is delightful, and is affording to every body who heeds it a fine opportunity for completing in a proper manner their out door planting and gardening matters.

Transplanting will now be finished. It should be remembered that fall planted trees are not safe until properly staked and mulched with manure or litter, to guard the roots against the effects of frost, and every precaution should be taken to prevent water from lodging about the roots, in the slightest degree, as it is almost certain death. All trees and shrubs that are in any degree tender should, in addition to staking and mulching, be protected with a sheathing of straw tied *loosely* around them. Many trees and shrubs that are perfectly hardy when well established, require care of this sort the first or second year after planting. A simple and effectual way of protecting young plants of rare evergreens, that cannot be wrapped up in straw is to place a small box or barrel over them, after being well mulched. *Strawberry Beds*, particularly those recently made, should be covered a few inches deep with leaves. *Raspberry Canes* should be laid down and covered slightly with earth. Some seasons this is quite unnecessary, but it is always safe, as it insures a crop next season, whatever the winter may be, and the labor required is a mere trifle. The large plantations of market growers, near New York, are all protected in this way. Bulbous roots, such as *Hyacinths*, *Tulips*, &c., should have a covering of leaves or straw to prevent the frost penetrating to the bulbs or drawing them to the surface. In cases of newly planted beds this is quite indispensable.

Rare or delicate *Roses* should all be carefully protected. Standard or tree roses are best managed by taking them up and wintering them in the cellar with the roots in the ground, and planting out again in the spring. This is the practice in France where the climate is not unlike ours, and where in many cases, whole acres of these rose trees are grown. Transplanting has a good effect upon them. The tops are always well cut back, when planted out, and this encourages a strong growth of flowering wood during the following season. If not taken up, they should be securely staked and the trunk well protected with straw, and a good mulching of manure or litter be placed around the roots. We allude to these matters because we know that many persons are now planting such things, that do not possess the necessary information to take care of them, and will most likely treat a rose tree as they would an apple tree.

Carnations and *Monthly Roses*, and many half hardy border plants may be wintered nicely in a little pit, some three feet deep, with a common hot-bed frame in it and covered with glazed sashes or boards and matts, or straw, and well lined around the outside with manure, or banked up with earth. Such pits as these are valuable to persons who have no green house, and if well managed answer every purpose. They will require occasional airings in mild weather, removal of dead and decaying leaves and wood, and a sharp look out always for vermin.

Every spring we hear people tell about losing their *Dahlia Roots*. They either *freeze* or *rot*. The roots after being taken up should be well dried in the sun, or if that cannot be done, near a fire, and then be put away on a shelf in a dry place. A little heat will do them no harm. A damp cellar is sure to rot them. They should be frequently examined and the decaying portions of the stem or tubers removed. A very good way is to put them, after being dried, in perfectly dry sand—dried by a fire.

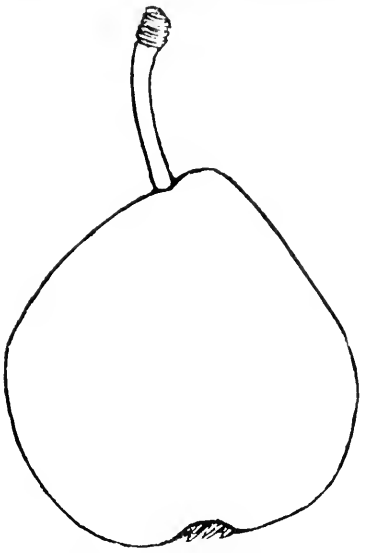
Rubbish of all sorts, piles of brush, stone, &c., that afford harbor for vermin, should never be permitted around a garden or orchard, and long grass or weeds in the neighborhood of trees is highly dangerous. For the amount of a days labor of a man (costing 75 cents) in removing such nuisance, whole orchards of trees are sometimes ruined, and hedges too. Towards Autumn people are too apt to slacken their culture, and allow weeds and grass to run wild—imagining that it will do no harm while growth is suspended, but experience to the contrary is often dearly bought.

Trenching, spading and manuring of gardens, and spading and manuring around neglected trees, should proceed now, as long as it is possible to work the ground. It is the period of the year when most leisure is enjoyed by all classes of people, besides it is the very best period for performing this work.

Fallen leaves should all be cleanly raked up from the garden walks, grass plot, and all around the premises, and be carried to the compost heap. If left where they are they become decayed before they are removed in spring, and injure the grass, and harbor vermin during the winter.

DESCRIPTIONS AND FIGURES OF TWO FINE PEARS.

The Forelle or Trout Pear.—This is the *Forellenbrine* of the Germans, and *Poire Truite* of the French, one of the most beautiful and at the



same time one of the most excellent of pears, and so distinct in the coloring of the fruit and the appearance of the tree as to distinguish it at the first glance from a thousand sorts. For four or five years past we have had it bear every year, and the more we see and know of it, the more we admire it. It was described and figured in Hovey's Magazine of August, 1847, and the description is so excellent that we choose it instead of giving our own description, as giving additional authority on the subject. We must remark, however, that the size of Mr. Hovey's and Mr. Downing's cuts are rather larger than we find it on an average. It is always a trifle below medium with us.

The Forelle is, without doubt, the most beautiful pear which has ever been produced, and would deserve cultivation for its appearance only, if it were even a second rate pear. But it stands almost as high for its excellence as for its beauty. Dr. Diel, in his *Pomology*, speaks of the Forelle as competing with the best French varieties, and Mr. Thompson states that it "merits his eulogium in all respects."

The Forelle takes its name from the resemblance of its beautifully speckled skin to the Trout, and, in the French collections, it is generally called the Truite pear. When the fruit is produced in perfection, it is deeply colored with vermilion, and profusely covered with grayish russet dots, which are margined or rayed with crimson. The tree grows very rapidly, more resembling, in the color of the wood, which is of a rich violet red speckled with grayish white, an apple than a pear: young shoots woolly: leaves, roundish ovate. It is very productive, and grows either; upon the quince or pear stock.

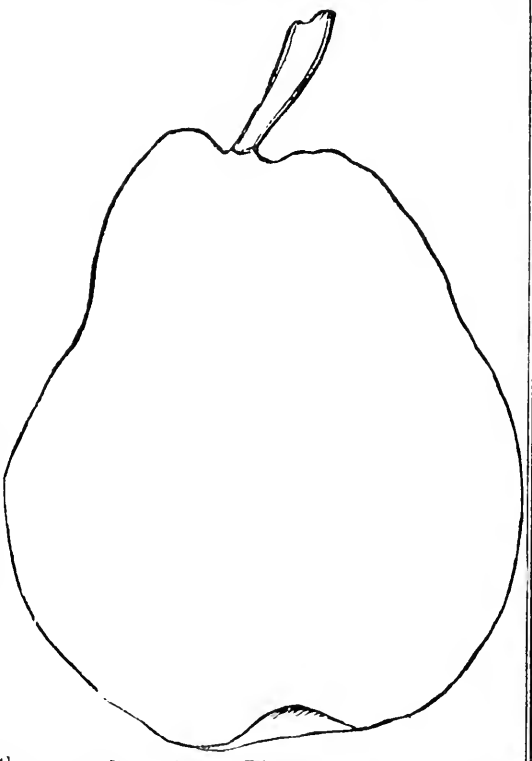
Mr. Manning, who described it among the many kinds which he proved in his collection, (Vol. III. p. 49,) stated that with him it had not come up to the character given it in the *Pom. Mag.*, but we suspect he had not produced it under favorable circumstances. Our drawing is from a specimen produced in the collection of Mrs. Heard, of Watertown, in 1846, and, in beauty as well as quality, it was a first-rate fruit. Where the locality is unfavorable as a dwarf or standard, we would recommend it as deserving a wall or an espalier.

Size, large, about two inches in diameter, and three long. *Form*, oblong obovate, regular, rather the largest in the middle, and tapering to an obtuse point at the stem: *Skin*, fair, smooth, dull yellow in the shade, broadly shaded with vermilion on the sunny side, and beautifully speckled with grayish dots, which are deeply margined with crimson: *Stem*, rather short, about three quarters of an inch, slender, nearly straight, and obliquely inserted in a small, shallow, contracted cavity, with a swollen lip or projection on one side: *Eye*, medium size, partially open, moderately sunk in a small and rather abruptly depressed basin, segments of the calyx broad and closed up, little reflexed. *Flesh*, white, very fine grained, buttery, melting and juicy: *Flavor*, rich, sprightly, vinous, slightly perfumed and excellent: *Core*, medium size: *Seeds*, medium size, nearly black. Ripe in November, and frequently keeps till January.

Mr. Downing in his Fruits and Fruit Trees says —"It fully sustains its high foreign reputation with us."

Beurre Gris d'Hiver Nouveau.—This is a large and fine pear of the first quality, quite rare yet in American collections. We imported it from France in 1846. In France and Belginm it is considered one of the best pears, and is invariably included in the smallest and most select assortments. From what we have seen of it here, we have not the least doubt but that it will prove equally fine in this country. The tree is rather slow in growth, but upright and exceedingly prolific, even to a fault. The young wood is reddish, bearing considerable resemblance to that of the old *Brown Beurre*, but the habit of the tree is different. Our tree is on a quince stock.

The fruit is large and somewhat irregular in forms some quite pyriform, as the *Bartlett*, and othere more obtuse, like a *Beurre Diel*, while others ars rounder still. We think the annexed cut represent;



the most ordinary form. The skin is covered with a rich cinnamon russet, and usually a faint tinge of red on the sunny side. Stalk stout, about three-fourths of an inch, inserted in a slight cavity, frequently under a fleshy knob. Eye small, in a shallow cavity.

Flesh white, fine grained and melting. Juice abundant, sprightly and perfumed, like the old *Brown Beurre*, but less astringent.

To our taste there is no better pear than this. A gentleman from Indiana, a thorough lover of fine fruits was in our office in October and picked up and ate a nice old *Brown Beurre*. After finishing it he said, "Well, I have eaten a good many of your best pears lately, but none so good as that—I must have a few more trees of it." What would he say if he had a slice of this?

This variety is noticed in Hovey's Magazine, vol. 14, page 110:—"A new and decidedly valuable acquisition to our late pears; possessing qualities similar to the old *Brown Beurre*, but less acid and fully as high flavored. It also ripens freely, and the skin is of a rich cinnamon russet." RIVERS says of it, (see Horticulturist, vol. 2, p. 476)—"In shape much like the *Easter Beurre*, and equal to it in size. This is a most abundant bearer as a pyramid on the quince. Flesh melting and high flavored, and ripens from end of December to end of January, or later."

CAUSE OF THE PEAR TREE BLIGHT.

MESSRS. EDITORS.—Noticing in the last number of the Farmer some remarks of Mr. JAMES H. WATTS, on the subject of the Pear Blight, and noticing also a request that others would communicate their experience on the subject through your columns, I am inclined to give you mine.

I have five pear trees adjacent to each other, which are of about twenty-five year's growth. Three of them stand in a yard which has, I think, never been cultivated since the trees were set. I have several times within the last five years given them a dressing of leached ashes. The other two trees are enclosed in another yard which has been cultivated for a few years past. They were all of them healthy, bearing trees up to 1848, when four of them were struck with blight—all of those in the uncultivated ground, and one of those in the cultivated. I pruned off all the affected branches, and the last spring they put out and grew vigorously for a time, but in the month of June the blight began to make its appearance again, which has continued, till now the tops are nearly all dead. The other tree, standing in the cultivated ground, and the most thrifty growing tree of the five, continued healthy and vigorous. I have also a number of dwarf pear trees in my yard. The ground has been spaded and manured around them every spring since they were set. Most of them have grown well, and are healthy—one of them only has been troubled with blight, and that the slowest growing and most puny tree in my yard.

I had occasion to pass through the orchard of one of my neighbors in September last, and observing several fine bearing pear trees, I inquired of the owner if his trees were ever affected with blight—he said not in the least. His orchard had been planted in corn the past season; it had also been frequently manured, plowed and hoed.

Our soil is a common lime-stone soil, with a subsoil of marl and clay, intermingled with limestone gravel. From my own experience and observation I am satisfied that Mr. WATTS' conclusions are erroneous. I think that a uniformly cultivated and enriched soil, which will keep the trees in a steady growing condition will render them most healthy and best able to resist blight. F. R. P.—*Sweden, N. Y., Oct.*, 1849.

ANSWERS AND ACKNOWLEDGMENTS.

GRAPES.—(N. SIMONS, Castile.) Your seedling Grape is a large fine variety of the wild Fox Grape, quite unworthy of cultivation, in our opinion, compared with the *Isabella* and *Catawba*. A gentleman of this city, M. G. WARNER, Esq., cultivates the same, brought by him from Connecticut.

APPLES.—We are indebted to Mr. ANDREW CONE, of East Bloomfield, for apples "taken from a seedling tree 55 years old—first rate for cooking and good for eating." This is a beautiful yellow apple with a red cheek, resembling the *Bellflower* in shape. We are sure it is first rate for cooking, and as Mr. C. says it is very productive, is no doubt valuable at this season.

Munson Sweeting.—We are indebted to Mr. JESSE STORRS, nurseryman, of Marathon, N. Y., for a box of this delicious sweet apple. We are sure it is identical with the Northern Sweeting, exhibited at New York by JONATHAN BATTY, of Keeseville—one of the very best sweet apples for fall use we have seen. We will give a farther account of this apple at another time.

PEARS. *Oswego Beure.*—We are indebted to J. W. P. ALLEN, Esq., of Oswego, for specimens of the *Oswego Beurre*, in perfection; and they fully confirm the high opinion expressed by ourselves and others in regard to the fruit. It is truly one of the very best American pears. The flavor is almost identical with the *New Winter Brown Beurre*, figured in this number, and if eaten in the dark one might suppose them the same fruit. Among these specimens we find one larger than the others, which Mr. ALLEN says was produced from a graft on an apple tree, set two years ago. It is high flavored and more mature than the others. We may add that this is one of the best for pyramids on quince stock. Mr. A. has promised us a fuller account of this fruit than has yet appeared.

Comparative profits of cultivating Fall and Winter Pears. (P. P. LYON, Plymouth, Mich.) We have not time this month to give this subject attention, but will as soon as possible.

[illegible]

[illegible] Each number Illustrated [illegible]

[illegible] D. D. T. MOORE.

[illegible] B. [illegible] HY, Esq., of Monroe County [illegible] of Genesee [illegible] New York [illegible]

[illegible] by L. WETHERELL, A. M.

[illegible] of such a journal in the metropolis of [illegible] Community. Indeed, from the [illegible] we believe that the industrial Citizens of the Empire [illegible] West and [illegible] *Agricultural and* [illegible] world, properly projected [illegible] the Products [illegible] the country. These are some of the reasons [illegible] the enterprise—a few [illegible] we have our *faith* in its success.

[illegible] as its title indicates, will be principally devoted to [illegible] and *Horticulture* and their kindred [illegible]

[illegible] the country. A large number of Contributors and Correspondents [illegible] and know how to impart both practical [illegible] communicate the results of their [illegible] to the readers of the New [illegible] Fruit and Garden Culture will [illegible] each number of the paper [illegible] In this respect we pledge our [illegible] similar journal [illegible] will contain

[illegible] AND [illegible] ENGRAVINGS [illegible]

[illegible] Portraits of Domestic [illegible] and Improved Implements and Machines [illegible] and Ornamental Trees, Shrubs [illegible] attention will be given to Rural Architecture [illegible]

[illegible]

[illegible] to Literature, Education and [illegible] the greatest care, and an [illegible] the heart and mind without vitiating [illegible] such a variety of [illegible] reading as will prove [illegible] to the aged and the youth—for the father and mother, young men and maiden.

That portion of the paper devoted to **General Intelligence** will contain a summary of the latest and most important Domestic and Foreign News. No effort will be spared to make this depart-

[illegible]

[illegible] Those who know [illegible] fully [illegible] combined of the [illegible] the poems [illegible]

[illegible] To [illegible] Teachers [illegible] of Agricultural Societies, and other educated persons [illegible] all [illegible] friend of mental and moral [illegible]

[illegible] remitted [illegible] money properly [illegible] be sent by mail at our risk. Address to

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October 1, 1849. [10-tf]

Agricultural Books.—A large assortment of Books on Agriculture, Horticulture, &c., for sale at this Office.

CONTENTS OF THIS NUMBER.

HORTICULTURAL DEPARTMENT.

ILLUSTRATIONS.

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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:

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When it is recollected that our terms to clubs are only from 37½ to 40 cents a volume, for one of the ablest and most valuable works in the Union, every reader must see that it is only by an extended circulation that the Genesee Farmer can pay any profit whatever to the Editor and PROPRIETOR. Kind friends will [illegible] and for the elevation of the profession?

DANIEL LEE,
Editor and Proprietor.

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If he will send ten dollars and twenty names, he shall have Boussingault's Rural Economy in addition and 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, he getting one-fifth or one-fourth of all the money received, in good books!

We are indebted to some kind friend for a handsome pamphlet containing the Transactions of the New Haven Horticultural Society, and an address delivered at its Annual Fair, on the 20th of September last, by S. B. Parsons, Esq., of Long Island. The address is excellent, and we shall next month give some extracts that will be interesting to all.

A New Article of Fuel.—Our attention was drawn a few days since to a load at the door of a citizen in Albany, which in appearance resembled unburnt bricks. Upon inquiry we found that it was an article of fuel, manufactured in the vicinity of Newton's Corners, a few miles west of the city, from a swampy piece of low land which furnishes an article much resembling peat. We learn that this muck or peat is thrown into a mill and ground, then pressed in the shape of bricks for the purpose of thoroughly drying, when it is ready for use. It is considered to be quite as cheap as hard coal, and preferable to either coke or coal, for grates, there being no gas or smoke from it. Thousands of tons have already been taken from a single acre in the above vicinity, affording a nice profit to the owners and manufacturers.—*Troy Budget.*

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VOLUME XI. FOR 1850.

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 [illegible] sustain its HIGH REPUTATION as an earnest and valuable aid to the Farmers and Fruit Culturists of the Country.

The new volume will commence on the 1st of January, 1850. It will be published in the best style, as heretofore—on HANDSOME AND CLEAR TYPE and [illegible]. The volume will be APPROPRIATELY ILLUSTRATED—with numerous and expensive Engravings of *Farm Buildings, Improved Implements, Domestic Animals, Fruits, Trees, Shrubs, &c.* Indeed, in typographical [illegible], we design to make the volume for 1850 what the present one is pronounced [illegible] in this country. 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.

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THE GENESEE FARMER,

[illegible]

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE & D. D. T. MOORE, Editors.

P. BARRY, Conductor of Horticultural Department.

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☞ Advertisements, notices, &c., should be forwarded on or before the 15th of the preceding month, to secure insertion in any specified number.

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