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 MIDDLETON, N. S.

### Nineteenth Cable Under Atlantic Has Just Been Completed by the Western Union Telegraph Co.

FIRST OF ITS TYPE TO BE LAID

Called a "Permalloy" Cable—Represents Investment of Five Million Dollars—Great Speed is Attained—Possible Cable Rates Will be Reduced.

A new trans-Atlantic cable has just been completed by the Western Union Telegraph Co., and will be opened for business. This makes the nineteenth cable working under the Atlantic between North America and Europe, and is the first cable to land in Southern Europe. It will handle business for Italy and Southern Europe, which in the past has had to be relayed in England or Ireland, thus saving considerable time in transit.

The new cable is what is known as a "Permalloy" cable, and is the first of its type to be laid. The copper core which carries the current, consists of seven strands and around it is wrapped a ribbon of permalloy. This latter is the most highly magnetic material known to science, having more than thirty times the permeability of iron—over this permalloy is the gutta-percha insulation and eighteen galvanized steel sheathing wires for strength. The deep sea section is one inch in diameter. The new cable was manufactured at

Greenwich, England by the same company that made the first Atlantic cable to operate successfully, which was laid in 1866. In some places the cable lies in water three miles deep.

Permalloy, which is an alloy of nickel and iron, is brand new, and is the invention of Western Union engineers, by which company it is patented. Permalloy increases the speed of messages over cable five or six times, so that the new cable transmits messages at the rate of 350 words per minute, as against 60 or 70 words by the old type cables. Permalloy works on the principle of the "loaded coil" used in long distance telephone circuits.

The new cable represents an investment of about five millions of dollars, and the laying of this new type cable was an engineering feat. It was not known whether the new type of cable would work this long distance, 4,700 nautical miles. The engineers' calculations, and the laboratory tests were all favorable, but it was not possible to tell until after the cable had been laid and in operation, just what its capacity, or speed would be. Cables are laid by the manufacturers and then turned over to the owners ready for operation. When this was done the Western Union engineers connected up the cable with the new high speed terminal plant, which had been designed and constructed specially for the new cable.

A group of cable operators could hardly believe their eyes, when the first tests were made recently. They saw the speed gradually increased from fifty words per minute, the standard cable rate, up to one hundred, two hundred, and finally up to three hundred words per minute, at which speed the signals were recorded on the paper tape perfectly clear and well defined. At this speed, the signals passed an extraordinary severe test. By a specially designed apparatus, the cable was switched on to a printing telegraph machine, which turns out copy, the same as an ordinary typewriter. The result was completely satisfactory. Heretofore this printing mechanism has been used on land lines only.

This speed is by no means the limit, for after a few adjustments on the receiving apparatus the speed was raised to 350 words per minute with perfect legibility.

The Western Union had staked five millions of dollars on an experiment—a failure is too dreadful to contemplate—some officials would probably have been looking for new jobs, and stockholders would have been minus some of their dividends. However, all's well that ends well.

In the past, difficulty has been encountered in working cables at very high speed, on account of induction from high tension power circuits, which are becoming so numerous. To

overcome this difficulty special precautions were taken in the case of the new cable one was to carry a ground wire in a cable, one hundred miles out to sea, this serves as the ground connection of the new cable. This has limited the difficulty experienced in the past of the cables being affected by disturbances caused by electrical power systems and atmospheric sources, from which stray currents are readily picked up by the very delicate machinery necessary to work the cables at high speed.

This is the first essential change except for slight variations in size, that has been made in cables since the first cable was laid in the Atlantic sixty-six years ago. During this time the speed and efficiency of ocean cables have been multiplied many times, but the improvements have all been in the apparatus used in sending and receiving messages.

The new cable should readily telegraph across the ocean the entire news contents of the Saturday Globe in about four hours.

The Western Union Company is now making arrangements for the construction and laying of another permalloy type cable next summer. This latter cable will run from the North Sydney, N. S. cable station to Pen-

ance, England, with a loop into Heart's Content, N.S., where automatic repeaters will be inserted in the circuit.

The Western Union now has eight cables under the Atlantic and these two new high speed cables will have the effect of practically doubling their trans-Atlantic cable capacity. It is altogether likely that the cable rates will be reduced in order to provide sufficient business to keep all the cables busy 24 hours a day, and seven days a week. The cable letters and week-end letters keep the cables going continuously now.

—O—

A lady staying in a hotel was frightened by a noise like that of a person running about in a room over the ones she occupied. The noise went on at intervals for two nights and then changed, as if the occupants on the floor above had gone mad and was skipping about. The lady did not believe in ghosts, but she was afraid of them, so she asked the clerk to investigate the mystery. It was a sick foreigner obeying the perfectly understood directions of an English medical man: "Take the medicine two nights running, then skip a night."

You have been intending to try "Red Rose." Why not now before you forget.

**RED ROSE**  
**TEA "is good tea"**  
 The ORANGE PEKOE is extra good. Try it!

#### THE LATEST CREATION

As stated in our last edition, we had stock on the way, for the printing of Personal Stationery. This stock has arrived and we completed the many orders that had been received, much to the great satisfaction of those who received them. If you would like a supply of this stationery, you will find The Outlook printers ready to serve you "better."

One lady on looking at the samples remarked: "Isn't that lovely, and such exquisite paper." This is only one of the many complimentary remarks we have had when customers were passing judgment.

The price is very moderate: Only \$2.00 for one hundred sheets of folded paper (correct size), and one hundred envelopes to match. Or for \$1.25 we will print up orders of fifty sheets and fifty envelopes.

This stationery is made from the beautiful "Norman" linen finish paper, and will please the most fastidious. It contains a delicate surface, easy to write upon.

Remember, we supply the paper and envelopes, and print them up with your name, address and post office box if you wish. The color ink used is a beautiful bronze blue. Just say "Norman"—we'll know.

If you do any corresponding, this is your opportunity.

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#### FREE SCHOOL BOOKS IN NEW BRUNSWICK

In the speech of His Honor, the Lieutenant Governor at the opening of the New Brunswick Legislature, the following reference was made regarding free school books: "During recess my Government has given serious consideration to the question of making provision for free school books, and after a thorough survey of the situation the decision has been reached to provide, for the present, free books in certain grades of our public schools and it is hoped that a date not too far distant this system may be extended to more advanced grades than at present contemplated. To this end a Bill will be submitted for your consideration."—Spectator.

#### ARE PEOPLE LESS CAREFUL

Are people becoming less careful of their personal safety? There has been an alarming increase in the number of accidents to the staff of the Great Western Railway during the last twelve months.

"They are unnecessarily frequent," says the general manager in the current issue of the "Great Western Railway Magazine." "The avoidance of obvious and needless risks would save many painful mishaps."

"It means that a wave of indifference to risks—of lack of care, of disregard of safety—has flowed in upon us," says another writer in the magazine. "Strangely enough, the same kind of thing has happened during the past year or two in nearly every industry, and all over the world."

From January to September last year the number of accidents on the Great Western Railway was 2,291. For a similar period this year the number was 2,591.

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#### TID-BITS

Public office is a public trust, the authority and opportunities of which must be used as absolutely as the public moneys for the public benefit, and not for the purposes of any individual or party.—Borman B. Eaton.

The ideal social state is not that in which each gets an equal amount of wealth, but in which each gets in proportion to his contribution to the general stock.—Henry George.

Truth is tough. It will not break like a bubble at a touch; nay, you may kick it about all day, like a football, and it will be round and full at evening.—Oliver Wendell Holmes.

**MURINE**  
 NIGHT & MORNING  
 KEEP YOUR EYES  
 CLEAN CLEAR AND HEALTHY  
 Write for full size card book—worth of \$1.00

**HEMORRHOIDS**  
 Do not suffer another day with itching, bleeding, or protruding Piles or Hemorrhoids. No surgical operation required. Dr. Chase's Ointment will relieve you at once and afford lasting benefit. 6c a box; all dealers or Bannerman, Bates & Co., Limited, Toronto. Sample box free.

## ALL THAT IS CHEERFUL LOOKING AND ATTRACTIVE

IN MEN'S NEW SUITS FOR SPRING AND SUMMER



HEATHER SUITS, Standard Model .....	\$15.00
DONAGLE TWEED SUITS, Sport Model .....	\$18.50
HEATHER STRIPE SUITS, Two Button Model .....	\$18.00
DARK LOVAT SUITS, Sport Model .....	\$18.00
GREY, LOVAT and HEATHER HOMESPUN, Two Button Model .....	\$20.00
PLAIN STEEL GREY SERGE SUITS, Standard Model .....	\$22.50
DONAGLE TWEED SUITS, Sport Model .....	\$22.50
GREY TWEED SUITS, Two Button Model .....	\$25.00
PLAIN GREY SERGE SUITS, Standard Model .....	\$25.00
CHECKED WORSTED SUITS, Two and Three Button Models .....	\$25.00
BLUE STRIPE SUITS, Two Button Model .....	\$30.00
BROWN STRIPE SUITS, Two Button Model .....	\$30.00
PLAIN BROWN SUITS, Two Button Model .....	\$30.00

We carry a very large assortment of Guaranteed Fast Color Navy Blue Serge Suits in stock. These are especially priced at \$25.00, \$28.00 and \$35.00.

### SUITS AND OVERCOATS MADE-TO-ORDER BY THE FIT-REFORM AND ROYAL TAILORS

We have Suits and Overcoats made to order by two of the largest and Best Firms in Canada: "Fit-Reform" and "Royal Tailors." You may have a Suit or Overcoat Made-to-Order for \$22.50.

## HANDSOME TOPCOATS

IN AN ASSORTMENT OF CORRECT AND NEATLY TAILORED STYLES

ALL WOOL FAWN GABARDINES, three piece, belt .....	\$18.00
ALL WOOL FAWN GABARDINES, three piece, belt .....	\$21.00
ALL WOOL FAWN GABARDINES, three piece, belt .....	\$23.00
ALL WOOL NAVY BLUE GABARDINES, three piece, belt .....	\$23.00
ALL WOOL GREY TWEED COATS .....	\$15.00
ALL WOOL CRAVETTE COATS, Box Back .....	\$28.00
TWEED RAINCOATS, Belted Raglans .....	\$ 8.00
GREY, BROWN and HEATHER RAINCOATS .....	\$10.50
BLACK RUBBER RAINCOATS .....	\$ 5.75
OIL SLICKERS .....	\$ 8.95

WHEN IN MIDDLETON call and inspect our stock, you will then appreciate the values all the more. If unable to pay a personal visit, remittance, we will be glad to send goods to you on approval. Phone or write us your requirements.

Every man, young man and boy desires to be well dressed at Easter, and with this end in view, we feel certain that in our Gents' Department this desire can be gratified. Our showing depicts all that is new for men, youths and boys. Easter is a most opportune time to don a new Suit or Overcoat—and for Quality, Workmanship and price you can get just what you want at our store.



## Men's Furnishings



### MEN'S WORKING CLOTHES

Khaki Shirts .. 95c, \$1.25 and \$1.50	
Blue Shirts .. 95c, \$1.25 and \$1.50	
Grey Shirts (Heavy Cotton) .. \$1.50	
Khaki Pants .. \$1.75 and \$2.00	
Khaki Breeches .. \$2.00 and \$2.50	
Cottonade Pants .. \$1.95 and \$2.75	
Blue Denim Overalls .. \$1.95 and \$1.95	
Headlight Overalls .. \$2.50	
Leather Work Gloves .. 50c	
Working Sox .. 25c and 50c	

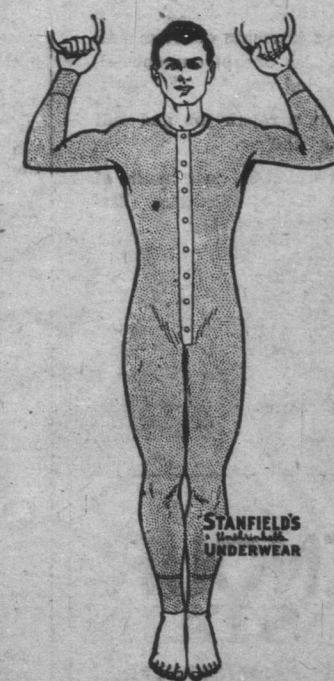
### HATS AND CAPS

We carry a very large stock of Men's Hats and Caps. We have them in most every shade and style made. Hats range in price from \$1.95 to \$6.00; Caps range in price from 75c to \$3.00.



## MEN'S UNDERWEAR

PENMAN'S BALBRIGGAN COMBINATIONS



Shirt Sleeves and Knee Length .....	
Short Sleeves and Ankle Length .....	
Long Sleeves and Ankle Length \$1.25	
Penman's Balbriggan Shirts .....	
Short and Long Sleeves per garment .....	65c
Penman's Balbriggan Drawers .....	
Knee and Ankle Length, per garment .....	65c
Stanfield's Silk and Wool Combinations .....	\$4.00
Stanfield's Light Weight Wool Combinations .....	\$3.75
Atlantic Spring and Fall Weight Combinations .....	\$2.00
Cotton and Wool Merino Underwear per garment .....	85c

### MEN'S GLOVES

Tan Cape, Unlined Gloves .....	\$1.59
Grey Sweater, Unlined Gloves .....	\$1.95
Grey Silk, Lined Gloves .....	\$2.25
Grey Silk Gloves .....	\$1.75
Imported English Cape Gloves .....	\$3.50
Natural Shade Deer Skin Gloves .....	\$3.50
Tan Silk Lined Gloves .....	\$2.50

## EASTER

Easter is close at hand. This is a recognized season for the appearance of New Apparel. There will be something from our stock that you will need, and now is the time to get your requirements: Suit, Coat, Hats, Caps, Ties, Shirts, and many other things are here for your inspection. Let us help you solve the problem for Easter. We are always pleased to meet our friends at any time.

**BENTLEY'S LIMITED, MIDDLETON, N. S.**