The Victor Talking Machine Company

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Editorial Notes

These pages outline the major developments of a company which led an industry for almost three decades. To a great extent, they also reflect one man's loyalty and dedication to that company. Through this manuscript, Ben Aldridge has made a significant contribution to posterity. It is impossible to read this material without being awed by the distance this industry has travelled since its beginnings. Our understanding and appreciation of what RCA Victor is today is immeasurably enhanced. The author's deep sense of responsibility and perseverance has more than earned our gratitude and respect.

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Note: Book taken from : http://www.davidsarnoff.org/onlinetexts.htm

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Preface

An effort has been made, in the pages which follow, to tell the Victor story fairly, accurately, and in essential detail. It is intended as a factual account-not for publication, but as a source from which material for publication could be drawn.

The following information has been compiled from many sources, some of which have been carefully guarded secrets. It is believed to be a fairly complete account of how it all started, how it developed, and what went on here many years ago. In some cases there is more reference detail than would normally be used in a compact narrative. In others, details could have been amplified. This last applies particularly to the recording end of the business which has a lore of its own that could easily fill a book again as large.

Most of the facts regarding Victor were found in legal papers in the general file, board reports, old copies of "Voice of the Victor," the research done by J. O. Smith, the *Memoirs of Leon F. Douglass*, correspondence and conversations with Mr. Fenimore Johnson, Mr. Dale Kramer (Mr. Johnson's biographer), Mr. Joseph Sanders (Mr. Berliner's nephew), Mr. E. F. Haines, Mr. R. W. Wythes, and from personal experience. The facts have been checked so far as possible, and are believed to be substantially correct.

In a few cases, it will be noted that details have been left specifically unverified because supporting evidence was not available. Some of these points could probably be checked if extensive research is thought to be justified. In other cases, the missing data is gone for good.

Most of the competitive information came from the *Encyclopedia Britannica*, *The Life of Emile Berliner*, *The Music Goes Round*, *Talking Wax*, and *The Talking Machine Industry*.

B. L. A.

Introduction

Sometime during February of 1896, Belford Royal brought a man named Whitaker to see Mr. Johnson. At that time, Mr. Johnson was operating a small machine shop in Camden where he did fine work in metal. He made and repaired machine tools, home appliances, models for inventors, and so forth. Mr. Royal, a workman in Mr. Johnson's shop, spent part of his time drumming up business.

Mr. Whitaker was apparently the "venerable old gentleman" referred to by Mr. Gaisberg in *The Music Goes Round* as having developed a crude spring motor designed to operate sewing machines. The Berliner Gramophone Company of Philadelphia had given him an opportunity to develop a spring motor for their hand-powered Gramophone, and he had come to Mr. Johnson for help in redesigning it.

Mr. Johnson wasn't very keen about the assignment because he thought the motor should be *completely* redesigned. However, in the end he complied only to have the motor rejected. He then made a further effort to interest Mr. Whitaker in putting up some capital to design an entirely new motor as a joint undertaking. Mr. Whitaker was not interested and, after trying to have his idea worked out elsewhere, finally gave up the venture.

In speaking many years later of his first experience with the Gramophone, Mr. Johnson said:

I became interested in it as I had never been interested before in anything. It was exactly what I was looking for. It was a great opportunity and it came to me as it can never come to any other man in the talking machine business again. Other opportunities may come to other people but that was the great opportunity and I was ready for itthanks to a chain of favorable circumstances, one link of which, if missing, would have changed the account totally.

To get the full impact of what happened next, the development of the industry up to this point, and the extent of the public's interest should be considered. Available information is limited, but apparently the situation was about as follows.

chapter one Scott and Edison

Mr. Leon Scott (de Martinville) is generally credited with having been the first to demonstrate, in 1857, that sound could be recorded. However, it would appear that Chladni and Duhamel, in 1809, and Eisenmanger, in 1836, produced somewhat similar results in Paris. At any rate, Scott attached a stubby hog's bristle to a flexible diaphragm and found that when this was brought into contact with a revolving cylinder smeared with lamp black, a straight line would be registered if everything were quiet. By the same token, if sound was thrown against the diaphragm, a wavy line would be registered. He also found that any given sound would always produce an identical wavy line. This is as far as he got. He called his invention the "phonautograph" and the recordings "phonautograms."

Sound is Reproduced

During August of 1877, Mr. Edison demonstrated that sound could be reproduced as well as recorded. He had originally become interested in the general subject when, as an inexperienced telegraph operator, he devised a contraption which enabled him to take down the messages by punching dots and dashes on a tape. Later he would re-run the tape more slowly and transcribe the message at his convenience.

The story goes, that he found that when the speed was increased, instead of retarded, a musical effect was produced. Mr. Edison is also reported to have said that while holding a telephone mouthpiece in his hand during a test, he noticed that vibrations caused the diaphragm to press against his hand. From this he got the idea that it might be possible to record telephone messages for both sending and receiving. With this in mind, he constructed a device very much like Scott's, except that the cylinder was enwrapped in metal foil and had helical grooves (about 10 to the inch). Recordings were made by the use of a metal pin attached to a flexible diaphragm. As the cylinder, was indented. The recording would be reproduced by playing it back against a "sound box" in place of the recording unit. The metal foil could be removed and replaced.

At the time, it was considered miraculous that the human voice could be reproduced, and the development created a sensation. The process, from any other point of view, left much to be desired. The resistance offered by the metal foil to the embossing point modified both the tone and the volume. The deeper the stylus tried to indent the foil, the greater the resistance it encountered. (p. 1)

At one time, Edison's priority to having invented the phonograph was challenged. It seems that Charles Cros, a Frenchman, had filed a paper with the Academy of Science in Paris on April 30, 1877, describing an almost identical "process for recording and reproducing audible phenomena." However, the contents of the paper were not divulged until December 3, 1877, which was after the Edison machine had appeared. Edison's original conception was dated August 12, 1877. However, a British patent had been filed for him on July 30, 1877. His first patent in the United States was filed February 19, 1878.

On April 24. 1878, Edison set up a company known as the Edison Speaking Phonograph Company with offices in New York and a small plant in Norwalk, Connecticut. The product was extensively exhibited by demonstrators who were sent out for this purpose to many cities. It was also used as a prop for lecturers. During the next eight years or so, Mr. Edison was preoccupied with the incandescent lamp and, consequently, paid little attention to his Phonograph. However, around 1887, the improved results obtained by Bell and Tainter of the Volta Laboratory sparked his interest once more. Using a wax cylinder, he developed an instrument which gave much better results than his original invention even though the volume was still thin. Bell and Tainter promptly claimed infringement and sued.

The Edison Phonograph Company

On October 8, 1887, the Edison Phonograph Company was organized. About three weeks later, Mr. Edison assigned many of his patents to the new company, but shortly afterward sold it to Jesse H. Lippincott who had previously acquired exclusive rights to rent and sell the Graphophone from the American Graphophone Company under the Bell and Tainter patents. Mr. Lippincott organized and assigned the sales rights to both the Phonograph and Graphophone to the North American Phonograph Company. About 30 sub-companies, having a combined capitalization of nearly \$30,000,000, were organized to sell and lease these machines in various territories. However, the North American Phonograph Company became insolvent about three years later (May, 1891). Mr. Lippincott died soon afterward and the North American Phonograph Company was thrown into a receivership. This created a serious situation for Mr. Edison since the North American until January 24, 1896. just about a month before Eldridge Johnson first saw the Berliner Gramophone. At this time, Mr. Edison bought the remaining assets of the North American Phonograph Company and organized the National Phonograph Company. (p.2)



Edison and his improved tinfoil phonograph: Washington, D.C., April 18, 1878.

While activities in the Edison product were naturally very much hampered in the early 1890's, Mr. Leon F. Douglass, who was to become an important factor in Victor's early history, reports that he: (1) developed a spring motor which Mr. Edison accepted somewhat reluctantly in 1891 or 1892, (2) had charge of the Edison exhibition at the Chicago World's Fair of 1893-94. making \$30,000 for Mr. Edison and \$3,000 for himself, and (3) invested his \$3,000 to set up the Talking Machine Company of Chicago which distributed the Edison Product from 1894 until 1904 when Victor acquired control. The other initial directors of the Talking Machine Company of Chicago were Charles Dickinson, a seed merchant, and Henry Babson, who was to become one of Victor's largest stockholders.

The Search For a Formula

It was obvious from the first that the materials used in recording blanks were of the greatest importance. To obtain smooth reproduction, it was essential that the blank should have an even texture; that it should be structureless; that it should not be too hard nor yet too soft; that it should not be subject to injury by reasonable heat or cold; that "feathering" from the recording process could be removed without injuring the recording; and that it should take a mirror-like polish.

It is easy to understand, accordingly, that as satisfactory formulae were developed, they became valuable properties and "top-drawer" secrets. From the large number of possible ingredients, Hughbanks says that Edison's initial formula was as follows:

Burgundy 50% Frankincense 25% Colophony 9% Beeswax 8% Olive Oil 4% Water 4% 100%

This critical area soon became a field in itself. The skillful mixing of wax and shellac with other materials quickly established such internationally known experts as Mr. Joseph Sanders. (p.4)

chapter two Bell and Tainter

Working in the Volta Laboratory with Alexander Graham Bell, Chichester Bell (Alexander's Cousin) and Sumner Tainter patented, in 1886 an improved recording process. They called the reproducer the Graphophone (Fig. 2).

The New Process

The grooves were cut, at the start, on a wax-coated, paper cylinder record. The Hill and Dale principle was used, but because of the greater flexibility of wax, the quality of the reproduction was much better than that obtained from Edison's metal-foil process. While the volume, at the start, was still so thin that ear phones had to be used, a notable step forward had been taken in the development of recorded music. Another important improvement in the Bell and Tainter instrument was the mounting of the sound box. A slight play provided better tracking of the sound box over the record.

The American Graphophone Company

In 1887, the American Graphophone Company was organized by Philadelphia capitalists to develop the improved product. A small plant, having a capacity of three or four machines a day, was established in Bridgeport, Connecticut.

Records, at this time, were almost exclusively of the popular-novelty-comedy variety. Because of the emphasis on volume of sound, a loud voice was more important than a finely cultivated one.

Early in 1887, Jesse H. Lippincott acquired from the American Graphophone Company the exclusive right to rent or sell the Graphophone under the Bell and Tainter patents. A little later, Mr. Lippincott purchased the Edison Speaking Phonograph Company and set up the North American Phonograph Company to promote the sale of both products nationally.

Columbia

Edward D. Easton and Paul Cromelin, Stenographers to the Supreme Court, organized the Columbia Phonograph Company in 1889 as a selling agency under license from the North American Phonograph Company with exclusive rights for the District of Columbia, Maryland, and Delaware. Mr. Easton had some time previously received a fee of \$50,000 (a record at the time) for having reported the trial of Guiteau for the assassination of Garfield. Their original objective was to sell the product to congressmen and others for dictaphone use. (p.5)



First Talking Machine (Gramophone) Exhibited in 1888.

The use of the word "Phonograph" in the company's name would indicate that they specialized in the Edison product at this time. Some hundreds were sent out, and they were all returned. Columbia was, accordingly, in a difficult position, and was only saved from failure by a demand which sprang up from showmen at fairs and resorts. At these exhibitions, as many as ten people, at a nickel each, could be listening to a record at one time. However, the Graphophone was apparently not sufficiently sturdy to stand the gaff at the World's Fair in 1894.

Mr. Lippincott died during 1891, and a portion of his business was absorbed by the Columbia Phonograph Company which was soon to suffer a serious burden of debt that almost caused its collapse. It was at this time that Mr. Easton assumed the presidency of the company and reorganized it with fresh capital. The product was improved by Thomas Hood MacDonald, director and chief experimentalist, who, for 16 years, was Manager of the Graphophone Company until his death in 1911. He was credited with having made important improvements in the mechanical construction of the Graphophone including a spring motor, in 1894, which Columbia claims established the principle used in all subsequent phonographic spring motors.

It is interesting to note that Bell and Tainter were reluctant to use a disc type of record because of the distortion factor which has been stressed in connection with the 45-rpm development.

Of the patent claims made by Bell and Tainter, the most important was the principle of the use of wax as a medium of recording.

In time, Columbia purchased the so-called "Jones" patent which was principally known for its claim covering "...a stylus vibrating laterally and engraving a groove of approximately uniform depth."

In passing, it might be recalled that, at the start, all cylinder records were individually recorded. Subsequently, the artists recorded in banks of four, and later in banks of twenty. The usual fee was \$2.00 a recording.

No evidence has been found of any broad, constructive effort to create a demand for the Graphophone as a source of entertainment and inspiration in the home prior to 1896. Sales efforts were chiefly on a price-novelty basis.

Mr. Easton, the motive power behind the Graphophone, was 41 years old in 1896 (about 12 years older than Mr. Johnson). He was an important, if troublesome, factor in the talking machine industry for 10 or 15 years. He died in 1915. (p. 7)



The original Bell Graphophone (1881), now in the Smithsonian Institute.

chapter three Emile Berliner

Emile Berliner was born in Hanover, Germany on May 20, 1851, the fourth child in a family of eleven. As a boy of 19, he went to Washington, D.C., where a job as a dry-goods clerk had been found for him by a former Hanover neighbor. During the next ten years, he spent a good part of his time peddling haberdashery along the Mississippi, but some time was spent in New York working for a chemist. He attended Cooper Institute in the evenings for awhile, and was greatly influenced by the book, A Synopsis of Physics and Meteorology. He had no formal education.

He became interested in the telephone as a result of the publicity it received at the Centennial Exposition of 1876. The "puttering" which he did, while working in the drygoods store, finally enabled him to evolve the loose contact principle which is still used in the mouthpiece (transmitter) of the telephone. He sold this invention to Alexander Graham Bell for \$75,000 plus a retainer of \$5,000 a year. This invention, and that of the continuous current transformer, brought him great professional prestige both in this country and in Germany where he was accepted and received by Von Siemens, Von Helmholtz, and other scientific notables of that important period of academic and scientific development.

The Berliner Process

Since the telephone men with whom Berliner had been working-Bell, Edison, Tainter-all became actively interested in the reproduction of sound around 1887, it is understandable that Mr. Berliner's attention would also be attracted to this subject.

He approached it from a new angle. Whereas Edison used the principle of indenting metal foil (Hill and Dale), and the Bells and Tainter cut the groove in a wax cylinder (also Hill and Dale), Mr. Berliner etched the sound in a metal disc, using the zig-zag pattern of Scott's original Phonautograph. The metal disc was coated with an acid resistant material. During the recording process, the pattern of the record groove was cleared by a stylus (attached to a flexible diaphragm) which removed the acid resistant material from the disc, thus exposing the metal to the subsequent acid etching process. The disc was then used as a master to make stampers from which duplicate records could be pressed in material that was plastic when heated and hard when cooled. It is interesting to note that, while the Berliner patent is generally supposed to have rested on the disc type of record as opposed to the Edison and Bell cylinders, the fact is that the form of the record was a matter of judgment and choice. The early patent situation was such that both Edison and Bell could have used the disc form had they so elected. (p. 9)

Commercially, the Berliner process had five important advantages. Of the five, the first two below gave the patent its basic value.

1. A record groove which formed track to guide the sound box across the record. (No propelling mechanism was needed.)

2. Grooves with hard walls which provided support for the needle and resulted in louder reproduction and protection against wear.

3. Ease and economy in making a large number of duplicate records.

- 4. Better musical results from the lateral process of recording.
- 5. Ease and economy in shipment and storage.

On the other hand, the Berliner process left something to be desired from the standpoint of extraneous noise. The walls and edges of the groove did not come out of the etching process as smooth as could be desired.

On May 16, 1888, Mr. Berliner added to his prestige by demonstrating his invention to the Franklin Institute. He called the instrument the "Gramophone" and the recording process, "Voice Etching." The feature for which the invention was best known was the elimination of the propelling mechanism.

Mr. Berliner assigned all of his patents to the United States Gramophone Company with an office in Harper's Ferry. West Virginia. Such efforts as were made to promote the sale of the original hand-powered Gramophone were not financially successful. The instruments, which were made by outside vendors, were used in exhibitions and demonstrations as a scientific novelty. Since Mr. Berliner was the principal owner of the company, he lost a considerable amount of money.

(No Model.) No. 534,543.	E. BERLINER. GRAMOPHONE. Patente	4 Sheets-She 3. ed Feb. 19 1895.
Pig. 3.		
Witnesses. Roy C.Brucen. J. J. Chapman		Emile Berliner, Jours Gerge Attorney

The Instrument pictured above is very similar to the model which Mr. Whitaker brought to Mr. Johnson in February of 1896.

The Berliner Gramophone Company of Philadelphia

In the Fall of 1895, the Berliner Gramophone Company of Philadelphia was set up as a manufacturing unit with a capital of \$25,000. They had an exclusive license for the entire United States, with the exception of the District of Columbia, for the use of the Berliner patents. Mr. Berliner was a minority stockholder in the Berliner Company. Mr. Thomas S. Parvin, a structural steel executive, became president of the new company. The other stockholders were Max Bierbaum, Joseph Goldsmith, William Armstrong, and Thomas Latta.

The hand-powered product which they were offering was, again, not being well received by the public. They were steadily losing money and, by the following February, came to the conclusion that their only hope of making a success of the venture would be to equip the instrument with a spring motor. The search for a satisfactory spring motor led them to Eldridge R. Johnson (Fig. 4).

From what has been said, it should be understood that Mr. Johnson's initial, and subsequent, routine contact was not with Mr. Berliner, as has been generally supposed, but with Mr. Parvin and his associates of the Berliner Gramophone Company of Philadelphia.

The Berliner Patent

For twelve or fifteen years prior to 1912, the "Berliner Patent" held basic control over the disc-type phonograph. During most of this time, the patent was on the defensive and its complications were shrouded in mystery to all but the legal experts.

The importance of the patent was generally recognized, and there was a great deal of curiosity as to what was behind the curtain. There were many conjectures, of course, but most of them were wrong.

The story which follows is based on information gathered, with the assistance of Mr. Joseph Sanders (Mr. Berliner's nephew), from many sources. It endeavors to reconstruct the case accurately and without bias. The technical description of the invention and the development of the Berliner disc was extracted from depositions prepared by Mr. Joseph Lyons-a famous turn-of-the-century patent expert-in connection with a suit filed by the American Graphophone Company against the National Gramophone Company and Frank Seaman.

The Berliner disc Gramophone record was covered by several U.S. patents, the most important of which was No. 534,543. It was issued in 1895, adjudicated in 1909, and expired in 1912. Patent 534,543 was a major factor in Victor's background and the foundation on which the phonograph industry was built.

In the late 1890's, Mr. Johnson questioned the patent's validity for the reasons which appear below. However, by the Fall of 1901, when Victor was incorporated, he was satisfied that it would be sustained. It therefore became a principal consideration in assigning a substantial participation in the new company to Mr. Berliner's Consolidated Talking Machine Company of America. Prior to this, there had been an understanding that Mr. Johnson would pay accumulated royalties if, and when, the patent was adjudicated.

The patent covered a disc record with an etched groove of substantially uniform depth, and laterally cut in a hard material. The advantages were: (1) better performance, (2) more volume, (3) greater durability, (4) much greater ease of duplication, storage, and shipment, and (5) the elimination of the mechanism previously needed to guide the sound box across the record.

This was the vision which Mr. Berliner had in March or April of 1887 when he started to develop an etching process. He knew that Leon Scott had used the lateral type of tracing thirty years earlier in his physics laboratory experiment which demonstrated that sound could be recorded. He also knew that Edison had done some experimental work in indenting hill-and-dale recordings on disc originals, and that Bell and Tainter had also done similar experimenting with cutting hill-and-dale disc recordings. (p. 13) However, no one had made a lateral tracing through an acid resisting film on a polished surface, nor cut a lateral groove in a disc, nor visualized the advantages of the disc over the cylinder in commercial practice.

His initial experiment consisted of tracing a lateral wave on a piece of paper covered with an infinitesimally thin coating of lamp black wrapped around a cylinder. The grooves were rather coarse and far apart. A few flat grooves were then etched in the plate by a photo-engraving process. When the stylus of a hand-held sound box was guided in these grooves, the result confirmed the soundness of the etching principle. The results, notwithstanding the harsh surface sounds, also indicated that, with refinements, the process would be better and louder than either indenting or engraving in wax.

In May or June of 1887, Mr. Berliner substituted glass for paper. He also substituted "amorphous ink" (i.e.. lamp black mixed with oil) for lamp black. The glass resulted in a better photo-engraving, and the ink reduced the surface sound. Under magnification, lamp black appears as an infinite number of small flakes, loosely held together. The cutting style in the recording process piled them up in saw-tooth formation on both sides of the groove. The oil tended to smooth them out. All in all, the results were encouraging in that some progress had been made.

By Thanksgiving of 1887, the process had been developed to the point where the recording on glass, covered with a film of amorphous ink, was transferred to a photographic negative which, in turn, was transferred to a polished zinc plate coated with bichromated albumen (a material which became insoluble when exposed to light). Except for the sound track, the surface of the disc had now acquired a protective coat. After the soluble albumen had been washed out of the sound track, and the edges and back had been protected, the disc was then ready for the etching bath of nitric acid. The acid etched into the zinc surface of the disc, which was exposed by the sound track, and developed a record groove of substantially uniform depth. While the results were better, the record wasn't totally uniform in depth and there was a mysterious roughness which, after numerous experiments, was determined to be hydrogen gas bubbles in the etching bath. This prevented the etching fluid from reaching the plate.

Early in 1888, a radical experiment was tried in which both the glass record and its subsequent photograph were eliminated. Instead, the recording was made on a highly polished zinc plate which had been coated with a thin solution of beeswax dissolved in benzene. This was an important improvement, but, because the residue was very thin, it didn't always protect the entire surface of the plate. This resulted, at times, in breakthroughs between the grooves. However, this was corrected by substituting chromic acid for nitric acid. The bubble problem, with its resultant unevenness and roughness of the playing surface, was finally solved by the addition of bichromate of soda to the bath. To avoid crystallization, the bath was later changed to a fresh solution of sulfuric acid with bichromate of soda. (p. 14)

About this time, a baffling complication developed. Two or three ghost grooves had a way of developing along side the master. It was finally determined, after a lot of experimenting. that this was due to minute particles in the air. However, neither water-filters nor vacuums did any good.

The solution to the problem seemed ultimately to have been found when alcohol, dripped on the center of the revolving plate, was permitted to flow over its surface while the record was being made. However, the grooves on records so treated had a way of varying in depth. This was not corrected until it was found, on further experimentation, that some of the diluted wax would find its way back into the groove which was being traced, and that it could be removed by washing the record in running water as soon as the recording was finished.

The work of refining the recording and matrix making continued, and the product was not released for manufacture until 1891 or 1892. From then until 1895, the volume increased, but was apparently not large. The real activity started after the development of the spring motor and after the record plants were set up in Washington. D.C., in 1892 in Hanover, Germany, in 1898, and in Canada, in 1900. The etching process progressively gave way to the groove-cut-in-wax method from 1900 to 1903.

On March 30, 1888, while browsing through the library of his patent experts. Lyon & Bissing, Mr. Berliner happened on a book entitled *Telephon*, *Mikrophon and Radiophon*, by Theodor Schwartz. The book contained a description of the paper written by Charles Cros on April 30, 1877. This was the first time that Mr. Berliner or his patent advisers had heard of him or his paper, but the description in the book was bad news. It described a process which was almost an exact copy of his own, and it looked as if he had been anticipated.

To determine whether he was confronted with a priority, he asked the patent office for a ruling. It was decided that the Cros paper had not disclosed invention and, even if it had, could only be regarded as an abandoned experiment. So far as is known. Mr. Cros never made a model of his instrument or record, and the long series of experiments which were required to perfect the Berliner Disc, as detailed above, points up the gulf which lies between describing a desirable product and the inventive skill which is required to make it work.

The ruling of the patent office, while logical and reassuring, had no official standing, and the issue would not be definitely determined until a patent had been issued and adjudicated. This, as we have seen, was not finally cleared for 21 years. (p. 15)

While these developments were going on Mr. Berliner was also working with vendors to find the best material from which to make the finished record. Hard rubber was tried as was celluloid, but it was found that the best results were obtained from a manufactured product known then as "imitation rubber." This material, based on secret, carefully guarded formulae, was based on shellac. It was brought to its top development by Mr. Berliner's nephew. Mr. Joseph Sanders.

As for the patent it is not hard to understand from the references to possible priorities, that in the late 1890's, there may have been some doubt in Mr. Johnson's mind as to its ultimate validity. Once convinced that the patent would be sustained, it became a bulwark of strength in Victor's growth. However. Victor never used the etching process. The principal value of the patent to Victor was the use of the record grooves to guide the sound box across the record.

As for the industry, it wasn't long before the disc type of record had completely, and finally, replaced the once dominant cylinders

chapter four Eldridge Johnson

While Mr. Johnson had not had any experience with sound reproducing equipment prior to 1896, his early training and experience assumed considerable importance in view of the part which he was to play in the development of the industry.

He was born in Wilmington, Delaware, on February 6, 1867, son of Asa Johnson and Caroline Reeves Johnson. Caroline died when Eldridge was about two years old, and he was sent to live on the farm of his mother's Aunt Elizabeth in the Bethel Church neighborhood of Kent County, Delaware.

It was here that Eldridge passed through one of the happiest phases of his life. The swimming hole in the creek was soon to be his favorite haunt, and he spent countless hours roaming the fields and woods on Aunt Lib's farm.

When Eldridge was eleven, he went to live with his father and new stepmother in Dover. His stepmother was a fine, deeply religious woman: a strict disciplinarian and a spic and span housewife in the best "Sunday parlor" tradition. The atmosphere was quite different from that at Aunt Lib's. Eldridge went to school in Dover until he was 15. After carefully weighing his interests, aptitudes, and resources, it was arranged for him to move to Philadelphia as an apprentice in the plant of J. Lodge & Sons who specialized in the manufacture of wire products. During this time, he lived with his stepmother's sister, Rebecca. It was one of Rebecca's sons, also apprenticed to Lodge, who had secured the job for Eldridge.

At the start, the job was extremely hard, dirty work, and the work-week was sixty hours. Gradually, he was given an opportunity to learn the trade, but the pressure was always heavy and he fretted under it. However, he was resolved to learn the trade and to excel at it.

At the end of four years, his apprenticeship ended and he became foreman of a department supervising 10 to 15 men at \$12.00 a week. This was less than the journeyman's scale, but Lodge refused to pay more since Eldridge was under 21. This more than anything else, prompted Eldridge to accept a position with the Scull Machine Shop (then known as the Standard Machine Shop) in Camden, New Jersey. This business, housed in a small building at 108 N. Front Street back of the Collings Carriage Shop, had been established by Captain Andrew Scull as a career for his son, a graduate of Lehigh in Mechanical Engineering. It was one of many small machine shops, so common at the time, (p. 17) that specialized in repairing home appliances and farm equipment, and building models for inventors. Mr. Johnson was hired by Belford Royal, who was then foreman of the shop. The fact that Mr. Royal was considerate and helpful during the break-in period, no doubt laid the ground-work for their close friendship in the years which followed.

In 1888, two years after the shop was started, young Scull died suddenly, leaving a partially completed invention of a wire-stitching book-binder. The father was anxious to have the invention completed, so he asked Mr. Johnson, who was temporarily working in another shop, to come back as foreman and manager to take on the wire-stitching development as a major personal project.

The book-binding machine was finished in 1890, and Mr. Johnson left the Scull Shop to take a trip to the West Coast. The trip lasted about a year, and Mr. Johnson said later that he regarded it as having been a valuable experience. When he returned in 1891, business was bad and having answered a help-wanted advertisement, he found himself

lined up as a strike breaker in Indianapolis, Indiana. He declined, but the Union paid his fare back to Philadelphia.

It wasn't long afterward that Mr. Scull asked him to come back as half owner of the business. Mr. Johnson agreed, and immediately set out to redesign the book-binding machine which was not selling because of its cost. Having accomplished this, a corporation known as the New Jersey Wire Stitching Machine Company was set up to market it. The venture was profitable almost from the start, and may even be active today.

As for the machine business, Mr. Johnson once said that it was a close race with failure for a long, long time. When they were lucky, the partners made ten or twelve dollars a week. In 1894, Mr. Johnson bought Scull's interest, and set up under his own name, borrowing some five or six thousand dollars for the purpose. Speaking of this experience, he said, "Being the proprietor of a machine shop was calculated to either break a man's spirit or prepare him for better opportunities. I did not win by superior speed. It was a matter of endurance." The financial stress was reduced a little by the change in ownership, but working capital was at great premium. The shop employed from 2 to 16 workmen, depending upon the volume of business in hand.

As was pointed out previously, there is no evidence to indicate that there was any considerable active demand, in the Winter of 1896, for sound reproducing equipment for use in the home, nor that any of the three principal manufacturers of the time-Edison, Bell-Tainter, Berliner-had constructive plans for developing such a demand. It follows that Mr. Johnson became identified with the industry right at the start.

This, then, is the experience and plant equipment of the man to whom Belford Royal brought Mr. Whitaker sometime during February of 1896. (p. 18)



The birthplace of Victor.

The Development of a Motor

Mr. Johnson was in dire need of working capital in the Spring of 1896. With the machinist business barely breaking even, there had been no opportunity to build up a reserve. His decision to go ahead independently with the development of a motor for the Berliner Company, when he was unable to come to terms with Mr. Whitaker, was hampered for want of capital. He went ahead anyway, putting every dollar of his own in the venture, and everything he could borrow. This was a time when opportunity was knocking on many doors. Men who loaned even a few hundred dollars profited handsomely.

From this struggle, a spring motor was developed which was satisfactory to Berliner. It was the first spring motor for a disc talking machine which would operate at uniform speed, could be regulated, was quiet in operation, and was inexpensive to make and easy to use.

The exact construction and appearance of this motor is not known, but the probabilities are that it followed the general design of the motor illustrated and described in Mr. Johnson's first talking machine patent (Fig. 6) which was granted on March 22, 1898. It is essentially the same model which is illustrated in the Victor trademark.

The available records covering production from 1896 to 1901 are very limited. As far as the first order is concerned, there is a great deal of contradiction. Mr. Johnson said that he got an indirect order for the pilot run of 100 units on August 10, 1896. On the other hand, Mr. Gaisberg, who was with Berliner at the time, said that Berliner gave Mr. Johnson an initial order for 200 units and made an advance payment to finance the cost of production. Against this, there is evidence that the Montross Metal Shingle Company, of Camden, had delivered 100 motors to Berliner by October 15, 1896. Some time during this period, Mr. Johnson unsuccessfully tried to persuade Montross to join him in making motors for Berliner. They had a good machine shop and, among other things, had a patented rotary spring carrying cage of peculiar construction for use with a certain type fan. Mr. Johnson wanted the cage and Montross wanted the Berliner business, but this involved Mr. Johnson's motor.

Montross took an order from Berliner for 1,000 units to be made by Mr. Johnson at \$4.00 each. However, the design was changed, and Mr. Johnson found that he couldn't make out at the \$4.00 price. The situation was adjusted as follows: (1) Mr. Johnson would make the 1,000 motors at the \$4.00 price, (2) he would take over the sale of the original 100 units, (3) he would not be called upon to pay royalty on orders he might get up to 2,500, and (4) he would subsequently pay an 8% royalty.

On October 28, 1897, Montross took an order direct from Berliner for 2,000 motors. It infringed Mr. Johnson's patent, so he declined to pay the royalties originally agreed upon. There was a lawsuit which ended with Montross agreeing not to make more than the 2,000 units, to mark the motors which they had made with a conspicuous "M," and to cancel the original agreement. (p. 20)



The first talking machine patent granted to Mr. Johnson on March 22, 1898.

It is not known how many different models may have been made between 1896 and the Fall of 1900. The indications are that there may not have been more than one model and that, subject to minor improvements from time to time, it was like the trade mark model. Total production during the four-year period may have been in the order of something less than 25,000.

From 1896 to the Summer of 1898, Mr. Johnson's activities as a manufacturing machinist consisted almost entirely of supplying Gramophones to the Berliner Gramophone Company of Philadelphia. Mr. Johnson made the motors, sound boxes, and miscellaneous metal parts. He bought the horns and cabinets, assembled the components, and delivered them as complete instruments.

The Johnson Recording Process

The so-called "Johnson Process" of recording was very important in Victor's history. Mr. Johnson himself said that, "It changed the Gramophone or disc Talking Machine from a scientific toy to a commercial article of very great value. It was the first and most important step in the whole history of the evolution of the disc Talking Machine." The fact that the results were so much better than either the contemporary cylinders or Berliner discs was, undoubtedly, an important factor in getting Mr. Johnson and Victor off to a good start.

As early as April 1896, Mr. Johnson described the process to his patent lawyer. It consisted of: (1) a laterally cut recording in a flat wax-like disc, (2) a very fine electrotyped matrix of this recording, (3) multiple male "stampers" made from the master matrix.

During the Summer of 1896, Mr. Johnson made a series of experiments with Mr. A. C. Middleton to put his ideas to a practical test. They began by melting common candles in a pie plate. This wasn't successful because the bottom of the plate was too uneven. Next, they bought a cake plate. Although this was better, it was still not good enough because the texture of the wax wasn't uniform. This led to intensive experimentation with many different kinds and combinations of waxes. For a considerable time, the master discs were made of cylinder records purchased direct from Edison.

Mr. Johnson next worked on the problem of making an electrotype from a wax base. He was aided in the part of his research by Mr. C. K. Haddon with whom he had worked at Lodge and Sons. Mr. Haddon was, at the time, working for the Wirtz Manufacturing Company who made containers for artist's materials and was equipped with an electroplating department. This experiment was also successful. (p. 22)

Mr. Johnson had, at this point, convinced himself that his ideas were practical. However, his patent lawyers advised him not to apply for a patent, but to maintain his operation as a secret process until the other patents in the area had been adjudicated. In January of 1898, Mr. Johnson employed William H. Nafey to concentrate on the development of the recording process up to the point of manufacture. Mr. Nafey worked under lock and key in a room rented from the Collings Carriage Company (Fig. 7). The process was developed by September 1898 and put on an operating basis early in 1899. (p. 22) In the meantime, Mr. Johnson applied for a patent on August 16, 1898. He re-filed on November 12, 1904, but the patent was not issued until August 11, 1908.



The Collins Carriage Shop-birthplace of the Johnson Recording Process.

In September of 1898, Mr. Bentley L. Rinehart, who had worked for Mr. Johnson before, was given the job of designing and installing an electroplating plant. This was completed in March of 1899, and turned out to be an excellent investment. This not only avoided the necessity of revealing secrets to outside vendors, but made it possible to develop progressively finer results.

The Patent Situation

For two or three years before 1900, and for five or ten years after, the patent situation was very troublesome. The number of patents was not large at the start, but their importance had not been legally established. Nobody knew for sure who had what.

Before 1901, there were three patents of particular interest to Mr. Johnson. Of the three, Berliner's patent #534,543 was the most important. The outstanding feature of this patent was not the disc form of record, as many have supposed, nor even the lateral cut, but the fact that the grooves, in hard material, guided the sound box across the record without supplementary mechanism. The hardness of the material was an important consideration, not only as protection against wear, but also because the support which it gave the reproducing point resulted in louder reproduction. The patent was important to Mr. Johnson because, if it were sustained, he would have to have it for his process. It would also be important as protection against infringement. Next in importance to the Berliner patent was the Jones patent #688,739. His patent application, filed on November 19, 1897, covered substantially the same ground as Mr. Johnson's patent #896,059 which was not applied for until August 16, 1898, although the date of conception was established as April 1896. The Jones patent was drawn on narrower, more technical, lines than Mr. Johnson's. The high point was the claim for "...a stylus vibrating laterally and engraving a groove of approximately even depth." The American Graphophone Company bought this patent from Jones for \$25,000, and, in due course, it became the property of the Columbia Phonograph Company. It figured in Mr. Seaman's legal tactics against Berliner in 1900, and was an issue between Victor and Columbia for many years.

Bell and Tainter's patent #341,214, of 1896, covered wax as a medium of recording. The fact that Mr. Johnson used wax on a disc as an intermediate step in the recording process, whereas its previous application had been a direct recording on a wax cylinder, didn't help. The old patent was broad enough to cover the new application. However, having not been adjudicated, it expired in 1903.

While it was clear from the beginning that, if sustained, the Berliner patent would be needed for the Johnson process, there was no assurance that it would be. Mr. Johnson had an agreement with Berliner that if, and when, it was sustained, Johnson would pay accumulated royalties. In the meantime, the improvements which he was making to the product (p.24) were not considered an offsetting factor, but a contribution to the salability of the product. Subsequently, the use of the Berliner patent was covered by formal license. When the license was taken out, Mr. Johnson stated that it was done as insurance rather than acknowledgement of the validity of the patent.

The company always had an aggressive policy toward its patents, and managed to establish a strong defensive position. In addition to the large number of patents issued to Mr. Johnson, the company did not hesitate to cross-license with its competitors when this would strengthen the company and reduce legal costs and bickering.

The Troubles Which Led to Victor

Emile Berliner developed the disc-type record, and for several years it bore his name, Mr. Johnson improved it, and was interested in combining all disc interests under the name "Consolidated" when trouble developed between the Berliner Company and its sales agent, Frank Seaman. The trouble hurt Mr. Berliner's business critically, and upset Mr. Johnson's dream.

It has been generally known that Mr. Johnson was involved in serious trouble in the late 1890's and early 1900's, but the exact nature of the trouble and its bearing on the early development of the disc-type phonograph has not been known. The situation has always been veiled in silence, and it has, as a result, been a source of speculation and gossip.

So far as can be determined from the available records, the facts are as follows. On October 10, 1896, shortly after Mr. Johnson started to deliver the motor-driven Gramophone which he had designed for the Berliner Gramophone Company of Philadelphia, the company signed a contract with an advertising agent in New York named Frank Seaman. Through this contract, Seaman received the exclusive sales agency for the Berliner product for most of the United States. In return, Seaman, operating as the National Gramophone Company, agreed to devote his entire time to the promotion of the Berliner Gramophone and Berliner records, and to identify these products, under all circumstances, with the Berliner name. So far as is known, he sold to anyone who would buy-wholesaler, retailer, consumer-and advertised the Gramophone extensively in the magazines. On one point of Seaman's operation there was no question. He was not satisfied with his mark-up. It was probably sometime in the later part of 1897 or early 1898 that Seaman decided to do something about it. Just what the mark-up was, isn't known, but the records show that he paid the Berliner Company two "royalties"-one on manufactured cost, the other on a percentage of the retail price. It would appear that Mr. Johnson's price to Berliner may have been at cost plus 25% and that Berliner may have taken a mark-up (p. 25) of 40% on Mr. Johnson's price, Mr. Seaman was allowed a discount from this price and got a further margin by adding a mark-up to his selling price.

When Seaman pressed for a larger margin, the Berliner Company held that the two royalties together were no more than necessary, and Mr. Johnson insisted that he had nothing to spare. Mr. Johnson's position was that the product couldn't he made right for less, and that there was no excess in his margin. Far from taking this as final, Seaman continued to press from every angle he could think of without success. Seaman had apparently set up very liberal discounts to his trade, and wasn't breaking even let alone being in a position to do the aggressive advertising and merchandising he wanted to do. It is not clear why list prices weren't increased. Presumably, it was felt that they were blocked by cylinder competition, although, looking back, this isn't easy to understand. The improved performance of the disc would seem to have justified a higher price. However, it must be remembered that the cylinder had been the accepted standard, and the disc was the contender.

In any event, after exhausting every other angle, Seaman insisted that the additional profit he wanted be taken out of the product Mr. Johnson refused to be a party to it. Seaman also tried to persuade Mr. Johnson to set up prices to Berliner which would provide a confidential kick-back. This was also refused. Seaman then had a cheaper copy made of the Berliner instrument. It was called the Zonophone, and was made by the Universal Talking Machine Company which had been set up by Seaman to equip the Berliner instrument for coin operation. The Zonophone was somewhat larger and much more showy than the Gramophone, but, because of inferior construction, the performance was not as good. It also infringed both Berliner and Johnson patents. A sample was turned over to Berliner and Mr. Johnson as an example of what Seaman wanted and what could be done. The idea was again rejected. Seaman then tried to persuade Berliner to buy Zonophones from Universal instead of Gramophones from Mr. Johnson. When this was refused, Seaman decided to make and market the Zonophone himself. It is not known just when this activity started, but the new instrument was featured in a full-page advertisement (Fig. 8) in Munsey's Magazine of October 1898.

During August of 1897, while this was going on, Mr. Seaman sent the sales manager of his National Gramophone Company, William Barry Owen, to London to sell European rights to the Berliner patents. The original intent, apparently, was that Seaman would supply the instruments under his contract with Berliner, and that matrixes would be made and records pressed from equipment supplied by Berliner. Owen didn't make the quick sale which had been anticipated, and, after a few months, resigned as National's sales manager. Owen finally succeeded in interesting an Englishman named Trevor Williams in setting up a company to promote the sale of Berliner records and the improved Gramophone being made by Mr. Johnson. The new company was called The Gramophone Company.

MUNSEY'S MAGAZINE-ADVERTISING SECTION.

As to the Improved GRAM=O=PHONE ZON=O=PHONE...

Do not confound it with anything of a similar name or nature It isn't a "business" machine You don't "talk into it"

Its sole purpose is that of Entertainment-Reproducing Everything in Speech or Music, with fidelity to the originals positively marvelous

Suited alike to Parlor, Lawn, Yacht, or Exhibition Hall. With an ordinary horn it has been heard in every part of the great Metropolitan Opera House, New York. Its cornet solos have been heard two miles.

Our records are made by experts, from actual performances of the most celebrated instrumentalists, bands, singers, actors, and orators in the world

These records, instead of being wax, to be kept in cotton, and handled as if they were egg-shells, are on hard, flat disks which are practically inde-

structible-the only permanent records made. As a guarantee of authenticity each record (except a few of the earliest ones) is signed. Among the records whose genuineness is thus attested by the autographs of their makers are those of

HON. CHAUNCEY M. DEPEW ADA REHAN JESSIE BARTLETT DAVIS

JOSEPH JEFFERSON DWIGHT L. MOODY **REV. T. DEWITT TALMAGE** SOUSA'S BAND, BANDA ROSSA, ETC.



Signed Records by Moody, Depew and Jefferson.

CAUTION The unprecedented popularity of the IMPROVED GRAMOPHONE (ZON-O-

PHONE), as a means of entertainment has led to many attempts at imitation, some of which are most unscrupulous; but the principles upon which the GRAMOPHONE is constructed are covered by patents so broad that anything of the same nature approaching it in excellence must be an infringement, and as such will be promptly prosecuted.

This applies not only to manufacturers and dealers, but to USERS; and, pending suits already brought, the public are warned against purchasing that which may cause them much annoyance.

Price of the Improved Gramophone (Zon-o-phone) is \$25. Records, 50 cents. For further information, printed matter, etc., address

NATIONAL GRAM-O-PHONE CO., 874 Broadway, New York.

Subscribers to MUNSEY'S MAGAZINE can obtain the Zon-o-phone (improved Gramophone) AT ONCE, by the payment of \$5 cash and \$3 per month for seven months. The National Gramophone Company agree, if the instrument is not satisfactory, to refund the money, less express charges, if returned immediately.

In answering this advertisement it is desirable that you mention MUNSEV'S MAGAZINE.

The Zonophone becomes nationally advertised, 1898.

During the Spring of 1898, F. W. Gaisberg went to London to set up recording facilities and to make artist contacts. At the same time, Mr. Joseph Sanders (Mr. Berliner's nephew) developed matrix and record pressing plants in his ancestral home of Hanover, Germany. Mr. Belford Royal went over to supervise the instrument end of the business. Complications soon developed, and the new company asked Mr. Johnson to come to London in July. The result of the trip was that Mr. Johnson sold rights to some of his patents, and agreed to sell parts and components direct. A capital of 15,000 pounds was accumulated, and the Gramophone Company was on its way.

In 1898, the Gramophone Company had the instrument parts which it bought from Mr. Johnson and assembled in London into complete Gramophones similar to the Victor trade mark model. It was also getting organized to have records pressed in Hanover, Germany, from Berliner matrixes which it would either make in London or import from Camden. In 1899, the name of the company was changed to the Gramophone Company, Ltd. Inspired by the early success of the company. Mr. Owen decided to expand into other lines, and a typewriter and electric clock were added. The name of the company was changed to Gramophone and Typewriter, Ltd. The new venture turned out badly and the company lost a great deal of money. As a result, the new lines were soon dropped, and the name reverted back to The Gramophone Company, Ltd. This is quite a bit ahead of the story, but outlines the important events in London prior to the birth of Victor.

Mr. Seaman was upset by the development in London. His contract with Berliner was limited to the United States, but he had hopes. He did everything he could, short of legal action, to block the transaction.

On March 22, 1898, a patent was issued to Mr. Johnson on his spring motor development. By this time, the recording process, which he had conceived in April of 1896, was nearly ready for practical application. The Johnson method cut the recording in a wax disc (from which the matrix was made) by very fine electroplating. This was opposed to the photo-engraving process of Berliner. The performance was greatly improved, and Mr. Johnson regarded the development as his most important contribution to the product end of the business.

As we have seen, there were patent complications from the start. There was no conflict with Edison's hill-and-dale cylinder, which was impressed, but Bell and Tainter's cylinder covered cutting in wax. The patent specifically covered hill-and-dale recording and reproduction on a wax cylinder, and then attempted to cover any other possible application by a blanket coverage. Since there was nothing definite about either recording or reproducing cylinder lateral cutting, some experts argued that the patent was confined to the type record, and that the broad claim wouldn't stand up. However, there was no way of telling for sure until the patent had been adjudicated. (p. 28)

The famous Berliner patent was, of course, the other to which the Johnson process might be vulnerable. However, even here there was some difference of opinion among the experts, but because of the uncertainty, the expert's advice was to proceed with the development, up to the point of manufacture, behind closed doors.

In the Fall of 1898, Mr. Johnson started to re-make the active records in the Berliner catalog by his process, expecting that they would be marketed by the Berliner Company. In a very few months, Mr. Johnson received \$15,000 from the Gramophone Company for the rights to his new process which was to be administered by Belford Royal with the understanding that the secrets would not have to be revealed to anyone else.

The affairs between the Berliner Company, the Johnson shop, and Frank Seaman took a dramatic turn during the Fall of 1898 when the National Gramophone Company took full pages in the national magazines to advertise the Zonophone without any reference to Berliner. During this same period, the American Graphophone Company, operating under Bell and Tainter patents, sued the National Gramophone Company for infringement. It looked as though the Bell and Tainter patent, which was due to expire in 1903, was about to be adjudicated, although it wasn't clear at the time why the suit was brought against Mr. Seaman rather than the Berliner Company. Mr. Seaman promptly called upon the Berliner Company for support.

On December 12, 1898, The American Graphophone Company brought a similar suit against the Berliner Company. A great deal of work was done, and a mountain of testimony was accumulated during the next 13 or 14 months. The most notable developments during 1899 would appear to have been:

(1) A progressive decline in the sale of the Berliner Gramophone, because the National Gramophone Company was putting its efforts behind the Zonophone.

(2) The postponement by both the Berliner Company and the Gramophone Company of the introduction of the Johnson recording process pending the outcome of the American Graphophone Company suits.

(3) A highly prosperous year for the Gramophone Company. Their net profits were several times higher than their invested capital.

(4) The sale to the Gramophone Company of European rights to the Zonophone.

Early in 1900, Seaman insisted that the Berliner Company should transfer its entire business in the Gramophone from Mr. Johnson to Universal. Mr. Berliner refused, and a crisis followed. On May 5, 1900. Seaman accepted a consent decree admitting the validity of the Bell and Tainter patent without consulting the Berliner Company. (p. 29)



Eldridge R. Johnson as a young man of 33.

Early in June, 1900, the Berliner Company notified Seaman that, because of repeated violations of their contract, it was considered to be forfeited. Immediately, Seaman got an injunction against the Berliner Company preventing them from selling Berliner products to anyone hut himself. The mere fact that this injunction was issued suggests that something is missing from our records. It would seem that Mr. Berliner had a clear case against Seaman. However, it could have been that Berliner may have acquiesced at the start in the Zonophone activities, that he may even have given Seaman a license, or that he may have lost legal position by failing to crack down promptly.

Up to this point. Mr. Johnson had, apparently, not been directly involved in the dispute between Seaman and the Berliner Company beyond a loss of orders. However, the loss of orders in itself had become very serious. Notwithstanding the relatively good volume from London, Mr. Johnson had invested his entire savings (\$50,000-\$60,000) in an enlarged plant and matrixes in anticipation of increasing volume from Berliner.

By now the trouble between Seaman and Berliner was generally known in the trade, and there was speculation that Seaman and Mr. Easton (American Graphophone Company) had teamed up, with the guidance of a brilliant lawyer named Philip Mauro, to harass and annoy Mr. Johnson and Berliner and to exhaust their resources to the point where they would become disgusted and vacate the field. To outsiders, the injunction against Berliner looked like a trump card which might very well bankrupt both Berliner and Mr. Johnson. However, time demonstrated that those on the outside vastly underestimated the ingenuity and tenacity of those on the inside.

In any event, Mr. Johnson had to make a prompt decision. There was no assurance that the Berliner Company would be able to start up again at a reasonably early date, nor was there any probability of their being able to work out a consolidation of disc interests. It seemed to Mr. Johnson, that the only solution that circumstances permitted was to adopt a brand name and distribute the products himself. While he was trying to work out the details, Seaman started up a heavy legal bombardment which was to last for two or three years.

It started with one move after another to prove that Mr. Johnson was not simply a vendor to the Berliner Company, but that there was a secret agreement which, in effect, made him a part of the Berliner organization and, therefore, subject to the injunction which Seaman had obtained against Berliner. These efforts all failed, but they were time consuming and costly.

By the end of August 1900, plans had been developed to the point that Mr. Johnson was able to start out for himself. (Fig. 9) He called the new activity the Consolidated Talking Machine Company, indicating that he regarded what he was doing as a holding action, and that he hadn't given up hope of an ultimate consolidation of disc interests.

MeCLURE'S MAGAZINE.



CONDITIONS: Limited to one thousand as above. Goods ours until returned or paid for. Offer limited to territory east of the Rocky Mountains. The outfit—consisting of a Zon-o-phone, complete, with horn, sound box, 200 needles, four Zon-o-phone records—for \$20 cash, or on installments as agreed upon, small payment down and monthly thereafter.

Warning

The public generally is warned against all attempts to revive or sell the abandoned Gramo-phone, which has been enjoined by the U. S. Circuit Court. The Zon-o-phone is the only legitimate talking machine using disc records, and our machines and records are protected by the allied patents of the four great talking machine corporations.

For Sale by dealers everywhere

NATIONAL GRAM-O-PHONE CORPORATION ⁸⁷⁴ BROADWAY BRANCHES Boston, 178 Tremont Street Philadelphia, 13 North Ninth Street Cincinnati, 21 and 23 West Fifth Street

Please mention McClure's when you write to advertisers,

Zonophone advertisement in the November 1900 issue of McClure's Magazine.

However, Berliner had previously set up a holding company over the Berliner Gramophone Company of Philadelphia and his United States Gramophone Company with the name, Consolidated Talking Machine Company of America. Seaman jumped on this as further evidence of something like collusion. The Consolidated Talking Machine Company of America entered suit against Mr. Johnson who immediately changed the name of his new company to Eldridge Johnson, Manufacturing Machinist.

The new company hadn't been going two months before Seaman tried a slightly different tack. Now, instead of trying to tie Mr. Johnson to the Berliner injunction, he took steps to get an initial injunction against Johnson along the lines of the one he had obtained against the Berliner Company. This would have prevented him from making or trading Gramophone products, or from using the name Gramophone. On March 1, 1901, Judge Gray refused to restrain the new company from making and trading Gramophone products, but did restrain the use of the Gramophone name. This was appealed and finally reversed by Judge Dallas of the Court of Appeals during June of 1901.

During the Summer and Fall of 1900, the Zonophone was advertised in the leading magazines as the only legitimate disc talking machine, and a replacement for the Gramophone. The ads carried the threat that purchasers of the Gramophone were vulnerable to prosecution. The new company was also being attacked by letters to the trade, and by salesmen who made every effort to throw doubt on Mr. Johnson's responsibility and integrity. Mr. Johnson got an injunction, but not until considerable harm had been done.

It was a stormy period. There were obligations ignored, facts distorted, pledges broken, products counterfeited, time and money wasted, and a multitude of suits started but never brought to trial. It was a time requiring great fortitude, and a commentary on a phase of business activity at that time.

Detailed records on the new company are not available, but the indications are that the volume may have been around a million dollars during the first fiscal year with a net of around \$180,000. The nucleus of a national distribution had been set up with ten distributors, and the trade mark Victor and His Master's Voice were being used. The instrument line had been built up to five models, and the superior performance of the Johnson recording process was getting recognition. The outlook was altogether encouraging.

However, the Gramophone Company of London, Mr. Johnson's best customer at the time, had bought the Zonophone Company and was thinking of pushing its sale in the United States. They had also offered the Berliner interests a 25% share in a company to exploit Berliner products in the American market with the speculation that the activity might develop into an international cartel. The Seaman injunction was still hanging over Berliner, suits involving both Berliner and Mr. Johnson were pending, and the patent situation was unresolved.



Instrument line introduced by Eldridge Johnson in the Fall of 1900.

But the developments in London were especially troublesome to Mr. Johnson, because if he moved against the Zonophone Company, he would run a risk of competing with, and probably losing, his best customer. Then, on July 6, 1901, the Seaman injunction against the Berliner Company was lifted. This raised the question for both Berliner and Mr. Johnson of what to do next.

Had it been lifted sooner, with reasonable assurance that it would stay lifted, the original set-up between Mr. Johnson and the Berliner Company would, undoubtedly, have been restored. However, by this time, the Berliner Company was in a weakened condition from inactivity and a greatly depreciated inventory. Although they did make an effort, they were in no position to compete in the market as it had then developed. Mr. Johnson's position was handicapped by the fact that he did not have the Berliner patent, and might be vulnerable to the Bell and Tainter patent.

Under the circumstances, Mr. Johnson wasn't sure what he wanted to do. He saw such an opportunity to improve both the record and the reproduced, and was so anxious to get going that he thought it might be to his advantage to sell his interest to Berliner's Consolidated Talking Machine Company and devote himself, unhampered, to the

development of the product. Consolidated was interested, but was unable to raise the \$350,000 cash that was asked. Their counter proposal of \$50,000 cash and the balance on a deferred basis was not acceptable to Mr. Johnson, so, after some delay, the negotiations ended.

The same offer was also made to the Gramophone Company, but, by then, they were in trouble with the ill-advised typewriter and electric clock lines and nothing came of it. Finally, in September of 1901, an ingenious plan was worked out, under the pressure of conflicting interests, which resulted in the organization of the Victor Talking Machine Company.

The company was incorporated on October 3, 1901, with 20,000 shares of common, and 5,000 shares of 7% preferred. The Consolidated Talking Machine Company of America received 8,000 shares of common for the Berliner patents, and paid \$50,000 for 500 shares of preferred with a bonus of 1,000 additional shares of common. This provided the new company with much needed working capital. Mr. Johnson received 10,000 shares of common and 3,000 shares of preferred for his plant, his patents, and his going business. The remaining 1,000 shares of common and 1,500 shares of preferred went into the company's treasury.

A detailed contract was drawn up with the Gramophone Company which gave them an option on three times their purchases for the previous year up to 50% of the company's capacity. They agreed to contribute up to \$10,000 a year to the expense of the company's experimental laboratories, to provide a 25% profit over costs, to protect the company's patents, trademark, etc., and to promote the sale of the product in Europe, in British colonies and possessions, and in Russia arid Japan.



"His Master's Voice" painted by Francis Barraud in 1899.

The new business was, in fact, a consolidation of Berliner and Johnson interests, but, in effect, was a continuation of Mr. Johnson's business in a stronger legal and financial position, and with Berliner participation. The company had not been in existence many weeks when the Columbia Company, conceding the merits of Johnson's products, introduced a laterally cut disc record which they called the Columbia Disc Graphophone Record. It not only violated the Berliner patents, but looked enough like the Victor record to confuse the public. Mr. Johnson got an injunction which led, after intermediate moves, to the cross-licensing agreement of December 8, 1903, between Victor and Columbia.

Mr. Seaman countered the organization of Victor with another suit, and succeeded in having the injunction against the Consolidated Talking Machine Company of America restored on July 22 1902. To eliminate a time consuming nuisance, this was finally settled out of court by Victor and Consolidated for \$40,000. As an interesting commentary, the Frank Seaman Advertising Agency then made a strong, but unsuccessful, bid for the Victor account.

In 1903, Victor bought the American interests of the Zonophone Company from London for \$135,000. This eliminated a serious potential point of friction between Victor and the Gramophone Company, but it was finally liquidated in 1912 with an accumulated loss to Victor of about \$500,000.

While there were other complications along the way, the preceding developments appear to have been the major factors which resulted in the Victor Talking Machine Company.

The Victor Trade Mark

The painting, "His Master's Voice," (Fig. 12) was done originally as an illustration for general publication. Back in the 1890's, the little fox terrier in the painting was the devoted pet of an Englishman named Mark Barraud (bah-Ro). Mark subsequently died and "Nipper" went to live with Mark's uncle, an artist named Francis Barraud. One day, the artist found Nipper with his head cocked, listening to a phonograph record. Beyond the fact that it was an appealing pose, the artist wondered if the dog might not think that he was listening to his dead master's voice. So he painted the picture and called it, "His Master's Voice."

After failing to sell it as a magazine illustration, Barraud decided to see if it could be used as an advertisement. He showed it first to Edison Bell. At that time, the instrument in the painting was a cylinder-type phonograph with a black horn, Bell thought that the instrument was too drab, so the artist called on the Gramophone Company to see if he could borrow a brass horn to use as a model, Subsequently. the painting was refused by Bell but purchased by the Gramophone Company for 100 pounds. The cylinder machine in the painting was covered over and replaced with a disc-type machine like Mr. Johnson's.



Mr. and Mrs. Leon Forrest Douglass.

The Gramophone Company started to use the painting as an incidental advertisement in the Spring of 1900. Copies were sold for framing, and were broadly distributed. By permission from the Gramophone Company, Mr. Johnson started using it as a trade mark in the Fall of 1900. In the meantime, Emile Berliner registered the mark in Washington on July 10, 1900 (Cft. #34,890). The transfer from Berliner to Victor wasn't officially put on the record in Washington until March 5, 1906.

The very first painting, which is reported to show paint marks of the original cylindertype phonograph, hangs in the board room of Electric and Music Industries, Ltd. (successor to the Gramophone Company, Ltd.), in Hayes, England. There are, however, a considerable number of originals (in the sense that they were painted by Barraud) in existence. These were ordered by Victor and the Gramophone Company to provide the artist with an income beyond the 1,000 pounds a year, which they were jointly paying him. The artist died on August 24, 1924.

The Company Name

The name "Victor" was first used as a brand name in December of 1900, and was registered in Washington on March 12, 1901 (Ctf. #36676). Mr. Leon Forrest Douglas was in charge of the company's advertising, sales, and recording at that time, and, although there is some contradiction, it is reported that "Victor" was derived from Mrs. Douglass' name, Victoria (Fig. 13). The name had originally been suggested as a name for the company itself, but this was postponed until its validity had been tested.

It will be remembered that Mr. Johnson was stopped from using the word Gramophone by Judge Gray on March 1, 1901, on the grounds that it was a Berliner trademark. Mr. Johnson was under the impression that the word Gramophone was a generic term (i.e., describing the disc-type reproducer). The term "Talking Machine," on the other hand, was generic, having been coined by a headline writer on a Buffalo, New York newspaper in 1889.

For a short time, the company also used the word "Monarch" as a trademark. It is not altogether clear why. It evidently carried something of a deluxe implication, but it is possible that the object was to have a reserve name to fall back on in case the others failed to stand up. The word "Monarch" was applied to instruments for only one season, but it continued on records for several, In this case, the name apparently identified the size of the disc. (Fig. 14) Early records were branded as follows:

14 inch - Deluxe Special12 inch - Deluxe10 inch - Monarch7 inch - Victor



Early records and brand names.

chapter five 1901-1905

The Victor Talking Machine Company, as we have seen, was incorporated on October 3, 1901, and organized two days later. It was not a new enterprise, but a merger of the interests of Eldridge R. Johnson with those of the Consolidated Talking Machine Company of America. The Consolidated Company, it will be recalled, was a holding company set up over The United States Gramophone Company, which controlled the Berliner patents, and The Berliner Gramophone Company of Philadelphia, which was the manufacturing company.

The first commercial activity of consequence by Berliner dated from October 5, 1895, when the Berliner Gramophone Company of Philadelphia was set up. Mr. Johnson made a pilot run of Gramophones for this company sometime during the late Summer or early Fall of 1896. His activities were, in fact, those of a brand-line manufacturer until September of 1900 when he set up to make and distribute his own product. From these facts, it would seem that the Victor Talking Machine Company could show direct lineage back to October 5, 1895. Mr. Johnson thought that it might reasonably claim 1894, the year in which he took over the Scull Machine Shop.

Whatever the preliminaries may have been, the company's real growth started with the formation of the Victor Talking Machine Company which got off to a fast start as a result of the business which Mr. Johnson had built up during the previous year. There is evidence that the first products (Fig. 15), which were offered by the new company, as well as its early advertising and other commercial activities, were a carry-over from Johnson's activity of the previous year. The work which Mr. Johnson and his organization had done from September 1900 to October 1901 in developing the product, building a factory organization, and establishing national distribution would, incidentally, appear to have had an important bearing on the distribution of Victor stock between the Berliner and Johnson interests, and hence on the company's history.

Looking back, it is natural to think of Mr. Johnson as having been the dominant figure in the entire development of the disc-type talking machine. This, however, was not always so. While Mr. Johnson was struggling along in 1896 trying to keep the small machine shop from folding up, Mr. Berliner was a man of considerable wealth with an international reputation and an important patent. Further, the men who owned the Berliner Phonograph Company of Philadelphia were men of parts with important outside interests.


The original instrument line offered by the Victor Talking Machine Company.

Starting from a subordinate place in the disc field, Mr. Johnson had, by the Summer of 1900, earned a considerably improved position: first, by designing a practical and attractive spring motor; second, by delivering a uniformly well-made product; third, by developing a process which, though ham-strung by patents, produced greatly improved results; fourth, by the exercise of patience, perseverance, and good judgment in dealing with the better established factors in the business; and fifth, by building a factory building and developing a manufacturing organization. However, he was still the junior partner in the activity; he was, at the time, only 34 years old. Mr. Berliner was 17 years his senior.

By September of 1901, this situation had changed radically. Mr. Johnson had had a successful year. In addition to having developed an active, nationally advertised business with broad distribution, he had made \$180,000.00. He had a manufacturing and selling organization on a going basis.

The Berliner Gramophone Company, on the other hand, had been out of business for a year as a result of the legal difficulties with its selling agent, Mr. Seaman, and had been greatly weakened both financially and commercially. They apparently were not able (perhaps not willing) to accept Mr. Johnson's proposal that they buy his interests for \$350,000 in order to clarify the complicated situation which existed at that time. It is possible, of course, that their decision may have been influenced by a fear that the Seaman injunction might be renewed. As it turned out, it was renewed.

At any rate, while the question was being debated, a decision was reached, somewhat suddenly it seems, to settle the problem by transferring the rights to Berliner's patents, as well as Mr. Johnson's patents and the assets of Mr. Johnson's manufacturing activity, to a new company to be known as the Victor Talking Machine Company with Berliner and Johnson interests participating proportionately. The ratio finally negotiated, yielding control to Mr. Johnson, could not have been easy for the Berliner interests to accept. On the other hand, looking back, the Victor point of view would be one of surprise that Berliner's share had been as large at it was.

Organization

The Company's first staff of officers following the organization meeting on October 5, 1901 was as follows:

Eldridge R. Johnson-President Leon F. Douglass-Vice President & General Manager Thomas S. Parvin-Treasure A.C. Middleton-Secretary & Asst. Treasurer Horace Pettit-General Counsel

John T. Gross and C. Roy Bair were also involved in the organization; presumably in some nominal capacity.



Victor's first factory office located at 114 N. Front Street in Camden, New Jersey.

The executive and factory offices were in Camden at 114 N. Front Street (Fig. 16). The sales office was on the 13th floor of the Stephen Girard Building on 12th Street in Philadelphia. Instruments using cabinets purchased from the Sheip Mfg. Co. were made in the new four-story brick factory building at 120 N. Front Street in Camden. Records were being recorded and matrixes processed at 10th & Lombard Streets, Philadelphia. Records were being pressed by the Duranoid Mfg. Co. in Newark, New Jersey. The product was being shipped from 10th and Lombard.

About a year later, the company had some records pressed by the Burt Co. of Milburn, N.Y., and started to press records for itself in a converted building at 23 Market Street in Camden. However, the sales office was not moved to Camden from the Commonwealth Trust Building (to which it had moved in 1903 or 1904) until 1905, and the transfer of activities from 10th & Lombard to Camden was not completed until 1907, which, incidentally, was the year Victor started to make its own cabinets.

London

Because the Gramophone Company of London had been such an important customer of Mr. Johnson's, and in view of its activities just before Victor was set up, it is understandable that their position with regard to the new company should have been clearly defined. It was mutually understood that:

1) Victor would provide sufficient capacity to give the Gramophone Company at least three times the volume they had received during the year ending July 1, 1900.

2) They could count on getting at least 50% of the new company's present or future capacity.

3) The new company would maintain an extensive experimental laboratory (50% of the cost up to \$10,000 to be borne by the Gramophone Company). The product would be sold to the Gramophone Company on the following basis:

a. Actual cost of material and labor.

i) Interest at 6% on the original cost of factory land and buildings with taxes and water rent added.

ii) 10% yearly depreciation on the cost of machinery in the factory. (Current machines to be taken at present value, new machines at cost).

iii) 25% profit.

4) Each company would confine its sales efforts to that part of the world where each had individual patent and copyright protection. In general, this meant that the Gramophone Company would serve the British Empire (except Canada, which was covered separately by the Berliner Gramophone Co. of Montreal) and most of Continental Europe. Victor, on the other hand, would serve the rest of the world-The United States, Cuba, Mexico, South America, Africa, the Near East, the Far East, the Pacific Islands, etc. (p.45)

In 1901, the Gramophone Company was still being managed by Mr. William Barry Owen, but he returned to America the following year and Mr. Alfred Clark took over. Mr. Clark had been with Edison at one time, and, at another, had charge of Berliner's retail store at 13th & Chestnut in Philadelphia. He was a very able man and continued as Managing Director of the Gramophone Company for 40 odd years. Victor's total life-time billings to the Gramophone Company were approximately \$5,600,000.

Domestic Distribution

In the Fall of 1900, the wax cylinder was recognized by the trade and the public as the standard of quality. The disc was on the defensive and, in the main, was sold through bicycle and other small shops, whereas the cylinder type machines would be found, to a greater extent, in music stores.

From the Fall of 1900 to the Fall of 1901, Mr. Johnson's organization had, through the better performance of the new disc record, succeeded in improving this situation and it is interesting to note that by September of 1901, two important "old line" music chains, Wurlitzer and Grinnell, were handling the product. It is also interesting to note that, within the next sixty days, two other important names, Lyon & Healy and Sherman Clay, had been added to the lists. The acquisition of Lyon & Healy was a particularly notable event. At the time, it was the largest and most influential music house in the country.

The story goes that Mr. Johnson had a long session with the store's management and tried from every angle to get their interest only to leave feeling that he had failed. However, acceptance was unexpectedly received the following day. This added greatly to Victor's prestige, and was to create assistance in getting other desirable distribution. It also started a close and mutually profitable manufacturer-wholesaler-retailer alliance, which lasted for about twenty years. The wholesale-retail set-up applied, of course, to numerous other distributors. As a matter of fact, a time came when Victor sold a few stores like Wanamakers, Lit Brothers, etc., whose wholesale activities were confined largely to their own retail stores. This policy was discontinued around 1920 when "dual" distribution was discontinued and a single wholesaler was set up to serve a "suggested" territory.

Columbia Competition

Up to the Fall of 1901, both Edison and Columbia stood firmly back of the cylinder principal as against the disc. As a matter of fact, Edison continued to exploit the cylinder exclusively until 1913. However, Columbia was so impressed with the improved disc record that, as we have seen, they introduced one of their own during the last quarter of 1901 under the name, "Columbia Disc Graphophone." It was not only a disc, but was also recorded by the Lateral Cut method (as against Hill and Dale), and in styling was so close to the Victor product as to cause confusion. Further, it infringed the Berliner patent and Victor got an injunction. (p. 46) This led directly to the cross-licensing agreement of December 8, 1903, between the American Graphophone Company (Columbia) and Victor. Under this agreement, Columbia got what they needed from the Berliner patent, and Victor got what they needed from the Jones patent. Now that Victor had the Berliner patent, and what it needed of the Jones patent. It seemed, for the first time, to be out in the clear as far as "basic" patents were concerned. Incidentally, the cross licensing put Columbia on an even footing with Victor and it became a question of who could make the best use of what they had.

In 1901, Victor won first prize at the Buffalo Exposition. Columbia, in an apparent effort to get something out of this for themselves, stirred up a great deal of friction with Victor by advertising their product as, "The one you saw at the Exposition. The one you like best."

In 1904, having been awarded first prize at the St. Louis Exposition by the Awards Committee. Victor advertised, 'Victor wins Grand Prize" (Fig. 17) This set loose a barrage from Columbia. It seems that, having been by-passed by the committee, they had wrangled recognition of some sort from the Exposition Committee. They protested and so did Victor. There were cross-suits, charges of corruption in connection with the awarding of prizes, etc., and more fuel was added to the early friction between Victor and Columbia.

Policy

When it started, or how it may have developed, is not known, but the business had not been going very long before a pattern, or program, of operations developed which lasted with comparatively little change over the years.

The first element in the program was that the product must be made of the best obtainable materials and workmanship. The principal objective was, of course, to get top performance. However, eye-value was an important secondary consideration. The product must have a flair-it must look quality. Great stress was placed on research and product development. A costly experimental laboratory (mostly "cut-and-try") was set up and every effort was made, in terms of the limited facilities of the time, to get increasingly better results. As time went on, no expense was spared to get special tools and other equipment, which would provide a better product and reduce the cost of manufacture.

As against the "card" or "price" type of advertising which most competition was using at the time, Victor assumed a constructive position almost from the start, and ran copy which was calculated to create desire for the product. Mr. Johnson gave this activity close personal attention, but, no doubt, got valuable assistance from Mr. Douglass and from the Powers and Armstrong advertising agency. While the advertising, which the company ran in the early days, was forceful and progressive, and no doubt represented a considerable financial strain, the results, which have been found do not support the general impression which has been built up that the volume was spectacular from the start.



Advertisement in "The Review of Reviews"-1904.

During the last three months of 1901, the advertising expenditure was 4.33% of domestic billings. During 1902 it was 3.25%, and during 1903 it was 5.92%. As against these figures, the lifetime average was 8.24%

The company's advertising policy-at least after 1903-was a heavy-handed one. The mediums used, in the main, were magazines and newspapers. There was no effort to get maximum results at minimum cost, but rather to use every publication for which there

was any justification. There were times when the money came hard, but it came. The advertisements were everywhere you looked!

Newspapers were used primarily to announce new products-particularly the monthly release of new records. Magazines were used to create product demand. Here again, a definite pattern developed. Whether this was pre-planned or something which evolved is not known, but the facts are that the general problem was continuously attacked from four separate, carefully ratioed angles:

- 1. The excellence and superior performance of the product.
- 2. The pleasure and advantages (entertainment and education) of ownership.
- 3. Availability of the world's best artists.
- 4. The gift idea ("The Gift That Keeps on Giving").

It was generally thought that, of the four leads, the third was, perhaps, the most effective. The vast expenditure for full and double page ads (Fig. 18) featuring individual artists and groups added greatly to the value of the Victor contract. It helped Victor sign up, at one time, nearly all of the world's best artists. It sold the product and, by association, implied a product of top-flight quality.

The advertising program was supported by a vigorous and effective commercial policy. By offering a quality product at competitive prices, and with sustained advertising, the line had dealer acceptance. This fact enabled the company to develop close bonds with its dealers (who were appointed by the distributor, but individually recognized by Victor). Every effort was made to insure fair and equitable treatment for all, and to get rid of disruptive and non-cooperative elements. The fact that the dealer liked the line and wanted to keep it enabled the company to press for results.

Approved dealers received sales helps, inspirational material, and direct mailing from Camden at a cost, at one time, of \$25.00 to \$35.00 a year. A dealer had to account for a yearly volume of at least \$300.00 to justify the expense, and was automatically removed from the list if he didn't. The company felt that fair trade practices were essential to the merchandising of a patented specialty, and these principles were successfully applied for about fifteen years, as will be detailed in a later section.

THE COSMOPOLITAN.



Advertisement in "The Cosmopolitan"-1903.

For many years, most of the big name artists and organizations made records exclusively for Victor. The Victor record catalog was developed to the point where it was generally accepted as a reference book of the best and most wanted music, and a "who's who" of the world's best artists-both popular and serious. The excellent work done by the Artist and Repertoire Department under Mr. Child, supported by the recording experts and the company's advertising department, soon developed the situation to a point where it became a mark of distinction to be a Victor artist-particularly a Victor Red Seal artist.

There is perhaps no better way to put the spot light on the skill with which the company was financed than to point out that, whereas the company paid cash dividends totaling 510% from 1902 to 1922, only 54% had been paid up to the end of 1910. Profits had been plowed back from 1901 to 1910 so that undivided profits at the end of 1910 stood at \$4,250,195.71. It is also significant that the dividends paid from 1912 to 1922, inclusively, were the equivalent of approximately 7% of the volume during this 10-year period. In 1922, Victor stock, having a par of \$100.00 (when available), sold over the counter for about \$1,300.00. On October 27, 1922, the brokerage firm of Stone, Prosser & Doty issued a circular in which the company was described as "... one of the largest and most brilliantly successful of companies."

In speaking of his policies, Mr. Johnson once said:

My business policies have always been very simple: first, I try to give as much for a dollar as is possible, and yet make sure of a reasonable profit; second. I have always been satisfied with a reasonable profit, and have tried to improve the quality of the goods offered for sale in every possible way: third, I have tried to conduct the business so fairly that I should feel satisfied if I were on the other side of the deal; and fourth, I have always made it a rule to never pay dividends or spend money when it was needed in the business.

Red Seal Records (Caruso)

While musical reproduction had been introduced into England and the continent from the United States, and while some progress had been made in the United States in recording serious music (Fig. 19), a time came when the European countries temporarily took the lead. Most of the early Red Seal recordings were from imported matrixes. This reached a high with the releasing of Caruso records by the Gramophone Company in March of 1902.

Fred Gaisberg had been sent to Milan by the Gramophone Company to hear a singer who was creating a sensation with a possible view to making some records. Gaisberg heard him and was impressed. However, Caruso wanted the unheard of fee (at the time) of £100 for 10 records. The current scale was in the order of \$2-\$5-\$10 a selection.



Recording for the Acoustic process.

London turned it down, but Gaisberg went ahead on his own. The ten records recorded were as follows:

Rigoletto-Questa O Quella Manon-O Dolce Incanto Elisire d'amore-Una Furtiva Lagrima Mefistofele-Giunto Sul Passo Estremo Mefistofele-Dai Campi, Dai Prati Tosca-E Lucevan Le Stelle Iris-Serenata Aida-Celeste Aida Germania-No, Non Chiuder Germania-Studenti, Udite

This session turned out to have been one of the most important, if not the most important, in the history of recorded music. For instance:

1. The Gramophone Company made a profit of £15,000 on the sale of these ten records.

2. The record "E Lucevan Le Stelle" got Caruso his first contract with the Metropolitan Opera Company in New York. Mr. Conried, Manager of the Met, heard it in the Gramophone Company's Paris office, took it to New York, and cabled Caruso his first contract. Caruso made his debut at the Met in "Rigoletto" on November 23, 1903.

3. The records had important influence in melting the prejudice, which big name artists still had against recording their art.

4. If Victor advertising over the years gave Caruso valuable publicity (Fig. 20), his name as an exclusive artist brought prestige to Victor.

5. His records, backed by exclusive Victor advertising, effectively stimulated the public's interest in serious music.

6. His contract with Victor was very helpful in building up the Red Seal catalog.

7. The fee of £100 for the Milan recording led ultimately to royalties to Caruso in excess of \$3,000,000. Caruso got \$4,000 for the first 10 records he made in Camden (shortly after his first appearance at the Met), \$10,000 for the next 10, and forty cents a record, with an advance on royalties of \$10,000, for the next 10. Caruso was 29 years old in 1903.

Record Development

If there were any records of Red Seal caliber in Victor's Catalog in 1901, there probably were not many. The last page of the bulletin of 10-1-01 announced that a group of records of this kind would "soon" be available by importation. The first published list of the kind which has been located was probably issued in 1903, and most of the listings were from imported matrixes.

The Literary Digest for January 23, 1915

Both are Caruso

Victor Record of "Celeste Aida" sung by Caruso

The Victor Record of Caruso's voice is just as truly Caruso as Caruso himself.

It actually <u>is</u> Caruso—his own magnificent voice, with all the wonderful power and beauty of tone that make him the greatest of all tenors.

Every one of the hundred and twenty Caruso records brings you not only his art, but his personality. When you hear Caruso on the Victrola in your own home, you hear him just as truly as if you were listening to him in the Metropolitan Opera House.

The proof is in the hearing. Any Victor dealer in any city in the world will gladly play for you Victor Records by Caruso or any other of the world's

HIS MASTER'S VOICE

greatest artists. There are Victors and Victrolas in great variety of styles from \$10 to \$200.

> Always use Victor Machines with Victor Records and Victor Needles-the combination. There is no other way to get the unequaled Victor tone.

Victor Talking Machine Co., Camden, N. J., U. S. A. Berliner Gramophone Co., Montreal, Canadian Distributors

Paris

New Victor Records demonstrated at all dealers on the 28th of each month

Advertisement in the "Literary Digest"-1915.

The records Caruso made in Camden apparently marked the beginning of the active development of the domestic "Red Seal" recordings. One important artist after another was added to the list until the domestic section of the catalog became much more important than the imports.

By 1906, the following artists had been signed on an exclusive basis:

Caruso Plancon Patti Journet Eames Schumann-Heink Melba Homer Sembrich Campanari Scotti De Gogorza

At the start, the record business was largely confined to popular tunes of the day, comics, and instrumental selections with a strong leaning toward Sousa's Band. During the first four years of the company's history, the dollar volume of the record end of the business developed as follows:

1902-\$579,000 1903-742,000 1904-985,000 1905-1,389,000 \$3,695,000

This was about \$600,000 better than the instrument volume for the same period.

Instrument Line

From 1901 to 1905, the company offered its domestic trade 12 different instrument models ranging in list from \$15.00 to \$100.00. Trade discounts are not known, but were probably 55% for the distributors, 40% for small dealers, and 40 & 10% for large dealers.

The most *noticeable* changes in product development had to do with the method of supporting the horn, and the evolution of the horn itself. However, far and away the most *important* development during this period, one of the most important developments in the company's history in fact, was the "taper tone arm and goose neck," introduced in 1903. This feature had the following advantages:

1. Because of the ball-bearing mountings, it enabled the sound box to track across the record almost without resistance.

2. The hinging of the "goose neck" made it possible to carefully determine the pressure of the sound box on the record, and made it much easier to change needles.

3. While the scientific reason for it wasn't known at the time, the performance was much improved. (p. 55) This was due to the fact that the additional distance and gradual expansion of the air-chamber from the sound box to the end of the horn provided a modification of the exponential principle used years later in the Orthophonic Victrola.

Domestic instrument volume from 1901 to 1905 increased as follows:

1902-\$615,000 1903- 683,000 1904- 717,000 1905-1,080,000 \$3,095,000

To a talking machine enthusiast, the "sound box" of a talking machine carried something of the importance and glamour of a chronometer. Individuals prized particular units as, for no particular reason, being the best that had ever been made. Even the company's executives took great pride in showing and playing a box which had come out of the company's experimental laboratory. Several of the company's best mechanics spent years of their lives working behind closed doors making up boxes in every conceivable size and weight and with every fulcrum variation that was suggested or could be thought of. While the great bulk of the company's production was equipped with Concert, Exhibition, No. 2, and Orthophonic boxes, there was a total of about 15 variations which were used in one connection or another.

Advertising

The company ran a back cover in the "Saturday Evening Post" on July 12, 1902. On April 25, 1903, it followed up with the first "double truck" ad ever run in the Post. The company again ran a back cover in the Post on April 9, 1904. Interspersed was a series of smaller advertisements. In an attempt to strengthen and enlarge its distribution, nearly all of these advertisements listed the company's distributors.

The bold use of large, conspicuous, space had the dramatic effect of putting the spotlight on the new enterprise, and of giving it an apparent importance in line with the largest companies in the country at that time. The practice of using special positions became established practice. After 1910, practically all of the company's extensive advertising in the Post was in big, important space-most of it double spreads and back covers.

Victor traded heavily on the power of curiosity and suspense. From the earliest days, records were issued once a month. They were announced or put on sale prior to a specified date. Instruments were put on sale nationally, with a fan-fare, on a specified "Opening Day." There was a build-up. Something important would happen on a particular day. The trade and public apparently loved it and waited expectantly. Every effort was made. of course, to make the wait worth while to avoid a let-down.

Then, remarkable results were obtained by featuring an unexplained "secret process" which may not have been anything more important than the important matter of using materials which were a little better than actually required, and workmanship which was painstaking in every minute part of the product.

From 1901 to 1905, exposed horns were available in many sizes and shapes: black horns, black horns with brass flanges of varying proportions, all brass horns, flower ("Morning Glory") horns, and, as a top development, horns in oak and mahogany plywood.

In view of the complications which had existed between the Berliner Company and Mr. Seaman-which had indirectly and, to some extent, directly involved Mr. Johnson-it is significant that Mr. Seaman, who was also an advertising agent in New York, should have made a serious play in February or March of 1901 for Victor's advertising account. It is also significant, in another way, that the Armstrong Agency should have held the account against all comers from 1901 to 1925. It was, however, no coincidence. Vendors and

others who served the company fairly and to the best of their ability were not easily dislodged.

License to Sell

From 1896 on, Mr. Johnson had met up with many of the rough sides of businesspirating, counterfeiting, misrepresentation, double dealing, patent infringement, lossleader sales, etc. From a practical point of view, none of these problems concerned him more than loss-leader sales. For, whereas there was some legal recourse against the others, the position of a patented product with regard to the Sherman Act had not been clarified.

Mr. Johnson and his lawyers took the position that it didn't make sense for the government to give an inventor a patent monopoly for 17 years and then leave him without protection against destructive elements in the trade. Victor was among the first to strongly advocate fair trade practices and they vigorously fought the issue for about 15 years. They argued that the public's interest against gouging by the manufacturer was protected by the inventor's self-interest because the price and product had to be acceptable to the public if the inventor was to survive.

One of the company's top legal advisers stated his own and the company's point of view as follows:

The Patent grant from the Government is a farce and the Patent statutes authorizing it might as well be repealed in toto, if no patentee, or joint patentee and licensee, can protect the grant from violation by trespassers on the monopoly, without being charged, for such act, with restraining trade in violation of the so called Anti-trust laws. (p. 57)

Beyond the broad theory that dealers interested only in scalping a short, quick profit could demoralize the market, Victor was confronted with the practical problem that promiscuous price cutting would have, in some way, to be controlled if the constructive support of houses like Lyon & Healy, Sherman Clay, Grinnell, etc., was to be retained.

Accordingly, in an effort to meet this situation and merchandise its products on a basis which, in its opinion, would yield a fair profit and equal opportunity to all, the company inaugurated a license to sell system starting March I, 1902, when the company was barely 5 months old. The "notice" was applied directly to the product and was worded as follows:

NOTICE

This machine, which is registered on our books No...... is licensed by us for sale and use only when sold to the public at a price not less than \$...... No license is granted to use this machine when sold at a less price. Any sale or use of this machine when sold in violation of this condition will be considered as an infringement of our United States patents under which this machine, and records used in connection therewith are constructed, and all parties so selling or using this machine contrary to the terms of this license will be treated as infringers of said patents, and will render themselves liable to suit and damages.

The license is good only so long as this label and the above noted registered number remains upon the machine: any erasures, or removal, of this label will be construed as a violation of the license. A purchase is an acceptance of these conditions. All rights revert to the undersigned in the event of any violation.

The Burt Company

On January 18, 1902, Mr. Johnson and Mr. Douglass personally bought the Globe Record Company of New York from the Burt Company of Milburn, New York, for \$10,000. This did not include a claim which Globe had against the Columbia Phonograph Company and the American Graphophone Company which Burt was left free to collect in any way it could. The Victor Company was involved in the transaction only insofar that Mr. Johnson, as an individual, agreed to buy 300,000 records from Burt before July 1, 1902, at 7½¢ for 7" and I5¢ for 10" f.o.b. Milburn. He also agreed to buy from Burt half of all the records Victor might require from January I, 1902, to July 1903. It was stipulated that the records were to be pressed from matrixes owned by Globe or Victor. Incidentally, no account has been found of the business, which Mr. Johnson or Victor may have given Globe, nor is the exact connection between Globe and Burt known. The agreement also stipulated that the arrangements would be continued indefinitely, but could be discontinued July 1, 1902, on 6 months prior notice and the payment of \$7,500, or on January 1, 1903, on similar notice with the payment of \$5,000.

On February 15, 1902, about a month after the purchase, Mr. Johnson and Mr. Douglass sold Globe to the American Graphophone Company. Available records do not show the money consideration, but American Graphophone agreed to drop a suit then pending against Globe and Mr. Johnson, and, what is much more far-reaching, they granted a release and discharge from any and all liabilities for any alleged past or future infringement of patents No. 341,214 (Bell & Tainter's important basic "wax as a medium of recording" patent), 341,288, and 375,579. They also released Mr. Johnson, The Berliner Gramophone Company of Philadelphia, and Mr. Parvin of all "costs, demands, profits, charges" and to "indemnify them from all parties who may claim to have any right to said patents." Available records do not give further details but the known facts would indicate that there must have been a bad situation in the background.

The incident was closed by Victor's abruptly closing the deal with Burt on October 14, 1902, on the ground that Victor's business was being intentionally injured in favor of Columbia by the delivery of inferior records. Victor's record production in its own new pressing plant at 23 Market Street, Camden, was 2,000 records a day during December of 1902.

The Fire

On Sunday afternoon, April 24, 1904, a fire (Fig. 21) destroyed a large part of the four story brick building which the company was using to make horn-type talking machines. Although the building was insured, there was a loss of about \$45,000-not including the loss of business, which would, of course, have been much more serious had the fire occurred in the Fall instead of the Spring. Activities were quickly moved to the "Match Factory" (now known as Campbell's warehouse #1 at the corner of Penn Street & Delaware Ave.). There was really a minimum dislocation of business. The effect can perhaps be reasonably measured by the following comparison of the company's net *profits* from 1902 to 1905 inclusive:

1902- \$151,000 1903- 495,000 1904- 424,000 1905- 607,000

The shrinkage for 1904 would have been greater had not increasing record sales, which were not affected, offset part of the instrument loss.



On April 24, 1904, a large fire destroyed the first factory building used by Victor.

chapter six 1906-1911

1906 was a notable year in Victor's history. On September 1st, the company paid the Consolidated Talking Machine Company (Berliner's holding company) \$800,000 for the 8,000 shares of Victor stock which had been issued to them at the time of the company's incorporation. There had been a difference of opinion for some time between the Berliner interests and Mr. Johnson as to dividends on the company's common stock. The Berliner group felt that the future of the business was sufficiently uncertain to justify dividends more in line with current earnings rather than the nominal 6% which was being paid. Mr. Johnson, on the other hand, felt that the earnings should be conserved for plant expansion. To settle the matter, the company finally bought back Consolidated's 8,000 shares. Fifteen years later, these 8,000 shares had a market value of about \$10,000,000.

Payment was made by the issuance of \$800,000 in gold notes covered by a mortgage on the company's real and personal property through Drexel & Company of Philadelphia. The notes ran from one month to five years. They were oversold and redeemed on schedule. At the time the notes were issued, the company's undivided profits stood at more than \$2,300,000.

The First "Victrola" Talking Machine

Until the Fall of 1906, all talking machines had exposed horns. Those made by Victor were known as "Victors." The first instrument with an enclosed floating horn was announced on August 9, 1906, and was known as a Victor Victrola (VV-XVI). The new instrument listed at \$200. Its development had been completed and sealed away two years before.

Considering the importance of the enclosed horn type talking machine to Victor's subsequent operation and growth, it is interesting to note that it was not received with any great initial enthusiasm. The transition from the exposed type of horn to the concealed type took several years. The trend of production was as follows:

1907	1911	1915
Exposed Horn 98,368	31,106	3,946
Concealed Horn 3,559	93,761	374,191

The original styling (Fig. 22), contributed by the cabinet vendor, was, no doubt, the principal negative although the company and the trade couldn't see much volume at the necessary list. Dealers put the instrument on display as a show piece and were pleasantly surprised that it sold.



Evolution of Model VV-XVI, the first Talking Machine with an enclosed horn.

Auxetophone

During the same year. the company introduced an entirely new method of sound reproduction known as the auxetophone. It was designed to produce greatly increased sound output for auditorium, dance hall, restaurant, and outdoor use. A self-contained air compressor unit forced air through a sound box having a "reed-like" construction. The advance billing was that it was ". . .destined to he the greatest musical instrument the world has ever known," and the results, under favorable circumstances, apparently justified some enthusiasm. However, it required more expert, routine mechanical attention than had been anticipated, and the hoped-for sales never developed. Production was confined to the initial order for 500 units.

Columbia's Grafanola

Victor's enclosed horn type talking machine had not been on the market long when the Columbia Company announced a similar, infringing product which they called the Grafanola. Victor contended that both the product and the name were calculated to confuse the public and unfairly divert sales. This additional incident between Columbia and Victor led to a new cross-licensing agreement on June 3, 1907. The agreement of December 8, 1903, had not been satisfactory from Victor's point of view. It was Victor's contention that Columbia had not kept its agreements-particularly some of the side issues having to do with record importations, etc. However, as a result of fresh assurances, the Berliner patents were now again squared off against the Jones patent

with an agreement that there would be no royalty payments until after the Berliner patents expired. Under the new agreement, several pending suits were dropped.

So far as is known, this agreement settled, at least superficially, the many points of friction which had developed between the two companies. The most important incidents, it will be recalled, were as follows:

1. The use of the Bell & Tainter patent in apparent collusion with Frank Seaman against The Berliner Gramophone Company of Philadelphia.

2. The introduction of an infringing laterally cut disc record during the last quarter of 1901.

3. Advertising efforts to take credit from Victor the win at the Buffalo Exposition.

4. Suits for infringing the Jones patent while they, at the same time, were infringing Berliner's patent.

5. Apparent collusion with the Burt Company to injure Victor by the use of inferior materials.

6. An apparent effort to distort results at the St. Louis Exposition.

- 7. Dubbing and "counterfeiting" records.
- 8. Failure to keep agreements.

	3	
C.0	DIRECTORS CABLE ADDRESS	
Le	ON F DOUBLASS GRANU PALE	
CH	IN F GEISSLER ST LOUIS EXPOSITION	
-	CAT C MIDDLETON PORTIANO EXPOSITION	
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	CAMDEN. N.J. USA	
	Semi-Wonthly Sugnersion Report	
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	521	
entlemen	1-	
	Kindly note on the attached list the names of parties who hav	
een take	n from our files of qualified Victor Dealers for causes as	
ndicated	below; i.e.	
1.	They have failed to comply with the various terms of our	
	contract.	
2.	They have gone out of business.	
3.	They are not qualified to handle Victor goods, owing to a lack of facilities for sale and exhibition purposes.	
	Please keep before you a complete alphabetical list of these	
ealers a	and decline to supply them with Victor goods or to re-qualify	
hem with	out our consent.	
	Yours very truly,	
	VICTOR TALKING WACHINE COMPANY	
	E00	

Semi-monthly suspension report issued by the Victor Talking Machine Company-1907.

While discussing the Columbia Company, it might be interesting to note the "firsts" which they claim:

- 1. Records engraved on wax.
- 2. Mr. Easton-first man in the world to offer talking machines for use, sale or rental.
- 3. Popular priced spring motors.
- 4. Tainter method of duplicating or copying recorded sounds.

5. "Grand" cylinder records with increased surface speed, fine quality, and greater volume.

- 6. Wax cylinder records by the "gold molding" process.
- 7. The laminated disc record.
- 8. Recording great stars of opera and concert.
- 9. The Master Works" albums.

License Plan

In 1906, the license plan, which had been started in 1902, was broadened to include shopworn and used instruments, and the company's point of view in reference to fair prices was spelled out in greater detail. Franchises were issued to distributors and dealers who signed the contracts. Subsequently, Semi-Monthly Suspension Reports (Fig. 23) were issued in which franchises were revoked for any one of the following reasons:

- 1. Failure to comply with the terms of the contract.
- 2. Business discontinued.
- 3. Unsatisfactory representation.

The company broadly publicized its point of view with advertisements. press releases. booklets, etc. The following titles reflect the approach:

- 1. "Price Cutting-A Restraint of Trade"
- 2. "Price Maintenance-A Bad Name-It Should Read, The Maintenance of Fair Prices."
- 3. "Who Loses When Prices Are Cut?-You Do!"

Double-Faced Records

On September 17, 1908, the company reluctantly announced that it would issue a limited number of double-faced, black-label records. The Columbia Company had forced Victor's hand. The company particularly disliked Columbia's pricing and the cut-price promotional angle which they had given the development.

Incidentally, while this was an innovation in the United States, C. & J. Ullman had introduced a double-faced record in Germany in 1904 under the name "Odeon Duplex."

Dealers and distributors didn't want the new product any more than the company did. The announcement was met with a hail of protest from the trade. Beyond the prospect of inventory loss, there were initial misgivings that good numbers would be called upon to carry duds. However, plans proceeded, and the company announced 100 ten-inch and 25 twelve-inch records on October 21, 1908. The price schedule was as follows:

Single	Double	
10"	\$.60	\$.75

12"

1.00

The company offered distributors a one-for-one exchange of double-faced records for single-faced without charge except for the difference in cost of the double-faced series against the single-faced, and/or ten-inch as against twelve-inch. This exchange cost the company about \$216,000 but was felt to have been a justifiable investment in good will. This was the first of a long list of record exchanges.

The double-faced series was introduced without advertising or other fanfare, and without benefit of the otherwise rigidly observed "Opening Day" releases. Red Seal records were not doubled until 1923.

Canada

The RCA Victor Company. Ltd. of Montreal dates back to 1899 when Mr. Joe Sanders (a nephew of Mr. Berliner's) and Emanuel Blout, who became one of Victor's distributors in New York, set up to do business. They first operated under the name "Berliner," but subsequently became the "Berliner Gramophone Company of Montreal." Mr. Sanders was an expert on record materials and was in charge of the company's manufacturing activities. Mr. Blout was in charge of sales.

Using materials obtained from Mr. Sanders' factory in Washington, D.C., the new company made its own records from the start. For a while, motors were purchased from Northern Electric. However, it wasn't long before the demand was greater than the vendor's capacity, and the Berliner Company started to make its own. In 1906, they started to build a factory building to get all of their manufacturing under one roof. Mr. Sanders left the Canadian Company sometime during 1908, and Mr. Blout followed soon afterward. It was not until 1906 or 1907 that fabricated parts of consequence were obtained from Camden. From this time on, Victor's magazine advertising carried a by-line which read, "Berliner Gramophone Co., Montreal, Canadian Distributors."

In 1909, the company made the first of several investments in the Canadian Company which, in 1928. culminated in full ownership of the manufacturing activities.

Sales Pressure

The company's program of national advertising, aimed at creating public demand for the product, was consistently supported by promotional materials and specific suggestions designed to help the dealers and distributors carry through with sales. Beyond point-of-sales materials, which were innovations at the time, there were also specific plans for building business by mail and by phone, tie-ins with artist appearances, suggestions for the intelligent use of installment selling methods, and so forth. There were systems for ordering and an elaborate method of record cross-references known as the "Ready Reference Labels." The purpose was to make additional sales of similar records and to suggest substitutions. From the earliest days, there were courses of instruction in salesmanship, lessons by mail, booklets, elaborate window displays, and a series of articles in the house organ, "The Voice of the Victor."

One interesting aspect of the work was the persistence with which basic ideas were hammered home. They were hit first from one angle, then from another, but never permitted to die. Another interesting phase was the company's "after-sale" activities. An example would be the attractively bound booklet "How To Get The Most Out Of Your Victrola," calculated to develop record sales.

Educational Activities

On April 1, 1911, Victor established an Educational Department under Mrs. Frances Elliott Clark. Mrs. Clark's experience in music appreciation dated back to 1891 when she was Music Supervisor of Public Schools in Monmouth, Illinois. By 1911, she had become Music Supervisor of Public Schools in Milwaukee, Wisconsin, where she was having conspicuous success in the use of recorded music in music appreciation work.

Mr. Geissler, impressed with her work, invited her to come to Camden to discuss the possible national application of her ideas. She accepted and was subsequently hired. The program which was developed had the far-sighted objective of building a demand for recorded music by developing an early interest in music. This was done by demonstrating how effectively records could be used to this end.

An efficient organization which traveled nationally, lecturing, demonstrating, and organizing, was built up. Courses of instruction were set up with graded lists of records; special records were recorded and pressed; and the music appreciation program was given national attention with the publication of such books as, What We Hear In Music and Music Appreciation For Little Children.

Mrs. Clark was personally active in the organization and administration of important national music club activities and used their forums with great skill and adroitness in preaching her doctrine. Because her dynamic personality was so closely identified with recorded music, and particularly with (p. 67) music recorded by Victor, she was able to get more effective results on a "non-commercial" plane than would have been possible by advocating specific products. The combined net effect of this work over the years is that America is better educated musically, and is a better market for musical merchandise and musical activities than it would have been had it not been for the sustained and effective work of Victor's Educational Department under Dr. Clark.

Copyright Laws

During 1911, the United States copyright law was amended to include talking machine records. It applied to practically all of the records in Victor's catalog. Because the company did not feel that it would be wise to raise the price of the records, increased economies were called for to avoid reduced profit. Copyright laws in foreign countries in which the company was doing business also became an acute problem during 1911.

In 1911, Mr. Johnson said in the board report:

The whole future of our business depends on one's ability to make steady but substantial improvement in the art. Better goods are demanded each year. The cost is increasing: the public wants more and more for their money. We must advance-to stand still is to slide backward. Therefore, we must secure constant economy in manufacturing, irrespective of what the immediate cost may be.

Our present warehouse facilities are entirely in adequate for our requirements. Many of the buildings which are now being used for the purpose of storage are not suitable in construction and in many cases the fire risk is very great.

Recapitalization

Also in 1911, the company increased its capital from 20,000 to 50,000 shares. At that time, Mr. Johnson apparently held 10,000 and the Consolidated Talking Machine Company, or Mr. Berliner, personally held the 1,000 shares which they had received at

the start. The 8,000 shares re-purchased from Consolidated in 1906 were still held in the treasury. The remaining 1,000 shares were held about equally by Messrs. Douglass. Atkinson, Haddon and Middleton. On this basis, 38,000 shares were distributed in 1911. It is a fair guess that Mr. Johnson got 15,000 which would have brought his holdings up to 50%, although there is some evidence that his holdings on January 6, 1927, consisted of only 20,000 shares. The following men participated to the extent of about 18,000 shares:

- L. F. Douglass
- A. C. Middleton
- H. B. Babson
- A. W. Atkinson
- C. H. Haddon
- E. Berliner

1,000 shares were left in the Treasury. The 4,000 shares unaccounted for were possibly held, in part, by Messrs. Royal, Geissler, Staats, Freeman and others not known.

Trustee Stock

Some part of the 4,000 shares were made available to "key" employees under a trusteeship. The plan worked as follows: The employee bought the stock at 80% of its current market value. He was given five (5) years to pay for it. The stock participated in dividends as they were declared. In practice, this worked out very favorably for the employee as dividends at the time were large-large enough in fact to pay the installments on the principal as they fell due. If the employee left the company, or for any reason wanted to sell the stock, he was committed to give the company the first option to buy it at 80% of its market value at that time. Beyond the initial distribution, stock only became available when it was turned back by an original holder. The plan was closed out at the time equity in the company was sold to the banking syndicate. At that time the company waived the 80% clause and repurchased this stock at the full current market.

In 1916, the company had 121 stockholders. Nine were directors or officers, 37 were other employees, and 75 had no direct connection with the company. The 112 stockholders who were not officers or directors held 21% of the company's common stock.

Speaking of Profit Sharing plans, Mr. Johnson wrote William Barry Owen, in the early days of Victor, as follows:

If I could only find a practical plan, I would pay every employee in the business in the same way, even down to the office boy, and we are working toward that end. But, of course, it is difficult to accomplish. It is all right as long as the company is making money, but off years have to be taken into account, and the fact that employees have to have a certain income has to be looked out for. It is not hard with the higher officers, as they generally have capital to last over a period of depression.

Other Activities-1906-1911

1. Mr. Douglass had a nervous breakdown in the Fall of 1906, went West to regain his health, and gave up his active connection with the company. Mr. L. F. Geissler came East from Sherman Clay and Company to take over.

2. The Supreme Court sustained the validity of patent #534,543 on April 1, 1909.

3. During 1909, the company wrote down patents, goodwill, etc., from \$2,079,528.80 to a nominal \$2.00.

4. The company's financial reports were changed from a fiscal basis to a calendar basis during 1910.

5. The company introduced the automatic brake during 1911.

chapter seven 1912-1920

In 1911, the name of Edison's National Phonograph Company was changed to, "Thomas A. Edison, Inc." The company was still making cylinder records and they were finer and longer playing than they had been at the start. Nevertheless, they were still cylinders. Over the years, Edison had occupied a conservative, relatively inactive, position. With a degree of veneration for Mr. Edison, the product was highly regarded by a comparatively limited following. In 1912, their blue celluloid cylinders began to replace wax and, for the first time, a disc record was offered under the trade name "Diamond Disc." It was a heavy record and the list of artists was limited, but the company took effective advertising advantage of the Edison name. Records were featured as re-creations. An elaborate "Laboratory Model" phonograph listing at \$285 was advertised to play records ". . . just as Mr. Edison heard them." Since Mr. Edison was known to be nearly deaf, the claim about what he heard was accepted by many with a good natured chuckle.

Victor's Welfare Activities

1. Beneficial Association-During April of 1913, Victor assumed sponsorship of the Victor Employee's Cooperative Beneficial Association. This Activity had been in operation by the employees for seven or eight years with company approval. At the time the company assumed the sponsorship, the terms were: entrance fee-\$.50, dues-\$.25 per month, sick benefits-\$1.00 per day (maximum-100 days), and death benefit-\$150. The company matched the employees' contributions dollar for dollar and absorbed the full cost of operation including nurses, administrative costs, etc. The conditions and benefits were broadened from time to time, subject to such reasonable conditions as experience proved desirable. Membership was ultimately divided into two classes based on weekly income. Class #1 included employees who made \$25 a week or less, and Class #2 included those who made more than \$25 a week. The breakdown in benefits is reflected below.

Class 2	Class 1	
Membership Fee \$.50	\$.50	
Sick Benefits 2.10	1.50	
Death Benefits 250.00	250.00	

There was a waiting period of seven days which was covered if the disability lasted longer than five weeks. The association was administered by a board of trustees under the chairmanship of Mr. E. F. Haines. Each trustee represented one of the company's major departments. The plan was discontinued in 1949 after the State of New Jersey enacted a law which established a system of benefits along the same general lines.

2. Group Insurance-On April 15, 1913, Victor took out a group policy with the Travelers Insurance Company. This was the third policy issued by Travelers outside its own organization. The first was issued to Mergenthaler Linotype Co., and the second to the Ohio Electric Company. The Victor policy was taken out a month and five days following the original coverage of Traveler's own employees.

The policy, at the start, called for a death benefit of \$500 to members of the Beneficial Association who had worked for the company five years or more and whose salary did

not exceed \$200 a month. This was increased to \$750 on January 1, 1916. On October 30, 1917, the plan was extended still further to cover practically the entire working force on a sliding scale based on length of service. Members of the Beneficial Association whose salary did not exceed \$200 a month received death benefits as follows:

More than two months	\$250
More than one year	500
More than two years	750
More than five years	1,250
More than ten years	1,500
More than fifteen years	1,750
More than twenty years	2,000

From the beginning, these benefits were without cost to the employee.

3. Pensions-The pension plan, which was established on May 15, 1913, applied, at first, to employees who earned less than \$200 a month. After 20 years of service, the plan provided for a monthly payment of \$30. The plan went into effect at age 65 for men and age 55 for women. Sometime before 1920, the payments were increased to \$40. During 1920, the payments were again increased to \$50 and the salary limit was increased from \$200 to \$300. The company absorbed all costs. A few retired employees are still participating in this plan because RCA assumed responsibility when Victor was acquired.

All three plans were administered with careful consideration, and exceptions were made in worthy cases. In cases of prolonged illness, the company extended help long after the provisions of the Beneficial Association had been complied with. Employees who lived a great distance away were sent home at company expense. In many cases, tubercular employees were sent to the Southwestern Presbyterian Sanitarium in Albuquerque where the company had established a connection. To take care of industrial accidents and other (p. 72) emergencies, the company maintained a dispensary with trained nurses and a doctor in constant attendance. While no expense or effort was spared to avoid industrial accidents, the company's policy was to provide medical attention as long as it was needed when they did happen.

4. Turkeys-For several years, the company gave each employee a turkey with cranberries at Christmas time. In 1912, the total weight of the gift turkeys was 50,000 lbs. and it took 57 barrels to hold the cranberries. The activity was discontinued in 1915 when it was discovered that workmen from the cabinet factory had gone into the poultry business with the gift turkeys.

License Royalty

On August 1, 1913, the License Royalty plan, with which Victor was particularly identified, was announced. Unlike the plans which had preceded it (including the short-lived plan of May 1, 1910, which included exclusive wholesale representation), title remained in the Victor Talking Machine Company as long as the covering patents continued. It was a license to use only, whereas the plans which had preceded it were licenses to *sell*. Available records do not show, for certain, that this plan was worked on and/or approved by Elihu Root and Charles Evans Hughes, but it is known that these men and others of top national prominence were retained by Victor to support the company's large and competent legal staff.

The principal features of the plan were as follows:

1. Machines and records were licensed to the public for use only.

2. Victor Machines were licensed for use only with Victor Records, Victor Sound Boxes, and Victor needles (and vice-versa).

3. The Victor Company retained the right to repossess.

4. Dealers were required to keep records in envelopes which contained the license notice.

5. Purchased products were not to be shipped abroad.

6. Instruments were not licensed for public entertainment at a profit. However, a special license was recognized.

7. Trading stamps and other inducements were forbidden.

8. Records were not to be announced or put on sale earlier than authorized.

9. Distributors and dealers who failed to cooperate would be discontinued.

10. Advertisements offering other talking machines at cut prices must exempt Victor products.

On March 31, 1916, about two years and a half after the License Plan had been in operation, the company had 6,043 dealers and 103 distributors. 4,884 contracts had been cancelled from January 1, 1912, to January 1, 1915. Approximately 5% were cancelled for price cutting. However, a large number of the cancellations were, no doubt, for insufficient volume. There is no known case of a repossession from the public.

The plan was sustained by the U.S. Circuit Court on August 1, 1915, and was actively administered until April 9, 1917, when the U.S. Supreme Court ruled against it.

A letter was issued to the trade on May 29, 1917 announcing that the plan had been discontinued and that future sales would , observe the terms of the ruling. Suggested list prices were offered, "Not binding on the Trade."

During the life of the plan, there had been a considerable amount of "grousing." It was therefore interesting that, when it was discontinued, there was no stampede to get away from it. On the contrary, it carried on of its own momentum in many markets for some time, and there were continuing expressions of regret over its loss several years after it had been discontinued. From the company's point of view, it had worked well. The company had profited, as had the cooperating distributors and dealers.

It goes without saying that the adverse decision was regarded by Victor's management as a serious blow. However, its advocates felt that it had been an important factor in establishing the company, and that it helped lay the foundation for the even larger volume which lay ahead. In 1917, the company's total volume was \$31,645,000. From 1920 to 1923 inclusive it averaged around \$46,500,000.

The Flow of Production

After Victor's shipping department was completed in 1915, cabinets were fed across the 4th floor bridge from the cabinet factory to meet motor board assemblies fed across by a similar 4th floor bridge from the metal manufacturing plant. By a system of overhead and roller conveyors, an assembly operation was developed which approximated the facilities

of an automobile assembly line. After the motor boards had been assembled in the cabinet and checked for performance, the conveyor continued to the packing section where the instrument was put in a veneered packing case, closed with an automatic nailing machine, and sent down the "Lowerator" to the shipping platform on the first floor where, in the busy season, ten box cars would be in the process of being loaded to be pulled twice a day.

Steel Needles

From the earliest days, Victor strongly cautioned against using a steel needle more than once. Many people, no doubt, thought that the company was simply trying to sell more needles. The facts are, of course, that while the company was interested in the sale of needles (which were obtained under specifications from a vendor), repeated use of a steel needle was bad for the record. At the end of a single record the needle would have developed a "face," and since the inside grooves of a record had a different contour than the outside, the needle at the end of a record would not fit the grooves as it had when it was new. (p. 74) This situation would grow progressively worse with repeated use. Results would be particularly bad if the needle was removed and replaced at a different angle. In such cases, the crystalline steel needle would be faced like a cutting tool.

In 1916, the company introduced the Tungstone Stylus with a fanfare and continued to "plug" it until automatic record players came along with the jeweled point. Up to this time, Victor's position had been that jewels couldn't be ground accurately enough at a justified price, and that improperly ground, or split jewels would hurt the record. The company felt that the fibrous (non-crystalline) character of tungsten made it an ideal reproducing point. Large quantities were made by a colorful process developed by Victor. On one floor of the metal manufacturing plant, there was a forest of screw machines in orderly arrangement. A thin metal rod was fed in one side-a spool of Tungstone wire on the other. The automatic head drilled the rod, inserted the wire, crimped it, grooved the shank to one of three different depths to produce either loud, medium or soft tone volume, cut the rod, and dropped a perfect stylus in the bin. Victor was never very enthusiastic about Fibre, or Thorn needles, although they were used, to some extent, by people who were afraid of hurting their prized records. The company's volume in steel needles and Tungstone Styli ran around \$1,000,000 or more for several years.

Printing Department

Of the \$52,654,000 which Victor spent for advertising from 1901 to 1929, \$17,814,000, or more than one-third, was spent for "sales promotion" or for record catalogs and supplements, instrument catalogs, and other printed matter. Much of this material was printed, two colors or more at a time, on very large, high-speed presses installed for this particular use by A. H. Sickler & Company (later known as The Franklin Printing Company), which was owned principally by Mr. Charles Brown of Moorestown. However, there was a great deal of printing (less elaborate advertising material, notices, office forms, etc.) which the company could print more cheaply than it could buy. From the earliest days, the company had had its own printing facilities for the preparation of record labels. These were located first at 117 Federal Street, then in the old Locke Building at Delaware & Cooper, and finally in Building #5 from about 1916 until the early 1930's when it was sold to the Advertising Printing Company, who moved it to the River Road near Building #53. Victor men will remember Charles Durgess, Oscar Hunt, and Van Hess as having been active in this phase of the company's business.

Victor Traveling Staff

Victor normally maintained a staff of twenty to thirty men in the field. They were not salesmen in the ordinary sense, although from time to time they would take orders for

accessories and, subject to the distributor's approval, orders for major products for the distributor's accounts. (p. 75)

The function of these men, glamorized at banquets and the like as "Ambassadors of Trade," was to get the best possible representation from dealers who, in those days, were officially recognized by Victor. Specifically, their function was to help the dealer in any way they could to increase his volume.

In cases where dealers were not giving satisfactory representation and gave no evidence of being interested in making the required effort, the situation would be called to the distributor's attention with suitable recommendations. A considerable number of the men in this group became distributors or the active manager of a distributing organization.

Orders, Shipments, Allocations

In 1917, the company's Order Department serviced orders from the distributor for instruments, records, and spare parts. It placed orders on the plants for instruments and parts. Another group was responsible for the more flexible orders on the Record Pressing Plant. The Order Department also handled complaints. Starting in the early "20's" records were also cleared by long hand.

One principal order was placed on the plant for instruments to cover the Fall season. This order was usually placed around the fourth of July-the low point in the seasonal cycle. This was thought to account for the fact that there was only one year in the company's history when there wasn't a shortage extending, in some cases, from a few models to the entire line. However, in view of the way the volume increased year after year, this point has, perhaps, been over-stressed.

Until 1921, the instrument lines which were introduced each year consisted almost entirely of slight changes in design. However, the trade was as sensitive to obsolescence as if the models had been completely changed.

Shipment of the new line usually started in July or August, but sometimes individual items would be delayed. Distributors would place bulk orders for much more than they could hope to receive, and shipments would be pro-rated. There was no trouble getting orders for a new line.

Until 1918 or 1919, shipments to each distributor would be made on the department manager's estimate of market requirements. From mid September to the middle of December. there would scarcely be a day when there wasn't at least three or four, and sometimes as many as ten or fifteen, distributors in Camden pleading for larger shipments. These men would see everybody who would see them, from the 7th floor down. There was a receptionist on nearly every floor of Building #2. This not only took an enormous toll of time during the day, but it was standard practice for active members of the department to take the customers to dinner and the theater. (p. 76)

Starting about 1919, a plan was adopted to base a distributor's shipments, during the active last three or four months of the year, on his performance during the first eight or nine. This was on the theory, of course, that if a distributor demonstrated that his own and his dealer's organization could sell say 1% of the factory's output in an open market, there was no equity in reducing this during the Fall in order to increase shipments to other distributors who were able to do some fast talking. The plan was accepted as fair and equitable by all distributors except a few "fast talkers" and was continued almost without change for many years. The number of callers was greatly reduced and one receptionist served the building.

In a very few cases, a distributor's rating was increased arbitrarily for justified reasons. But in no case, so far as is known, did this stand up after the end of the active season when the distributor was back on his own. The plan of allocations described applied only to shipments during shortages. Every effort was made by quotas. etc., based on population. spendable income, etc., to encourage distributors to improve their rating during the Spring and other times when merchandise was available.

It was a long-time company policy to estimate each distributor's share of production right up to Christmas. This meant that the shipping schedules, which were regularly and carefully timed for approximately simultaneous delivery across the country, had to be stepped up some weeks before Christmas to distant points with nearby points getting cut proportionately. As the date of the last pre-Christmas shipments were made, quantities would be stepped up, accordingly, to the nearby points.

In the days when all shipments were made from Camden, this would mean that quantities going to the big Eastern markets would be heavy in the days just before Christmas. On more than one occasion, a train of 10 or more cars was shipped to New York as late as 10 or 11 o'clock on Christmas Eve with company representatives riding the train to expedite its clearance across the Hudson for delivery to waiting consumers on Christmas day.

Camden Plant Expansion

The Camden plant was a gradual development spread over many years. However, about half of the entire investment was concentrated in the five year period from 1912 to 1917. During this period, Buildings #1 and #2 were completed as was a section of #18, and three sections of #17. Buildings #5, #6, and #7 were enlarged and the grinding plant, bulk head, and other wharf equipment for the economical storage and handling of coal, was completed as was the dry kiln which, at the time, was one of the largest and most efficient in the country.

Building #10 was not completed until 1923, but it was a notable addition to the plant. Built on filled ground, supported by innumerable concrete piles, its erection was carefully (p. 77) watched by the Bureau of Standards in Washington which was very complimentary in its conclusions. The original intent was that the building would ultimately be used entirely for record production. The cross-flow of air was designed to eliminate the excessive heat of the old pressing plant in Building #4. A prominent feature of Building #10 was the escalator arrangement and the speed with which the building could be emptied.

Building #2 was built in the early days of air conditioning. The original plan called for sealed-in windows. Since the air conditioning system proved inadequate, it is fortunate that it was subsequently decided to play it safe.

On several occasions, the company tried to buy the Esterbrook property in the interest of integrating the plant, but negotiations always fell through because of the increasing value at which the Esterbrook property was held.

Building #53 was erected as a warehouse, although during World War I it was used for the production of war material. Storage space was always at a premium. There were times when shellac, record scrap, etc., was stored in open fields under tarpaulins, and finished instruments, which distributors did not take as anticipated, were stored among machinery in inactive parts of the factory and in box cars held on the company's sidings under demurrage.

The various buildings in the plant were laid out in the interest of economical production. The company did not hesitate to make an important capital expenditure (as when Building #3 was torn down and Building #8 erected) if it could be demonstrated that a justifiable economy would follow.

Feature Records and Record Specialties

Over the company's history, many records have been issued which had great dramatic impact. Perhaps the first record of this kind was the duet from "Forza del Destino," sung by Caruso and Scotti. It was issued in May of 1906 and sold, single-faced, for \$4.00. The next such recording was probably the quartet from "Rigoletto," recorded by Caruso, Abbott, Homer, and Scotti. This was issued in the Spring of 1907 and sold for \$6.00. Next in line, would perhaps have been the Sextet from "Lucia," recorded by Caruso, Sembrich, Scotti, Journet, Severina and Doddi. It was released about a year later and sold for \$7.00. The great Miserere scene from "II Trovatore," by Caruso and Alda with the Metropolitan Opera Chorus was announced in 1910 and listed at \$4.00.

In 1918, the company introduced recordings by both the Boston and Philadelphia Symphony Orchestras, and there were many other outstanding records by organizations and individual artists. (p. 78)

Then there was a very much larger group of recordings which, while perhaps less spectacular at the start, were an important part of Victor's record volume and enjoyed excellent sales year after year. They, with other similar records by these and other artists, were "standard" selections and were the nucleus of many record collections of that period.

There were a lot of them but the following are, perhaps, the most notable:

Caruso-"O Sole Mio" Elman-"Souvenir" Lauder-"Roamin' In The Gloamin'" Gluck-"Carry Me Back To Old Virginny" Rachmaninoff-"Prelude In C Sharp Minor" Kreisler-"Liebesleid" Gluck and Zimbalist-"Fiddle & 1" Homer-Gluck-"Whispering Hope" McCormack-"Mother Machree" Heifetz-"Ave Maria"

In addition to records having entertainment or inspirational value, the company issued a number of specialties of a broad educational character. For instance, the "Oscar Saenger Course of Vocal Training" consisted of ten double-faced, 12-inch records with a book of instructions arranged in sets for each type of voice-bass, baritone, tenor, mezzo-soprano and soprano-in an attractive carrying case with lock and key. Each course sold at a list price of \$25.00.

Then, during World War I, records were issued with accompanying text under the title, "First Aid French" to enable men going abroad to get some of the inflection of the French language.

Over a long period of time, the Educational Department issued a set of records which reproduced the various instruments of the orchestra. While they were primarily for the use of students, they would help anyone to a fuller enjoyment of instrumental music. In addition, there were other records for studying wireless, etc., and, in a somewhat different field, for setting up exercises, weight control, etc.

"Free Course in Practical Salesmanship"

In 1919, the company set up a sales school in Camden under F. S. Delano. It was generally known as the "Red Seal School" and the main purpose was to promote the sale of Red Seal records, but all other phases of the company's business were also covered.

Dealers and distributors were invited to sign up as many of their people as they wanted for two weeks' intensive instruction. There was no charge for the tuition. Transportation and living costs were paid by the dealers and distributors. (p. 79)

From first to last, there were 40 or 50 such classes averaging about 25 students each. At the end of the course, each student was given a diploma, which, incidentally, was usually highly prized. Each class was given a name and all classes vied with each other after "graduation" to establish sales records.

The work followed, to some extent, the activities of a traveling unit which the company had sent to a number of cities a year or two earlier, but it was more comprehensive. The work of the traveling school was covered in three or four days.

During the two weeks the students were in Camden, they got a thorough workout on the product-particularly Red Seal records. However, the basic elements of salesmanship, store management, ordering, etc., were also covered. Stress was laid on sizing up the customer with suggestions as to how best to determine probable musical tastes, etc. At the time these classes were held, the company had an "ideal store" set up on the first floor of Building #2. It was known as the "Idea Shop" and was equipped with the best equipment which the company had developed or sponsored to improve retail sales. The operation of the school was altogether successful. If there was any negative, it was that, in a few cases, dealers were annoyed by requests from "trainees" for more pay on the grounds that the school had qualified them for better jobs!

World War I

Victor's established policy was one of active and cordial cooperation with the government. It responded promptly to requests for all sorts of cooperation. It helped the 1,200 Victor men who joined the armed forces, did what it could to build their morale, and assured them that their jobs would be waiting for them when they got back.

The company also made aircraft parts and assemblies, rifle stocks and parts, shell parts and assemblies, detonator cases, and other war materials.

In 1918, the fuel administration curtailed all talking machine production to 70% of 1917. This was reduced later to 40%. In actual practice, instrument production was reduced for a while to 10% of normal. Following the end of the war, it took about four months to clear the plants of war work. Full capacity was not reached until October of 1919. In addition to the general excise tax of 3%, the talking machine industry was called upon to pay an extra excise tax of 5% because music was rated as a semi-luxury. In 1920, Victor's taxes amounted to nearly \$4,000,000. The company issued the following notice to its key people: "The new burden of taxation must be offset by efficiency in manufacture and our fundamental business policy must be to market a large volume of goods of the highest quality at a small margin of profit."

During the war, records were in extraordinary demand. Distributors not only brought great pressure on the company for current popular numbers, but several of them sent (p. 80) scouts around the country to buy up anything which would play. This included, quite literally, anything which would play. At the end of the war, when production was picking up, distributors had back orders on the company for about 50,000,000 records. Feeling

certain that this was heavily inflated, the company gave them an opportunity to revise. The total was cut to 12,000,000. Later, on a second opportunity, it was reduced to 5,000,000.

Conventions

For many years, the company met with the distributors in Atlantic City, or other convention spots, during the Summer, to discuss plans for Fall and to socialize. A feature of these conventions was entertainment by the company's artists-both Red Seal and Black Label. In 1920, for instance, the group was entertained one evening by Caruso, Rachmaninoff, Kindler, and the Victor Orchestra (the Philadelphia Orchestra under Pasternack), and on another evening by Henry Burr, Billy Murray, Peerless Quartet, Frank Banta, Monroe Silver, Fred Van Eps, and Margaret Young. While this was a lavish display of talent for a routine business meeting, the customers were, in fact, listening to samples of the product they had to sell. There was always a cheerful carnival air at these conventions with enough of the serious to send the customers away with a feeling that they were part of a top flight activity.

Distributor Association

In 1906, Victor's Eastern wholesalers organized the Eastern Talking Machine Jobbers Association. A year or two later, this became The National Association of Talking Machine Jobbers. Officers and directors were elected. The officers met with Victor's officers from time to time to acquaint the company with developments in the field, to make organized requests, express appreciation, and so forth. It also served as a nucleus of social activity at the conventions. For the most part, its activities were innocuous. However. there were times when, from the company's point of view, it seemed to be developing into a problem.

Custom Department

At least twice during Victor's history, efforts were made to develop a custom-made department to serve the carriage trade. At one time, the old Potter Express Building, across from the Esterbrook plant where Building #3 stands now, was entirely devoted to this activity under W. B. Stevenson. Some very handsome cabinets in traditional design were developed, but nothing came of it. The cost of the fine cabinets, made in small quantities, resulted in a total price for the instrument which was higher than prospective customers were willing to pay. (p. 81)


We build Victrolas to order

To those who desire a Victrola of special design to harmonize with the furnishings of any particular room, we extend an invitation to make use of the services of the Victor Art Shop. We are prepared to furnish an instrument of Victor quality embodying your own individual requirements. Let us know your needs and we will gladly submit sketches and upon approval complete for you an instrument conforming to the exacting Victor standards. Consult any dealer in Victor products or write to us direct.



Advertisement featuring Victor's custom models-1924.

Columbia Financing

Sometime after Mr. Easton died in 1915, a New York financier bought control of the Columbia Company. He increased the capitalization from 150,000 shares to 1,500,000 shares, no par. These shares were listed on the New York stock exchange and were

quickly run up to 65. At this point, the issue was at a value of nearly \$100,000,000, whereas the tangible assets did not have a value of one-third this amount.

In 1921, the stock dropped to \$5 a share. The banks who had loaned the company \$15,000,000, kept it going for 3 years, but, in 1923, receivers were appointed. The stock was taken from the exchange and the end had arrived. The company was later resumed under new ownership.

Distributor Contacts

The company regarded its distributors and their salesmen as the company's own representatives on the "firing line." While it was made clear to company personnel that distributors must be treated cordially and fairly, it was also made clear that distributor and factory interests were not always identical and that there were points of conflicting interest which were not always discussed. There was a particular ban on discussing one distributor's affairs with another. There was also an effort to brief those who came in contact with distributors on the company's position on controversial questions so that everyone would tell the same story. This resulted from cases where distributors, talking with several factory men, were able to piece together more of a story than any of them had intended.

Committee System

For many years, problems requiring special decisions were cleared through a system of committees. They were set up in the form of a pyramid. The base of the pyramid was made up of operating or production groups (primary functions). Each would be headed by a department manager and each would have established authority. Decisions beyond the scope of the primary committee would be sent up, with recommendations, to a reviewing committee consisting of the chairmen of the primary committees headed by a director. These secondary committees also had delegated authority. Issues beyond their scope would be sent up, with recommendations, to an executive management committee made up of directors which, in turn, passed along issues of top importance to the Board. Minutes were taken by a staff of trained male secretaries. Under the plan, it usually took about a week for clearance. The plan had the advantage of getting everything which required attention "on the record" and of securing a general airing. In practice, discussions, under some chairmen, were continued too long and there was a feeling, at times, that competition which could get a quick answer from a top executive had an advantage. (p. 83)

Equalized Freight

For many years, shipments were made "f.o.b. factory with the lowest published carload rate allowed to destination." During most of its life, the plan was quite satisfactory from the standpoint of the large distributors who got all or most of his shipments in full cars. Suggested list prices could be advertised nationally, distant distributors were at no disadvantage (profit-wise) against those near the plant, the problem of local manufacturing in distant markets was covered, and so on. The plan was less favorable to small and medium sized distributors, many or most of whose shipments went LCL. In some cases, the differential was the measure of profit or loss on the distributor's activity for the year.

In operation, the cost of freight was included in the cost of merchandise. The loading was in the order of 2% which was adjusted from time to time to bring the cumulative cost of freight in line with the actual cost on a non-profit basis. If the loading was larger than needed, it was reduced (or vice versa).

The plan was discontinued by RCA-Victor in 1933 because large distributors near the company's only domestic instrument plant in Camden (where competition was especially hot) were in the position of carrying the load for distributors in parts of the country where the heat wasn't so great. The loading was taken out of the cost, the country was divided into three zones, and suggested list prices were set up on the basis of the relative cost of freight. Numerous difficulties developed-not the least of which being inconsistencies in list in fringe areas close to the edge of the zones.

Lunch Club

From the very early days, the company maintained a lunch club which was, at one time. a residence on Cooper Street where part of Building #2 stands. Later, a building was erected just north of Building #2 on Front Street. It was built along the lines of a metropolitan club with rooms at the left of the entry for the directors and guests, and at the right for company executives (major and minor). Upstairs was a larger room for all other employees who wanted to use it. Many, in those days, carried their lunch and were not interested.

Cabinet Finishes

Victor cabinets were always finished with great care. During the years when the surface was varnished, the operation was very thorough and very involved. Under Jim Thompson's skillful supervision, the product had an international reputation for top quality. The process varied from time to time with the price class of the instrument, but, in general, took from 18 to 24 days.

chapter eight 1921-1930

In September of 1917, after the cancellation of the License System, R. H. Macy & Company sued Victor and several Victor distributors for damages. counsel fees, and costs to the amount of \$570,000, claiming violation of the Sherman Anti-Trust Law.

This suit was based on the fact that in April of 1914. Macy had applied for permission to sell shop-worn records at less than the specified retail prices. This request was denied, presumably for fear that blanket authority would get out of hand and would give Macy with their 6% "cash discount" policy, an advantage over all other dealers.

Macy ignored Victor's wishes and proceeded to buy where they could. During 1915 and 1916 particularly, they did a large volume, and, because of their large volume, had little difficulty in finding dealers who would split the discount. Victor tried several times, without success, to get Macy to take out a dealer's license. The effort to keep the merchandise in authorized channels was not successful.

The activity gave Macy such a competitive advantage over licensed dealers that the entire Victor system, designed to produce equitable competitive conditions between all dealers and distributors, was in danger of breaking down at a time when the system was believed to be on a sound legal basis. In March of 1921, nearly four years after the license system had been discontinued, the court held that the Anti-Trust Law had been violated and awarded Macy damages totaling \$184,836.68.

Wood Carving

Victor depended, to a considerable extent, on wood carving for decorative effect. The extent of the carvings, in general, corresponded to the price of the instrument. Much of this carving was done by machine, but there was a time (around 1920) when the company had the reputation of having the finest staff of wood carvers in the world. There were about 125 men in this group. On the lower priced instruments, their activity might consist of simply an occasional "under-cut" to supplement the machines, whereas on the higher priced instruments, the carving would be carried out in elaborate and attractive detail.

Double-Faced Red Seal Records

Although Black Label records had been doubled since 1908, Red Seal numbers were not doubled until 1923. The delay was due, of course, to the difficulty of working out (p. 85) details with the artists. The complications were finally ironed out, and after a record exchange which enabled the trade to get its inventories in order, the doubled records were announced on a price basis which enabled the public to buy two selections for a small increase over the previous price of one.

Advances Against Royalties

Being in the position of having all, or nearly all, of the world's big artists could become a serious problem, as the company found out in the early "20's." This problem developed not from the size of royalty itself, but from the advance which it became routine to make against the royalty and which, in many cases, was established when the artist's royalties were running high. Times came when the royalties earned by some of the biggest artists did not nearly cover the advance. In the meantime, competition was quite willing to pay a bonus for the prestige value of a name and, consequently, Victor was in a hazardous

position. This problem was still an active issue when the recession hit the industry in the Fall of 1924.

The Debacle of 1924

In 1921 and 1922, radio receivers were evolving from the wound-coil, cat's-whiskers stage to manufactured parts, to complete sets. It was becoming increasingly evident that here was something for the talking machine business to be concerned about, although Victor's volumes in 1920, 1921, 1922, and 1923 were larger than in any previous years.

Victor decided that it had better be prepared to get in the business and, consequently, made a determined effort to develop a radio chassis which would be good enough to carry the trade mark. This continued for two or three years.

In 1924, RCA introduced an impressive line of radio receivers which included Radiola III, the Super VIII, the Regenoflex, the Semi-Portable Superheterodyne. and other models. Their introduction was supported by a particularly effective year-long advertising campaign.

The Victor organization was not as alert as it should have been to the significance of this development, nor did it appreciate the fact that it had been trading on momentum and was, in fact, suffering from a lack of aggressive research and development work in its own field. There were straws (like the public's clamor for better bass response) which should have revealed this, but which the company by-passed for want of a satisfactory solution. The company was complacent-lulled by excellent current volume.

In 1924, business followed the normal seasonal cycle until September when, for the first time in Victor's history, sales to the public failed to materialize as anticipated. By this time, materials had been fabricated to the point where the cost of completion would be (p. 86) relatively small and the management decided that it would be better to liquidate complete instruments than materials in process. Sales were subnormal all Fall, and even at Christmas there were heavy inventories everywhere-dealer, distributor, factory. For the factory, it was the first time in the company's history.

During the first six months of 1925, the company made a concentrated constructive effort to sell its own inventory as well as that of the dealers and distributors. Instrument manufacture was stopped cold and overhead was rolling up at a rate of several hundred thousand dollars a month.

A high-powered sales campaign was set up under the slogan and symbol "Do YOU have a Victrola" superimposed on a question mark. Campaigns were set up in 10 or 12 cities-St. Louis, Syracuse, Baltimore, Washington, Detroit and Cleveland, to mention a few. There was a carefully developed program with dealer meetings, cooperative advertising, house to house selling, banners, point-of-sale material, etc. The campaign was organized in each city with a manager. Specific duties were assigned and everyone in Camden, in any way qualified, was sent into the field. Lloyd Egner, Manager of the Traveling Department, was in charge with Otto May and Ralph Cron his principal assistants.

The effort wasn't without success. Sales added up to about \$1,000,000. However, this was not nearly enough. The personnel hadn't been adequate to do the job and there was still several million dollars in inventory to be sold. So, around the first of June, the management decided that drastic action must be taken.

The first step was to appoint Roy A. Forbes as Sales Manager. Mr. Forbes had been in the retail end of the business for many years. He had started with Landay, made a further

name for himself with McCreery in New York, and was Manager of Wanamaker's Talking Machine Department in Philadelphia just before he came to Camden.

At this time, the company was being actively managed by a committee consisting of Mr. Shoemaker, Mr. Staats, and Mr. Fenimore Johnson. Eldridge Johnson was not well and had, as a matter of fact, been relatively inactive in the company's management since 1917. A good part of the intervening time, his participation in the company's affairs had been by "remote control."

By the late Spring or early Summer of 1925, the men at the top knew that greatly improved sound reproduction was in sight. Its own scientists, working with Westinghouse, had well developed experiments in the field of matched impedances (exponential amplification). The Bell Lab., working on telephone improvements, had developed the same principle with the specific application of the re-entrant horn. They had also developed electric recording. It was clear that between radio on the one side. and greatly improved sound reproduction on the other, drastic action of some sort was unavoidable. (p. 87)

One of the first steps taken by Mr. Forbes was, accordingly, the unpleasant necessity of liquidating the company's inventory. This was done by offering it to the company's distributors at fifty cents on the dollar. This action was unpleasant not only because of the loss to the company, but because it was the first time in the company's history that dealers and distributors had been asked to take inventory loss. The company was not in a position to absorb the mark-down.

The offering, made at the worst time in the seasonal cycle, was a spectacular success. Dealers and distributors sold what they had and bought more to average down. The way was now clear for Victor to do whatever might next be decided upon. After much deliberation several important decisions were made.

1. Victor signed up with RCA for radio chassis and apparatus for the electric reproduction of records.

2. Victor signed up with Western Electric for the re-entrant horn and for electric recording. There is a story to the effect that Victor was about to sign with Western Electric for the exclusive right to electric recording, as well as the re-entrant horn. Frank Capps found out about it through a laboratory leak and told Louis Sterling (Columbia's long-time strong man in England) who burned up the wires, got the negotiations held up until he could come over, and finally persuaded Western Electric to also license Columbia.

3. Victor perfected the first automatic record changer.

It will be understood that these steps were taken at a time when there was plenty of doubt among businessmen as to whether any kind of record business could survive in the face of radio, and at a time when Victor's fortunes were at a low ebb.

In the late Summer of 1925, Victor switched their advertising account from F. Wallis Armstrong to N. W. Ayer & Co. to provide a complete change of pace in the critical situation which existed at that time. During October, Victor took two black & white double-pages, two more in color, a fourth cover and a color page in the Saturday Evening Post. Most of this was devoted to announcing that the company would introduce spectacular new merchandise around the first of November.

In the meantime, the management had ordered a vast quantity of merchandise, not only from its own plants, but from RCA and others. Among the items ordered were 10,000 of the Credenza Orthophonic-Victrola, a manual, hand wound, acoustic talking machine with

the re-entrant horn, which was to sell for a list price of \$300 (\$335 with electric motor). This, in itself, took considerable courage.

Shortly before the first of November, engraved invitations were sent to important people in music, politics, publishing, and other circles, inviting them to a pre-showing of electric recording on the Orthophonic instrument. The resulting word-of-mouth and other publicity was tremendous. (p. 88)

Finally, the national "Opening Day" came, with newspaper advertising, street banners, store displays, and great "hoopla." The stores were jammed and complimentary comments were to be heard everywhere. This lead was followed up with demonstrations at Rotary, Lions, Kiwanis and similar clubs, church activities, sewing circles, dealers' stores everywhere, and it was even billed as a vaudeville act. Sales of the product were heavy from the start. 67,000 units of this one model (Fig. 25) were sold in about a year. During 1925, the total of 19 models was introduced. This was followed by 24 more in 1926. List prices ranged from \$17.50 to \$1,000.

The nine records listed below, having popular appeal and calculated to bring out the features of electric recording and the Orthophonic Victrola talking machine, were selected for use whenever or wherever the product was demonstrated:

Pal of My Cradle Days-Whitman I Miss My Swiss-Happiness Boys Valse in C Sharp Minor-Cortot Aloha Oe-Kreisler Rose Marie-Mixed Vocal Soldiers Chorus-Victor Male Chorus Don't Bring Lulu-Jan Garber Tripoli-Creatore March Slav-Philadelphia Orchestra

Annotations were supplied with suggestions as to how the records could be used to best advantage. In addition to putting over the product, this resulted, as might be expected, in a substantial sale for each of the records.

Some of the instruments, particularly the higher priced radio-combinations which had been expected in the Fall of 1925, did not materialize until late in the first quarter of 1926. At the time, there was considerable anxiety that they might not sell so late in the season, but they did. However, production was stopped during the Summer months to avoid overproduction which might dampen enthusiasm in the Fall.

At radical variance with the company's earlier policy, the cabinet styling used at this time had the definite feel of traditional furniture. The designing was done by Miss Virginia Hamill of New York. In the main, the instruments were well liked, although some structural problems were encountered and they were costly.

By the end of 1926, the working loss of about \$6,500,000 suffered during 1925 had been fully covered. It had been demonstrated that radio was not going to replace recorded music, and that Victor had recovered the position which was being lost in the Fall of 1924. (p. 89)



Model 8-30. The public invested approximately \$20,000,000 on this one model in slightly less than a year.

The "Orthophonic Victrola"-The "Electrola"-The "Panatrope"

Victor was in trouble in the Spring of 1925, as was the rest of the phonograph industry. For the first time in peace-time history, there had been no upsurge of sales during the previous Fall. The public was buying radio receivers instead of phonographs. RCA had its first full-line of seven models and had been doing an outstanding job of advertising.

Victor's current sales in the Winter of 1924-25 were not good enough to absorb outstanding inventories, let alone provide adequate production. How Camden worked out

of this problem is another story. Suffice it here to say that an infusion of new products was urgently needed. It was, accordingly, a real break that the Bell Laboratories should have come up with electric recording, logarithmetic [sic] acoustical reproduction, and electrically amplified reproduction just at this time.

At this point, it might be explained that the Brunswick Balke Collender Company had been giving Victor formidable competition for several years. This company had gotten into the business shortly after the end of the First World War to liquidate a lot of cabinets which had been cancelled by Edison. As a result of the war-time shortage, their effort was very successful, and they decided to follow it up. They soon found that there was a strong latent demand for cabinets with better furniture values-with the phonograph equipment concealed. To meet this demand, they developed a series of "Flat-Top" consoles.

Victor resisted this trend on the ground that the "Victrola," like a piano, was a definite musical instrument entitled to its own identity, and that the inevitable decorations on the lid of a "Flat-Top" would hurt the record business. It seemed like a sound position at the time, but the demand became so insistent that, in the end, Victor had to yield.

Victor's old rival, the Columbia Company, got into severe financial difficulties in 1921. A receiver was appointed in 1923 and the company was reorganized in 1924. Columbia's genealogy after this was as follows:

1. In 1925, the company was sold to Louis Sterling's Columbia Gramophone Company of Great Britain.

2. Sterling then sold it to the Grigsby Grunow Company.

3. In 1934, Grigsby Grunow sold it at a receiver's sale to the American Broadcasting Company.

4. ABC sold it to the Columbia Broadcasting System in 1938.

The Brunswick Company had also found that the public wanted better bass response and tried to provide it. Here again, they were commercially successful, although the results were scientifically inadequate. From Victor's point of view, the reproduction was "barrelly" or "tubby" and they would have no part of it. Victor recognized the need for better bass but didn't know how to provide it and refused to compromise. (p. 91)

The date which concerns us here is 1925, for it was in that year that Mr. Sterling learned that Victor was about to sign an exclusive contract with the Western Electric Company for electric recording. He protested so effectively that he was included in the transaction. Presumably, he did this before the English Company bought the American Company, but this is not definitely known. The Columbia electric records were known as "Vivatonal." They also introduced an improved instrument which was not commercially important. It is of interest, parenthetically, that the American Record Company bought rights to Brunswick and other records.

In 1925, Brunswick was left out in the cold as far as the Bell Patents were concerned. They met this situation with a development which they called "Light Ray" electric recording. It was, in fact, simply a type of microphone. It didn't live up to its billing and did not become a troublesome competitive factor. So much for electric recording. The instrument situation was another story. In the Spring of 1925, electric amplification was not quite ready for the market. The magnetic speaker was further advanced than the dynamic, but the logarithmic acoustical horn, using the principle of matched impedances, was further advanced than the magnetic.

At this time, Victor was facing a loss of about a half million dollars a month and didn't feel that it could hold, even briefly, for product development. So it signed up for all three-electrical amplification with both magnetic and dynamic speakers, and the exponential acoustical system. It also signed up for radio chassis to be used in radio-phonograph combinations. As far as the phonograph was concerned, major effort was put back of the acoustical system. The Brunswick Company, on the other hand, elected to put emphasis back of electric amplification.

On August 13, 1925, The New York Times carried a full column-plus story to the effect that the Brunswick Company would privately demonstrate a new instrument later that week, that it would be known as the "Panatrope," and that there would be a demonstration in Carnegie Hall in October. The same article announced a 40-minute record with 500 grooves to the inch, and with frequencies of 100 to 7 or 8,000. The first recording was to be issued in October, but so far as is known, it never was. The record was to have been called the "Pallatrome."

On August 15th, there was a news story in the "Talking Machine World" which said that the Panatrope would be demonstrated to the Trade around September 15th. An advertisement on September 15th spoke of the instrument as having "magnetic" reproduction, although Dr. Kellogg, who made important contributions to the dynamic speaker, does not think that they ever made extensive commercial use of the magnetic type. (p. 92)

An advertisement in the October 15th issue of The Talking Machine World said that they were getting ready to feature the Panatrope and that the rest of the Brunswick line would be dropped.

On November 15th, two weeks after the Orthophonic Victrola had been introduced, they advertised that the Panatrope was the first, and only, purely electric reproducer.

On February 15, 1926, their monthly advertisement in the "Talking Machine World" said that more than 1,000,000 people had heard the Panatrope in the past sixty days.

On March 15th, they increased the total to 2,000,000. They also featured "amazing music" by Brunswick light-ray recording.

On April 15th, they announced three new phonographs (evidently reinstated to meet competition with Victor's low priced Orthophonic models).

The first Brunswick advertisement in the Saturday Evening Post did not appear until September 11, 1926. It was a double-page spread and featured Brunswick Records.

On October 9, 1926, their advertisement in the Post said that the Panatrope had been demonstrated in New York just before Christmas, 1925, and had been heard by 4,000.000.

In the meantime, during the Spring of 1925, Victor had put an intensive sales drive back of the old line Victrolas in key cities using the slogan, "Have you a Victrola?" About \$1,000,000 worth of sets were sold through dealers on this drive, but this wasn't nearly enough in view of the developments in sight for Fall. So, in the early Summer the public

was given the opportunity to buy the long time staple Victrola at fifty cents on the dollar. Discounts on the factory stocks enabled distributors and dealers an opportunity to equalize losses they might be called on to take on their own stocks. This sale was a spectacular success.

Victor spent the early Fall of 1925 getting ready for a grand opening of the Orthophonic Victrola, scheduled for early November. There was an elaborate build-up developed by Victor's Sales Manager, Ray Forbes, the N. W. Ayer advertising agency, and Victor's Directors.

Four new Orthophonic (acoustical) models were announced to distributors on September 10th. A sample of the top model in the line was shipped to each distributor with 14 records selected to dramatize the new reproduction. (p. 93)

NEWS

of interest to every man and woman in America

NEXT MONDAY, November 2nd

THE most astonishing demonstration ever held will be given throughout the country by dealers in Victor products. It will begin at 9 A. M. and continue throughout the day It will introduce the most important contribution to music since the invention, 30 years ago, of the Victor Talking Machine

Don't miss it! It will be one of the most amazing demonstrations you have ever heard. It will establish new standards of comparison and change your whole present viewpoint on the subject of music in the home.

The more critical your attitude toward music, the more astounded you will be. You will heat a range of tone, a perfection of tone, a richness and fullness in every note that will move you to the edge of your chair with an eagerness hitherto unknown.

A few people have heard this new instrument, and to say that they have been amazed, is but a meager description. Fritz Kreisler, Ernestine Schumann-Heink and John Philip Sousa have listened and marveled.

November and has been set aside as Victor Day—as the day on which this new instrument will be presented to the public. All classes of music will be played and sung by Victor's own incomparable artists Instrumental solos. Vocal selections. Choruses Bands. Dance music. In sufficient variety to disclose the amazing versatility of the instrument.

No matter what you plan to do next Monday, do not miss their demonstration. You will never forget it.

Go to the nearest dealer in Victor products any time after nine o'clock during the day of November and. Even though you may be away from home, there will be a demonstration nearby which you can attend. In every city, in every state in the United States, this miraculous instrument will amaze and capture all who hear it.

Victor Day—November 2, 1925—is destined to be a day that will stand out in the history of music.

The New Orthophonic Witter Day Monday, November 2nd Victor Talking Machine Company, Camden, New Jersey

The above is a good example of the Company's use of curiosity and suspense in announcing the Orthophonic Victrola.

There was a teaser advertisement in seven October magazines featuring "Opening Day." Toward the end of October, this was carried nationally into the newspapers (Fig. 26) There were advance shows to influential people a few days before opening day. There were store and street banners, and window displays designed to create curiosity. Dealer's stores all over the country were crowded on opening day. There were excellent news articles and enthusiastic reactions. This was followed with demonstrations to groups of people everywhere: fraternal organizations, churches, even Vaudeville acts, and, of course, advertising was continued in the magazines and newspapers. The product was a sell-out from the start.

It was an exciting time in Camden, greatly emphasized by the bad time the company had just come through. Incidentally, the ground work had been laid for 1926 which was so good that the loss of 1925 was fully covered and more.

Camden knew that Brunswick had something, but things were breaking so favorably for the acoustic product that they weren't worrying too much that deliveries of equipment for electric amplification were not coming through as expected.

On December 16th, Victor announced eight more models-two "Electrolas," four acoustical combinations, one electrical combination, and one electric-acoustical combination. Shipments were expected to start in a few days. However, the models with the magnetic speaker didn't start until February, and those with the dynamic speaker until the following September. During the next few years, Victor introduced 29 electrically amplified record reproducers. Nine sold at retail for \$900 to \$1,750, ten for \$400 to \$900, and ten for \$195.50 to \$400. The total production was 270,262 units (including about 8,000 which used the Orthophonic horns).

Summary

It has been known that the Panatrope was demonstrated to both the trade and the public before the Electrola. However, the emphasis on "demonstrations" and the number of people who had "heard" the instrument, and the fact that it apparently was not advertised to the public until October 1926, leads to the conclusion that Victor had been the first to make stock shipments.

This is supported by the fact that Victor's first shipments of Model 12-2 with the dynamic speaker were made during September 1926. This indicated that Victor got off to an even start with Brunswick.

However, there is evidence that a dealer in Denver, Colorado, had a Panatrope with a magnetic speaker during November 1926. This may, of course, have been an isolated pre-production model, but this doesn't seem probable.

Under the circumstances, until better evidence is available, any claim for priority in electrical amplification should be made with discretion, if at all. (p. 95)

The New Instrument Line

Starting in the Fall of 1925, Victor introduced a large number of new models with a wide variety of new services.

There were instruments which played records acoustically through full and modified Orthophonic horns. They were called Victrolas. There were instruments which played records electrically through an Orthophonic horn with speaker unit or with a cone. These were called Electrolas. There were radio-phonograph combinations which used the same radio chassis as Radiolas #20, #25, and #28, and later Radiolas #18 and #64 with a broad selection of record playing equipment. There were, for the first time, electrically amplified models which played records automatically through the Orthophonic horn or through a cone. These were available with or without radio. There were straight radio (only) receivers, and there were some models, like luggage-style "hand-wounds," which differed with the past only in detail.

In general, the service offered and the price range of the new products was as follows:

		EXAMPLE	LIST
.*	Full Orthophonic Acoustic reproduction. Manual Hand wound.	8-30	\$300.00
2.	Medium Orthophonic Acoustic reproduction. Manual. Hand wound.	8-12	225.00
3.	Small Orthophonic Acoustic reproduction. Manual. Hand wound.	4-3	95.00
4.	Electric Amplification through full Ortho. Horn. Manual. Electric motor.	8-60	650.00
5.	Electric Amplification through cone. Manual. Electric motor.	12-1	450.00
6.	Straight Radio (only) Receiver, using Radiola #20.	R-20	135.00
7.	Radio-Phono Combination. Full Orthophonic. Acoustic Amp. Manual. Electric motor.	9-40	1000.00
8.	Radio-Phono Combination. Medium Orthophonic. Acoustic Amp. Manual. Hand wound.	9-15	600.00
9.	Radio-Phono Combination. Small Orthophonic. Acoustic Amp. Manual. Hand wound.	7-1	350.00
10.	Radio-Phono Combination. Electric Amp. through Cone. Manual. Electric motor.	15-1	900.00
11.	Automatic Record Player. Full Orthophonic. Acoustic Amp. Electric motor.	10-50	600.00
12.	Automatic Record Player. Electric Amp. Full Orthophonic. Amp. Electric motor.	10-51	975.00
13.	Radio-Phono Combination with automatic Record Player. Electric Amp. Electric motor.	9-55	1,550.00

*Most manually operated units were also offered with induction disc electric motors at an additional cost of \$35, or with universal motors at an additional cost of \$55. (p. 96)

In addition to the types of instruments listed, the company offered an instrument for coin operation (Model CE-47), and a model with out-sized Orthophonic horn for use in large halls, theatres, out of doors, etc. Production was not large in either case.

While it was the Orthophonic instrument with acoustical reproduction which created the dramatic reaction in the Fall of 1925 and Spring of 1926, it developed later that two other introductions of the period turned out to have much greater historical value. The Orthophonic Victrola is now simply an interesting development in sound reproduction, whereas electric amplification and automatic record changers are important current products.

First Automatic Record Changer

The automatic record changer, used in Model #10-50 and other models, was introduced in March 1927, and was the very first automatic record player. Its operation as a changer was entirely satisfactory but it was a bit awkward to feed the records to the "over-head" suspension. The fact that it would only play 10 or 12-inch records separately also left something to be desired. Accordingly, the company proceeded to develop a new model. It was included in Model #10-35 introduced in November of 1928. It had a flexible arm hopper, was easy to feed, and would play 10 and 12-inch records intermixed. However, the product had a hidden mechanical imperfection of some sort and gave a lot of trouble. Victor's sales during 1927 and 1928 were among the best in the company's history.

Export

Victor's export activities may be said to have started in 1898 when Mr. Johnson made his first shipments to London. However, this consisted of supplying material for another brand. The first export shipments under Victor's trade marks were made, no doubt, through the Victor Distributing & Export Co. of New York in 1903. This company had been taken over as a wholly owned subsidiary in 1904. Victor apparently started to export from Camden in 1906. No records have been found of specific earlier shipments.

From 1906 to 1926, export activities accounted for the following totals:

		Approximate % of Company Total
Machines:	\$11,696,875	4%
	446,638 (units)	6%
Records:	\$11,786,791	5%
	22,714,138 (units)	7%

It was company policy to foster the export business. During periods of shortage, for instance, every effort would be made to cover instrument requirements as closely as possible. Even on the tightest items, they would participate to the extent of the traditional 10% even though their previous purchases were no more than half of this. Their demand was particularly strong for machines which bulked small for shipment. This accounts for the lower dollar ratio for machines as against units. This activity was supported not only in the interest of added volume, but also as a hedge against possible periods of domestic economic depression.

By the early 1920's, Dan Mitchell, the manager of the department, had developed a highly efficient and effective organization. Special records were pressed; instruments were especially protected against tropical conditions: a staff of highly trained salesmen covered the various territories; and the Camden office was expertly staffed right down to a corps of translators. They also had close affiliations with aggressive distributors in the countries where Victor had trade mark and patent coverage.

In 1921, activities in Argentina were supported by setting up the Pan American Recording Co., a wholly owned subsidiary. This was broadened from year to year by setting up other subsidiaries with varying functions, in Japan, Brazil, and Chile, and by acquiring the Canadian Company. An important interest was also acquired in the Gramophone Co. Ltd. of London.

Display Rooms

For several years, Victor maintained two elaborate showrooms with trained personnel to demonstrate the product to the public. One of these rooms was on the east side of Fifth Avenue, just below 42nd Street, and the other was on the Board Walk in Atlantic City just below the Traymore Hotel.

McCormack-Bori Radio Broadcast

On January 1, 1925, Victor broadcast a program by John McCormack and Lucrezia Bori over WEAF and thirteen other stations. Because of the artists, the event got a lot of publicity both before and after the program. It was a red-letter event in the development of radio!

At that time, Victor had no radio receiver to sell, nor did they have one in prospect. On the contrary, it had a heavy overstock of talking machines which had not been sold during the preceding Fall as anticipated. But the broadcast dramatically called attention to the vast pool of program material which was available in Victor's list of big-name artists. The broadcast also gave Victor an opportunity to sell the idea that the talking machine would not be replaced by radio but would live beside it. (p. 98)

Following the broadcast, Victor widely advertised the program under the headline, "YOU HEARD THIS PROGRAM ON THE RADIO-NOW YOU CAN HEAR IT WHENEVER YOU PLEASE ON THE VICTROLA."

Johnson Sells Control

In the Fall of 1926, Mr. Hector McNeil, representing Speyer & Co. and J & W Seligman of New York, opened negotiations for the purchase of Mr. Johnson's interest in the Victor Talking Machine Company. When the decision came to sell, it was with the stipulation that all others who wished to sell might do so on the same basis (\$115 a share). Mr. Johnson is reported to have received \$23,000,000. Those close to him received \$7,000,000, for a total of \$30,000,000. There were many who regretted the sale and had some difficulty in reconciling the decision.

It was, undoubtedly, a difficult decision to make, and there is some evidence that it was subsequently, but perhaps only temporarily, regretted. At the time it was made, there were apparently three principal considerations. First, Mr. Johnson did not feel that his health would enable him to give the hectic situation of the time the personal attention which it needed. Second, there was concern that the equity which he and his close associates had built up might crumble under the operation of inheritance taxes. Third, there was a long time urge to be relieved of the strain under which he had operated so much of the time since 1894.

The transaction between Mr. Johnson and the bankers was completed on January 6, 1927, On January 17, 1927, the stockholders approved a plan of recapitalization.

Before giving effect to the recapitalization, but after the plant had been reappraised by the James F. Baker Co., the company's capital structure stood as follows:

Capital Capital Surplus (arising from reappraisal) Surplus	\$34,618,200.00 11,738,022.00 7,525,630.78
	\$53,881,852.78
After the recapitalization it stood as follows:	
Capital Surplus	\$49,730,000.00 4,151,852.78
	\$53,881,852.78

Victor Acquired by RCA

On March 15, 1929, the Victor Company was acquired by RCA, but continued to operate with few, if any, changes in personnel or distributors for nearly two years (Victrolas were manufactured by the Victor Division of the Radio-Victor Co.). Similarly, the Radiola (p. 99) lines were distributed by the Radiola Division through Radiola distributors. The Victor plant had, in the meantime, been taken over by (General Electric and Westinghouse, Radiola's previous sources of supp1y. The new manufacturing operation. known as the Audio Vision Appliance Co., was set up to supply both the Radiola and Victor Divisions. Victor, having in mind its reputation for guality reproduction of sound, decided to rest its case on an excellent, newly developed TRF chassis. It was given the name, "Microsynchronous" and a sales campaign featuring the word was built tip around it. It was markedly successful. Victor's total instrument sales for 1929, made up principally of two radio-phonograph combinations (RE-45 and RE-75), an electrically amplified talking machine, and a straight radio set, totaled \$50,540,000 which was the largest in the company's history. This total, however, was not entirely spontaneous. Production was somewhat beyond demand and sales effort was required, even in the active Fall months, to run up the total. The chassis, however, was warmly received. Owners were generally satisfied that the reproduction was better than anything previously offered. Five or ten years later, many owners still felt that nothing had yet appeared which was as good.

Most of the 1929 line was continued well into 1930 with a new line added during the Fall of 1930. This contained a lower priced combination, RE-17 (a modification of the RE-45 with home recording added), RE-57, R-15, and R?35.

Starting late in 1930, or early in 1931, steps were taken to consolidate the Victor Division activities with the Radiola Division (which had been operating parallel) in a superheterodyne line. The company's internal and field staffs were combined under the RCA Victor Company which had taken over the Radio-Victor Co., the Audio Vision Co., and the remaining assets of the Victor Talking Machine Co. A new group of distributors. selected from those who had been serving either RCA or Victor, was set up. The organization in each territory best rated by the RCA and Victor internal staffs was given the first opportunity to buy the other. The negotiations were difficult and protracted. They were carried out under the supervision of Mr. I. E. Lambert of RCA's legal staff, and were completed April 2, 1931. The first product by the new company was the "Superette," an excellent table model at substantially lower list. It was announced February 13, 1931. First shipments were made during March, 1931, as the company's somewhat belated answer to the Gilfillian "Cathedral" model of West Coast "loft" fame and to Philco's well known "Midget." Building #3 was erected for the economical, straight-line, manufacture of Model R-7. The "Midget" took Philco, who at one time had been an important vendor of Victor's, out of the battery and battery eliminator business, and established them as radio receiver manufacturers. (p. 100)

Summary

Starting almost from scratch in the Fall of 1901, when a dollar was a dollar, the Victor Company had run up a total volume of approximately \$700,000,000 by the end of 1930. Of the total, approximately \$413,000,000 was in instruments, \$272,000.000 in records, \$15,000,000 in parts (motors, sound boxes, etc.) and sundries (needles, horns, albums, etc.). Approximately 8,130,000 complete instruments were made, all but 308,000 (3.79%) of which had turn-tables. Approximately 591,000,000 records were made.

Roughly \$52,000,000 was spent for advertising; \$34,400,000 for space; \$17,800,000 for catalogs, record supplements, sales promotion helps, etc., and \$450,000 for radio broadcasting and miscellaneous advertising expenses.

More than 30 individuals were said to have participated in Victor activities to the extent of at least a million dollars. A large number of individuals in "key" positions profited handsomely, but to a lesser extent. Around 10,000 people had good jobs.

But these figures, as impressive as they are, are not as important for RCA Victor as the fact that the company, dominating the industry for almost thirty years, played an important part in the inception and subsequent development of entertainment in the home, thus giving RCA Victor a clear title to having been the dominating factor for more than fifty years in one of the two or three most important aspects in the current American standard of living.

Nor are they as important as the good will which is still attached to the "dog" trade mark. Based on correspondence from the public, and other evidence, there are apparently a very large number of people who still remember the thrill of their first hand wound "Victrola" machine under the Christmas tree, and who still have a nostalgic interest and affection for a particular assortment of records and for the dog.

Appendix I Chronological Outline of Important Developments

- **1894** In October of 1894, E. R. Johnson became sole owner of the Scull Machine Shop at 108 N. Front Street, Camden. He regarded this as the beginning of the Victor Talking Machine Company.
- **1896** During February of 1896, E. R. Johnson saw his first Gramophone. It was hand powered. He developed a spring motor and sound box for it, and made 100 for the Berliner Gramophone Co. of Philadelphia before October 15, 1896. The horns and cabinets were vendor supplied. Orders for more followed, but the quantity was not known. The shop employed 2 to 16 men. Production was probably small since Berliner was the only customer. Berliner gave the National Gramophone Co. (Frank Seaman) an exclusive sales contract for all of the United States except for the District of Columbia (10/10/96).

During 1896, Mr. Johnson invented and demonstrated the practicability of a new recording process (Electrotyped masters from wax discs).

1897 Wm. Barry Owen, Sales Manager for the National Gramophone Co. (Berliner's Sales Agent), went to London to sell foreign rights to Berliner's patent. He was not successful at the start, but finally persuaded E. Trevor Williams to join him in a £15,000 undertaking to sell the Gramophone which Mr. Johnson was making for Berliner.

Production continued on this Gramophone for Berliner. Berliner sold Seaman. Seaman also sold London.

Little activity in record development. No record manufacturing.

1898 E. R. Johnson went to London in June. Arranged to sell London direct (motor parts and sound boxes only).

Wm. J. Nafey spent from January 1898 to September 1898 developing the recording process to the point of manufacture. He made about 25 matrixes late 1898. Electrotyped matrixes were made by Franklin Electrotype Co. of Philadelphia. Sample records were pressed by Duranoid Mfg. Co. of Newark, New Jersey. No records were sold.

There was a full page Zonophone (an infringement of the Gramophone by Frank Seaman) advertisement in *Munsey's* for October, 1898.

1899 Sold instruments to Berliner Gramophone Co. of Philadelphia. An independent company was started in Canada under Berliner's patent. Camden did not sell Canada at the start. Sold motor parts and sound boxes to London.

With Mr. Calvin Child's assistance, Mr. Johnson started to re-do the Berliner catalog during the Fall of 1898.

About 25 matrixes in 1898–200 during 1899.

(2/11/99) Mr. Royal, now of London, was prepared to set up the Gramophone Co. to use the Johnson recording process.

During 1899, Mr. Johnson made about \$40,000.

1900 February – E. R. Johnson moved from 108 to 120 N. Front St., Camden. The Gramophone Co. of London started to use the dog trade mark. April – Berliner held that Seaman had forfeited his sales contract of 10/10/96. May 5th – Seaman accepted consent decree acknowledging American Gramophone Co.'s patent. June – Berliner stopped selling to Seaman. They stopped doing business entirely. June 25th – Seaman got an injunction preventing Berliner from selling to anyone else. July – E. R. Johnson stopped shipping to Berliner. August – Leon F. Douglass joined Mr. Johnson. September — E. R. Johnson started up for himself as The Consolidated Talking Machine Co. using the dog trade mark. Soon changed to Eldridge R. Johnson. Metal plant in Camden. The office was in the Stephen Girard Bldg. in Philadelphia. Records were pressed by Duranoid, and the first sale was made under the Johnson process. December – Started to use the trade mark "Victor." (p. 103) Seaman's injunction dismissed July 6, 1901 until July 23, 1902. 1901 From October, 1900 to October, 1901, F. R. Johnson made about \$180,000 (about \$52, 000 during August and September of 1901). Victor Talking Machine Co. was incorporated 10/3/01 (organized 10/5/01). Paid \$40,000 to Frank Seaman (out-of-court settlement). Agreed to sell the Gramophone Co. up to 50% of Victor's plant capacity (They never used more than 40%). Started to press records in own plant in Camden (23 Market Street). License 1902 plan adopted for instruments. 1903 Victor bought control of the Universal Talking Machine Mfg. Co., Inc. (Zonophone) for \$135,000. Taper arm and goose neck introduced during Fall of 1903. 1904 Factory was seriously damaged by fire 4/24/04 (\$45,500 loss). Purchased Victor Dist. & Export Co. (NYC). Office moved to Commonwealth Trust Bldg., 12th & Chestnut Sts., Philadelphia. 1905 Office moved from Philadelphia to old Bldg. #3. Purchased St. Louis Talking Machine Company. Purchased The Talking Machine Co., Chicago. First factory building rebuilt after fire. 1906 Enclosed horn machine introduced. Leon Douglass retired. Louis Geissler arrived.

License System revised.

Victor bought 8,000 shares of common from Berliner (Consolidated Talking Machine Co. of America) for \$800,000.

Fifth story added to first four-story factory building.

Buildings #6 and #7 occupied—Matrix and Shipping Departments moved from Philadelphia.

1907 Offices moved to Bldg. #15 from Bldg. #3.

Recording Lab, moved to Bldg. #15 from Philadelphia.

Matrix Plant moved to Bldg. #15 from Bldg. #7.

First Cabinet Factory purchased.

Lumber yard set up at present location buildings #11 and #24.

1908 First record exchange.

Double-faced, *Black Label* records introduced.

Equipment added to Power Plant.

1909 Supreme Court sustained Berliner patent (534,543).

Patents, good will, matrixes, etc., written down from \$2,079,528.80 to \$2.00. "Old Power Plant" completed. Also #17-A.

1910 Fiscal year changed to calendar year (The company's statement for 1910 covered 15 months). License system revised.

Three floors added to #15. Recording Lab, and Matrix plant moved to two top floors. Second street section #18 completed.

1911 Copyright applied to records.

Mrs. [Frances] Clark's school activity started.

Common stock increased from \$2,000,000 to \$5,000,000. Important employees permitted to buy company stock on favorable basis.

1912 New higher dividend policy inaugurated. Active building program started.

"Zonophone" liquidated.

Berliner Patent 534,543 expired during February, 1912.

Buildings #6 & #7 enlarged. Printing Dept. which had been at 117 Federal and the Locke Bldg. (corner Delaware and Cooper—present Bldg. #3) moved to Bldg. #6. Continued until about 1933. Equipment added to Power Plant. Five floors added to #4. Building #17-B completed. (p. 104) **1913** Beneficial Association sponsored.

Group Insurance started April 15th.

Pension Plan started May 15th.

"License Royalty" plan introduced August 1st.

- Front Street section #18 completed. Six floor grinding plant completed.Wharf property completed with large storage space for coal enabling company
- 1914 What property completed with large storage space for coal enabling
- War. to buy year's supply. Best advantage water delivery.
- Record material Mfg. Bldg. completed.1915 Preferred stock called at \$140.

"License Royalty" plan sustained by Circuit Court.

#1 completed. Also #17-C.

1916 #2 and #5 completed. Also #17-D and Dry Kiln completed.

Lumber yard moved from Delaware Ave. and Cooper to State Street and River Road.

1917 Supreme Court ruled against the License Royalty plan. Victor immediately switched to conventional plan of sales. Marked all list prices "Not binding on the Trade."

Bldg. #53 (warehouse) completed—used to make war material.

War work: aircraft, shell parts and assemblies, rifle stocks and parts, detonator cases, and other war material.

- All subsidiary companies sold.1918 Production curtailed; first to 70%, then 40% of 1917.
 - Mr. Geissler resigned. War ended November, 1918.
- **1919** Special luxury tax of 5% beyond the current 3% excise tax applied to talking machine mfg. Normal production not reached until October. Company had \$200,000,000 in back orders.
- **1920** Company paid nearly \$4,000,000 in excise taxes.
- Purchased half interest in Gramophone Co. Ltd., London.Pan American Recording Co. established in Argentina.
- **1923** Double-faced, *Red Seal* records introduced.

Buildings #8 and #10 completed. 20 acres purchased in Oakland, Calif. Building completed.

1924 Over-production due to advent of mass-produced good-quality radio receivers and failure to improve Talking Machine performance.

Purchased controlling interest of the Berliner Gramophone Co. of Montreal. Name changed to Victor Talking Machine Co. of Canada, Ltd.

- **1925** Liquidation of old line. Serious financial loss. Introduction of Orthophonic Victrola, Electrola, Radio-Phonograph Combinations and Automatic Record Changers.
- **1926** Loss of previous year fully covered. Export volume 80% larger than any previous year. Control of company purchased by a banking syndicate (completed 1/6/27).
- N.Y. Talking Machine Co. and Chicago Talking Machine Co. purchased.
 Purchased additional interest in Canada. Also Southwestern Victor Distr. Co., Dallas: Calif. Victor Distr. Co., San Francisco: Northwest Victor Distr. Co., Seattle; and Victor Talking Machine Co. of Japan. Ltd.

Control of Victor passed to Speyer & Co. and J & W Seligman of New York on January 6, 1927.

- **1928** Purchased remaining balance of Canada. Also sold 32% interest in Victor Talking Machine Co. of Japan, Ltd. Purchased Baltimore Victor Distr. Co. (Baltimore, Washington, Richmond). Also Victor Talking Machine Co. of Brazil, and Victor Talking Machine Co. of Chile.
- **1929** RCA (previously served 60% by GE–40% by Westinghouse) acquired control of Victor 3/15/29. Starting 4/25/29, Victor's sales activities continued as the Victor Division of the Radio-Victor Corp. operating parallel to the "Radiola Division" with separate product lines. Both divisions purchased from the Audio Vision Appliance Co., the name tinder which General Electric and Westinghouse had reorganized the Victor plant. (p. 105)
- 1930 On January 1, 1930, the RCA Victor Company took over the Radio-Victor Co.. Inc., the Audio Vision Appliance Co., and the remaining assets of the Victor Talking Machine Co. The separate commercial departments described above, were consolidated during the first half of 1931 with a single, combined list of distributors (completed 4/2/31). The R-7 was the first RCA Victor model announced (2/13/31). RCA Victor Co., Inc. was absorbed by RCA Mfg. Co. on January 1. 1935. The RCA Mfg. Co. was absorbed on January 1, 1942 by the RCA Victor Division.

BUILDING KEY

Bldg. No.	Date Completed	Use
1	1915	Victor's Shipping Dept.
2	1915	Office Bldg.
(Old #3)	1905	Record Pressing-Office-Metal Mfg.
(Old #4)	1912	Power Plant-Records-Metal Mfg.
5	1916	Warehouse, printing dept. garage-Front and Linden
6	1906-12	Old Shipping Dept.—Warehouse- Front and Linden
7	1906-12	Old Shipping Dept.—Warehouse- Front and Linden
(Old #8)	1907	Cabinet Factory
8	1923	Metal Mfg.
10	1923	New Record Bldg. (wharf)
15	1907-10	Office Bldg—Recording Lab. & matrix plant
17-A	1909	Victor's Cabinet Factory
17-B	1912	Victor's Cabinet Factory
17-C	1915	Victor's Cabinet Factory
17-D	1916	Victor's Cabinet Factory
18	1910 & 1913	Metal Mfg.
53	1916	Warehouse

Appendix II Historical Background of Important Antique Models

PHONOGRAPHS

Thomas Edison invented the phonograph in 1877. It played cylinder records. Bell and Tainter made certain improvements.

In 1887, Emile Berliner developed a disc record and a hand-powered phonograph to play it.

In 1896, Eldridge Johnson developed a phonograph with a spring-motor for the Berliner Gramophone Company of Philadelphia.

In 1900, the year before he founded the Victor Talking Machine Company, Johnson started (with Berliner's approval) to distribute his own products. At this time, he also introduced a greatly improved disc record and established a policy of sound merchandise and merchandising, overcame existing prejudices, made the phonograph a respected musical instrument, offered records by the world's best artists, advertised them lavishly, and got universal acceptance.

The *Trade Mark* model was the first disc phonograph with a spring motor. It was originally developed by Eldridge Johnson for Berliner in 1887.

The *Toy* model was offered briefly in the Fall of 1900. It was important in that it helped Eldridge Johnson establish his new business.

The *Victor II* model was most popular model of all phonographs with exposed horns. Demand continued until 1924 but fell off sharply after 1911.

The Victrola XI. For about 10 years, Victrola phonographs with self-contained horns were a social must. This model was the most popular model of all.

The Orthophonic *Victrola 8-30*. This model, introduced on November 2, 1925, established an entirely new standard of reproduction and set the stage for the important developments since then. (p. 106)

RADIO

Until November, 1919, when Frank Conrad of Pittsburgh broadcast records from his home, radio had been a wireless telegraph service.

To pick up Conrad's programs and programs from commercial stations that were gradually introduced in various parts of the country during the next year or two, the public had to make its own receivers. Fabricated sets did not start up until late 1921, and then only in a limited way. They were expensive, and it was a couple of years more before they were produced in large quantities. In the meantime, there was widespread activity in homemade "Coils and Cat's Whiskers" and crystal detectors.

This activity at home continued for some time after manufacturing started while the many publicized circuit possibilities were being screened.

The Aeriola Senior. A battery operated set with one tube. It was a definite improvement over the home-made crystal sets. It introduced radio into tens of thousands of homes and was a major step in Radio development. However, it was expensive. It had to be installed and was not easy to tune.

The *Semi-Portable Superheterodyne*. This model emerged as the best of the many circuits which were developed in the early 1920's. It cut through interference, brought in distant stations (greatly desired at the time), and established a base for the future.

Radiola 24. This was the first luggage-type portable superheterodyne. While it was important at the time, it is now chiefly of interest because of its colorful design and as evidence of the progress which has been made in recent years.

Radiola 28. When used with the dynamic speaker #I04, it was the first receiver which could be plugged directly into house current. It was a notable and popular model.

Radiola 17. This model was the first receiver with AC tubes which could be plugged directly into house current. It was cheaper than the complete 28, and more compact and better styled. Production ran into the hundred thousands. It required antenna, ground, and separate speaker.

Radio Model R-7— "The Superette." This model was a further important step in radio development. A dynamic speaker was self-contained in a cabinet styling which was very popular at the time. It was compact, complete, and popular priced.

"Personal" radio—Model BP-IO. This unit started an important trend in receiver design. The production was very large and would have been even larger if it had not been stopped by the war. Beyond its convenient size, the public was fascinated by the fact that it started to play the instant the lid was lifted.

TELEVISION

After years of research and an investment of many millions of dollars, Models TT5 and TRK-12 were exhibited at the World's Fair in New York in 1939. It was the first time that the public had seen Television in action. They were thrilled, but developments and production were curtailed by the war.

Model 630-TS, on the other hand, which was introduced in about a year following the end of the war, was an immediate smash hit. It was in short supply for more than a year, and was so well engineered that the chassis became a base for subsequent developments.

Appendix III Victor's Distributors

This list of Victor Distributors shows the development during the Company's early history, 1901-03.

SEPTEMBER, 1901

Chicago, III.—The Talking Machine Co. Boston, Mass.—Eastern Talking Machine Co. Philadelphia, Pa.—Western Electric Co. St. Louis, Mo.—P. E. Conroy New York, N.Y.—Maguire & Baucus Cincinnati, O.—The Rudolph Wurlitzer Co. Baltimore, Md.—H. R. Eisenbrandt's Sons New Orleans, La.—National Automatic Fire Alarm Co. Detroit, Mich.—Grinnell Bros. Kansas City, Mo.—J. F. Schmelzer & Sons Arms Co.

DECEMBER 7, 1901

Chicago-The Talking Machine Co. Chicago-Lyon & Healy New York-Maguire & Baucus. Ltd. Boston-The Eastern Talking Machine Co. St. Louis-P. F. Conroy Philadelphia–Western Electric Co. New Orleans-National Automatic Fire Alarm Co. of La. Kansas City-J. F. Schmelzer & Sons Arms Co. Buffalo-P. A. Powers San Francisco-Sherman Clay & Co. Baltimore–H. R. Eisenbrandt's Sons Cincinnati– The Rudolph Wurlitzer Co. Indianapolis-Carlin & Lennox Cleveland-Cleveland Talking Machine Co. Detroit-Grinnell Bros. Pittsburgh-S. Hamilton

JANUARY, 31, 1903

Chicago-The Talking Machine Co. Chicago-Lyon & Healy New York-Victor Distributing and Export Co. New York-C. Bruno & Son Syracuse-W. D. Andrews Boston–Eastern Talking Machine Co. Boston–John C. Haynes & Co. Kansas City-Schmelzer & Sons Arms Company Cleveland–Cleveland Talking Machine Company Jacksonville-Metropolitan Talking Machine Company New Haven-Henry Horton Philadelphia–Western Electric Co. Philadelphia-Penn Phonograph Co. Cincinnati-Rudolph Wurlitzer Co. Baltimore-H. R. Eisenbrandt Sons Buffalo-P. A. Powers

St. Louis–Victor Talking Machine, Limited St. Louis–Simmons Hardware Co. Dubuque–Harger & Blish San Francisco-Sherman Clay & Co. St. Paul-Koehler & Hinrichs Milwaukee–Huseby Co. Indianapolis-Carlin & Lennox Lincoln–Wittmann Co. Omaha-A. Hospe, Jr. Pittsburgh-E. G. Hayes & Co. Pittsburgh-Theo F. Bentel Co., Inc. Detroit-Grinnell Bros. Schenectady–J. A. Rickard & Co. Louisville-Victor Co. Grand Rapids—Julius A. J. Friedrich New Orleans–National Automatic Fire Alarm Co.

Appendix V Corporate Structure

- **1901-** 20,000 shares Common.
- **1911** 5,000 shares Preferred.
- **1911** (3/7/11) 50,000 shares Common (Employee participation). 5,000 shares Preferred.
- **1915** The Company offered to buy all outstanding Preferred at \$140.00 a share. All was turned in except 19 shares.
- **1916** Victor had 121 stockholders of whom 9 were Directors or Officers, 37 were other employees, 75 were not connected with the company. The 112 stockholders who were not Officers or Directors held 21% of the company's common stock.
- 1922 (600% Stock dividend).350,000 shares Common.19 shares Preferred.
- **1926** Eldridge R. Johnson gave Speyer & Co. and J & W Seligman & Co. option to buy his holdings and the holdings of anyone else who wished to participate at \$115.00. The option was exercised 1/6/27.
- **1927** On 1/17/27, the stockholders approved a recapitalization which was increased to \$49,730,000 as follows:

69 shares Preferred par \$100.00.

207667 shares 7% Cum. Prior Preference Preferred—\$ 100.00.

121,139 shares 6% Cum. Convertible Preferred—no par.

571,086 shares Common-no par.

Under this plan each holder of 10 shares of Common received 6 shares of 7% 3.5 shares of 6% and 16.5 shares of Common.

1929 RCA acquired the Victor Talking Machine Co. on 33/15/29 after the acceptance of the following plan by Victor stockholders.

For each share of Victor Common RCA offered:

1 share of RCA Common.

1 share of RCA Class B Preferred.

\$5.00 in cash

Appendix VI Dividends on Victor's Common Stock

6%
6
6
6
6
6
6
6
6
6
20
20
35
30
80
50
20
50
60
45
40

510%

From 1912 on, the dividends which Victor paid were large. So large, in fact, that it seemed to many that the prices at which Victorlas and Victor Records were sold must have included an unusual margin of profit.

The facts are, of course, that these dividends simply reflected the large volume which the company was doing on comparatively small capitalization due to the company's conservative policy of "plowing back" profits.

From 1902 to 1911, dividends had been held to 6% on its common capitalization of \$2,000,000 or \$120,000 a year. During this period undivided profits increased from a technical \$400,000 to an actual \$4,250,000.

In 1901, the company's assets totaled \$3,024,413 with \$2,726,124 representing patent rights, good will, and treasury stock. By 1921, this had increased to \$43.426.756. with patent rights, good will, treasury stock, and matrixes accounting for \$2.00.

A total life-volume of more than \$600,000,000 had been produced with comparatively little cash having been added to the \$50,000 which Mr. Berliner had paid for 500 shares of Victor preferred (with a bonus of 1,000 shares of common) back in 1901. As to the dividends which were paid from 1912 to 1922 inclusive, they were the equivalent of a net of approximately 7% on the volume during this ten year period.

Appendix VII Investments in Other Companies

Year	Investment at end of year (after adjustments)	Name of Subsidiary	
1903 1904	\$138,750 288,527	Universal Talking Machine Co. (Zonophone) Victor Dist. & Export Co. (NYC)	
		(p. 110)	
1905	322,661	St. Louis Talking Machine Co.	
		The Talking Machine Co.—Chicago	
1906	322,661	No purchase	
1907	313,597	No purchase	
1908	330,097	No purchase	
1909	382,946	No purchase	
1910	277,604	No purchase	
1911	268,430	No purchase	
1912	213,510	No purchase	
1913	213,510	No purchase	
1914	213,509	No purchase	
1915	534,664	(Increase not accounted for)	
1916	544,103	(Increase not accounted for)	
1917	None	All subsidiary companies sold	
1918	None	All subsidiary companies sold	
1919	None	All subsidiary companies sold	
1920	1,586,583	Half Interest Gramophone Co. Ltd., London	
1921	1,611,084	Pan American Recording Co., Argentina	
1922	4,568,127	No purchase	
1923	4,367,187	No purchase	
1924	5,101,723	Controlling interest Berliner Gramophone Co. of Montreal, name changed to Victor Talking Machine Co. of Canada, Ltd.	
1925	6,520,684	No purchase	
1926	3,303,620	N. Y. Talking Machine Co.	
1027	F 400 109	Additional interest Canada	
1727	5,400,198	Southwestern Victor Distr. Co., Dallas, Calif. Victor Distr. Co., San Francisco, Northwest Victor Distr. Co., Seattle, Victor Talking Machine Co. of Japan, Ltd.	
1928	8,424,606	Remaining balance Canada Sold 32% interest Victor Talking Machine Co. of Japan, Ltd. Baltimore Victor Distr. Co., (Baltimore, Washington, Richmond) Victor Talking Machine Co. of Brazil Victor Talking Machine Co. of Chile	

Appendix VIII Canada

- Started as *E. Berliner* by J. Sanders and E. Blout on money borrowed from Mr. Berliner. The business prospered and the money was repaid promptly. The name was soon changed to *The Berliner Gramophone Co. of Montreal*. No important purchases were made from Camden until about 1905. After that all of Victor's national advertising carried a byline reading "Berliner Gramophone Co., Montreal, Canadian Distributors." Mr. Sanders, a nephew of Mr. Berliner's, had charge of product development, production, etc. He was a recognized expert on recording materials. Mr. Blout was in charge of the commercial end of the business, and subsequently became one of Victor's distributors in New York City.
- (6/17/09) The company was incorporated as The Berliner Gramophone Co. Ltd., Canada. Victor got 94 shares.*

*There is some question about this quantity. It may have been 940.

- "His Master's Voice Ltd., Canada," a national distributing subsidiary, was incorporated on March 6, 1920.
- On November 21, 1923, the Victor Board authorized the payment of \$292,000 for 170.000 shares of Berliner stock at par. The purchase price was to include "His Master's Voice," the distributing subsidiary. The name of the company was to be changed to the Victor Talking Machine Co., Ltd. (Canada) with a capital of \$1,000,000. \$500,000 were the assets of the company and \$500,000 cash was to be supplied by Victor. Victor was to have 5,001 shares with an option to increase to 67%.
- Victor now owned 7,949 shares of 10,000, (12/31/27).
- Victor acquired full ownership.
- (3/17/34) RCA Victor Company Ltd., formerly the Victor Talking Machine Co. of Canada Ltd., incorporated with an authorized capital of \$3,000,000 (\$1,000,000 paid in).
- (5/1/36) "His Master's Voice" was absorbed by RCA Victor, Ltd.
- "His Master's Voice" Charter was surrendered.

Appendix IX London

- **1898** Set up by Win. Barry Owen and E. Trevor Williams with a capital of £15,000 as The Gramophone Co.
- **1899** Name changed to The Gramophone Co., Ltd.
- **1900** Name changed to The Gramophone & Typewriter, Ltd.
- **1903** On 9/8/03 Victor directors voted to buy 4,000 shares of Gramophone preferred, available records do not confirm completion of the purchase.
- **1907** Name changed back to The Gramophone Co., Ltd. Gramophone moved from London to Hayes, where they had large manufacturing facilities. The capitalization was increased to £600,000.
- **1920** (5/26/20) Victor bought a half interest in the Gramophone Co. At that time the Gramophone's capital structure was as follows:

100,000 5% Cum. Pfd. 750,000 Common—"Ordinary" 850,000 Common—"B-Ordinary"

1,700,000

Victor bought 850,000 shares of "B-Ordinary" @ £1.55. These shares were changed to "Ordinary" on 6/30/23. Victor's first payment was £212,500 (\$1,586,583.71) the balance of £637,500 was paid 12/31/22. Victor borrowed \$2,500,000 to complete the deal.

- **1927** Victor received \$538,310.75 in dividends from the Gramophone Co.
- **1928** Victor received \$958,504.43 in dividends from the Gramophone Co.
- 1931 Following the business depression of 1930, Gramophone and Columbia interests were combined. The new company was known as Electric & Musical Instruments, Ltd. and included the following brands: His Master's Voice Columbia Parlophone Regal (English) Zonophone. Mr. Alfred Clark was the Managing Director.
- **1933** At the end of 1933 RCA carried an investment in Electric & Musical Instruments, Ltd. in its Statement \$13,189,431.98. 1,700,000 shares of common, 1000 shares of preferred, carried at cost.
- **1935** RCA sold its Electric & Musical Instruments, Ltd. stock in the fall of 1935 for \$10,225,917 in cash.

Appendix X License Royalty

1. Victor started to license its products for *SALE* as early as March I, 1902, barely five months after the company was incorporated. The notice read as follows:

NOTICE

This machine, which is registered on our books No.______ is licensed by us for sale and use only when sold to the public at a price not less than \$ ______. No license is granted to use this machine when sold at a less price. Any sale or use of this machine when sold in violation of this condition will he considered as an infringement of our United States patents under which this machine, and records used in connection therewith are constructed, and all parties so selling or using this machine contrary to the terms of this license will be treated as infringers of said patents, and will render themselves liable to suit and damages. The license is good only so long as this label and the above noted

registered number remains upon the machine: any erasures, or removal, of this label will be construed as a violation of the license. A purchase is an acceptance of these conditions. All rights revert to the undersigned in the event of any violation.

VICTOR TALKING MACHINE CO.

- 2. The plan was broadened and made the basis of dealer and distributor franchising on June 1, 1906.
- **3.** The basic plan of 1906 was revised on May 1, 1910. The most important change called for exclusive representation by the Distributors.
- **4.** On August 1, 1913 the plan was changed from a "License to Sell" basis to a "License to Use." The exclusive representation provision was dropped.
- **5.** This plan of sale, developed by some of the best legal minds of the time, was based on the theory that an inventor, having been given a patent monopoly by the government, was entitled to control of its application during the 17-year life of the patent.
- 6. Victor's objective was to set up a fair schedule of prices for the public, for dealers, and for distributors, and to keep price-cut scalping from making the line unattractive and unprofitable to dealers who could and were ready to do constructive jobs of merchandising.
- **7.** In 1915, the United States Circuit Court of Appeals for the second Circuit handed down a decision favorable to the company.

8. However, on April 9th, 1917, the United States Supreme Court rendered a decision to the effect that the notices applied to the company product were "in part unenforceable." Whereupon, the company announced to the Trade that the plan had been discontinued and that sales in the future would be without control. Suggested prices were clearly marked "not binding on the Trade."

Appendix XI Record Sales

While the following list is not complete, it contains a large number of the selections which had runs in excess of 400,000 until February, 1927. The parentheses indicate the number of different forms—vocal, instrumental, etc.—in which the selections were available.

Selection	No. of Forms	Production
Three O'Clock in the Morning	(4)	1,732,034
Whispering	(2)	1,479,052
Prisoner's Song	(5)	1,320,356
Tuck Me to Sleep	(2)	1,040,811
Valencia	(4)	1,012,687
Dardanella	(1)	961,144
Mr. Gallagher & Mr. Shean	(2)	929,185
The Sheik	(1)	875,622
All Alone	(5)	835,586
Wonderful One	(3)	800,005
Wabash Blues	(1)	763,136
Marcheta	(5)	726,286
Parade of the Wooden Soldiers	(2)	722,895
It Ain't Gonna Rain No More	(3)	678,403
Roses of Picardy	(5)	667,885
La Golondrina	(5)	644,862
Yes, We Have No Bananas	(1)	610,101
What'll I Do	(4)	538,434
At Peace with the World	(4)	528,440
Indian Love Call	(5)	526,884
Hot Lips	(2)	523,106
You Forgot to Remember	(4)	519,811
Who	(2)	486,244
You Gave Me Your Heart	(1)	480,137
Underneath the Mellow Moon	(2)	466,370
Sleepy Time Gal	(2)	459,713
Katharina	(4)	456,166
Last Night on the Back Porch	(1)	427,784
My Man	(2)	424,849
I Love You	(2)	421,322
Bye Bye Blackbird	(2)	414,494
Linger A-while	(2)	413,860
You've Got to See Mamma Ev'ry Night	(2)	413,466
Dinah	(3)	405,763
The Old Rugged Cross	(1)	405,647
The Death of Floyd Collins	(3)	403,055

Appendix XII "Key" Personnel

Experimental: J.C. English

Engineering: W. N. Dennison. Henry H. Murray, George Smith. G. T. Williams

Purchasing: H. W. Troth, Edward E. Shumaker, Harry L. Sommerer

Instrument Mfg.: Wood: Eugene T. Keifer, J. D. Haddon Metal: Isaac Burton, L. Lambert, Fred C. Jones

Musical Directors: Walter Rogers, Josef Pasternach, Rosario Bourdon, Nathaniel Shilkret, Edward King, Cliff Cains, Roy Shields

Recording Lab: Wm. H. Nafey, Harry O. Sooy, Raymond Sooy

Matrix Dept.: James W. Owen

Records and Repertoire: Walter Clark

Record Mfg.: Clarence S. Wickes, Gus Smith

Shipping: E. K. Smith, John Missey, Garrett R. Schenck, Edward T. Hamilton, Edward Fitzgerald

Legal and Patent: John D. Myers, Chester Baxter

Sales Mgr.: F. K. Dolbeer, J. S. MacDonald, Henry Brown, Roy A. Forbes

Ass't Sales Mgr.: Edward J. Dingley

Advertising Manager: Henry Brown, Ernst John, Roy Marshall

Traveling: George D. Ornstein, Charley Bennett, Harry A. Beach, P.A. Ware, C. Lloyd Egner

Education: Dr. Frances E. Clark

Contract: L. W. Collings, Frank McGalliard

Orders (except Record Production Orders) -Replacement Parts -Service: Walter B. Fughum, Edward J. Dingley, B.L. Aldridge

Record Reproduction Orders: Howard J. Shartle, Gustav T. Wielage, R. P. Wetherald

Export: Don Mitchell, Walter Garlan, Robert Bradshaw

Accounting: D. W. Evans, F. M. Dolbeer, E. F. Haines, George W. Jaggers
Credit: Oliver Jones, F. K. Dolbeer, E. F. Haines

Other Important Assignments: R. W. Wythes, C. B. Myers, F. F. Gold, W. B. Stevenson, H. Spellman, E. C. Forman

Appendix XIII Victor's Directors and Officers

(*Director)

Eldridge R. Johnson* President. 1901-1925, also Chairman of Board, 1920-1925

Leon F. Douglass* Vice President and General Manager, 1901-1903 Vice President, 1904-1905 Chairman of Board, 1906-1918

Belford G. Royal* General Superintendent, 1912-1919 Vice President and General Supt., 1920-1922 Vice President, 1923-1925 Chairman of Board, 1926-1928

Edward E. Shumaker* Purchasing Agent, 1919-1924 Director, 1925 President, 1926-1928

Louis F. Geissler* General Manager, 1906-1918 Director, 1919-1921

Eldridge R. F. Johnson* Vice President, 1922-1928

Charles K. Haddon* Treasurer, 1905 Vice President & Treasurer, 1906-1919 Vice President, 1920-1921

Thomas S. Parvin* Treasurer, 1901-1904 Director, 1905-1909 (Died 1912, long illness)

Alfred Clark* (Mg. Director, The Gramophone Co., Ltd., London Director, 1920-1928

Colin Cooper* (Director The Gramophone Co., Ltd., London) Director. 1920-1925

Levi L. Rue* (Chairman Philadelphia-Girard Nat'l Bank) Director, 1922-1928

John C. Jay* (Partner J & W Seligman & Co.) Director, 1926-1928 DeWitt Millhauser* (Partner Speyer & Co.) Director, 1926-1928 George F. Cullinan* (Vice President Graybar Electric Co.) Director, 1927-1928 Albert Strauss* (Partner J & W Seligman & Co.) Director, 1927-1928 William Boyd* (Vice Pres. Curtis Pub. Co.) Director, 1928 Horace Pettit General Counsel, 1901 Elmer C. Grimley Ass't Treasurer, 1924-1925 Treasurer & Comptroller, 1926-1928 Walter J. Staats* Comptroller, 1910-1918 Treasurer, 1919-1925 Director, 1926-1928 Albert C. Middleton* Secretary, 1901-1914 Director, 1915-1918 Albert W. Atkinson* Ass't Secretary, 1906-1919 Ass't Treasurer, 1920-1924 Director, 1925-1927 Calvin G. Child* Director Recording Laboratory, 1919-1924 Director, 1925-1928 Ralph L. Freeman* Ass't Secretary, 1912-1914 Secretary, 1915-1918 Director of Distributors, 1919-1923 Edward K. MacEwan Secretary, 1920-1928 Eugene F. Haines Ass't Treasurer, 1920-1928 George W. Jaggers Ass't Treasurer, 1920-1925 Ass't Comptroller, 1926-1928

Frank B. Middleton Ass't Treasurer, 1920-1925 Ass't Comptroller, 1926

Walter H. Hunt Ass't Secretary, 1920-1928

Harry C. Grubbs Commercial Vice President, 1928

Alfred Weiland Vice Pres. in charge Production, 1927-1928

Appendix XIII Eldridge Reeves Johnson - An Autobiography

In 1894, I purchased my partner's interest in the firm of Scull & Johnson, Manufacturing Machinists, and changed the name of the firm to my own, Eldridge R. Johnson. This was the actual beginning of the business that is now the Victor Talking Machine Company.

There was very little expense or ceremony involved in this change. The stock of stationery happened to be low and our entire investment in the matter of advertising had been confined to a few business cards, letterheads, billheads, and a sign over the door. There were no electric letters or gold leaf connected with this sign; it was of the class commonly called shingle. While we set about to raise the standard of our business by calling ourselves Manufacturing Machinists, we had in reality a small machine shop for repairing any and all kinds of machinery.

The business was started by Captain Andrew Scull in 1886 as a career for his son, John, a Mechanical Engineer and graduate of Lehigh University. Young Scull was clever and possessed great ability as an engineer. Had he lived, the business started by his father for him would, undoubtedly, have proposed under his management, in which case my career would have been different. Certainly there would have been no Victor Talking Machine Company; of this I am quite sure, for no other combination of circumstances could have caused the Victor Talking Machine Company to have been formed, as will be made apparent to all by the following account of events leading up to its formation.

Young Scull died very suddenly, and in 1888 I took charge of the Scull Machine Shop as foreman and manager. Andrew Scull, who was a sea captain by profession, had no particular liking for the repair business. It was his impractical scheme to pay a certain portion of the expenses through the repair work and in the meantime, develop the factory along the regular lines of manufacturing.

Young Scull had left a partially completed invention of an automatic book binder which his father wished me to perfect, and he instructed me to make this my main purpose. I soon discovered the principles of young Scull's invention, and was able to construct a practical machine from the records and experiments which he had left. Feeling that my task was finished and that there might be broader fields for me in some other location, I resigned the position as foreman and went on a sort of general scouting expedition through the West. I visited the state of Washington and lived there about a year, during which time I found plenty of employment at liberal salaries; but I never felt exactly at home or satisfied in the West, and my experience convinced me that the East held far greater opportunities for a young mechanic. Employment was much more easily secured in the West and wages somewhat higher, but the opportunities of rising beyond the ranks of a wage earner were certainly not so plentiful. The trip was a great education, however, as it lifted me out of mental ruts formed by a long apprenticeship and a narrow circle of acquaintances confined to machinists and people of about the same ideas and experiences as mine. The atmosphere of the West raised my ideals.

In 1891 I drifted back to Philadelphia. Mr. Scull sent for me soon after my arrival. He had been unable to market the book-binding machine, on account of the excessive cost of manufacture. He was greatly disappointed in this as he had staked a large portion of his capital in the enterprise, and he found himself in a bad financial position, which is the usual luck of those who undertake to finance mechanical experiments. He stated his financial condition to me frankly, and said, "If you will again take charge of the machine shop, you may have half of whatever profits you can make it yield." The proposition appealed to me strongly. It was the ambition of my life to be the proprietor of a machine shop, but I did not know what I was up against when I accepted Mr. Scull's apparently liberal proposition. The work was hard, very hard; the profits small, but we divided and I

managed to live on my share, even if I could not dress according to the latest fashion. My wardrobe did not contain a dress suit, and there was plenty of room for somebody else's clothes in my trunk. I could easily have made over three times as much money by working for someone else, but the dignity of proprietorship held me to the purpose. The sacrifices that I made in the early stages of my career for the purpose of being my own boss were more than I would care to be forced to repeat. We had hard times and plenty of them. Captain Scull grew tired and lost confidence. It became apparent to both of us that the little machine shop could not be made to yield sufficient profit (p. 117) to support two, and eventually it became a question of which one of us should leave, so Mr. Scull sold his interests to me, as I, on account of being a practical machinist, had the better chance to succeed. It was a close race with failure even for me-neck and neck for along time. I did not win by superior speed. It was a question of endurance. The cares and anxieties of those early days were hard to bear, and even time has not softened the memory of them.

Previous to the dissolution of the partnership, I had designed a new book-binding machine. This was my first invention. It was a good commercial proposition, and we formed a corporation called the New Jersey Wire Stitching Machine Company, to market it. The result of the new company's first efforts to sell the book-binder or wire-stitcher was very discouraging. The firm of Scull and Johnson had contracted with the new corporation to build a quantity of the stitchers. We made a miscalculation in our estimate and lost money on the contract which was the largest proposition we had ever undertaken. This was hard luck, and the firm never recovered from the loss until after the dissolution of the partnership. The single ownership had the effect of somewhat checking the financial drain on the business, so that after a few years of hard work the business reached a paying basis. The demand for stitchers began to increase and the New Jersey Wire Stitching Machine Company paid a dividend. This was sixteen years ago and the Stitcher Company is still paying a dividend.

The machinery manufacturing business has changed. All machines are now made in duplicate parts. The small repair shops have grown smaller in size as well as in number. When a machine breaks down today the owner sends to the factory that made it for a new part, which the maker carries in stock; it is no longer necessary to send to the small machine shop to have the part made. Therefore, many of the little organizations so necessary and useful a few years ago, have gone out of business or changed to some other line. My business was among those that changed, an(I I took very little money with me in changing, but I did take a wealth of experience which was unquestionably worth all the trouble, hard work and sacrifices that it cost, measured by financial standards.

Being the proprietor and manager of a repair machine shop twenty years ago was well calculated to either break a man's spirit or fit him for better opportunities.

Not a small part of my early business was the manufacture of experimental models for new inventions. Such models now are generally made in the laboratories of large factories, but in those days independent, poverty-stricken inventors were numerous and their haunts were invariably the small machine shops. They were generally impractical and visionary but possessed by the boundless, unreasonable enthusiasm of treasure hunters.

It was interesting work and there was a profit in it if you could collect your bills; but in many cases the machine shop proprietor took a portion of his profit, at least, in experience.

During the model-making days of the business one of the very early types of talking machines was brought to the shop for alterations. The little instrument was badly designed. It sounded much like a partially-educated parrot with a sore throat and a cold

in the head, but the little wheezy instrument caught my attention and held it fast and hard. I became interested in it as I had never been interested before in anything. It was exactly what I was looking for. It was a great opportunity and it came to me as it can never come to any other man in the talking machine business again. Other opportunities may come to other people, but that was the great opportunity, and I was ready for it-thanks to a chain of favorable circumstances one link of which, if missing, would have changed this account totally.

The stitcher was a good paying proposition, but its possibilities were limited. Bookbinding was an old and well-developed industry, while the talking machine was a new art with a boundless future waiting only to be developed. Contacts with so many inventors had inoculated me with their disease and the talking machine fever broke out all over me.

Mr. Berliner had given the world the greatest basic improvements in the talking machine since the day of Mr. Edison's original discovery, and I happened to be there at the right time to give this great discovery the needed improvements and refinements, and to manufacture it in such forms and designs as to become (p. 118) most popular with the buying public. My years of hard experience in model making and repair work had well qualified me to cope with intricate designs and processes. I immediately undertook a course of experimenting with talking machines and made discovery after discovery until a talking machine of the disc Gramophone type, capable not only of reproducing sound in its own mechanical fashion and in a tone of its own but of reproducing the tone true to the original sound, stood in my laboratory.

The talking machine is destined to play an important part in educational matters eventually; already the Victor Company is breaking the way. My great hope in the beginning was in musical reproduction: so I searched for a process of recording that would give true tone. It cost me \$50,000 and two and one-half years of desperately hard work, but the Victor Company's factory is a standing testimonial that justifies the cost.

I manufactured the instruments and put them on the market. The Trade could not get enough of them from the start. I got into difficulties with the Berliner Company over the complicated question of Berliner Patents. This litigation and dispute led to the formation of the Victor Talking Machine Company so that the Berliner Patents and my own interests (improvements and patents) could be combined in one corporation. It is a bad plan to fight a patent unless you are perfectly sure that you are right.

The Berliner Patent and the litigation arising from possession of it cost the Victor Talking Machine Company over a million dollars, and the patent expired within a very few months after it had been finally sustained. The litigation to this purpose has been the greatest in the history of patent litigation in the United States, but the Victor Talking Machine Company feels amply repaid for the large sum expended. The Victor Company was a very small affair when it was first formed in 1901, but it has grown and will continue to grow as long as its products grow better and better. The Victor Company, with its organization of competent experts, is able to accomplish more in a day now than I was able to accomplish in twelve months, fifteen years ago. Its great object and ambition is to improve its product. Just as soon as a certain improvement is secured, the experts in the organization are set to the task of making something new that is better than the last improvement. The Victor Company is now in possession of many patents and secret processes, but our greatest secret process is this:

WE SEEK TO IMPROVE EVERYTHING WE DO EVERY DAY

The manufacture of the Victor and Victrola calls for skill and workmanship far beyond that of watch manufacturing and violin making. Watches are constructed to measure

time at intermittent intervals, but a talking machine record must revolve evenly, true to pitch and maintain the same percentage of accuracy throughout each degree of its revolutions. It must measure out billions of vibrations so small that the eye can detect but few of them, so accurately as to make the true tone of the original. The construction of the parts that record and reproduce the sound to a satisfactory volume without destroying its beauty is most difficult and complicated, and calls for an organization of experts with a greater variety of skill than any other known business.

The matter of advertising and selling calls for unusual methods and is different from any other business in many respects. Victor advertising is excelled in quantity by few other enterprises. It is aimed to be artistic in sentiment as well as practical in effect. The Victor selling organization is the most important and most expensive of the whole establishment. The research and debate devoted to advertising and selling always astonishes those who chance to learn to what extent a scientific study of these matters is made.

A Legal Department of considerable size is part of the regular organization. This, however, is purely advisory. There must be a legal analysis made of every new law, legal decision or patent that can possibly affect the business. The actual litigation is always handled by independent attorneys. (p. 119)

The art of manufacturing sound records of a quality sufficiently high to insure commercial success is far more complicated and more difficult than is generally supposed or could possibly he imagined by those not in a position to know.

The Victor Company has the greatest and most efficient musical organization ever gotten together for any purpose whatsoever. None but the most competent can stand the fierce test of a permanent record. A single performance is heard and forgotten, but think how serious would he a mistake made in a record that is heard over and over again by so many. Talking machine records must be technically correct, as well as pleasing, or their educational value becomes nil and the Victor Company would be lost standing to the same extent that a publisher of text books would suffer through the publication of books containing inaccuracies.

The Victor Company depends very largely on its experimental departments for the future of its business. There are several of these departments, each specialized to a particular branch. As a whole, they are intended to entirely cover the field of research from which the future improvements on talking machine manufacturing may be dug. Improvements come hard now-a-days. The field is no longer a virgin one. Great chunks of free gold are no longer lying around to be picked up by lucky hunters. Comparatively speaking, prospecting must now be done with a diamond drill, and upon the location of a good vein, great shafts must be sunk and an expensive plant built before pay dirt can be taken out. The old fashioned prospector is out of the race. It is now also necessary to dig according to the latest scientific methods and keep on digging with the best equipment that money can buy. What the public is eager to purchase today cannot be given to it tomorrow. It will take twenty-five years yet to perfect the talking machine. What the future holds in store can only be imagined by those who are learned in this new art. It will play as important a part in future education matters as has the printing press in the past.

The future of the Victor Company is now in the hands of its organizations, as the business is too large and complex for any one man to ever fully grasp. Each unit of the organization is being taught and is trying to do something a little better each day, and this progressive spirit is all concentrated on our product.