

SCIENTIFIC AND SANITARY.

A BULLETIN on aluminium issued by the Census Bureau indicates that this metal is gradually working its way into the industrial economy of the people. Large deposits of the ferruginous hydrates from which the metal may be most cheaply produced have recently been found in Arkansas; and aluminium roofing, pipe, ornamental work, bridges and the like, may not be so far distant.

A RUSSIAN investigator has preserved tuberculous sputum on pieces of linen at the ordinary temperature of a living room and found that, under these conditions, the infectiveness of the tubercle bacillus was retained two months and a-half, whether it was kept in darkness or in the light. His results are confirmatory of all preceding work in showing that this bacillus is very tenacious of life.—*Canada Health Journal*.

It is announced that the members of the Leprosy Commission, who are now pursuing their researches in Simla, have made the important discovery that the leprosy bacillus can be isolated and cultivated artificially. A rabbit was inoculated and killed after some days, and distinct leprosy nodules were found in the body. It is stated that the bacillus has never before grown outside the human body.—*London Public Opinion*.

THE tannin present in tea, according to Grimshaw, is absorbed by suitable animal substances, such as boro shavings, dried albumen, hide clippings, and the like. It is preferable to add the material to the tea in the dry condition before the infusion is made, but it may be added to the infusion, or the infusion may be passed or filtered through a layer of the substance.—*Canada Health Journal*.

DR. KLEIN, the eminent English bacteriologist, in the nineteenth annual report of the Local Government Board takes occasion to emphasize a fact which is of great practical importance and should always be borne in mind by health officers, to wit: The contagion of diphtheria is to be classed with those which can exist and thrive outside the human body; that a room may retain active the diphtheritic contagion for a long period; and that milk may be not only the vehicle, but even the multiplying ground of the diphtheritic contagion.—*C. H. Journal*.

AN invention for an improved apparatus for providing railway carriages with a cool and pleasant breeze has just been patented by Mr. George Payne, of the Locomotive Department, Indian Midland Railway. It is fitted under the body of a carriage, is self-revolving, is so arranged that it will catch the air from all directions, and it possesses other advantages, one of the most important being that it will keep working for fifteen minutes after the train has been pulled up.

"German Syrup"

J. C. Davis, Rector of St. James' Episcopal Church, Eufaula, Ala.: "My son has been badly afflicted with a fearful and threatening cough for several months, and after trying several prescriptions from physicians which failed to relieve him, he has been perfectly restored by the use of two bottles of Boschee's German Syrup. I can recommend it without hesitation." Chronic severe, deep-seated coughs like this are as severe tests as a remedy can be subjected to. It is for these long-standing cases that Boschee's German Syrup is made a specialty. Many others afflicted as this lad was, will do well to make a note of this.

J. F. Arnold, Montevideo, Minn., writes: I always use German Syrup for a cold on the Lungs. I have never found an equal to it—far less a superior. G. G. GREEN, Sole Man'fr, Woodbury, N.J.

COMBATING the insects which have been ruining the trees and crops in Bavaria has cost the Government 2,000,000 marks, and the communal authorities probably as much more for coating the trees with a specially prepared preventive.

DOVER, N.H., is one of the few towns in New England, or indeed in the country, that operates its electric street railway system without the aid of a steam engine. The Salmon Falls River, which flows near the town, turns a 500 horse-power water-wheel, which supplies power for the dynamos that operate the street line, the electric lights in the place and electricity for several neighbouring towns as well. There seems to be no difficulty in obtaining a sufficient amount of power at all seasons of the year.

In the June number of the *Zoologist*, Mr. J. G. Lockhart, an experienced hunter, gives some interesting facts about the moose deer of North America. The senses of hearing and smelling in the moose are remarkably acute, and the animal in couching lies with its tail to windward and its eyes to leeward, so that it can scent an approaching enemy from one side or see him from the other. When sleeping or ruminating, the ears of the moose are perpetually moving, one forward, the other backward, alternately, like those of a horse. Before going to rest the moose turns on its course, and lies down near its trail, so as to be able to hear or smell its pursuer before he comes up with it.

SHOULD the telescope prove a superior instrument for accurate observation to other great triumphs of the astronomical optician, it may be used to answer the puzzle set by Mr. Stanley Williams. Mr. Williams, an observer in Sussex, has noticed three curious marks near the equator of the planet Saturn. He describes them as round spots, two bright and one drrk, and invites the attention of other astronomers to them, that their meaning may be discovered. Can it be that they are the germs of future satellites to be formed, as science has predicted, from the running together of Saturn's rings—that they are the first nuclei of condensation in the nebulous or meteoric vapour of which the rings are possibly composed? If so the astronomic world may ere long witness one of those great life throes of nature which have hitherto existed only in theory and in imagination—a planet giving birth to moons.—*Manchester Examiner*.

It is estimated that there are not less than 325 electric railways in the United States, England, Germany, Italy, Australia, and Japan, requiring over 4,000 cars and 7,000 motors, with 2,600 miles of track, with a daily mileage of not less than 400,000 miles, and carrying 750,000,000 passengers annually. Grades of 13 and 14 per cent. distances of six miles or more from the central stations, speeds as high as from twenty-five to thirty miles per hour for single cars and trains of from two to four cars, are, according to the *Western Electrician*, features of their operation. Not less than 10,000 persons represent the number employed on these lines. Fifty millions of capital invested in the United States alone, and a present annual business not less than \$8,000,000 to \$10,000,000 on the part of the manufacturing and contracting electrical companies, show the present standing of the street railway works.

IODINE or the iodides should be given on an empty stomach. If given during digestion the acids and starch alter and weaken their action. Acids, as a rule, should be given between meals. Acids given before meals check the excessive secretion of the acids of the gastric juice. Irritating and poisonous drugs, such as salts of arsenic, copper, zinc and iron, should be given directly after meals. Oxide and nitrate of silver should be given after the process of digestion is ended; if given during or close after meals the chemicals destroy or impair their action. Potassium permanganate also should not be given until the process of digestion is ended, inasmuch as organic matter decomposes it and renders it inert. The active principle of the gastric juice is impaired and rendered inert by corrosive sublimate, tannin and pure alcohol; hence they should be given at the close of digestion. Malt extracts, cod liver oil, the phosphates, etc., should be given with or directly after food, says the *Medical World*, authority for the foregoing directions.

A REPORT from Washington says that the Navy Department is preparing for one of the most exhaustive tests of armour plates ever conducted in any country. American guns and projectiles will also be tested. The chief object of the trial is to determine definitely which is the best armour plate, with a view to its formal adoption as the standard for naval purposes. Eight sorts of plates will be represented, each 10½ inches thick, 6 feet wide, and 8 feet long. They include plates composed of all steel, steel with nickel alloy, steel treated by the Harvey process, and steel and nickel alloy treated by the same process. American-made 6-inch and 8-inch guns, with American-made Firming shells, and a few Holtzer projectiles, will be used at the trials.

THOSE interested in questions relating to physical education will find much to please them in a paper, in the June number of *Physique*, by the Rev. T. A. Preston. Many boys are not much attracted by games, and it seems hard that in such cases any sort of compulsion should be used. Why not have various alternative ways of securing exercise, any one of which might be chosen? Mr. Preston shows with great force, says *Nature*, and in a very interesting manner, with how much advantage the study of natural history might in some instances be substituted for cricket and football. Boys out for a field excursion take a great deal more exercise, he maintains, than is ever taken at cricket. "With those who are keen naturalists," he says, "the mere exercise taken in any one day (not in an excursion) is often such that it might almost be said to require moderating. I have no hesitation in saying that, if exercise alone is to be considered, a field naturalist will take far more than any one at games." *Science*.

CONSIDERABLE progress is being made by the Government of Japan in its survey operations, as we learn from the *Proceedings of the Royal Geographical Society* for June. A map on the scale of 1:200,000 was commenced sixteen years ago, and is now published (in seventy-seven sheets) for the whole of the islands except Yezo. This is, however, considered merely as a provisional publication, being based on Japanese methods of work, and therefore not to be relied on for accuracy. A modern survey was commenced eleven years ago, with triangulation of four orders, and depending on some five base-lines. Copper-plate, photogravure and lithography are employed in the reproduction of these maps, and few if any Europeans are employed. The work appears to be excellent. Only a small proportion is completed, and it will be many years before the whole is finished. About three hundred of the published sheets can now be bought; the scale is 1:20,000. A map on a scale of 1:100,000 is also being prepared, based on the 1:20,000 map, but no sheets are yet for sale. The names on these maps are in Japanese characters. In the Geological Survey of Japan reconnaissance map, Roman characters are used, and 1:400,000 is the scale.

THE sufferers from Catarrh are legion and the majority of them make the serious mistake of thinking they should only use treatment when at its worst. Treatment during the summer months is almost certain to prevent a recurrence of the disease, and Nasal Balm is the only remedy that will effect a complete cure. All dealers, or post free on receipt of price (50c. or \$1 a bottle). Address Fulford & Co., Brockville, Ont.

WHAT IT DOES.

Hood's Sarsaparilla

1. Purifies the blood.
2. Creates an appetite.
3. Strengthens the nerves.
4. Makes the weak strong.
5. Overcomes that tired feeling.
6. Cures scrofula, salt rheum, etc.
7. Invigorates the kidneys and liver.
8. Relieves headache, indigestion, dyspepsia.

CHAPTER 1: Weak, tired, no appetite.
Chapter 2: Take Hood's Sarsaparilla.
Chapter 3: Strong, cheerful, hungry.

THE University of Pennsylvania has decided to increase the time given to the subjects of mechanical and electrical engineering by providing additional courses in these subjects, extending over four years. scientific and sanitary

DR. RUSSELL, Senior Pathologist of the Edinburgh Royal Infirmary, has at length secured a cancer parasite and traced its life history. He finds it to be a fungus of the yeast type. Dr. Russell says the discovery cannot be definitely accepted until tested by others.

ACCORDING to *Industries*, two novel modifications of sulphur have been recently discovered by Engel. The first, like that proved to exist in Wackenröder's solution, is soluble in water and very unstable. The other is crystalline, soluble in carbon disulphide and chloroform, and polymerizes slowly in the cold, and quickly at a temperature of 100° C., but, unlike prismatic sulphur, which changes on keeping into the octahedral variety, it becomes converted into the white insoluble form which commonly constitutes so large a percentage of the material known as "flowers of sulphur."

IN the *Pilot Chart* for July the attention of masters of vessels is called once more to the importance of using oil to prevent heavy seas from breaking on board their vessels. The following report, printed in the chart, illustrates the fact that even the largest and most powerful vessels may sometimes derive benefit from its use, and that the precaution is especially necessary when a vessel encounters the terrific seas of a West Indian hurricane. Captain Ringk, of the German steamship *Fulda*, reports that at 5 a.m., June 9, in latitude 44° 06' north, longitude 43° 06' west, the wind lulled to a dead calm for a short time and then suddenly sprang up from the south, shifting to southwest and north-west and blowing a perfect hurricane. The sea was like a boiling mass of foam, and the flying spray prevented those on board from seeing far ahead. Soon a very high and heavy sea came up from the west-south-west, and the ship (westward bound) laboured heavily and shipped a great deal of water. An oil-bag was then used with great success.

Fort Warren

Voluntary Statement from Mr. H. Graham, Ph. G., Hospital Steward, U. S. A.

"Fort Warren, Boston, June 15, 1891.

"C. I. Hood & Co., Lowell, Mass.:

"My wife and child have been taking Hood's Sarsaparilla for the past two years and it has done them both an incalculable amount of good. We came here from Florida, one of the yellow fever districts. On arrival they were weak, anæmic and thoroughly out of tone in every way. I tried them with iron, quinine, etc., etc, but with no benefit.

Hood's Sarsaparilla

was recommended highly by a personal friend in the service, and I can truly say that it is just as good as you state. Will take precious good care not to be without it hereafter.

"You are at liberty to use this letter together with my name for any purpose that you think serviceable, and more especially for those who I know are unhappy on account of ill health." H. GRAHAM, Ph. G., Hospital Steward, U. S. Army.

N.B. Be sure to get

Hood's Sarsaparilla

The best blood purifier, the best nerve tonic, the best building up medicine.

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.