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That Means 2 More Days of Saving Opportunities if You Buy From Us. What About It?

Men's Invictus Hockey Boots

The Hockey Boot worn by all the famous Skaters and Champion Hockey Players of Canada and Newfoundland.

It is the most comfortable and also the most durable Hockey Boot on the market—in fact no other Hockey Boot can compare with

Would make an ideal New Year's Gift.

Cotton Blankets

A Saving Opportunity in Cotton Blankets. From to-day, Dec. 26th to Saturday, Dec. 30th, our stock of

Cotton Blankets at Special Cash Price

Call and inspect them.

Wadded & Eiderdown QUILTS

We have already greatly reduced our prices on Wadded and Eiderdown Quilts, and now offer a

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This offer holds good up to Saturday, December 30th.

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Rubber Footwear

We have a large and well assorted stock of Rubber Goods, including

THE FAMOUS MERCHANT BRAND.

Children's and Misses' Rubber Shoes.

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Children's and Misses' Gaiters.

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Youths' and Boys' Long Rubbers.

Boys' Gaiters.

Ladies' Rubber Shoes

Ladies' Long Rubber

Ladies' Gaiters.

Men's Rubber Shoes.

Men's Long Rubbers.

Men's Gaiters.

Friday and Saturday Our Special Sale Days. All Lines at Reduced Prices.

Mysteries Science

Cannot Solve.

There are a thousand and one mysteries connected with wireless telephony and telegraphy. Some of them have been explained by science, but others baffle even the greatest brains. Why is it, for instance, that wireless travels so much better after dark than during the hours of daylight? We know that the receivers bring in much louder sounds at night time and that the range of a transmitting station may even be doubled after sunset, but no one can say for certain why these things happen.

The only explanation that seems at all likely is this. Heat and light are first cousins of wireless, each being caused by waves that rush through the ether at the rate of 186,000 miles a second. The only difference is that the waves of heat and light are much shorter than those of wireless. During the daytime the ether near the earth's surface is filled with heat and light waves from the sun, which throw it into such violent agitation that wireless waves are to some extent "jammed." At night, when there are less disturbances from other waves, they have an easier passage.

Bouncing From Earth to Sky. Again, how is it that wireless waves follow the earth's curves whilst other waves do not? A lighthouse is invisible at a distance of thirty miles because it is below the horizon. Its rays move in straight, unending lines. But the great station at Leasfield can send its messages round the half circle of the world's circumference.

Some people believe that the waves are made to bend by the envelope of fine dust floating high in the atmosphere, which surrounds the earth. We know that wireless waves can be reflected by certain substances, just as those of light are by a mirror. Those who support the "envelope" explanation hold that the undulations sent out from the transmitting aerial rush upwards until they meet the dust, which probably sends them back to earth. During the whole of their journey they are continually "bouncing" into space, but the envelope will not let them do so. Consequently, they travel in a series of gigantic bounces from earth to sky and from sky to earth.

Others think that they journey, not above the surface of the earth, but through the ground itself. Some scientists even deny that there is such a thing as the ether.

Another strange mystery is that of the "dead spots." It was discovered recently that there are certain localities where even the strongest wireless

signals are received only very faintly; in some they cannot be heard at all.

Repelled by Rocks?

An American scientist who was travelling northwards, stopping each night to give a lecture on wireless, found that his set was becoming gradually less and less efficient. Suspecting his batteries, he bought new ones, but the results were no better. At last he came to a town where nothing at all was received. As he moved away from it the signals became stronger again, and soon they were as good as they had ever been.

It is possible that these "dead spots" contain certain underground rocks or mineral veins which repel wireless waves. The waves are sent down towards the ground by the dust envelope, but before they can reach receiving aerials they are reflected upwards by the action of substances in or beneath the soil.

Every listener-in has made the acquaintance of atmospheres, whose crashes, tearings, and splutterings sometimes spoil reception. They are due to electrical disturbances in the air, and certain parts of the world have been found to act as breeding grounds for them. Most of those that annoy us during the summer arise from thunderstorms over our own country. But those that come in at other times of the year originate chiefly in a district in the north-west of Africa.

For Gentlemen of good taste Sub Cigarettes. —sept28/22

Modern Marvels of Inventive Genius.

It is said that the wonders of one generation are the commonplace of the next, but never, perhaps, will some marvels of to-day become just ordinary things.

One of the latest additions to their number is the potted telephone mes-

sage. If the person wanted is out or engaged, the caller can get in motion a recording instrument, and the message he dictates is impressed by magnetic action on the receiving end upon a moving steel ribbon. Subsequently this ribbon, on being run through a simple reproducing device, will repeat the message.

If, moreover, there should be any dispute concerning it, the message can be read off again and again either in

the place where it was received or elsewhere, and it can also be stored for an indefinite period.

ROMANTIC SIDE OF SCIENCE.

No less wonderful is the filament of the electric bulb. It is made of tungsten, a small bar of which is drawn out until it becomes a wire that would extend from London to Southend, or, say, for nearly forty miles.

A fascinating form of the bulb is used by the surgeon for diagnostic purposes. Though it may be only half an inch in length, it enables him to inspect the approaches to the bronchial tubes, detect disease, and remove foreign bodies—such as buttons and pins—which may have lodged there.

Surely, too, what we already know of wireless will always be regarded as part of the romance of science. By means of one appliance—the thermionic valve—such inconceivably fine measurements as $\frac{1}{10,000,000,000}$ part of an inch and $\frac{1}{1,000,000,000}$ part of a second are now possible.

Just as amazing is an adaptation of well-known telegraphic instruments by which a message could be received at any wireless station in Great Britain, radiated at 120 words per minute, and received simultaneously, in plain, printed English, at all the newspaper offices in the kingdom. Further, the message could then be reproduced without the aid of type, and scattered over the face of the country.

Again, many facts about the atom will never become tame and uninteresting. Scientists told us long ago

that it makes up minerals, metals, and other substances, adding that it is so small that it cannot be divided—a proposition which seemed reasonable enough in the light of their statement that 432,000,000 atoms would be required to bridge a halfpenny.

Later research, however, proves that they were under the mark. Some probe into Nature's secrets now consider the atom a large particle, and deal with sub-atoms and the millionth parts of atoms. Yet there is a wonderful instrument, known as the spectrometer, which reveals the atomic structure of a substance and enables accurate measurements of it to be taken.

This contrivance shows that the diamond, for instance, is built up of cells which are so minute that, though each contains many solid atoms, millions would be required to form a heap as big as a pin's head.

Radium is the supreme example of romance in little. Mr. Frederick Soddy gives a striking illustration of how it could be divided and sub-divided almost indefinitely. If a man possessed one-thousandth part of an ounce (roughly half a grain), and distributed an equal share to every man, woman, and child in the world to-day, science would be able to recognize any one of the shares!

This means that, as the estimated

population of the world is 1,646,000,000, one and a half billionth part of a ounce would be identifiable as radium!

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—By Bud Fisher