Scientific.

Interesting Agricultural Experiments.

Some recent experiments in wheat and flour go to prove that both contain water, and that the quantity is more in cold countries than in warm. In Alsace, from 16 to 20 per cent. In England, from 14 to 17 per cent. In the United States, from 12 to 14 per cent. In Africa and Sicily, from 9 to 11 per cent. This accounts for the fact that the same weight of Southern flour yields more bread than the Northern. English wheat yields 13 pounds more to the quarter than the Scotch. Alabama flour, it is said, yields 20 per cent. more than Cincinnati. And in general, American flour, according to the authority of one of the most extensive London bakers, absorbs 8 or 10 per cent. more of its own weight of water in being made into bread than the English. The warmer the country the more is the water dried out of the grain before it ripens, and hence when made into bread, it absorbs more water again, and is therefore more valuable. Professor Beck has written a report to the Patent Office, in which he shows that the presence of water unfits these articles for preservation. The books of a single inspector in New-York city showed that in 1847 he inspected 218,679 barrels sour and musty flour. In his opinion the loss on these was $250,000. Every year the total loss in the United States from moisture in wheat and flour is estimated at from $3,000,000 to $5,000,000! To remedy this great evil, the grain should be well ripened before harvesting, and well dried before being stored in a good granary. Kiln drying is preferable. The mode of ascertaining the amount of water is this: Take a small sample, say 5 ounces, and weigh it carefully. Put it in a dry vessel. which should be heated by boiling water. After six or seven hours weigh it carefully, until it loses no more weight. Its loss of weight shows the original amount of water.

What is It?

'A Mechanic,' in the Philadelphia Ledger, says that two gentlemen of that State have invented a new method of roofing houses, more durable than shingles, slate or tin, as brilliant as glass, fire-proof and water-proof; red, blue, yellow, green, or any other color that may be desired; a non-conductor of electricity, a reflector of heat; cheaper than tin, lighter than slate; being vitrified, it is almost indistructible by time or weather, and so easily put on that the largest roof can be covered in a single day, if desired. It requires very little descent; a roof covered with this material may be made as flat as any tin roof, without the least danger of leaking. Nothing short of actual violence will injure it. Should it come into general use, our cities will outshine the Kremlin of Moscow. When a house with a slate roof is on fire, the slates fly so that firemen are in great danger, should they come near it; but this article having passed through the fire in the process of manufacture, is not liable to this objection; its durability is such that it will last as long as the house.

An Air Bed.

Mr. A. J. Goodenough, of Yorkshire, Cattaraugus Co. N. Y., has invented a new kind of bed to supersede the use of feathers entirely, and is somewhat peculiar. He unites two boards the length of the bed by a strip of leather so as to fold on the top of one another, and unites these boards to iron legs which have hinges for the purpose of clasping the boards, and are braced together by portable slender iron rods. He uses double sheets of india rubber air tight for a bed extended and fastened to the boards described, by loops over pins. By a tube communicating with the inside of the India rubber bag bed it can be filled with air and expanded, buoyant and soft as Russia down. The material of which the bed is composed is made strong enough to stand considerable atmospheric pressure, not even fearing the gravity of the Kentucky giant. The bed, for which the inventor has taken measures to secure a patent, has some other peculiarities for the regulation of pressure on the surface. It has at least one grand advantage in economy and health, viz., no bad smell from impure feathers, and it can be emptied and filled with little expense.

Important Discovery.

A new and very efficacious method of preserving meat from putrefaction, has been invented by a renowned chemist of Kœnigsburg, in Prussia. By the means which he employs for this purpose, meat is preserved for a considerable length of time, without losing its peculiar taste, or becoming unwholesome; blood is prevented from putrefying, or if already in a state of putrefaction, is rendered odorless and fit for use for several months. The substance referred to, neither coagulates the albumen of the blood serum, nor decomposes the sugar in the process of refinement, and being easily prepared will very brobably become of great importance in sea voyages, for sugar-refiners, etc. A scientific committee in Kœnigsburg, having examined the virtues of this antiseptic remedy, have declared it to be superior to all other substances, for counteracting and stopping putrefaction.

Chloroform an Antiseptic.

A discovery of another property of chloroform has just been announced by two French gentlemen, who, simultaneously, and without any consultation with each other, found that chloroform is an 'antiseptic' of marvellous virtue, preventing animal decomposition after death, or promptly checking it if already commenced. Muscular flesh, and all animal tissues, when subjected to its action, become fixed for a long period of time in the precise form and condition in which they may happen to be at the moment of application; and natural colours, even to the slightest and most delicate shades are preserved without the slightest change. The French Academy of Science is about to make some further investigation, to verify this remarkable discovery, from which so many benefits may be expected, in the preservation of military and naval stores, animal food in sea voyages, and its application to a variety of other useful purposes.

Light from Electricity.

Mr. Staite is lecturing in England on his new mode of lighting by electricity. The Literary and Philosophical Society of Sunderland gave a public soiree last November, at which this mode of lighting was the principal attraction. The Newcastle Guardian says: "The light, which was of astonishing brilliance and beauty, was placed under an air-tight glass vase. When the gas was turned down, it sufficiently lighted the spacious building, and bore the closest resemblance to the great orb of day of any light which we ever witnessed. The electric light was next exhibited in a vessel of water with equal success. Mr. S. stated that it was the cheapest as well as the best for all practical purposes; and the marvellous invention was hailed with rapturous plaudits."

Scientific Coincidence.

In 1815 Captain Smith ascertained that the height of Mount Etna is 10,874 feet. The Catanians disappointed that their mountain had lost nearly 2000 feet, would not believe it. In 1834 Sir John Herschell, who was not aware of what Capt. Smith had done, determines the height by a careful barometrical measurement and found it 10,872½, a difference of 1½ feet. Herschell called this a "happy accident," but Mr. Wallaston justly remarked "that it was an accident which would not have happened to two fools."

The Farm.

[*From the Albany Cultivator.*]

CULTURE OF INDIAN CORN AND OATS.

Gentlemen—There are some farmers whose intelligence and skill in agriculture I greatly respect, who doubt that there can be one hundred bushels of Indian corn grown upon one acre of land. But my own practical experience and improvement in agriculture, have proved, not only to myself, but to all who are conversant with the following manner of cultivation, that there can be such crops of corn raised.

In order to produce a great crop of corn, as well as any other large crop, *deep plowing* is indispensable necessary, and plow in a coat of manure at each plowing, in order to mix the manure well with the soil, observing at each time of plowing, to go equally as deep if not deeper, than it had been plowed before. When I calculate to grow a great crop of corn, I begin to prepare the ground the year previous. The first year I put on from 40 to 50 common ox cart loads of coarse or long manure to the acre, in the spring of the year, and plant it with corn. The result of the first crop, with good attention, is generally about 60 bushels to the acre. The next spring I apply full 50 loads of same kind of manure to the acre; this last coat will bring the crop to maturity in the late stages of its growth, while the previous coat being well mixed with the soil, will start the crop with the greatest luxuriance in the first stages of its growth. I plant from the 18th to the 20th of May, rows four feet, and hills two feet apart; at the first hoeing, which I have done with great care, the stalks are reduced to three in each hill; then a mixture of lime, plaster, and hard wood ashes, unleached, a gill to each hill of corn is immediately applied. After the second hoeing, plaster alone is applied, a tablespoonful to each hill. It is hoed the third time, and each time with care and neatness, using the cultivator, and elevating the earth but slightly around the stalks, keeping the surface clean from weeds and nearly level. The seed is a mixture of the yellow eight rowed and Brown corn, so called, and when the two kinds become blended, it imparts a deep, rich chocolate tinge to the whole. The cob is small, the ears are long, well filled out, and the kernels deep, close, and compact. Such is the manner of cultivation upon three and one half acres the past season, *one acre of which yielded* 92 6-7 *bushels, another acre* 88 4-7 *bushels.* These acres were taken one from each side of the field the longest way; through the centre of the field, lengthwise, is a slight elevation or ridge, on which the crop was not quite as good.

Had it not been for the severe drouth late in the summer, and had it set as well for ears as usual, I have no doubt but there would have been over 100 bushels to the acre on the whole field, as it was as heavy a growth as a field of four acres I had in 1849, which produced 104 bushels to the acre, but it set to ears much better than the field of the present season. The soil where I grow my corn, is of the alluvion bottom lands upon the Connecticut river, and no where in the known world, is there a better soil for the production of this valuable grain, but it will not grow even here spontaneously; it requires care and labor, skill and judgment, and these rightly exercised upon such a soil, will be annually amply remunerated in full compensation. I present these two acres of corn for the first and second premiums on the first and second best acres of corn.

Oats—I also present, gentlemen, two acres and 15 rods of oats, which produced within a fraction of 174 bushels, weighing 34 lbs. to the bushel. The soil is the same as my corn land, alluvion, bottom land; it was planted to corn the previous year with 50 loads manure to the acre spread broadcast and plowed in ten inches deep; it was plowed again ten inches deep, last spring, and sowed to oats about the 20th of April, 1¾ bushels of seed to the acre; harrowed thoroughly and rolled down smooth; the straw grew so rank and stout that it stood up well, and the oats, when reaped, stood over six feet high on an average, with long heavy heads and well filled. I will here remark that it is a mistaken notion to seed with more than two bushels of oats to the acre, whenever the soil is, or has been well manured the year previous; by seeding thus sparingly, the straw has more and better opportunity to expand and grow larger and stronger, and the crops will be less likely to lodge; the heads will mature better, and more bushels will be obtained to the acre. Another important consideration in seeding oat land sparingly is, if we are desirous of seeding to grass, the grass seed will take root much better than when the oats are sown thick, and fall down in consequence. It is a common saying among farmers, that oats are a bad crop with which to seed down to grass; I have always practiced seeding to grass with my oat crop, and never even in the dryest seasons have I lost a single grass seeding.

These two acres and 15 *rods of oats, yield at the rate of* 83 *bushels to the acre. I offer them for the first and second best acres of oats.*

Now if farmers would consider and consult their best interests, and would cultivate their farms in someway similar to the above statements, they would not only raise their corn and other grains with half the labor, but after the land is laid down to grass, it will yield double the quantity of hay, and will hold out three times longer than land cultivated in the ordinary way.

No good farmer will half starve his horses, cattle, sheep or swine; neither should he half starve his land. If he does, in the end it will more than half starve him. J. W. Colburn.

Springfield, Vt., Jan. 12, 1852.

How to Preserve Vines from Bugs.—Mr. Editor:—As the season has arrived when bugs commence their depredations upon squash, pumpkin, cucumber, and sometimes other vines, perhaps some of your numerous readers would like to hear of a *simple* way to prevent this evil. Two years ago, I planted a piece of ground with vines, of the kinds above mentioned; they came up and began to look quite flourishing, but suddenly the bugs commenced operations upon them in good earnest. The bugs were of two kinds; mostly very small, striped with black and yellow, and a few large black ones, commonly called "pumpkin bugs."

I showered the vines several times with soap suds, but it seemed to do very little good. I then tried the effect of *common-wood ashes.* After *wetting* the vines (if they were dry,) the ashes were *sprinkled* upon them until the leaves were covered.

Unless there was considerable rain, or very high winds, the ashes would adhere several days, and when it had fallen off, if the bugs had returned, the vines were sprinkled again in the same manner as before. This was repeated as occasion required, until the vines were too large to be seriously injured by their enemies. The bugs were completely frustrated in their designs, and the ashes did not injure the vines in the least.

I applied ashes to my vines last year in the same manner, with like success, and have commenced doing the same this year, and I have no doubt the effect will be the same. Bugs are the most numerous in warm dry weather, and therefore the vines, at such times, should be looked to the more frequently.

Yours, &c.,

Groton, June 16, 1852. S. D. W.

Cucumbers.—As soon as the temperature is sufficiently mild, says the North American Farmer, cart out a few loads of old, well-rotted, chip manure, and spread it evenly on a patch of green sward—say one or two inches deep—and plant the seeds the same as in garden soil. The hills may be four feet apart, and if you have not a sufficiency of manure completely to cover the whole surface, drop one or two bushels in a place where the hills are to be, and leave the spaces intervening uncovered. The vines will grow with surprising vigor and luxuriance, and the fruit, resting on the clean grass, is easily plucked, and never defiled by dirt. Melons and squashes are grown in this way also. As soon as the plants make their appearance, spread over them a thin cake of cotton wadding; and to prevent its being removed by the wind, confine it in its proper place by wooden pins. The lightness of the article enables the plants to grow without hindrance from its close contact, and to derive the necessary principles from the atmosphere with the same facility as though they were exposed to it without protection. We request our agricultural friends, one and all, to make trial of this method, and establish the results.

Mowing Pastures.—We have before spoken of the necessity of keeping the grass of pastures from running up to seed and dying on the ground. As grass grows with more rapidity in the early part of the season than at a later period, it is difficult to keep it properly fed down, without putting on more stock than can be kept on the land after the *flush* of feed is over; and yet, if the grass goes to seed and lies on the ground, the after feed will be less in quantity and of poorer quality. The difficulty may be overcome by mowing the grass at the right time—before it has run to seed, at all events. This may be done on many pastures to good advantage, the hay obtained being of good quality for any kind of stock; and the pastures are left clean, start equally, and afford a good growth of fresh afterfeed. We have lately met with several farmers who have followed this practice for many years, and they agree with us in regard to its utility.

Worth Knowing.—It is said that a small piece of resin dipped in the water which placed in a vessel on the stove, will add a peculiar property in the atmosphere of the room, which will give great relief to those troubled with a cough. The heat of the water is sufficient to throw off the aroma of the resin, and gives the same relief as afforded by the combustion of the resin. It is preferable to the combustion, because the evaporation is more durable. The same resin may be used for weeks.

Sobriety, Temperance, and Tranquility, are nature's best Physicians.