

SCIENTIFIC AND SANITARY.

It is stated that Sir Edward Watkin has built a private chalet at the summit of Snowdon, and that he is making arrangements for the occasional display there of a powerful electric light, which will be visible not only over a great part of Wales and England, but as far as Ireland also.—*Electrical Review*.

As is well known, the water power of the Rhône is being largely utilized for industrial purposes in the neighbourhood of Geneva. Colonel Turettini, chief engineer of the St. Gothard Tunnel, who carried out the works, has recently issued a report as to the state of the works. The canal on the left bank is provided with twenty turbines, working up to 4,400 horse-power. During the past year 216 motors, totalling 1,565 horse-power, have been driven from the works. The smallest, of one-third horse-power, have been used to run sewing machines, while the largest (625 horse-power) has driven the electric light installation for the town of Geneva.—*Industries*.

CLOSELY following on M. Lippman is an inventor of another system of photographing in colours, who proceeds on the theory that there are four primary colours—green, red, blue and violet. He accordingly takes four distinct pictures simultaneously by means of four lenses, in front of which respectively is a screen of one of the four colours named. The negatives are developed in the ordinary manner, and in throwing the pictures on the screen four lenses are again used, having a common focus, each of the pictures being projected through a screen of the colour originally used. The result is that a picture is produced which includes the colours of the original.—*Chicago News*.

At a recent meeting of the French Academy of Sciences, Mr. Chatin stated that Parasitical plants seriously affect the sap of the trees, etc., on which they exist, destroying certain elements, and, on the other hand, producing new ones. For example, no strychnine is found in the loranthus grown on the *Strychnos nuxvomica*, and no quinine in the botanophora of the cinchona; and, in the oak mistletoe, green instead of blue tannin is found. On the other hand, substances are found in parasites which do not exist in the trees on which they are found. Thus, mistletoe contains lime, and the dodder produces yellow and red colouring matters. In the broom-rape of hemp and milfoil a blue colour is found; in that of the horseshoe vetch, a rich sulphur tint; and, in the broom-rape of thyme, an amethyst shade. The mistletoe and most other parasites contain fecula, which penetrates to the fiber of the wood. In short, all these matters are formed by the parasitical plants themselves.

"August Flower"

How does he feel?—He feels blue, a deep, dark, unfading, dyed-in-the-wool, eternal blue, and he makes everybody feel the same way—**August Flower the Remedy.**

How does he feel?—He feels a headache, generally dull and constant, but sometimes excruciating—**August Flower the Remedy.**

How does he feel?—He feels a violent hiccoughing or jumping of the stomach after a meal, raising bitter-tasting matter or what he has eaten or drunk—**August Flower the Remedy.**

How does he feel?—He feels the gradual decay of vital power; he feels miserable, melancholy, hopeless, and longs for death and peace—**August Flower the Remedy.**

How does he feel?—He feels so full after eating a meal that he can hardly walk—**August Flower the Remedy.**

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

IN the New York *Sun*, Mr. G. F. Kunz, the well-known expert in gems, has recently called attention to a property of the diamond which may serve as a means of distinguishing it from other substances. Referring to the paper of Robert Boyle "On a Remarkable Diamond that Shines in the Dark," published in the Transactions of the Royal Society in 1663, Mr. Kunz remarks that this paper has been indirectly alluded to by a number of authors, but never read. Among a quantity of facts, Boyle mentions one diamond that phosphoresced simply by the heat of the hand, absorbed light by being held near a candle, and emitted light on being rubbed. He stated that many diamonds emitted light by being rubbed in the dark. The experiments made by Mr. Kunz show conclusively not only that Boyle's statement that some diamonds phosphoresce in the dark, after exposure to the sunlight or an arc of electric light, is true, but also that all diamonds emit light by rubbing them on wood, cloth or metal—a property which will probably prove of great value in distinguishing between the diamond and other hard stones, as well as paste, none of which exhibit this phenomenon, and will be welcomed by the general public who do not possess the experience of a dealer in diamonds. The property is evidently not electric, or it would not be visible on being rubbed on metal.—*English Mechanic*.

AN oil distributor has been brought out by Captain C. C. Conves, of Penarth, and tried with satisfactory results on the s. s. *Arrow*. The new invention distributes oil in a perfectly even and continuous flow from the bows of the vessel. It consists of a circular tank or reservoir above a cylinder, and this is fixed in the fore-peak of the ship, as near the bow as possible, and at such a height as to be a little above the water-line when the cargo is on board. Two small copper pipes run from the lower part of the cylinder out through the bows (one on each side) and by means of brass cocks the oil in the cylinder is allowed to run out just over the broken water caused by the passage of the vessel. The pipes at their outlets are not above 1-16 inch in diameter, so that the quantity of oil they allow to run out is small, though quite sufficient to subdue the heaviest seas. A strong steel piston works on a spindle rod through the cylinder, and forces the oil through the pipes when the cocks are open, so that the jets flow several feet out beyond the bows, and prevent the water coming inboard. The cocks are quite separate, and will allow of the oil being distributed on one side only if need be. The reservoir will hold about seven gallons of oil and the cylinder about five, which will last some four hours with the two jets full on. Seal oil has been tried with the best results, but other kinds of crude oil can be used at pleasure.—*Industries*.

THE Russian Government has definitely entered upon the work of constructing a great trans-Siberian railroad. The cost of this work is estimated to be about \$135,000,000, but it is quite likely to exceed \$200,000,000 before the road is completed. Although the railroad is built mainly for strategical reasons—that is, in the absence of these, no immediate steps would be taken in this direction—it is estimated that, when completed, its uses for trade purposes will be sufficient to pay interest on the cost of construction and running expenses, with a possible deficiency of about \$1,250,000 per annum. This margin of loss the Government feels that it is justified in assuming in consequence of the imperial advantages which would result from this improved means of transportation. Under existing conditions the extreme eastern and south-eastern portions of Siberia are in a relatively defenceless condition, largely because of the difficulty that would be experienced in sending reinforcements of soldiers either by land or by water. The English could readily seize the ports on the Siberian coast of the Pacific and destroy them, while it is thought that even the Chinese might possess themselves of certain valuable territories in their neighbourhood in the absence of an adequate force of defenders, and when once in possession, with better means of reinforcements, their ejection would not be an easy undertaking. Possibly the construction of this new road will serve to stimulate the imagination of those Americans who believe that it would be an

easy matter to construct a railway through the North-West Provinces of Canada, and through Alaska to Behring Strait, and by a short ferry transit have the journey made by land from the United States to Europe.—*Boston Herald*.

VERY few photographs of landscapes are correct in perspective. Mr. A. Mallock has been discussing in *Nature* the optical factors which determine this, and in the course of his article he says that any photograph taken with a lens of less than about a foot focal length must exaggerate all the distances or make objects in the picture look smaller than they should. The only remedy for this, in his opinion, is to enlarge the picture until the right distance to view it from becomes also the convenient distance. Even if this be done, however, there is still a tendency to view the picture too far off; for few lenses, except those for portraits, embrace an angle so small as to be taken in at a single glance, and people are naturally inclined to stand far enough from a picture to see the whole of it at once. Still a proper amount of enlargement offers the best means of making a photograph give a true idea of the scene which it represents; and this is especially true of the small pictures taken by so-called "detective" cameras, having lenses varying from four to six inches in focal length; and it is for this end, and not, in general, to enable more detail to be seen, that the enlarging process is most useful.—*Chemist and Druggist*.

THE American Forestry Association, we are glad to see, is taking steps to examine certain forest areas in order to ascertain whether they should be reserved from settlement. There is very little danger that the Chief Executive of the nation will include too large a fraction of the public domain in these reservations; and even if lands which are more valuable for agriculture than for their forests should be included, it would be very easy afterward to turn them over to settlers. Indeed, we have urged that all forest lands should be withheld from entry until the data which special agents of the Land Office are now instructed to collect could be ascertained by a commission of scientific men. The present action, however, is much better than no action at all; but what protection is there thrown around these reservations even after the President has made his proclamation to set them apart? So far as we are aware, no legal provision is made for guarding them against depredation or protecting them from fire. It has been our opinion that the United States army was the proper force to use in guarding the forests on the national domain, and we have urged that these forest lands withdrawn from entry should be placed under the charge of the army. This has been done to some extent in the case of the Yellowstone reservation and the great Sequoia reservations of California. If it is practicable to place such reservations as are declared by the President under this same guardianship, we shall feel that something has been done for our forests which promises to have practical value, and the brief section which was attached to an act relating to quite another matter may prove an important piece of legislation in the history of the forests of the nation.—*Garden and Forest*.

MES SRS. CLARE BROS. & Co., of Preston, whose advertisement appears on the second page of this issue, have just issued a most complete and artistic catalogue, descriptive of their hot-air, hot-water, coal and wood furnaces, together with a full illustrated list of registers, which they will be pleased to forward to any address on application.

WHY IS IT POPULAR?

Because it has proven its absolute merit over and over again, because it has an unequalled record of cures, because its business is conducted in a thoroughly honest manner, and because it combines economy and strength, being the only medicine of which "100 Doses One Dollar" is true—these strong points have made Hood's Sarsaparilla the most successful medicine of the day.

Dr. T. A. Slocum's

OXYGENIZED EMULSION OF PURE COD LIVER OIL. If you have any Throat Trouble—Use it. For Sale by all druggists.

A PERMANENT board of torpedo experts has been recently established by the United States Navy Department to take charge of experiments, tests of firing and launching tubes, installation on board, stowage and torpedo supplies.

WE now have the electric light to aid us in our dental operations, and I find by its use I can discover imperfections in cavities I have prepared that had previously escaped my attention. Why? Because the electric light gives a paler white light, and it is more intense than daylight. This is particularly so in that form of decay known as the white decay. You may prepare the cavity with the ordinary care, having it seemingly perfectly dry, and a magnifying glass will show you no imperfections, but with the aid of the electric light you find them.—*Dr. Pruyn (Scientific American)*.

THE peculiar enervating effect of summer weather is driven off by Hood's Sarsaparilla, which "makes the weak strong."

MEN who are suffering from nervous debility, overwork, early indiscretions or any of the numerous causes that break down the system, should use Dr. Williams' Pink Pills. A certain blood builder and nerve restorer. They never fail. Try them. Sold by all dealers or post paid on receipt of price (50c. a box). Address 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 *hautton* (a patient): "As you ladies will use them, I recommend 'Gouraud's Cream' as the most valuable 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. FERT 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.

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When I say I cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give EXPRESS and POST-OFFICE. H. G. RQOT, M. C., 186 ADELAIDE ST. WEST, TORONTO, ONT.