
EDISON AND GROWING HOSTILITIES¹

By Raymond Wile

The spring of 1878 witnessed a flurry of phonographic activity at the Edison laboratories. Caveats were filed with the United States Patent Office, and Preliminary Specifications were filed on April 24, 1878 which resulted in the eventual issuance of a British patent.² Despite this initial activity, the Edison involvement rapidly wound down by the end of that summer. In September a fatal mistake occurred—final specifications were supplied for the British patent, but the equivalent American applications were neglected. In December, an attempt was made to rectify the omission by predating a series of applications, but the U.S. Patent Office refused to allow this and the matter had to be dropped. Except for a patent applied for on March 29, 1879 and granted in 1880 the phonograph seems to have been completely abandoned by Edison in favor of his new interest in the electric light.³ During the first half of the eighties there is no evidence whatsoever of any phonograph activity emanating from Menlo Park. However, Edward H. Johnson, who had done much experimenting for the Edison Speaking Phonograph Company, did become involved in some experimenting after his return from England in 1883—enough so for Bergmann and Company to bill the group for 192 1/2 hours of experimental work.⁴

Edison had become completely disenchanted and reasoned that the concept of the phonograph was incapable of further developments. The members of the Edison Speaking Phonograph Company were delighted to relieve Edison of the responsibility for further experimenting when he released them from the necessity of investing further capital. Little effort was made to meet the technical requirements to keep the corporation alive in Connecticut. Annual meetings were not held, reports were not filed, and stock ledgers generally were not available for inspection, although they were in the possession of Uriah Hunt Painter, the promoter who first organized the company. Squabbles between the major investors left their marks and the company now consisted of two bitterly opposing factions, each ready to resume warfare if the company showed any renewed signs of life.⁵

Such a situation gave Alexander Graham Bell's Volta Laboratory Association a clear field in which to conduct phonograph experiments. Their success, where Edison had failed, was undoubtedly due to a complete preoccupation with the phonograph, with occasional forays into other areas of acoustical or telephone experimentation after the Telephone Company agreed to partially support the laboratory. Edison's

later denigration of their work in wax recording was unfortunate because he had not been able to make it work despite flirting with the idea.⁶ By manipulating wax formulas, the Bell group made wax a more suitable medium. They also developed more sensitive diaphragms. Although Edison had done nothing with his invention for five years, the Volta group attempted to deal fairly and approached the remaining members of the Edison Speaking Phonograph Company through their liaison Gardiner Greene Hubbard, the nominal president of the company, and Edward H. Johnson, the secretary. An agreement was reached to build a group of ten machines at the factory of Bergmann and Company, a firm in which Edison was interested and where he maintained a laboratory. Edison must have seen the machines under construction although nothing else resulted from the negotiation. After further vain attempts at a merger of interests, the Volta group decided to proceed on their own.⁷

One result of the situation was the development of a life-long hostility towards Edison on the part of Charles Sumner Tainter, the major inventive force in the Volta group. Tainter later claimed with some justice that much of Edison's later work was a misappropriation of his ideas. Edison felt the same way and complained bitterly concerning the renaming of his invention as the Graphophone.⁸

This period marked a low point for Edison. The continued drain caused by the costs of electrical experimentation and light company start-ups left him even more financially embarrassed than usual. Part of his Menlo Park property was rescued from a sheriff's sale by placing it in the name of his first wife or in the name of several of his companies, although a portion of the remaining assets was sold to meet the judgement levied against him.⁹ The death of his wife compounded this depression and his experimental work became sporadic as desperate efforts were made to protect and keep his electric light activities alive.

With the introduction of the experimental graphophone onto the Washington scene it was obvious that it would only be a short time before efforts were made to market the conception. A new company, the Volta Graphophone Company, was organized to excite the interest of stenographic reporters. In the handling of House debates, the reporter took down rough debate notes and read them to a stenographer who converted them into a fair shorthand. This was then transcribed by a typist and the results compared to the original notes. By having a reporter, such as Andrew Devine, read his notes directly onto a cylinder several steps were saved while accuracy was improved. Later the technique was so refined that it became possible to typeset the minutes of one of the conventions of local phonograph companies directly from dictation cylinders.¹⁰

John H. White, another House reporter, and James O. Clephane, the proprietor of a stenographic bureau, also became interested. Clephane, who was involved with the Mergenthaler Linotype Company and the Lanston Monotype Company, was either one of the chief organizers or suppliers of capital to a manufacturing and marketing company organized to handle the invention. The subsequent agreement of March 28, 1887 with the Volta Graphophone Company marks the first move towards the organization of the American Graphophone Company. Thus begins the oldest continuous business genealogy in the "talking-machine" industry, which continued through its later connection with the Columbia Phonograph Company. Before a full company organization could be effected it was necessary to clear away any impediment that might remain from an earlier agreement by which the American Bell Telephone Company had agreed to underwrite a portion of the expenses of the Volta

Laboratory in exchange for any developments that might pertain to the telephone. After some negotiations, the rights to the gramophone patents were cleared.¹¹ Soon afterwards the American Graphophone Company was incorporated in one of the states so dear to the hearts of the American promoter—West Virginia. Papers were filed on May 15th although final organization did not take place until June 22, 1887.¹²

Little time was lost before publicity efforts began. The first of the printed literature concerning the new machine consisted of a series of small pamphlets detailing interviews with several Washington personalities in which possible uses of the graphophone were discussed. Each was typeset directly from graphophone cylinders.¹³ As part of the agreement which set up the new company, the Volta Graphophone Company received stock and cash which was then distributed to stockholders of record. With a wider dispersal of its stock the management of the American Graphophone Company became worried lest internal dissension damage it in times of conflict with other companies. As a response, many of the major stockholders agreed to place their shares in the hands of the Company's General Agents—Clephane, Savelle and Devine—with the understanding that the stock would not be sold for less than \$40.00 per share.¹⁴

To achieve as widespread an introduction as possible, the promoters took one of the machines built by Bergmann and Company and headed for the Midwest. On July 21, 1887, the graphophone was demonstrated to great acclaim at the Ninth Annual Convention of the Business Education Association of America in Milwaukee, Wisconsin. There a recommendation was made supporting the adoption of the graphophone by all of the member colleges.

The event stirred other interest as well—A. B. Dick, licensee of the Edison Electric Pen and Duplicating Press, wrote to A. O. Tate, Edison's private secretary, concerning the machine:

There has been exhibited... a 'graphophone' which, we are informed, is very similar to Mr. Edison's phonograph. Perhaps it is the same machine under another name. Will you please inform us if such is the case? If not, please let us know who manufactures the graphophone. We are considerably interested in the Phonograph you spoke of to Mr. Dick, and we wrote to you a few days ago to send us a machine as soon as completed.¹⁵

This letter marks one of the first documented expressions concerning Edison's reawakening interest in the phonograph.

This was not the first time that the idea of reworking the phonograph had intruded upon the Edison horizon. In the 1870s a young man, Ezra T. Gilliland, had worked at the Edison Newark and Menlo Park shops. In May 1878 he departed in order to become the local exhibitor of the speaking phonograph for the State of Ohio.¹⁶ After the tinfoil bubble had burst, Gilliland went on to work with the infant telephone industry. At various times, he headed local telephone companies, developed several devices for making telephone service more efficient, and formed his own manufacturing company. By the time he became head of the Telephone Company's Experimental Department, Gilliland already was independently wealthy. It was at this juncture that the acquaintanceship with Edison resumed—if Gilliland is to be believed—at Edison's importunings. Gilliland allowed Edison to join him in developing William Wylie Smith's idea for telegraphing from moving trains. Through their efforts, Edison soon made a quick profit of \$50,000.¹⁷ Also at this time Gilliland

introduced Edison to Mina Miller, who would become Edison's second wife. Gilliland repeatedly urged Edison to again take up the phonograph, but Edison refused, "urging as reasons that the phonograph was of no value; that his principal patent had expired and that the art broadly was open... [and that] under his contract with the Edison Speaking Phonograph Company, all new inventions he might make would belong to it...." Despite Edison's opposition, Gilliland conducted a number of experiments.¹⁸

By mid 1887 Edison's attention was reawakened by the request of W. W. Jacques of Boston for a license to adapt a small version of the phonograph to talking dolls. This, along with Gilliland's importunings and the activities of the graphophone group, turned Edison's hand. At first, there seemed little that he could do except attempt to further develop the tinfoil machine. He had allowed a competing system to intrude upon the scene, and worse yet—become patented. In his attempts to further develop the tinfoil concept, he began to investigate the possibility of re-applying for a series of American patents that would be the equivalent of the 1878 British patent. But the Patent Office that refused to allow him to file on a pre-dated basis in 1878 would not allow him to patent the same material when he applied in 1887. The matter dragged on in the Patent Office until 1891 but proved a hopeless cause.¹⁹

The expiration of the British patents through non-renewal or expunging gave Edison another inspiration. The rival group was using features that already had been disclosed and therefore were not patentable. Also, if the American Edison patents were null and void because of the lapse of foreign patents, then he owed the old Edison Speaking Phonograph Company no loyalty. He did not realize that either path would create an intolerable situation.²⁰

Operating on the assumption of a wide-open field, Gilliland and Edison

worked incessantly [in 1887] in the effort to produce a practical phonograph. At first [they] sought to avoid infringement of the graphophone patents, but finding a commercial machine could only be constructed by embodying the principle of engraving or cutting, [they] determined to adopt it, as Edison claimed that he had invented this same principle years before, and that it was substantially described in some of his early patents, and in case of suit for infringement by the owners of the graphophone patents, [Edison] could successfully establish that such patents were void.²¹

The activities of the graphophone group and the reawakening of Edison's interest were bound to catch the attention of Edison Speaking Phonograph Company principals. In the early part of 1887, a series of missives flowed between Uriah Hunt Painter and both Gardiner Greene Hubbard and Edward Johnson concerning the graphophone and Edison's activities. The close connection of Hubbard, the Company's nominal president, with the graphophone and Alexander Graham Bell later proved embarrassing to all concerned. In February, Painter reported to his crony Johnson that he had spoken to the banker Charles Bell about the "graphophone piracy" but that there had been no new developments. The awakening public interest caused by the graphophone publicity also caused some movement of the old inventory of tinfoil phonographs. Painter wrote to Bergmann and Company, the selling agents for the old company, asking: "Have you any phonographs on hand with the modern improvements? If there is any modern improvement to it." In the event of a struggle a new listing of stockholders in the Edison Speaking Phonograph

Company was hastily prepared. All of them felt, as did members of the Volta group, that the most immediate danger to both was not from Edison but from each other. Consequently, the Board of Directors of the Volta Graphophone Company met on May 10, 1889 to consider the advisability of attempting to harmonize relations. As if to underscore their concern, Painter began to investigate the possibility of instituting a suit for patent infringement.²²

Time was running out both for Edison and the old Company because unless each could come to some agreement the graphophone would conquer the field by default. As if to underscore this point, the American Graphophone Company in mid-summer let a contract with the New York branch of the Western Electric Company for the construction of 300 treadle machines—once these machines were completed and on the market the competition would have the benefit of market priority and therefore obtain additional financing.²³ Even though Uriah Hunt Painter knew about the shaky position of the old Edison Speaking Phonograph Company, he also realized that it might be an expensive impediment for any newly developing groups. Probably, Gardiner Greene Hubbard tipped the hand when he telegraphed to Charles Bell asking him to contact both Edward Johnson and Uriah Painter in an attempt to postpone any possible reorganization of the Phonograph Company.²⁴ Johnson replied that he knew nothing of the organization of a new company

beyond the fact that one has been organized by Mr. Edison and others and that when they have completed their arrangements, it is their purpose to make us a proposition which we can accept or reject as we may elect. I only ascertained this much as a result of the inquiry incited by your letter. There is nothing whatever being done with the old Co.

Edison verified Johnson's analysis in responding to an inquiry from Detroit: "I have lately been engaged in improving the phonograph" and saying that a Company had just been organized and incorporated to handle it. In intimating that the phonographs would be ready soon Edison was to be overly optimistic—it was over a year before they really began to be produced.²⁵

Despite continued rebuffs, the graphophone promoters decided again to seek a rapprochement with Edison. Consequently, James O. Clephane telegraphed on October 5, 1887, asking: "Will you please inform me by telegraph when and where during today or tomorrow it will be convenient to meet a committee from Washington to talk over phonograph matters." Painter immediately felt it wise to warn Johnson:

I learn the Bell crowd are going to send Edison to see what he is doing and where he stands. I want you to see him and get his word at once, under no circumstance to intimate that he has or is going to have anything to give them any satisfaction about the old co.—or indicate any disposition to have any deal with them....²⁶

The interview with Edison took place and was reported by Painter who had seen both Devine and White after the session. They reported that they had offered to combine the two rival machines and put one out on the market but Edison declined, saying that he felt that two were better and let the best machine win. He had expressed his bitterness over what he considered the Bell and Tainter appropriation of his ideas—which even went so far as to rename it. Painter felt that Edison really didn't have a machine even though Edison had said that it was being made. "Yes that's been his story for 11 years."²⁷

Meanwhile the necessary papers to organize the Edison Phonograph Company already had been signed on September 30, 1887—the formal incorporation being completed on October 8. The charter was quite broad:

...to manufacture and sell Phonographs and apparatus and devices embodying the same; to purchase and own Letters Patent, and to grant rights and licenses thereunder; to buy lands and to erect thereon buildings and machinery for the purposes of such manufacture; to issue bonds secured by Mortgage upon the property and franchises of the said Company.

Capitalization was set at \$1,200,000.²⁸ Soon afterwards, additional agreements were executed. The first set out the relationships between Edison and the Company, detailing that he was to be able to manufacture the phonographs and to receive a manufacturing profit and a royalty on each machine sold. Significantly, the preamble to the contract indicated the thrust of the ideas concerning the phonograph's role—it was to be a business device, and nowhere in the contract was an amusement function even hinted at. The rights to the toy contract with Briggs and Jacques were transferred to the new company.

Despite the widening split with the old phonograph company, engendered by Edison's belief that his patents were void and that he had no remaining contractual obligations with them, provision was made for the rights to be recognized should they indeed exist. In doing this Edison placed himself in a remarkable position. If he proved the rights did not exist, his patent was obviously no longer in existence, and he therefore opened the field to the American Graphophone Company. If the rights did exist he was then at the mercy of the old group.²⁹

An agency contract was entered into in which Ezra T. Gilliland would be responsible for marketing the new machine. In it a specified profit to the Edison Speaking Phonograph Company was guaranteed on each machine sold. A carefully projected estimate of machines to be sold was prepared in which Gilliland projected 5,825 for the first six months and 17,675 for the first year. Gilliland was to be allowed a profit of fifteen percent on the sale price of \$60 per phonograph. This would have yielded him \$159,075 for the first year. The profit margin on supplies was 100 percent so that if the business of the Company assumed the levels that were hoped Gilliland would have an extremely valuable contract.³⁰

All of these preparations and moves were not lost upon the promoters of the American Graphophone Company and the members of the Edison Speaking Phonograph Company. The graphophone group attempted to obtain additional financing in anticipation of the eventual storm. Gardiner Greene Hubbard wrote to Alexander Graham Bell that the Company owed \$40,000 and intended to issue bonds in the amount of \$60,000 to cover the debt.³¹ The possibility of a significant infusion of cash soon arose. In early fall of 1887, one Thomas R. Lombard arrived in Washington, D.C. on a visit to his brother-in-law, James L. Andem, during which he saw one of the graphophones. "The machine interested [him] so much that [he] became quite enthusiastic over the possibilities of doing business with it, and the result was that negotiations were opened with the [American Graphophone] company, looking to acquire the sole right for introducing it into the United States."³² Lombard had been taken completely by surprise when he saw the new apparatus. He did not realize that a machine existed that could be made to record and repeat a conversation. On asking about the phonograph and the rights the Company had for making the

machine, he was told that it was improved and thoroughly protected by patent. The agents reported to Lombard that they had visited Edison and believed that he was working on an improvement of the old phonograph with the view of bringing out a competing machine. They expected to meet his competition by making their price equally low, but still hoped that some arrangement might be arrived at for avoiding competition. They believed that the graphophone was so simple in design and operation that Edison could provide no serious competition. They also mentioned that they were hampered in attempting to arrive at an agreement by the intense hostility that now existed between Charles Sumner Tainter and Edison—Tainter feeling that he had made as strong a contribution to the invention as Edison.³³

Negotiations began almost immediately as Lombard gathered together a group of potential investors. By mid-November enough progress had been made to prepare a rough memorandum for submission to the Directors of the Company. It included the following stipulations.

- 1) The contract would be entered into by Thomas R. Lombard and his associates.
- 2) The investors recognized the validity of the graphophone patents.
- 3) The American Graphophone Company undertook to furnish promptly all instruments that would be required. The first 300 instruments would be furnished at a price not exceeding (blank) percent of the profit on the cost of production. The next 1,200 would be furnished at a price not exceeding 25 percent profit on production.
- 4) Record tubes, discs, and other supplies would be supplied at a discount of 60 percent of list price.
- 5) The American Graphophone Company would protect the syndicate in the event of litigation and would assume the costs of defense.
- 6) The states of Wisconsin, Michigan and Illinois were excluded from the area controlled by the syndicate.
- 7) In the event of competition, the American Graphophone Company would protect the group by making such concessions as would be necessary to allow a successful competition.
- 8) 5,000 graphophones would be purchased the first year and not less in succeeding years.
- 9) A permanent contract embodying these proposals would be entered into on or before the (blank) day of January of 1888.

The Directors met and viewed the proposals in a generally favorable light, but now insisted that Lombard provide a guarantee through insurers for the performance of the contract. Before any further action was taken, it also was decided to check references provided by Mr. Lombard. And a new motion was passed stating that if a syndicate or association were organized, capital in hand of \$500,000 would be required. James Savelle voted Nay and protested. On November 30 a formal memorandum of contract authorized the President to make necessary amendments and submit to Mr. Lombard. The major potential investors—Lombard, Barlow, Lipincott, and Robinson—all objected to the feature requiring a personal liability since they wanted to organize a joint stock company. Because the Board refused to entertain their objections, the negotiations came to a halt. Lombard later remarked that at least a portion of the failure could be attributed to the hostility of James H. Savelle.³⁴

Meanwhile, the rift between the old Edison Speaking Phonograph Company and Edison was growing wider. Johnson reported on a meeting between himself, Painter, and Hubbard, and requested an appointment with the inventor where the group could settle the whole phonograph matter. Edison refused. If he came to New York, he would lose a day. Instead, he proposed the following:

- 1) A company had been formed with a capitalization of \$1,200,000—the old Company members would get \$400,000 and Edison \$800,000.
- 2) The old company members would be required to pay \$1.00 per share which would go into a treasury.
- 3) Edison would receive a royalty of 15 percent of the selling price of each phonograph—probably about \$2.15, rather than the 10 or 20 percent of the old agreement.
- 4) Edison would set up the factory and supply all phonographs and appliances for a 20 percent profit on manufacture without adding any salary for himself.
- 5) Edison would give all improvements during the next five years to the Company.
- 6) The toy contract with its guaranteed \$10,000 a year would be turned over to the new company.

Now I consider that I am doing the fair thing by the old stockholders. They get 1/3 more of the whole thing for the \$10,000 originally paid me for the option to purchase. Even Mr. Cheever who controls a considerable quantity of the old stock thinks it is fair and just and accepts the proposition. I have started in to make this a success scientifically and commercially.... I have a strong impression that our patents are not worth a cent, so I am going on the basis that we are going to hold the field only by making a better and cheaper machine. If Mr. Hubbard or our friend Painter want to go into the field I think they could do so and copy my machine and I have no patent that would stop them. The Phono[graph] and Graphophone are unfortunately killed by that d—d infernal Beerd [sic] British patent.

Edison also expressed his intention to avoid becoming engaged in a stock manipulation like that of the graphophone.³⁵ Details of the new Edison factory were obtained by Johnson and passed on to Painter. The building was to be substantial. It was to be located at Bloomfield, N.J., on the Delaware, Lackawanna and Western about two miles from Orange, and would employ 75 men initially. Plans were provided for either a three story or one story building.³⁶ Painter was anxious to counter Edison's proposals and drafted a reply for Hubbard as President of the Company: "[I] cannot see how either you or the old Company [are] to be benefited by your proposed programme...."³⁷

Hubbard's reply was really a gesture, since it was almost certain that Edison would not acquiesce. Painter now suggested that it might be wise to organize an Edison Phonograph Company in Colorado under their general laws giving the old Company shares in the new. They would then be in a position to go into court which they could not because of recent modifications "of Conn[ecticut]'s law requiring minutes of things which [they could not] comply with...." He also wanted a lawyer to contact Edison and call his attention to the fact that his patents were being violated, both by the Graphophone Company and the new Phonograph Company, and insist that he take steps to stop them. If Edison did not take action, the old Company could go to court and obtain a *writ of mandamus* to compel him to take the action. Painter also suggested that Hubbard resign as President, because if he were director of the Graphophone Company he would provide Edison's only possible defense "that you set up a company to beat him."³⁸

By November 5, 1887 Charles Batchelor noted in his Record book that:

I drove over from Orange today with Tate to Montclair to look up property—We called at Bloomfield & saw the new shop for manufacturing phonographs—Mr. Keller superintends & has about 12 or 15 men working on tools, etc. They have not received the model from the Laboratory at East Newark yet but expect it every day—They have about 20 new good tools all ready to manufacture.

On November 11, 1887 he reported that Edison brought the model of the new machine down to the Laboratory to exhibit it to members of the National Academy of Sciences.³⁹ Even so, the machine lacked much that would make it a viable contender in the market place. Gilliland with his experience involving the telephone chaffed to improve the machine. Edison, on hearing this, complained but Gilliland countered bitterly:

This is the first opportunity I have had to do any work of this kind. If the Machine is better than others I should think you would want it. If any of your workmen should produce a superior Machine, you would not hesitate to adopt it. Surely, I must be entitled to the same consideration. The present form of Machine we are at work upon in Bloomfield, would not compare favorably in any respect with the Graphophone, and I have never felt that you would put it upon the market in that condition. Certainly, we are capable of producing a Machine superior to the Graphophone, and knowing you as well as I do, I felt perfectly sure you would never allow the Machine to go out if it was not equal to the Graphophone; and I believed that you would leave nothing undone in order to produce something superior, and it was with the desire to do my part toward bringing about this end that I have worked out a Machine that is not only equal to all of the claims made for the Graphophone, but superior, inasmuch, as it provides for several important points which they do not claim to cover... This is all accomplished without complicated mechanism or multiplicity of parts. It is not simply invented but it *worked out for manufacturing* to advantage....⁴⁰

In such a situation it was not surprising that Uriah Painter constantly worried about the position of the old Edison Speaking Phonograph Company and the dissension within its ranks. In November he toted up his strength and estimated that he would be able to vote 10,300 shares of the stock of which 9,801 were required for a majority. But if somehow the block of stock listed in the name of John H. Cheever as Trustee were voted illegally the outcome would be problematical. His letter was long and he literally bombarded Johnson with questions and suggestions. Johnson promptly sent the letter on to Edison.⁴¹

Edison reacted almost immediately by drafting several replies. One version exists at the Edison National Historic Site, another was penned on the bottom of a letter that Painter had sent on November 30th which Edison returned, and still another appeared in a letter dated December 5th:

My whole action in the phonograph matter is based on the assumption that the phonograph patents are void, *they* cannot be set *right* by a decision of the supreme court like our electric Lamp patents because *they* were *filed* after the granting of the *foreign* patent while the lamp patent was filed *before*. The statute is clear, and the foreign patents have expired—After ascertaining this I determined to go into it as a business enterprise with the risks and struggles of competition, I did not want to see the old phono people left out so I offered them a 1/3 interest in the business....⁴²

The year ended without a resolution of any of the problems facing the nascent industry. A few experimental phonographs had been completed, certainly many less than Edison had intimated in his conversations. The graphophone company was

impatiently awaiting the three hundred machines ordered from the Western Electric Company, but production was well behind schedule. The gramophone of Emile Berliner was still in the experimental stage and the Edison Toy Phonograph Company had yet to produce a commercial machine. But expectancy filled the air as Edison and the graphophone forces girded for an impending battle. Strangely enough the ultimate major role of the talking machine as an amusement device generally was ignored—only the concept of the fledgling Berliner Gramophone and the Edison Toy Phonograph pointed toward the future.

The new year dawned with the protagonists frantically jockeying for position prior to the eventual battle. Painter's refusal to accept the Edison proposals and Edison's suspicions that he was somehow connected with the graphophone made him unwelcome at West Orange. He was forced to rely completely upon Edward Johnson for his information. When did Edison intend to market the new phonograph? A prompt reply stated that it would not appear in January 1888. Johnson also reported that he had seen the machine in pieces and did not think much of it.⁴³ Despite the slowness with which the new phonograph was being prepared for its introduction, Edison was presenting another face for the press. He reported that thirty machines were in daily production at the factory in Bloomfield, certainly an inflated figure.⁴⁴

Painter took advantage of the confusion to further reestablish the rights of the old phonograph company. If the situation were all that Edison had intimated, they certainly could manufacture phonographs again. And if the patent were indeed in effect, their manufacturing activities would place both the graphophone group and Edison on notice that trouble lay ahead. Painter directed a letter to Bergmann & Company asking if they could make copies of the improved phonograph that recently had been illustrated in the *Scientific American*. Bergmann's response pointed out that the Edison people had not finished experimenting, but any number of copies could be made if orders were submitted.⁴⁵ A proposal was prepared, but it was never executed. The document called for the construction and delivery of five thousand phonographs at prices declining from \$45.00 each for the first thousand to \$35.00 each for the last thousand. Delivery was promised within three months from the approval of a model machine. The rekindling of public demand was underscored by an inquiry from Brehmer Brothers concerning the sale of several instruments to schools.⁴⁶

But first the company needed to meet the Connecticut regulations concerning corporations. Without this the group would find it impossible to reestablish the rights that they felt were theirs. Consequently, an annual meeting was proposed as mandated by law. This would be the first such meeting in the ten years' existence of the Edison Speaking Phonograph Company. Once such a meeting was scheduled Painter needed to make certain of his stock control.

The [transfer] books were closed earlier than they need have been, but as there was no executive officer to sign the certificate except yourself [Edward Johnson], nothing has been lost thereby. The resignation in November of Mr. Hubbard as President and director; the refusal of Mr. Edison, Vice President, to have anything to do with the Company, and the death and disqualification of other directors leaves us without a quorum to elect other executive officers.⁴⁷

After Johnson expressed fears that he did not have the Company books in his possessions, Painter ominously added that there were "several skeletons in our closet that it is not to the advantage of any stock-holder in the old company to have paraded at this time..."⁴⁸

On another issue pertaining to the coming annual meeting, Charles Cheever attempted to extend the olive branch and quiet the scene. He stated his willingness to allow the Painter group to have four directors while he would be satisfied with three, "all he wants is to compel E[dison] to disgorge. [He] has taken legal advice and is assured that E[dison] is in the wrong & can be made to hand everything to the old Co."⁴⁹ But Painter wanted two directors from Norwalk, the local site of incorporation in Connecticut, and was unwilling to turn out Edison and Batchelor. Consequently he could not accept the proposal.⁵⁰ Painter also was concerned about a block of shares that Johnson, who was always short of funds, had pledged to Hillbourne Roosevelt in 1880, a few years before Roosevelt's death. The lien had not been paid by Johnson and the shares presumably would have gone to the lender had he not died. The executors now wanted the stock, which Painter was certain would then be voted in favor of the Cheever faction. He argued that it still stood in Johnson's name and should be voted by him.⁵¹ In order to maintain a semblance of peace, Painter also asked Johnson to obtain Edison's proxy although he was certain Edison would not give it.⁵²

After the impending annual meeting was advertised in the Norwalk, Connecticut papers, Painter again toted up his possible proxy strength.⁵³ He might muster a possible 12,010 shares if he could vote the disputed Johnson stock while the Cheever faction would probably be able to vote 7,615 shares unless they illegally attempted to vote the stock held in trust by John H. Cheever.⁵⁴ On January 23, 1888, Johnson in a fit of uncertainty wired: "Cheever will be in Norwalk with legal adviser. You must come. I can give proxy for five hundred shares."⁵⁵

On the next morning the principal stockholders boarded the New Haven Railroad's Norwalk train. On their arrival the town witnessed the spectacle of two separate meetings each of which produced a slate of "duly elected officers." In the meeting representing the Painter faction, 10,388 votes were cast—certainly less than his previous November estimate. A slate of directors consisting of Thomas A. Edison, Edward H. Johnson, Charles Batchelor, Josiah C. Reiff, William E. Chandler, A. H. Byington, George E. Littell, Uriah H. Painter and E. H. Lockwood resulted from the proceedings.

These actions were reported in Byington's paper the *Norwalk Gazette*. The Cheever-led meeting, which occurred down the street, resulted in an almost completely different slate: Thomas Sanders, George L. Bradley, Alfred Roosevelt, John H. Cheever, Charles A. Cheever, Robert J. Cummings, Thomas A. Edison, A. H. Byington and Matilda Arnold.⁵⁶

Almost immediately both groups attempted to consolidate their positions. Painter was anxious to organize as soon as possible and issued a hurried call for Johnson and Reiff to come down to Washington so that a bare minimum of directors could act. He also reported one of the reasons for speed.

The Bell people are now willing to take out a license on the 300 machines which they are having made to change the name to Phonograph and raise no question about the validity of the Edison patents and to accord him the credit in any manner that may be

thought best, they merely claiming the improvements in the mechanism. This will bring a considerable sum of cash money, at once, and should be promptly attended to. Under our contract with Mr. Edison he is entitled to a minimum of \$16.[00] on a machine, which will give him \$4,800 on this present lot of 300. I am willing to take a small amount above the \$16.[00] for the Company without being obligated to continue the low rate if we find the machines are marketable, of which I have grave doubt.

Johnson showed the letter to Edison who exploded: "If I add anything to them it will simply be to record my disinclination to submit to coercion."⁵⁷ On seeing Painter's proposed letter Josiah C. Reiff commented, "If so I think Thomas A. Edison ought to share it with the old Co.—still it may be cheap enough to give it all to him this time if it will more fully commit him to his obligations to the old Co."⁵⁸

Painter now was approached by Charles A. Cheever who ordered him to turn over the company books on February 2, 1888. But the Painter faction responded by ordering the others to cease representing themselves as Directors.⁵⁹ Cheever maintained that he was indeed the new President and had full knowledge and authority to act in all company affairs. He cautioned Painter: "I would thank you to inform me from whom your alleged authority was derived... that I may take proper means to protect the Company against the acts of unauthorized individuals."⁶⁰ In an inspired stroke Cheever's group was able to further entrench itself by the simple expedient of obeying the law—they filed an Annual Certificate for the Edison Speaking Phonograph Company on February 14, 1888.⁶¹ Edward H. Lockwood, an attorney from Norwalk who represented Painter, must have been caught napping, for a few days later he reported: "As long as Cheever and the rest of them do nothing more than represent themselves as officers of the Company it will do no material harm and I should pay no attention to it but watch them closely."⁶² Cheever took the war into the opposing camp by visiting Johnson and demanding the company books and papers. He was held off—Johnson reporting that he felt it was an attempt to sound him out. He cautioned that he felt that the insurgents would probably "move on us legally."⁶³ But the uncertainty must have been wearing on Johnson: "Now I am done—It is perfectly useless to follow up a correspondence so long as it is conducted in the present spirit—My advice now is to get the old Co. in proper working form & free from the clutches of the Cheever party—and then let the matter simmer quietly through the Summer..."⁶⁴

While all of this was taking place the Edison forces were quite busy getting a new organizational structure into some kind of working order. A. O. Tate, Edison's private secretary, reported that Ezra T. Gilliland, the General Agent, was not quite ready to arrange for state agencies but would be shortly.⁶⁵ He did not say that one first needed machines to sell. The small plant in Bloomfield, N.J. really was not ready to turn out machines nor did Edison have the necessary capital with which to engage in extensive manufacturing. On this point Edison attempted to play a trump card by involving Henry Villard, the financier of Northern Pacific Railroad and Edison General Electric Company fame. Writing in the exquisite hand that was reserved for very important missives, Edison casually remarked to Villard,

I send you some data which you can read over. I should like to see you for a couple of hours either at your house in the evening, or if it would be convenient should very much like to have you come over some afternoon before dark and see what a fine laboratory I have, bring your wife and stop for dinner or stay all night would be still better.⁶⁶

In the supporting materials Edison described the conditions of the phonograph enterprise:

About \$15,000 has been spent so far in shop at Bloomfield and at Laboratory making tools, patterns, etc. and manufacturing the parts for a considerable number of machines—We should have the phonograph market before this, but we saw so many things that could be changed to make it more convenient to the customer that we have altered them from time to time so that now we are perfectly satisfied and hope to have them on sale by Feby 20th. With 6 or \$7000 more spent on machinery in the little Bloomfield shop we shall probably be able to turn out 25 to 35 daily working nights until a new factory can be built which cannot be commenced before the frost is out of the ground, say May 1st—This factory can be put up and in running order by August 1st if not sooner. The success we have with sales up to May 1st will determine the size of the factory—My impression is that the factory would have a capacity of 200 machines daily and supplies for the same—Roughly the land will cost \$5,000—the buildings \$30,000. The machinery complete with 3 months supplies \$65,000. The machinery is mostly standard and can be used for almost any kind of mechanical manufacturing—about \$15,000 in current cash would be required to carry stock & wages on machines during process of construction.

The contract with the Phonograph Co. is for an allowance of 20 percent profit on the cost of the machines. The cost being labor, material & general expenses. The \$15,000 current cash & \$10,000 supplies would be the money outside of investment we should have to turn. We ought to turn this 20 times a year. The Contract with the General Agent is that he pays the factory for all machines in 40 days from date of shipment.

Edison suggested a partnership in everything except the ore milling, the phonograph (except for manufacturing), the telephone and the electric light. The two partners would divide evenly on inventions—Villard would pay all experimental costs and would own one-half of each invention. If an invention were sold outright they would share equally in the proceeds. Edison also provided a listing of ideas for other inventions that he proposed to work upon.⁶⁷ But nothing seems to have come from the proposals.

Meanwhile unsubstantiated rumors circulated throughout all three opposing camps. In later years, industrial spying systems were developed by both the Edison and graphophone groups, but now each was subjected to tantalizing fragments of information that would be blown out of all semblance of truth. J.C. Reiff cautioned Uria Painter that Edison was “persuaded you have made a deal against him with the Bell Graphophone people.”⁶⁸ Painter on the other hand attributed much of the ill will on the part of Edison to one individual.

I have known for some time that he had a toad sitting at his ear whispering slanders about me, and I only have this to say, if my past record does not protect me from such trash, the time will come when I will be in a position to defend myself and bore a hole through the toad. I have no idea that I am the only one who has been traduced by this sucker, in fact I have very good evidence that both you and Johnson have been included in the list of those whom it was advisable to assail.

Presumably the toad was Gilliland. “Oh you horrible sheep to muddy the water. I think I will eat you up.”⁶⁹

After negotiations between the American Graphophone Company and the Lombard syndicate broke down they were soon followed by individual negotiations on the part of Jesse H. Lippincott, who for several years had been associated with Thomas R. Lombard in investment matters. Although he remains a shadowy fixture, we are now able to shed a little more light on his career. He was born in Mount Pleasant, Pennsylvania on February 25, 1843, the son of a country storekeeper. At the age of 18 he entered the army and served with distinction for three years in the Civil War.

His first commercial venture came as a grocer in Pittsburgh. Soon after the war he joined with Henry C. Fry in a Pittsburgh glassmaking firm, Lippincott, Fry and Company, with Fry leaving the firm in 1869. In 1872 the two again became associated in organizing the Rochester Tumbler Company (in Pennsylvania). In Rochester, they discovered an ideal manufacturing location—with both high quality “glass” sand and abundant supplies of natural gas for firing the “pots.” Commencing operations in July 1872 the two principal organizers instituted manufacturing economies and improvements which dramatically increased the capacity of the enterprise. By the 1890s it was the largest such installation in the world with a capacity of 75,000 dozen tumblers a week or 150,000 per day. The company also specialized in finer grades of glass. He organized the Bridgewater Gas Company as part of his Rochester operation and was president of the Braddock National Bank for a number of years. Using his Glass Company stock and income as a base for borrowing, he acquired interests in railroads and other businesses. In 1885 he came to New York City where he presumably met Thomas R. Lombard. Although it was reputed that he had sold his interests in the Glass Company in order to invest in the talking machine industry, there is no firm evidence of this and it is probable based on evidence in his assignment of 1891 that he obtained capital by borrowing against his holdings.⁷⁰

Lombard continued as Lippincott's advisor and was in a position to detail some of the stages of the negotiations. Also, Lippincott made a strong ally of James O. Clephane by agreeing on February 21, 1888 to guarantee him a cash interest of \$33,333.33 in the new business and the refusal of an agency covering one-half of the State of Pennsylvania should the negotiations prove successful.⁷¹

He surely realized that it was imperative to conduct negotiations with all possible speed since rumors were circulating concerning the possible amalgamation of phonograph and graphophone interests. In an unsigned article that may have been inspired by Frank Z. Macguire, the Washington *Capital* attempted to lay such rumors to rest, but as late as March 10, 1888 Gilliland had sent a letter out under Edison's name denying such a merger.⁷² It is possible that the stories may have come from a rejected scheme by Stephen Moriarity which had been placed before the Board of Directors of the American Graphophone Company. It called for the creation of a new company through a merger of the old Edison Speaking Phonograph Company, the Volta Graphophone Company, and the American Graphophone Company with a capitalization of \$5,000,000.⁷³

Lippincott almost immediately overcame the major obstacle when he agreed to assume personal liability and arranged for two business associates, George I. Whitney and John Robinson, to act as guarantors for the performance of the contract. By February 25, 1888 the Directors already were entertaining a proposition. On March 17 the final details were worked out. These included the already mentioned secret payment to Clephane and the purchase of \$100,000 par value stock owned by the three Agents for the sum of \$200,000. It was proposed to place a surrender of the

rights of the General Agents in escrow until a contract could be ratified at a special meeting of stockholders to be held at Harper's Ferry on March 29, 1888. The proposition was overwhelmingly approved by a vote of 42,892 in favor to 305 opposed.⁷⁴

In order to best understand the eventual course of the history of the industry it is necessary to examine the details of the contract:

- 1) Lippincott promised to furnish graphophones for lease or sale in the United States except for the states of Illinois, Wisconsin and Michigan which were reserved by the Company. However, if the American Graphophone Company was not able to make arrangements for the reserved territory it would be added to the basic contract.
- 2) All supplies and machines would be supplied by the American Graphophone Company. The Company would arrange for the speedy delivery of the three hundred machines that were being constructed by the Western Electric Company's New York Branch and then would be required to arrange for supplying at least 5,000 machines per year after the first year.
- 3) Should the American Graphophone Company not be able to supply machines after due requisition, Lippincott had the option to arrange for manufacture but would have to pay a \$25.00 royalty on each machine. If, however, Lippincott was not supplying to meet a demand the "said American Graphophone [might] give notice thereof to the party of the second part; and if at the expiration of thirty days thereafter the said neglect or omissions still [continued], the said American Graphophone Company [might] proceed to supply the said demand through agents or otherwise...."
- 4) The Company would defend Lippincott against all suits for infringement and would pay any judgements that might be rendered. It also agreed to initiate suits for the protection of its patents.
- 5) The contract would have an effective life of fifteen years unless the patents were declared invalid.
- 6) If either party failed to keep up and perform the details of the contract, the other party would have the right to terminate it after thirty days notice. This would not prejudice any claims that the American Graphophone Company might have.
- 7) Lippincott would be required to post a performance bond of \$200,000 through guarantors.⁷⁵

With the signing and approval of the agreement the entire phonograph versus graphophone situation began to move rapidly towards a climax. The graphophone backers knew that they would soon have to establish their rights, and in order to do so began to consider litigation as the only solution. Consequently, they obtained affidavits for use should a suit become necessary. Although subsequent events canceled the need for immediate action a bill of complaint and several supporting affidavits were prepared by the firm of Pollok and Mauro.⁷⁶ The moving papers showed the intention of attacking any possible infringement and were purposely left blank regarding the specific federal jurisdiction and the defendant involved since it was apparently intended to bring actions in several areas against principals or local agents.

These defendants, and others acting in concern with them... wrongfully, unlawfully, and with intent to injure your orators, made, or cause to be made, used, or cause to be used, and sold, or cause to be sold apparatus for recording and reproducing sounds, known as 'phonographs' or 'graphophones'... in infringement of the exclusive rights granted to your orators....⁷⁷

Such a course of action was decided upon at the May 17, 1888 directors' meeting of the Volta Graphophone Company, but preliminary moves obviously had already occurred.⁷⁸ These actions would become necessary only if it were not possible to come to an arrangement with the Edison forces.

In the Edison camp, Gilliland now felt that all of his energies should be directed towards accomplishing necessary office details and in organizing additional agencies. By June, several had been established such as the Pacific Phonograph Agency of Louis Glass and the Pennsylvania Agency of Frank Z. Macguire. Certainly, there were others if one is to judge from the tone of surviving letters. Edison, meanwhile, was generating the newspaper coverage that he always managed to inspire. In mid-April he proposed giving an exhibition at the laboratory for the press, but Gilliland cautioned him to postpone it until mid-May. It occurred on May 11, 1888.⁷⁹ Such publicity would make the public more conscious of his invention, but even more important might add to the sale value of the Edison Phonograph Company or its stock. The Villard proposition had fallen through and without infusions of capital Edison obviously faced financial troubles. On April 26, Edison wrote to George E. Gouraud, his English representative, pushing the stock of his proposed Edison Phonograph Works. "Money must be deposited in New York subject to draft of Company during May, June, July, August. Cannot enter into contracts for buildings without cash in bank. This factory is essential for general success of operating companies."⁸⁰ The shop at Bloomfield was much too small to achieve the level of production envisioned. Even before he obtained his money, a contract was let to construct a large wooden building to house the Edison Phonograph Works located near the new Edison Laboratory at West Orange, N.J. The building was planned to be 208 feet long by 50 feet wide with a height of 20 feet from foundation to eaves.⁸¹

The need for capital also emerged from the reaction of Samuel Insull to Alfred O. Tate concerning the financial management of the whole phonograph enterprise.

Almost invariably when I am in New York I get inquiries as to the stability of the Phonograph Company.... I am told that the Phonograph people do not pay their accounts. Of course I invariably reply that this is simply a matter of neglect and the accounts ought to be paid, and that it is a blank, blank shame that they are not paid. I have had to do this because this failure to pay accounts affects our [Edison Machine Works] credit. I find that the only way to keep a good credit is to settle monthly in some form or another. If you people at Orange are going to abuse your credit you will cripple us.⁸²

But Tate could not settle bills without the necessary means. Edison hoped to obtain the necessary capital through the organization of a new manufacturing company—the Edison Phonograph Works. This company, organized on April 30, 1888, regularized its relations with Edison through an agreement signed with him on May 12, although Edison had not yet produced an adequate phonograph.⁸³ Edward Johnson commented,

A mutual friend in discussing Edison's disgruntled condition of late says it no doubt arises from his disappointment in the outcome of the Phonograph. I enquired what he meant and he said 'Why don't you know they have at last recognized that their Phonograph is a failure.' I said no I had not heard of it. Well he says 'it is a fact at all events'—This has a basis of truth no doubt. But I believe they will continue at it until they do get it.⁸⁴

The phonograph as it stood was shown to the press on May 11, and formally unveiled at the Electric Club on May 19 by Ezra T. Gilliland.⁸⁵ At that time, he delivered a paper detailing the "official" Edison position concerning Edison's long lapse and then discussed the new machine. As demonstrated, the machine was not really ready for manufacturing, nor was it adequate for the demands of commerce. During the remaining days in May, information accumulated concerning a long series of defects and operational difficulties. They were dealt with in a 72-hour marathon that ended on June 16. Now, the instrument was ready to be shipped to England for demonstration. That event has entered the folklore of the phonograph, and was documented in a series of photographs made by W. K. L. Dickson.⁸⁶

Edison's activity during the spring of 1888 created consternation at the American Graphophone Company which feared the loss of its leadership role in the introduction of new "talking machines" to the market. The Western Electric Company's New York Branch was having such difficulty producing three hundred graphophones that it refused to bid on a second lot unless a large increase in the price of each instrument was granted.⁸⁷ As a result, an active campaign was instituted soliciting quotations from manufacturing concerns with the aim of producing the 5,000 machines called for in the agreement with Lippincott. Although one firm bid a figure of \$27.25 per machine boxed and delivered in Waterbury, Connecticut, the Graphophone Company decided to manufacture its own instruments.⁸⁸

As these events unfolded, rumors circulated concerning a proposed merger of the phonograph and graphophone interests. One such rumor implied that Theodore N. Vail and a syndicate from the telephone company were considering such an acquisition.⁸⁹ This partially may have been inspired by the purchase of 150 shares of the Edison Phonograph Company stock by Mrs. Mary Hemenway. In a letter to Gilliland, Edison mentioned that he had promised George Parsons Lathrop to show the phonograph privately to Mrs. Hemenway and to the Forbes family.⁹⁰

We cannot say with certainty when Jesse Lippincott decided that he wanted to control the phonograph at all costs, nor do we know if a strategy of acquisition had been adopted at the time of his contract with the American Graphophone Company. Thomas R. Lombard later recalled that

Mr. Lippincott went to see Mr. Gilliland, at 19 Day Street, and was there shown an Edison phonograph in his office. He immediately came to me and asked me to go down there and see it, which I did. He went to Washington a few days after that, and when he came back he told me that the Graphophone Company wanted him to commence negotiations with Edison, having in view acquiring the phonograph interest [and] combining the business under one head. He commenced negotiating with Mr. Gilliland and Mr. Tomlinson....

On cross examination he added: "I cannot recall the date, but I would say it was probably some time in the first of April of 1888. I have one way of arriving at that date, and it is I know after the blizzard in March, 1888."⁹¹

In May negotiations were proceeding very much in earnest, although Edison apparently had not been apprised of the fact. Even though Lippincott and Lombard had made it a point to see the new machine at Gilliland's offices, some kind of formal introduction was needed before engaging in any kind of discussion—this was arranged by Mr. Thayer of the Western Electric Company.⁹²

By mid-May some sort of preliminary negotiation was taking place. On May 18, 1888, John C. Tomlinson requested the stockholders of the Edison Phonograph Company to sign a pooling agreement wherein all stock would be "sold for the benefit of each stockholder, ratably, at not less than par."⁹³ Edison now dumbfounded both Tomlinson and Gilliland by concluding the Hemenway stock sale.⁹⁴

Lippincott, in discussing the phonograph with Gilliland, first mentioned some kind of cooperation or combination to avoid business competition and the cutting of prices. The possibility of purchasing Edison's interests also was broached.⁹⁵ Tomlinson, Edison's lawyer, then approached his employer to determine if a sale indeed were possible. Although exact records were not kept, Edison dated these discussions on or after May 20, 1888.⁹⁶ It is certain that Lippincott considered the negotiations serious because James G. Payne, president of the American Graphophone Company, wrote on May 23, "I think the fact of your negotiations has leaked out either through Gilliland or some one here. I think, however, that I can safely say that our Company will not deal with the Edison people through anyone but you."⁹⁷

Discussions between Gilliland and Lippincott occurred on at least four or five occasions in late May. At one of the meetings Lippincott offered \$500,000 for the Edison Phonograph Company assuming that Edison would be able to deliver the entire stock. Tomlinson entered the negotiations on either May 31 or June 1, although Gilliland must have consulted him earlier.⁹⁸ At this time Tomlinson presented Lippincott with a memorandum of terms upon which the Edison Phonograph Company stock and the Gilliland Agency might be sold:

- 1) Lippincott agreed to pay \$500,000 for the acquisition.
- 2) Edison would reserve \$113,000 to buy out the Edison Speaking Phonograph Company.
- 3) Edison would have the manufacturing rights for cost and a twenty percent profit.
- 4) The instrument would be called the phonograph or the Edison phonograph—the best instrument would be put on the market.
- 5) Edison would be paid a five percent royalty on the price of the phonograph by the Edison Phonograph Company for 15 years and assign the company all new patents.
- 6) The new company would be called the United States Phonograph Company.
- 7) Some of the persons that would be connected with the new company would be Jesse Lippincott, George Whitney, and John Robinson.
- 8) The Gilliland contract would be bought for \$250,000 in stock of the new company. Stock valued at \$50,000 would be paid for in cash, and the company would agree to purchase the \$200,000 balance for \$200,000 in cash four months later.
- 9) A definite answer was expected within 15 days. The affair was to be completely consummated before August 1, 1888.⁹⁹

Gilliland and Tomlinson then went out to see Edison, and after quite a bit of argument Edison was persuaded to consider selling the phonograph. On June 3 Tomlinson wired, "Have seen my parties proposition will be accepted. I think it important preliminary papers should be closed at once. What is the earliest day you can be in New York."¹⁰⁰

Business had called Lippincott back to Pittsburgh, and he had departed on the night of June 3. He spent a week there, went to Washington for a day and arrived back in New York on the morning of June 12. In Washington he had discussed the June 1 proposals with the Directors of the American Graphophone Company. Probably on June 12, Lippincott, Gilliland and Tomlinson went to West Orange to see Edison, Lippincott armed with a list of conditions that Edison previously had jotted down. "It was assumed at the interview that we had arrived at terms." All the features of a proposed contract were mentioned in the penciled memorandum.¹⁰¹

- 1) A royalty of 10 percent would be added to the factory price to the company.
- 2) Edison would have the sole manufacturing right in perpetuity at a cost plus 20 percent profit.
- 3) The new company would be called the American Phonograph Company.
- 4) The company would respect Edison's foreign business. The Edison Phonograph Company would have the right to manufacture in the United States for export.
- 5) Any future improvements on the phonograph were to go to the company without cost but on any special extras Edison would get a 15 percent royalty for his invention.
- 6) Clocks would be excluded from the agreement.
- 7) Experimental expenses would be allowed to Edison: \$30,000 for the first year; \$15,000 for the second; \$10,000 for the next three years; and then \$5,000 per year for the next seven. These would be billed at actual cost, and no profit was to accrue to Edison.
- 8) Edison was to be satisfied that the parties to the agreement were business men and that the "scheme isn't to be a stock speculation run by a lot of lunkhead directors."
- 9) The price of a complete machine was to be no more than \$85.00. The public would be allowed to buy the machines outright. The machines for sale were to be as good as the rented outfits.
- 10) "Mfg duplicate records (i.e.) publishing of music, novels, opera etc. to be reserved to factory that is to say if E[dison] succeeds in devising a process of printing duplicates of Records commercially the factory is to manufacture such duplicates at regular allowance of profit & E[dison] is to get his royalty on same as an extra (i.e.) 15 percent, patents of course to go to Company."¹⁰²

Sometime about June 13 Edison began his fabled 72-hour marathon and was unavailable for consultation. It is possible that Lippincott wished to confer with him since he delayed until June 17 a departure for Washington where he was to discuss the Edison proposals.¹⁰³ They were presented to the Board of Directors of the graphophone group on June 19.¹⁰⁴ On June 21 the results of the consultations were submitted in a letter to Edison:

- 1) After paying a large sum of money the purchasers should not be obliged to pay a royalty.
- 2) The Graphophone Company was not willing to give Edison exclusive manufacturing rights.
- 3) The proposed company would agree not to sell for export except to Canada.
- 4) The group would agree to Edison's stipulations concerning improvements.

- 5) The group would agree to the clause concerning duplicates.
- 6) The phonograph would be put on the market as the phonograph while the graphophone would be dubbed the phonograph-graphophone.
- 7) The American Graphophone Company would consider the Edison Manufacturing Company when ready to let contracts.
- 8) The Company would probably both rent and sell—the backers did not want to be committed absolutely to the price suggested by Edison.
- 9) It was agreed to pay the experimental costs as proposed by Edison.
- 10) The phonograph would be the instrument as it stood on the date of the contract. One was to go immediately into Lippincott's possession.
- 11) The new company would have the right to require the inclusion of names, numbers, and dates of patents as they might be specified on the advice of counsel.

If Edison agreed to these stipulations, Lippincott was prepared to pay Edison \$500,000 for his Edison Phonograph Company stock, the 1,200 shares that Edison held in the Edison Speaking Phonograph Company and Charles Batchelor's five shares.¹⁰⁵

With the delivery of the Lippincott letter the negotiations rapidly concluded. Edison indicated that he would accept the proposed modifications and Lippincott officially communicated the tentative acceptance to the American Graphophone Company. The Board discussed it on June 25, 1888 during the afternoon and again in the evening. At this meeting, it was proposed that the company place itself in a position to purchase the Edison property, and provisions were suggested for increasing the capitalization to make that possible. If this occurred, Lippincott would be reimbursed for his \$500,000 expenditure in stock. It also was voted that Charles Sumner Tainter should receive the same experimental allowance as Edison. Lippincott received notification of the resolution on June 26.¹⁰⁶

Returning to New York on June 27, Lippincott saw Gilliland and Tomlinson, who then proceeded to Orange carrying a draft memorandum of contract. Edison looked it over and expressed a concern that had hitherto not manifested itself. "There are some things here I won't agree to myself, but suppose you stay here to-night, and we will get up a contract, go over, and present it to Lippincott as a basis to argue on." He stated "Mr. Tomlinson, if I thus surrender everything, and pass title to it, and the buyer then fails to keep his contract with me, I will have nothing but a lawsuit against him, and will have parted with all my property and tied up my factory." Edison suggested that the stock of the Edison Phonograph Company be retained as security for the payment and placed in the hands of a trustee pending completion of the payment of the purchase price.¹⁰⁷

On June 27 Lippincott transmitted to Washington the substance of his interview with Gilliland and Tomlinson:

- 1) He would agree to undertake the purchase of Edison stock and patents for \$500,000.
- 2) If he succeeded he would allow the American Graphophone Company an option to purchase the stock at any time up to five years for the same price as was paid—the price to be paid in cash or in American Graphophone Company stock at par.
- 3) He promised to pay a \$10 royalty on all phonographs sold or leased and 30 percent on the selling price of supplies.
- 4) If the company bought the property, Lippincott would pay the company the same price on phonographs as he would on graphophones.

- 5) All of this was predicated upon the American Graphophone Company allowing him to handle the phonograph and its accessories.
- 6) The American Graphophone Company would be allowed the same for experiments as Edison was to be allowed.¹⁰⁸

At three o'clock on the afternoon of June 28, Edison, Gilliland and Tomlinson arrived at Lippincott's office with a rough draft of a proposed contract. The major change involved the delivery of the stock and provisions for Edison to repurchase the stock that he had recently sold to Mrs. Hemenway.¹⁰⁹ "Mr. Lippincott took the rough contract..., read it over, did not object to any of the points, placed the contract on the table and handed [Edison] a pen to sign it." Edison was astonished that the rough should be considered final without submission to an attorney.

He merely glanced over the contract, spoke to [Edison] about the new provision touching the Hemenway stock, and asked... if [he] agreed to deliver the Hemenway stock, whereupon [Edison said no, that [he] did not agree to deliver it, but would make an allowance, as was stated in the contract. That was all [Lippincott] asked about it.

The contract was then signed.¹¹⁰

About an hour later Tomlinson returned with another contract detailing the terms of sale of the Gilliland Agency contract. The agreement was then pre-dated so that it read June 27.¹¹¹ The agreement stated, following the concept of the June 1 memorandum, that the sale would be consummated in stock with a par value of \$250,000, but that Gilliland and Tomlinson would have the option to request that the stock be redeemed at par. The sale was now complete.¹¹²

The final contract called for the following:

- 1) To buy, excepting the 150 shares belonging to Mrs. Mary Hemenway, the entire capital stock of the Edison Phonograph Company for \$500,000. Thomas A. Edison would reserve \$22,500 to repurchase the stock.
- 2) Payment for the stock would be made as follows: \$10,000 on July 13, 1888; \$115,000 on September 1, 1888; \$125,000 on October 1, 1888 and \$250,000 on November 1, 1888.
- 3) On July 13 after the first \$10,000 payment the certificates of stock would be placed at the Garfield Safe Deposit Company which would deliver them when all monies were paid.
- 4) Lippincott agreed to form within 20 days a corporation to be called the American Phonograph Company.
- 5) Within 30 days Edison's contracts with the Edison Phonograph Company and the Edison Phonograph Works would be modified so that Edison could draw up contracts with the American Phonograph Company. Copies of such modified contracts were attached to the agreement.
- 6) If Lippincott were to default in his payments he would receive one share of Edison Phonograph Company stock for each \$100 paid—the remaining balance would be delivered back to Edison.
- 7) Lippincott agreed to attempt to purchase the Edison Speaking Phonograph Company stock and would hold Edison harmless from claims against him. When all provisions of the contract had been carried out Edison would deliver his 1200 shares and Batchelor's five shares in the Edison Speaking Phonograph Company.¹¹³

On June 29, 1888 the success of the negotiations was communicated to James G. Payne of the Graphophone Company. "The purchase is now actually made. I am to pay Edison ten thousand dollars July 13th, the balance at the times noted in my proposition addressed to him." He was going out to the mountains—Pittsburgh—and would be back on July 9.¹¹⁴

On July 12, Edison's secretary, A. O. Tate waxed rhapsodic, "...involving the blessing of God upon [the] divine undertaking."¹¹⁵ But in the trouble and turmoil that followed, the blessings of God seemed very distant indeed. The future brought bankruptcy, nervous and mental breakdowns, litigation, and constant strife. Within a few weeks the preliminary cracks in what was hoped to be a trouble-free endeavor were evident. It was not until 1909 that the final pieces were sorted out by the old Federal Circuit Court for the Southern District of New York. 

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PRINTED SOURCES

[*American Graphophone Co.*] [*Leaflets*]. ENHS.

American Graphophone Company versus Cleveland Walcutt, Walter H. Miller and Henry J. Hagen. (U.S. Circuit Court for the Southern District of New York. In Equity No. 5996). *Defendant's papers in opposition to motion for preliminary injunction.* ENHS.

American Graphophone Company versus the Edison Phonograph Works. (U.S. Circuit Court. District of New Jersey. In Equity No. 3500 [Plea] Record). ENHS. (Note: originally The Volta Graphophone Co. joined in the complaint.)

American Graphophone Company versus the Edison Phonograph Works. Record [for Final Hearing]. (U.S. Circuit Court. District of New Jersey. In Equity No. 3500). Printed signatures. ENHS. The missing material may be found in typescript at National Archives Regional Center, Bayonne, N.J.

American Graphophone Company versus the United States Phonograph Company. Record [for Final Hearing]. (U.S. Circuit Court. District of New Jersey. In Equity No. 3668). ENHS and typescript at National Archives Regional Center, Bayonne, N.J.

History of Beaver County. Chicago, Warner Co. 1888.

In the matter of the assignment of Jesse H. Lippincott to Frederic S. Wait, for the benefit of creditors. (New York. City and County Court of Common Pleas. L-319) Portions of this are printed, other parts are manuscript. New York Surrogates Court. Obsolete Records Section.

Printed copies of agreements as specified in text endnotes. ENHS. For the most part these were prepared for the North American Phonograph Company.

Spencerian Business College, Washington, D.C. *Announcement for 1887-8.* An electrostatic copy was obtained through the courtesy of its owner—Robert Truax.

Tate, Alfred O. *Edison's open door.* New York, E. P. Dutton, 1938.

Thomas A. Edison versus Ezra T. Gilliland and John C. Tomlinson. (U.S. Circuit Court for the Southern District of New York. In Equity No. 4652). Printed complaint and printed answers of Gilliland and Tomlinson. The remaining material including drafts of answers is at the ENHS. The printed copies are at NARC, Bayonne.

Notes:

¹I should like to acknowledge, with thanks, awards from the New Jersey Historical Commission, the Faculty Research Award Program of the City University of New York (FRAP 11042) and the Professional Staff Congress/Board of Higher Education Award Program (PSC/BHE 12061) which partially funded my continuing research into the business organization of the early sound recording industry.

²Caveat No. 77 dated February 28, 1878 as filed on March 8, 1878 appears in *American Graphophone Company versus the United States Phonograph Company.* (U.S. Circuit Court. District of New Jersey. In Equity No. 3665 on patent 341,214). The *British Patent, Series 1878 No. 1644* had Provisional Specifications on April 24, 1878 and Final Specifications on October 22, 1878. ENHS.

³I have seen a copy of case No. 154, one of the applications. It is dated September 16, 1878 but was filed on December 15, 1878. The patent granted in 1880 was for case No. 174, filed on March 29, 1879 and granted on May 18, 1880. Patent No. 227,679. ENHS.

⁴Statement from Bergmann and Co. to Edison Speaking Phonograph Company, December 31, 1883. 192 hours experimenting on phonograph as per directions of E. H. Johnson, Esq. (@) 50¢ = 96.25; Material \$5.00. Total \$101.25. PP.

⁵The two warring groups within the company consisted of Painter, Johnson, Reiff, and Hubbard, who were ranged against Charles A. Cheever, Hilbourne L. Roosevelt, and George H. Bradley. Roosevelt died in the mid-eighties.

⁶The *British Patent, Series 1878, No. 1644* showed a great many ideas but the American Courts were later to hold them insufficiently worked out. The Volta experiments were long and detailed.

⁷See Charles Sumner Tainter. *The Talking Machine and Some Little Known Facts in Connection with its Early Development.* (Typescript). NM.

⁸Tainter's bitterness still showed at the time he penned his memoirs.

⁹The action *Lucy F. Seyfert versus Thomas A. Edison* dragged on in the New Jersey Supreme Court from 1883 or 84 until at least 1886. For documentation see T. A. Edison—Personal Files in the document files at ENHS.

¹⁰Tainter *op. cit.*, pp. 83-95. NM.

- ¹¹*Ibid.* Agreement—American Bell Telephone Co. with Alexander Graham Bell, Chichester A. Bell, Sumner Tainter and the Volta Graphophone Co., March 29, 1887. AT. Letter James H. Savelle to E. Hudson, March 30, 1887. AT.
- ¹²See Certificate of Incorporation of the American Graphophone Company. Copies were introduced in several court cases in the 1890s and also as a portion of Tainter *op. cit.*, NM. Also West Va. Sec. of State.
- ¹³*The Graphophone for Deposition purposes... Mr. Andrew Devine... and Mr. E. V. Murphy... April 4th, 1887; The Graphophone was a sure and immediate substitute for shorthand amanuenses... Mr. James O. Clephane... and Mr. J. J. McElhone... April 7, 1887; the Graphophone as applicable to newspaper reporters and the National Typographic Company's machines... Mr. James O. Clephane... and Mr. Stilson Hutchins, April 7, 1887; The Graphophone for business purposes... Mr. James O. Clephane... and Hon. H. R. Hitt... April 18, 1887.* ENHS It is significant that the Edison forces obtained all of this publicity material. No other copies are known to exist.
- ¹⁴Letter, July 12, 1887. Bell Papers.
- ¹⁵The meeting was reported in Spencerial Business College. *Announcement for 1887-8.* p 18; A. B. Dick Co. to A. O. Tate, July 25, 1887. ENHS. The College also announced its intention of acquiring a graphophone for use after October 1887.
- ¹⁶A copy of the license was discovered among the Edison Speaking Phonograph Company papers. PP. The earlier connection of Gilliland with Edison is documented at the Edison National Historic Site.
- ¹⁷See "Answer of Ezra T. Gilliland" in *Thomas A. Edison against Ezra T. Gilliland and John C. Tomlinson*. (U.S. Circuit Court for the Southern District of New York. In Equity, No. 4652) p. 4 NARC-Bayonne (RG21).
- ¹⁸*Ibid.* p. 13. The files at the Edison National Historic Site bear this out. I can find no evidence of Edison experimentation until 1887.
- ¹⁹There is a copy of case No. 733, one of the reapplications, in the oversized document files at ENHS. The folder contains letters showing the office actions relating to the three reapplications Nos. 733, 734 and 806.
- ²⁰See Henry Edmonds, *The Graphophone* (British Association for the Advancement of Science. Bath Meeting, 1888. Section G), p. 10 for details concerning the fate of the Edison British patents. ENHS (This pamphlet was also reproduced in *The Talking Machine Review International*, Vol 5, No. 33 (April 1975), p. 327-332.
- ²¹Gilliland, *loc. cit.*, p. 14.
- ²²Painter to E. H. Johnson, February 25, 1887; Painter to Bergman & Co., April 9, 1887; Bergmann & Co. to Johnson, April 30, 1887 (concerning stockholder list). PP. Volta Graphophone Co. "Extracts from Minute Books" in *American Graphophone Company versus the Edison Phonograph Works* (U.S. Circuit Court, District of New Jersey. In Equity No. 3500 on Patent 341,314 [Plea] Record p. 303.) ENHS; H.M. Herman to U.H. Painter, May 16, 1887. PP.
- ²³Detailed in American Graphophone Co. *Annual Report, 1888* and also in various correspondence. The *Annual Report* is in Bell Papers.
- ²⁴See C. J. Bell to E. H. Johnson, September 23, 1888. PP.
- ²⁵Johnson to Bell, September 27, 1887. PP. Edison to Albert Miller, September 30, 1887. ENHS.
- ²⁶Clephane to Edison (telegram), October 5, 1887. ENHS; Copy of letter Painter to Johnson, October 6 1887. PP.
- ²⁷Painter to Johnson (tissue copy), October 9 1887. PP.
- ²⁸Edison Phonograph Co. "Certificate of Organization" in *American Graphophone Co. vs. Ed. Phonograph Works*. [Plea] Record. p. 174. ENHS.
- ²⁹Agreement between Thomas A. Edison and the Edison Phonograph Company, October 28, 1887 (printed copy), pp. 1-7. ENHS.
- ³⁰Agreement between Edison Phonograph Company and Ezra T. Gilliland, October 28, 1887 (printed copy). ENHS.
- ³¹G. G. Hubbard to Alexander Graham Bell, September 26, 1887. Bell Papers.
- ³²Testimony of Thomas R. Lombard in *American Graphophone Co. vs. Edison Phonograph Works* [Plea] Record. p. 134. ENHS.

³³*Ibid.*, p. 134-5.

³⁴American Graphophone Co. "Extracts from Minute Books" in *American Graphophone Co. versus Edison Phonograph Works*, [Plea] Record p. 257-28 (11/26/87, 11/29/87, 11/30/87, 12/7/87 & 12/20/87); Lombard testimony in *loc. cit.*, p. 136. ENHS.

³⁵Johnson to Edison, October 20, 1887. PP; Edison to Johnson. Received October 24, 1887. PP.

³⁶Rough notes of Painter, October 24, 1887 on Edison Electric Light Co. paper. PP.

³⁷Painter rough draft of reply and also copy of Hubbard to Edison, October 28, 1887. PP.

³⁸Painter to Hubbard October 28, 1887, tissue copy. PP.

³⁹Charles Batchelor. *Record Book*. Item No 506 Phonograph, November 5, 1887, and Item 510 November 11, 1887. ENHS.

⁴⁰Gilliland to Edison, December 1887. ENHS.

⁴¹Painter to Johnson, November 20, 1887. ENHS.

⁴²Edison to Painter, December 5, 1887. PP. Painter to Johnson, November 30, 1887. PP. Draft statement November 30, 1887. ENHS. Edison on Painter to Edison December 5, 1887. PP.

⁴³Painter to Johnson (with Johnson endorsements), January 4, 1888. PP.

⁴⁴Philip G. Hubert, Jr. "The new talking machine" in *Wheeling Intelligencer*, Jan 7, 1888; Endorsement of Johnson on Painter to Johnson, Jan 4, 1888. PP.

⁴⁵Painter to Bergmann & Co., January 11, 1888; Bergmann & Co. to Painter January 13, 1888. PP.

⁴⁶Proposed contract S. Bergmann and U. H. Painter (undated). PP. Brehmer Bros. to Painter, February 4, 1888. PP.

⁴⁷Painter to Johnson, January 10, 1888. PP.

⁴⁸Painter to Johnson, January 11, 1888. PP.

⁴⁹Johnson to Painter, January 17, 1888. PP.

⁵⁰Painter to Johnson, January 18, 1888. PP.

⁵¹Johnson to Painter, January 19, 1888. PP.

⁵²*Ibid.*

⁵³*Norwalk Gazette*, January 11, 1888. PP.

⁵⁴Stockholder list, January 21, 1888. PP.

⁵⁵Johnson to Painter, January 23, 1888. PP.

⁵⁶Edison Speaking Phonograph Co., Report of meeting, January 24, 1888. PP; *Norwalk Gazette*, January 25, 1888. PP; Letter James Skillan, Secretary of [Rump] meeting of Edison Speaking Phonograph Company to A. H. Byington, January 25, 1888. PP.

⁵⁷Painter to Johnson (with endorsements), January 29, 1888. PP.

⁵⁸Josiah C. Reiff to Painter, January 30, 1888. PP.

⁵⁹Cheever et al. to Painter, January 30, 1888. PP; Lockwood to Cheever, February 1, 1888. PP.

⁶⁰Cheever to Lockwood, February 5, 1888. PP.

⁶¹*Annual Certificate of the Edison Speaking Phonograph Co.* dated February 14, 1888 (Printed). ENHS.

⁶²Lockwood to Painter, February 18, 1888. PP.

⁶³Emendation, February 20, 1888 on Painter to Johnson, February 19, 1888. PP.

⁶⁴Johnson to Painter, February 24, 1888. PP.

⁶⁵A. O. Tate to Wiman, January 4, 1888. Tissue letter book. ENHS.

⁶⁶Edison to Villard, January 19, 1888, Villard Papers, Item no. 471 Baker Library, Harvard University.

⁶⁷Edison to Villard, January 19, 1888. Supporting material. Villard Papers, Item no. 471, *loc. cit.*, also draft at ENHS.

⁶⁸Reiff to Painter, February 5, 1888. PP.

⁶⁹Painter to Reiff, February 7, 1888. PP; Painter to Reiff, February 8, 1888. PP.

⁷⁰Letter Arthur Walworth to Raymond Wile. *History of Beaver County* p. 770-771; Souvenir folder—*The Rochester Tumbler Co. to its friends . . . January 1st, 1896*. Obituary in *New York Times*, April 20, 1894, p. 2, c. 2; A.O. Tate *Edison's Open Door*, p. 169; *In the matter of the assignment of Jesse H. Lippincott to Frederick S. Wait for the benefit of creditors*—Affidavit of James O. Clephane. Letter of Banner Baking Powder Co. November 6, 1891 showed Lippincott's ownership. Tate stated that Lippincott obtained his money by selling out his Tumbler Company holdings, but there is no evidence of this. An examination of the papers in the

assignment would tend to contradict this as well as Lippincott's almost immediate need for funds in the latter part of 1888. The *Pittsburgh Gazette*, April 20, 1894 gave the birth date as February 18, 1842.

⁷¹Affidavit of James O. Clephane *loc. cit.* The notes had not been paid.

⁷²Washington *Capital* February 12, 1888 clipping. Item No. 538 in Charles Batchelor *Record Book*. ENHS; Edison to Louise H. Patterson, March 16, 1888 as signed by G. (Gilliland). ENHS.

⁷³*American Graphophone Company versus the Edison Phonograph Works [Plea] Record* p. 270-274. ENHS. It is possible that the proposal of Stephen Moriarity represented a proposition from a group headed by Jesse Seligman.

⁷⁴*Ibid.*; also see testimony of Thomas R. Lombard, p. 138. ENHS.

⁷⁵"Agreement American Graphophone Company and Jesse H. Lippincott, March 26, 1888" in *Ibid.*, pp. 188-194. ENHS.

⁷⁶The proposed bill of complaint and several supporting affidavits were introduced in the testimony of Philip Mauro, November 4, 1898, in *American Graphophone Company versus the United States Phonograph Company and George E. Tewksberry*. In Equity No. 4005 on Patent 341,287. ENHS. The confrontation took place in 1893 in *Volta Graphophone Company and the American Graphophone Company versus the Edison Phonograph Works*. In Equity No. 3500. After Volta gave the American Graphophone Company full title to the patents in question its name was dropped as a complainant and an Amended Bill of Complaint was filed.

⁷⁷*Ibid.*, pp. 44-45.

⁷⁸Volta Graphophone Company Minutes for May 17, 1888 in *American Graphophone Company versus the Edison Phonograph Works. [Plea] Record*. ENHS.

⁷⁹Little of the material has survived, but letters exist with agency titles as part of their letterheads. See Gilliland to Edison, April 23, 1888, Document files—1888—Phonograph, Gilliland to Edison, April 16, 1888. All ENHS.

⁸⁰Edison to George E. Gouraud, Tissue letter book April 26, 1888. ENHS.

⁸¹Specifications for the frame building of the Edison Phonograph Works. 1888 Document file. ENHS.

⁸²Samuel Insull to A. O. Tate, May 23, 1888. (On Edison Machine Works letterhead). ENHS.

⁸³See *American Graphophone Company versus Edison Phonograph Works. [Plea] Record*. p. 182 for a copy of the Certificate of Organization. The (New York) *Sun* for May 2, 1888 also reported the organization of the new company. Clipping in PP. The *Agreement between Thomas A. Edison and Edison Phonograph Works* provides details of the contract with Edison. May 12, 1888 (printed). ENHS.

⁸⁴Johnson to Painter, April 27, 1888. PP.

⁸⁵See Electric Club, New York. *Paper read before the monthly meeting... by Mr. E.T. Gilliland....* ENHS.

⁸⁶A series of these oft-reproduced photos still exists at the Edison National Historic Site.

⁸⁷American Graphophone Company. "Extract from Minute Books, October 8, 1888" in *loc. cit.* p. 286. ENHS. For other details see Raymond R. Wile "Introduction" to the reprint edition National Phonograph Association. *Proceedings of the 1890 Convention of Local Phonograph Companies*.

⁸⁸The circularizing of a large number of companies is mentioned in the printed minutes and also borne out by the fact that the circular received by A. C. Woodworth was prepared on the Edison Electric Pen and Duplicating Press. American Graphophone Company to A. C. Woodworth April 30, 1888 and A.C. Woodworth to American Graphophone Co. May 1, 1888. AGC papers—NM. The proposition must have been presented to Woodworth at an earlier date since he also provided a parts estimate dated April 28, 1888. AGC-NM.

⁸⁹See Wile, *loc. cit.* p. xxi.

⁹⁰Gilliland to Edison May 25, 1888. ENHS. Endorsement on Gilliland to Edison May 2, 1888. ENHS.

⁹¹Testimony of Thomas R. Lombard in *loc. cit.* Answer to Question 16 (p. 137); Answer to Cross-Question 78 (p. 151). ENHS.

⁹²"Affidavit of Jesse Lippincott" in *Thomas A. Edison against Ezra T. Gilliland and John C. Tomlinson*, Folio 2. ENHS.

⁹³Second endorsement on letter J. C. Tomlinson to E. H. Johnson May 18, 1888 (typed copy). ENHS.

⁹⁴Gilliland to Edison May 25, 1888. ENHS.

⁹⁵Answer of Ezra T. Gilliland in *loc. cit.* Fol. 65-66—NARC-FRC-Bayonne.

⁹⁶Edison recalled this as being after the 20th since foundation work was still in progress for the new phonograph factory. "Affidavit of Thomas A. Edison" in *Thomas A. Edison against Ezra T. Gilliland and John C. Tomlinson*, p. 3 and 4. Copy at ENHS.

⁹⁷James G. Payne to Lippincott May 23, 1888 in *American Graphophone Company versus the Edison Phonograph Works [Plea] Record* p. 237. ENHS.

⁹⁸Affidavit of Jesse Lippincott, *loc. cit.* Fols. 5-7.

⁹⁹*Ibid.* Exhibit A.

¹⁰⁰*Ibid.* Exhibit B.

¹⁰¹*Ibid.* Folios 25, 20-21. The memorandum is undated but if Edison did embark on the fabled 72-hour experimental session for getting the phonograph ready to send to his English Representative—George E. Gouraud—the Twelfth would be a more logical day than the Thirteenth—the experimental session would presumably have started on the Thirteenth.

¹⁰²*Ibid.* Exhibit D.

¹⁰³*Ibid.* Fol. 25.

¹⁰⁴Brief for Defendant on defendant's reply to complainant's bill of complaint" (Concerning the Plea) in *American Graphophone Company versus the Edison Phonograph Works*, p. 32. ENHS.

¹⁰⁵Lippincott Affidavit *loc. cit.* Exhibit E.—Lippincott to Edison June, 21, 1888. ENHS.

¹⁰⁶American Graphophone Co. "Minutes" June 25, 1898, *loc. cit.* p. 276-280.

¹⁰⁷Affidavit of Thomas A. Edison, *loc. cit.* p. 10-11.

¹⁰⁸American Graphophone Company. "Minutes" June 27, 1888, 8 p.m., *loc. cit.* p. 278-280.

¹⁰⁹Edison Affidavit. *loc. cit.*, p. 11. The office was located at 139 Barclay Street.

¹¹⁰*Op. cit.*, p. 11.

¹¹¹Lippincott Affidavit, *loc. cit.*, Fol. 30-31.

¹¹²*Op. cit.* Also printed version of agreement *Agreement between Ezra T. Gilliland and Jesse H. Lippincott, June 28, 1888*. ENHS.

¹¹³*Agreement Thomas A. Edison with Jesse H. Lippincott, June 28, 1888* (printed). ENHS.

¹¹⁴Lippincott to Payne June 29, 1888 in *American Graphophone Co. versus Edison Phonograph Works [Plea] Record* p. 239. ENHS.

¹¹⁵A. O. Tate to John C. Tomlinson, July 12, 1888. ENHS.