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Man on the land wants a paint that will give real protection against the weather, and in specifying Berger's Paint (B.P.) for every painting job on the farm he gets the most desirable and durable paint that science and experience can produce and money can buy. In capacity, in durability, in purity, BERGER'S has no equal.

BERGER'S PAINT, Prepared (B.P.) is the purest paint obtainable. For years the firm of Lewis Berger and Co., Ltd., has been specialising in the manufacture of paint.

BERGER'S PAINT (PREPARED.)

Made of pure white lead and zinc mixed with refined, matured turpentine and American spirits of turpentine and is 100 per cent. pure paint. BERGER'S PAINT, Prepared (B.P.), is guaranteed to last longer, cover more, work easier, and uniformly, give better results than any other paint, including pure white lead and linseed oil.

BERGER'S Specialities are:—Berger's structural and Reef Paint, for all work; Maiseone, a cold water paint for exterior decoration; Matone, an oil emulsion at moderate cost, and Berger's varnish for all purposes.

Manufacturers: LEWIS BERGER AND SONS (Australia) LTD.,

Established 1760. Stores at Homerton, London and Sydney, N.S.W.

BROAD SMALL AND CO.

CHAIRS AT YOUR SERVICE.

WHEN you want a HAIR CUT or a SHAVE you want it done well, don't you? Well go to—

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SCIENCE NOTES.

A NEW STORAGE BATTERY.

A new type of storage battery is described in a recent issue of "Science Abstracts." This new battery appears to be a modification of the nickel-iron alkaline cell as made by Jungner, the chief characteristic being the method of making up the plates from briquettes of active material which are automatically fed in between two perforated nickel-steel strips. These strips enclosing the active material are manufactured in lengths folded together and fitted into a steel frame. The complete electrode is then put through a rolling process to ensure perfect contact between the active material and the strips. Only a brief indication is given of the methods followed.

A BY-PRODUCT FOR ENAMELS.

Some phosphate rocks carry an amount of fluorine sufficient to lead one chemical engineer to consider methods for its recovery and utilisation. Following a series of experiments the technique of recovering this fluorine from the acid phosphate plants was devised and sodium silicofluoride produced. The grade is very satisfactory and the product has the advantage of being reasonably constant in quality. This material bids fair to be substituted for cryolite, an essential ingredient in the type of enamels used on cast and sheet metalware. Most of the cryolite is imported from Greenland, so that the recovered by-product has a considerable advantage in cost of transportation and handling.

SHERARDISING.

Sherardising is not merely the application of a zinc coating on iron or steel, as is the case with electroplating and galvanising. The coating produced by sherardising is an alloy with the underlying metal upon which the outer layer of zinc is afterwards deposited. The zinc therefore enters into every crevice and cavity, making the process quite different from any other method of zinc coating. The coating is not as hard as it is in the case of galvanising, for which reason it is considered more desirable for special uses, as where pieces must withstand severe straining and bending and still retain their rust-resisting qualities. It is impossible to give sherardised metal a finish comparable to nickel plating or silver plating by buffing on a fine polishing wheel and finishing on a cloth wheel.

FOOD SOURCES.

Statistics were given before the American Philosophical Society with reference to the various sources of the chemical compounds which make up the essentials in our diet. More than 50 per cent. of the protein is contained in animal foods other than fish; 36 per cent., including 23 per cent. from wheat, comes from grains; 26 per cent. from meats, 20 per cent. from dairy products, and about 7 per cent. from poultry and eggs. Of the fat eaten, 51 per cent. is derived from meats, including 40 per cent. derived from pork and its products, 27 per cent. from dairy products, 12 per cent. from oils and nuts. Our carbohydrates are principally from grains which supply 56 per cent., 25 per cent. is from sugar, and the remainder is to be found in fruits and vegetables and dairy products.

SOUND AND NAVIGATION.

There has probably been more learned about sound and its transmission during the past four years than during all the rest of time. Listening devices installed outside the ship's skin, or within ship's tanks, not only distinguish different sound sources at considerable ranges when the ship is under way, but the direction can be obtained within an accuracy of two or three degrees. For example, the multiple-unit microphones with electronic compensator placed on the Von Stenben enabled that vessel, when running at full speed, to hear the submarine bell on Newport lightship, at a distance greater than 35 miles. It may be safely stated that a distinctive sound source, as a submarine oscillator, can be heard at all times and during all kinds of weather in deep water, at a distance of 20 miles or more. In addition to obtaining bearings of distant sound sources, these devices may be utilized to determine fairly accurately the depth of water.

London cables that mails were dispatched for New Zealand on the 9th by the s.s. Tanui.

Four New York picture theatres claim to entertain between them 50,000 people every day, while the Stoll Picture Theatre in London entertains an average of 9000 people daily.

MOTORING NOTES.

ELECTRIC CARS.

On account of the high price of petrol, a decided impetus has been given in some countries, particularly Scandinavia and Italy, to the electric vehicle. The vast hydro-electric schemes now under consideration in various countries may lead to cheap electricity, which will to some extent compete with petrol or benzole as a motive power for cars. An electric garage has been established in Milan, which operates electric buses for the hotels and also a regular lorry service between Milan and Bergamo. In Denmark and Norway electric cars are being used in the postal service.

SPRING FOOTBOARDS.

Many motor-cyclists prefer footboards to footrests, but complain that a fixed footboard conveys vibrations and obstructs access to various items of the machine. A recent English design is free from such objections, and has the further merit of being cheap to make. The footboard is freely pivoted at the forward point of attachment, so that it can be swung up when the rider wishes to adjust any mechanism; when the board is dropped into riding position, the free end of a cantilever spring, bolted to its underside, rests against a cross arm fixed to the bearer bolt. A ratchet adjustment permits the angle of the board and the action of the spring to be reset to please individual tastes.

ELECTRIC SIGNALS AT NIGHT.

The trouble with so many signals is that they fail to attract the attention of the motorists ahead or behind the car that may be operating a signal. But the signal about to be described gives intermittent flashes, which quickly catches the eye of the driver in the rear. The flashes are produced by an electric light attached to the end of an arm, with two revolving discs, the light being located between the two discs. When the arm is in the upright position the light on the arm is extinguished, but as soon as the arm is moved down to any of the three positions, the light automatically comes on, and the action of the air causes the discs to revolve rapidly, thereby giving the intermittent flashes which attract immediate attention to the arm. The nature of the turn that is to be made by the driver is then indicated by the position of the arm.

A NEW VAPORISER.

In cold weather, or when using poor quality fuel, the starting up of petrol engines for lorries, motor-cars, aeroplanes, as well as stationary petrol engines in exposed buildings, more often than not causes considerable difficulty. In contrast with the methods commonly employed, but not particularly effective, such as flooding the carburettor, priming the cylinders with petrol, the application of hot rags or boiling water to the exterior of the carburettor, or repeated cranking up, the scientific way of ensuring rapid ignition would seem to be to heat up the induction pipe inside. The latest device to effect this consists of an enclosed electrical heating element placed within an asbestos cushion. This is mounted on the packing material between the induction pipe and carburettor flanges, the asbestos cushion projecting upwards into the induction pipe. On the suction stroke of the piston, the cushion absorbs the liquid fuel spray injected by the carburettor. This spray is immediately vaporized on coming into contact with the electrically heated cushion, thus producing the necessary volume of hot fuel vapour for starting the engine.

WAR TROPHIES.

In addition to asking the loyal co-operation of all soldiers for transport publications for the public library, we are anxious to receive on behalf of the Southland War Museum a collection of trophies. It is very important that nothing be lost that will be in any way a war trophy. Southland soldiers have played an important part in the war and we must preserve, for the benefit of those who follow, something of a tangible character.

Every part of the Dominion is seeking a collection of trophies and we must not be behind. Numbers of articles which have been brought from the battle front are being lost sight of, and we would be glad to receive anything at all. Name and address must be sent, also full particulars of article, where found, stunt, etc. Articles can also be displayed in the museum and remain the property of the sender, but can we, as representing Southland soldiers, make a direct gift to the people. Trophies can be sent to "The Digger" office direct, box 510, Invercargill; or to Mr Crosby Smith, Athenaeum Buildings, Dee street, Invercargill.

NIBBLES FROM CLEMENCEAU.

FROM "THE STRONGEST" BY GEORGE CLEMENCEAU.

The thing that amuses me most is the variety of ways in which people imagine they can deceive life.

You see, wealth isolates the heart. We get rich and we're surrounded by the selfishness of those who have been beaten, and the worse selfishness of those who have won out.

A curt word of refusal, spoken in the hurry of life; a gesture of disgust with the sordid beings from another world the common cry, "I can't help everyone," which often expresses lack of will, not lack of capacity, to help; these sink deep into the attentive soul of a child.

The unhappy console themselves by showing their miseries. But supreme felicity shuns display, indifferent to the indifferent world.

"Really," she asked, "what more could our parents do for us if they were our bitterest enemies? When I think of the lies at school and at home, falsifying our souls and corrupting our hearts, I wonder that we have any sincerity and honesty left. Tell me, where are the beautiful things we are taught about the family and society? It seems we are to discover the Higher Will in them. Then why do I see, instead of the advertised beauties, nothing but a battlefield in which the desires of the strongest triumph?"

"Who would have thought that Paris would make you a poet of the fields?" he would say to Henri. "That's the punishment for idleness. Instead of going into ecstasies over an oak tree, get into the stream of action in the world, turn back your cuffs, make me a roll of paper out of this tree, bring up your ignorant workers to some conception of industry, increase the substance of mortal man; these are worth more than plain living and high thinking."

The most beautiful sentiments must be translated into action, into everyday movements, and must be realised by activity in full daylight.

Grief has no words, the heart no cobbling, for irreparable disasters. The consoling peace of the tomb is the temptation for helpless weakness.

There is an art of using the words "devotion" and "sacrifice" so that they call up emotions quite distinct from those that they should connote. What is more banal than the exhortation to be charitable? And what action is more rare than disinterested help, given without hope of heavenly recompense or worldly praise? Organised charity, of Church or State, subjecting each and all to the prevailing formula, becomes an excuse for ferocious egotism, freed from all restraint.

The rich are told to give; the poor to be resigned. The former give meekly; the latter are not resigned. The rich often give to prevent the want of resignation in the poor from being fatal; their giving is not the act of sacrifice demanded by the man of Galilee. Greed that has been satisfied is on the defensive against the greed that demands to be satisfied, and the war of the classes is let loose.

The contesse was more of a spectacle to the factory than the factory could be to her. She passes with lowered lids under the ironic silence of the distant creatures at whom she would not even look. She went along, with little movements, among incomprehensible things of iron or of flesh and blood, vaguely consoled with the thought that such things had to be in order that she might shine in her glory. What, to her, were these men begrimed with coal or with paste?—these fellows disgustingly stained at the strainer or fouled with motor oil; these women, so pretentiously aged; the girls, the children, stupefied with the mechanical grind, twisted into an eternal repetition of the same gesture by which they made their living. No, they were nothing to her. They were at opposite poles.

"To love is to suffer," Uncle says. "Ah, yes. But he will also tell you that it is to know the highest happiness. The egoist is afraid to suffer, and so loses his chance to be happy."

"The only criticism I accept is from experience. A dress must dress you. What are all our frocks but a concession to the infirmities of the masculine heart which refuses to be content with a beautiful soul?"

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THAT HANDSOME BOX OF SWEETS?

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Ring 1370 and I will have your Sweets ready for you.

F. C. Jarvis,

"EXCELLA," DEE STREET

Next Bank N.S.W.

Books to Read.

LATEST DETECTIVE NOVELS, 5/6.

BERNARD TREVES' BOOTS (Lawrence Clarke)

THE BROKEN FANG (Vol Key).

HON. ALGERNON KNOX (E. Philip Oppenheim).

THE HOUSE OF DANGER (Guy Thrine).

GUILE (Headon Hill).

THE LOST MR LINTHWAITE (J. S. Fletcher).

THE CAMP OF FEAR (Leslie Howard Gordon).

KATE PLUS TEN (Edgar Wallace).

Gardner & Son, TAY AND KELVIN STREETS, INVERCARGILL.