

Science Siftings

By 'Volr.'

The Largest Torpedo.

The largest size of torpedo at present manufactured by the principal naval powers is the 18in Whitehead. Its length is 16ft 1½in; its weight about two tons, and its diameter 18in. It is not of cigar shape, but is spindle-shaped, and it gets its name from the ray fish named torpedo. Its effective range depends on the object at which it is discharged, being from 1500 yards at rapidly-moving object, such as a swift cruiser or torpedo-boat destroyer, up to 6000 yards at a break-water or fleet in mooring. The latest form of torpedo, guided by an instrument called a gyroscope, travels at a rate of thirty knots.

Distilling Camphor.

Wherever camphor trees grow (says *Science Siftings*) you will find camphor distilleries. They are low buildings of mud brick, and their odor is so aromatic that it can be detected two miles off. In each building there are a dozen fires. On each fire is a kettle of boiling water, with a perforated lid. Fitted to the top of this kettle is an iron cylinder, filled with camphor wood chips of the size of your little finger. Fitted to the top of the cylinder is an empty inverted jar. The steam of the boiling water passing up through the cylinder extracts from the camphor wood its oil. This oil, mounting still upward with the steam, settles like brine on the side of the inverted jar at the top. And this brine, when the fire goes out, dries into a substance like frost or snow. White and aromatic, the frost-like substance is the crude camphor. It is scraped off the side of the jar, and refined and pressed into attractive shapes.

Electric Farming in Germany.

Figures worked out in Germany indicate that the electrification of crops on the farm will not be an expensive change, and it should soon become common if the practical increase in yield proves as great as the experiments have foretold. An area of about 15 acres was covered with a net-work of wires 1-32nd of an inch in diameter, stretching about 15 feet above the ground at a distance apart of 33 feet. The current was supplied at 65,000 volts, the position pole being connected to the network and the negative to the earth; and in dry weather of moderate temperature the power consumption was only 17 watts. Allowing twice as much for losses, it was calculated that the electrification of 100 acres for three months, at an average price for current, would cost about £18. The chief expense would be for wires and their maintenance, and this would vary greatly under differing conditions.

Telephone Experiment.

In experimenting with telephones surprising results were obtained by a Danish engineer named Petersen by simply heating the transmitter. It was found that this increased the volume of sound very considerably. In fact, a transmitter thus heated so increased the volume of sound that the receiver, laid on the table on the other end of the line, delivered the speech so plainly that all at a far corner of the big room away from it heard every word distinctly. Before the transmitter was heated this was impossible. A Paris telegraph engineer named Germain made practically the same discovery some time before, but it was not put to use. Now Professor Hannover, of the Danish State Experimental establishment, has taken up the matter and finds that a simple apparatus may be made for heating the microphone transmitter of a telephone, and thereby enable messages to be transmitted by telephone a much greater distance than is possible under ordinary conditions. The reason for this is simple enough. The heating of the microphone transmitter results in making the air about it rarefied, and this naturally carries the sound better. For telephones extending over high and weather-exposed mountain peaks, and in such places where there is difficulty in making the sound carry well, this heating can be resorted to and the line made as clear as a bell.

WYNDHAM CATHOLIC CLUB

A progressive euchre tournament, promoted by the Wyndham Catholic Club, attracted a large gathering to the Town Hall on Wednesday evening of last week (says the *Wyndham Farmer*). Rev. Father Tobin (Gore) made a short opening speech in which he expressed his pleasure at seeing so large an attendance, and trusted all would spend a pleasant evening. Mrs. John Trapski and Mr. Fred Bogue acted as joint secretaries to the committee, and are to be congratulated on the success of the club's initial social. Mr. G. T. Smart acted as supervisor. Musical items were contributed by Mrs. T. Murphy, and Messrs. T. Durham and Hawkins, L.A.B. Father Tobin announced the winners and presented them with their prizes. First honors went to Mrs. B. Ruston (silver shoe-horn and button-hook) and Mr. Edwin Rankin (silver serviette ring). Father Tobin stated that a similar social would be held later on, when he trusted the weather would be more propitious and the attendance even larger.

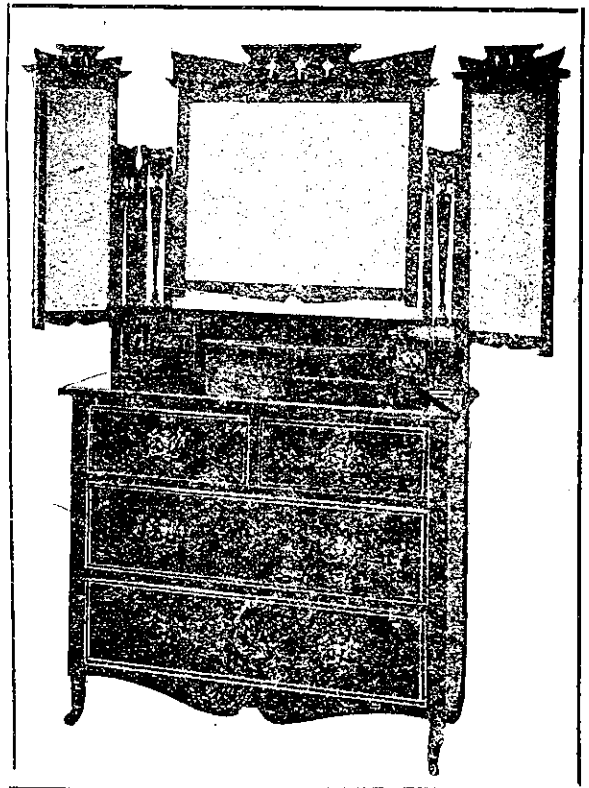
Greymouth

(From our own correspondent.)

The Greymouth *Star*, at the time of the Drednought's visit to Greymouth, offered eight prizes to the pupils of the West Coast, for the best essays on the visit of the warship. I note with pleasure that several pupils of the Convent and Marist Brothers' Schools were successful in securing prizes. In addition, Inspector Austin (the judge) said, 'That the work of the Convent pupils, as a whole, was by far and away the best in the competition.' When one considers that practically every school on the Coast sent in essays, we have every reason to be proud of the success of the convent pupils.

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