

The COLLINS BULLETIN

ISSUED BY

THE COLLINS WIRELESS TELEPHONE CO.

GENERAL OFFICES AND LABORATORIES

54 and 56 Clinton Street, Newark, N. J.

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No. 2

With this issue of the BULLETIN we are sending you the second part of our catalogue. It deals with Demonstration Wireless Telegraph Apparatus exclusively, and as a casual glance at its contents will show, a small sending and receiving instrument may be purchased for as low a price as \$15. The principles underlying the "Prep' Set" are exactly the same as in the higher priced instruments, and a fairly good working knowledge of wireless may be obtained with it. We have sold a good many sets, however, which we fear were never purchased with the intention of elucidating the properties of electric waves. For instance, we have sold some sets to spiritualistic mediums (?) and many a chill will chase up and down the back of the foolish auditors seated hard by the mystic table, while the latter will click out signals from the "dear departed" to the tune of the operator manipulating a telegraph key in another room. But that's their business, not ours.

With almost any of the demonstration sets listed in Part II all the experiments performed by Hertz such as setting up electric waves, detecting their presence, reflecting, refracting and polarizing them and other optical phenomena may be produced, the only other requirements being some sheets of polished zinc or copper, a large piece of pitch and a couple of grids, formed of wooden frames with wires inserted in them. It is also easy to find the wave crests and nodal points in stationary electric waves and produce shadows and other interesting manifestations that are almost past human belief.

The wireless telephone! Does that mean that the next generation will go about with an extra vest pocket in which to carry the individual telephone?—Pittsfield, Mass., Eagle.

It will be observed that the first parts of our catalogue are fully protected by U. S. copyright, and the Collins Company will take immediate steps to prosecute any person or persons who attempt to either appropriate or utilize it in part or in whole. This is the first catalogue of wireless telephones ever published, and like our wireless telephones, imitators must not infringe our rights.

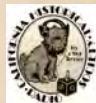
One of our customers wrote us that he was enabled to send and receive signals with his FRESHMAN SET over a distance of nearly two miles, but that he did not think *Clientele* and *Collins* were words that go well together. Since he is satisfied with his outfit we are determined to "cut out" all French words and phrases hereafter.

The wireless telegraph experiments which have been conducted with great success by the boys of the Montclair (N. J.) High School will have to be abandoned, according to a recent report, because the fire insurance underwriters have condemned them as a source of danger. The underwriters allege that as the wires used by the youthful experimenters are not protected, they might cause a fire.

We are not informed as to the nature of the installation but if the aerial is connected direct to the ground when the instruments are not in use, as is the common practice, there is not only no danger but it acts as a protection from static discharges and lightning. Evidently, the underwriters of Montclair need a few lessons from the boys in wireless.

It may yet become possible to put a receiver to your ear and carry on a conversation with yourself around the world.—Kansas City Journal.

The Collins Bulletins will be sent free to any address on application.



COLLINS CABLELESS TELEPHONY.

EDITORIAL IN THE NEW YORK TRIBUNE.

A dozen or more inventors have essayed to employ for telephonic conversation the ether vibrations which Marconi turned to account in wireless telegraphy. At least one of these men now proposes to install apparatus which will enable his patrons to talk across the Atlantic. Years ago Professor Pupin devised a system of treating a submarine cable so that it could be used for telephony as well as for telegraphy. It has not been so applied because those who purchased his patents did not deem the venture profitable. An outfit for wireless telephony would probably cost much less than the device which Professor Pupin originated, but it is to be observed that the man who offers to provide facilities for wireless talk between New York and Paris is not enthusiastic about the commercial results of the venture. Many things fail to pay which are feasible and perhaps it may yet be regarded as somewhat doubtful whether satisfactory conversation for three thousand miles is feasible.

Between the usages of Morse telegraphy and wireless telegraphy there are several points of resemblance. One is that in both instances messages are received by the ear, not the eye. A Morse operator reads the clicks of his sounder. A Marconi operator wears a headpiece like that of the girl at a telephone switchboard, and thus hears the dots and dashes which are intended for him almost as distinctly as does the other man. This circumstance alone might have indicated that wireless telephony was easily possible. The fact is rather too suggestive, however. It has been asserted that on the top of the Eiffel Tower telegraph dispatches sent from Marconi's station in Nova Scotia have been overheard, though manifestly not meant for the listener in France. The fact that apparatus when not devoted to its own legitimate business can be employed to pry into that of other persons is not exactly a recommendation of wireless telephony.

It has been deemed worth while to formulate international rules relative to wireless telegraphy. Perhaps it will yet be found advisable to supplement them with rules concerning wireless telephony. A few weeks ago the British Admiralty opened communication with Hertz waves between its own office in London and the colossal fleet manœuvring in the North Sea under the command of Lord Charles Beresford. Would it be particularly agreeable to any leading naval power—England, the United States or Germany, for instance—to have its official instructions picked up by an unauthorized person on the Eiffel Tower? What guarantee can be afforded that such abuse would never be practicable in wireless telephony as it is in wireless telegraphy?—Aug. 25, 1908.

MR. COLLINS' REPLY.

To the Editor of the *N. Y. Tribune*—

Your editorial on "Wireless Telephony" (August 25th) cites some very important factors in the new art, but I cannot, as the originator of the long distance wireless telephone, quite agree with your conclusions.

First, *re* the feasibility of trans-Atlantic wireless telephony, let me say that in my opinion it is not a question of such an equipment failing to pay dividends, but rather it is a matter of satisfying certain technical conditions that now stand in the way.

A venture of this kind, when the time comes for its commercial exploitation, will doubtless pay its investors handsomely, since it would be the only medium for the transmission of articulate speech between Europe and America.

The reason a cable telephone system has not been provided is not because it would be unprofitable, but in virtue of the fact that, even with Pupin's improvements, it has been impossible of accomplishment, since when he adds enough inductance coils to counteract the effects of capacity he also adds a resistance more than that of the cable itself.

In my system of long distance wireless telephony we have neither inductance, capacity nor resistance of wires to overcome, and the only retardation of our electric waves through space is the minimum resistance offered by the noiseless ether itself. Wires and cables are consequently the artificial medium while the ether is the natural medium for the electrical transmission of intelligence.

Second, to one who has observed that the head telephone receiver worn by a Marconi operator is to all intents the same as that worn by a Bell girl is afar from right if he thinks the action or the results have anything in common unless it is that both are employed to receive electrical intelligence. They are as different as the arc and incandescent lamps are in their modes of operation and what may be true of one may not be taken as true of the other.

Third, I have pointed out during the past five or more years why selective wireless telegraphy was difficult of accomplishment and I shall point out in the future why selective wireless telephony is easy; without entering into a didactic dissertation the reasons may be stated in a few words, *i. e.*, the first system uses periodic oscillations while the second employs continuous oscillations and consequently while the former is incapable of producing sustained electrical resonance the latter is eminently adapted to produce these desired results and by this means only can selectivity become an actuality in practice.

I may add here that secrecy and selectivity are not synonymous terms although the average man seems to so believe. The Bell 'phone and the Morse telegraph are selective; the Marconi telegraph is not entirely selective for reasons I have mentioned, but none of them are proof against the legion of "listeners in."

What I claim is, that my wireless telephone will be highly selective but I do not claim entirely secret, since there are no means, electrical or otherwise, in the whole category of the transmission of intelligence that cannot be "tapped" and the message, if desired, obtained by the unscrupulous.

A. James Collins

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Sparks in the Dielectric Medium.

The wireless news of the month in notes.

At the Telephone.

A cartoon from the Chicago Record-Herald showing how death reaped a rich reward when the Intermediate Crib was destroyed by fire at Chicago for the want of the wireless telephone.

The Triumph of Wireless.

A cartoon from the Chicago Inter-Ocean showing how death was defeated by wireless on the ill fated *Republic*.

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The Smallest Receptor.

The smallest wireless receiving apparatus ever constructed.

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Told by Jack Binns, the Hero of the Republic. How President-elect Taft learned the mysteries of C. Q. D.

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Being the second paper of a series of articles by A. Frederick Collins, and telling in simple language and clear cut pictures how to make two types of receiving apparatus, one of which can be made for a dollar or less.

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