

SCIENTIFIC AND SANITARY.

PROBABLY the largest and strongest magnet in the world is that at Willet's Point, New York. It came to be made by accident. Major King happened to see two large 15 inch Dahlgren guns lying unused side by side on the dock, and immediately conceived the idea that a magnet of enormous power could be constructed by means of these cannon, with a submarine cable wound around them. The magnet, which stands about ten feet from the ground, is eighteen feet long, and has eight miles of cable wound about the upper part of the guns. It takes a force of 25,000 lbs. to pull off the armature. A seemingly impossible experiment was performed with some 15-inch solid cannon balls, the magnet holding several of them suspended in the air, one under the other. The most interesting experiment was the test made of a non-magnetic watch. The test was highly satisfactory. The magnet was so powerful that an ordinary watch was stopped stock still as soon as it came within three feet of it, while an American non-magnetic watch was for ten minutes held in front of the magnet, and it did not vary the hundredth part of a second. A sledge hammer wielded in a direction opposite to the magnet, feels as though one were trying to hit a blow with a long feather in a gale of wind.—*Chicago Railway Review.*

THE Americans, who are certainly much more ready in applying scientific principles to the solution of small practical problems than we are, are said to have invented an electrical thief-photographing process, by which anyone who attempts to open a drawer, or box, or room where he has no business, will get himself photographed for his pains without his knowledge, so that he may be afterwards identified. A tobaccoist of Toledo, Ohio, of the name of Triquet, had missed repeatedly cigars from the show-case in his shop without being able to discover the thief. Hence, he applied to an electrician to give him an apparatus which would take a portrait of anyone going to that case. An electromagnet was so fastened to a match as to strike it against a rough surface whenever the electric circuit was completed, and by the light of the match an instantaneous photograph was taken, and immediately the shutter closed on the camera. On examination after the next disappearance of cigars, the portrait of two boys was discovered, and they were apprehended and sent to prison for the theft. Such an arrangement for photographing burglars without their knowledge—if that could be managed—would soon make burglary too hot even for the most astute professionals.—*Spectator.*

"German Syrup"

Martinsville, N. J., Methodist Parsonage. "My acquaintance with your remedy, Boschee's German Syrup, was made about fourteen years ago, when I contracted a Cold which resulted in a Hoarseness and a Cough which disabled me from filling my pulpit for a number of Sabbaths. After trying a Physician, without obtaining relief—I cannot say now what remedy he prescribed—I saw the advertisement of your remedy and obtained a bottle. I received such quick and permanent help from it that whenever we have had Throat or Bronchial troubles since in our family, Boschee's German Syrup has been our favorite remedy and always with favorable results. I have never hesitated to report my experience of its use to others when I have found them troubled in like manner." REV. W. H. HAGGARTY, of the Newark, New Jersey, M. E. Conference, April 25, '90. **A Safe Remedy.**

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

Minard's Liniment for sale everywhere.

ANALYSIS has proved that the enamel of the teeth contains more fluorine, in the form of fluoride of calcium, than any other part of the body, and fluorine might, indeed, be regarded as the characteristic chemical constituent of this structure, the hardest of all animal tissue, and containing 95.5 per cent. of salts, against 72 per cent. in the dentine. As this is so, it is clear that a supply of fluorine, while the development of the teeth is proceeding, is essential to the proper formation of the enamel and that any deficiency in this respect must result in thin and inferior enamel. Sir James Crichton Browne thinks it well worthy of consideration whether the reintroduction into our diet of a supply of fluorine in some suitable natural form—and what form, he asks, can be more suitable than that in which it exists in the pellicles of our grain stuffs?—might not do something to fortify the teeth of the next generation.—*Science.*

In a recent number of *Le Genie Civil* Mons. P. F. Charon says that the products of combustion from a charge of dynamite have been found to be approximately: Steam nineteen per cent., carbonic oxide and carbonic acid fifty eight per cent., nitrous product fifteen per cent., and nitroglycerin vapour in varying quantity. The carbonic oxide, nitrous compounds and nitroglycerin vapour are very deleterious, and their formation should be prevented. This, M. Charon says, can be best done by using a more powerful detonator, say one to thirteen grammes instead of one-half gramme of fulminate, thus making the combustion more perfect. To counteract the effects of the injurious fumes the author recommends a draught of strong, pure coffee and the inhalation of ammonia, sulphurous acid or concentrated acetic acid.—*Engineering and Mining Journal.*

THE "warning to smokers" recently printed in this column, embodying the report of the British Royal Society's Committee on Colour Vision, which declares that "though alcohol rarely if ever causes colour blindness, it results very frequently from the smoking of strong tobacco," is made the subject of interviews with leading oculists by a Philadelphia newspaper. One physician was found who has three patients, each an excessive smoker, suffering from this defect of vision—amblyopia, as the doctors technically term it. Another physician, a professor at the Wills Eye Hospital, said: "Beyond any question, the toxic effect of nicotine poisoning produces optic neuritis. And this is so very largely with those who smoke tobacco in pipes; it is much more injurious than the use of cigars; and if those so affected do not abstain from the use of tobacco they are apt to lose their sight entirely, or at least for a time, and the first symptom that indicates the total colour blindness and subsequent atrophy in smokers of tobacco is the failure to quickly distinguish the colour of red in the centre of the field of vision. In tobacco amblyopia the excessive pipe smoker is affected first, next the cigar smoker, while the chewer of tobacco is affected last and not frequently. Middle aged people are usually the victims, and to show you how virulent the nicotine poison is, a case is reported of a woman who became affected with optic neuritis while attending her husband, who smoked inveterately."—*New York World.*

A CORRESPONDENT of the *Spectator*, who has been making experiments with various musical instruments on the animals at the Zoological Gardens, writes as follows with regard to one of his latest tests: Our first visit was paid to "Jack," the young red orang-outang, which, since the death of "Sally," the chimpanzee, claims the highest place in animal organization among the inmates of the Zoo. He is a six-months-old baby, of extremely grave and deliberate manners, and perhaps the most irresistibly comical creature which has ever been seen in London. He is extremely well-behaved, not in the least shy, and as friendly with strangers as with his keeper. His arms are as strong as those of a man, while his legs and feet seem to be used less for walking than as a subsidiary pair of arms and hands. He is thus able, when much interested, to hold his face between two hands and to rest his chin on a third, which gives him an air of pondering reflection beyond any power of human imitation. "He knows there's something up,"

remarked his keeper as we entered the house, and the ape came to the bars and sat down to inspect his visitors. As the sounds of the violin began, he suspended himself against the bars, and then, with one hand above his head; dropped the other to his side and listened with grave attention. As the sound increased in volume he dropped to the ground, and all the hair on his body stood up with fear. He then crept away on all fours, looking back over his shoulder like a frightened baby; and taking up his piece of carpet, which does duty for a shawl, shook it out, and threw it completely over his head and body, and drew it tight round him. After a short time, as the music continued, he gained courage and put out his head, and at last threw away the cloak and came forward again. By this time his hair was lying flat, and his fear had given place to pleasure. The piccolo at first frightened the monkey, but he soon held out his hand for the instrument, which he was allowed to examine. The flute did not interest him, but the bagpipes—reproduced on the violin—achieved a triumph. He just flattened his nose against the bars, and then, scrambling to the centre of the cage, turned head over heels, and lastly, sitting down, chucked handfuls of straw in the air and over his head, "smiling," as the keeper said, with delight and approval.

HOOD'S SARSAPARILLA absolutely cures all diseases caused by impure blood and it builds up the whole system.

A NOVEL form of inclined railway has been built at Bridgenorth, England. It connects the upper and lower parts of the town, communication between which was formerly provided by means of steps cut in the solid rock. The length of the track is only 201 feet, but its vertical rise is 111 feet. There are two cars, on separate lines of rail, and they are connected by a steel cable passing round a wheel at the top. They are thus balanced, and a preponderating weight is given, which ever one is at the top, by pumping a supply of water into a tank placed in the frame of the car. The steel rails are secured to ties which are bolted to the solid rock and also embedded in concrete. The brakes are normally on the wheels, and motion is only possible while the brakeman turns his handle. The track is cut out of the solid rock, so that it shall not spoil the beauties of the landscape.—*Scientific American.*

WHAT STRONGER PROOF is needed of the merit of Hood's Sarsaparilla than the hundreds of letters continually coming in telling of marvellous cures it has effected after all other remedies had failed? Truly, Hood's Sarsaparilla possesses peculiar curative power unknown to other medicines.

Hood's Pills cure Constipation by restoring the peristaltic action of the alimentary canal. They are the best family cathartic.

MESSRS. 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.

GREAT DISCOVERIES.—The astronomer who discovers a new star, the scientist who finds a new face, or the geologist who alights upon a new species of fossil, becomes deservedly famous; but the actual good such discoveries do is nothing when compared to the finding of a medicine which is an infallible cure for certain diseases. Such a discovery was made nearly half a century ago by an Eastern gentleman named Perry Davis, and his preparation is now known to the world as PERRY DAVIS' PAIN KILLER. It is a sure cure for Diarrhoea, Cramps, Cholera Morbus, Cholera, and, indeed, all bowel complaints. 25c. only for Big 2 oz. bottle.

THOSE who are incapable of shining but by dress would do well to consider that the contrast between them and their clothes turns out much to their disadvantage.—*Shenstone.*



Mrs. A. A. Williams
Lynn, Mass.

We are pleased to present this from Rev. A. A. Williams, of the Sillsbee Street Christian Church, Lynn, Mass.:

"I see no reason why a clergyman, more than a layman, who knows whereof he speaks, should hesitate to approve an

Article of Merit

and worth, from which he or his family have been significantly benefited. My wife has for many years been a sufferer from severe

Nervous Headache

for which she found little sleep. She has tried many things that promised well but performed little. Last fall a friend gave her a bottle of Hood's Sarsaparilla. It seems surprising what simply one bottle could and did do for her. The attacks of headache decreased in number and were less violent in their intensity, while her general health has been improved. Her appetite has also been better." A. A. WILLIAMS.

HOOD'S PILLS are the best family cathartic.

PROFESSOR DEWAR, in lecturing before the Royal Institute, London, handed around to the audience an entirely new thing in the way of tipples, in the shape of claret glasses filled with liquefied air. The boiling point of liquid air is one hundred and ninety-two degrees Centigrade, or ten degrees lower than that of oxygen. After liquefying oxygen, Professor Dewar said that it is not true, as has been supposed, that the oxygen in the air liquefies before the other elements in air; on the contrary, the air liquefies as air, and is not resolved into its elements before liquefying. If this globe were cooled down to two hundred degrees below the zero of Centigrade it would be covered with a sea of liquefied gas thirty five feet deep, of which about seven feet would be liquid oxygen.—*New York Commercial Advertiser.*

As for cities which take water from sources notoriously foul, like Jersey City, Philadelphia, Cincinnati, and many others, the prospective danger makes the present an excellent time to agitate the question of a pure water supply. "All that a man hath will he give for his life," and the possibility of a plague of cholera in some of these sewage-drinking cities should silence effectually the plea that the present supply is as good as they can afford. Second only to pure water supply in preventing the spread of epidemics is the promotion of cleanliness and proper sanitary precautions. The prompt removal and destruction of garbage, the thorough cleaning of streets and flushing of sewers, the provision of necessary appliances for fighting contagious disease when it appears—all these are matters which, in seasons of epidemic, acquire a new and great importance.—*New York Engineering News.*

THE introduction of the search light, without which no modern war ship or torpedo boat would be considered complete, dates from 1876, and the first vessel in the navy fitted with a search light apparatus was the *Minotaur*. The dynamo employed was one of the alternating-current type with thirty-two magnets, and it was driven at about 400 revolutions by a belt from an auxiliary pumping engine. The projector was of a primitive type, and pedestals were fixed in three different places, from any of which the same projector could be used. It was fitted with a parabolic reflector and with dioptric and diverging lenses. A diaphragm was also provided for enabling flashing signals to be made. The *Temeraire* in the same year was next fitted in a similar manner, with the exception that a Mangin projector was introduced, fitted with Wilde's lamp, lens, etc. In the next year, 1877, the *Dreadnaught*, *Neptune*, and several other vessels were fitted with the same class of apparatus.—*Electrical World.*

Minard's Liniment Cures Burns, etc.