

*Molecular Telephone*

When one types in the word "rare" in ebay search, 1,179,607 items come up. It is used so freely that it is now "rare" that it even means rare.

When used with the *Molecular Telephone* though, it does mean rare. Tom Adams shares a recent find of his that does fit the definition. Tom is well known for his restoration work, but this phone just needs a good cleaning.



This is one interesting phone. I called and talked to Norm Mulvey who used to have one. We discussed how the hook switch and receiver was supposed to work. He says that the receiver cord is short (true, as mine still has the original cord) and when you put the receiver up to your ear, it will pull the arm out and up to activate it. Seems it might work, but my guess is that to be sure there is no problem having a good contact, hand operation would be best. He also said the receiver just hangs loose from the receiver cord, no hook or rest for it. I'm going to run a cloth covered wire between the eyelets on the receiver and transmitter box along beside the receiver cord to ensure it doesn't fall off as my cord is old and weak. I was able to locate the original patents to give you a clear idea of the operation. It is about 1882 or 1883, as you will see the Supreme Court issued a cease order in 1888. Enjoy,  
Tom Adams



*More photos of Molecular Telephone*



Patent pages on page 11 and 12 and more info on the paperless pages on [www.atcaonline.com](http://www.atcaonline.com)



### Extending Telephone Limits.

One of the daily papers of this city gives the following account of some experiments which were recently made for the purpose of ascertaining whether the limits of telephonic communication could be considerably extended:

A series of experiments have been made in the offices of the Postal Telegraph Co., No. 49 Broadway, with Lockwood & Bartlett's new molecular telephone, by the use of which it is claimed that conversations can be carried on by persons separated by almost the breadth of the continent. The telephone was connected with a wire of the Postal Telegraph Co., running from this city to Cleveland, a distance of 650 miles, and over this wire conversation was held with Dr. Henry E. Waite, an electrician, and one of the inventors, who was stationed in the office at Cleveland. Among the gentlemen who tested the telephone were A. W. Beard, president, and H. Cummins, vice-president of the Postal Telegraph Co.; A. D. Swan, president of the Molecular Telephone Co. of New England; William S. Knox, of Boston; Charles F. Livermore, president of the Molecular Telephone Co. of New York; J. J. Waterbury, under whose supervision the tests were made; R. T. Wilson, George S. Coe, James O. Sheldon, George Bell, C. P. Dixon, James M. Johnson, W. F. Buckley and George D. Roberts. All these gentlemen talked with Dr. Waite over the wire, and the responses were as distinct and intelligible as those received over an ordinary telephone from a distance of half a mile. Such words as "Mississippi" and "forest," which are very difficult of transmission on account of the sibilants, were received with perfect clearness. The wire used is of copper, and between Nos. 4 and 5. As soon as the Postal Telegraph wires reach Chicago an attempt will be made to talk between New York and that city, and the inventors of the telephone claim that it can be done as easily as the experiments with Cleveland were conducted.

The molecular telephone differs from all others in the substitution of molecular action for mechanical vibration in the transmission of sound. The transmitter of the telephone, instead of being a metallic vibrating plate, is a carbon microphone, imbedded in and completely covered by cork, although wood, card-board, or any non-resonant material can be used. The receiver is a magnet surrounded by insulated wire at one of its poles, a continuation of which is made to tap against a plate of cork or any other substance that is free from inductive action by the variations of the current, its operation being similar to that of the sounders which are so extensively used in telegraphy. The cork absorbs the sound waves, thus producing within its substance molecular disturbance, by means of which the words spoken at the transmitting end are reproduced in a distinct manner without any confusion of syllables or liability to error in words in which sibilants occur. The molecular action ceases by the absorption of the sound waves as soon as the words transmitted are reproduced, and this, without reaction, produces perfect articulation. The officers of the Molecular company claim that the telephone can be produced one-third cheaper than the ordinary instruments.

The New York Times

Published: January 1, 1886

**THE MOLECULAR TELEPHONE COMPANY**

**THE PRESENT CONDITION OF ITS LITIGATION AND ITS PURPOSE IN THE  
FUTURE.**

The Molecular Telephone Company was organized under the laws of the state of New York in June 1880, by certain gentlemen prominent in banking and commercial circles.

The patents owned by the company embrace the most improved forms of the carbon microphone, conceded to be the future commercial and permanent form of the telephone, and differing not essentially from the Crossley telephone in England, and the Ader telephone in France. In France to-day the Blake transmitter and Bell receiver are discarded, except in the provinces. Under these valuable patents the Molecular Telephone Company commenced the business of their introduction into use in the Autumn of 1882, and continued that business satisfactorily to its patrons and successfully to itself till June, 1885, when it was restrained from further work by an injunction issuing from the Circuit Court of the United States for the Southern District of New-York, under a decision of Judge Wallace in favor of the American Bell Telephone Company.

During this time exchanges had been established and a large number of the instruments leased for private line use. Experience showed that the telephones were all that had been claimed for them, and unexcelled for loud and distinct articulation, capability for long distance telephoning, durability, and cheapness.

The company has also met with a notable success in Canada in its legal contest with the Bell Company, the Telephone Manufacturing Company of Toronto having succeeded upon its petition and after hearing in having the Bell Telephone patents for Canada declared null and void by the Minister of Agriculture, from whose decision there is not appeal.

The broad field thus opened to this company has been availed of, and wherever the instruments have been introduced there is the same uniform testimony as to their capabilities.

The bill of complaint of the American Bell Telephone Company against the Molecular Telephone Company was filed in July, 1883, and the case was heard by Judge Wallace in March, 1885. The Bell Company claimed that the Molecular Company infringed an obscure claim in Bell's patent for "improvement in multiple telegraphy," issued in 1876, known as the fifth claim, a claim which the Bell Company contended lies at the foundation of telephony, and gives the Bell Company a monopoly of electricity in all its applications to the transmission of speech. Against this claim the Molecular Company

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denied the validity of a patent claiming a principle or a force of nature; denied that Bell was the inventor of the telephone, and set up the inventions and discoveries of others made while Bell was a stranger in the field of telephone science.

A large amount of testimony was introduced by the Molecular Company, making 1,500 printed quarto pages. The evidence related to the inventions and discoveries of Philip Reis, Alfred G. Holcomb, George W. Beardslee, Peter H. Van Der Weyde, Elisha Gray, and James W. McDonough. The evidence relating to the work of Reis, the great pioneer in telephony, is especially full and complete, consisting of the testimony of living witnesses in this country and abroad, contemporaneous with Reis and publications in the German language, some of which had never been introduced in evidence before, and which describe the Reis telephone as an instrument which would not only transmit musical tones, as claimed by the Bell Company to be its only function, but which would also reproduce the quality of sound. Dr. Van Der Weyde was himself a witness, producing his original instruments as made by him and publicly exhibited in New-York at the Cooper Union in 1869, as well as a number of gentlemen now living in New-York who were present at his exhibition in 1869, and heard words transmitted and reproduced as in the commercial telephone of to-day.

Alfred G. Holcomb was a witness, corroborated by many others who made and used in this country in 1860-61 an instrument in which everybody concedes was a complete magneto telephone. He produced his instruments, and was especially and peculiarly corroborated by one George W. Beardslee, who in 1861, after Holcomb told him what he had done, made himself an instrument like Holcomb's in principle, but entirely different in form and detail of construction. This instrument, bearing unmistakable evidences of age and entirely complete, was produced also. The entire evidence relating to Gray's inventions was introduced, consisting of the testimony of himself and assistants, together with his patents, proceedings in the Patent Office, his celebrated caveat of Feb. 14, 1876, and the peculiar proceedings relating to it.

All the testimony taken in the interference proceedings in the Patent Office in behalf of James W. McDonough was also put in. The same evidence upon which the Examiner-in-Chief in his thorough and masterly decision awards priority for the magneto receiver, which is all there is to the Bell telephone proper, to McDonough. All this evidence is explained and made clear to the court by the testimony of the best electrical experts in this country, Henry Morton, President of the Stevens Institute of Technology; Charles A. Young, Professor of Astronomy of the College of New-Jersey, at Princeton; Cyrus F. Brackett, Professor of Physics in the College of new Jersey; William F. Channing, an author of many electrical works and the one to whom the world is indebted for the portable form of the telephone.

All the original instruments and publications thus put in evidence are now owned by and in the possession of the Molecular Company. Very much of this evidence seems to have been disregarded by Judge Wallace in his decision against this company, notably that relating to Gray, McDonough, and Beardslee. The decision of Judge Wallace rests, as have all the decisions the Circuit Court Judges before whom the Bell Company have won their so-called victories, upon the two early decisions rendered in Massachusetts, one against Spencer and one against Dolbear.

But those two cases are without weight or authority before a tribunal not bound by comity to regard decisions of Circuit Judges, for the reason that in both those cases it was formally admitted that Bell was the original inventor of the telephone, and thus the very question which later and present litigation has been and is striving to have decided was conceded at the outset.

The conduct of the defense in those two cases was peculiar and fatally mistaken, to take the most charitable view of it. And upon those two decisions the whole Bell monopoly has grown up. Even the Examiner-in-Chief of the Patent Office says in his report that but for those two decisions Bell could not be even in interference with those claiming to be the real inventor of the telephone.

Immediately after the decision of Judge Wallace the case was appealed to the United States Supreme Court, the appeal perfected and entered upon the docket of that court, and the case will undoubtedly be advanced for argument at the present term.

The only other telephone case now upon the docket of the Supreme Court is the Dolbear case. The case of the Molecular Company presents to the highest tribunal of the country, for the first time, all the questions involved in the invention of the telephone, a tribunal not bound by decisions of inferior courts and a case not strangled at the outset by fatal admissions.

**That Bell's patent is invalid, and that he was not the inventor of the telephone, and that the carbon microphone does not infringe any of the patents of the Bell Company, are propositions sustained by overwhelming evidence now before the Supreme Court.**

That it will be so decided cannot be doubted by any one who carefully examines the case.

In the event of success, the Molecular Telephone Company proposes to enter at once upon the establishment of exchanges with superior and tried instruments with charges for exchange service of less than half the present Bell rates; to lease and sell telephones for private line use at a price to place them within the reach of all; to enter upon the field of long distance telephoning in direct competition with the Bell Company, and with the telegraph as well. That the Bell Company, when their monopoly is broken, cannot compete with the Molecular Company will be conceded by any candid man who considers the following propositions:

*First*—The present form of the Bell telephone is old and commercially valueless in comparison with later and improved forms. Nothing but the monopoly keeps the Bell telephone in use. There is a greater difference between the present Bell telephone and the Molecular telephone than between the Reis and Blake transmitters.

*Second*—The various companies now furnishing the Bell Telephone to the public have been formed by continued consolidations and increase of stock by pouring in water till the capital of those companies bears no relation to the property and rights owned. It is within limits to say that the entire property, right, and franchises of the Bell Company and its licensees could be duplicated for one-twenty-fifth of the stock capital represented and upon which the public have to furnish the money to pay dividends, and thus it is that the

rental and royalties exacted bear no reasonable relation to the cost of manufacturing the instruments and furnishing service to the public.

*Third* —As a result of the Bell Company's contest with the Western Union Telegraph Company in what is known as the Dowd case, a compromise was made by terms of which the Bell Company were to pay the Western Union Telegraph Company twenty per cent, of their gross receipts, and were not to use the telephone in rivalry of the telegraph – twenty per cent of the gross receipts equals forty per cent of the net receipts – it is too obvious to remark that a company which gives away forty per cent of its net income at the outset cannot compete with a company that has no royalties to pay and owns its patents and can give the public an unrestricted use of the telephone.

Bell's priority of invention was upheld in 1888 by the United States Supreme Court

#### US Patents owned by The Molecular Telephone Company of New York

US228824-Transmitter-Lockwood-Bartlett-Molecular-6-15-1880  
US228825-Receiver-Lockwood-Bartlett-Molecular-6-15-1880  
US229151-Transmitter-Lockwood-Bartlett-Molecular-6-22-1880  
US229153-Transmitter-Lockwood-Bartlett-Molecular-6-22-1880  
US231065-Receiver-Lockwood-Bartlett-Molecular-8-10-1880  
US239519-Transmitter-Lockwood-Molecular-3-29-1881  
US241385-Transmitter-Lockwood-Bartlett-Molecular-5-10-1881  
US241386-Receiver-W-V-Lockwood-Molecular-5-10-1881  
US250306-Receiver-Waite-Molecular-11-29-1881  
US250308-Transmitter-Waite-Molecular-11-29-1881  
US252714-Transmitter-Bartlett-Waite-Molecular-1-24-1882-TA Phone  
US253665-Transmitter-Bartlett-Waite-Molecular-2-14-1882  
US253812-Receiver-Bartlett-Waite-Molecular-2-14-1882  
US256907-Receiver-R-M-Lockwood-Molecular-4-25-1882  
US262532-Switch-Bartlett-Waite-Molecular-8-8-1882-TA Phone  
US271188-Receiver-Bartlett-Waite-Molecular-1-23-1883  
US286875-Receiver-Waite-Molecular-10-16-1883  
US286876-Receiver-Waite-Molecular-10-16-1883  
US287742-Receiver-Waite-Molecular-10-30-1883  
US287743-Receiver-Waite-Bartlett-Molecular-10-30-1883  
US287896-Receiver-Bartlett-Waite-Molecular-11-6-1883  
US292602-Receiver-Waite-Molecular-1-29-1884  
US292603-Transmitter-Waite-Molecular-1-29-1884  
US298924-Receiver-Waite-Molecular-5-20-1884  
US298925-Transmitter-Waite-Molecular-5-20-1884  
US302364-Telephone Exchange System-Waite-Bartlett-Molecular-7-22-1884-TA Phone  
US305552-Switch-Waite-Molecular-9-23-1884  
US306050-Switch-Bartlett-Molecular-10-7-1884  
US310751-Receiver-Waite-Molecular-1-13-1885  
US312409-Transmitter-Waite-Molecular-2-17-1885  
US316204-Transmitter-Bartlett-Waite-Molecular-4-21-1885  
US316205-Magneto Telephone-Waite-Bartlett-Molecular-4-21-1885-TA Phone  
US316206-Receiver-Waite-Molecular-4-21-1885-TA Phone  
US318058-Receiver-Waite-Molecular-5-19-1885  
US319042-Telephone-Waite-Molecular-6-2-1885  
US327625-Telephone-Waite-Molecular-10-6-1885