# WIRELESS WONDER AGED 14 AMAZES SENATE COMMITTEE

## Young W. E. D. Stokes, Jr., Glibly Discussed Radio-Activity and Modern Electricity in a Way That Made Staid Solons Wonder.

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W.E.D STOKES JR

George Manley with Some of His Home Made Apparatus.

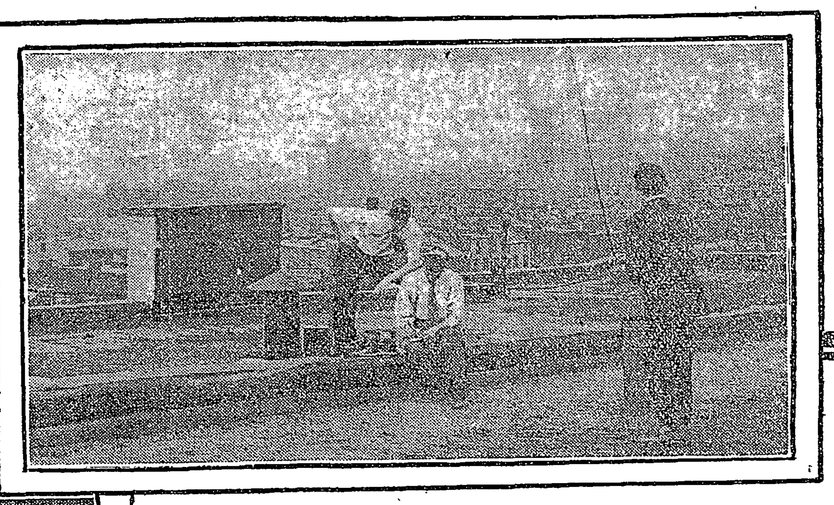


Ralph S. Bolton, 261 Stuyvesant Avenue, Brooklyn, a Wireless Worker.

W. E. D. Stokes, Jr., the 14-year-old President of the Junior Wireless Club. (In picture above.)



W. E. D. Stokes, Jr., at Home.



A Group of Wireless Operators Receiving Messages.

**N. Leavers, 149 Clinton Street, Brooklyn, N. Y.**

ONE of the reasons why W. E. D. Stokes, Jr., the fourteen-year-old President of the Junior Wireless Club of America, Ltd., led a delegation of his organization down to Washington last week to oppose the passage of the Depew bill for the regulation of radio communication, was to take a hack at what he said was the "communication trust" of this country. His mission was considered a success by many of his elders, who ought to know. He is the youngest pleader that ever appeared before a Senate committee.

He is at once the youngest orator who ever appeared before a Senate commitee to argue on a bill, and undoubtedly the youngest self-confessed trust-buster in the world.

Some night soon, perhaps this week, the thirteen charter members of the Junior Wireless Club of America, Ltd., will get together in the Ansonia Hotel, Broadway and Seventy-third Street, and will there felicitate the organization, over a dinner, upon the first hack taken at what they call the "communication trust," and upon the prospects for their continued use of the air, of which it was the purpose of the "trust," through this bill, to deprive them, they declare.

W. E. D. Stokes, Jr.—called Weddy, as his father was also called in his younger days—rode back from Washington triumphant Friday afternoon, having just missed a dinner at the White House at the invitation of the President. At 9 o'clock Friday night he was found in his workroom at the southeastern corner of the sixteenth floor of the Ansonia Hotel among a tangle of apparatus of all kinds.

Stretched all the way across one end of the room was a blue Yale flag, toward which the young inventor inclines strongly. As Harvard got young Sidis, the mathematical and philosophical prodigy, so Yale will probably get this prodigy of physical science.

One side of the room was taken up with the wireless telegraphy and wireless telephone instruments. It was not toy machinery, but full-sized apparatus, with all the appearance of having been made for business purposes.

With an ease and swiftness born of exceeding familiarity with the instruments, the boy connected a wire here and there, turned a few screws, and prepared to see what he could catch out of the air from the members of his club, who have a wave length which enables them to talk with one another without interfering with other operators, so President Stokes says.

"Oh, I suppose John did not get up the new aerial while I was gone," ne explained to a friend who knew all about his wireless experiments. "I told him to take down the old aerial on the roof while I was gone and put up that better one, so that I wouldn't lose any time. You see, we got back earlier than we expected, and I suppose he didn't finish his work. I thought of going to the roof and looking after the thing when I came home to-night, but I guess it would be a ticklish job up there to-night, with the wind going like it is.

"No, I guess we won't do anything to-night. But to-morrow I'll get the members on the wire, and we will have a talk about what happened down at Washington."

The youngster then began to unloosen his wireless connections for the night, pulling a rope here that swung a huge prong out of socket, turning a wheel there that broke a strong current of electricity, and delicately touching a fragile coil of wire at one end of the table.

Hanging from the ceiling was a model of an airship, and stuck around in several parts of the room were various kinds of scientific kites, which formed the basis of the aeroplane idea. The room was brilliantly lighted with a half dozen different kinds of electric apparatus. Among them was one of the familiar devices which shows a little mill inside a vacuum turning from the effects of the light rays.

Outside the window fluttered a big weather signal flag, to which the boy attends. This room is the club room and experimental station of the Junior Wireless Club, Ltd., of which Master Stokes is the founder and president. He is small for his age. He has black hair and quick, alert black eyes, and talks with the grammatical correctness of a school teacher. But his restless activity, his jumping about from one place to another, his difficulty in managing his hands unless he is at work or playing with something, his frankness and simplicity—all mark him out still essentially a boy, though he has progressed along electrical lines of investigation as far as many professors of physics.

He looks a good deal like his mother, who is now Mrs. Phillip Lydig. His father, who accompanied him to Washington, and who sympathizes with him in all his scientific endeavors, affording him costly apparatus and instruction when he needs it, is excessively proud of the boy, though he tries to make it appear a humorous thing that he should play with electricity and harangue a Senate committee.

Mr. Stokes occupies a large part of the sixteenth floor of the Ansonia Hotel, of which he is the proprietor. Through it there runs two or three long, winding halls. Strung along the sides of the first of these are innumerable gilt chairs of various designs, looking as if they had been picked up all over the world, and pieces of ancient carved furniture of many kinds. The boy, hearing that the reporter had entered the outside hallway on Friday night, got out there before his elders and had a few words by himself.

"Well, what success did you have with the Depew bill?" he was asked.

"Oh, fine, we think," he answered, restlessly playing with a string of electric light bulbs that lay on the floor. He didn't think they ought to be there, and so he hid them in a corner.

"Well, what is the Senate committee going to do about it?" he was asked.

"We think they will veto the bill."

Which shows that the youngster doesn't know nearly so much about Senate committees as he does about aerials, kilowatt coils, and the like. Finally he leaped on a bicycle, which sat against the wall, and went racing through the winding hallways.

After a while he was pinned down to a talk about his wireless work and the expedition down to Washington. About four years ago, he went on, he became interested in electricity, which he encountered in the course of his regular studies. It attracted him powerfully, and so he pursued it diligently.

"You see, one things leads up to another," he explained, "and I just naturally came on up to wireless telegraphy and telephony. That seemed to give me plenty of room to work in. I have invented a good many electrical appliances. Patents have been granted on five or six of them."

Miss E. L. Todd of 121 West Twenty-third Street, the earliest woman to devote herself to heavier-than-air flying machines in this country, gave young Stokes considerable instruction in his studies. She is the Honorory President of the Junior Wireless Club of America, Ltd., and has an apparatus near her rooms with which she talks to the club members.

"I built my own station here," went on the boy. "At first I put in small instruments of a simple sort, but I have replaced these with bigger and better instruments from time to time; and now I think I have as complete a station as any amateur in the country. It's as good as many belonging to the professionals.

"A couple of years ago I thought it would be nice to organize a number of us boys who had begun to experiment with wireless telegraphy, so that we could arrange to talk to each other and help one another along. You see we can fix our instruments so that we get a unique wave length, and that enables us to talk to each other without interfering with anybody else, and without being interfered with by others.

"There are thirteen charter members, and every one of them has apparatus of his own. We usually talk to each other early in the night. I am the President. George Eltz of 441 West Forty-seventh Street, is Vice President. Fatoute Munn, out in East Orange, is Recording Secretary, and Frank King, up at 326 West 107th Street, is Secretary, and Frederick Seymour, who also lives in East Orange, is Treasurer.

"Do you know, there are between 25,000 and 40,000 amateur wireless experimenters in the United States, and a great many of them are boys."

In addition to the thirteen charter members, who have apparatus of their own, there are twenty or thirty members of the club who use the stations of friends, and who have considerable electrical knowledge. They attend the weekly or monthly meetings of the club at the Ansonia and know the secrets of the organization. "But a boy must have his own station," explained President Stokes, Friday night, "to be a full-fledged member of the organization."

Master Stokes said that he could pick up messages twenty-five miles away with his wireless telephone instruments. He thinks the most remarkable development in the science of electrical communication is to be along that line.

"I don't think it will be a very long time," he said, "before men will be able to carry around with them in their automobiles or aeroplanes wireless telephone outfits. With these they should be able to talk to people having like instruments within a radius of forty or fifty miles. Miss Todd has planned to put a wireless apparatus on her aeroplane, but she hasn't gone up in it yet.

"If the communication trust is allowed to go as far as it likes, all the wireless instruments will be gobbled up so you can't buy one by the time science has made it possible for people to talk to one another that way. There are certain kinds of talking instruments now that can't be bought; they can only be rented."

The President of the Junior Wireless Club, Ltd., said that with his wireless telegraphy instruments he could send messages about 500 miles, and receive them from places about 1,000 miles away. He had heard messages from Galveston, Texas, he declared.

Speaking about what he thought was the affected superiority of adult wireless operators, he told of a boy who on visiting a wireless station some months ago found a new operator packing up his things to leave. The operator said there was something radically wrong with the station, which would have to be attended to by an expert. The boy, went on young Stokes, located the trouble in a few minutes and set things going. It later developed that he was the boy.

"About a month ago we heard about the bill that looked like it would result in monopolizing the air for professional wireless operators and companies," went on the boy, "and we decided we had better send a delegation down to Washington to argue before the Senate Committee on Commerce and Labor. George Eltz, Frank King Ernest Amey, and myself decided that we would go down. We left here on Wednesday, and arranged for a hearing on Thursday.

"There were a lot of other amateurs from all over the country down there to argue against the bill as it now is, and a good many representing the professionals. The man who spoke just before I did was over six feet tall. He was an amateur, too, and he thought that the bill would cut us out of the air, if we obeyed the letter of the law.

"As a matter of fact, it would require an army of wireless Government inspectors to inforce the law, and it would take a whole lot of money. It would require the building all over the United States of a double system of wireless stations in every locality, so as to take the triangulation, to locate the offender. For a wireless aerial will be just as operative if strung within a house (in the cellar, or any portion of the house) or along the eaves of the house, as it will in the air.

"It is just as easy to conceal the aerial as it is to conceal the operator. With the new methods of radio transmission, the location of the operator could be absolutely concealed. There would be no noise, no spark, to indicate his location. He might have a dozen aerials, a mile apart, which would only cost from $2 to $5 each, connected to some one locality, or a dozen localities, where the operator could be concealed; and while the engineers were trying to locate one apparatus by triangulation the offender could be operating another one a mile away, or two miles away. And it would require the co-operation of several skilled raido engineers to locate each apparatus.

"To substantiate this statement, any of us would guarantee to prove that it would take at least a month for the Government aerial engineer detectives to discover our locality, for the engineering calculations would be so intricate it would take days to locate the exact position of the offender.

"Is our Government prepared to establish a Detective Bureau of Wireless Police, which will be fully expensive, if not more expensive, to carry on as the United States Customs House?"

Master Stokes thinks that the wireless system of telegraphy used by the United States battleships are inferior to that used by the other first-class nations. In particular, he things that the navies of Japan, England, Russia, and Germany excel this country in their wireless systems. "The messages of the British Admiralty sent on a uniform wave length and in a secret code cannot be made out by those for whom it is not intended," he said.

"The system of wireless on our battleships should be such that every ship could send 1,000 miles and receive 2,000 miles, and two or three special ships of each fleet should be able to send 2,000 miles and receive 4,000, so that no fleet of our Government would be out of range of Washington, in which city should be established the very best possible type of central station.

"Every ship should have an apparatus of the same up-to-date type, instead of the many different antiquated systems now in use, most of which lack means of cutting out interference, and which use wave lengths varying from 450 to 1,000 metres, as you can see from consulting the United States Government report of Oct. 1, 1909.

"Our Government should use a uniform wave length and a secret code for transmitting Government messages, and with the proper kind of instruments, they would have no complaint to make of interference from private or public stations.

"Mr. Chamberlain, Commissioner of the Bureau of Navigation, Department of Commerce and Labor, in a letter to us March 15, 1910, says that Admiral Sperry told him recently that he was in constant communication with Washington in the round-the-world cruise until he got within two or three days of the home shores. We believe that the Admiral's wireless operators did not represent things to him quite as they were. We know the official Government report, previously quoted, states that the Connecticut had on board at that time an instrument of the antiquated Shoemaker type, having only a 3 K. W. transformer.

"Any expert will tell you that an instrument of only 3 K. W. transformer could not, under the most favorable conditions send over 450 or 500 miles, more probably only about 400 miles on the average. With this instrument an operator could not possibly cut out interference or work with equal efficiency under all atmospheric conditions at all hours of the day or night, and at all seasons of the year. Surely the operator misled the good Admiral as to the real cause of trouble in communicating. Why, to-day most all the ocean steamer messages are transferred or relayed from ship to ship within a radius of 500 miles at most.

"We amateurs are blamed for much that we do not do. The cases where amateurs actually interfere are few and exaggerated. In many cases antiquated apparatus and incompetent professional operators are responsible for the trouble. A good operator with an up-to-date machine can cut out interference and continue his work.

"It has been said that many 'fake' messages have been sent to the fleet during its manoeuvres for the purpose of causing confusion in orders, and out of a wish to make trouble with Government operations. None of our members has ever caught any such messages, and believe such reports exaggerated. We have, however, heard "fake" messages sent out by some of the stations of these water-stock-jobbing so-called wireless companies. One time we interrupted a message purporting to come from the Eiffel Tower, Paris, France, which we now was sent out by one of the officers of a company from a station on Manhattan Island, for the purpose of making people believe the company had solved trans-atlantic communication."

But when the boy President of the Junior Wireless Club of America, Ltd., talked like that, it was clear that he was repeating some of the matter from the speech prepared for Washington delivery. And he must have had considerable help on that, clever as he is.

W. E. D. Stokes, Sr., says he is going to let W. E. D. Stokes, Jr., go into whatever profession he likes. That hasn't been decided upon yet. The youngster is simply enjoying himself just now. His electrical things make the time go by fast, and he is clever enough and energetic enough to want constantly to improve on what instruments he has.

His statement that there are between 25,000 and 40,000 amateur wireless operators in this country is probably true, and among them there are a great many boys. New York City has a great many of them. Ralph S. Bolton of 261 Stuyvesant Avenue, Brooklyn, 16 years old, made most of the machinery with which he equipped his station. His call is B. W. through the air.

E. Hyers, 18 years old, of 235 West 103d Street, has a station that is the equal of any commercial station in the city. He declares that he once heard an O. K. from Scotland on a wireless message sent from this country, after it had been relayed from ship to ship. His call is T. K. He is the master of three codes—the Morse, Continental, and Naval.

Brooklyn, which has a large group of young wireless operators, also claims Eric Leavers of 149 Clinton Street. He makes most of his own instruments and does all his wiring.

The New York Times
Published: May 1, 1910