

## SCIENTIFIC AND SANITARY.

AN electric hand fan for theatre-goers has been devised, which is likely to take the place of the present methods of cooling auditoriums. The fan is very light, and it may be hung on the back of a theatre-seat. A push-button on the side of the handle turns on the slight current needed to revolve the flukes, which compels a steady rush of air without making the least noise.—*New York World*.

It is reported from Munich that experiments are being made in Austria for the view of replacing steam by electricity for rapid railroad travel. A new railway is projected on which, instead of trains, single cars of great length will be propelled by electricity supplied to them through the rails. The speed to be attained is from 120 to 150 miles per hour. To provide against accidents the roadway is to be built on solid masonry, with curves, steep gradients being adopted instead, if necessary. The great momentum of the cars will enable them to climb grades which would be insurmountable to a steam locomotive. As a further safeguard, the signalman will have the power to stop the cars by shutting off the current in their section of track. The first experimental line is projected between Vienna and Buda-Pest.—*Philadelphia Record*.

FIRST of all, the attitude for sleeping should be assumed immediately upon retiring to bed. "Sleep not on your back like a dead man" was one of the rules issued by Confucius for the guidance of his disciples. This was good advice, for although lying on the back may secure the greatest amount of rest to the muscular system, yet this is the position assumed in the most exhausting diseases, and it is generally hailed as a token of revival when a patient voluntarily turns on the side. It is better to go to sleep on the right side, for then the stomach is very much in the position of a bottle turned upside down, and the contents are aided in passing out by gravitation. If one goes to sleep on the left side the operation of emptying the stomach of its contents is more like drawing water from a well. It is particularly unwise to go to sleep on the back after a meal. The weight of the digestive organs and that of the food resting on the great vein of the body near the backbone compresses it and arrests the flow of the blood more or less. If the arrest is partial the sleep is disturbed and there are unpleasant dreams. If the meal has been recent or hearty, the arrest is more decided and the varying sensations of nightmare are experienced. It is essential for refreshing sleep to have the feet warm and the head cool, and the head should not be raised more than six inches above the level of the bed.—*Brooklyn Eagle*.

## "German Syrup"

### For Coughs & Colds.

John F. Jones, Edom, Tex., writes: I have used German Syrup for the past six years, for Sore Throat, Cough, Colds, Pains in the Chest and Lungs, and let me say to anyone wanting such a medicine—German Syrup is the best.

B. W. Baldwin, Carnesville, Tenn., writes: I have used your German Syrup in my family, and find it the best medicine I ever tried for coughs and colds. I recommend it to everyone for these troubles.

R. Schmalhausen, Druggist, of Charleston, Ill., writes: After trying scores of prescriptions and preparations I had on my files and shelves, without relief for a very severe cold, which had settled on my lungs, I tried your German Syrup. It gave me immediate relief and a permanent cure.

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

Minard's Liniment Lumberman's Friend.

SEVERAL attempts have been made by the friends of technical education in Toronto to establish means for imparting instruction of this character, but nothing practical has been done. Technicalities arising out of the law regulating the purposes for which municipalities may devote public money have proved a hindrance to definite action being taken. There has likewise been a great deal of apathy shown by the public towards the movement. One of the newspapers has gone so far as to call in question the necessity for anything of the kind. In assuming such an attitude, it either ignorantly or wilfully places itself in opposition to the views of many of the leading educationists and thinkers of the day, to whom the fact is apparent that scientific theory and practice should go together. We are pleased to notice that during last month an Association was formed in Toronto for the promotion of technical education. The officers are: Prof. Galbraith, President; John Galt, C.E., Vice-President; W. G. Blackgrove, Secretary-Treasurer. The Association calls upon the city council to grant financial aid to assist in establishing technical training schools of science for the benefit of artisans, mechanics and the working classes generally, and to appoint a board of directors, representing the different practical and manufacturing interests of the city, to manage and conduct the affairs of this important movement. The officers of the Canadian Association of Stationary Engineers are taking an active interest in the project, which it is hoped will now assume a tangible form.—*Canadian Electrical News*.

SIEMENS BROTHERS, the well-known electricians, performed some very interesting and beautiful experiments with alternating currents at an exhibition recently given before some friends in London, the object being to push the limits at which high tension currents may be transmitted. Upon a table was placed an electrode about three inches in diameter, while over it was a second electrode terminating in a point, a sheet of glass about a quarter of an inch thick separating the electrodes. The terminals of an alternating dynamo were connected with the electrodes and the current turned on. Immediately a purple haze appeared on the upper electrode, and as the current increased the haze grew and began to dart out fine lines of light like tendrils. As the current was further increased lines of light beat the glass as if they would break it, writhing and twisting about in impotent fury. Finally, when the current reached an intensity of 40,000 volts, the current overleaped the edge of the glass, and in doing so the light changed from a purple colour to a white light of dazzling brilliancy. Other experiments, different in character, showed the same general results in the shape of twisting and twining streamers of light that were compared by one of the spectators to "an agonized Japanese chrysanthemum." A brass disc took the place of the upper electrode in one of the experiments, but when the current was turned on to its fullest extent the glass invariably broke in pieces, and no sheet tried was able long to remain unbroken. In another demonstration an arc under a pressure of 44,000 volts was produced. When the electrodes approached within five inches of each other the arc established itself, but the flames instead of spanning the space streamed out in two thin parallel tongues at right angles to the electrodes. Upon pushing the electrodes nearer together the flames slowly left the extremities of the electrodes and travelled back along the stems, showing that they were repelling each other.—*Philadelphia Record*.

In the supplementary number just issued of the monthly notices of the Royal Astronomical Society, Mr. E. E. Barnard, the well-known observer of the Lick Observatory, California, describes interesting appearances in connection with the transit of Jupiter's first satellite. On September 8, 1890, while Mr. Barnard was observing with the 12in. refractor the satellite transiting across the bright equatorial belt of Jupiter, he noticed that it seemed elongated in a direction nearly perpendicular to the belts of Jupiter. With high powers and perfect definition the satellite appeared distinctly double, the components clearly separated, and dark against the bright body of the planet. Mr. Burnham also witnessed the phenomenon. The distance between

the centres of the two images was about one second of arc. On August 3, 1891, when the satellite was in transit across the dark south equatorial belt of Jupiter, it appeared under careful examination with the great 36in. refractor as an elongated white spot, the elongation being nearly parallel to the belts on the planet. During this time satellite No. 2, which was also transiting, appeared perfectly round. Mr. Barnard hence infers that either the satellite has a bright belt on it similar and nearly parallel to those of Jupiter, and, reasoning from analogy, it rotates on an axis nearly perpendicular to the plane of its orbit; or it is actually double. "The true theory can be settled with absolute certainty by careful observations. If the phenomena are caused by a white belt, the satellite, when it transits a bright portion of Jupiter, should always appear double, the apparent components nearly vertical to the belts of Jupiter; when it transits a dark belt it should always appear elongated in a line nearly parallel to the belts of Jupiter. If it is actually double, the elongation or line of apparent duplicity should be seen under all angles." No indication of a belt has been seen on the other satellites.—*The Times*.

[TELEGRAM.]

CHICAGO, Oct. 16, 1891.  
F. REDDAWAY & Co., 57 St. Frs. Xavier St., Montreal.

The contract for fire hose for the world's fair was awarded to-day to the Fabric Fire Hose Company, through their Western agents. We can flood the earth.

F. A. RAYMOND.

MONTREAL, Oct. 14, 1891.  
MESSRS. F. REDDAWAY & Co., Montreal.

GENTLEMEN,—My opinion of the waxed and treated brands of hose is of a most favourable nature, and I can recommend them to all our Fire Departments without fear of being contradicted, after giving them a fair trial.

We have had the Keystone Brand of those hose, and I have never found a better sort to stand our coldest winter temperature. Yours truly,

(Signed) Z. BENOIT,  
Chief Fire Dept

WHEN natural gas was in excess of all demands a few years ago, the suggestion that the natural pressure might be supplemented by the use of pumps in carrying the gas long distances was met with incredulity and even ridicule. The impossible has come to pass, however, and for more than a year gas has been pumped from the wells to Pittsburg. Last year the People's Gas Company had two pumps in the Murraryville region, by means of which the pressure of the gas was increased from twenty-seven to eighty pounds. The Versailles Gas Company is now putting up an \$8,000 pumping plant at Grapeville, Pa., and the Greensburg Fuel Company is building a \$10,000 pumping station at the same place.

IT IS A MISTAKE to try to cure catarrh by using local applications. Catarrh is not a local but a constitutional disease. It is not a disease of the man's nose, but of the man. Therefore, to effect a cure, requires a constitutional remedy like Hood's Sarsaparilla, which, acting through the blood, reaches every part of the system, expelling the taint which causes the disease, and imparting health.

DR. T. A. SLOCUM'S

OXYGENIZED EMULSION OF PURE COD LIVER OIL. If you are Feeble and Emaciated—Use it. For sale by all druggists. 35 cents per bottle.

C. C. RICHARDS & Co.

Gents.—We consider MINARD'S LINIMENT the best in the market and cheerfully recommend its use.

J. H. HARRIS, M.D.,  
Bellevue Hospital.  
F. U. Anderson, M.D.,  
L.R.C.S., Edinburgh.  
M.R.C.S., England.  
H. D. WILSON, M.D.,  
Univ. of Penn.

LEADING authorities say the only proper way to treat catarrh is to take a constitutional remedy, like Hood's Sarsaparilla.

## 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. LOACH, 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.

# CANADIAN PACIFIC RY.

## CHRISTMAS

### AND NEW YEAR'S

WILL ISSUE TO

## STUDENTS and TEACHERS

Round Trip Tickets at FARE AND A THIRD, good going December 9th to 31st, 1891, and to return up to January 31st, 1892.

### GENERAL PUBLIC

Round Trip Tickets at FARE AND A THIRD on December 24th and 25th, and December 31st and January 1st, 1892, inclusive, good to return until January 4th, 1892, and at

### SINGLE FARE

On December 24th and 25th, good to return up to December 26th, and on December 31st, and January 1st, good to return until January 2nd, 1892.



Mr. PICKWICK.  
If with your friends you've been dining,  
And get home so late in the night,  
"DUNN'S FRUIT SALINE" in the morning  
Will make you forget you were

DUNN'S  
FRUIT  
SALINE

DUNN'S  
FRUIT  
SALINE

DUNN'S FRUIT SALINE makes a delicious Codling Beverage, especially cleanses the throat, preventing disease. It imparts Freshness and Vigour, and is a quick relief for Biliousness, Sea-Sickness, etc.

BY ALL CHEMISTS.

Minard's Liniment Cures Garget in Cows.