

THE RISE AND FALL OF THE EDISON  
SPEAKING PHONOGRAPH COMPANY,  
1877 - 1880

by

Raymond R. Wile

PREFACE

Until recently, it was impossible to prepare a detailed account of the genesis of the Edison Speaking Phonograph Company, for relatively little had survived at the Edison National Historical Site and no other major accumulations of early phonographic documents were known. However, the discovery of several other collections of documents has now made such a detailed study feasible. An amplification of the following paper will form the basis for a portion of my proposed history of the business organization of the phonograph industry, from its origins through 1904.

I am grateful for the past and present kindnesses of many individuals. At the Edison National Historical Site, my research was begun while the following people were still there. Mr. Melwin Weig, Superintendent, was always encouraging and a true friend; Mrs. Kathleen R. McGuirk was always more than helpful; Mr. Harold Anderson served as one of the few remaining links with the recording period; Mr. Norman Speiden had originally organized much of the archival material; and Mrs. Dayle R. Mathews, Assistant Archivist, was also very cooperative. Their unfailing courtesy and enthusiasm early established the continuing tradition of friendly assistance which I still experience. My gratitude to the present staff is unbounded. They have made themselves a part of my research and have shared in many of the thrills of discovery. These have included Mr.

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Warren Beach, Park Manager; Mr. Samuel H. Reck, former Park Manager; Miss Elizabeth E. Albro, Supervisory Museum Curator; Mr. Arthur "Reed" Abel, Archivist; Mrs. Leah S. Burt, Assistant Archivist; and Miss Marilyn L. Kyles, of the Curatorial Staff. At the American Telephone and Telegraph Co., Mr. Lewis Gum extended to me the use of the historical library, and Mrs. Viola B. Graeper, Historical Librarian, unearthed the large amount of Speaking Phonograph material in the collection. The Bell Room material at the National Geographic Society was used through the courtesy of Dr. Melville Bell Grosvenor and my indebtedness to Miss Betty Tinley and Mr. Kenneth Cox will be even more apparent when my research concerning the 80's is published. The Staff of the Historical Society of Pennsylvania was more than helpful and shared in my thrill of discovery at the rich vein of material, including the business records of the Edison Speaking Phonograph Company in the Painter Papers. The superb microfilm produced at that time has made it a pleasure to utilize these materials.

A portion of this research has been supported by a Grant-in-Aid from the New Jersey Historical Commission. The recognition by the Commission of the importance of my research is acknowledged with gratitude. I should also acknowledge the assistance extended by Allen Koenigsberg, of the Brooklyn College Classics Dept. and publisher of the *Antique Phonograph Monthly*. While little in this paper concerning the early period is directly attributable to Mr. Koenigsberg, he has often acted as a friendly sounding board for me and critically read the manuscript for me.

My own family has long been involved in my interest and have suffered patiently throughout my research. This work, then, is dedicated to them with love.

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## RISE AND FALL...

The full account of the development of the phonograph will probably never be known. It was created in the last quarter of the nineteenth century, a period of great creativity for Thomas A. Edison, and never again would he produce as varied and original a group of inventions. Newspapermen had quickly dubbed him "the Wizard of Menlo Park" and his research laboratory "The Invention Factory." He became America's first scientific "folk-hero" and was always good for a story when filler material was necessary.<sup>A</sup>

Even though the phonograph was a popular subject in the press from the very beginning and much of the early chronology is still shrouded in conflicting accounts, a rough outline can be established. On July 18, 1877, Edison noted on the bottom of a "Speaking Telegraph" laboratory sketch-sheet:

"Just tried experiment with a diaphragm having an embossing point & held against parafine paper moving rapidly the spkg [i.e. speaking] vibrations are indented nicely & there is no doubt that I shall be able to store up & reproduce automatically at any future time the human voice perfectly."<sup>1</sup>

By August 12, enough experimental work had been conducted for the phonograph to sit for its first portrait. It had already evolved from a strip model with a sliding speaker. *PLATES I&II*. This sketch should not be confused with another erroneously marked with this date. The artwork is crude and hurried, but the device and its purpose are clearly recognizable. September saw the drafting of a press release by the inventor, but for some reason the document was not sent out. Accompanying drawings show a machine which used long strips of parafined paper for a recording medium.<sup>2</sup> Between the end of September and the beginning of November there is only one presently known reference to the phonograph - a letter. At this point, all known documentation ceases. Benjamin Butler, the recipient of the cited letter, reacted as expected: "Tell me something more about your wonderful invention in recording the human voice. I need not say that you had better keep it perfectly secret."<sup>3</sup>

A former telegrapher and Edison associate, Edward H. Johnson, had been touring the Lyceum Circuits during 1877 demonstrating the Edison Telephone. A born lecturer, eternal optimist, and "boomer;" Johnson could easily have set for that patron saint of the Gilded Age, Mark Twain's Col. Beriah Sellers.<sup>4</sup> On October 18th, he had abruptly terminated his 1877 speaking tour at Jersey City. Soon after, on November 5th or 6th, the *Scientific American* published its November 17th issue, and it contained a long letter from Johnson describing Edison's "summer" phonograph. It is a virtual paraphrase of the unreleased laboratory letter of the 7th of September. Two of the drawings were utilized for engravings by the *Scientific American*. There was no indication at all of the cylinder phonograph that was to appear publicly.<sup>5</sup> This letter was reprinted in full by at least three of the New York daily papers. "Wonderful possibilities of Mr. Edison's latest invention;" "A singular invention" were some of the headlined reactions.<sup>6</sup>

Johnson soon grasped the full commercial possibilities of the phonograph and immediately must have begun efforts to become involved with its control. He made contact with the lobbyist, promoter, and newspaperman, Uriah Hunt Painter, who was then Washington correspondent for the *Philadelphia Inquirer*. **PLATE IV.** Painter, through his many political and business connections, would be able to put a group of backers together and would undoubtedly include Johnson in the package. By the time the first working model of the phonograph was displayed at the offices of the *Scientific American*, on December 7th, the wires of Western Union were humming with:

"Phonograph delivered to me today. Complete success.

Talks plainer than telephone. Inform Henry & Butler."<sup>7</sup>

**PLATE III.**

This device, actually constructed between December 1 and 6, consisted of

"a metallic cylinder having a helical indenting groove cut upon it from end to end. This cylinder was mounted on a shaft supported on two standards. This shaft at one end was fitted with a handle, by means of which the cylinder was rotated. There were two diaphragms, one on each side of the cylinder, one

being for recording and the other for reproducing sound. Each diaphragm had attached to it a needle. By means of the needle attached to the recording diaphragm, indentations were made in a sheet of tin-foil stretched over the peripheral surface of the cylinder when the diaphragm was vibrated by reason of speech or other sounds. The needle on the other diaphragm subsequently followed these indentations, thus reproducing the original sounds.

Crude as this first model appears in comparison with machines of later developement and refinement, it embodied their fundamental essentials, and was in fact a compleat, practical phonograph from the first moment of its operation."<sup>8</sup>

Johnson's letters are usually full, chatty, and optimistic, and his discussion of the new invention on December 8th was no exception. His pen literally flew across the pages. He almost immediately mentioned his discussions with Edison concerning Painter as a possible backer of the phonograph and that he had urged Edison to construct a new exhibition phonograph that would be more reliable than the patched-up and unpredictable first-born. He described the general details of the phonograph, emphasizing that the machine would have to use a clock-work mechanism for a steady motion - else words "were snapped out like a fish-woman's." He described how recording was accomplished on tinfoil. He particularly marvelled that it was unique among Edison's inventions in that "it performed upon the very first trial.... The *Scientific American* was all ready to go to press when I took the machine up there yesty. They stopped it - took sketch of the machine. Made an Engraving of it last night (Engraver boards at our house & sat up all night in his room working on it) & will issue one day later in consequence." **PLATES VI & X.** The original letter covered eleven pages.<sup>9</sup>

Johnson and Painter then embarked upon a frantic pursuit of their El Dorado. Vast potentials were envisioned for a perfected machine, but the two had reason to worry -- there were other negotiations! Later in the month, Edison prepared a summary of the proposals of the two groups involved:

George H. Bliss

- 1) Form a Chicago company with no less than \$30,000 in the bank
- 2) Open offices in principal cities. Each office would carry a large stock of machines
- 3) Edison would receive a royalty of 15 to 20% of the selling price for machines
- 4) Machines would be sold for \$100 each but each one would cost approximately \$25 to manufacturer.

Uriah Hunt Painter

- 1) Form a New York based company and work the United States on a larger scale than envisioned by Bliss
- 2) If the proposed company were not a stock manipulation and if Bliss were properly recognized by Edison, would be willing to enter into a contract if:
  - a) Edison were to have \$10,000 to experiment with, a portion of the stock, and a royalty of 15%
  - b) Edison might sell outright for an undisclosed sum of cash.<sup>10</sup>

Johnson and Painter were now certain that, if all intangibles worked out, the phonograph would be theirs. But Edison was constantly worried that the proposed Painter group of backers would be unacceptable to Western Union, financial backers of the Edison Telephone, since the money would be coming from the rival Bell Telephone promoters.<sup>11</sup> Edison was enjoying the acclaim of his unique invention and the Painter group felt if the negotiations were protracted the contract might soon prove too expensive. A patent attorney, Theodore Puskas, gave other reasons for anxiety when he arranged with Edison for the disposal of the rights to the phonograph for applications to toys and clocks to two additional sets of backers.<sup>12</sup>

In mid-January, the proposals assumed the form they were eventually to take. Minimizing the risks, Painter warned his backers of the possible loss of the contract if Edison were not soon signed. But he emphasized that "the paid-up capital he wants us to have is to be under [our] own control. It can easily be carried on paper until we need to use it and when we do need

money to push it, it can be had in any amount, if he furnishes us the models for salable [sic] things. Out stock will sell for 5 or 10 for 1 inside of six months - we want to call it the Edison Phonograph Co."13

On another occasion, the possibility was broached that if the company succeeded, Edison had other things for the promoters. The phonograph would have been acquired at a great bargain and there seemed to be no limit on what it could do. The group would also be allowed to control the Clock and Toy contracts that Edison signed separately.12

By now the final list of backers had been drawn up. Thomas Edison later described these individuals himself:

Q.12: Who are the people who are named in these several contracts, or who were they?

A.: Gardiner G. Hubbard is the father-in-law of Alexander Graham Bell, I believe.

Q.13: Hubbard has been largely interested in the telephone business from the start?

A.: Yes, sir; and is largely interested in the telephone business; Mr. Bradley and Mr. Cheever and Mr. Roosevelt were interested in the telephone business; Mr. Painter was the correspondent of the *Philadelphia Enquirer* at Washington, D. C.; Mr. Somers and Mr. Davis were manufacturers; Mr. Russell was an agent; and Mr. Harris was also an agent.

Q.14: Were any of these gentlemen men of large affairs and property?

A.: Yes; Mr. Hubbard, Mr. Bradley, and Mr. Roosevelt were wealthy men, and also Mr. Somers.

Q.15: Men of intelligence and of wide acquaintance?

A.: Yes, sir.15

Somers and Davis were connected with the clock contract and Russell and Harris with the toy contract. Cheever was a remarkable man, "who never walked on account of paralysis of the limbs from childhood. He had a man to carry him around during the day and another man at night. In the office he had a wheel chair."16 An additional individual, E. S. Converse of the Boston Rubber Shoe Company, was also interested but later with-

drew. George H. Bradley was concerned with the wording of several sections of the proposed contract and openly wondered if the other partners should be liable in the event that another did not meet his obligations. Despite misgivings about the \$50,000 manufacturing figure, a contract with the syndicate was entered into on January 31, 1878.

The contract details were to be of great importance during the first twelve years of the history of the phonograph: in its own promotion, in the Volta negotiations of 1885, and finally in the organization of the North American Phonograph Company in 1888. They were as follows:

- 1) Edison was to receive \$10,000 and other valuable considerations for granting collectively, not individually, the exclusive license and right to manufacture or cause to be manufactured in the United States. All applications of the phonograph, except clocks and toys, were to be theirs. The contract would continue for the duration of the basic patent, providing that the parties of the second part supplied a business capital of not less than \$50,000.
- 2) The party of the second part promised to pay Edison a royalty of 20% and promised to make correct returns on or before the fifteenth day of each month.
- 3) Edison was to be paid a sum of \$10,000. The reason for the amount was to provide a fund for experimentation, the 20% royalty being the main consideration of the contract. Should Edison not perfect the phonograph, the Company could require the return of \$8,000 of the \$10,000. Should Edison not return the amount if demand were made by the party of the second part, the Company had the right to terminate the agreement.
- 4) The licensee agreed to use reasonable diligence in establishing a permanent business.
- 5) Should the party of the second part not follow through on the above stipulations, including the provision of the \$50,000, Edison would have the right to terminate the agreement.



6) Edison would provide for protection against infringers.

7) All improvements within the next seventeen years, the duration of the contract, with certain exceptions, were to go to the Company.

8) To insure that Edison would receive a just compensation, the minimum selling price would be set at no less than \$80.00 unless mutually agreed to by the signatories.<sup>17</sup>

Two other agreements were also entered into:

U. H. Painter, of Washington, D.C., is to be paid five per cent. of the 20 per cent. (i.e.), for every \$20. I receive from royalties, U. H. P. is to be paid \$5., leaving me 15 per cent. instead of 20 per cent. Fifteen per cent. of all monies, after U. H. P. is paid, which I receive from royalty is to be paid and I have signed a contract to pay to Chas. Batchelor and Jas. Adames (i.e.), if I receive \$100 Batchelor is to be paid \$10 and Adams \$5.<sup>18</sup>

The Syndicate was anxious that the basic patent be granted as soon as possible. It had been filed on December 24, 1877, and would apparently be granted without any difficulty. Without the patent, a formal assignment would not be easily arranged. Also, without its protection, the group was unwilling to begin manufacturing machines. It was, however, quickly granted on February 19, 1878.<sup>19</sup>

Back in December, Edison had already experienced difficulty in developing the phonograph and although a tremendous amount of exploratory work had been done, he had not succeeded in substantially improving the device. A practical machine seemed very far away. Until it could be developed, Edison proposed the sale of a small instrument to illustrate the essential principles. The small model would cost about six dollars but could be sold for twenty-five. It could not be used for business, since it would have a capacity of not more than fifty words.<sup>20</sup>

Some provision had to be made for an address at which inquiries concerning the phonograph could be answered. Letters were often addressed to Edison, but this was a stop-gap system. In the absence of a formally organized company, the offices of the Telephone Company of New York were utilized. This allowed for a sharing of expenses of both Telephone and Phonograph affairs. Much of the early activity in March and April consisted in the arrangement of demonstrations of the new machines since formal manufacture had not yet begun. Some of the curiosity seekers must certainly have become involved with the telephone. An extremely early postcard from this period, with a printed announcement, read:

Dear Sir: Your favor \_\_\_\_\_ received, in regard to the speaking phonograph invented by Mr. Thomas A. Edison. At present we are not ready to furnish any phonographs but expect to be in a position to fill orders within a few weeks, and will inform you as soon as we are prepared to attend to your requirements.

P. O. Box 5529, New York City  
Your respectfully,  
THE PHONOGRAPH COMPANY<sup>21</sup>

Cheever and Johnson were placed in charge of the office, a situation later to prove troublesome. But in the absence of any legal company, some provision had to be made for the day-to-day business needs and requirements. On March 9th, the first tissue-letter-book was begun for the Edison Speaking Phonograph Company. Johnson, the eternal optimist, expressed his pleasure and apprehension -- his exhibition income would be limited, but there was a good possibility of something more permanent arising from the situation.<sup>22</sup> *PLATE VIII.*

The phonograph, despite all efforts of the promoters to hold it down, suddenly took off. They had realized that unless such publicity were properly controlled it would result in a drain of the Company's finances through exhibitions for the curious without any resultant sale of machines. Without the "Standard Machine" that Edison was feverishly attempting to produce, they would have nothing to show for their efforts. Such publications as *Harper's Weekly*, *Frank Leslie's*, *The Scientific*

*American*, and the *Daily Graphic* all ran extensive articles. Cheever remarked that they were "all getting up large and expensive cuts out at their expense, in fact, the tide has started itself so fast that I have been unable in spite of all that I can do to hold it back until we had the small phonograph ready to sell."<sup>23</sup> Johnson and Cheever had already investigated sources for the manufacture of machines and had closed a contract for twenty-five large machines to tide them over. They would cost \$10.00 each to make. Also considered was the production of twenty-five large machines for sale to colleges and universities at \$75.00 or \$80.00. With a written guarantee not to use "on the outside," the transaction would yield needed money and not interfere with the ultimate business. Johnson already had orders for two or three.<sup>24</sup> Edison's assistant, Charles Batchelor, later described these machines in a patent suit deposition:

xQ.261. You have referred to machines manufactured by Bergmann. Can you state when this manufacture began?

A. I cannot give the exact date, but as they were in the market, I believe early in 1878, I presume it was around that time that he was manufacturing them.

xQ.262. Do you know how many machines of the kind manufactured by Bergmann were made and sold?

A. No, sir; I do not. I believe there was a large number of them.

xQ.263. For whom were these machines manufactured, if you know?

A. I believe there was a company formed of which Mr. Johnson was the moving spirit, and I think Mr. Bergmann made a great many machines for them; I believe he also made some machines for Mr. Edison of the type of what we have called the second cylinder machine.

xQ.264. All of the machines put upon the market, or offered to the public, employed tin-foil as the recording medium, did they not?

A. As far as I know, they employed metal foils. It might not be always tin-foil, but I am not sure that they did not put other machines out.<sup>24a</sup>

The magazine and newspaper accounts as well as the letters of the principals read like a Who's Who of contemporary New York. Among the individuals were such celebrities as William Cullen Bryant who requested per-

mission to bring others to see the new wonder.<sup>25</sup>

While Johnson openly emphasized sales, the remaining promoters were envisioning rentals and lectures. This would provide needed operating income. If the machines were rented for non-commercial use, they would not interfere with the potential lecture market. The royalty from the lectures would be the only real source of revenue which could be expected within the next few months. "Our idea thereby is to give license to lecture, including assignment of reasonable sized territory to such lecturers he to pay the sum in addition to the price of the machine a royalty of 33 % upon the gross receipts of such lecture or exhibitions, we giving him as an equivalent therefore the exclusive right in the territory which may be assigned to him."<sup>26</sup> Territories could simultaneously be started up in the various sections of the United States, as the need for operating money made the scheme imperative -- at least until phonographs really began to be sold.

The constant pressure for income, the precarious financial position of the Phonograph Syndicate, the impending failure of the Telephone Company of New York, and the recent failure of one of Hubbard's partners in a coal mining venture all drove home the point that a formal incorporation of the phonograph company should soon occur. Such an incorporation would have the effect of limiting the liability of the individuals involved. Cheever wrote:

"Upon consulting with my father who has had some little experience in the matter I have decided in view of the financial situation that it is of the utmost importance to incorporate the Phonograph Company at once. My present programme is to do so under the general law of the State of Connecticut, will organize a regular corporation under this law which is more favorable than the laws of New York on the various points in question. We can then issue and sell our stock in such time to investigate (say a month or so from now) if we find we can get better arrangement under some other state laws will quietly organize another company and sell out all property, right, title, and interest of company number 1 to

company number 2, of course if this is the better thing to do when we call our stockholders together and show it to them they will make no objection. I do not think it is well to wait even to get a special act through any of the Legislatures as it will take time, and instantaneous action is most desirable now apparently. I shall as quick as I get a copy tomorrow have a company incorporated calling it the 'Edison Speaking Phonograph Company,' it will cost but a very few dollars to file the certificate and if you and Mr. Painter do not approve, why a \$5.00 fee or whatever amount it will be will be all the harm that will be done, if you like the plan it will be a day saved." [A stock division based on \$600,000.00 was also suggested.]<sup>27</sup>

Cheever's own financial situation was worsening almost daily and the strain was obviously telling upon him. He complained with increasing frequency and even greater graphic detail about the precarious state of his health: "The state of my health is rapidly declining. I am afraid I am going to have brain fever or something, never felt so before and do not want to feel so anymore."<sup>28</sup> He mentioned that he would try to spend some time away from New York to allow for rest and recovery. He was always somewhat sickly but this situation seems to have been unusual. He soon left New York and did not return until April 22. He was then more than anxious to settle up telephone and phonograph matters. The Telephone Company of New York had been requiring advances that Cheever and Hilbourne L. Roosevelt, its promoters, could no longer sustain.<sup>29</sup>

The Edison Speaking Phonograph Company was now incorporated under Articles of Association filed in Norwalk, Connecticut, on April 24th, by five of Cheever's telephone employees. Each was given a minimal number of shares to satisfy the laws governing incorporation. By-laws had been adopted on April 20th, and had been patterned on those of the Telephone Company of New York. The form of the by-laws seems usual for the period and called for quarterly Trustees' [or Directors'] Meetings.<sup>30</sup>

Painter had already begun to use his considerable promotional experience to publicize the phonograph. As an experienced newspaperman, his actions were nothing

short of inspired. Edison was invited to demonstrate his phonograph before the National Academy of Sciences on April 18th, in Washington, D. C. If the accounts of the demonstration are accurate, the audience was wildly enthusiastic, with prominent scientists vying with one another to see or use the phonograph:<sup>31</sup>

"Washington people telegraphed me to come on. I took a phonograph to Washington and exhibited it in the room of James G. Blaine's niece (Gail Hamilton), and members of Congress and notable people of that city came all day long until in the evening. I made one break. I recited 'Mary,' etc., and another ditty:

'There was a little girl, who had a little curl  
right in the middle of her forehead;

And when she was good, she was very, very good,  
But when she was bad, she was horrid.'

It will be remembered that Senator Roscoe Conkling, then very prominent, had a curl of hair on his forehead; and all caricaturists developed it abnormally. He was very sensitive about the subject. When he came in he was introduced; but being rather deaf, I didn't catch his name, but sat down and started the curl ditty. Everybody tittered, and I was told that Mr. Conkling was displeased. About 11 o'clock at night, word was received from President Hayes that he would be very much pleased if I would come up to the White House. I was taken there, and found Mr. Hayes and several others waiting. Among them I remember Carl Schurz, who was playing the piano when I entered the room. The exhibition continued till about 12:30 A. M., when Mrs. Hayes and several other ladies, who had been induced to get up and dress, appeared. I left at 3:30 A. M."<sup>32</sup>

Although it is likely that Hayes made a recording himself, it is not known to have survived.

In an article in the *North American Review*, Edison envisioned wide possibilities for his new invention. Unfortunately, few of these were then realized by the Company. In their biography of Edison, Dyer and Martin summarized them:

1. Letter writing and all kinds of dictation without the aid of a stenographer.
2. Phonographic books, which will speak to blind people without effort on their part.

3. The teaching of elocution.
4. Reproduction of music.
5. The 'Family Record' - a registry of sayings, reminiscences, etc., by members of a family in their own voices, and of the last words of dying persons.
6. Music boxes and toys.
7. Clocks that should announce in articulate speech the time for going home, going to meals, etc.
8. The preservation of languages by exact reproduction of the manner of pronouncing.
9. Educational purposes: such as preserving the explanations made by a teacher, so that the pupil can refer to them at any moment, and spelling or other lessons placed upon the phonograph for convenience in committing to memory.
10. Connection with the telephone, so as to make that instrument an auxiliary in the transmission of permanent and invaluable records, instead of being the recipient of momentary and fleeting communication.<sup>33</sup>

The publicity was useful in setting the stage for paid exhibitions of the new machine. A wide grouping of exhibitors would have to purchase machines and their activities would develop demand and generate further publicity. If the devices were built to sell for \$100, a handsome profit would accrue to the Company. It would cost \$15 to manufacture, \$5 for supplies, \$20 royalty for Edison, \$15 agents' commission, this leaving a \$45 profit. At the beginning of May, Cheever arranged with James Redpath, the lecturer and Lyceum manager, to organize the exhibition arrangements. Redpath agreed to do this for a 20% share of the net proceeds from the exhibitors, who would be forced to pay royalties through October 1st. After that time, all territories would be open and the machines would be theirs. Redpath's services would then cease.

"The royalties from Boston, ever intellectually awake and ready for something new, ran as high as \$1800 a week. In New York there was a ceaseless demand for it, and with the aid of Hilbourne L. Roosevelt... concerts were given at which the phonograph were 'featured.' [Redpath] divided the country into territories, each section being leased for exhibit-

ion purposes on a basis of a percentage of the 'gate money.' To 203 Broadway from all over the Union flocked a swarm of showmen, cranks, and particularly of old operators, who, the seedier they were in appearance, the more insistent they were that 'Tom' should give them, for the sake of *Auld lang syne*, this chance to make a fortune for him and for themselves. At the top of the building was a floor on which these novices were graduated in the use and care of the machine, and then, with an equipment of tinfoil and other supplies, they were sent out on the road. It was a diverting experience while it lasted .... Many of the old operators, taken on out of good nature, were poor exhibitors and worse accountants, and at last they and the machines with which they had been trusted faded from sight."<sup>35</sup>

The exhibition contracts would have had little validity if the phonograph were widely imitated and the very simplicity of the machine almost invited infringement. The situation was further complicated when the *Scientific American Supplement* featured plans for the construction of a simple home-made phonograph. Suits were brought in several instances, but there was no systematic prosecution.<sup>36</sup>

Many of the large tinfoil machines that have survived were distributed as a part of the exhibition contracts. The formal conditions for exhibition licenses contained the following stipulations:

- "1) No phonographs would be sold until October First except for exhibition purposes or at least without charging an exhibition royalty.
- 2) A limited number of machines would be given a conditional sale. This would give the right to exhibit in designated territories. Should the phonograph be exhibited outside the district it would be subject to seizure.
- 3) After October First the machines could be exhibited anywhere and would not be subject to payment of royalty.
- 4) The phonographs would cost \$100 or \$200 according to size, style, and finish. Fifty dollars would be charges as an initial royalty."<sup>37</sup>



Until the middle of May, 1878, the Company was really an organization without a product. On May 21st, the Company formally assumed the Syndicate contract in exchange for stock, with a par value of \$599,375 being 23,975 shares. The remaining shares totalling twenty-five, had been issue as organizational shares to the original incorporators. The stock was now apportioned to the partners in the following way:

Gardniner Greene Hubbard	3200 shares	\$80,000
Uriah Hunt Painter	3200 shares	\$80,000
Charles A. Cheever	3200 shares	\$80,000
George L. Bradley	3200 shares	\$80,000
Hilbourne L. Roosevelt	3200 shares	\$80,000
Uriah Hunt Painter	1200 shares	\$30,000
Thomas A. Edison	1200 shares	\$30,000
Edward H. Johnson	1200 shares	\$30,000

Four thousand of the remaining shares would be assigned to a trustee, John H. Cheever, who would then sell them whenever he could realize fifty cents on the dollar, the money going into the Company Treasury. The remaining 375 shares were to be held by the Trustee in trust, to be conveyed in such manner as the parties, or any three with equal interest, shall order.<sup>38</sup>

The newly organized group immediately found problems. Painter seriously questioned Cheever's management and requested royalty statements from him. Cheever quickly countered with a refusal, claiming a lack of office staff.<sup>39</sup> "We find Cheever has no idea of the value of money & won't do for a business manager & will make other arrangements."<sup>40</sup> By now, the moves to oust Cheever resulted in changes in the by-laws. On June 5th, the concept of Trustees was abandoned and Directors took their place. The number was increased from five to seven and a quorum was set at four. The management was changed from an executive committee of two to an executive committee of four. This was later reduced to three on July 6th. As a result, Cheever and Roosevelt, who normally aligned themselves with one another, could be by-passed.<sup>41</sup> Cheever was then forced to resign. He put the new arrangement on record in a letter to the Executive Committee on June 24th. "At your meeting Saturday it was decided that I should be

as soon as possible relieved of the management of the business detail of the Company owing to my ill health rendering me unable to perform the services desired *as well as for other reasons* [italics mine]. It was then decided by you that a gentleman should be sent by Mr. Bradley to take the position of Manager of the Company...."<sup>42</sup> At the same time, suspicions were prevalent that Cheever had been diverting funds from the Phonograph Company to bolster his shaky Telephone Company of New York. His own financial collapse soon followed. On July 24th, the sale of the Telephone Company of New York was reported to Bradley by Cheever. Charles Batchelor had a different picture. "Cheever has busted higher than a kite but Painter and Hubbard were closeted this afternoon & I understood that they had secured everything so that it will be no inconvenience." He reported a few days later: "I went to see Cheever about your telegram today, and he said that he presumed you meant the balance on \$10,000. I told him that I presumed it was. He said there was due from him about \$600 and from Painter \$100 which was the balance of \$10,000. He said that he was restrained from paying anything and that you would be obliged to wait 3 weeks or a month and he was sure you would do that knowing the trouble he was in.... He told me that he had sold out telephone to Hubbard & was going out of it."<sup>43</sup>

Under such conditions, it is not strange that Painter felt constant alarm over the financial position of the phonograph company. Redpath attempted to assuage his fears by assuring him that the income prospects would improve. If the collections for exhibitions held in June took place, an income of over \$5000 would be realized. Painter was importuned to allow Redpath to set up a plan of selling phonographs while they were still a novelty and in demand. After October 1, they would no longer be a Mecca for curiosity seekers. He was certain that if he were authorized he could sell a large number of machines.<sup>44</sup> The plan was adopted and reactions soon began to pour in from Johnson. Redpath was selling machines in territories that were open or that he could throw open "for a specific sum for the Instrument and *Whatever he can get* [emphasis in original] for Royalty."<sup>45</sup> Money was flowing in, if not in the quantity

desired, and Painter was seeing that the bills were paid. Johnson complained that this policy, and that of the new treasurer, Charles Bailey, was preventing the company from having sufficient working capital.<sup>46</sup>

Although the Standard Machine that Edison envisaged was proving impossible to develop, Johnson was continually making small modifications on machines as they were ordered and as the opportunity presented itself. On August 6th, he reported to Painter on an adjustable mouthpiece and dampener. This allowed a simple adjustment to modify volume as opposed to the time-consuming method previously used. "We are however not putting it on the finished machines they have cost too much already." Bergmann discovered that silver foil cost less than 2 cents a sheet was as readily indented as tinfoil but lacked much of the incidental surface noise of the tinfoil.<sup>47</sup> Charles Batchelor, in his 1896 deposition, described Johnson's importance to the phonograph:

xQ. 166. The high-water mark of development was reached about July, 1878, was it?

A. I could not say that, because it was in the hands, at that time particularly, of Mr. Johnson and Mr. Bergmann.

xQ 167. Was Mr. Bergmann engaged in experimental work, or was he simply a manufacturer?

A. In this case, he was the manufacturer, but his shop was an experimental shop, and I have the impression that Mr. Johnson had a large number of experiments made there on the phonograph.

xQ. 168. After you turned your attention to other lines of work, the phonograph experiments were in the hands of Mr. Johnson, were they?

A. I don't know that they were put there particularly; I know that Mr. Edison experimented a great deal on it. I can only tell of the experiments and work that was done under my personal supervision. The work done afterwards I do not know about.<sup>48</sup>

On further experiments in increased articulation, Johnson exulted "a few more steps and the boundary of the the scientific toy will be passed and the realm of the practical will be entered. I am so confident of this that if the Company were to appropriate \$500 for my use

to experiment for the production of a Standard Instrument I could do it within 90 days. But it would inevitably result in its production." If he did not succeed, the rivalry would further spur Edison on. "Remember that the majority of the details of the improved machines have been my work." The position of Johnson in the early development of the phonograph will have to be reassessed.<sup>48a</sup>

At the beginning of September, Bailey, the Treasurer, was able to report an improvement in the Company's position. Machines were being moved and Redpath had been successful in his exhibition activities. He counselled the preparation of a descriptive price list and emphasized the necessity of a decision concerning the type of machine to concentrate on. He suggested making up an iron version of the brass machine for a selling price of \$100. This would allow for a wide range of prices--\$50, \$100, and \$200.<sup>49</sup> Even though Bailey was enthusiastic about the performance and prospects of the Phonograph Company, the Directors knew quite well that with the ending of the exhibitions and the loss of the royalty income, there would be hard times. This was further complicated by Edison's failure to develop a "Standard Machine" and his despairing of ever doing so. Johnson was continuing to putter but his improvements, while important, were minor in the larger picture. Plans were made for a major retrenchment and the first move was to cut costs as much as possible. With operating costs down, there would be more chance of survival. Office costs were pared and Bailey was asked to take a salary cut of 25%. He was bitter and indignant and complained to George Bradley, his sponsor, that he was being penalized at time when the Company's prospects were good. No matter what financial pictures were being painted, he was being maneuvered into a position where he would be forced to or be asked to resign.<sup>50</sup>

Ever since the clock and toy contracts had been subdivided by Edison in January, the Company had been attempting to gain control of them. Without a hold on these vital contracts, it was felt that a portion of the business was going by default and also that it might

be possible to manufacture small phonographs as toys. The sponsors of the two contracts were not eager to sell out. Suddenly, Hilbourne Roosevelt was able to buy out one of the partners in the toy contract. Immediately, the other members of the Phonograph Company were apprehensive that Roosevelt would use the contract as a means of holding them up for a relatively worthless, but potentially valuable, contract. Painter, in particular, was angry and left no doubt concerning his position. In November, he informed Hubbard of his feelings: "Wire Bradley to withhold action on Toy Contract till meeting. I now own majority Phono Stock and will retaliate if this robbery not stopped."<sup>51</sup> Painter had reason to worry, for Roosevelt had gone to Edison and obtained his authorization. Edison wanted Roosevelt to provide sufficient capital and to actively take over the management. With limited funds, it is possible that Painter felt that the Phonograph Company would be asked to be the source. Then, too, Roosevelt had been able to obtain a major concession from Edison, who was willing to waive his \$6,000 royalty payment for two years in exchange for a 20 / royalty. After two years the \$6,000 would become due but the royalty would go down to 10° / .<sup>52</sup>

Hubbard was bewildered and reeled in the cross-fire. He complained that he was not used to such abuse and would not normally act under threats.<sup>53</sup> The first of the cost cutting moves occurred at the end of November. Bailey was dismissed and not replaced, but Johnson took over his functions. The office of the company was then moved to less expensive quarters at 66 Reade Street in New York City.<sup>54</sup>

The situation now becomes cloudy. We know that Edison intensified his electrical experiments, signing an agreement with the Edison Electric Light Company to devote all his efforts toward that end. The contract of November 15, 1878, was renewed on January 12, 1881, for an additional five years.<sup>55</sup> Evidence of intensive phonographic experiments ceases by the end of November, but Johnson was to continue to experiment and develop the phonograph himself. In January the Company was released of its obligation to put up \$50,000 for the purpose of carrying on the manufacture and sale of phono-

graphs, and Edison was released of the requirement to return any part of the \$10,000 experimental money.<sup>56</sup>

Painter was still concerned over the situation, this time over the possibility that Roosevelt might attempt to manufacture small phonographic toys. To avoid this, and to obtain additional income, estimates for constructing small phonographs were solicited from several firms. We know that at least two companies, Remington Arms and Brehmer Bros., prepared estimates. The contract apparently went to Brehmer Bros. of Philadelphia, and the small machines, such as they made, seemingly comprise the majority of American tinfoil phonographs that have survived.<sup>57</sup> Phonographic toys were not marketed under the Toy Contract at this time and the rights became dormant through non-payment to Edison. They were later resurrected in the late '80s in conjunction with the Edison Talking Doll.

Once the small phonograph matter was settled, Johnson could devote all of his efforts to the preparation of a standard machine.<sup>58</sup> But this was not to be. Johnson, as always, was hard pressed for cash and toward the end of May, a judgement had been entered against him in Washington, D. C. He was forced to transfer his phonograph stock in settlement.<sup>59</sup> This event probably accounts for Johnson's anxiousness to accept an offer by Edison to be his representative in England concerning telephone matters. The offer must have been made soon before May 28, 1879, when Hubbard commented on it: "You have given your time I know & have done much to make the phonograph of value & have designs for making a perfected machine, which with Edison's aid may be successful. If you now leave us most of the money we have paid you will have been made then wasted, for we must employ other parties to have what you have been taught at our expense - Mr. Edison kindly offers to carry out your ideas at his factory, that is simply an impossibility, it needs your constant presence & oversight & [I] consider [that] without that care would undoubtedly be a failure." To illustrate Johnson's position in the history of the early phonograph, it should be noted that it was necessary for Johnson to advise Edison on how to obtain the best results from his own invention: "I cannot but believe that if you follow these instruct-

ions literally you will obtain the results which have given the phonograph its fame." He sailed for England at the beginning of July.<sup>60</sup>

In the midst of this impending move, the Directors obviously attempted to get the affairs of the Company in order. Through careful auditing, it was now possible to unravel the tangled skeins woven by Cheever and Roosevelt during the Cheever Treasurer-ship and the actual reason for his removal in June of 1878 was now documented:

When he was removed from the Treasurership by forced resignation, the Phono money was in his own name, and was used in paying bills of the Bell Tel. Co., in which Messrs. Cheever and Roosevelt were joint owners, was paid by duplicating and copying accounts [to draw it mildly] increased to a large amount their indebtedness to the harm of the parent Co. My belief is that we could convict both Cheever and Roosevelt in a conspiracy to defraud the Phono Co..... Mr. Roosevelt owes the Co. \$1,868.63 - he says he is willing to pay \$700.<sup>61</sup>

We do not know if Roosevelt or Cheever settled, but Painter asserted in the late '80s that they still had not.<sup>62</sup>

The company gave up its N. Y. C. Directory listing after 1879, and royalty statements show a declining number of machines sold. They cease with the statement for January, 1880. The highest number reached for the large phonographs was 288 and 1904 for the small ones.<sup>63</sup> The small machine serial numbers appear "scattered" and certainly many less than 1900 were sold of this model. The Company for all practical purposes was now dormant, although a few transactions appear sporadically during the mid-80s.

On October 15, 1879, a new element was introduced into the history of the phonograph when Alexander Graham Bell entered into an agreement with Charles Sumner Tainter to assist him in experimental work devoted to sound.<sup>64</sup> The Edison Company revived slightly after the successful work by the Bell group and finally disappears after the sale of a majority of its stock to Jesse Lippincott in 1888-1889.<sup>65</sup>

The condition of the first phonograph company in the world was well summarized by Samuel Insull:

"In those early days I had little or nothing to do with the phonograph business, it was absolutely dead. Johnson was the only man who seemed to take any interest in the phonograph. He had one of the old types of machine with tin-foil and used to experiment on it a good deal. Edison's only apparent interest in the phonograph at this time could probably be summed up on the remark which he made to me one day: 'Well, Sammy, they never will try to steal the phonograph; it is not of any commercial value and therefore nobody will ever have the incentive to try and get it away from me.'"<sup>66</sup>



## SOURCE NOTES

The following abbreviations have been used to cite the various document collections:

- AT Various folders relating to the Edison Speaking Phonograph Company and the principals mentioned in this discussion located in the Historical Library of the American Telephone and Telegraph Co., New York City.
- ED Document files at the Edison National Historical Site, West Orange, N. J.
- ED-Bat Charles Batchelor papers located at the Edison National Historical Site, West Orange, N. J.
- PP Uriah Hunt Painter papers. Historical Society of Pennsylvania, Philadelphia, Pa.
- PP-LB Letter Books of the Edison Speaking Phonograph Company located within the Painter Papers.
- NG Bell and Hubbard Papers located in the Bell Room - National Geographic Society, Washington, D.C. [Recently acquired by the Library of Congress.]
- A. For an indication of the vast range of stories about Edison, see J. B. McClure: *Edison and His Inventions*. This book went through several editions and printings between 1878 and 1898. It is, in essence, a collection of presscuttings.
1. Laboratory drawing Vol. 12, no. 25, as reproduced on photo negative 6919 at ED. While the text is in Edison's hand, he did not sign the page. It was, however, witnessed by Charles Batchelor and James Adams.
  2. The drawing of August 12th is a newly discovered laboratory drawing and is not to be confused with a later reconstruction (showing a cylinder machine) made by Edison for his friend J. U. McKenzie. Laboratory drawing - Phonograph - August 12, 1877. Signed by Edison but not witnessed by others. The September 7, 1877, document appears as Vol. 17, nos. 13 and 13A at ED. It was witnessed by many, including John Kuresi, thereby dispelling the myth that Kruesi did not know what he was constructing later that year.
  3. Edison to Benjamin Butler, October 13, 1877, Letter Book ED; Butler to Edison, October 23, 1877, ED. The document is the first known instance of the phonograph being mentioned in America, except in laboratory notes. There is a mention of other laboratory drawings in the testimony of Edison and Batchelor in the case of *American Graphophone Co. vs. The Edison Phonograph Works*, U. S. Circuit Court. District of New Jersey. A partial transcript exists at ED and at the Federal Record Center, National Archives Center, Bayonne, N. J. (Record Group 21). But the drawings have not been located.
  4. Sellers was a major character in Samuel L. Clemens' *The Gilded Age*.
  5. See Johnson's testimony in U. S. Patent Office, *Telephone Interference Cases, 1887*, for a mention of town dates. It is possible that the letter appeared as a result of a premature disclosure by Johnson or was designed to stimulate curiosity concerning the eventual invention. It is also possible that it appeared as the result of the publication in a French magazine (*Le Semaine du Clerge*) on October 10, 1877, of the ideas of a Frenchman, Charles Cros. This theme will be explored elsewhere in a full article concerning the invention of the phonograph. Edison might also have realized that the interest

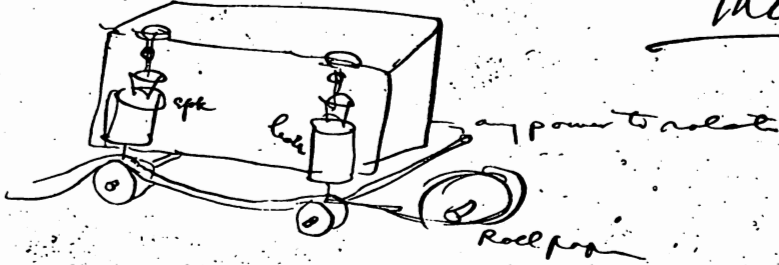
- in sound created by the telephone would generate ideas in other inventors. The letter would thus be a form of public caveat.
6. See *The Sun*, 11/6/77; *The Tribune*, 11/7/77; *The Times*, also commented on 11/7/77. Clippings in Telephone Scrapbook maintained by Charles A. Cheever, AT.
  7. Johnson to Painter, 12/7/77 PP; "Henry" is Joseph Henry, Secretary of the Smithsonian Institution and "Butler" refers to Benjamin F. Butler, Congressman and Civil War General mentioned *supra*.
  8. Frank L. Dyer and Thomas C. Martin: *Edison: His Life and Inventions*, 1910, vol. 2, p. 848.
  9. Johnson to Painter, 12/8/77 PP. Johnson's letters are the sole first hand accounts that we have.
  10. George H. Bliss had been the promoter of the Edison Electric Fan and had formed the Company. Rights to this invention were later acquired by A. B. Dick Co. Enclosure of Edison notes in Johnson letter to Painter, 12/24/77 PP.
  11. Johnson to Painter, 12/24/77. By now, Gardiner Greene Hubbard, the head of the Bell interests and father-in-law of Alexander Graham Bell, was directly involved. See Hubbard to Painter, 12/24/77, approving of Painter's actions, PP.
  12. The right to adapt the invention to toys was obtained by Oliver D. Russell and for clocks by Daniel M. Somers and Henry I. Davies. See Edison Speaking Phonograph Co.: *Articles of Association, By-laws* etc. 8-16 ED - PP. Printed copies were also gathered up and combined in a collection at the Edison National Historic Site under a cover title: *Mr. Edison's Phonograph Contracts* ED. The second collection contains some additional sub-agreements. Johnson continually emphasized the need to close negotiations. For example, Johnson to Painter 1/10/78 PP.
  13. Painter to Hubbard, no date PP.
  14. Painter to ? (probably a letter to each backer) 1/11/78 Copy in PP.
  15. Deposition of Thomas A. Edison, Questions 12-15, in *American Graphophone Co. vs. Edison Phonograph Works*, 1896 ED. Converse was mentioned in the following Cheever letters to Hubbard, 2/6/78; 2/8/78; Converse to Cheever, 2/16/78; all at AT. Bradley to Hubbard, 1/25/78 AT. Bradley had reason to worry as later shown by Cheever's financial scrapes and the failure of a partner of Hubbard in a coal mining venture. See various Hubbard letters, in February and March, 1878, NG.
  16. Joseph P. McCoy: *Memoirs*. unpublished typescript, p. 5 ED.
  17. Edison Speaking Phonograph Co., *op. cit.*, p. 1-6, passim, ED/PP.
  18. *Mr. Edison's Phonograph Contracts*, p. 6 ED. A detailed listing of Painter's royalties was prepared. Edison to Painter 3/1/79 PP.
  19. Cheever to Edison, 2/11/78 PP. The patent had been delayed because of amendments supplied by Serrell, Edison's Patent Attorney. Patent No. 200,521. ED.
  20. Johnson to Painter, 1/3/78 PP; Hubbard to Bradley 2/26/78 AT.
  21. Postcard mentioned in Batchelor Scrapbook, Item no. 388 ED-Bat.
  22. Johnson to Edison, prob. 2/25/78 ED; Tissue Letter Book of Edison Speaking Phonograph Co., No. 1, Letter of 3/9/78 Johnson to Painter marked first, PP-LB. The original letter may be found at AT.
  23. Cheever to Hubbard, 3/15/78 AT.
  24. Johnson to Painter, 3/8/78, 2d letter, PP.
  - 24a. Deposition of Charles Batchelor, *op. cit.* Cross-Questions, 261-264.
  25. Cheever to Painter, 3/8/78 PP; See also, *Philadelphia Times*, 3/9/78,

- Item 393, ED-Bat; *Daily Graphic*, 3/15/78, Item 400, ED-Bat. The individual at the right of the woodcut in the *Graphic* appears to be William Cullen Bryant.
26. Cheever to Hubbard, 3/20/78 PP-LB; Cheever to Hubbard 3/22/78 PP-LB.
  27. Cheever to Hubbard, 3/26/78 PP-LB; see also Cheever to Hubbard, 3/27/78 PP; several letters exist concerning the varied laws on incorporation, PP, AT. For example, the assumption of the charter of a dormant corporation was at one time considered. See Charles Bradley to Cheever, 3/14/78; Hubbard to Bradley, 3/18/78; Bradley to Hubbard, 3/21/78 and 3/22/78; all AT. It was noted that Connecticut laws allowed for the avoidance of personal liability, Charles Bradley to Hubbard, 3/22/78 AT.
  28. Cheever to Hubbard, 4/22/78 AT.
  29. Cheever to Sanders, 4/23/78 AT.
  30. Cheever had mentioned in a letter on March 30 when he got back can "organize my company as quick as can get papers drawn up --- which will probably take about two days." Cheever to Hubbard, 3/30/78 AT; the incorporation papers are shown in Edison Speaking Phonograph Co., *op. cit.*, p. 17-25, *passim*.
  31. For accounts of the meeting, see *Washington Post and Union*, April 19, 1878; *New York Daily Tribune*, April 20, 1878. The *Tribune* was widely used in exchanges and a story in it was assured a wide reportage. Edison also sat for Brady photographs during his visit to Washington, including the one reproduced. **PLATE IX**.
  32. The Edison account appears in Dyre and Martin, *op. cit.*, v. 1, p. 210.
  33. *Ibid.*, p. 216, 217.
  34. Cheever to Painter, 4/2/78 PP.
  35. Redpath's contract has not been located, Details are contained in Cheever to Hubbard, 5/6/78 PP; also Dyer and Martin, *op. cit.*, v. 1, p. 214. Redpath also allowed his name used in a testimonial printed by G. Schirmer Music Publishing Co., New York, in connection with the first sheet music written specifically for the phonograph.
  36. *Scientific American Supplement*, no. 133, July 20, 1878, mentioned in Philip Petersen's "Early versions of the Edison Tinfoil Phonograph" in *Talking Machine Review*, February 1974, p.50-51. Johnson saw a *Scientific American* representative who suggested a small space ad warning against infringement. Johnson to Painter, 7/29/78 PP. A circular was sent out by the Edison Speaking Phonograph Co. warning against infringement. Circular 8/1/78, signed by E. H. Johnson, Batchelor Scrapbook, Item 885, ED-Bat.
  37. Undated blank circular, Edison Speaking Phonograph Co., signed by James Redpath, PP.
  38. Copy of minutes of Directors' Meeting 5/21/78, p. 17-23, *passim*. Agreement Hubbard, Bradley, Cheever, Roosevelt, Painter 5/23/78 PP.
  39. Cheever to Painter, 6/6/78 PP.
  40. Painter to Edison, 6/12/78 ED.
  41. Edison Speaking Phonograph Co., *op. cit.*, p. 21, 24, 25.
  42. Cheever to Executive Committee, 6/24/78 PP-LB.
  43. Cheever to Bradley, 7/24/78 AT; Batchelor to Edison, 7/24/78 ED; Batchelor to Edison, 7/26/78 ED. There is no evidence that the balance was ever paid by Cheever.
  44. Redpath to Painter, 7/29/78 PP-LB.

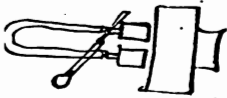
45. Johnson to Painter, 7/29/78 PP.
46. Johnson to Painter, 8/9/78 PP.
47. Johnson to Painter, 8/6/78 PP.
48. Deposition of Charles Batchelor, *op. cit.*, Cross Question 166-168 ED.
- 48a. Johnson to Painter, 9/9/78 PP.
49. Bailey to Cheever, 9/6/78 PP-LB.
50. A portion of the affair is discussed in Bailey to Bradley, 10/1/78 PP-LB.
51. Telegram, Painter to Hubbard, 11/10/78, enclosed in Hubbard to Painter, 11/11/78 PP.
52. Edison to Roosevelt, 10/14/78 ED.
53. Hubbard to Painter, 11/11/78 PP.
54. Bailey to Hubbard, 11/29/78 PP-LB; Bailey to Johnson, 12/5/78 PP-LB.
55. Allen Koenigsberg: *Edison Cylinder Records, 1889-1912; with an illustrated history of the phonograph*. Brooklyn, NY, APM Press. p. xv.
56. *Mr. Edison's Contracts, op. cit.*, p. 31-32.
57. Remington quoted at \$2.50 each. Remington to Johnson, 2/19/79 PP; Brehmer Bros. quoted at \$2.15 each, Brehmer Bros. to Johnson, 4/9/79 PP. Needed modifications increased the Brehmer price to \$2.375, Brehmer Bros. to Johnson, 5/9/79 PP. There is no census of machines. Many of the small phonographs were destroyed in a fire, Johnson to Painter, 12/10/80 PP.
58. Hubbard to Johnson, 4/11/79 PP.
59. R. W. Russell to Johnson, 5/26/79 ED. The stock was apparently later retransferred to Johnson, date unknown. It was then assigned to Roosevelt after having secured a loan.
60. Hubbard to Johnson, 5/28/79 PP; Johnson to Edison, 6/6/79 ED; Johnson to Painter, 6/28/79 PP-LB.
61. Painter to Hubbard, 6/2/79 passim PP-LB.
62. Cheever still owed Edison \$408.35 from the original contract. James R. Ash to Painter, 9/10/88 PP.
63. Statement, Edison Speaking Phonograph Co. to Edison, 2/14/80 ED & PP-LB.
64. Agreement, Alexander Graham Bell and Charles Sumner Tainter, 10/15/79 NG.
65. Agreement, Uriah H. Painter and Jesse H. Lippincott, 9/24/88 PP.
66. Notes prepared for the Dyer and Martin biography, *op. cit.*, but not used. Mr. Insull's Notes, Feb. 1909 (unpublished typescript), p. 12 ED.

Phonograph

Aug 12 1877  
Edison



Input - Bell Telephone company put ~~in~~ on end of  
pole. They also across diaphragm,  
also



was a sketch permanent magnet. was was flying  
in cup between diaphragm & pole allowing speaking  
to be perpendicular -

PLATE I: First known representation of a phonograph. Laboratory Drawing. Unnumbered. Courtesy of the Edison National Historic Site, West Orange, New Jersey.

502

Phonograph

Nov 29<sup>th</sup> 1877  
T. A. Edison  
Chas. Batchelor  
J. Kruesi

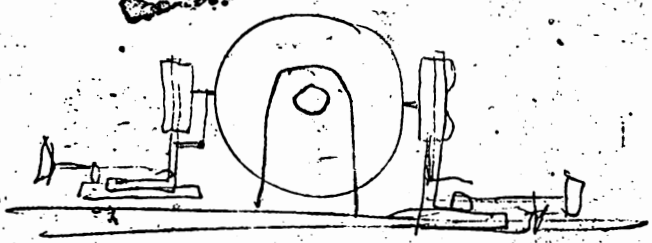
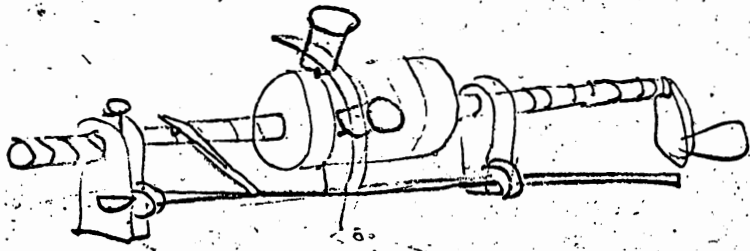


PLATE II: Early sketch of the phonograph. Courtesy of the Edison National Historic Site, West Orange, New Jersey.

Form No. 1

# THE WESTERN UNION TELEGRAPH COMPANY.

This Company TRANSMITS and DELIVERS messages only on condition, during the Holiday, which have been accepted to by the sender of the following message.  
Errors can be guarded against only by repeating a message back to the sending station for correction, and the Company will not hold itself liable for errors or delays in transmission or delivery of Unrepeated Messages.  
The message is an UNREPEATED MESSAGE and is delivered by request of the sender under the conditions stated above.

A. R. BREWER, Sec'y.

WILLIAM ORTON, Pres't.

Dated

*New York* Dec 7 1877  
1:39 pm

Received at

*Wm H Painter*

READ THE NOTICE AT THE TOP.

Phonograph delivered to me today. Complete success. Talks clearer than telephone inform Henry Butler

*E H Johnson*  
*132nd Cong*

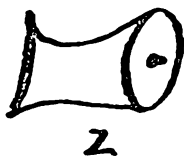
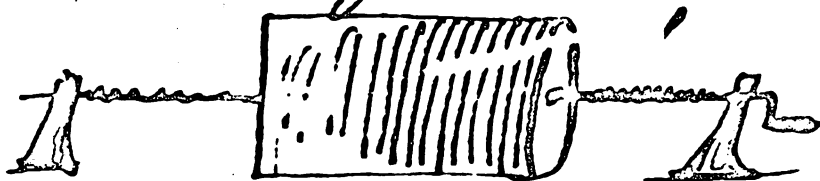
THIS TELEGRAM HAS JUST BEEN RECEIVED AT THE OFFICE IN

WHERE ANY REPLY SHOULD BE SENT.

Direct Wires.

PLATE III: Telegram from Johnson to Painter, December 7, 1877. Courtesy of the Historical Society of Pennsylvania, Philadelphia, Pa.

7  
*Phonograph*



*(Handsome?)*

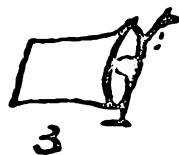


PLATE IV: Illustration sent from Johnson to Painter, December 8, 1877.  
Courtesy of the Historical Society of Pennsylvania, Philadelphia ,  
Pa.



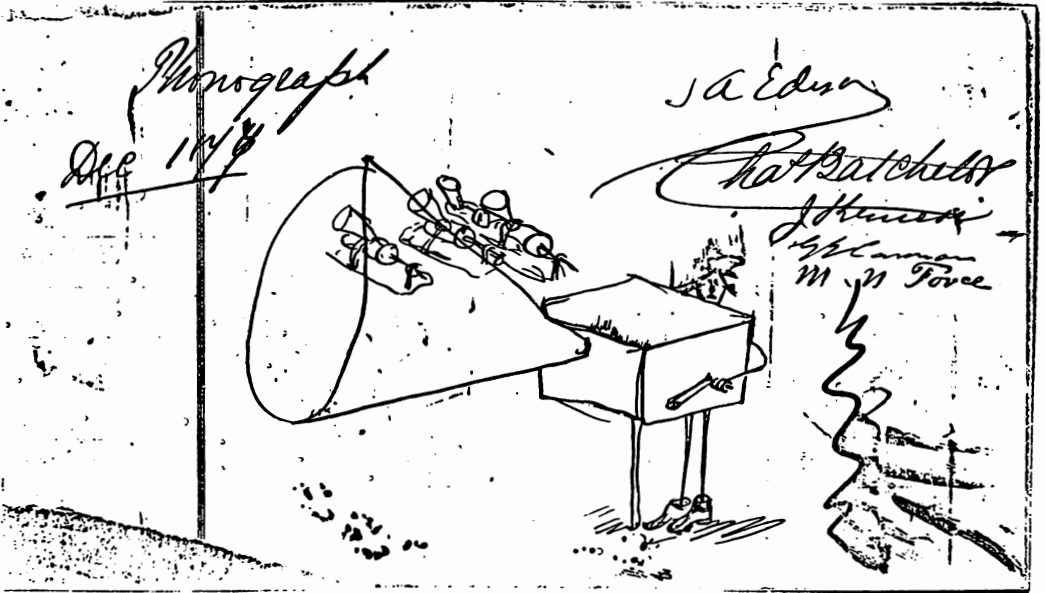
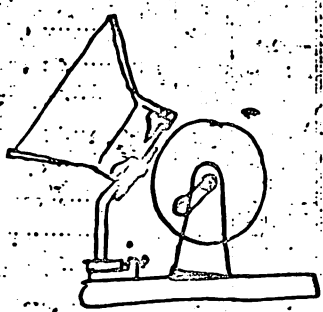


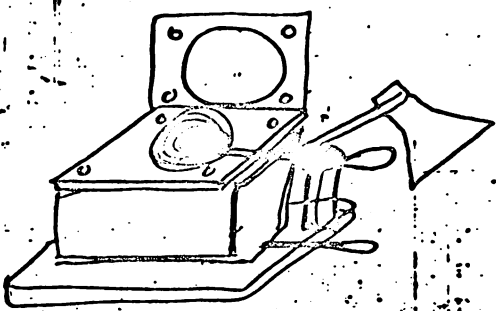
PLATE V: A Phonograph Street Organ or Toy, December, 1877. Laboratory Drawing Vol. 17, no. 21. Courtesy of the Edison National Historic Site, West Orange, New Jersey.

*Scientific American*  
out Thursday  
F.W.T.

PLATE VI: A note referring to the issue of the *Scientific American* that announced the demonstration of the first phonograph. Kept with Laboratory Drawings Vol. 17, item no. 32. Courtesy of the Edison National Historic Site, West Orange, New Jersey.



Also make this just like the  
Illustration



Patent make drawing of  
our new phono. make complete  
model with the horn and wax  
funnel - then if just as one  
are going to make it.

Model.

PLATE VII: Early phonograph models, drawn no later than March, 1878. Courtesy of the Edison National Historic Site, West Orange, New Jersey.

New York, Feb'y 19. 1878.

Dear Sir,

Will you be good enough to put the enclosed in proper hands to accomplish the end sought, which you will observe, is to give you a Telephone and Phonograph Exhibition.

My tour commences at Syracuse, N.Y. Feb'y 28th. Hence prompt replies to my Circular are desirable. After that time I will be on the road, and can be reached only by Telegraph.

By giving this your personal attention you will

Greatly oblige

E. H. Johnson

73

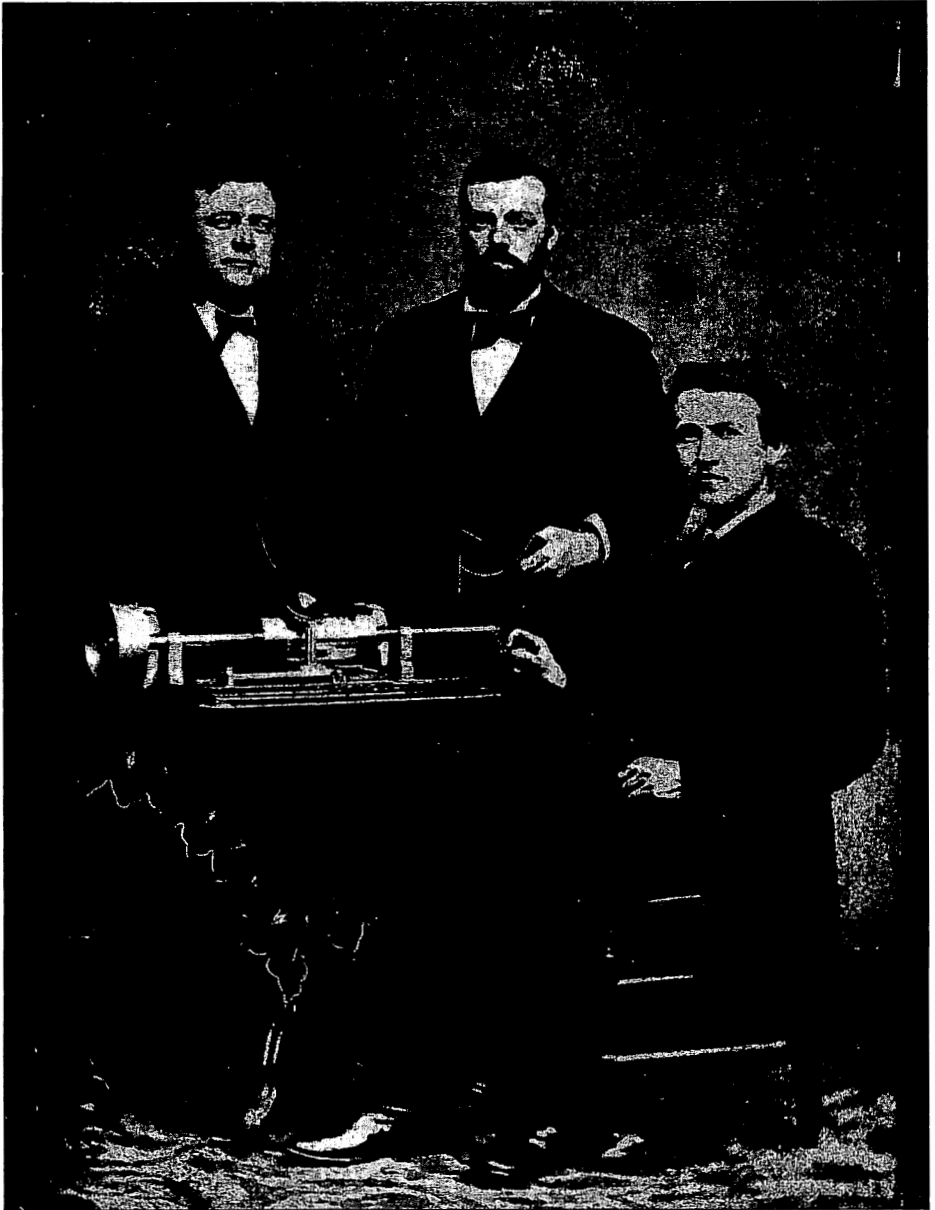


PLATE IX: From left to right: Uriah Hunt Painter, Charles Batchelor, and Thomas A. Edison. Photographed by Brady, April 18, 1878. Courtesy of the Edison National Historic Site, West Orange, New Jersey.