MATTERS OF INTEREST TO AGRICULTURISTS.

Some Up-to-date Hints About Geltivation of the Soil and Yields Thereof -Horticulture, Viticulture and Florioulture.



to make on apple growing: Apple trees need water. If the supply of water in the

soil in an orchard deficient when the fruit is maturing, as it frequently is, the trees cannot produce a full crop of apples, however well they may have been fed and otherwise cared for. The lack of a sufficient amount of water in the soil in orchards often is the cause of apples dropping prematurely and the ripening of winter fruit during the fall months. While it may be impracticable to attempt to supply water artificially in most cases, at least, to orchards in this state, yet much can be done by good management to prevent the needless escape of the natural supply, and in this way large quantities of water may be retained in the soil for the use of the trees when it is needed by them. A mulch of grass, leaves or other organic matter is useful for this purpose, and the ground in some cases may be cultivated in the open spaces to good advantage. In this connection we must en-

ter a protest against the practice of trimming off the lower limbs of apple trees. This allows the wind to sweep

umbus yielded twenty-five bushels per acre, and this yield was increased by five to six bushels in the average by the use of fertilizers. Throughout this

produced a marked increase of plant growth in the fall, and it was hoped that, in seasons of severe winter killing, such fertilizers might enable the plant to successfully resist the adverse climatic influences; but in 1896. HE Rhode Island the yield of the unfertilized plots havexperiment station ing fallen to less than half a bushel has the following suggestions

per acre, the largest increase made by any fertilizer was not more than three bushels. In the experiments at Wooster, where wheat is grown in rotation with corn, oats, clover and timothy, three crops have now been harvested. The results for. 1894 and 1895 are given in Bulletin 71. In 1894 there was no increase, in 1895 the increase on the plots receiving a complete fertilizer averaged nearly eight bushels over an unfertilized yield of three bushels; while in 1896, the winter killing being almost complete, the unfertilized yield has averaged but a bushel to the acre, and the increase over this has been less than six bushels. The fertilizers which have produced the largest increase of wheat have been complete fertilizers, containing nitrogen, phosphoric acid and potash, all three. The average increase of wheat alone has not paid for the fertilizer, at present prices, but the increase in the grass crop following the wheat has in some cases more than made up the loss on wheat. The clover sown in March, 1895, in this rotation made a good catch, and maintained its hold through-

FARM AND GARDEN. continuously on the same land at Col- opposed to what they please to term SAVED IN A TRANCE. "book" farming. This is all wrong. The farmer must read books, papers and magazines devoted to his calling. He must keep posted. Otherwise how seven-year test it was observed that is he to keep up with the procession, fertilizers carrying phosphoric acid I should like to know. The time when a man can keep aloof from all out-

side knowledge and comradeship and make farming pay has departed. Grange meetings, and all agricultural associations and institutes cannot be too highly indorsed as mediums for making progressive farmers. The farmer of the next century will become more and more a man of thought and intellect, for only by so becoming may he hope to cope successfully with the ever recurring problems that arise for practical solution. The progressive farmer must occasionally visit the near by city where he markets his produce. There he is to observe and listen to find out how to pack in best shape, and to learn what the market demands; but of course these excursions are mere incidents, the chief labor and attention of the farmer is demanded upon the farm itself. The thrifty, progressive farmer will show his character clearly by his stock, farm buildings and fields. The fruits of practicing modern ideas and following the most trustworthy light upon agricultural matters will be very manifest. All classes of stock will not be of a nondescript standard, but of some recognized breed. They will show the evident results of care and good management. The farm buildings will be solid and substantial, and, what is more, covered with a good coat of paint, not alone for appearance's sake, but for the purpose of securing greater durability and lasting out the season, notwithstanding the unqualities. The fields will show the resuits of the liberal use of tillage coufavorable conditions, and in the fall pled with fertilization without stint, the growth on the unfertilized plots appeared even better than where fertil- The progressive man's acres never izers had been applied to the wheat. look as though they had just been through beneath them and the sun to During the winter, however, the clover | pulled through the proverbial "seven



DRESSING THE WOUNDS OF A CUBAN INSURGENT.

Not a Paug Felt by the Patient While the Doctor Clipped and Newed the Quivering Flesh-Over Forty Stitches Were Taken

tions has lately

markable case is that one which recently happened in one of the insurgents' camps in Cuba, It was at Nojazza when such an operation was performed on a sub-lieutenant, who understood English perfectly, and who was brought in with a machete wound to the advance guard. The slash which the officer had received left the right thigh and continued down, exposing the bones of the knee joint and laying open the calf below. The wound was filled with clotted blood, stifling the flow of blood, but every writhing or twisting of the sufferer dislodged the cloths and started the bleeding afresh. He lay in a canvas hammock, pale and exhausted. His wounded limb, from which the trousers had been cut, protuded crosswise over the canvas. He groaned and cried for assistance when the surgeon arrived. The implements for a surgical operation were execceedingly scant. Some water was boiling in a cracked old iron kettle. Into it were dropped the only instruments at hand, a knife, a needle, a needle forceps and an artery forceps, with a spool of surgeon's silk. An asceptic of mercury tablets dissolved in water was prepared in two little dried gourds. The surgeon now began to wash the wound with a piece of cotton netting, sterilized from germs by boiling. The suffering of the man was He writhed and twisted so intense. much that the flow of blood increased. Operation was impossibile without depriving him of consciousness. In this dilemma, the physician, although not a hypnotist, determined upon an experiment. And now began an exhibition of hypnotism, which would have put Syengali in the shade. Drawing from his pocket a small gold coin and leaning far over the patient, he held it before his eyes, saying in a clear, low, earnest voice: "Look directly at this. I want you to think of nothing else but this coin." Still holding the coin, he passed his right hand over the pale brow, stroking it softly. "I am taking the sensation from your forehead. It is numb. You do not feel anything now. Why! you are very sleepy, are you not? You are growing sleepy. Breathe deep. Sleep!"

Intense became the surgeon's look. spoke, intently hanging over his patient with the golden coin. "Breathe O'Briens' thot are on th' foorce?"

TRAPPING PARK DEER. Three of the Druid Hill Herd Will Be

Captured and Sold. Capt. Cassell, superintendent of Druid Hill park, says that Mr. F. H. Roebling of Trenton, N. J., who a few days ago

wrote that he wished to purchase three deer for the park at that place, will have to wait until there is a snow-fall in Baltimore which will cover the ground, as the deer at the park cannot be captured except when there is snow HE use of hypno enough to hide the grass and herby tism instead of an they usually feed upon, says the Baltianaesthetic in cermore Sun. At other times their huntain surgical operager does not compel them to seek the bait in the traps.

been the subject of Whenever deer are to be captured the considerable distraps are erected just after a snowfall. cussion among the A pen of boards is built twelve feet higher authorities high, back of which there is a door of the medical proleading to a small hut. The pen must fession. A very rebe at least twelve feet high, as deer at the park have been known, Capt. Cas-

sell says, to jump a ten-foot fence. On the floor of the hut corn is spread, and amid the corn are arranged triggers which, as soon as touched, cause the door to fall and the hungry animal finds itself in captivity. In this way as many as seven deer have been caught in one pen in a single night, that many getting into the hut before any of them happened to touch a trigger. The pen is used to attract deer, as they might be afraid to enter a hut. "There is no use trying to catch them except when it snows," said Capt. Cassell yesterday. "For several days we have had a peck or so of corn dumped here and there to see if they would come up and eat it, but they will not go near it when they can get grass. Mr. Roebling wants two does and a buck, but he cannot have a buck, as we cannot spare one. There are now in the park but three bucks with horns, which means three over eighteen months old. There are some younger ones, but the great majority of the deer are does. Every autumn we shoot a number of the horned bucks to keep them from mutilating the young trees with their horns. Last fall we shot twenty. There is one which we have spared for several years and he has now a beautiful set of branching antlers, adding a branch every year. In the park at present there are 135 deer. They are in separate herds in different parts of the park, from twenty-five to thirty usually going in a herd."

THERE ARE MANY O'BRIENS.

But the Farticular One Wanted Now Is a Policeman.

An old man, travel-stained and weary, wandered into Essex Market court this morning and stood patiently waiting for some one to speak to him, says the New York Mail and Express.

He was finally arrested by Roundsman O'Brien, who asked him his business.

"Of've came all th' way frum th' owld country looking for me lad," said the old man.

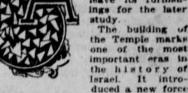
"Oi'm near 80," he continued, "an' me boy run away from home twenty For a moment he neither moved nor year ago. Me name is O'Brien, an' me son is a policeman. Do yez know any

THE SUNDAY SCHOOL.

LESSON V-NOV. 1-BUILDINO SOLOMON'S TEMPLE.

Golden Text: Except the Lord Build the House They Labor in Vala that Balld ft"-Panims 137:1-Temple's Teach-Ings.

> S next Sabbath's lesson also con-cerns the Temple, we will consider to-day only the Temple itself, and leave its furnish ings for the later study. The building of



important eras in the history of Israel. It introduced a new force fluence was religious and political. In the words of Dean Steeland political. In the vords of Dean Stanley, "It was far more than a mere architectural display. It supplied the framework of the history of the kingdom of Judah. As in the Grecian tragedies we always see in the back-ground the gate of Mycenae, so in the story which we are now to traverse we must always have in view the Temple of Solomon. There is hardly any reign which is not in some way connected with its construction or its changes. In front of the great church of the Escurial in Spain-in the eyes of Spaniards itself a likeness of the Temple-overlooking the court called from them the Court of the Kings, are six colossal statues of the of Judah who bore the chief part in the Temple of Jerusalem: David, the proposer; Solomon, the founder; Jehosh-aphat, Hezekiah, Josiah, Manasseh, the successive purifiers and restorers. The idea there so impressively graven in stone runs through the history which we have henceforward to consider."

The section includes 1 Kings 5 and 6, and the parallel account in 2 Chronicles

2 and 3. Time. The building of the Temple was begun on the second day of Zif (bril-liancy, the month of flowers), corresponding to our month of May. in the year 1012 B. C., the fourth year of Solomon's reign, and 480 years after the exodus (1 Kings 6 1, 37, 38). It was completed in seven and one-half years, in the eighth month, Buf (October-November), B. C. 1005, and the eleventh year of Solomon's reign (I Kings 6: 38). The revised version of Acts 13: 20 relieves the difficulty from Paul's

13: 20 relieves the difficulty from Paul's chronology there given. Place, Jerusalem. The Temple was built on Mount Moriah, the castern hill of Jerusalem (2 Chapn. 3: b, the place which when a threshing-floor David bought of Araunah in order to offer sac-rifices for the cessation of the great plague (2 Sam, 24: 16-25). Here, too, al-most 300 years before, Abraham. in the great trial of his faith, brought Isaac for sacrifice (Gen. 22: 2).

sacrifice (Gen. 22: 2). Contemporary History. Tyre flourish-ing under King Hiram. The Sabean Kingdom of Yemen, the queen of which came to see Solomon. Commerce extended to Europe, Africa and India. To-day's lesson includes 1 Kings 1-12,

as follows: 1. "And Hiram king of Tyre," the rich, commercial and industrial kingdom rich, commercial and industrial kingdom on the northwest of Israel. "Sent his ser-vants unto Solomon." Seemingly with a message of congratulation on his acces-sion. Josephus (Ant. VUI. 2, 6) says so. -Cambridge Bible. "Hiram was ever a lover of David." See 2 Samuel 5: 11; 1 Chron. 14: 1; 22: 4; 2 Chron. 2: 3.—Cook. 4. "Evil occurrent." "Occurrent" is the old English form of the noun for which old English form of the noun for which

we now use "occurrence. 5. "Cedar-trees out of Lebanon." (See Ezekiei 31: 3-5.) The cedar is one of the most majestic trees of the Eastern forests, and is found in its greatest perfec-tion on Mt. Lebanon. It grows to the height of seventy to eighty feet. The wood is of a red color and bitter taste, which prevents its injury by insects. It continues to grow for 1,000 years. It is continues to grow for 1,000 years. It is very durable. There is no such thing as a rotten cedar. There is a specimen in the British Museum labeled "Cedar of Lebanon, from Palace of Nimrod; 3,000 years old." 9. "Convey them by sea in floats." Fe-vised version, rafts "made of the trees fastened side by side, and formed into long raft-like structures, somewhat like those which may be seen often on the Rhine, sent down from Switzerland. Such floats would keep close to the shore and floats would keep close to the shore and be anchored at night."—Cambridge Bible. "Unto the place." Joppa (2 Chron, 2: 16), the most convenient port to Jerusalem. The pay was an annual supply of the products of Palestine, in which Phoen was deficient. 11. "Twenty thousand measures of wheat." The measure was a "cor," or homer, equal to eight bushels. "Twenty measures of pure oil." This amount is so insignificant in comparison that it seems best to adopt the Greek reading here (agreeing with 2 Chron. 2: 10, and with Josephus), of 20,000 baths, or 2,000 cors of oil.-Ellicott. A bath is six or seven gallons, or one-tenth of a cor. The Temple was built upon Mt. Moriah, where had been the threshing floor of Or-nan (Auraunah).-2 Sam. 24: 18-25. This was probably the spot where Abraham was to offer up Isaac. This was the eastern hill of Jerusalem, overlooking the Kedron and the Mount of Olives, and separated from Mt. Zion by the Tyropoeal Valley. We can hardly be wrong in iden valey. We can hardly be wrong in iden-tifying the remarkable rock known as the Sakrah, over which the mosque of Omar (Kubbet-es-Sakrah) is built,—the "pierced rock" of the Jerusalem Hinerary,—with the threshing-floor of Ornan,—Pulpit Commentary, Over this rock is scupposed to have been the Holy of Holles, Reneath this area are still aqueducts, pas sages and tanks once used for the proper drainage and use of the Temple. "The rugged top of Moriah was leveled with immense labor; its sides, which to the east and south were precipitous, were faced with a wall of stone built up per-pendicularly from the bottom of the val-ley, so as to appear to those who looked down of most terrific height-a work of prodigious skill and labor, as the im-mense stones were strongly mortised to-gether and wedged into the rock."-Mil-man. "The magnificent wall on the east man. "The magnificent wall on the east side, known as 'the Jews' walling-place. is doubtless the work of Solomon, and after outlasting 'the drums and tramp-lings of a hundred triumphs.' it remains to this day in uninjured massiveness. One of the finely beveled stones is 3% feet long and 7 feet high, and weigh more than 100 tons. These tast stones were hown from a quarry above the lovel of the wait, and howered by rollers down an inclined plane.

shine in and dry up the soil over their | was badly heaved out, the destruction roots. In the average orchard in Rhode Island these limbs should be spared if for no other reason than to retard the evaporation of moisture from the soil beneath the trees.

Apple Trees Use Sunlight .-- In order to produce ten barrels of fruit as the product of one or two seasons growth, an apple tree must do a large amount of work in collecting the crude materials required and in manufacturing them into such refined products as Gravensteins, Greenings or Baldwins. Sunlight, by its action upon the foliage, furnishes largely the power that runs the machinery of an apple tree. The amount of this power that a tree can use in a measure determines how much fruit the tree can bear. For this reason the surface area of the top of an apple tree should be as large and as well exposed to the light as circumstances will allow. The natural habit of the apple tree is to form a rounded top with its branches bending low to catch as much sunlight as is possible. It is a too common practice to cut off these lower limbs, which may in the case of a well-grown tree represent from 400 to 800 square feet of the normal bearing surface of the top, and in this way to permanently injure the trees. It is as important for an apple tree that is to do its best work to have its top adjusted to use the light as it is for a sailing vessel to be trimmed to catch the wind. Save the lower limbs that increase the surface area of the top, for these when the roots are well d for enlarge the bearing capacity of the tree, but thin out and when necessary shorten in the limbs that the light may shine brighter on those which are left.

Sunlight and Fruit Buds .- Limbs of pple trees that are exposed to strong oduce more fruit buds than those which are in partial shade. In order to prove this we secured permission to go into an orchard where the trees, although rather too near together, were on the whole well grown, and cut two limbs from each of ten trees in different parts of the orchard. The imbs selected were about one inch in diameter, and in each case one was taken that was fully exposed to sunlight and the other where partially shaded. When the limbs were taken to the laboratory where the buds were counted the action of the sunlight in promoting the formation of fruit buds ras apparent.

Furtilizara on Wheat.

Bulletin Ti of the Ohio Experiment station, now being distributed, gives the results of the station's experiments with fertilizers for the seven years, 1859 to 1895 inclusive. In the average

being much more complete on the unfertilized plots, and these finally gave an average yield of less than fifteen hundred pounds of hay per acre, a

large portion of which was ragweed, while eight plots receiving a complete fertilizer, used at the rate of about 400 pounds per acre, gave double this yield, of hay free from weeds, and two plots, dressed with barnyard manure at the average rate of six tons per acre, gave an average increase of more than a ton per acre, or a total yield of a ton and three-quarters. In the three-crop rotation of potatoes, wheat and clover, the unfertilized wheat yielded this year seven bushels and a half per acre, and this was increased to twelve bushels by the use of complete fertilizers. The clover following the unfertilized wheat of last year yielded nearly two tons per acre, while the increase from fertilizers averaged nearly six hundred pounds, and that from barnyard manure was over thirteen hundred pounds, the quantities of fertilizers and manure being the same as in the five crop rotation. In these experiments neither fertilizers por barnyard manure have more than partially prevented the destruction of either wheat, clover or timothy by winter killing. In the case of wheat, six tons of barnyard manure has produced about the same average effect as four hundred pounds of fertilizer, but in the case of the clover and timothy following the wheat, the average residual effect of the manure has been considerably greater than that of the fertilizer.

Progressive Farming.

Times and conditions are necessarily always changing. We cannot do all things as they once were done. We must watch the signs of the age and be governed accordingly. We cannot farm as our grandfathers did, for the latters' practices if now followed would result in bankruptcy. The farmer must be progressive. He must climb out of the "rut," use his brains to show him the right course to follow, and not be weighed down and burdened by traditions and hoary precepts now proved to be unworthy of credence. I do not mean to be understood to imply that any farmer should embrace every new theory and follow it blindly just because it is new, but rather put himself in the line of testing the new and holding to that which is good, while discarding the wrong. Nor, on the other hand, should the farmer be preindiced against any plan or method because it is old. If it is old, and has firmly stood the test of years, all the better. The whole labor lies in the sifting of truth from error. Farmers of of these seven years the wheat grown | the old school are as a class radically should be abolished.

years of Pharaoh." but rather they support a vegetation of great luxuriance and abundance. Finally, it may be said that the lands of the progressive farmer are constantly undergoing some improvement; something is always being done for the betterment of the farm. There is no stagnation. W. P. Perkins.

Kerosene Emulsion Applications.

Prof. Howard Evarts Weed, in a bulletin of the Mississippi station, says: Although poisons like Paris green are not applicable to insects which take their food by sucking, yet an external irritant, like kerosene, is applicable to all, and it matters not how they take their food. Kerosene can be used against all insects except those living in confined places where they cannot be reached, such as tomato worms, those living in stored grain, etc. The amount of kerosene which should be used will vary with the kind of insect to be treated, some requiring a much larger proportion than others. Nearly all plants will bear one part of kerosene to ten of water, but when a strong er application is to be made, it should first be tested on a few plants to see if the foliage is affected. For the treatment of ordinary insects the following proportions are recommended:

Plant-lice, of all kind, 1-20

Caterpillars or other larvae exposed on leaves, 1-15.

Scale insects on leaves, 1-16. Scale insects on bark, summer treat-

ment, 2-10. Scale insects on bark, winter treatment, 3-10.

Lice on domestic animals, except hogs, 3-10,

Lice on hogs and ticks on cattle, 5-10 The mixing of the two liquids takes blace partially in the pump, but more gely in the nozzle, where they are divided into very fine particles. Of course a mixture made in this way is not a permanent one, nor is it necessary that it should be so. What is needed is simply a dilution of the kerosone so that it will not cause injury when applied, and the attachment accomplishes this object fully.

A Difference in Cows .-- That different cows need different rations is certain. As in the human family so in the bovine family, there are wide differences of taste. One cow will eat and relian a food that seems to be disgusting to another cow. It is the same with the rations. The same ration operates tif. ferently with different cows.

Wherever a horticultural society receives an annual appropriation from the state all membership fees and dues

deeply," he continued. The man's eyes had a vacant stare, but he breathed as commanded. "Breathe! You are breathing for the whole universe! Breathe! I am going to close your eyes now, so that you cannot open them. You cannot open them."

He now closed the paient's eyelids with the palm of his cool hand, and the man remained as if in a deep trance. Motionless and calm. Hurriedly slipping the coin into his pocket, and still looking intensely on the man before him, the surgeon said in a sharp tone: "I have taken all sensation from your forehead. It is numb. You do not feel anything now. I am going to make your arm rigid." Hereupon he struck the patient's elbow with his

hand, and stroked his arm. "It is rigid. You cannot bend it now." What was the wonder of the spectators when the man's bare arm became absolutely rigid, and his muscles stood

out. "That will do," said the doctor. "Let it drop." And the arm dropped. He was an absolute victim of hypnotic influence.

"Your leg is dead," continued the hypnotist. "There is no feeling in it. It is a piece of wood-a log. You have no sensation there." Now the patient was ready for the surgical operation. The doctor picked out a needle from the pot of boiling water with the needle forceps and with deftness and agility bred of practice began to sew up the gash in the leg, from the bottom upward, with quick, regular movements, toward the joint.

The patient lay comfortably without suggestion of pain or even discomfort. In a short while forty stitches had been made and small skeins of silk were left at intervals in the gash, to answer the purpose of drainage pipes. The wound was sprinkled with powdered iodoform and the patient's body well washed with the asceptic mercurial so lution.

When the operation was over the surgeon passed his hand over the man's brow and shook him slightly by the shoulder.

"You are safe now," he said. "You are perfectly well."

Slowly the man opened his eyes, gianced about him and tried to rise from his hammock, but fell back with a look of mild surprise.

He described his sensation as he rew into the comatone condition, that the coin placed above his over had grown bigger and bigger until it formed itself into a golden palace in a great, cool, blue ocean that washed above and below it, and then he had miles asleep. This is the only known instance that hypnotism has been attempted in an insurgent camp. The operation was a remarkable success.

"Yes," assented the roundsman, "my name is Tom O'Brien."

"How long hove ye been a poleecemon?" asked the old man, excitedly. "Twenty years," said the rounds-

"Hurroo," howled the old man, "ye're me lad fer sure." And he grabbed O'Brien around the neck and kissed him ecstatically.

"I'm not your son," said the roundsman, blushing furiously, "my father is still living with me. I was born right here in New York.

"Be they ony other O'Briens that is poleecemen?"

"About 100."

"Glory be to God! But how'll Oi ever foind me son?"

The old man was directed to go to police headquarters, and he left court with the announcement:

"O'll foind that lad if it takes twinty years. Oi want to see me boy.'

Over 1.000 Descendents.

A half-breed Indian who comes across the Canadian border with snowshoes, moccasins and baskets to sell may be seen almost any day about the streets of Saranac Lake. He occasionally makes excursions to this city. His name is Macomber, his father having been a Frenchman. The tribe to which he belongs has a reservation twelve miles square. The tribe is descended from the Five Nations. The reservation is known as Caughnawaga. Macomber's grandfather died last week, aged 163, and leaving considerable wealth. He had been married three times, the first two wives being dead. His first wife bore him six children, the second fifteen and the third the same number. His grandchildren, great-grandchildren and great-greatgrandchildren number over 1,000. Of the thirty-six children twenty-eight are living, as are most of the grandchildren, great-grandchildren and the

great-great-grandchildren. The tribe claims a portion of Vermont territory known as the Missisquoi valley. Chiefs and great men of the tribes of the Five Nations have appeared before every session of the legislature for upward of half a century demanding remuneration. -- New York Times.

Cucitata and Carrier Pigeons

Experiments with cyclists and carrier pigeons for transmitting measures are being made by the Gymnastic ciety of Rome, in the interest of the Italian army. The rider carries a small cage attached to his machine, in which are several well-trained pigeons. When important observations have been taken and joited down they are placed in envelopes and affixed to the birds, which are liberaled.

MRS. GRUNDY SAVINGS.

That there is no doubt about a superfluity of cheap magazines.

That anobhishness reems to be just as hereditary as incanity.

That many alleged economies of suburban life are imaginary.

That modern society men are lacking in deference to women.

That no modest bather at the reaside makes a beach exhibition.

That the girl who never forgets social proprieties wins at the last.