



Clark Wireless and Its Interference Machines

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A Note

The little-known historical vignette described below began with newspaper clippings found in the archives of the Society of Wireless Pioneers at CHRS. It's one of many tales that only those old-timers who sailed the seven seas with their spark sets would remember and would have the foresight to preserve for later generations. In return, let's remember them. And now...

The Situation

Back in 1910 the primary use of radio, or "wireless" as it was then known, was in ship-to-ship and ship-to-shore communications by telegraphy. Phone (voice) communication was still in its infancy and radio broadcasting wouldn't catch on until the 1920s. On the East Coast American Marconi dominated Atlantic maritime communications while United Wireless, which had been but was no longer associated with Lee DeForest, was the biggest provider on the Pacific coast. Less well known, however, is the situation in the middle, for ships plying routes along the "great inland seas," the Great Lakes. In those days, when middle America was among the world's greatest manufacturing as well as agricultural sectors, this was potentially a very lucrative market.

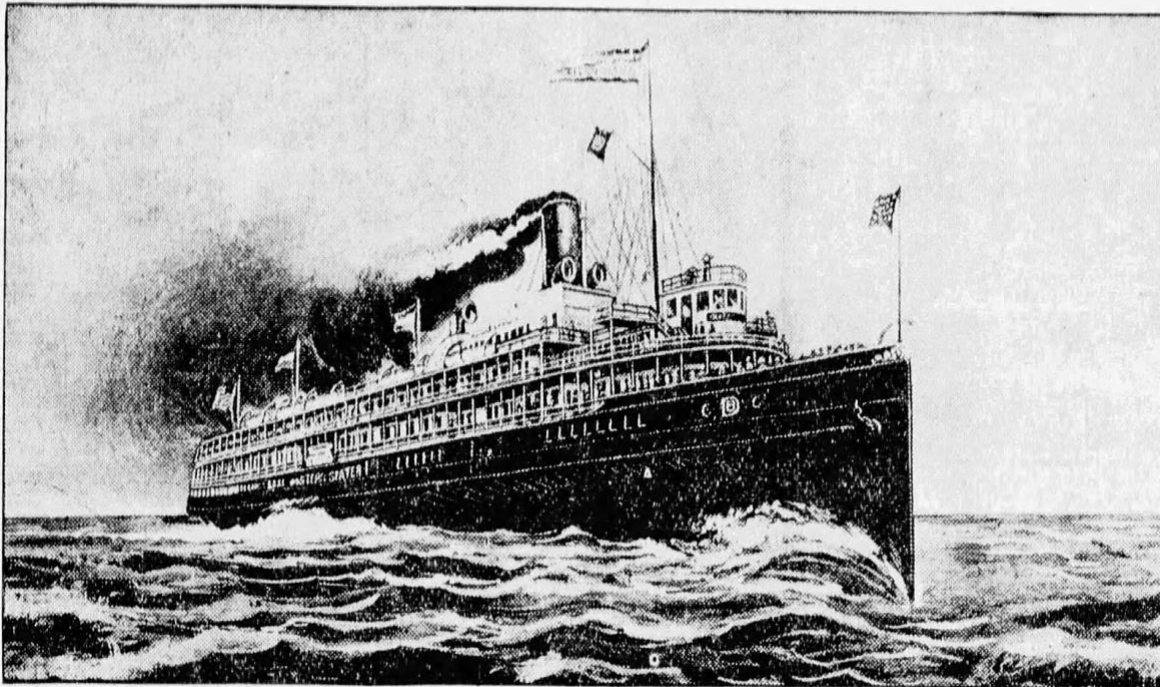
So a number of companies including Clark Wireless Telegraph and Telephone (founded by inventor Thomas E. Clark¹) and United Wireless vied for control of Great Lakes radio traffic. As with all early wireless companies, but especially American ones, success was not primarily measured by profitable message handling, because few turned a profit. Instead, what mattered most were stock and bond sales. Stations were often erected for the sole purpose of convincing locals to part with their money. Proceeds were diverted from the company to line the pockets of executives and unscrupulous stock promoters.² With this much at stake, the competition could be fierce!

* With thanks to Archivist Bart Lee.

The Incident

The *Western States* was a passenger ship of the Detroit & Buffalo line that had been equipped with radio by United Wireless. On September 21, 1910 a bit more than halfway through its trip from Detroit to Buffalo, NY, an engine high-pressure cylinder burst, leaving the ship and its 300 passengers adrift in Lake Erie.³ Although there was no fire and no immediate danger of sinking, the ship's wireless operator, C.H. Royal, was ordered to send out an SOS⁴ and communicate with the United Wireless station in Buffalo, WBL. This he attempted to do.⁵ The first few distress calls were heard by E.H. Striegel, the United Wireless operator at WBL, "but before the *Western States* had a chance to tell us of her troubles the Clark station opened up with its interference machine to break up communication."⁶

STEAMER WESTERN STATES, DISABLED IN MID-LAKE LAST NIGHT.



Buffalo Evening News, June 16, 1911.

Interference machine? Yes, Clark Wireless had not just one, but actually two! Royal, the United Wireless operator sending the SOS knew all about them, having worked at Clark Wireless previously. He later described them as evidence in court:

"This machine [at Detroit], I was told, was designed to work automatically and to prevent United Wireless from getting through any messages. This machine was so arranged by having points on a shaft of a motor that as the motor would turn it would close the circuit and make dashes... In Buffalo the design of the interference machine is changed and a salt water reostat [sic] is designed as follows: in a vessel of salt water two pieces of steel are placed, being two connections of a circuit. One piece of steel is placed down in the water and the other just touching it. When the current is turned on, bubbles form around the piece of steel near the top and when the bubbles break contact is made, and a dash is made through the wireless instrument until another bubble is formed. This is a continuous performance."⁷

So the design of the Detroit QRM generator owed something to the rotary spark gap, while the Buffalo bubble machine was similar to an electrolytic interrupter, used by amateurs to chop up direct current for transformation to a higher voltage.

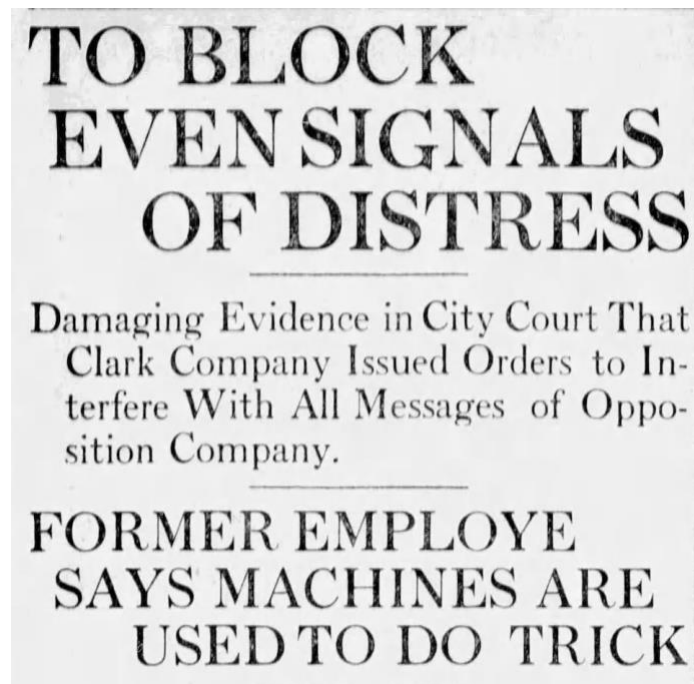
Back at WBL, now unable to hear any further messages due to the QRM, operator Streigel, telephoned the Buffalo Clark Wireless station and spoke to its operator, Ernest Goodwin, who "said he would not keep quiet."⁸ He then called the Erie, Pennsylvania United Wireless station to ask them to get in touch with the *Western States*. The same QRM kept them from doing so. In desperation, having received only an SOS but nothing further, Streigel called the Buffalo police. Once he managed to get across the urgency of the situation, they sent patrolman Heitzman out to the Clark station with an order for them to "stop butting in."⁹

Goodwin "said he wasn't butting in and how could I tell he was. He kept up a racket and for all I knew it might be calling out the police in Erie or he might be playing tick-tack-toe with himself. If I saw a man trying to talk with another across the street and saw another get between the two and begin to holler and kick up a row, I could tell plainly that he was butting in and pinch him for disorderly conduct, but how is any ordinary patrolman to tell when one wireless operator is raising a racket to drown out the messages of another?" Goodwin, however, had to temporarily shut down the machine and its noisy straight spark gap just to talk with the officer, and in that short time the ship let WBL know that it was in no serious danger. Then, as in a Lawrence Welk concert, the bubble machine was turned on again.

After seven hours adrift on Lake Erie, repairs allowed the *Western States* enough auxiliary power to limp into port fifteen hours behind schedule. Its captain, F.G. Stewart, was "mad clean through," saying that more than fifty wireless messages he sent had been interrupted and if the boat had been sinking, this could have proven fatal to everyone aboard.¹⁰

The Fallout

United Wireless was eager to take action against its perfidious rival. Warrants were sworn out against Clark Wireless operators Goodwin and another, Nelson Holt. The former was taken to jail and released a week later on a writ of habeas corpus. The latter had vanished. Goodwin was charged with "interfering with the wires or messages of a telegraph company," punishable by a maximum of 4 years imprisonment.



Buffalo Evening News, October 3, 1910

A Clark Wireless document entitled "Instructions to Operators" was introduced into evidence. It begins by saying that United Wireless has been "tampering with operators" and instructs employees to allow no one into their facilities without the written permission of Mr.

Clark and Mr. McWade "black on white."¹¹ "In your conversation with people," it orders, "state to them that you are tending to business, and as far as you know the station is a paying proposition." It goes on to warn them that "if the United Wireless had this business in hand, you boys would be walking the streets. They are laying men off right and left... You will soon see the beginning of the end and the quicker this takes place the sooner will the wireless telegraph proposition be placed on a commercial paying basis. It is up to our operators to assist us in discrediting the manner in which these people are trying to impose upon the public..."

"WE WISH TO IMPRESS UPON OUR MEN THAT THE FIGHT IS TO NOT ALLOW THE UNITED WIRELESS TO GET A SINGLE WORD THROUGH." It goes on to none-too-subtly hint that they could lose their jobs if they don't get "results" but assures them that they're poised to win this fight. Further, Royal, the *Western States* radio operator previously employed by Clark testified that "while at Detroit, I was instructed verbally by W.N. McWade, superintendent of the Clark Company, to interfere with the United station at Detroit and their boats, and not to allow them to get through a single message." He also said he had written, signed instructions to that effect at his home in Detroit.

For his part, Goodwin claimed that he had not interfered but was simply going about his regular business. If the United Wireless land stations couldn't get through to the ship, it was because their equipment was inferior. But since Goodwin had been charged with interfering with the sending of a telegraph message, the question came up as to whether the same law applied to *wireless* telegraphy, and this was to be decided in the New York Supreme Court by a Justice Hooker.¹² Before that happened, however, the incident was discussed in Washington as a test case for existing wireless laws. Acting Secretary of Commerce and Labor Benjamin S. Cable found that "there is no law at present to prevent a wireless telegraph company from interfering with the messages transmitted by a competing company and rendering the message unintelligible, even when the message is a steamship's distress signal."¹³ Legislators had long anticipated such a test case, which gave them some ammunition for passing a very necessary radio law, though not until the post-*Titanic* days of 1912.¹⁴

As to operator Goodwin, his name appeared no more in new stories of 1910-1911. United Wireless, however, did not "forgive and forget." A few months later they petitioned the

United States Circuit Court to issue an injunction against Clark Wireless and Continental Wireless to restrain them from interfering with their business on the Great Lakes.¹⁵ The injunction was denied, with Judge Hazel curiously stating that it wasn't clearly shown that the operators of these two companies willfully tried to hinder United Wireless from sending messages.¹⁶ He did, however, allow United the right to renew the motion if the (alleged) practice (allegedly) continued.

Perhaps all of this bad publicity on interference had an affect anyway. In a case of "deja vu all over again" on the night of June 15, 1911, the *Western States*, carrying 250 Michigan bankers on their way to a convention in Buffalo, broke a connecting rod and blew off a cylinder head.¹⁷ A distress message was duly sent from the ship and received by the United Wireless shore station without any apparent interference. Another ship, the *City of Cleveland*, was called and within an hour it had reached the crippled vessel, offloading all those vacationing moneymen. At the time this was billed as "the first time in the history of the Great Lakes that the wireless was put to such a practical test."

Conclusions

All of these companies, United Wireless, Clark Wireless, Continental Wireless and others would soon be branded as stock frauds, with executives like Christopher Columbus Wilson, Abraham White, and A. Frederick Collins being convicted and sent to prison. Lee DeForest himself barely escaped such a fate, with the prosecutor holding up one of his audions (triodes) and pointing out to the jury that it was worthless, even as a light bulb! Even the largest wireless company, American Marconi, was not immune: their purchase of United Wireless a few years later set in motion the famous "Marconi scandal" that embroiled British MPs like Lloyd George.¹⁸ Stock swindles and bad behavior had given all wireless companies a bad name.

Interference was typically blamed on amateurs, but here we see an example of its commercial use, one that reeks of desperation. Only a company with few paying messages of its own to transmit could afford to spend its time and kilowatts jamming a competitor, who would naturally retaliate by jamming them. This is borne out by the company's statement that

operators should say that Clark Wireless was profitable but that at best, they could hope that it would be if they got United Wireless out of the picture. It was the strategy of a loser.

¹ See undated Continental Wireless Telephone and Telegraph Company prospectus, available at <https://worldradiohistory.com/Archive-Early-Radio-Assorted/CATALOGS/Continental-Wireless-Telephone-and-Telegraph-Company.pdf>.

² See, for example "Wireless and Worthless," *Munsey's Magazine*, Vol. XLVII, No. III, June 1912, p. 424.

³ "Passengers Have Long Trip of it When Ship's Cylinder Breaks Down," *Buffalo Courier*, September 22, 1910.

⁴ Newspaper accounts at the time uniformly refer to it as an SOS call, but years later the United Wireless operator at Buffalo recalled that it was actually a CQD, the earlier distress call: "Early Radio at Canisius and the 'News'," *Buffalo Evening News* March 15, 1924.

⁵ "Stone to Stop Interference with 'S.O.S'," *Buffalo Evening News*, September 28, 1910.

⁶ "Early Radio at Canisius..." *op cit*.

⁷ "To Block Even Signals of Distress," *Buffalo Evening News*, October 3, 1910.

⁸ "Early Radio at Canisius..." *op cit*.

⁹ "Chief Regan May Have to Get a Wireless Cop," *Buffalo Evening News*, September 23, 1910.

¹⁰ "Mad Clean Through," *York (PA) Daily*, September 23, 1910.

¹¹ "To Block Even Signals of Distress," *op cit*.

¹² "Wireless Interference Taken to Supreme Court," *Buffalo Evening News*, October 4, 1910.

¹³ "Not Wrong in Law to Tap Wireless,," *Buffalo Evening News*, October 10, 1910.

¹⁴ For more about the 1912 radio law and factors leading up to it, see Bob Rydzewski, "The Wireless Boys of Alameda Part 2: There Ought to be a Law," *Journal of the California Historical Radio Society*, Vol. 41 No. 2, Fall 2022.

¹⁵ "Wireless Arguments Are Heard in Federal Court," *Buffalo Evening News*, February 7, 1911.

¹⁶ "United Wireless Company is Denied Injunction," *Buffalo Courier*, February 8, 1911.

¹⁷ "Steamer 'Western States' Disabled," *Buffalo Evening News*, June 16, 1911.

¹⁸ See Frances Donaldson, *The Marconi Scandal* (New York, Harcourt, Brace and World, 1962).