

SCIENTIFIC AND SANITARY.

CYCLONES originate in the tropics, and are chiefly found in five localities: The West Indies, Bengal Bay and the Chinese coast, north of the equator; and in the South Indian Ocean off Madagascar and the South Pacific near Samoa. In the Antilles there are not half a dozen on the average every season.

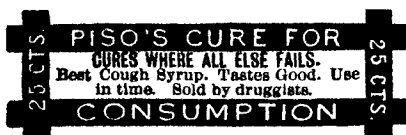
SHARPENING TOOLS BY ELECTRICITY.—An electro-chemical method of sharpening files and other tools is being used with satisfactory results, both from a practical and economical point of view. The files, which have first been thoroughly cleaned, are immersed for twenty minutes, suspended in a metal plate in a mixture of 100 parts of water, six parts of nitric acid and three parts sulphuric acid. The plate is placed in connection with a number of carbons immersed in the same liquid. The corrosion of the metal takes place in the cavities only, so that the edges are sharpened in exactly the same manner as if the operation had been performed by a file cutter.

On the roof of a meat store in Salem, Massachusetts, a clothes-line was stretched, and on it a wet handkerchief was hung to dry. This was seized by the wind and twisted around an electric wire; by means of its dampness, this handkerchief conducted the electricity along the wire, and brought it into communication with other wires, running along which it reached the water-pipes in the cellar. From these the electricity sprang to the stove, on which stood a kettle of boiling fat, to which it communicated so strong a light that a workman who was near thought the fat was burning. In attempting to take the kettle from the stove, he received an electric shock which threw him against the wall. Pale with terror, the man ran into a room back of the workshop. Another workman, trying to bring him a glass of water, turned the brass faucet of the water-pipe, and was immediately thrown against the furthest corner of the room. For several minutes everything appeared to be turned into a galvanic battery; the nails on the wall were red hot, the water pipes spouted out flames, and even the iron bands of the water pail showed signs of disturbance. Finally the cause of the commotion was discovered and ended, as soon as the wire was freed from the embrace of the wet handkerchief.—*Translated for Public Opinion from the St. Louis Anzeiger des Westens.*

"August Flower"

I had been troubled five months with Dyspepsia. The doctors told me it was chronic. I had a fullness after eating and a heavy load in the pit of my stomach. I suffered frequently from a Water Brash of clear matter. Sometimes a deathly Sickness at the Stomach would overtake me. Then again I would have the terrible pains of Wind Colic. At such times I would try to belch and could not. I was working then for Thomas McHenry, Druggist, Cor. Irwin and Western Ave., Allegheny City, Pa., in whose employ I had been for seven years. Finally I used August Flower, and after using just one bottle for two weeks, was entirely relieved of all the trouble. I can now eat things I dared not touch before. I would like to refer you to Mr. McHenry, for whom I worked, who knows all about my condition, and from whom I bought the medicine. I live with my wife and family at 39 James St., Allegheny City, Pa. Signed, JOHN D. COX.

G. G. GREEN, Sole Manufacturer, Woodbury, New Jersey, U. S. A.



Minard's Liniment Cures Diphtheria.

THE Compagnie des Hauts-Fourneaux, Forges et Aciéries de la Marine et des Chemins de Fer is experimenting with a new alloy for armour plates, projectiles and guns, viz.: a steel containing 1 per cent. of chromium, 2 per cent. of nickel and not more than 0.4 per cent. of carbon; the steel is first melted in an open hearth, and in the ordinary way. When the silicon and manganese in the metal have attained their proper proportions the nickel and chromium are added successively in the form of ferro-nickels and ferro-chromes, or in the shape of a double ferro-chrome and nickel.—*Engineering and Mining Journal.*

THE SOPORIFIC EFFECT OF LETTUCE.—It appears that the properties popularly attributed to lettuce (its soporific effects were known to the Greeks), are due to hyoscyamine. Mr. T. S. Dymond, in a paper read before the Chemical Society, explained that the mydriatic (dilation of the pupil of the eye) action of an extract of lettuce was suspected of being due to an alkaloid, and after treating in the usual way with chloroform he obtained crystals in the form of silky needles, having the same melting-point and other properties as hyoscyamine, the mydriatic alkaloid known to exist in belladonna, henbane and other plants belonging to the Solanaceae. The lettuce (*Lactuca*), however, belongs to the Compositae, and probably Mr. Dymond is the first to discover hyoscyamine or any other alkaloid of the mydriatic group in a plant not belonging to the Solanaceae.—*English Mechanic.*

SELF-MEDICATION.—With the recurrence of influenza a word of warning against the possible dangers of self-medication becomes once more imperative. Many regard this affection as trivial and transitory, and requiring little more treatment than merely remaining at home for twenty-four hours or so; while they are prepared either to ignore medicine entirely, or to fly in reckless, haphazard fashion to quinine, salicin, antipyrine, exalgine or to any substance which may be widely advertised either for the reduction of fever or the relief of pain. It cannot be too widely known that such a course is fraught with considerable danger, not only from the possibility of serious but insidious complications being overlooked until the case is perhaps moribund, but also from the fear lest any of the newer remedies should be employed in overdoses. The most casual reference to any work dealing with the synthetic compounds will show that, as a rule, they possess toxic properties, and this fact alone should cause those addicted to self-medication to pause before they act upon the assumption that statements in an advertisement, or even in the columns of the daily press, convey the whole truth. It is true that certain drugs relieve pain and reduce temperature, but it is equally true that, unless they are employed by persons who are properly informed, disastrous accidents will undoubtedly occur.—*The Lancet.*

ARTIFICIAL OYSTER CULTIVATION IN FRANCE.—The United States Consul at Bordeaux in a recent report describes the artificial cultivation of oysters in France. He says that in 1872 the increased price of oysters led to official investigation, and subsequently to the introduction of cultivation by artificial means. The modes of providing artificial beds vary with the nature of the bottom and the violence of the wind and waves. Tiles covered with cement and immersed along the sea-beach are found the most advantageous, for they present a surface to which the oyster can readily attach itself, and from which it can afterwards be easily removed. The tiles can also be transferred from place to place without difficulty, which is a matter of some importance, as the processes of breeding and fattening may require different temperatures. The Bay of Arcachon, one of the centres of oyster cultivation, was at one time crowded with natural beds, but owing to excessive dredging they became exhausted. The industry has revived there owing to artificial culture. The whole of the sea bottom that can be dredged, to the extent of 12,600 acres, is staked off into inclosures. In some instances nets are attached to the stakes to keep out lobsters and other fish. It is inside these parks, as they are called, that the tiles are immersed. These are usually fire-bricks covered with mortar, with a surface of two

square feet, and accommodate from 500 to 600 oysters. The latter grow so rapidly that the owner of the park has frequently to raise the tiles to the surface in order to scrape off the oysters for which there is no room, while he sinks more tiles to give them a home.

PROGRESS IN ELECTRICITY.—By means of electric currents alternating with very high frequency, Prof. Nikola Tesla has succeeded in passing by induction through the glass of a lamp energy sufficient to keep a filament in a state of incandescence without the use of connecting wires. He has even lighted a room by producing in it such a condition that an illuminating appliance may be placed anywhere and lighted without being electrically connected with anything. He has produced the required condition by creating in the room a powerful electrostatic field alternating very rapidly. He suspends two sheets of metal, each connected with one of the terminals of the coil. If an exhausted tube is carried anywhere between these sheets, or placed anywhere, it remains always luminous. The extent to which this method of illumination may be practically available experiments alone can decide. In any case, our insight into the possibilities of static electricity has been extended, and the ordinary electric machine will cease to be regarded as a mere toy. Alternating currents have at the best a rather doubtful reputation. But it follows from Tesla's researches that as the rapidity of the alternation increases they become not more dangerous but less so. It further appears that a true flame can now be produced without chemical aid—a flame which yields light and heat without the consumption of material and without any chemical process. To this end we require improved methods for producing excessively frequent alternations and enormous potentials. Shall we be able to obtain these by tapping the ether? If so, we may view the prospective exhaustion of our coal fields with indifference; we shall at once solve the smoke question, and thus dissolve all possible coal rings. Another tempting field for research, scarcely yet attacked by pioneers, awaits exploration. I allude to the mutual action of electricity and life. No sound man of science endorses the assertion that "electricity is life"; nor can we even venture to speak of life as one of the varieties or manifestations of energy. Nevertheless, electricity has an important influence upon vital phenomena, and is in turn set in action by the living being—animal or vegetable. In the study of such facts and such relations the scientific electrician has before him an almost infinite field of enquiry.—*Prof. Wm. Crookes, in Nature.*

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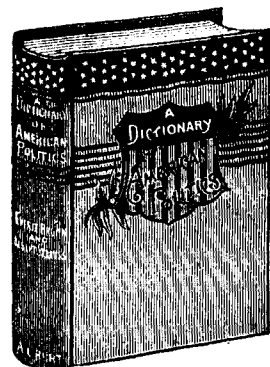
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