

## SCIENTIFIC AND SANITARY.

"WHEN the earth was very young," says Dr. Ball, astronomer Royal for Ireland, "it went around so fast that the day was only three hours long. The earth was liquid then, and as it spun around and around at that fearful speed, and as the sun caused ever increasing tides upon its surface, it at last burst in two. The smaller part became the moon, which has been going around the earth ever since at an increasing distance. The influence of the moon now rises tides on the earth, and while there was any liquid to operate on in the moon, the earth returned the compliment."

THE knowledge of the principle on which photography depends reaches back to the time of the alchemists, who discovered that silver chlorid exposed to the sun's rays became black. The phenomenon was studied by Scheele (1777), Senebier (1790), Ritter and Wollaston (1801), and from the results of these investigations experiments were made by Thos. Wedgwood and Humphry Davy, in the Royal Institution, London, which were published in its journal in 1802. Wedgwood may be considered the first photographer. In 1814 M. Nicéphore Niepce, and in 1839 Daguerre made further discoveries. Mr. Archer perfected the wet collodion process and published full working details in 1851. Collodion dry plates were introduced by Dr. Hill Norris in 1856; collodion emulsion dry plates by Messrs. Sayce and Bolton in 1864. In 1871 Dr. R. L. Maddox discovered the dry-plate process, and this in turn was improved by Bennett in 1878, and came into general use about 1880.

PROFESSOR DUBOIS of Berne, as we learn from *Nature* of March 12, has lately been studying the physiological action of electric currents and discharges; and he has some interesting observations on the human eye, which, it is known, has luminous sensations under the action of galvanic currents. Sudden variations of intensity, especially at making and breaking the circuit, produce such flashes. With a moistened plate at the nape of the neck, and a pad on the eye, a slight flash was distinctly perceived, even with a Leclanché cell of about 1.20 volts, and measuring in the galvanometer .04 of a milliampère. Raising the intensity to .5, the observer could tell which pole was applied to the eye. On the other hand, the retina responds much less readily to discharges from condensers or induction coils. Not till a capacity of 0.037 of a microfarad and a tension of 21 volts was reached was a true retinal flash perceived; and not even with 10 microfarads were the durable sensations characteristic of the two poles produced. The retina reacts to quantity.—*Science*.

## "August Flower"

For Dyspepsia.

A. Bellanger, Propr., Stove Foundry, Montigny, Québec, writes: "I have used August Flower for Dyspepsia. It gave me great relief. I recommend it to all Dyspeptics as a very good remedy."

Ed. Bergeron, General Dealer, Lauzon, Lévis, Québec, writes: "I have used August Flower with the best possible results for Dyspepsia."

C. A. Barrington, Engineer and General Smith, Sydney, Australia, writes: "August Flower has effected a complete cure in my case. It acted like a miracle."

Geo. Gates, Corinth, Miss., writes: "I consider your August Flower the best remedy in the world for Dyspepsia. I was almost dead with that disease, but used several bottles of August Flower, and now consider myself a well man. I sincerely recommend this medicine to suffering humanity the world over." ©

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

FROM the annual report of the special committee of the American Society of Civil Engineers, on uniform standard time, we learn that the advantages of the 24-hour notation are beginning to be recognized in various branches of civil life. In hospitals, for example, to prevent mistakes by nurses in the administration of medicine, in recording temperatures, and in other matters, the new system is being gradually introduced; also in weather-tables and in the recording of meteorological readings: indeed in departments where simplicity of system and accuracy are essential, the new notation is being spontaneously brought into use in many quarters. For two or three years back the Canadian Almanac has abandoned the old notation and substituted the new. It is in connection with railway service, however, that the general introduction of the 24-hour notation may mainly be looked for.—*Science*.

Not many years ago few persons, if any, surmised that certain microscopic living beings—microbia, or micro-organisms—could be powerful agents of combination and decomposition, not merely in living plants and animals, and not alone in dead organic matter, but even in the mineral kingdom. Some time ago the researches of Schloesing and Muntz, of Marcagno, of P. F. Frankland and of others showed that the decomposition of dead organisms into their components depends mainly on the action of microbia which break up blood, flesh, leaves, and even wood, into carbonic acid and ammonia. Living organisms further convert the ammonia into nitric acid, which, if potash is present, forms saltpetre. By a due selection of different ferments—all of them living organisms—we can produce, in a solution of sugar or a decoction of malt, alcoholic liquors having the actual aroma and flavour of the choicest wines. More remarkable still, it is now proved that the green rust on antique bronzes is a product of microscopic plant life.—*Prof. W. Crookes, in Forum*.

THE safety of the electric light as a means of illumination has been well demonstrated during the last year in Philadelphia. In that city the light or power is used in over 5,000 buildings. Two hundred and eighty-seven buildings have their own apparatus, ranging from a 20 light to a 4000-light installation; in the aggregate, 80,258 incandescent and 3,325 arc lights. There are also fifteen central stations supplying from 2,000 to 40,000 lights each, and motors from 1 to 30 h.p. Chief Inspector McDevitt of the Fire Underwriters' Association reports that during the year "no insurance loss occurred in any building in our city from fire where the cause could be in any way attributed to electric wires." This is a splendid showing, and one of considerable encouragement to electric light men. It also demonstrates the wisdom of rigidly enforcing the rules of the insurance companies in the manner of running wires and installing electrical apparatus generally. These rules may at times seem somewhat arbitrary, but the results attained through their observance in the matter of reputation alone are of as much value to the electrical interests as they are financially to the insurance companies.—*Canadian Electrical News*.

DR. BORDAS has given in *La Médecine Moderne* the results of some of his researches in acute articular rheumatism, which in his opinion tend to show that the cause of that disease is a pathogenic micro-organism specific in character. He reports that he has been able to isolate and cultivate a microbe which, when injected into the carotid artery of a rabbit, engendered an inflammation of the endocardium with vegetations upon the valves. He believes that acute articular rheumatism with its complications will be proved to be a disease produced by microbes analogous in their production, for example, to the *Micrococcus pyogenes*, and he is convinced that the organism investigated by him will be found by others to be the specific germ of that disease. The investigation was conducted under the supervision of M. Germain See, and will undoubtedly stimulate parallel researches in other laboratories. These, if confirmatory, will be important as an advance, not only in ætiological, but in therapeutic results.

THAT tired feeling now so often heard of is entirely overcome by Hood's Sarsaparilla, which gives mental and bodily strength.

HERE is an illustration of true Hindoo politeness from Lady Dufferin's journal: A Judge who was a very bad shot had been out for a day's sport, and on his return the man who went out with him was asked: "Well, how did the Judge shoot to-day?" "Oh," he replied, "the Judge shot beautifully, but God was very merciful to the birds."

## A DANGEROUS COUNTERFEIT.

THE man who counterfeits a coin or a bank note, or who is detected in an attempt to pass a counterfeit is speedily placed in prison as a person too dangerous to be permitted to be at large. How much more dangerous is the person who, for the sake of paltry gain, endeavours to impose upon the public a dangerous and worthless counterfeit of a popular medicine. The great popularity achieved by Pink Pills, and the wonderful results that have followed their use for the treatment of all female complaints, nervous diseases, and general debility in both males and females, has induced some unscrupulous parties to place upon the market a worthless imitation, resembling the genuine Pink Pills in appearance only. The public are cautioned against these spurious imitations, and are asked to see that every box they purchase bears the trade mark and name of The Dr. Williams' Medicine Co., of Brockville, Ont. Do not permit any dealer to palm off upon you any imitation of the genuine pill, as not only will they not produce the expected results, but may prove positively harmful. No other pills made can produce the results obtained by the use of Dr. Williams' Pink Pills. Sold by all dealers or sent, post paid, on receipt of price (50c. a box) by addressing The Dr. Williams' Medicine Co., Brockville, Ont.

NEW YORK, Nov. 11th, 1887.

FERD. T. HOPKINS, ESQ.,

I would like to know the price of one dozen bottles of your Oriental Cream, as I use it and like it. Would like to get a supply to take on my tour, soon as possible. Answer and oblige

MRS. JAMES BROWN POTTER,  
Brevoort House, New York.

FEBRUARY 19th, 1888.

FERD. T. HOPKINS, ESQ.,

SIR:—I notice your advertisement in regard to Poudre Subtile. Please inform me the price of it. I wish to send for some of it. I have thoroughly tested the Gouraud's Oriental Cream, and it is grand. I do not want anything else for a face wash. Reply soon and oblige.

Respectfully,  
LOUISE DENNING,  
Neligh, Antelope Co., Nebraska.

NEW YORK, Sept 29th, 1890.

MR. F. T. HOPKINS,

DEAR SIR:—I received the bottles of "Gouraud's Oriental Cream." Please accept thanks; it is the only reliable beautifier I have used so far, and take pleasure in testifying to its merits.

Yours sincerely,  
CARMENCITA.

WHAT DOES IT MEAN?—"100 Doses One Dollar" means simply that Hood's Sarsaparilla is the most economical medicine to buy, because it gives more for the money than any other preparation. Each bottle contains 100 doses and will average to last a month, while other preparations, taken according to directions, are gone in a week. Therefore, be sure to get Hood's Sarsaparilla, the best blood purifier.

PALE and listless girls and prematurely aged women would soon give place to bright, healthy, rosy females if Dr. Williams' Pink Pills were used for the ills to which women are peculiarly liable. They enrich the blood, build up the nerves, and restore the shattered system, regulate the periods, etc. Try them and be convinced. Sold by all dealers, or sent post paid on receipt of price—50c. per box, or five boxes for \$2—by addressing The Dr. Williams Med. Co., Brockville, Ont.

## From Toronto

"TORONTO, ONT., Dec. 28, 1890.

"For a good many years I have been suffering from catarrh, neuralgia and general debility. I failed to obtain any permanent relief from medical advice, and my friends feared I would never find anything to cure me. A short time ago I was induced to try Hood's Sarsaparilla. At that time I was unable to walk even a short distance without feeling a

DEATH-LIKE WEAKNESS

overtake me. And I had intense pains from neuralgia in my head, back and limbs, which were very exhausting. But I am glad to say that soon after I began taking Hood's Sarsaparilla I saw that it was doing me good. I have now taken three bottles and am entirely

CURED OF NEURALGIA.

I am gaining in strength rapidly, and can take a two-mile walk without feeling tired. I do not suffer nearly so much from catarrh, and find that as my strength increases the catarrh decreases. I am indeed a changed woman, and shall always feel grateful to Hood's Sarsaparilla for what it has done for me." MRS. M. E. MERRICK, 36 Wilton Avenue, Toronto, Can.

## Hood's Sarsaparilla

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & Co., Lowell, Mass.

100 Doses One Dollar.

A Skin of Beauty is a Joy Forever.

DR. T. FELIX GOURAUD'S  
ORIENTAL CREAM, OR MAGICAL BEAUTIFIER



Removes Tan, Pimples, Freckles, Moth-Patches, Rash and Skin diseases, and every blemish on beauty, and defies detection. On its virtues it has stood the test of 40 years; no other has, and is so harmless we taste it to be sure it is properly made. Accept no counterfeit of similar name. The distinguished Dr. L. A. Sayer, said to a lady of the haulton (a patient): "As you ladies will use them, I recommend 'Gouraud's Cream' as the most harmless of all the Skin preparations." One bottle will last six months, using it every day. Also Poudre Subtile removes superfluous hair without injury to the skin. FERD. T. HOPKINS, Proprietor, 37 Great Jones St., N.Y. For sale by all Druggists and Fancy Goods Dealers throughout the U. S., Canada and Europe. Beware of base imitations. \$1,000 reward for arrest and proof of anyone selling the same.

## RADWAY'S READY RELIEF.

The Cheapest and Best Medicine for Family Use in the World.

CURES AND PREVENTS  
COLDS, COUGHS, SORE THROATS,  
INFLAMMATION, RHEUMATISM,  
NEURALGIA, HEADACHE, TOOTH-ACHE, ASTHMA, DIFFICULT BREATHING, INFLUENZA.

CURES THE WORST PAINS in from one to twenty minutes. NOT ONE HOUR after reading this advertisement need any one SUFFER WITH PAIN.

INTERNALLY.

From 30 to 60 drops in half a tumbler of water will, in a few moments, cure Cramps, Spasms, Sour Stomach, Nausea, Vomiting, Heartburn, Nervousness, Sleeplessness, Sick Headache, Diarrhoea, Dysentery, Cholera, Morbus Colic, Flatulency, and all Internal Pains.

## MALARIA

Chills and Fever, Fever and Ague Conquered.

There is not a remedial agent in the world that will cure fever and ague and all other malarious, bilious and other fevers, aided by RADWAY'S PILLS, so quickly as RADWAY'S READY RELIEF. Price 25c. per bottle. Sold by druggists.

Dr. RADWAY'S  
Sarsaparillian Resolvent

A SPECIFIC FOR SCROFULA. Builds up the broken-down constitution, purifies the blood, restoring health and vigor. Sold by druggists. \$1 a bottle.

Dr. RADWAY'S PILLS

For DYSPEPSIA and for the cure of all the disorders of the Stomach, Liver, Bowels, Constipation, Biliousness, Headache, etc. Price 25 cents. DR. RADWAY & Co., Montreal.