

SCIENTIFIC AND SANITARY.

AN immense flume is being constructed near Fresno, Cal., which will not only furnish water for irrigating purposes, but will be used to transport lumber needed by farmers living near by.

ALUMINIUM is to depose not only the beer glasses, but even the adored beer mug of the South Germans. Dr. Schultze, of Vienna, alarmed the beer drinkers about a year ago by his declaration that beer not only deteriorated in a few minutes by being kept in a glass, but that the glazed earthenware "Krug," with its metal top, afforded no protection to the evanescent qualities of the liquor of King Gambrinus and John Barley-corn. Pewter pots, says Dr. Schultze, are good, and silver pots are better; but best of all is the aluminium mug. So the doctor advises the manufacture of aluminium pots, which would be forty times cheaper than silver, and half the weight of pewter.

AN extraordinary illustration of the influence of the wind at great depths below the surface of the earth has recently been brought under official notice in Victoria. It is in connection with the underground operations of the Earl of Beaconsfield and Lord Harry Mines at Allendale. Directly a north wind blows, it is said, a noxious gas forms in the drives and crosscuts, and compels the miners to retire. This has happened several times lately, and some of the miners have been injured in health. The matter was brought under the attention of the Minister of Mines the other day by Messrs. Peacock and Richardson, Ms. L. A., who suggested that the Department should carry out a series of scientific tests with a view of ascertaining the nature of the gas, its component parts and the best means of expelling it from the mines. Mr. Outtrim said he would ask Mr. A. Mica Smith, analytical chemist at the Ballarat School of Mines, to proceed to the mine the next time the phenomenon occurred and procure some of the gas for analysis, after which experiments would be made with a view of ascertaining the best method of drawing it off from the underground workings.

WHEN you ask for Nasal Balm do not permit your dealer to give you some "just as good" substitute. It is the only remedy yet discovered that will thoroughly cure catarrh. Sold by all dealers.

PAINTED windows were photographed in their original colours recently by a Swiss doctor who has devoted long study to this subject.

MEN who feel "run down" and "out of sorts," whether from mental worry, overwork, excesses or indiscretions will find a speedy cure in Dr. Williams' Pink Pills. All dealers.

"German Syrup"

"We are six in family. We live in a place where we are subject to violent Colds and Lung Troubles. I have used German Syrup for six years successfully for Sore Throat, Cough, Cold, Hoarseness, Pains in the Chest and Lungs, and spitting-up of Blood. I have tried many different kinds of cough Syrups in my time, but let me say to anyone wanting such a medicine—German Syrup is the best. That has been my experience. If you use it once, you will go back to it whenever you need it. It gives total relief and is a quick cure. My advice to everyone suffering with Lung Troubles is—Try it. You will soon be convinced. In all the families where your German Syrup is used we have no trouble with the Lungs at all. It is the medicine for this country.

John Franklin Jones.

G. G. GREEN, Sole Man'fr, Woodbury, N.J.

THE Simplon tunnel will cost Switzerland as much as \$16,000,000. Time set down for construction, 8½ years.

CHARLES J. HUBBELL, an old telegrapher of New York, thinks he has solved the problem of making a primary battery which will neither give off offensive fumes nor waste the fluids while not in use. Zinc and carbon are the elements. Mr. Hubbell carries the terminals through the bottom of the cells instead of the top, and covers the top, insulating the central porous cup in which the carbon stands. A pad of asbestos on the cover charged with bichromate of potash absorbs and oxidizes the fumes arising from the action of the battery.

NITRO-GLYCERINE has served as the basis of most of the modern explosives of high power, but the transition from the unstable liquid that exploded on the slightest provocation to the present solid compounds, that can be subjected to the roughest usage without fear of explosion, has been no less remarkable than advantageous. For example, here is a new English explosive called ammonite, which has recently been subjected to some surprising tests. Tested in a mortar a charge of 76.5 grains sent a 29-pound projectile a distance of 320 feet, as compared with 289 feet for dynamite and 136 feet for gunpowder. A weight of fifty-nine pounds dropped from a height of five feet upon a cartridge of ammonite failed to cause an explosion, and the same result followed the ignition of a canister of gunpowder in the midst of a lot of ammonite cartridges. When a cartridge of the new explosive was thrown in a blazing fire it merely burned slowly with a black smoke. Apparently the only means by which ammonite could be exploded was the use of small detonators of fulminate of mercury.

AN instrument for optical comparison of transparent liquids, named a "liquoscope," has been recently devised by M. Sonden of Stockholm (*Nature*, Sept. 17). Two hollow prisms holding the liquids are separated by a partition at right angles to the refracting angle. The whole is placed in a vessel filled with glycerine, and which allows of vision in a horizontal direction through plain glass plates. The deflection of the light rays through the prisms is thus compensated. So long as the two liquids have the same optical action, one sees a distinct mark (say a black paper strip on a window) as a straight connected line; but its halves are relatively displaced if the liquids have different refractive powers. The amount of displacement gives a measure of the difference, the positive or negative nature of which also appears from the direction of displacement. The author recommends his apparatus for chemical purposes, especially comparison and testing of fats and oils, analysis of glycerine, etc., and detection of margarine in butter, margarine greatly lowering the index of refraction.—*Science*.

AN interesting geological phenomenon is noticed in the district of Izium, in Khar-kov, Russia. In consequence of the heat this summer the ground broke open in many places, and deep ditches formed, at the bottom of which subterranean water appeared. Geologists who examined the ground think that the subterranean water comes from the same source which supplies the Slavianskoye salt lakes of the neighbourhood. The Reponye salt lakes in that district were formed probably in the same manner at a very recent date, for on its bottom were found kettles and other appliances for boiling mineral salt, of which there is a rich deposit in that district. As late as 1857 quite a number of small lakes were formed in a similar manner. The ground burst open, then caved in, forming funnels, in which salt water appeared. They are all in a straight line westward of the Slavianskoye Lake, and from two to three sazons (eighteen to twenty-seven feet) deep. In warm weather the water of these lakes dries out, but then it appears again from below. It is supposed that the cracks which have appeared in that district will conduce to the formation of new lakes of the same kind, and may eventually lead to the enlargement of the Slavianskoye Lake so that it will cover the whole area of land where the subterranean water now appears in isolated spots.—*Philadelphia Ledger*.

Minard's Liniment Cures Dandruff.

A MAINE man has invented a device for preventing electric cars that have stopped while ascending a deep grade from running down grade before the brakes are applied.

ACCORDING to the *Boston Journal of Commerce* the waste of a paper and pulp mill near West Troy, New York, is being utilized as the basis of a new fuel. The waste as it comes from the mills is nearly pure carbon, and by cleansing and chemical treatment it is converted into a form that permits of nearly perfect combustion. It is said to burn rapidly and with intense heat.

THE greatest known depth of the ocean in the Pacific is near the Ladrone Islands, where soundings were made to the depth of 26,850 feet, or a little over five miles. In the Atlantic the greatest depth found is just north of the West Indian Islands, which is 23,250 feet, or nearly four and a-half miles. In those parts of the ocean most free from islands, as in the route from Newfoundland to Ireland, the ocean is most shallow, seldom exceeding 12,000 feet.—*English Mechanic*.

A RECENT report by the United States consul at Martinique gives some details concerning the hurricane at that island on August 18. He states that early on that morning the sky presented a very leaden appearance, decidedly threatening, with occasional gusts of variable winds, mostly from the east-north-east. The temperature was very oppressive during the entire day. The barometer varied only slightly, but was a little higher than usual until afternoon, when it commenced to fall, at first gradually and then very rapidly. The storm struck the east side of the island at about 6 p.m., rushing through the ravines with terrible force, and destroying everything in its path. On the elevated plains the ruin was most complete. One very peculiar feature of the hurricane was the deafness experienced by every one during the storm, possibly the result of the reduced barometric pressure. During the cyclone the wind veered from east-north-east to south-south-east, the latter being most destructive. During the storm there were incessant flashes of sheet lightning, unaccompanied by thunder, and immediately after the storm there were two distinct shocks of earthquake, at intervals of about five seconds. Early in September the Consul visited Trinité, and all the way the destruction was most complete, the trees and vegetation looking as though there had been a forest fire, although without the charred appearance. The thermometer ranged from 90° to 100° F. during the storm. There was a deluge of rain, one account stating that over four inches fell in a few hours that evening. Nine-tenths of the buildings throughout the island were unroofed. The loss of life was small in St. Pierre, but large in the interior towns. The total loss of life, so far as reliable information can be obtained, was seven hundred, and the loss of property was enormous. All the fruit, the main reliance of the labouring class, was destroyed, and prices of provisions have advanced 300 per cent. Every vessel was wrecked or badly damaged, fifty sail in all. A clipping from a Martinique newspaper states that the barometer fell 27.95 inches at Fort de France. At St. Pierre the wind blew a hurricane from the north-east, from 7 to 8.15 p.m., when the rain suddenly stopped and it fell calm, the sky becoming clear. This marked the passage of the centre. At 8.30 the hurricane re-commenced from the south-west, and blew with great fury until 9.30, the barometer rising and the wind shifting to the south-east. At 10.30 there were still strong squalls from the south-east, but the storm was practically over.—*Science*.

C. C. RICHARDS & Co.

Gents.—I took a severe cold, which settled in my throat and lungs and caused me to entirely lose my voice. For six weeks I suffered great pain. My wife advised me to try MINARD'S LINIMENT and the effect was magical, for after only three doses and an outward application, my voice returned and I was able to speak in the Army that night, a privilege I had been unable to enjoy for six weeks.

Yarmouth. CHARLES PLUMMER.

THE new remedy for consumptive patients called chlophenol is said to have shown remarkably good results in Italian hospitals.

If You Wish

To overcome that extreme Tired Feeling, or to build up your appetite and purify your blood, take

Hood's Sarsaparilla

Possessing the best known vegetable tonic and alternative properties, it builds up in a perfectly natural way all the weakened parts, purifies and promotes healthy circulation of the blood, and makes you feel real hungry.

For the Blood.

"Toronto, April 18, 1891.

"Having tried Hood's Sarsaparilla I wish to state that I have found it excellent. I have used about 4 bottles and have proved the virtue of it for the blood and appetite. I have found no equal to it and cheerfully recommend it to others." F. LOON, Engineer for W. H. Banfield, No. 80 Wellington St. West, Toronto.

Believes it Unsurpassed.

"Toronto, April 17, 1891.

"From my own experience and from the experience of others to whom I have recommended Hood's Sarsaparilla, I have proved to be one of the best blood purifiers and Spring medicines extant. I believe

Hood's Sarsaparilla

to be unsurpassed by any other remedy on the market." D. L. JONES, 345 College Street, Toronto.

To avoid the hissing in the arc lamp there has been invented a carbon pencil containing a percentage of alkali silicate, which, when burned, forms a conducting vapour that is said to prevent the trouble.

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

THE Great Benefit which people in run down state of health derive from Hood's Sarsaparilla, conclusively proves that this medicine "makes the weak strong." It does not act like a stimulant, imparting fictitious strength, but Hood's Sarsaparilla builds up in a perfectly natural way all the weakened parts, purifies the blood, and assists to healthy action those important organs, the kidneys and liver.

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OXYGENIZED EMULSION OF PURE COD LIVER OIL. If you have Difficulty of Breathing—Use it. For sale by all druggists. 35 cts. per bottle.

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PURIFIES AS WELL AS Beautifies the Skin. No other cosmetic will do it.

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, and no other has, and is so harmless we taste it to be sure it is properly made. Accept no counterfeits 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 Powder. Subtle removes superfluous hair without injury to the skin.

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Beware of base imitations. \$1,000 reward for arrest and proof of anyone selling the same.



Minard's Liniment for sale everywhere.