

Scientific Memoranda—American.

**REMEDY FOR PLANT LICE.**—Mr. E. G. Mygatt, of Illinois, offers through the German town "Telegraph," the following remedy for plant lice, so destructive in the early part of the season. We commend it to our friends for a trial:

"If you have any species of the aphid in your nursery, please to make a trial of the following decoction;—Get from a druggist 1-2 lb. of Quassia; boil it fifteen minutes in six quarts of water; pour off the decoction into a dish-pan with handles. When cool, get an assistant to hold the pan while you carefully bend down and immerse the branches—giving them a little motion to wet all the insects. Look at the trees two days after, and if the aphides are dead, and the tender shoots uninjured, use and recommend the Quassia and let the whale oil soap perform some other office.

For young and tender buds or grafts, I use the spray from a nearly spent syringe where it is not safe to bend them over the pan."

**TO DESTROY VERMIN ON ANIMALS AND TREES.**—G. W. Kendall, one of the Editors of the New Orleans "Picayune," in his letter from Paris to that Journal, gives the subjoined recipe for destroying vermin on animals, plants and trees. This remedy is simple, easy of application, and worthy of at least a trial:

"The celebrated Raspail, well known as one of the best French chemists, has given an important recipe for destroying vermin on animals, and also on plants and trees—important, at least, if true. The process he recommends is to make a solution of aloes—one gramme of that gum to one litre of water, French measure—and, by means of a large brush, to wash over the trunks and branches of trees with this solution. This simple process, says Raspail, will speedily destroy all the vermin on the trees, and will effectually prevent others from approaching. In order to clear sheep and animals with long hair, they must be bathed with the solution, or well washed with it.—Raspail mentions several trials he has made with this mixture, all of which has been attended with the most complete success: and he recommends it very strongly for general use. I can only say that if a simple solution of aloes and water will kill or drive away ants from peach and other trees in Texas and other parts of the South, the discovery will be hailed with pleasure. At all events there is no harm in trying the experiment. A French litre is a little less than three of our pints—a gramme is the five-hundredth part of a French pound.—A little aloes, if used at all, will thus go a great way. Were I troubled with ants and other vermin in Texas, I should certainly try Raspail's solution."

**THE ROSE BUG.**—The Philadelphia "Ledger" says, "this insect often, in a few days, destroys all promise of roses for the season.—They appear in such numbers that I have counted from 50 to 100 on a single flower or bud, destroying it entirely in less than an hour. They are also disposed to attack the leaf of the grape-vine, and in some districts they extend their ravages to the apple, the cherry, and the plum.

They come out of the ground about the second week in June, and in some localities in July, and remain from a month to six weeks; at the end of that period the males fall to the earth and perish; but the females make their way into the earth again, where they remain for a while to deposit their eggs, and die soon after they return. The number of eggs is generally from 25 to 50, they are globular, and about 1-30 of an inch in diameter. The young larvae feed upon all tender rootlets that come within their reach. At the approach of frost they descend below its influence, pass the winter in a state of torpor, and in the spring approach the surface of the earth again, when they are transformed into a pupa, and in the month of June and July they are turned into a beetle and make their way to the surface of the earth again.

From the foregoing brief notice of this destructive insect, it will be seen how difficult, if not impossible, it is to destroy the race in its incipient state; the attack, if any, must be

made upon them in their most perfect form. Various methods having been proposed, but as all are troublesome, and only partial in their effects, we will take the liberty of suggesting a process which we are persuaded will be found effectual.

When the rose-bug first makes its appearance, sprinkle your bushes profusely with the pollen of the flower of the Ailanthus tree, or pour upon the bushes through a watering pot, a strong decoction of the same. You will presently see hundreds of the bugs falling to the ground, there to die. The operation may be repeated once or twice a day, until they entirely disappear, which generally takes place in less than a week."

[Perhaps Quassia or a solution of aloes, may answer as well as the pollen of the ailanthus; the experiment at least can be easily tried.—The rose-bug is now busy with the grape vine, and close attention should be paid to destroy them. Those who have grape vines should not forget that vigilance is the price of grapes.

**HOW TO KEEP GATHERED FRUIT AND FLOWERS ALWAYS FRESH.**—A friend has informed us that fruit and flowers may be preserved from decay and fading by immersing them in a solution of gum-arabic in water two or three times, waiting a sufficient time between each immersion to allow the gum to dry. This process covers the surface of the fruit with a thin coating of the gum, which is entirely impervious to the air, and thus prevents the decay of the fruit, or the withering of the flower. Our friend has roses thus preserved, which have all the beauty and fragrance of freshly plucked ones, though they have been separated from the parent stem since June last. To insure success in experiments of this kind, it should be borne in mind that the whole surface must be completely covered; for if the air only gains entrance at a pin hole, the labor will be all lost. In preserving specimens of fruit, particular care should be taken to cover the stem, end and all, with the gum. A good way is to wind a thread of silk about the stem, and then sink it slowly in the solution, which should not be so strong as to leave a particle of the gum undissolved. The gum is so perfectly transparent, that you can with difficulty detect its presence, except by the touch. Here we have another simple method of fixing the fleeting beauty of nature, and surrounding ourselves ever with those objects which do most elevate the mind, refine the taste, and purify the heart.—[Country Gentleman.

An artesian well has been bored at Cape May, 80 feet deep, which supplies excellent fresh water. This is considered a satisfactory test of the fact that good water can be procured on the sea shore by boring.

Foreign Scientific Memoranda.

Great efforts are now being made in England for the extension of telegraph lines under the waters of the Mediterranean. Recently a very large telegraph cable has been made to be sunk in the Mediterranean. It is 110 miles in length, and weighs somewhere about 800 tons. It contains six copper wires, or conductors for the fluid to traverse, protected by a gutta percha covering secured in a hempen rope, and finally surrounded with twelve iron wires of No. 1 gauge. The projector and originator, Mr. John Watkins Bret, profiting by experience, has allowed 20 miles for what is technically termed 'slack' and 'way,' and for depths of the ocean. As now coiled in the yard, the cable occupies about 75 feet, taking its convex sides. The perpendicular height of the coil is about five feet, and the width of one side of the coil from convex to concave reaches 24 feet. The moment it is laid London will be immediate communication with Cagliari, in Corsica, through the cable and about 400 miles of subterranean wire.

**ENGINEERING ESTABLISHMENT.**—The British Admiralty have undertaken to provide speedy means of effecting repairs of the machinery of any of the engines of the Baltic fleet, by equipping the "Volcano," steam-frigate, as a complete engineers' workshop, to attend to the fleet, and carry the workshop alongside of any ship requiring repairs of the machinery, and so

effecting such repairs with all promptitude.—The deck of the Volcano has been lowered so as to yield a most spacious workshop, 10 feet high from floor to roof, 104 feet long by 30 feet wide, in which are placed, in most convenient arrangement, a 12 horse power independent steam engine, two boilers, to supply power and motion to the various machines, and tools, forming the equipment of this floating workshop; which tools and machinery consist of one powerful turning lathe, and three others of graduated capabilities, two planing machines, two boiler-plate punching and shearing machines, four drilling and boring machines, two bolt-screwing machines, one steam hammer, with four forges, one cupola, capable of executing any casting in brass or iron up to 30 cwt., with its appropriate foundry apparatus and material, a blowing fan to supply blast to the forges and foundry cupola; together with grindstones, anvils, vises, and all the minor implements of a very complete and efficient engineers' establishment, which there can be no doubt will prove of the utmost value and importance to the service. Mr. James Namsmith, of Patricroft, has been entrusted by the Admiralty with the equipment of the Volcano.

**ORGANS.**—The present organist at Breslau, Prussia, gives in a book just published, some curious facts respecting the external embellishment of the organs in the seventeenth and beginning of the eighteenth centuries. One had the whole case ornamented with statues, heads of angels, vases, foliage, and even figures of animals. Songs of nightingales, cries of the cuckoo, celebrated holy Christmas, and proclaimed to the Christian assembly the birth of the Redeemer, and eagles flapped their wings or flew towards an artificial sun. The crown, however, of all these absurdities was the fox's tail. It was intended to frighten away from the organ all those curious and inquisitive persons who, by thronging round it, often disturbed the organist. Thus, when they pulled out this stop, suddenly a large fox-tail flew into their faces. Another absurd contrivance is the *tremulande*, a register which on funeral services, fast days and on Good Friday was to indicate the sobbing, sighing, and trembling of men.

**ARMS FOR A STATUE.**—Every body has seen or heard of the Venus of Milo—that wonderful creation which of itself is worth a whole museum. It will be remembered the statue is destitute of arms, and academicians, antiquarians, and sculptors, have long been in dispute upon their true position and movement, while every artist has deplored their loss. It seems that these arms have been recently found—not the veritable originals belonging to this particular statue, but a copy with the arms in their right place, which has just been exhumed from the trenches of Rome. The Venus of the Louvre is nearly seven feet high. The copy just found is of reduced size, being from four and a half to five feet only. The Venus, it seems, has triumphed over her rivals, Minerva and Juno, with whom she has disputed for the prize. One of her arms, the left, is elevated in the air, where she holds the apple which Paris has just given her. The right is inclined downward, gathering and adjusting her raiment. Thus has the problem been solved; but where is the artist who dares chisel out the arms of the Venus of Milo?

**SIZE AND PROPORTION OF ROOMS.**—Experience shows that where a room of moderate size has the breadth equal to two-thirds of the length, and the height half of the length, every body will acknowledge it to be a well proportioned room. We do not know why, but if we take a foot away from any of these dimensions, the room will not obtain so ready a commendation, though in point of convenience nothing may be lost. The finer and more cultivated taste the more sensible will a person be of a small aberration from these proportions. I say a small aberration, because with a greater difference a new style of beauty may be introduced, and two persons of equally refined taste may differ as to which is the better. A square room would have its advocates, though this form is not much in request

at present, and in that case the height should be at least equal to two-thirds of the width, or more, perhaps even to the whole width if with a coved ceiling. Generally speaking, the eye more readily forgives an excess of height than the want of it. In small rooms a square form is preferable to an oblong, partly, I suppose, with reference to the human stature. A room 12 by 12 feet may do very well in a small house, one 14 feet 9 inches by 9 feet 10 inches occupying about the same area, and half as long again as abroad, would be inconveniently narrow. To a Lilliputian, I apprehend a room 6 feet by 4 feet, and 3 feet high, would seem exceedingly well proportioned. A double cube is a beautiful form, and for a large hall, or in a public edifice, a length equal to three times the breadth, and a height equal to half the length, would be almost universally approved; but in small rooms these proportions would not be pleasing. A room 36 feet by 12 feet would not be admired, and in such a room the height of 18 feet would appear extravagant. In these feelings there is an evident reference to a being 5 or 6 feet high.—[The Builder.

The Atmospheric Telegraph.

The atmospheric telegraph of I. S. Richardson, of Boston, which was illustrated on page 265, vol. 8 Sci. Am., has been laid before Congress, and an appropriation asked for laying down a line between Washington and Baltimore, for carrying the mails. A committee, appointed by the Senate—of which Senator Mallory is chairman—to investigate the subject, has reported as follows:

"It is deemed expedient that the experiment should be made for a short distance, upon an established mail route, in order that, if successful, it might constitute a part of a more extended work; and your committee has been disposed to prescribe a direct line between Washington and Baltimore. The mail between Washington and New York is now carried upon railroads in twelve hours. If your committee do not greatly err, the same mails may be carried between these cities in two hours, by the proposed atmospheric telegraph, and the expenditure now necessary for the transmission of one set of mails, would enable the post office department to send six sets of mails every twelve hours. Many practical difficulties and objections will doubtless develop themselves whenever the atmospheric telegraph shall be established upon a large scale—such, for example, as wastage of power in the air pumps, the wear and tear in the mail bags, pistons, and interior surface of the tubes by high velocities, the admission of air in the tubes, the effects of climate upon them, the expense of establishing them, &c., &c.; but your committee, after weighing these and other objections which have been suggested, do not hesitate to recommend an appropriation to test its utility and capacity."

We certainly would like to see this plan fairly and fully tested, to determine the practicability of the invention on a long line, for on a small line it operates well.

Cotton Manufacture in the Southwest.

The Louisville papers state that the success of the extensive cotton manufacturing establishment of H. D. Newcomb & Bro., of Louisville, at Cannelton, Ky., during the last year, has been unprecedented in the history of modern manufactures. Their mammoth mill now in operation at that place, turns off a daily production of goods, such as the very best domestic fabrics in market, equal to 15,252 yards. The value of one day's production, at the present market rates, 8 1-4 cents, is \$1,258. The monthly productions of this mill, as compared with eastern water and steam mills, of like capacity, shows an excess over their monthly reports of from ten to twenty-five per cent., thus demonstrating the entire practicability of the establishment of cotton manufacturing in the valley of the Ohio with far superior advantages over that branch of business anywhere east of the mountains.

The reports from east, west, north, and south respecting the crops, are very favorable.—Flour is now falling in price.