PHONO-CYLINDERS VOL. 1
Edited and from the collection of George A. Blacker
Folkways Records FS 3886

PHONOGRAPHIC ENTERTAINMENT
MUSIC AND ELOCUTION
BY THE
BEST MUSICIANS AND ELOCUTIONISTS

Directed by W. L. Skinner and William Treichel.

This entertainment will be the best of its kind ever given in this vicinity.

While you will be delighted and pleased, you will do more solid thinking than you ever did in the same amount of time in all your life.

Many of our records are new and were purchased by the managers at no small expense.

You may never be privileged to hear the

EDISON MILITARY BAND
Second Selection from "A Country Girl"
London Regimental Band. Lambert 835, 1904
Daybreak at Calamity Farm
Len Spencer & Gilbert Girard. Edison 2777, 1916
Tramp, Tramp, Tramp
Byron G. Harlan, Frank C. Stanley & chorus. Edison Special, 1910
Dream of the Rabbit Foot
Edison Military Band. Edison 9707, 1907
Immutability (Excerpt from lecture "The Prince of Peace")
William Jennings Bryan. Edison 9913, 1908
The Village Seamstress
Elene Foster, Edison 9103, 1905
Kerry Mill's Barn Dance Band. Ind. 1141, 1909
The Ragtime Drummer
James Lent. Ind. 689, 1907
I'm Afraid to Come Home in the Dark
Arthur Collins. Columbia 23232, 1908
Unlawful Trusts
William Howard Taft. Edison 10000, 1908
When I was 21 & You were Sweet 16
Walter Van Brunt. Ind. 4M 3268, 1912
Hermit's Bell Overture (Maillart)
American Symphony Orchestra. Edison Special J, 1910
Waiting at the Church
Ada Jones. Edison 9315, 1906
Rip Van Winkle Meets Meenie
Joseph Jefferson. Columbia 32230, 1907
PHONO-CYLINDERS
VOLUMES 1 & 2
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PHONO-CYLINDERS VOL. 1

Side I Edison
Band 6 935
The Girl Who Throws Me Down
Edward M. Favor & chorus.

Side I Ind.
Band 7 979
I Used to Be Afraid to Come Home in the Dark. Billy Murray.

Side I Edison
Band 8 4004
Laughing Song
George W. Johnson.

Side I Ind.
Band 4 2777

Side I Ind.
Band 3 5923
In the Good Old Steamboat Days
Murry K. Hill.

Side I Ind.
Band 6 9315
Old Dandy Pegleg
New York Military Band.

Side I Edison
Band 2 2320
Arthur Collins.

Side I Edison
Band 1 2777
Len Spencer & Gilbert Girard.

Side I Edison
Band 5 5923
Dress of the Barefoot Friar
Brunt Military Band.

Side I Edison
Band 6 9315
I've Told His Missus All About Him
Helen Trix.

Side I Edison
Band 1 2777
The Baseball Girl
Miss Ray Cox.

Side I Edison
Band 5 9415
Street Piano Medley
August Molinari.

Side I Edison
Band 6 9315
House Cleaning Time
Ada Jones & Len Spencer.

Side I Edison
Band 4 5004
(F.K's Song)
Mat Wills.

Side I Edison
Band 7 1114
Kerry Hill's Barn Dance Band.

Side I Edison
Band 7 1114
The Ragtime Drummer
James Lent.

Side I Edison
Band 1 2777
I'm Afraid to Come Home in the Dark
Arthur Collins.

Side I Edison
Band 3 1000
Unlawful Trusts
William Howard Taft.

Side I Edison
Band 1 1915
Marry K. Hill.

Side I Edison
Band 4 2720
That's Where I Come In
Edward M. Favor.

Side I Edison
Band 3 7078
Farmer & the Business
Theodore Roosevelt.

Side I Edison
Band 4 1024
Confidential Chat
Press Ejdridge.

Side I Edison
Band 5 9948
New York Military Band.

PHONO-CYLINDERS VOL. 2

Side I Edison
Band 1 9019
In the Good Old Steamboat Days
Murry K. Hill.

Side I Edison
Band 2 655
That's Where I Come In
Edward M. Favor.

Side I Edison
Band 3 3708
Farmer & the Business
Theodore Roosevelt.

Side I Edison
Band 4 1024
Confidential Chat
Press Ejdridge.

Side I Edison
Band 5 9948
New York Military Band.

PHONO-CYLINDERS ALBUM NOTES

What you hear on this album of cylinder reissues is not the tinny, distorted reproduction so commonly associated with the old cylinder phonographs. You hear the full tonal range recorded on the cylinders, as reproduced electronically on a specially built electric playback machine, equipped with a high-fidelity magnetic transcription cartridge. If you have ever heard an old cylinder phonograph in somebody's rumpus room or an antiques shop, and thought that the poor sound quality was the fault of the records, prepare immediately to dismiss the notion forever from your mind. Actually, most cylinder records, especially those made by Edison, were far superior in fidelity to any acoustically recorded disc records sold at the time. Indeed, many collectors believe that Edison's recordings surpassed all the quality suffered somewhat in the dubbing process. Despite this, they offered pretty good sound. One thing is sure; no other record producer ever tried to put his products into competition with Edison's diamond disc phonographs and records in the Edison Tone Tests. Thomas A. Edison amply deserves the title of "Father of High Fidelity".

THE RECORDS

The selections contained in this album represent a sort of "mixed grill" of cylinders, such as a
cylinder collector might have accumulated over a period of years, if he had collected seriously and tried to preserve them. You'll find a bit of everything here, from cornball comedy to military band selections to serious political speeches. Entertainments, rather than instruction, is the main purpose of this collection. So put the record on your phonograph and have fun!

RECOMMENDED BIBLIOGRAPHY

1. "From Tinfoil to Stereo" -- Oliver Reed & Walter L. Welch -- Howard W. Sams, Indianapolis and Bobbs-Merrill, New York, 1959. . . . This is the best, most accurate history of the development of the phonograph and the art of sound recording; currently available. Though written from a technical point of view, this book is not burdened with technical terminology or mathematical formulae. It was the major source of information for these notes.


4. "Cylinder Records" -- Dr. Dane A. Beakins -- Published privately by the author at 1205 Paloma St., Stockton, California, 1958. Probably out of print. *

5. "Joe Batten's Book" (Story of Sound Recording) -- Joseph Batten -- Rockliff, Salisbury Square, London, 1956 . . . The memoirs of a recording technician and manager whose career spanned phonographic history from cylinders by the "found" to magnetic tape and the LP record. He relates many amusing stories of his adventures and misadventures in the recording studios.

* This author has published a series of Indexes of the releases of the major cylinder makers, having covered all of Edison's domestic issues and all that is known of the material issued by the Indianapolis Phonographic Record Company, of Albany, N.Y. Others will be forthcoming as material is collected. Some are now out of print, consult the author about what is still available.
"Dream of the Rarebit Fiend" - Edison Military Band -- Edison is known to have made a short movie bearing this title, but whether the selection was meant for use as background musical music is not certain. Somebody here does a real tailgate job on those trombone glissandos. (1907)

"Immobility" (Excerpt from Lecture "The Prince of Peace") -- William Jennings Bryan -- One of a series of records made by "The Great Commoner" in 1908, during the Presidential campaign of that year.

"The Village Seamstresses" -- Eleone Foster -- It is a matter of regret that this lady didn't make more records, for she had in this record one of the most authentic "Tea-Trolley" roles ever put on wax. She has captured the accent with such accuracy that one suspects she was herself a native of the area. (1905)

"Kerry Mills' Barn Dance" -- Band 7 1181 -- As was the practice with most band and orchestral recordings issued by Indestructible, no name was given to the band or orchestra, which was probably a studio pickup group. (1905)

"The Ragtime Drummer" -- James Lent -- It was recorded in 1907, in the first drum solo ever recorded and about the only cylinder ever issued on Indestructible, which has the greatest jazz interest. (I exclude the Edison Blue Amberol dubs of the Louisiana Five and others, since they are not original cylinder issues.) Lent recorded the same selection first on Osborne 779 and 5 (7-inch and 6-inch discs, respectively) and Victor 17029. Of the three versions, Osborne 779 is the most interesting from a jazz point of view. This cylinder version, being the first, is well deserving of preservation.

"I'm Afraid to Come Home in the Dark" -- Arthur Collins -- This is an amazing song, but improbable. The average wife is less naive (App. 1908).

"Unlawful Trusts" -- William Howard Taft -- Taft too, is one of a series of records made by Mr. Taft in the Presidential campaign year of 1908. Anyone who bought both series had a complete political debate, plus Bryan's views on "Immobile." (App. 1908). One cylinder, "Irish Stories" as his contribution to the non-political side.

"When I was 21 & You were Sweet 16" -- Walter Van Brunt, vocalist -- Happy Anniversary, Folks! (App. 1912).

"Hermit's Bell Overturn" (Maliant) -- American Symphony Orchestra -- Thaddeus V. Story represents our how to haute couture. The selection is not a familiar one, though. Who knows? We may very well be resurrecting it! (1910)

"Waiting at the Church" -- Ada Jones -- The song was first popularized by English comedienne Vestia Victoria, but it was recorded by her in the U.S. Beatrice Kaye revived it in the 1940's, but this is the earliest version. (1906)

"Zip Van Winkle Meets Meenie" -- Edison Military Band -- Iraordon was a well-known actor of the turn of the century who revivized Washington Irving's story into a 19th-century "smellerdrumze", complete with a villain. (App. 1907)

"In the Good Old Steamboat Days" -- Mury K. Hill -- Mark Twain must have enjoyed this one! (1907)

"That's Where I Come In" -- Edward M. Favor -- The Neighbor who let his chicken run loose apparently has to have his flock decimated. At least Mr. Favor came out ahead there! (1908)

"Farmer & the Businessman" -- Theodore Roosevelt -- He made this one himself for his "Ball House" campaign of 1912. It would seem that the country had a few "ball houses," too.

"A Confidential Chat" - Press ("Commander-in-Chief of the Army of Fun") Eldridge -- Mr. Eldridge himself of his opinions of how best to seek marital bliss. One question that he doesn't answer, though, is who is to marry the gal first. The supply of widows is limited! (1909)

"Old Daddy Pegleg" -- New York Military Band -- A lively two-step. Want to roll back the rug? (1908)

"The Girl Who Threw Me Down" -- Edward M. Favor -- This record was made for one of the 'educational' series and was made by Mr. Favor himself. (1909)

"I Used to Be Afraid to Come Home in the Dark" -- Arthur Collins -- Is it just a sequel to "Waiting at the Church"? Revenge was sweet! (1907)

"The Baseball Girl" -- Miss Hay Cox, vocalist -- The moral is that you'd better not take your girl friend to a ball game, especially if she's on the gabby side. (1909 (orig. issue)

"For You Alone" -- unidentified vocalist -- The song is one of the sentimental type such as "Because," but it fits the spaghetti (1907). The record was made by one of England's pioneer recording artists. (Release date unknown)

"I've Told Him Missus All About Him" -- Helen Trix -- This song is a sequel to "Waiting at the Church." Revenge was sweet! (1907)

"The Laughing Song" -- Harry Bluff -- We switch across the "pond" for this record. Recorded by one of England's pioneer recording artists. (Release date unknown)

"Street Piano Medley" -- August Mollard! -- Give the money, it's for the music! -- The song is a sequel to the "gob" side. (1909 (orig. issue)

"Mouse & the Clock" -- Edison Concert Band -- "Listen to the mouse!" was the invitation to the phonograph discs, which in this record was listed. Well, you can hear him if you listen very carefully! (1907)

"House Cleaning Time" -- Ada Jones -- The song is not particularly well known, but it's been around since 1906. It's getting a little out of date, but not too bad it can't be considered abolished! (1906)

"G.P.O.S." (Elna's Song) -- Rev. W. Wills -- Honest, Felicia, we're sure he was just kidding! 1909 (original issue).

"THE PHONOGRAPH'S SALUTATION"

I seize the pellipratt air. I board music and speech.

All lips that speak are mine.

I speak, and the invariable word Authenticates its origin and sign!

I am a tomb, a paradise, a throne, An angel, prophet, slave, immortal friend!

My living records, in their native tone
Convict the knife, and disquisitions end.

In me are souls embalmed. I am an ear, Flawless as Truth, and Truth's own tongue an I.

I am a resurrection, and men hear
The quick and dead converse as I reply.

Written and recorded by the Reverend Horto M. Favor, of Monticello, N.Y., of Edison's laboratory, June 16, 1909.

Notes by George A. Blacker

BRIEF HISTORY OF THE ART OF SOUND RECORIDING

Before beginning with the history of sound recording, the three methods of recording should be clarified. VERTICAL RECORDING was the method in which the record was varied in density by the recorded signal, creating a series of "hills and dales." This method was used on all cylinder and disc records. LATERAL RECORDING was the method by which the stylus moved from one side of an imaginary straight line to the other, the signal being varied in density by the magnetic alignment of tiny magnets on a moving oxide-coated tape (or a steel ribbon and another metal strip). The third method, used on留otofop recordings, was ELECTRO-MAGNETIC RECORDING, in which the magnetic alignment of iron molecules on a moving oxide-coated tape (or a steel ribbon and another metal strip) was varied by an electro-magnet of special design.

The first known workable sound recording device was the "phonograph," invented in 1856 by a Frenchman, Edward-Leon Scott de Martinville. It transformed sound vibrations in the form of lateral undulations on a cylindrical sheet or round disc of lamplightened paper. While it could record sound waves, it was unable to reproduce them. It was used for many years as a laboratory instrument for measuring and analyzing sound waves, a function now filled by the cathode-ray oscilloscope. A lucky accident set Thomas A. Edison to thinking about the possibility of recording sound; his curiosity was piqued by the odd behavior of a telegraph recorder on which he was experimenting in the summer of 1877. This machine transcribed telegraphic messages on a moving paper tape in the form of indentations varying in corresponding length corresponding to dots or dashes. While running an indented tape rapidly through the machine, Edison heard a faint humming sound resembling human talk heard indistinctly. The sound was caused by a tension spring on the machine which came into contact with the indentations on the paper strip, and was set in vibration by them. He then tried an experiment with a diaphragm to which an embossed stylus was attached. This assembly was able to record sound in a moving strip of paraffin-coated paper. When he spoke into the diaphragm, a faint but distinct recording of his voice was heard upon the paper strip. Thus, in one of Edison's happier instances of serendipidity, the art of sound recording was born on July 18, 1877.

The now famous tinfoil phonograph was built by John Kessell, a technician in Edison's laboratory, on August 18, 1877. To Mr. Edison's astonishment, the machine worked properly the first time it was tried. He then recorded a sentence spoken into the mouthpiece, and this was not unusual for a laboratory prototype.

The invention was widely publicized, and a few hundred phonographs were manufactured and sold during 1878. Most of the machines sold went to traveling lecturers, who put on very entertaining shows with them. In a short time, public interest in phonographs subsided and the lecturers had to turn to other subjects. The tinfoil phonograph was an interesting novelty, but it had shortcomings. For one
thing, its fidelity left much to be desired. For another, the tinfoil recordings didn't play back well and wore out after a few playbacks. Improvements were needed, but they were not to be forthcoming for nearly ten years.

In 1886, the Edison transmitter, Western Union's most advanced was adapted by Alexander Graham Bell. Edison sold the rights to his phonograph to Western Union, which accompanied the award to set up a research group. Bell and Tainter organized the Volta Graphophone Company at Alexandria, Va. (This company was the corporate ancestor of today's Columbia Phonograph Company).

In 1886, after their graphophone patents were issued to them, the Bell brothers and Mr. Tainter organized the Volta Graphophone Company at Alexandria, Va. This company was the corporate ancestor of today's Columbia Phonograph Company. In 1887, the company was incorporated as the American Graphophone Company.

Edison and to invite him to join forces with Bell and Tainter to join forces in phonographic research and development of the American Graphophone Company. Edison worked, however, was opposed to Edison's method of indenting the recording surface in this patent, probably because it was much more than a minute number of copies could be made from a single cylinder. Edison was still at the time. No further efforts were made to join forces in phonographic research and development of the American Graphophone Company.

The organization of the Volta Graphophone Co., and the fact that many of their devices were similar to those proposed by him in his 1878 British patent, inspired Edison to redesign his own phonographic work.

Since he had completed most of the work involved in developing the electric light and a suitable power distribution system for it, he was better able to devote time to work on the phonograph. What eventually emerged from the laboratory was an instrument of its general characteristics to the later Edison Home Phonograph. It was powered by an electric motor and used a solid wax cylinder that was tapered to fit the mandrel; the same size as the two-and-four-minute entertainment cylinders commonly used. This cylinder was easily removed from the machine without damage and could be reused oftener than the phonograph cylinders of the time. (Year after year, American Graphophone Company, corporate successors to Volta Graphophone, were to adopt the Edison-type cylinder.

Before the two firms could get a real start in business, financial difficulties began to plague Edison. Lippincott, a Pittsburgh businessman who proposed that the two merge into a common sales and distribution network, was interested in both the Edison and Graphophone companies. The corporation thus formed in 1890 was called the North American Phonograph Company.

North American planned to organize state recording bureaus and make it easy for people to record their own voices on phonographs. The cooperation brought by them was to plague Edison for years. As a last resort, Edison was forced eventually to dissolve the North American company and to sell out to the American Graphophone Company.

Edison was able to regain control of his old company. He was able to reorganize his company and to make it successful. He was able to regain control of his old company and to make it successful. He was able to regain control of his old company and to make it successful. He was able to regain control of his old company and to make it successful.
After the break-up of the North American combine, the Graphophone Company, also an outcome of the Columbia Phonograph Company, combined to form the American Graphophone Company, lineal successor of the Columbia Phonograph Company. The Edison Phonograph Co. was likewise reorganized into the National Phonograph Company, a unit of the Edison, Inc. (The Edison Company still survives as a division of McGraw-Edison and part of the old Edison Grange, and has been taken over by the National Park Service as the Thomas A. Edison Laboratory National Monument).

Both companies proceeded to produce phonographs and recording equipment, but which was to prove to be most profitable. Both also made and sold cylinder dictating equipment for years, but as a sideline to their regular job, that of clerk typist, they became brisk competitors.

The record business was hampered severely by the lack of a suitable method of mass production of cylinders from a single master. It was expensive and numerous cutting methods, chemical and acoustic, to produce even a moderate number of copies from one recording. Edison, generally speaking, to make no more than four or five "master" cylinders at one time. This was accomplished by placing recording needles around the performers and directing their horns toward them. Each "master" record thus made could produce up to 75 copies, after which its quality deteriorated so much that it could no longer produce good duplicates. Obviously, it was a handicap for the artist to perform his music many times to make it possible to produce a substantial number of commercial copies.

Edison had discovered in the early 1890's that he could better quality records by increasing the velocity of the recording surface under the recording stylus. This made it easier to record at higher frequencies. It was possible to increase surface velocity in two ways: increase the rotational speed of the record or increase its diameter leaving rotational speed unchanged. The first solution was not very practical as it would have further curtailed the already short recording duplication process. The "master" cylinder was five inches in diameter. These large cylinders could more successfully be used in the recording duplication process than the standard two-inch diameter because their better quality offset the loss in response that was incurred in the duplication. The use of specially shaped recording and playback stylus also helped to improve higher frequency response.

Late in 1896, American Graphophone Co. (Columbia) began selling cylinders commercially in the 5-inch size. The "Graphophone Grand" and the "Grand" records were trumpeted as "the greatest of the art" and as offering the most natural reproduction, and loudness with clarity. Edison was compelled, as a matter of face, to offer cylinders and machines, too. Loud and relatively clear they were, but their size) but their size. Edison's collection was withdrawn. The patent examiners passed on Lambert's claim for a "graphophone" as a recording, or used as a master from which stamping electroplates were made. Commercial records were made at first from vulcanite, or hard rubber. Later, a shellac compound was adopted, whose basic formula was kept under wraps by Edison, with the restriction that it not be sold until vinyl plastic superseded it.

The playback machine, dubbed the "graphophone," was a hand-propselled turntable, with a reproducer coupled directly to a short horn,
which was pivoted toward its large end. He applied for his patent in 1887.

As a musical instrument, the gramophone left much to be desired. The acid etching process by which grooves were made in the master blank had been learned in that art by chemists who worked with photographic plates, and the grooves were jagged and rough, creating noise and distortion and playback. Furthermore, it was very difficult to obtain a spring motor that was strong enough to handle the needs of the phonograph. By the time Edison had invented a suitable motor, the world was poised for a revolution. The 1880s were the first decade in which the phonograph achieved practical and economical mass production. The cheaper and bett er regulated form of motive power was needed. Electric motors were used on a few models, but a suitable spring-powered motor was not yet available.

Ferdinand Geisberg, a recording technician and accom panist who had worked for the Volta Graphophone Company, had been working on a spring motor and was anxious to get the word out to the world. He was associated with the Philadelphia inventor that had invented the phonograph in the early 1870s. The major technical improvements to the phonograph in the early 1890s had been made by the Philadelphia inventor and the two disc models, but a suitable spring-powered motor was needed. He was associated with the Philadelphia inventor who had invented the phonograph in the early 1870s.

Edison and Johnson combined an internal horn and built the external horn phonograph in 1906. The external horn design necessitated the use of incising as a method of recording the sound. Frank Seaman, a New York promotion and advertising man, was given credit for inventing and popularizing the disc phonograph. Edison and Johnson combined an internal horn and built the external horn phonograph in 1906. The external horn design necessitated the use of incising as a method of recording the sound. Frank Seaman, a New York promotion and advertising man, was given credit for inventing and popularizing the disc phonograph. Franklin C. Morse, a young lawyer, was hired by Edison to merge with him, and the two disc manufacturers combined forces in 1901, to become the Victor Talking Machine Company, which eventually became the Victor Talking Machine Company.

The first known experiment with electric recording took place in England in 1899. Two inventors, Charles G. R. Bell and Charles H. W. M. Bell, worked on a flexible sound recording process. The reason the use of incising as a method of recording the sound was chosen was that it was the most efficient way to record the sound. The rise of the phonograph in the late 19th century was due to the work of the Philadelphia inventor who had invented the phonograph in the early 1870s. Edison and Johnson combined an internal horn and built the external horn phonograph in 1906. The external horn design necessitated the use of incising as a method of recording the sound. Frank Seaman, a New York promotion and advertising man, was given credit for inventing and popularizing the disc phonograph. Franklin C. Morse, a young lawyer, was hired by Edison to merge with him, and the two disc manufacturers combined forces in 1901, to become the Victor Talking Machine Company, which eventually became the Victor Talking Machine Company.

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The first known experiment with electric recording took place in England in 1899. Two inventors, Charles G. R. Bell and Charles H. W. M. Bell, worked on a flexible sound recording process. The reason the use of incising as a method of recording the sound was chosen was that it was the most efficient way to record the sound. The rise of the phonograph in the late 19th century was due to the work of the Philadelphia inventor who had invented the phonograph in the early 1870s. Edison and Johnson combined an internal horn and built the external horn phonograph in 1906. The external horn design necessitated the use of incising as a method of recording the sound. Frank Seaman, a New York promotion and advertising man, was given credit for inventing and popularizing the disc phonograph. Franklin C. Morse, a young lawyer, was hired by Edison to merge with him, and the two disc manufacturers combined forces in 1901, to become the Victor Talking Machine Company, which eventually became the Victor Talking Machine Company.
radio came along. The first radio sets rarely had enough power to drive more than a pair of headphones. By the early 1920's, their capabilities had been improved to the point where they could provide reasonably adequate sound reproduction. Other new developments, of which resembled high-powered earphones units. Some were coupled to a large horn or directly driving loudspeaker units. Phone-type speaker units were even sold that could be used with the internal horn of any phonograph or radio receiver, in place of the sound-card system. (Later models of phonographs were made with storage compartments for radio chassis, and the magnet wire was wound in the horn internally.) More and more, people who heard the improved radios began to draw unfavorable comparisons between these and their phonographs. Phonograph and record sales declined sharply as a result. The phonograph had been made possible by the combined efforts of Edison and Henry C. Harrison, but they didn't know how to reverse the tide.

In 1919, a research group at Bell Telephone Laboratories under W. F. Wight and Henry C. Harrison, experimented with using sound cards that could be recorded and played back by telephone equipment. Their chief feature was that, by reducing the current and imaginative, and complex, was shot sharply, but they didn't know how to reverse the tide.

The spring of 1925, both Victor and Columbia had completed production of Victor's first electric issue (and first on the 3,000 recorders). "John Peel" was 50013 - D, which had been just barely contrived to exist, because the company had been forced to begin to produce them as soon as it could, in order to compete with the new phonograph pioneers who were building all-electric phonographs, and indeed many had already been able to go as high as 10,000 cycles per second and cut off even the higher notes of the human voice in order for their instruments to stand up under the heavy stylus pressures, and their sound effects man directed a lusty whack at the sheet iron. At the proper time, the sound effects man directed a lusty whack at the sheet iron, but missed it and scored a TKO on Dawson.

To play the new electric recordings, Victor and Columbia introduced "Diamond Discs" to the phonographs which had been designed by the Western Electric technicians. Their chief feature was that the diamond-like styli were in themselves made of a material which could be folded in on itself to fit conveniently into an average size phonograph cabinet. (It is estimated that they are about 9 feet long.) The soundbox had been redesigned to work most effectively with the new discs. It seems that a certain amount of "planning" had been involved, but it was involved, since the characteristics of the new phonographs were such that the old acoustic records did not sound their best on them. Conversely, the new electric recordings didn't play very well on the old machines.

By 1924, the Bell equipment was sufficiently perfected to be offered to the record makers as a standard feature.

By the spring of 1925, both Victor and Columbia had completed production of Victor's first electric issue (and first on the market) was 1926: "I'm from Arkansas" by Melody/Bluebird restaurants or dance halls, but it may not seem numerically so far as record sales went. Concerned about the growing population of radios and phonographs, Edison began to look for a way to exploit the new technology for his own benefit.

In 1926, Edison, along with his company, the Thomsen group, founded the Deca Recording Company, and recorded a large number of popular records. Despite this initiative, Edison's efforts were not particularly successful. The Deca records did not sell in large numbers, and Edison's company soon discontinued the operation.

The year 1928 was a significant year for the recording industry. It was in 1928 that the first long-playing record was introduced. This development was particularly important for the recording industry, as it allowed longer playback times and higher-quality sound reproduction.

However, the success of the long-playing record did not come without challenges. Some critics argued that the format was not compatible with the existing infrastructure of record players and phonographs. Nevertheless, the long-playing record quickly gained acceptance and became the standard format for the recording industry.

In conclusion, the development of the long-playing record was a significant milestone in the history of the recording industry. It marked a turning point in the evolution of the format and opened up new possibilities for the creation and distribution of music.

The 1920s saw a significant growth in the music industry, with the development of new recording technologies and the expansion of the recording market. The long-playing record played a crucial role in this growth, and its introduction marked the beginning of a new era in the history of music.
amplifiers. By the 1960's, wide-range tape recorders operating at 30 ipm were in wide use in Europe for delayed broadcasting of special radio programs (now the standard professional speed.) American technicians subsequently improved the tape recorder so that a wider variety could be recorded at slower tape speeds, and the tape recorder is now a commonplace item in the home and the broadcast studio; its biggest advantage was that "fluffs" didn't necessarily mean that a record master was wasted. A perfect master tape could be made, then transferred to the disc master which was especially advantageous in recording long operatic or symphonic works.

The fidelity of disc records had been gradually improved over the years, but their relative-brief playing time made them unpopular, especially for the classical music fan. He got relief in 1948, when Columbia introduced the long-playing, or LP, record. It was similar to the ill-fated Victor LP of 1931 in all respects but one--it had a much finer groove. This permitted longer playing time and made it easier to inscribe higher frequencies on the record. This was because the physical wave length of a high frequency tone was less than the width of the groove itself. Columbia offered to license all other record makers to produce LP's. Almost everyone except Victor accepted--everyone, that is, but Victor. They introduced their 7-inch short-play, 45 rpm microgroove record a year later. For some time, during the "Battle of the Speeds", the record business underwent a sharp slump while record buyers waited to see which type of record would triumph. In due course of time, the 33 1/3 and 45 rpm records achieved a sort of coexistence, with 33 1/3 being vastly more popular than 45 rpm. The sales of the 78 rpm record began to fall off sharply when it was established as the best speed for popular singles, and it is now obsolete, except for occasional children's records. It can be argued, with the wisdom of hindsight, that the "War of the Speeds" could have been eliminated, and the complexity of turntable and changer design reduced, if the best features of LP and 45 rpm records had been combined. For instance, why couldn't the 1/2-inch center hole of the 45 rpm record be used on all 33 1/3 rpm records? If all new recordings were cut at 33 1/3 rpm, and if all had the 1/2-inch center holes, record changer and turntable design could have been simplified greatly, and the extra speed wouldn't have been needed. It wasn't, anyway. Columbia made 7-inch 33 1/3 rpm records for popular singles for a time. Oddly enough, they sold very widely. Recently, Columbia introduced a line of 7-inch 33 1/3 rpm singles. How well these have sold we don't know, but few record dealers to whom I've spoken were optimistic about their prospects.

Stereo disc sound is far from new, too. It's actually as old as the human head. Given normal hearing, almost anyone can tell from which side a sound comes, even if they can't see the source. Stereophonic sound takes advantage of that ability to perceive directionality. The first example of stereo phonographic recording and reproduction of sound (or at least a reasonable facsimile of it) was the Columbia Multiplex Grand, a huge contraption that was made on special order about 1898 or 1899. It used cylinder records 5 inches in diameter (concert size) which must have been at least ten inches long, since they had three separate recorded tracks on them, each recorded by a separate horn and master and reproduced by a separate pickup. The result was a primitive variety of three-track stereo. The Mulex Graphophone Grand could play standard Grand and Concert records if one removed two of the three tandem reproducers, and long-playing Grand records were made which played for ten minutes. Because the machine and accessories cost $1,000, it was very doubtful whether most of them were sold. A Multiplex Graphophone Grand and a new Rolls-Royce would now be approximately an even trade.

The next known attempt at recording sound from two separate pickups into single record groove occurred about 1931, when an English experimenter, A. D. Blumlein, developed and patented a special recording head which was able simultaneously to cut a lateral and vertical signal into one groove of a 78 rpm record. The lateral and vertical cuts were used for the two sound channels. Naturally, a special reproducer was needed for playback.

In the late 1940's and early '50's, Arnold Bugden, an English engineer, made experimental stereo this LP's, using the Blumlein lateral-vertical process.

The stereo disc recording process now accepted as standard is the 45/45 system, developed by English Decca and Westrex in the U.S. It is similar to the Blumlein lateral/vertical method, except that both channels are cut in a combined lateral and vertical motion. Audio information is cut into the sidewalls of the record groove in such a way that Stylus motion for either sound channel is at an angle of 45° with respect to horizontal (record surface).

In 1958, a few stereophonic records and a limited amount of reproducing equipment began to appear on the market. The early stereo records were not always the best in sound; some were even poorer than their monophonic counterparts. Improvements have been made in recording and mastering techniques, however, and stereo records now offer quite consistently good quality. Pre-recorded stereophonic tapes in various forms and speeds are also available. Debate continues among hi-fi fans as to whether tape or disc records offer the best stereo sound. Regardless of differences in quality, the disc is still more convenient and cheaper than tape. (Ever try to locate a selection on a reel of tape? Fun, isn't it?)

With all the improvements that have been made in records and phonographs, one fact stands out: Little effort has been made to gather and preserve recordings of historic and musical value. A major contributing factor has been the tendency among people in this country to accept the latest model of anything as the best ever, and to toss last year's model on the scrap heap or into the attic. Discs displaced cylinders, and the voices of many celebrities were all but lost. (Many valuable cylinder and disc matrices were completely destroyed in a fire at Thomas A. Edison, Inc., in 1924. Otherwise, all remaining early masters and all subsequent recordings are still stored in the vaults at West Orange, but have not been reissued extensively.) The advent of the electric recording process displaced many valuable acoustic records by great artists and celebrities in the popular and classical fields. The masters of many companies that went out of business were destroyed by them, and it is said that the master vaults of Columbia and Victor lack many recordings from their early days; metal electrotapes were scrapped during the war years when copper was in short supply, and wax master records were lost through breakage and deterioration. When the LP record was introduced, many 78 rpm recordings were dropped from the catalogs because demand was not sufficient to warrant their transfer to LP or 45 rpm records. Today, the life of a popular single record is so brief that, if you find something you like, you have to buy it while it's still on the charts, or you're out of luck. (If you find any current popular records worth preserving for posterity, you've done something unusual.)

There is no such thing in this country as a national archive of recorded sound, where historic recordings may be heard or copies obtained. Private collectors have done much to preserve valuable recordings, but the results of their efforts have never been collected and cataloged by any central agency. This is an effort to make some old cylinder recordings of historical and musical interest more widely available for the person who is unable to locate original copies or, for various reasons, doesn't wish to invest in old records and phonographs. If circumstances warrant, more collections of this nature will be forthcoming from time to time. The sound quality of the material contained herein is admittedly not comparable to that which is to be found on newer records, but we feel that their interest far outweighs any technical inadequacies.
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