

Late Foreign News

KILLED BY LIGHTNING.

A Desperate Murder in a German Prison.

Disaster to a Bridal Party.

A museum of postage stamps was opened week before last in Dresden by Prince Augustus of Saxony.

Up to date 718,986 marks have been subscribed towards erecting a memorial church in honor of the Emperor William I.

Since the Japanese have had war ships they have been experimenting with lacquer as a protection to the bottoms with marvellously satisfactory results. The Fusokan, after having been lacquered for a year, was found to be in perfect condition.

One of the greatest obstacles to the settlement of vast regions in Africa has been the tsetse fly. Although harmless to man, all civilized animals die from its bite in two or three days. A man of Natal has discovered a remedy for the poison in which he has such confidence that he has contracted to carry the Portuguese military stores through the tabooed districts on bullock.

Italy's new war ship *Sardagna* will have the most powerful engines yet made—25,000 horse power.

The potato crop having failed in eastern Prussia, the merchants combined to raise prices. They have been attacked in consequence in many villages, and broken heads and frequent arrests are the consequences. The magistrates are emphatic, and complaints loud and deep are made of their conduct. Count Bismarck-Böhlen is an exception. He is buying abroad and selling at cost prices.

For years there was a beggar on the steps of Saint Sulpice with a hump which steadily grew. A few months ago he was taken ill, and in delirium jumped out of a window and was killed. A neighbor who picked him up upon investigating his hump found that it contained \$20,000 in bonds and coin. Finding that the beggar had two relatives to whom he had left his fortune by will, the finder sent the money to them, with the exception of \$4,000. The relatives discovered this fact, and after prosecution for theft the man in question was condemned to two years' imprisonment.

The Russian Ministry of the Interior is considering a project to put all drug stores under the monopoly of the Government. Should this project be approved the people will get their medicines at cheap rates, and the Government, charging only 10 per cent. profit on drugs, will be able to keep two salaried physicians in every drug shop to treat poor invalids gratuitously.

A further installment of the diary of the late Emperor Frederick is published. It is crowded with proofs of the kindness and manliness of the ill-starred Emperor. After the battle of Trautenau, on the 29th of June, 1866, the parish priest, Pransnitz, prayed that the blessings of heaven fall on their new master, the King of Prussia, striking out of the service the name of the Emperor of Austria. Frederick, then Crown Prince, makes a note of the priest's servility, and says he ought to hang on the gallows for it. Many passages in the diary deplore the necessity of bloodshed.

Despatches from the Cameroons, West Africa, announce that Dr. Zintgraff, who has been exploring the interior, has been repeatedly repulsed by the natives. He has himself been badly wounded and his forces were demoralized. The colonial press insist that the Government take unusual measures in view of a general uprising, which would be more serious than in the East Africa, the natives being better armed.

A waterspout burst over the city of Brunswick recently, and spent its force on the famous museum containing a gallery of paintings of the greatest masters and a superb collection of classical antiquities and works of art. The building was partially unroofed; water poured in in torrents, and many unique pictures and other works were ruined or badly damaged. The loss is incalculable. The institution has been closed for repairs, which will take a month or more to complete.

A Moscow daily says: "The destruction of small birds in large numbers is a profitable trade, but it is not devoid of bad consequences for agricultural regions. Along the lines of the Razu-Kozlov and Orlov-Graz railroads dead and live birds are shipped by the ten thousands for their feathers or as songsters, and in those regions various kinds of insects and worms multiply correspondingly and destroy the fruits of the orchards and kitchen gardens. In several districts in Ekaterinoslov a lively trade is carried on with the skins of magpies; and there rats and field mice are multiplying rapidly and destroy the crops of grain. Although Russia abounds with birds of all kinds, the destruction of the birds is not carried on with impunity."

A telegram, dated Budapest, Tuesday, says:—A despatch from Losing, in the Oldenburg district, states that 18 field labourers having been overtaken by a thunderstorm, sought shelter by the side of a haystack, which was immediately afterwards struck by lightning. Three of the men were killed on the spot, the others being stunned by the electric discharge.

During the exercises of the infantry near Weimar on Friday and Saturday last forty were sunstruck, four killed outright, and nine paralyzed. The officers are severely blamed for exposing the troops needlessly to such danger.

Fresh dissensions have broken out among the German Socialists. The younger men continue to denounce the moderate programme proposed by the party. There was a stormy meeting of the Berlin section of the Socialists last night. Herr Bebel defied and ridiculed the extremists. Those who preferred street fighting to orderly legislation were entitled to their opinions, but must form their own party to carry them out.

Between Bokhara and Fergan, in Central Asia, is a large stretch of land known as Golodnaya Step (the Hunger prairie), in Russia. The soil of this steppe is of excellent quality, but it lacks irrigation. The Russian Government has made attempts to irrigate this soil, and spent millions of rubles in digging canals and artesian wells in various localities, but, on account of the careless prospecting of the engineers and imperfect arrangements made for the nival-

ing of the soil, all these attempts have failed. Last summer the Minister of Finances, on his tour in Central Asia, made a personal inspection of the Golodnaya Step and of the abandoned works of irrigation there. He noted down carefully what had been done, and what, according to the opinion of expert might be done to reclaim the steppe to fertility. Recently he submitted to the Government a plan for the irrigation of the whole region, proposing to utilize convict labor for the purpose. His plan was accepted, and work will soon begin from the convicts' station of Kooyluke, eight versts (about one and a quarter miles) from the military station of Tashkent.

The present population of Helsingfors, the capital of Finland, is 39,647, of whom 29,787, are Finns and 29,860 are Swedes. Last year there were only 14,479 Finns and 23,949 Swedes. The diminishing of the proportion of Swedes in Helsingfors is due to the progressive Russianization of Finland.

The Russian Mining Departments of the Ministries of Imperial Property and of the Interior have sent three engineers to America to study the methods by which gold is worked out in the mines of Arizona, Colorado, Nevada, California, and Utah. The yield of the Russian gold mines has been very poor of late, and the rising of the Russian values in the foreign markets has made the mining of gold almost unprofitable. It is believed that the introduction of American methods of mining will improve the miner's trade.

A laborer named Busch, who murdered a family of four persons at Neuhof, near Guiströn, was confined in the prison at the latter place, and proved an exceedingly difficult man to handle. He repeatedly tried to escape from the jail, and was finally placed in irons, a warden being stationed in the cell to watch him. The prisoner, by dint of persuasion and holding out visions of untold wealth by a career of burglary, induced the warden to assist him to escape and to accompany him. The overseer, Hoppe, was surprised the other morning to see the two men creeping through a corridor armed with iron bars. Finding they had been discovered they boldly attacked the overseer, knocked him down, and began beating him to death with the iron bars. Hoppe, however, clung to Busch, although the warden kept battering at his head. The noise aroused the other officers, help came, and Busch and the false warden were overcome and heavily ironed. It is doubtful whether the overseer will recover.

Maggie.

The mother of the family was an invalid, and there were so many little helpless children and only Maggie to do for them all! It was Maggie here and Maggie there, from morn to night, and often the sick mother would lie and suffer rather than ask for what she needed and so increase the haste and worry of the little housekeeper.

For Maggie was only a child—a little girl who had learned to work instead of to play, who when other children were amusing themselves with dolls was bathing her sick mother's fevered head, and keeping the house still. There had been no school room nor play house for her, yet she had somehow learned to read, and it was the aim of her young life to send all these other children to school, as she knew her father would have done if he had prospered. And to keep home so bright that he was contented with it, to make an altar in the sick room around which all the family should meet at night—this was the work of little Maggie.

It was not easy work, nor pleasant work, and except that she had unselfish help to bear her through, little Maggie would have fallen by the wayside long before her work was accomplished. For sometimes when the little troublesome children were asleep, and the sick mother settled for the night, Maggie sat down at the window and "took a spell of thinking." She wondered why some people should be born rich, and others poor; why some should do nothing and others everything; what it was to know all about the world, to be a fine lady, and wear nice dresses, and sail away in a grand ship, as she had seen them do in pictures. And she looked at the moon and stars, and wished she knew if Heaven really did lie on the other side.

Then always a stern human voice broke in on her dream, and it told her to go to sleep, for she must get up again in the morning, ready for work.

When Maggie was 12 years old all her dreams came true. A grand ship of state was sent to bear her to a distant country, where she could wear beautiful clothes, and learn all that she wanted to know. It sailed away with her to the Blessed Isles, and as her friends saw her face for the last time, they knew she was forever happy.

But her work, her influence, are still here. In the house where she lived she still exists. Not as a memory, but as a precious presence. For you will hear there all day long her name repeated in tones of loving remembrance. "Maggie used to do so and so;" "Maggie said we must do this;" "Maggie said God would hear us say our prayers when she was gone;" "Maggie said if we were good we would go to her some day." And the stricken mother, when appealed to settle some vexing question, answers humbly and lovingly: "Do as you think Maggie would have you."

Is this not the perfect spiritualism that challenges no criticism, the living influence of the ministering angel who still controls the household she has left? No stone marks her grave at Woodmere, but she herself erected a monument whose tops shall reach the skies:

"To live in hearts we leave behind
Is not to die."

A Flight of Eagles.

A Russian letter says: A curious and unusual sight has just been witnessed by the inhabitants of Bjelgorod in the south of Russia. A few days ago an enormous flight of eagles were seen to fly past the town and settle in an adjacent forest. The woodmen who were in the forest at the time fled in dismay from the place. It is well they did, for when these unwelcome visitors had taken their departure, it was found that they had devoured ten horses, several sheep, and a vast number of smaller animals. The ground where they alighted was strewn with feathers, and all the birds of the neighborhood have been so terrified that they have flown away. Only one of the eagles was caught—a bird of immense size and belonging to a Siberian species. The eagles, which were several hundreds in number, flew away in a westerly direction. The peasants who saw this remarkable sight state that there were so many of them that for the space of several seconds their wings hid the sun from their sight.

FLOWERS THAT TRAP INSECTS.

And a Vegetable Whiskey Shop that Catches and Eats Frogs.

A new species of vegetable whiskey shop has been added to the collection of plant curiosities at the Washington Botanical Garden. The liquor it distills in the pitcher-shaped receptacles that hang from its stems is especially liked by frogs, which hop into these traps for the purpose of drinking it. Although the sweetish fluid is a powerful intoxicant, the batrachian customer, however wildly over-stimulated, would certainly jump out again were it not that two very sharp dagger-like thorns project downward from the lip of the vessel in such a manner that Mr. Frog in trying to escape is thrust through the body by them at every leap until presently he falls dead in the "liquid refreshment"—an appropriate object lesson to all intemperate creatures—whereupon the plant absorbs his substance, as the ordinary whiskey shop consumes that of its frequenter, and is thus supported.

This species is tropical and has to be kept in the greenhouse devoted to plants of the equatorial belt. Naturally there are no frogs in the conservatory, and so Superintendent Smith is obliged to feed

THIS ECCENTRIC VEGETABLE

with raw meat chopped fine, on which it thrives excellently. For lack of insects likewise he supplies with the same artificial sustenance the other sorts of whiskey shops that find in bugs of various descriptions their chosen prey. They will all eat beef, although each variety seems to have in nature its particular line of customers, one capturing cockroaches, another ants, and so on. Doubtless they all could live on any animal food, but there seems to be a difference of taste among the insects as to the liquors. One species will only touch the drink served by a certain representative of this carnivorous plant family; another selects by preference a different brew, and so on. Thus but one sort of bug is ordinarily found in each set of pitchers, those designed for the accommodation of large beetles and cockroaches being as big as small shoes. It is very curious to cut open one of these vessels after it has become withered and dead, being merely formed at one end of the leaf, and to find what a wonderful collection of victims it has gathered in and not finally digested, often numbering many hundreds, if the prey is small. The whole structure of each trap is beyond measure curious, the inner surface of some coated with little bristles that project downward and prevent the guest so hospitably received from walking out again. This is particularly a feature of what the superintendent calls the vegetable lager beer saloons, which prepare a liquor of much less intoxicating quality in tall chalice-shaped vessels instead of pitchers, depending upon drowning their customers rather than upon making them so drunk that they cannot get away. A deplorable thing it seems, by the way, to find such bad habits prevalent among bugs, the opinion having been always held that only man, the most noble of animals, had a right to indulge in vices to the elaboration and invention of which he has given so much attention.

So far as can be ascertained, no analysis ever has been made of the liquors dispensed by these vegetable gin mills, chiefly owing to the fact that such an experiment would involve a very difficult problem in organic chemistry. It is known, however, that the strongest of them contain a large proportion of alcohol. Persons hard up for stimulants have often achieved a

MAXIMUM OF INTOXICATION

by swallowing the contents of a few of the pitchers, which sometimes hold more than a quarter of a pint each, without bothering about the insects in the fluid. Why may it not be that from this origin the term "bug juice" is derived? How appropriately is such a beverage adapted to the convivial uses of the tropical tramp, who, while pursuing his leisurely travels can pluck his drinks by the way side!

A novelty at the Botanic Gardens is a plant whose leaf bears a remarkably well executed caricature of the Duke of Wellington, all done in the veining; but in the interest of visitors it does not seriously rival either the "mother-in-law plant," a scrap of which swells up your tongue so that you cannot speak for days, or the famous "butcher plant" of Maryland, that has, instead of leaves, so many pairs of toothed jaws that close upon any insect venturing between to get at the bait within.

This "butcher plant," which grows nowhere in the world save in the vicinity of Wilmington, N. C., suffer for its carnivorous habits, being a chronic victim of indigestion. Each stomach trap, having used up most of the gastric juice which it secretes in digesting the first living prey caught, usually finds the second victim it captures disagree with it, and the third it is unable to assimilate satisfactorily. Then the trap turns from green to brown and dies, like any leaf, other fresh ones developing meanwhile to take up the work of gobbling. After all, this greedy vegetable is not nearly so bad as the "cruel plant," as it is called, whose flowers wantonly capture unsuspecting butterflies that alight to sip honey, and hold them until they are dead, when the grasp of the ruthless peadals is relinquished, and the luckless visitor is dropped on the ground.

Plants even employ insects as their servants in the work of reproducing their species, paying them wages in honey. Most vegetables combine the two sexes in one flower; but breeding "in and in" is no more healthy for them than it is for animals. One blossom must marry with another if the species is to be continued in a healthy way. So young Mr. Honeysuckle dresses himself in a spring suit of bright yellow and

PERFUMES HIMSELF DELICIOUSLY

for the purpose of attracting the gay butterflies that flutter around. He also provides a small store of nectar in a golden cup to offer any insect guest that may come his way. Presently a butterfly pauses to take a sip of the sweet liquor, but in doing so he cannot avoid getting some of the pollen on her head, and this she carries to another honeysuckle, where she stops for a second bit of refreshment, incidentally rubbing off some of the pollen upon its stigma. Thus is accomplished the marriage of the flowers.

But the bee is the Cupid of the vegetable world, to whom is assigned most of this marrying and giving in marriage among the blossoms. There is one kind of orchid that depends altogether for the continuance of its species upon flights among bees. To a moral delinquency on their part it may be said to owe its survival entirely. The petals of each of its flowers are so bent as to form a

sort of little tunnel, and to get at the honey a bee must go in at one end or the other. If nothing interferes it will never come in contact with any of the pollen, but now and then it happens that it meets another bee which has entered from the other side. Then there is a fight, and in the scrimmage the combatants get bounced around and are covered with the reproductive powder. However, in order to accomplish anything, one of these bees must go off and have the same sort of flight in another orchid blossom, so as to transfer a portion of the pollen to the stigma. Luckily this occurs often enough to perpetuate the plant.

Some kinds of orchids imitate to the life bees, butterflies, and moths, apparently for the purpose of attracting these insects on the decoy duck principle. The object is not quite so evident in the case of varieties of these extraordinary plants whose flowers counterfeit with amazing exactness toads, huge spiders, and other animals. There is one which presents the likeness of a man hanging by the head, and another that opens and shows a beautiful dove in an enclosure of petals.

A book might be made of the freak plants of the world. There is the vegetable boa constrictor of India, known as the "maloo climber," which twines about great trees and

STRANGLES THEM TO DEATH,

so that they decay, fall in, and often leave the empty tower of climbers standing erect. In South America there is a "cow tree," which gives milk that is shown by chemical analysis to be of almost exactly the same composition as that of the cow, which it resembles to perfection in appearance and quality, tasting like sweet cream. Deep in the swamps and forests of the Island of Formosa grows a plant the stems of which are filled with a fine white pith. This pith is cut by the Chinese into thin strips and is called "rice paper." Bodies of the dead suspended within hollows of the "baobab" tree that grows in Africa are transformed into mummies for all eternity without further process of embalment. On the elevated barren plains west of the Volga grows a plant closely resembling a lamb, which was said by travellers of old to bend from the stalk upon which it could turn and feed upon the herbage about it, but when the grass died it perished from hunger. The likeness referred to is not to be denied though its death when the grass dries up is due to the same cause that kills the other vegetation, namely, drought.

No Such Thing as Luck.

"You young people," said a successful banker, "are fond of talking of luck and chance. As for myself, I do not believe in either."

"Each year that I live I am more impressed with the order and meaning which underlie events—the least as well as the greatest. Under this inexorable law the smallest incident in our lives works for our good, if we try to do right. If you live long enough to look back, and are observing and thoughtful, you will find this to be true."

"There was a certain snow-storm, for example, which for twenty years I regarded as the unluckiest accident of my life. This is a true story, remember."

"At the time of this storm I was a young man just beginning my business career as a clerk in the employ of a large firm of cotton brokers."

"A heavy hail storm had broken down the telegraph wires coming into the place, and I was bidden to take a dispatch to the nearest city, and send it by wire to New York. The success of a large venture which the firm had made depended on it."

"I set out in a sleigh with a stout pair of horses; but the fiercest snow storm I ever knew set in, and before I had made half the distance to my destination the drifts were impassable."

"I was forced to turn back. As I plowed my way through the night and storm, I heard a feeble cry for help, and found buried in the snow by the roadside a woman and her child, nearly frozen. The almshouse was near, and I managed to reach it with them. The mother died that night, but the child lived and remained in the almshouse."

"I could not send the dispatch. In consequence our firm lost a third of its capital, and in the financial embarrassment that followed I was thrown out of employment and went to the West."

"For years, as I said, I regarded that storm as a cruel accident."

"But when I look back at it now, I find that the loss of money was but a temporary matter, which affected no human life seriously. The firm recovered from the shock in a year or two. My 'ill luck' forced me to exert myself as I never had done before, and new avenues of success opened before me."

"The boy, who would have died if I had not been driven back by the storm, was a thin, nervous little fellow, full of energy and courage. He pushed his way through school and college, became a specialist in medicine, and has made scientific discoveries which have benefited the civilized world."

"We grumble against fate whenever our plans are defeated by what we call accident or luck. It is not in a day, perhaps, nor in a year, possibly not in this life, that we shall see the whole meaning of the defeat. But God sees it, and I am sure means the defeat as a part of our education in life."

A Forgotten Prisoner Starved to Death.

A Viennese correspondent telegraphs:—At a Bohemian village, near Troppau, a deaf and dumb man, who sometimes caused public scandal, was locked up at the police prison on Corpus Domini day, the 28th of May, when it was feared he might disturb the public procession. He was absolutely forgotten, and as he had no friends nobody missed him. On Monday another man was to be locked up, and when the prison was opened it was found that the poor deaf and dumb creature had died of starvation. The body had been shockingly mutilated by rats, very little of the flesh being left. The Public Prosecutor is examining the affair.

A Famous Brigand.

Noubia, the famous Italian brigand, who was arrested with all the members of his band over 50 years ago, near Viterbio, has just been released from prison. He and his band had committed numerous murders, and admitted having, at different epochs, stolen as much as a million of francs from travellers journeying to and from Rome by Viterbio. All his companions were executed. Noubia was spared at the intercession of the then governor of Rome, Prince Orsini, whose children's lives he had saved. Noubia is now 83 years of age, and an invalid.

SUMMER DRINKS

Mixtures That Taste Well but Are Not Alcoholic.

All these are harmless home drinks for use in hot weather. Not one of them contains alcohol.

Almond milk is a delicious beverage. Take three dozen fresh almonds, blanched, and pound to paste; two bitter almonds, blanched, and pound to paste; two lumps of sugar, one pint of water. Mix one gill of boiling water with the almonds. When you have pounded them in a mortar strain, return to the mortar and pound with more water until you have used a pint in all; sweeten to taste.

Fruit sherbets are now being sold at confectioners' stores, but they can be as easily made at home. Mash any ripe fruit and pass it first through a coarse, then through a fine sieve. To every quart of juice add a quart of water and sweeten with powdered sugar. When the sugar is dissolved strain again and keep in the refrigerator until wanted.

Mulled cider is a cool and refreshing drink. In order to make it take one quart of cider, eight eggs and a few grains of allspice. If the cider is hard reduce it with water and put it to boil with the allspice; meanwhile beat the eggs light in a large pitcher, pour the cider on the eggs, and pour from one pitcher to another until it has a fine froth on it; grate a little nutmeg on each glass as it is poured out.

Russian tea, another cooling drink, is made like ordinary tea, but served in small glasses with thin slices of lemon floating in them. It is to be sugared to taste and taken ice cold.

Orangeade is a common enough beverage in a majority of homes, but very few persons know how to make it properly. Take three dozen sour oranges, two pounds of loaf sugar and the peel of two oranges; shave thin. Mix and stir well together, and add water and pounded ice in proportion. This quantity, of course, is for a large party.

Cambrie tea is made from one pint of fresh milk and the same of boiling water; sweeten to taste. In olden times this was known to Western people as tea kettle tea.

Cocoa nibs is composed of one quart of boiling water, two ounces of cocoa nibs and one quart of fresh milk. Wet the nibs with a little cold water, add to the boiling water, cook one hour and a-half, strain, add the milk, heat to boiling and take from the fire.

Lemon water ice is made from the juice of six lemons to each quart of water; the rind of a lemon grated and steeped in a little water; the water strained, and a little of this added to the juice improves the flavor; sugar to taste, always bearing in mind that freezing diminishes the strength of sugar, and that water requires more sugar than either cream or milk; then heat, stir and freeze as for ice cream.

Creme a la rose is a delicious ice now sold at the confectioners'. Take two quarts of rich, fresh cream; sugar and rose water to taste; cochineal in sufficient quantity to give a fine rose color; yolks of twelve eggs. Heat the cream boiling hot, stir in the sugar, flavoring and coloring; have ready the yolks, well beaten; add the cream to the yolks, little by little, stirring continually; strain, cook a *bain marie*—which means in one vessel inside of another—until it thickens, and when cold, freeze.

Kirsch is made by taking a pound of wild plums, mash them, take out the stones and crack them; throw them into a gallon of brandy; let them steep a month, filter, and you have the famous Kirsch Sirup added to taste makes a delightful cordial.

Orgate is made from half a pound of almonds, blanched and pounded in a mortar and mixed with a little rose water and a quart of boiling water. When nearly cold strain, sweeten and flavor with rose water.

Narrow Escape from a Burning Balloon.

The unusual spectacle of a balloon on fire in mid-air was witnessed at Prague on Tuesday night. The balloon, which carried three passengers, ascended to a height of over 6000 feet, at which altitude the silk split, and the balloon sank with alarming rapidity for 2000 or 3000 feet. A strong current of air then appeared to check its downward course somewhat, but it continued to fall. To the great alarm of the occupants it was seen that the descent was being made straight on an iron foundry in full blast, belching forth flames and showers of sparks. The aeronaut being powerless to avert the danger, the car caught in one of the chimneys and was immediately ignited. Meanwhile however, the descending balloon had attracted the attention of the people employed at the foundry, and aid was speedily forthcoming. To the amazement of every one the occupants escaped uninjured. The accident was witnessed by a large number of people, and produced intense excitement.

The Elevation of the Rabbit.

An article in the *Hobart Mercury* gives some very interesting and curious facts concerning the development of a new sort of nail in the rabbits of Australia in consequence of the animals' endeavour to climb over the wire netting used to impede their progress in travelling. The farmers have discovered that the rabbits can burrow under the netting unless it is buried six or eight inches under the soil. Moreover, they can climb, or evidently intend to do so after a little training, and to this end they are developing a nail which will enable them to hold on while progress is made upwards. This nail development has been noticed before in Queensland when the bark just out of reach was desirable of attainment, but to effect hand-over-hand nautical climbing shows the rabbit in the act of elevating himself in the scale.

A Paper Hotel.

There seems to be practically no limitation to the uses to which paper can be applied. To the long list of articles intended for personal use and in the smaller details of construction in rolling stock, such as wheels, axles, &c., there has been added a more extensive application of paper to the needs of every day life by the building of a hotel constructed of this material. This novel residence, which has just been finished, and is situated in Hamburg, has been made entirely of paper boards, which, it is said, are of the hardness of wood, but possess an advantage over the latter material in that they are fireproof, this desirable end being effected by impregnation with certain chemical solutions.