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THE PHONOSCOPE

A Monthly Journal Devoted to
SCIENTIFIC AND AMUSEMENT INVENTIONS
APPERTAINING TO
SOVND & SIGHT.

ENTERED AS SECOND-CLASS MATTER AT THE NEW YORK, N. Y., POST-OFFICE.

Vol. III

No. 10

New York, October, 1899

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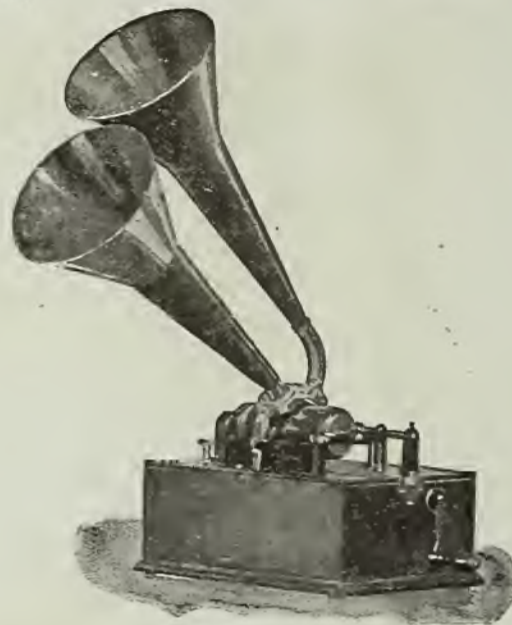
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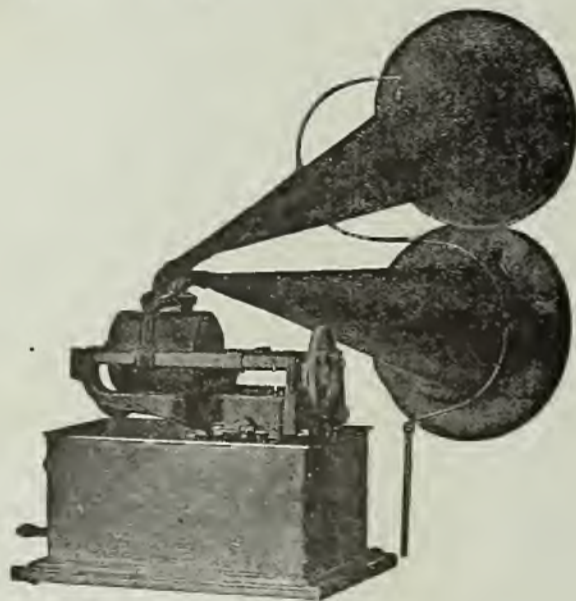
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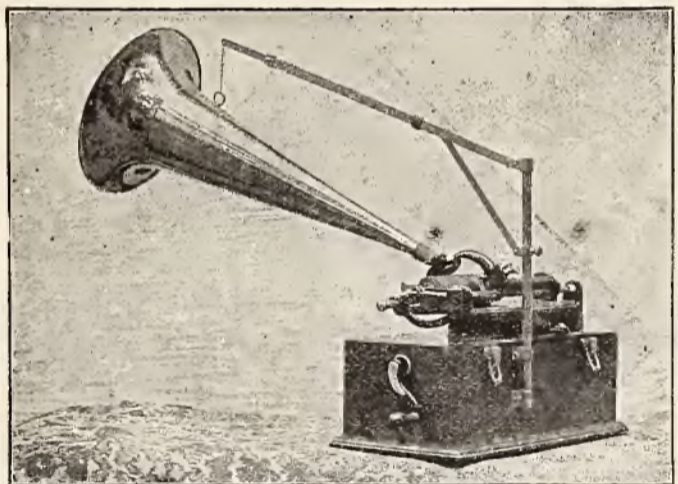
Whereas, it has come to the knowledge of the American Talking Machine Company that these certain parties or party, who are unknown to them, are circulating these stories with the intent to deceive the talking machine trade by these false and malicious statements, which is clearly an actionable proceeding.

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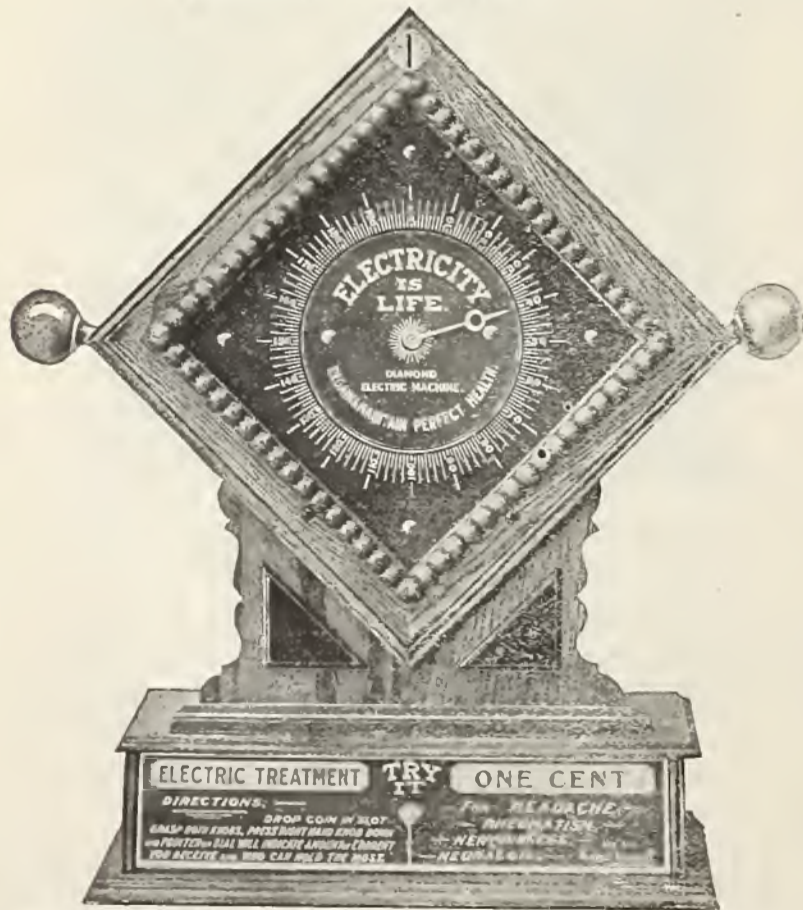
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The Phonoscope

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A Monthly Journal Devoted to Scientific and Amusement Inventions Appertaining to Sound and Sight

Vol. III.

NEW YORK, OCTOBER, 1899

No. 10

Seven Miles of Photographs Taken at Night

Four Hundred Arc Lights Were Suspended Above the Champion Boxers, Jeffries and Sharkey, as Pictures Were Taken

A series of reproductions of moving pictures taken by electric light of a pugilistic contest which recently took place at Coney Island, was illustrated in a prominent New York Newspaper. The principals, James J. Jeffries and Thomas Sharkey, engaged in a boxing bout with gloves for the heavyweight championship of the world, and Jeffries was declared the winner upon scientific points, after twenty-five rounds of the liveliest kind of boxing.

The most interesting fact in connection with this contest, however, was the making of a continuous moving picture of the entire proceedings, 110 minutes in length, by artificial light. Such an achievement in photography has never before been even approximated, and the successful outcome of the enterprise opens the widest possible field for the imagination. Sunlight is no longer a necessary element in motion photography: night may be turned into day, and sunlight discounted by the genius of the end-of-the-century photographer.

The record of the contest at Coney Island was made by the American Mutoscope and Biograph Company, of this city, the enterprise of whose cameras, working wherever there are interesting occurrences the world over, is already familiar. The photographic expert of the American Mutoscope and Biograph Company, who originated and carried out to complete success the plans for making this mammoth moving picture, gives the following interesting description of his work:

There were four cameras used at the Jeffries-Sharkey contest. Each one was run by a large storage battery at 110 volts, the same practically as is used for electric illuminating in buildings. These batteries turn over the mechanism of the cameras at the rate of 1,800 revolutions per minute, one picture being made at each revolution. Better results are obtained by the use of electric instead of hand-power. The great advantage so gained is the absolute uniformity of exposure. By that is meant that thirty pictures are made every second—not twenty-eight pictures one second and perhaps thirty-three or thirty-four another, giving that jerky appearance on the screen, which is often apparent in pictures made on machines operated by hand. The actual time of exposure is 1-150th of a second on each picture.

The film used in making the biograph record of the contest was contained in forty film boxes specially made for this purpose. They were rather cumbrous affairs, necessarily so on account of the enormous amount of film that had to be stored in each—1,365 feet. This was enough to

run steadily for four minutes, which time included the round proper, three minutes, and one minute of intermission. Inasmuch as the contest went the limit of twenty-five rounds, there was a total of 40,500 feet of negative film consumed. This means seven and two-third miles, almost enough to run, if stretched out, from the Battery to the Harlem River. This band of film was two and three-quarter inches wide and was made of celluloid similar to that used in kodaks, but of a thickness specially adapted for the biograph camera. The total number of pictures on this enormous band was 216,000, each picture being two and one-quarter inches long and two and three-quarter inches wide.

The usual biograph picture shown in the theatres runs for about half a minute. Some scenes run a minute and a few have been made running a minute and a half. When the American Mutoscope and Biograph Company produced its well-known scene of "A Trip Across the Brooklyn Bridge," which ran a trifle over three minutes, it was a noteworthy achievement, considering the magnificent quality of the scene depicted. A single round of this contest is one-third longer than the Brooklyn Bridge scene. This gives a fair idea of the gigantic proportions of the enterprise.

So far only the negative film has been referred to. It must be understood now that before an exhibition can be given on the screen an equal amount of positive film of equal size must be printed. For this contest 36,000 feet, or six and five-sixth miles have been printed. The total amount, then, of film necessary to be printed and developed before the first exhibition can be given, is fourteen and one-half miles. Those who have bought an ordinary spool of film for their kodaks (each spool usually containing twelve pictures, or enough to run the biograph camera less than one-third of a second), will perhaps realize the cost of the material required in this undertaking.

The number of operators needed on the camera stand during the exposure of this film was twelve. As one camera completed its work of recording the round and intermission, another took up the action without interruption, and thus all four cameras were in some process of recording, emptying or reloading during the entire time of the contest. This accuracy was made possible by the use of split-second stop watches and time-keepers, who kept an accurate record of the progress of the contest.

The electric equipment utilized in illuminating this scene was very extensive, and was carried out in a manner hitherto unattempted. Up to the evening of September 30, when a test was made under the exact conditions likely to prevail on the evening of the real contest, no moving picture had ever been successfully taken by electric light, and the entire scheme was discouraged and pool-pooled by all to whose attention the matter was brought and who pretended to have any knowledge of the subject, and the hopes

of the photographic expert of the American Mutoscope and Biograph Company were stigmatized as highly fantastic. The photographic value of sunlight has been estimated by scientific men who have investigated this branch of photography, as 100,000 candle power at a distance of one foot from the object to be illuminated.

The key to the situation was to be found in the devising of scientifically constructed reflectors which would thwart the well-known physical law of the diminution of the intensity of light as the square of the distance from its source. Condensing lenses and perfect parabolic reflectors were so expensive as to render their use prohibitive. A compromise had to be effected, and a reflector was actually devised approximately correct in form, which had the effect of concentrating the rays of light from the 400 arc lamps used, in such shape as to cause them to emerge in a more or less parallel direction.

It is a well known fact that in photography the shadows are taken into consideration in determining the amount of time required for each exposure. The lights take care of themselves. The lamps were so arranged as to kill their own shadows: that is, speaking roughly, what 300 lamps illuminated from the front, 100 illuminated from the back and sides. There were, therefore, practically no shadows to contend with. The 400 arc lamps were used in eleven rows. Each lamp was approximately twice as powerful as the standard street lamp, and this without considering the matter of reflectors at all, although they were the most vital portion of the equipment. It is an interesting fact that there was enough light over the twenty-four-foot ring in which the contest took place to illuminate efficiently a city of 100,000 inhabitants. That this unheard-of concentration of light was not disturbing or inconvenient to the contestants and to those immediately about the ring is best evidenced by the fact that the contest went to the limit of twenty-five rounds of the severest kind of exertion. The explanation is to be found in the fact that the eye will accommodate itself to intensities of light and darkness in a very few moments through action of the opening and closing of the iris, and it is conceded that this event was viewed by the 10,000 persons present with more optical pleasure, so to speak, than any other similar event in the past where only a few lights were used to light the ring. Neither was the heat a serious drawback, inasmuch as athletes work to the best advantage in summer heat. Sharkey himself stated that he was not even aware of the existence of the lamps, and he took no notice whatever of the heat after the first round.

It is hardly likely that this method of making moving pictures will be adopted as a matter of every-day occurrence. The expense of installation, including the arc lamps and the wiring of them, every lamp having its individual cut-out, expert-reflector work, carpenter work, not to mention the difficulty of obtaining the electric current to feed so many lamps, will no doubt be

prohibitive. In this case about \$6,300 is what was actually spent on the lighting system for the two-hours' run.

With the aid of the reflectors there was the equivalent of 800,000 candle power actually concentrated on the ring. While this amount of illumination as compared with the sun would appear to be highly insufficient, nevertheless, with the aid of specially rapid lenses and the most scientific development of the negatives, results were actually obtained which are superior to any ever obtained by sunlight.

The system of developing the negatives and also the positives printed from them was very elaborate, and by dint of working day and night with a force of expert photographers increased fourfold over the regular staff, the Company was able to produce a positive film ready for projection on the screen in ten days.

Legal Notices

SUPERIOR COURT OF CINCINNATI

THE EDISON PHONOGRAPH COMPANY, vs. ILSÉN & COMPANY.	No. 50,349.
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MOTION FOR TEMPORARY RESTRAINING ORDER.
OPINION OF THE COURT.

The plaintiff in this case claims that by purchase from the receiver of the Ohio Phonograph Company it came to be the owner of all its property including its franchises and every other right, and among other things the exclusive right to use, rent or sell in the State of Ohio Phonographs and Graphophones manufactured under the patents of Thomas A. Edison until March 26, 1903.

Plaintiff further claims that the North American Phonograph Company, a corporation organized under the laws of the state of New Jersey came to be the owner and controlled the patents of Thomas A. Edison relating to the Phonograph, and that the said North American Phonograph Company transferred its rights to the Ohio Phonograph Company for the state of Ohio, and that the latter company's rights passed by a receiver's sale to the plaintiff.

That subsequently the North American Phonograph Company went into the hands of a receiver, and its property of every kind was purchased at judicial sale by Thomas A. Edison, who subsequently organized a company called the National Phonograph Company for the purpose of manufacturing and selling the same instruments for which the plaintiff owns the territorial rights in Ohio.

That the defendants in this case are engaged in business in Cincinnati and that with the knowledge of plaintiff's rights are confederating with the National Phonograph Company and the said Thomas A. Edison to violate the rights of plaintiff and have been for some time purchasing and selling, and unless restrained, will continue to purchase and sell in Ohio Phonographs and Graphophones from the said National Company and the said Thomas A. Edison.

The defendants allege and make affidavit to the effect that they buy the instruments they sell in New Jersey of the company with which said Edison is associated, and that they are ignorant of any violation of contract in so doing.

The state courts have jurisdiction to hear and determine questions of contract with respect to patents which do not involve the validity of the patents.

In *Keeler, vs. Standard Folding Bed Company*, 157 U. S. 659 the complainants were assignees for the state of Massachusetts, of certain letters-patent granted to one Welch for an improvement in wardrobe-bedsteads. The Welch Folding Bed Company owned the patent rights for the state of Michigan. The defendants purchased a carload of said beds from the Welch Folding Bed Company, at Grand Rapids, Michigan, for the purpose of selling them in Massachusetts and afterwards sold them there and were still engaged in selling such beds in Boston.

It was held in that case that the defendants having purchased the patented articles in Michigan from the assignee of the patent for the territory included in that state, had a right to sell them anywhere within the United States, including Massachusetts, where the patent rights had been assigned to another assignee; that one who buys patented articles of manufacture from one authorized to sell them at the place where they are sold becomes possessed of an absolute property in such articles unrestricted in time or place.

In the decision of this case, however, the Court leaves open, because not presented by the case, the question whether a purchaser who knows his vendor is violating his contract may retain the purchase and resell the article.

In the case at bar the allegations of the plaintiff's petition are sufficiently broad not only probably to present this question, but the further question of fact whether the defendant and Thomas A. Edison and the company with which he is associated are not acting together in a combination against the rights of plaintiff.

But the defendants deny any such knowledge or combination, and allege on the contrary that they buy the instruments they sell in New Jersey from said companies, in entire ignorance of the fact that plaintiff has any contract with the parties from whom they purchase; and allege that no one but themselves is interested in their business.

On a motion for a temporary restraining order where the evidence is in the form of affidavits, it is impossible for me to decide that the statements of the plaintiff are true and the statements of the defendants are false. Upon final hearing, such issue, if controlling, may be determined with more confidence as to the correctness of the determination.

For the reasons stated, the motion to grant a temporary restraining order will be overruled.

C. W. BAKER, *for Plaintiff.*

HOWARD W. HAYES, OF NEWARK, N. J.,

W. P. BIDDLE, PECK & SHAFFER,
for Defendants.

Decrees have just been entered in the United States Circuit Court for the district of New Jersey, which it is expected will have a marked effect on the rapidly growing business of making records for talking-machines. The decrees are signed by Judge Kirkpatrick in suits brought by the American Graphophone Company against the United States Phonograph Company, et al. The suits were based on the fundamental patents owned by the Graphophone Company and which, it is claimed are the foundation of the existing art of recording and reproducing speech and other sounds. The charges against the Phonograph Company allege infringement by the manufacture, use and sale of so-called duplicates of sound records and the use of the machines known as duplicators.

A similar decree has been filed in the United States Circuit Court for the Eastern District of Pennsylvania, against Thomas E. Challenger, enjoining him from infringing the Graphophone Company's patents.

Phonograph a Nuisance?

Decision of The Court Says That It Is

NEW ORLEANS, LA.—Persons who own and operated pianos, organs, violins, Phonographs or other musical instruments in their places of business or private residences, had best keep on good terms with their neighbors and the police, otherwise they are liable to be taken into a recorder's court and fined for "disturbing the peace." Doubtless, since the decision rendered in one such case in the Second Recorder's Court recently, a number of affidavits charging disturbance of the peace will follow.

Sergeant J. H. Jagot, acting under instructions, made an affidavit in the Second Recorder's Court some days ago against John Cuccia, proprietor of a barroom on Hospital and Decatur Streets, charging him with violating City Ordinance No. 3,680, C. S., relative to disturbing the peace on premises by using a Phonograph.

Despite the fact that a permit to operate the instrument had been issued by the Mayor and the accused had also secured the signatures of a large majority of the residents in the immediate neighborhood to a petition for a renewal of the permit, after hearing two or three witnesses for the prosecution, Judge Aucolin fined the accused \$2.50 or ten days, declaring that the law required it and he only could follow the law.

Judge Thos. J. Ford, attorney for the accused, gave notice of an appeal from the ruling and will test the matter in a higher court. Judge Ford made a very able argument on behalf of his client, and asked why it was that affidavits had not been made against the operators of Phonographs in other sections of the city.

An Instrument that Enables a Person to Look Underground

Frank Harvey, a young French-Canadian living in Lowell, Mass., is the author of an invention which on paper is destined to become still more celebrated than the X-rays. The invention consists in a sort of a telescope, by means of which a person can look through the earth just as well as one can now see through the human body with the X-rays. It is a very delicate and complicated instrument, and the inventor has been experimenting with it in a quiet manner for many months and has in the meantime greatly perfected it. He has now applied for a patent in this country, England, France, Germany and other foreign countries. Hugo A. Duquette, of this city is looking after his interests, and recently showed a picture of the new instrument.

It is claimed for this instrument that it will allow one to see through rocks and earth even as far as a hundred feet, according to the strength of the light used. Electric light is the means of lighting the tube. With an ordinary candle power the instrument will allow human vision to penetrate through the earth as far as ten or twelve feet. But, like the X-rays, the instrument cannot send its rays through metals. They pass through water, earth, rocks, etc., but are stopped by copper, iron, lead, gold, silver and other metals.

If it is proved that it comes up to all that is claimed in its favor it will be of great use to clam diggers and pursuers of the angle worm for fish bait. Its inventor is a well-known resident of Lowell, and he was always known for his inventive genius. He is very confident in the qualities of his instrument and determined to put it before the public.

Phonographic Telephones

A Dane Invents a Means of Leaving a Message at the End of a Wire

COPENHAGEN.—Ever since the invention of the telephone it has been the dream of electricians to see an instrument perfected, which will leave a message on the other end of the wire. Numerous attempts have been made, but it has been left for a young Dane named Paulsen to invent this connecting link between the telephone and the Phonograph. Paulsen left the world in ignorance of his discovery until he astonished the residents of Copenhagen recently with a detailed story of what he had achieved. He demonstrated before a body of experts that a telephone message can be left at the other end of a wire, and the absentee by simply turning a knob, can hear what has been left for him.

Paulsen, until a few years ago, was an employee of the engineering department of the Copenhagen Telephone Company. Naturally he had many facilities for experiment, but his associates did not know what he was about. Instead of the usual Phonographic wax cylinder Paulsen supplied a steel ribbon. Where it is necessary to plane off the wax on the ordinary Phonograph, Paulsen's Phonograph needs only a cloth to rub off the writing, which does the "talking," as easily as if it was that much chalk on a blackboard.

The only reason why experiments in this direction met with failure was because it involved too much trouble to record the message on the wax cylinder. The feasibility seemed apparent enough. But until Paulsen appeared no value could be attached to the experiments. The young man has the reputation of being a thorough chemist and it is not impossible that his knowledge of chemistry and its kindred arts has enabled him to overcome what has baffled others.

The apparatus is constructed so that a very small magnetic needle which is connected with the current of the telephone wire, influences a steel ribbon which in turn runs over two cylinders.

These cylinders come in touch with the magnetic needle and the work is done. While the instrument is operating and a person talks into the telephone, the magnetism in the steel ribbon is influenced by the electric needle to such a degree that a perfect message is recorded. At the receiving end it is only necessary to let the steel ribbon pass later before the electric needle and the current will then reproduce the words sent over the wire. Just as soon as the message has been heard, by passing a magnet over the steel ribbon, the speech is wiped off immediately and the instrument is ready to receive messages again.

The experiments, which have recently been made in Copenhagen have been so successful that a company has been formed to introduce the invention all through the world. Paulsen sold out his patent, and interested in the new concern are men like bankers August Lunn and Lemvig-Fag. Patents have been applied for in all the principal countries of the world.

The experiments so far with this telephone-Phonograph go to show that song is heard more distinctly by this method than simple words. Why this should be no one seems to know. The question arose whether time would have any effect on the clearness of the message. Apprehension was felt that if the message was held for several days the words would be inaudible. To test this the steel ribbon was removed from the machine and laid away for a time. When placed in position it gave the message very plainly.

The only drawback to the present receiving instrument is its size. It is somewhat larger than

the ordinary table Phonographs. But there is reason to suppose that this will be remedied as soon as the instruments are placed on the market. The new Phonograph is a separate instrument, and if no use for it exists for some time it may be disconnected and placed to one side. It is arranged so that when some one calls up, should no one respond, the talker is at once made aware that at the other end there is only the Phonograph connection. He will, therefore, frame his message accordingly. So far as the central station is concerned, no extra work is placed on the operators there. Quite to the contrary, when a Phonographic connection is present the operators will not be called upon as frequently as before.

Young Paulsen is the son of one of the best-known lawyers in Copenhagen and has written considerable on the subject of physics as well as chemistry. His parents are wealthy. This allowed him to some extent to devote his time to the problem which he has recently solved.

Our Tattler

Residents of one of the up-river towns are busily engaged in discussing the changes and trades in which the first Phonograph that ever came to town has figured in. The machine was purchased a couple of years ago by a resident, who sent to New York for it at a cost of \$60. He bought a lot of records, and for a long time used it to entertain his friends. At last he tired of the instrument and sold it for \$35 to another man, and since then it has been on the go constantly and has figured in half a dozen very amusing incidents, as a result of which its voice has become a little out of true, so to speak.

The second man was an enterprising sort of a chap and the entertainments that he furnished with the Phonograph were for cash, strictly. After a time he received an offer to trade the machine for a horse. He thought he needed the horse, and as the animal was a fairly good one and he could get a couple of dollars to boot he decided to trade. The man who exchanged the horse kept the Phonograph for a time and then sold it for a watch, giving \$1.25 in cash to make the trade go.

The third owner of the Phonograph was of a fun-making disposition and he used the Phonograph and the accompanying records to assist him in snaps of a new and different character from anything that the villagers had ever seen. He and some of his chums took it to a church on a Sunday evening and broke up the prayer meeting by starting it playing a ragtime tune at the time a leading deacon was at the height of a fervent prayer. Of course the trouble was laid to the owner of the Phonograph, but with the help of his friends he succeeded in proving an alibi and thus escaped punishment. For a time after this the Phonograph jokes were of a more mild and innocent kind, but at last there came a day when the female inhabitants of the town arose and vowed, with indignation great, that "that Phonograph must go!" And go it did.

It came about in this way. There was a session of the local sewing circle, held at the home of one of the members, and some one succeeded in introducing the horn of the machine through a window and started it going. That would have been all right had the record, which was on the instrument been of the proper kind, but it wasn't. It was a declamation, in which profanity was a prominent feature.

That settled the history of the Phonograph so far as the town was concerned, and as above stated, it went. The owner sold it for one dollar,

and threw in the records. The young fellows who bought it took it into the woods where they were cutting cord wood, to enliven the winter evenings. As they went to camp they had barrels of fun with it, by setting it up beside the road, where neither they nor the instrument could be seen and starting it going as people passed. One old fellow, who had evidently never heard of the Phonograph or anything of that kind, stood one of the selections by Gilmore's band, but when the machine began to talk he couldn't stand it, and the way he drove his old horse into town was equal to the speed of the "Flying Yankee." Several others were frightened by the machine before it finally reached camp, where it is now furnishing all sorts of amusement for the wood-choppers.

Items of Interest

Superior to the Megaphone

The War Department has been informed of an interesting device invented by an Englishman and now being tested in the British coast forts, which promises to serve as a substitute in a limited measure for wireless telegraphy. It is claimed to be superior to the megaphone now universally used on shipboard. It is a simple parabolic reflector with a flexible speaking tube pointed at the focus of the reflector. Speaking into the tube, the sound waves are reflected in practically a direct line and caught by a similar reflector with an ear piece located at some distant point.

The report does not say what extreme range has been attained, but indicates that the experiments have been quite satisfactory.

Electricity

Electricity is in itself one of the greatest discoveries of all time, and a large number of its applications stand foremost among the achievements of the century. Guessed at by the ancients, it had its scientific beginnings with the American, Franklin. But it was the Italian, Alexander Volta, who, working out a hint given by his compatriot, Galvani, produced the device known as Volta's pile, and changed electricity from a scientific plaything to a recognized power, whose limit of usefulness can only be guessed at. Then came Joseph Henry, an American, with his voltaic battery—the germ of the modern electric motor—in 1831. When the dynamo, a result of the congress of many brains, came to supplement the electric motor, the new era of electricity had fully set in. Thomas A. Edison is the great protagonist of the new era. Following in his footsteps came his pupil, Nikola Tesla. The latter's polyphase alternating current system for the transmission and distribution of power electrically from Niagara Falls is a gigantic conception, which in its present infancy gives promise of becoming an epoch making fact. The numerous discoveries and inventions of Edison—the telephone, the Phonograph, the kinetoscope, all calling in the aid of electricity—are treated under other heads. So are the telegraph and the electric motor power, to which Edison has likewise made important contributions. In developing the uses of electricity for illuminating purposes, as great an advance over gas as that was over the oil lamp, Edison also stands supreme with his incandescent lamp, invented in 1880. This consists of a carbon filament fixed to two platinum wires, a glass bulb, in which a vacuum has been formed, and a threaded base inserted in the neck of the bulb, which holds the lamp in its socket.

THE PHONOSCOPE

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EMIL IMANDT, EDITOR

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THE PHONOSCOPE is the only journal in the world published in the interest of Talking Machines, Picture Projecting and Animating Devices, and Scientific and Amusement Inventions appertaining to Sound and Sight.

Correspondents in London, Paris, Berlin, Amsterdam, Madrid, Alexandria and Constantinople, Australia, South America, Central America, Canada and 108 cities in the United States.

The Publishers solicit contributions from the readers of THE PHONOSCOPE, and suggest that any notes, news or items appertaining to sound and sight would be acceptable.

An indestructible blank and record are among the latest inventions in the talking-machine art. They are made on a celluloid cylinder, which is prepared for engraving the record by being treated to a chemical bath. After the record is engraved the prepared surface quickly hardens and the record is ready for shipment or use. Samples of these new records which our representative heard were equal in volume or tone to the present new process wax cylinder records. The inventor hopes to have them on the market for general sale within ninety days. Their advent should do away entirely with the present fragile wax cylinders. The points of advantage claimed are: lightness, easily packed for mailing, small cost for postage, easily packed for large shipments, about twice as many to the barrel as wax, no more breakage in transportation, no breakage in use, no damaged stock, can be washed, etc.

* * *

The United States Phonograph Company, pioneers in the record making business, and who have been defendants in a suit brought by the American Graphophone Company, owners of the Bell & Tainter patents for recording and reproducing sound on wax cylinders, have consented to a judgment by the American Graphophone Company restraining them from duplicating records and thereby infringing Bell & Tainter recording and reproducing patents. The American Graphophone Company have shipped them a quantity of blanks and given them until the 15th of January in which to wind up their present business. We understand that the United States Phonograph Company have made arrangements with the Edison Phonograph Works or the National Phonograph Company to make a special line of records for them at the Edison Laboratory, therefore, the United States Phonograph Company are not actually forced out of business. The United States Phonograph Company say they were tired of the expense, which tends to show that a patent suit now-a-days is not so much a question of who has the most right, but who has the most money.

* * *

Can it be true, the rumor which we have heard, that that ubiquitous Columbia detective, the Sherlock Holmes of the talking-machine business has been himself detected and was for four of the best days during the Holiday week in durance vile? Much as we dislike to believe it, the evidence

seems to point that way. His confident smile has given place to a troubled look and his lack lustre appearance is accounted for when we see that his old friend, the Kohinoor, no longer flashes from his shirt front. But as we notice him nervously fingering the ticket in his vest pocket we know that that friend is not forgotten. Other friends and trusted employers may fail him at the critical moment and an appeal for bail at three o'clock in the morning meet with only a sleepy refusal. But his diamonds fail not and at a moment's call, pass submissively to the oblivion behind the mystic three balls to remain until their owner has sold more duplicators and fake Concert Phonographs and a few barrels of "Gilt (guilt) Edge" records and raised the price of their ransom. Will he ever learn that infringing is expensive and that honesty is the best policy?

* * *

Word has reached New York that there are further international complications arising in the offering of American made talking-machines in the English market. The Edison-Bell Company, of London, own English rights under perpetual license from Edison, also the Graphophone Company, and they have been suing everybody offering these goods or trying to deliver them in that market. At the time E. Barry Owen organized the English Gramophone Company, suits were started against his Company and they were enjoined, but the case was continued pending a final hearing and the English Gramophone Company are now operating on a large scale, but a new issue has arisen which causes further complications in the field. American export houses are offering to the English trade a machine called the Zonophone, which is made by a New York Company who are identified with the National Gramophone Company. The English Company claim that this new Zonophone machine has no patent rights whatever, that it is being made the opportunity of a plot to encroach upon their territory, and they now threaten to retaliate by seizing every one that comes into the English market, one of the queer things in English law being that it allows the inventor or owner of a patent to seize the property he claims infringes his rights, and courts then try the case afterward.

A Challenge

January 5, 1900

PHONOSCOPE PUBLISHING COMPANY.

The Brooklyn Phonograph Company informs us that the reason given them by the National Phonograph Company for placing them upon the suspended dealers list was for selling us either directly or indirectly Edison Phonographs. It has been rumored among the trade that Mr. C. H. Wilson, of the National Phonograph Company, has \$500.00 to wager that he can prove this to be a fact. If Mr. Wilson has \$500.00 to so wager we are willing to cover this amount or any sum up to \$10,000.00 by certified check, that the allegation cannot be proved. In view of the above statement it seems superfluous to add here that the Brooklyn Phonograph Company have never sold us directly or indirectly any Edison Phonographs.

Very truly

HAWTHORNE & SHEBLE.

The Edison American Phonograph Company of Kansas City, Mo., who were threatened with a law suit by Thomas A. Edison if they did not immediately discontinue the use of his name, promptly acquiesced.

Trade Notes

Miss Mann is having deserved success with her records with violin obligato by Mr. Erdman, for which there is a great demand.

Miss Sallie Stembler is receiving favorable mention for her "My Love's the Same" published by Hylands, Spencer & Yeager Company.

Pathe Freres are now selling a new Graphophone, modeled after the Gem Phonograph with improvements and using a Graphophone reproducer.

The process of duplication is by a new duplicator having both mandrils on one shaft. The idea is both novel and simple and the results are astonishing.

Mallory Brothers, with Williams & Walker, will use the big hits "The Girl I Loved in Sunny Tennessee" and "The Moth and the Flame" on the saxophone.

A small talking-machine has lately been placed on the market with a very simple reproducer and light horn attached, which will sell for the small sum of two dollars.

"My Blackbird" is developing into a great favorite. When the boys on the street begin to whistle it there can be little doubt that "Blackbird has really caught on.

The Talking Machine Company, of Chicago, in its latest booklet makes a specialty of a series of Moody & Sankey hymns in record form. Mr. Sankey made the records.

It is interesting to note the remote points into which the talking-machine is penetrating. Messrs. Hawthorne & Sheble report recent shipments to Chili, Japan, Liberia, India and Russia.

Mr. J. Aldrich Libbey, the well-known baritone, is doing some fine work for the Lyric Company, in Concert Grand records. His repertoire embraces the songs of the Winsor Music Company.

A quarterly dividend (No. 19) of two percent has been declared on the preferred stock of the American Graphophone Company, payable February 15, to stock holders of record February 1.

England's war with the Boers has even effected the talking-machine business. Messrs. Hawthorne & Sheble report that some of their best South African trade has been entirely cut off since hostilities commenced.

Messrs. Hawthorne & Sheble are always on the lookout for anything new in the talking-machine line, and their facilities enable them to push anything to the very best advantage. They report their business for December as one of the largest in their career.

Mr. Fred. V. Bower's latest song, "When I Think of Thee" is being sung by Miss Mann, and Mr. Monroe H. Rosenfeld's "I'd Rather Be An Old Man's Darling, Than a Young Man's Slave" is being sung from manuscript by the same lady. Both songs are great.

The Lyric Phonograph Company are doing a great business in Concert Grands; their records are clear, loud and musical. Zither duets are an additional novelty this company will have this month for their patrons; the artists are Messrs. Geo. Lechler and August Schmidt.

F. W. Hager, the well known leader and violinist who won the gold medal presented by the PHONOSCOPE PUBLISHING COMPANY, at the Pittsburgh Exposition recently issued a neat card to display in the windows of Phonograph parlors. These cards can be procured upon request.

Word comes to us from London that Russell Hunting has charge of the record making department of the Edison Bell Consolidated Phonograph Company, Limited, of London. We congratulate his employees on having obtained the services of so able a man as Mr. Hunting is in that line.

Mr. F. H. Woodbridge who was so long with F. M. Prescott as export salesman, has made an extensive trip through the south in the interest of the Gramophone. He reports good business everywhere and that he had no trouble in selling the Gramophone over the other types of talking-machines.

It is certainly interesting to note the growth and development of Hawthorne & Sheble's business. They have always occupied a prominent position in the talking-machine world, but to-day they are among the recognized leaders, and the trade is asking what will be their next move in developing and pushing.

Mr. John A. Heinzman, pianoist, for the Concert Phonograph Company, with the assistance of his brother, Mr. O. M. Heinzman, have just completed, which they hope to be New York's latest waltz song success entitled "She's Mine, All Mine." Jos. Stern & Company, have been the lucky ones to get the song.

Pathe Freres, of Paris, have put on the market an improved form of recorder and reproducer for Graphophones. It is exceedingly sensitive and reproduces more loudly than other types. It is made of vulcanite and has a large deep sound-box with a diaphragm glass. The list price is but ten francs or \$2.00.

In the United States Circuit Court recently Judge Dallas entered a decree in the equity suit of the American Graphophone Company against Thomas E. Challenger. The patent of Gianini Bettini for improvements in Phonographs was sustained and the defendant, Mr. Challenger, was enjoined perpetually from making an infringement.

Clinton B. Repp, formerly with the Columbia Phonograph Company's New York store, is now manager for the American Talking Machine Company, Havana branch, having taken charge of the office early in December. Mr. Edgar, formerly in charge in Havana has been transferred to the uptown branch of the Company in this city.

The demand for talking-machines is constantly increasing. This, the makers say, is due to the great improvement in the machines themselves as well as the lowering of prices. The receipts, sales and profits of the American Graphophone Company during the month of December just passed were by far the greatest in the history of the company.

Since the Brooklyn Phonograph Company were placed on the suspended list by the National Phonograph Company they report the supply and sale of Edison Phonographs has been larger than ever before. Judging from the healthy condition of business of other large dealers also on the suspended list it is unnecessary for us to point to the moral here.

Mr. Tracy L. Freeman, who managed the American Mutoscope parlors here during the summer, and who was afterward selected as assistant manager of the New England Mutoscope Company (a branch of the American), has now been given the position as general manager of the New England Mutoscope Company, with offices in Boston.

The handsome Phonograph laboratory recently opened by the National Phonograph Company in New York City is under the able management of I. W. Norcross, Jr., who has gained the reputation of being one of the foremost record takers. Our representative heard a few of their Edison concert records and can safely say that as yet they have no equal.

A novelty in the manner of laying corner stones occurred at Bascom, O., the occasion being the laying of the corner stone of the new school house at that place. The speech for the event was made by City Solicitor A. P. Black, of Tiffin, and it was recorded on a Phonograph cylinder, after which the cylinder and Phonograph were put in the stone with the other articles which were to be kept.

One of the special features of Wm. West's big Minstrel Jubilee, at the Star Theatre, New York, recently was Carroll Johnson's rendition of "My Black Bird." He is featuring this song and another, "Warum Baby From the South." Mr. Johnson, on the first night, was the recipient of a gorgeous floral offering in the form of a horse shoe, which was large enough to enable Richard Jose to hide behind it.

We are informed that the suit instituted by the American Graphophone Company, vs. The Polyphone Company, Leon Douglass and others, for duplicating, has been decided against the American Graphophone Company. The Graphophone Company appealed. The Court of Appeals, by Judge Seamon, Judge Woods and Judge Bunn, all decided in favor of The Polyphone Company, Leon Douglass and others.

Chas. S. Hall, manager of the National Gramophone Company's Philadelphia office, was arrested on complaint of M. Krulan, manager of the Philadelphia office of the American Vitaphone Company, for uttering false and slanderous statements, and was held in bail, which was furnished by Mr. Parvin, president of the Berliner Gramophone Company of Philadelphia. The war is waxing hot in the disk talking-machine business evidently.

The Paris Exposition is going to open up a grand field for the distribution of literature and information regarding the talking-machine, and it is to be hoped that our American manufacturers who are leading the world, will not fail to make application for space at what promises to be one of the greatest expositions the world has ever seen. The Columbia Phonograph Company having an established house in Paris, is making preparations to put in an elaborate exhibit of their products.

F. H. Woodbridge, formerly with F. M. Prescott, sole export agent of the National Gramophone Company, has joined the selling forces of the American Talking Machine Company, in pushing the new vitaphone disk talking-machine. Woodie is well-known to the New York trade, and one of our correspondents meeting him on the street, asked him why he had shifted, to which he replied in his jovial way, that he saw his finish unless he got in line with the real thing. He is now on his way to the Pacific Coast stirring up things for the new machine.

"Picture No Artist Can Paint," which, by the way, is meeting with a gratifying sale, has been selected on the list to be adapted to the newly patented song illustrator. This new machine designed by Mr. Len Spencer and owned by him is a slot device requiring a nickel to operate it. Simultaneously with the reproduction of the song by the Graphophone the twenty-three electrically illuminated views follow the title page in succession before the eye. The model is complete and is a credit to the Capps Manufacturing Company, of Newark, N. J., who made it. The cabinet intended for use is the finest obtainable.

A lighted cigarette dropped from the gallery to the balcony and striking a roll of film used in a vitagraph caused an explosion, a fire and a panic in the Court Street Theatre, Buffalo, N. Y. It was at the matinee given by the Tammany Tigers Burlesque Company.

The operator, Frank Main, of New York, who claims he was showing some of the stolen pictures of the Jeffries-Sharkey fight, had his face, neck and arms badly burned. The flash from the vitagraph reached half way across the darkened theatre, and hundreds of people crushed and bruised each other in their attempts to escape. The pictures were destroyed at an estimated loss of \$1,000.

Joseph W. Jones, who has charge of the record laboratory of the American Talking Machine Company, will leave on January 27th for Europe with recording apparatus, in order to secure some of the best coster songs and music hall novelties, so as to prepare a full line of records for the English market. While abroad he will also visit Paris, taking French records, and also Madrid in order to get some pure Castilian Spanish records, something that the American manufacturers have sadly lacked, and one of the greatest complaints made by Spanish-speaking countries in reference to the American manufacturers of Phonographic goods is the quality of the language used in what is supposed to be good Spanish records.

At the adjointed meeting of the American Graphophone Company, held at the office of the President in New York recently directors for the ensuing year were elected as follows, all the old directors being re-elected: M. E. Lyle, Andrew Devine, F. J. Warburton, Edward D. Easton, R. F. Cromelin, Thomas R. White, Jr., Philip Mauro, Wm. Herbert Smith and John J. Phelps.

The board was organized for the year, E. D. Easton being re-elected President; M. E. Lyle, Vice-President; Wm. Herbert Smith, Treasurer; and F. Bischoff, Secretary. Messrs. Easton, Devine and Lyle were elected as the executive committee.

The annual reports submitted showed the enterprise to be in flourishing condition. During the year \$32,000 more was paid in dividends than in the preceding year, the total amount distributed in dividends for the year being \$150,000.

'Graphs, 'Phones and 'Scopes

The Multiphone

La Nature gives a description of a multiphone, the invention of M. Dussand. This appliance is intended to augment the sounds of the telephone and Phonograph, as well as to apply to other uses. By the means of this instrument deaf persons have been enabled to hear the telephone and Phonograph. But, while this is possible, its greatest utility will be in enabling partially deaf persons to hear these instruments, and to multiply their sounds so that they can be used in auditoriums on public occasions, as well as the multiplying of all kinds of sounds, and especially in rendering audible sounds now beyond the capability of the human ear.

The Spectrograph

The spectrograph is an instrument for photographing the spectra of celestial objects—that is, the rainbowlike bands into which their light is spread out by the prisms of a spectroscope. Among the investigations which are conducted with this instrument is that of the movement of stars "in the line of sight," or, in other words, directly toward us or directly from us. The movement is revealed by a very slight displacement of the dark lines that cross these spectra, and so accurately are the observations and measurements now made that according to a recent statement of Professor J. E. Keeler, the director of the Lick observatory, the probable error of a single determination of velocity with the Mills spectrograph attached to the thirty-six inch telescope is for the best stars, only about one-quarter of a kilometre per second, or less than one-sixth of a mile. That is to say, with this instrument it can be told not merely whether a star is approaching or receding, but how many miles it moves a second within this small limit of uncertainty.

During the last three or four years this spectrograph of the Lick observatory has been used by Professor W. W. Campbell, assisted by W. H. Wright, for observing systematically certain stars suspected of being variable in their rates of movement. The results of the observations have been published from time to time in the last year, and form one of the most interesting and important contributions that have recently been made to stellar astronomy. Down to the present time fifteen stars have been found which vary in their velocities in such a way as to indicate that they are circling in orbits, that they form parts of systems consisting of at least two bodies which revolved about each other, or, rather, about their common center of gravity, like the two balls of a dumbbell tossed into the air.

One of the most interesting of these cases is the discovery, that Polaris or the North Star, is a triple system, the bright and visible star being attended by at least two dark companions, one of which forms with it a binary star, having a period of about four days, while these two bodies circle together around the third, in a period not yet determined, but which is probably several years in length. This discovery, made from a comparison of fifteen photographs of the spectrum of Polaris, taken between the 5th and 30th of last August, has since been confirmed, so far at least as regards the binary system, by similar photographs obtained by E. B. Frost at the Yerkes observatory.

Another very interesting star on Professor Campbell's list is Capella, the brilliant star which may now be seen in the early evening in the

northwest. A recent examination of six spectrum plates of Capella, taken with the Mills spectrograph in 1897, "leaves no doubt that this star is a spectroscopic binary." The plates show a variation in the velocity of the star, the movement of which is from us, between the limits of about thirty-three and two miles a second. The companion of Capella, about which this movement is taking place, appears to be a dark body, but there are indications of a third companion, which is luminous and which circles round Capella with a short period, not yet determined, so that this star also is probably, like Polaris, at least a triple system. It may be interesting to recall here that a few years ago the star Beta Aurigae, a star of the second magnitude in the right shoulder of Auriga (the Wagoner)—Capella is in his left shoulder—was discovered at the Harvard college observatory to be spectroscopically binary, both components being bright and the period of revolution being about four days.

Another of the stars which have been found by Campbell to be variable in their velocity is Epsilon Ursae Minoris, a star of the fourth magnitude, the third star from Polaris in the handle of the Little Dipper. This star moves sometimes towards us, sometimes from us, the variation in its rate of travel being nearly thirty miles a second.

Another star in this region of the heavens, which varies in its velocity still more rapidly is Omega Draconis, a star of the fifth magnitude, situated about midway between Polaris and the "eyes" of the Dragon. Four plates of the spectrum of this star, taken between July 25, and August 29, this year, give different velocities, ranging between eleven miles a second from us and thirty-eight miles a second towards us.

Still another very interesting star on the list is Beta Capricorni, of the second magnitude, the lower of a very conspicuous pair of stars which we may see on a September evening low in the south. In August, 1898, this star was found to be approaching at the rate of about three miles a second. Between the dates May 15, and September 26, 1899, a number of spectrograms of the star were taken, which indicate different velocities, ranging between about twenty-eight and twenty-one miles a second.

As was before stated, the list of these discoveries now contains fifteen stars, those named above being selected as especially notable. Only in the case of Polaris has a period of evolution been ascertained, but "the observations for determining the orbits of these bodies are well up to date," says Professor Campbell, "and for several of them are practically completed." Some idea of the labor involved in the observations which have led to these results, to say nothing of that of making the measurements and "reductions," can be formed from the statement that 522 plates were taken with the Mills spectrograph in the last year.

The companion of Sirius was discovered by Alvan Clark, Jr., in 1862, and more recently that of Procyon has probably been seen by Schaeberle, at the Lick observatory, so that these companion stars have been taken off the list of dark suns. Evidence of the existence in space of non-luminous bodies of considerable size is also furnished by the variable stars of the "Algol type," stars, which, after shining steadily for a few days, undergo, in the course of a few hours, a greater or less diminution of brilliancy. The suggestion was made long ago, in the case of Algol, that this star was attended by a dark companion, which, revolving round it and passing periodically between it and us, cut off a portion of its light, and a few years ago Vogel, by means of the spectroscope, used as Campbell now uses it, proved conclusively that such is the case.

The Nethoscope

A step in advance in the science of meteorology has been made at the Auditorium tower. A new instrument by means of which an entirely new precision in study of cloud forms and movements is possible has been placed. This new piece of apparatus is called the nethoscope.

This little device enables exact observation of cloud movements, and it is hoped that after some time the weather men will be able to foretell from the action and conformation of the clouds swimming in the bright sky the weather that is to come. They think it not unlikely that long series of observations in many places in all weathers will give data that will connect certain cloud forms with coming thunder-storms or cold waves or drenching rains or cyclones. Again, it is expected that after long observation the velocity of the clouds may enable the forecasters to predict the winds to come.

However, all this is in the future. For the present the weather men can do no more than take observations with the nethoscope day and night and Sundays and send the carefully marked charts to Washington, where the mathematicians will compare states of the barometer with the cloud shapes and speeds. It has been found already that there is connection between cloud conformations and velocities within single isothermal zones.

The nethoscope is simple. A circular mirror with black instead of silver background is fixed in a frame so that it can be accurately leveled. Rising upward from one edge of the black mirror is a steel wire that has a cross-arm, also of wire. The two look like a ship's mast with a yard across it. From the tip of the mast, to make the resemblance more complete, runs a thread of rigging that extends to the center of the black mirror and there vanishes through a hole.

The instrument is used by getting a sight of the cloud in the black mirror. Then the mastlike wire is moved until the eye sights over its tip and just catches the edge of the cloud's reflection at the center of the mirror. The tiny thread is pulled taut from masthead to center and its angle from the plane of the mirror measured with a scale. Next a calculation is made and the angle of the cloud's altitude is secured. From this can be deduced the cloud's height from the ground. This done, the measurement of its size is simple, the observer having a scale cut into the polished face of the mirror. The velocity is measured on the same scale, which is on a diameter of the circle, by moving the scale into the line of the cloud's movement.

The Graphophone Won the Blue Ribbon

Highest honors were won by the Columbia Phonograph Company on account of its display at the National Export Exposition recently held in Philadelphia. The award consisted of the blue ribbon and silver medal, the greatest honors within the gift of the Exposition.

The exhibit of Graphophones, records and talking-machine supplies at the company's booth was also highly complimented by the committee on awards, at whose request the Graphophone Grand, the giant-voiced talking-machine, was utilized during the last days of the Exposition in the music hall of the main building as a part of the musical attraction. The reproductions of this machine which represents the farthest advance in the talking-machine art, could be heard without effort in every part of the immense auditorium.

X-Ray Items

Dr. Scott Invents a Current Interrupter That May Extend the Ray's Penetrating Gaze

A Kansas City physician has constructed an improvement on the ordinary X-ray apparatus that promises to be an innovation in the scientific world. The experimenter is Dr. J. N. Scott, who is regarded as an authority on X-ray work.

Since the discovery of the mysterious rays, electricians have experimented in vain to discover a new system of increasing the current in order to render opaque articles more transparent. The system employed at present enables the camera to photograph such subjects as bullets imbedded in flesh, or other articles hidden by opaque substances, but the negatives thus secured are dim and indistinct.

Dr. Scott has constructed a current interrupter that increases the current to such a degree that it is thought that photographs almost perfect in detail will be secured.

The apparatus is as yet very crude, but the experimenter declares that he will soon achieve the success he desires.

New Roentgen Rays

A new kind of Roentgen rays appears to have just been discovered. On the occasion of the annual meeting of the Chemical-Physical Society, recently held in Vienna, Herr Stefan Meyer and Dr. von Schweidler made some very interesting demonstrations with the newly discovered element, "radium." That element gives off rays similar to, but weaker than Roentgen rays. The former, like the latter, produce a clearly discernible fluorescence, and can penetrate sheets of aluminum and other metals, nay, pretty thick lead also. Another important property of radium is that it makes the air a better conductor for electricity. The first public demonstrations took place before the Society of Physicists at Munich, and now experiments with it have been made in the presence of a number of scientists in this city. They were carried on in a perfectly dark room. The first thing shown was a screen coated with cyanide of barium platinum, and radium produced fluorescence on it. The preparation was distinctly visible at a distance of about two meters, and in regard to the intensity of its light it reminded the beholder of the glow worm. The insertion of an aluminum plate made the effect produced a little weaker, while copper and iron diminished it more, but still the phosphorescent light was visible to those near. Further demonstrations showed that radium makes the air conductive for electricity. Then some radium was placed near an electroscope, and the resultant effect shown on a white sheet on the wall. All the experiments were most successful.

World's Biggest X-Ray Machine

Sioux City may have the largest and most powerful X-ray machine in the world.

Dr. John Hermann, whose offices are in the Metropolitan block, has offered an eastern manufacturing company \$3,500 for a machine which will meet certain requirements laid down by him and the company has assured him that it can meet the requirements. The wonderful machine is now in the process of manufacture. Dr. Hermann has \$3,000 on deposit in one of the Sioux City banks, which, with an additional \$500, will be turned over to the manufacturing company when it delivers the machine and gives proof of the work it can do.

What Dr. Hermann wants is a machine with which he can take instantaneous photographs of the human body and parts thereof, under the influence of the wonderful Roentgen rays. With the machine he now has, which, too, is an expensive one, it is necessary to make an exposure of a minute or so in order to get a good photograph. The advantage of an instantaneous photograph, where there could be no movement of the body or its members to blur the plate, is evident. Then, too, the power of the new machine would be much stronger and greater than that of more ordinary machines, so the photographs would be clearer and more distinct, and consequently of more value.

In the new machine there will be seventy-two miles of wire. This long line is used in the generation of the force in which will lie the value of the machine. It will be strong enough to throw a spark three feet. The machine which the doctor now uses in his X-ray work will throw a spark fifteen inches.

Dr. Hermann is one of the pioneers in the use of the Roentgen rays in medical practice in this country. When the discovery of the remarkable light was first made known he began experimenting, making a number of photographs. Later on he purchased an expensive apparatus, which has been used in a number of important surgical operations. It is the only X-ray machine in Sioux City, and, indeed, the only one for miles around.

The last patient to be put under the light of the machine was "Australian" Billy Murphy, the prize fighter, whose right arm is giving him so much trouble. This arm he broke in his fight with Larry Gleason at the Grand Opera House a few weeks ago. Dr. Hermann got an excellent photograph of the arm. It was to be seen from the plate that the photograph was a good one.

Slot Machines

Senator Wagner introduced a bill, making it a misdemeanor for any person to have in his possession "any slot machine or any other mechanical contrivance with moving pictures of immoral images or objects."

"Poor Device the Police Can't Get Anything Out of," Remarks the Magistrate

Issac Tobolsky, who keeps a cigar store in New York City, was held for the Grand Jury by Magistrate Meade in the Essex Market police court, for having in his store a gambling device in the shape of a penny-in-the-slot machine which gives a chance to win several cigars for a cent.

"How did you know that this machine was a gambling device?" asked the Magistrate.

"Because," replied the detective. "I dropped in a cent and didn't get a thing."

"Well, it must be a pretty poor device when the police can't get anything out of it," said the Magistrate.

The penny-in-the-slot system is becoming immensely popular in Germany. The very latest extension of the kind takes the form of automatic telephone machines, of which no fewer than fifty have been fixed up in Berlin Post Offices, while nearly fifty more have been erected in the leading shops and restaurants of that city. The charge for a three-minute conversation within the metropolis is one penny, and an extra penny enables one to converse with friends in the

suburbs for the same space of time. It was proposed further to attach specimens of these telephones to the principle stations in the capital, but, unfortunately for the general public, the railway companies have not yet made up their minds whether such an arrangement would be to their own advantage or not, and until they have signified their approval of the proposed plan, the postal officials can do nothing.

A Change in Newport

The slot machines are being removed from Newport, but not because of any moral argument or scruple. Last summer the clergymen and some other good citizens inaugurated a crusade against them, and at the election of municipal officers a few months ago the machines were a burning issue. But in spite of all crusades, and notwithstanding all the political efforts, the machines continued to receive all of the nickels which were presented, and to distribute the promised cash prizes at indefinite and widely separated periods. But now this is being changed.

It seems that some enterprising individuals have been "working" the machines. As the machines always had the best of the argument with those who parted with their nickels, some patrons determined to even up things. This was done by securing a liberal supply of valueless metal disks in size and weight similar to the nickel, which were fed into the machines. In due time, when the owners came to investigate, they discovered that the "working" process was against them financially. Accordingly the machines have been withdrawn, as they were supposed to be money-making rather than money-losing schemes.

"Business is business," you know.

New Corporations

The annual meeting of the stockholders of the American Mutoscope & Biograph Company, which is capitalized at \$2,000,000, was held in Jersey City recently, and the following Board of Directors was elected for the ensuing year: George R. Blanchard, Edward J. Berwind, Herman Casler, W. C. Brown, G. M. Dodge, S. M. Dodd, William H. Kimball, W. C. Andrews, William R. Thomas, A. W. Soper, Robert P. Porter, Henry N. Marvin, Channing F. Meek, Elias B. Koopman, John T. Easton and William H. Macnabb. This concern, which holds the patents on biographs, has recently organized a number of sub-companies, with a capital of from \$100,000 to \$400,000, which will act as operating companies and have exclusive rights in the various territories in which they are located.

The American Talking Machine Company, who are manufacturers of the vitaphone, having received complaints from a number of their customers that they were being annoyed by parties circulating false and slanderous statements in reference to patents, claiming that the American Talking Machine Company was being sued by their competitors, has caused the American Talking Machine Company to place the matter in the hands of the Mercantile Association of America, and they have offered a reward of \$1,000.00 for the arrest and conviction of the parties circulating these false statements, which were intended to deceive the talking-machine trade. We believe that the circulation of rumors of this character when without foundation, is very dishonorable and should not be countenanced by reputable dealers.

Wants and For Sale

Special "Want" and "For Sale" advertisements will be inserted in this column at the uniform rate of three cents a word, each insertion. Answers can be sent in charge of "The Phonoscope" if desired. All letters received will be promptly forwarded to parties for whom intended, without extra charge.

FOR SALE—100 Artoscopes, nickel-in-the-slot picture machines, all in good order; make an offer for one or the lot. Address, A. B. care Phonoscope Publishing Company, 4 East 14th Street, New York City.

FOR SALE—Graphophone Recorders, new, \$3.50 each. Address, C. D., care of Phonoscope Publishing Co., 4 East 14th Street, New York City.

New Films for "Screen" Machines

The following list of new films has been compiled from lists sent us by the leading foreign and domestic manufacturers

DEWEY FILMS

Eight parties were equipped on the occasion of Admiral Dewey's arrival in New York, Wednesday, September 27, 1898, and secured the following excellent moving pictures of the Admiral and his great ship, together with the stirring events of Dewey Day, September 29, the day of the Naval Parade and Dewey Day, September 30, the day of the Land Parade.

This was the only photographic apparatus on board the U. S. Cruiser Olympia on this memorial occasion. The Admiral posed especially for this camera.

PANORAMIC VIEW OF GRANT'S TOMB, RIVERSIDE DRIVE. Showing throngs on the River banks watching parade.

POLICE BOATS AND PLEASURE CRAFT ON WAY TO OLYMPIA. Showing Hospital Boat 'Missouri' and Gun Boat 'Dupont,' the latter under full speed.

ADMIRAL DEWEY LEADING LAND PARADE ON RIVERSIDE DRIVE. Showing Naval Brigade of North Atlantic Fleet, followed by Schley, Sampson, Miles and other celebrities, The Admiral is in a carriage with Mayor Van Wyck.

MOUNTED POLICE, SOUSA'S BAND AND SAILORS FROM U. S. S. OLYMPIA.

ADMIRAL DEWEY AND MAYOR VAN WYCK GOING DOWN RIVERSIDE DRIVE. Showing Battleship saluting on Hudson River.

PANORAMIC VIEW OF NAVAL FLOAT (OLYMPIA.)

PRESENTATION OF NATION'S SWORD TO ADMIRAL DEWEY by Secretary Long, at Washington, showing President McKinley, the Admiral and many other celebrities.

WEST POINT CADETS IN LAND PARADE.

TENTH PENNSYLVANIA VOLUNTEERS IN DEWEY LAND PARADE.

BATTERY K. SIEGE GUNS IN DEWEY LAND PARADE.

GOVERNOR ROOSEVELT AND STAFF IN DEWEY LAND PARADE.

ADMIRAL DEWEY LEADING LAND PARADE, EIGHT AVENUE. Showing Central Park in background.

U. S. MARINES IN DEWEY LAND PARADE.

FLAGSHIP OLYMPIA AND CRUISER NEW YORK IN NAVAL PARADE.

ADMIRAL DEWEY'S FIRST STEP ON AMERICAN SHORE.

PANORAMIC VIEW OF CRUISER OLYMPIA. With the entire White Squadron in the background.

ADMIRAL DEWEY AT STATE HOUSE, BOSTON, MASS. This picture shows Dewey coming down the State House steps leaning on the arm of Governor Walcott.

FOR SALE.—Now ready, bound copies of THE PHONOSCOPE Vols. I and II. Price \$2.00 per volume. Address Phonoscope Publishing Co., 4 East 14th Street.

FOR SALE.—Home Grand Graphophone, more than twice as loud as the voice or vocal rendition, including recorder, reproducer and shaving-knife, large brass horn, records, blanks, etc. Address, J. K. care of Phonoscope Publishing Company, 4 East 14th Street, New York City.

FOR SALE.—Complete talking-machine outfit, consisting of the Eagle Graphophone, 6 records, 3 blank cylinders and 2-way hearing tube. Price \$10. Address, J. W. care of Phonoscope Publishing Company, 4 East 14th Street, New York City.

New Records for Talking Machines

The following list of new records has been compiled from lists sent us by the leading talking machine companies of the United States

All I Want is Action for My Money Mr. Erdman
An Ethiopian Mardi Gras (Violin Solo) Mr. Erdman
Across the Hills to Georgia (Violin Obligato) Miss Mann & Mr. Erdman
A Rural Wedding (W. Mason Organ Solo) F. O. Elmore
An Innocent Young Maid (Roger Bro's. Hit) Miss Mann
Aht's "Little Snow White," Lyric Trio
Alti and Terame (Said Pasha) Miss Mann & Mr. Havens
Bugle Calls Wm. J. Styles
Bridal March (Organ Solo) F. Oscar Elmore
Constance's Solo From Oper "Ameer" Miss Mann
Captain of the Pinacore Lyric Trio
Duet From the Greek Slave Miss Mann & Mr. Havens
Duet From "The Ameer" Miss Mann & Mr. Havens
Defender Polka (Cornet) Wm. Styles
Daughter of Love Waltz (Mandolin) Mr. L. Wolfe
Dolly Dear Geo. Gaskin
Everybody Have a Good Time Dan Quinn
Everything is Rag-Time Now Len Spencer
Flowers That Bloom in the Spring Lyric Trio
Heimweh (Violin Obligato) Miss Mann & Mr. Erdman
Heimweh (Violin Solo) Mr. Erdman
Hannah's a Hummer Dan Quinn
I Couldn't Do a Thing To You Dan Quinn
In Dahomey Dan Quinn
I've Waited Honey, Waited Long For You Dan Quinn
International March (Mandolin) Mr. L. Wolfe
I Want My Lon Lou Anna Barthold
I'd Leave My Happy Home For You Len Spencer
I've Waited Honey, Waited Long For You Len Spencer
I Don't Care to be Your Lady Friend No More (Violin Solo) Mr. Erdman
I've Waited Honey, Waited Long For You (Violin Obligato) Miss Mann & Mr. Erdman
In Old Ben Franklin's Days From Opera "Ameer" John Havens
I'm Glad I Met You Mary John Havens
I Will Magnify Thee, O Lord (with Organ) Lyric Trio
In Zion's Sacred Gates (with Organ) Lyric Trio
Jennie Jones (Variations Cornet) Wm. Styles
Love is Tyrant From Opera "Singing Girl" Miss Mann
March Francaise (Seetson Clark Organ Solo) F. Oscar Elmore
My Darling Nell (Violin Obligato) Miss Mann & Mr. Erdman
My Alabama Lize John Havens
Michael Murphy as a Gas Bill Collector J. R. Gannon
My Blackbird (Orch. Acc.) Len Spencer
Murphy as a Political Speaker J. R. Gannon
My African Queen Dan Quinn
My Creole Sue Steve Porter
My Little Georgia Rose Steve Porter
One Little Word Steve Porter
San Francisco Sadie Dan Quinn
Rosie Carey Anna Barthold
Solo from "Boccaccio" Anna Barthold
She'd Never Been There Before Anna Barthold
Sunny Southern Home Geo. Gaskin
She is More to be Pitted Than Censured Anna Barthold
Smoky Mokes Len Spencer
Sweet Little Maid From Ireland Geo. Gaskin
Suwanee River Anna Barthold
Simple Aven (Cello Solo) Muster Jean Moliere
Sis Hopkins J. R. Gannon
Sweet Rose, Yodel Song and Dance Geo. P. Watson
Scene De Ballet (Violin Solo) Mr. Erdman
Tyrolean Song From Opera "Singing Girl" Miss Mann
Two Roses (new) Miss Mann
Torpedo and the Whale Lyric Trio
The Matrimonial Guards (Charlatan) Miss Mann & Mr. Havens
The Oriental Coon (Orch. Acc.) Len Spencer
Think Once Again Before We Part Anna Barthold
The Rag-Time Hymn Dan Quinn
The Hottest Ever Dan Quinn
The Girl I Loved in Sunny Tennessee Steve Porter
Tramcarrie (Cello Solo) Muster Jean Moliere
Tripping on the Green Reed's Orchestra
The Kissing Bug Steve Porter
Those Cruel Words Good-bye Steve Porter
Vienna Forever (Mandolin) Mr. L. Wolfe
When the Swallows Homeward Fly Anna Barthold
Where the Sweet Magnolia Blooms Steve Porter
Won't You Take Me Back to Dixie Steve Porter
When You Come Back to Georgia John Havens
When I Think of Thee Miss Mann
Warmin' Up in Dixie Reed's Orchestra
We All Went Down to Murphy's on a Sunday J. Gannon
Uncle Josh in Society Cal Stewart
Uncle Josh and the Lightning Rod Agent Cal Stewart
Uncle Josh in the Chinese Laundry Cal Stewart

Bound Copies of The Phonoscope Volumes 1 and 2 \$2.00 per volume

Every Phonograph Dealer, Operator or Individual interested should secure these bound copies.

Phonoscope Publishing Co.
4 East 14th Street
NEW YORK CITY

The Latest Popular Songs

The following is a list of the very latest popular songs published by the leading music publishers of the United States

All the Coons Are A-Comin' Ma Way Sandy Hirsch 8
After What He Done to Me Theo. A. Northrup 1
By the Lakes of Killarney Annie B. O'Shea 11
Dream on Beloved Arthur Trevelyan 3
Dear Old Soul Ford & Hatton 1
De Coon With de Auburn Hair Curtis A. Duval 1
Forever More Robert Cone 1
Forever and a Day James B. Oliver 1
For Love Alone J. Fred Hell 9
Got Your Habits On John Queen 10
Gold Cannot Buy a Love Like Mine Hattie Starr 1
Good Things Come High W. W. Herbert 1
He Carved His Name Upon the Tree Gussie L. Davis 10
How'd You Like to be the Iceman? Helf & Moran 9
I Couldn't Spell That Word Because I Love You J. Fred Helf and G. B. Alexander 10
If You Were Only by My Side E. T. Paull 11
If I Thought You Loved Me Yet John V. Hollar 9
I'm Livin' Easy Irving Jones 2
I've Got Another Nigger on My Staff Sterling & Von Tilzer 10
I Wonder if She's Waiting Harry von Tilzer 2
I Love Ma Babe Andrew B. Sterling 2
I've Just Come Back to Say Good-bye Chas. K. Harris 4
I'm Always Glad to See You When You'll Buy A. Sloane 1
It Seems Like Only Yesterday G. B. & D. E. Wheeler 8
I Dreamed of Thee Alva Rue 1
Is Yo' Goin' to Frow Yo' Baby Down? Lyn Udall 1
Just For the Old Days Stanley Haskins 5
Lucy Dale Harry Linton 10
Love is Tyrant "The Singing Girl" Victor Herbert 1
Love's Tribute George J. Mager 1
My Philippina Gal Florence C. Hawley 1
Mamie Tracy Roger Harding 5
Mary Had a Little Lamb Jos. Tabrar 9
Mid the Green Fields of Virginia Chas. K. Harris 4
My Love's the Same Roger Harding 7
My Sunny Southern Home Roger Harding 7
My Old Westchester Home Among the Maples Wm. B. Gray 9
My Ann Elizer Malcolm Williams 5
My Ababamba Lize Wise and Perrin 5
My Watermelon Boy Malcolm Williams 5
Niggerin' William Bros 4
One Touch of Nature Makes the Whole World Kin Felix McGlennan 9
Pretty Kitty Clover Roger Harding 7
Smoky Mokes A. Holzmann 10
Skeleton Dance W. V. Ullmer 8
She's the Belle of Gay New York John Reno 1
The Hymn You Loved the Best William C. Davies 8
The Busy Bee Theo. Bendix 1
The Little Church Upon the Hill Howitz & Bowers 1
That's How the Rag-Time Dance is Done Sterling & Von Tilzer 10
The Girl I Loved in Old Virginia Max Dreyfus 2
The Old Church Door Gussie L. Davis 11
The Sermon That Touched His Heart Tony Stanford 10
The Stories Mother Told Me Sterling and Von Tilzer 10
The Hottest Ever—Coke Walk Soug. J. O'Dea 4
Two Little Roses from Mother to Me Harry Yeager 7
Those Cruel Words, "Good-bye" Fred Helf 9
'Tis Best For Us to Part Roger Harding 7
'Twere Better Had We Parted Long Ago W. C. Davies 8
Why Did We Drift Apart Philip Staats 8
Will I Find My Manum There? Chas. K. Harris 4
Will He Ever Return Vera Doré 3
Wing Lee's Rag Time Clock Al Truhern 5
You'll Get All Dat's a Comin' to You Sterliug & Von Tilzer 10
You're It Gussie L. Davis 9
You Ain't the Man I Thought You Was Lew Sully 9

LATE INSTRUMENTAL PUBLICATIONS

A Warmin' Up in Dixie E. T. Paull 11
Great Ruby—March T. W. Hindley 5
In Summer Time, Gavotte R. H. Barker 1
La Tambo Dance Herbert Dillea 1
Plantation Echoes Otto M. Heuzman 11
Smoky Mokes A. Holzmann 10
Sparrow Dance H. O. Wheeler 1
The Winner Arr. by F. W. Meacham 1
The Gallant 71st F. Fanciulli 10
The Rajah Waltzes Samuel S. Aronson 8
Up to Date Lancers, Series VI Arr. by F. W. Meacham 1
When I Gave My Heart and Hand to You J. Haack 8

Note.—The publishers are designated as follows: 1 M^o Witmark & Sons; 2 T. B. Harms & Co.; 3 F. A. Mills; 4 Chas. K. Harris; 5 Myll Bros.; 6 J. W. Stern; 7 Knickerbocker Music Co.; 8 Gagel Bros.; 9 W. B. Gray; 10 Feist & Frankenthaler; 11 E. T. Paull Music Co.



The Eagle Talking Machine, \$10.00

**THE Greater New York
Phonograph Co.**

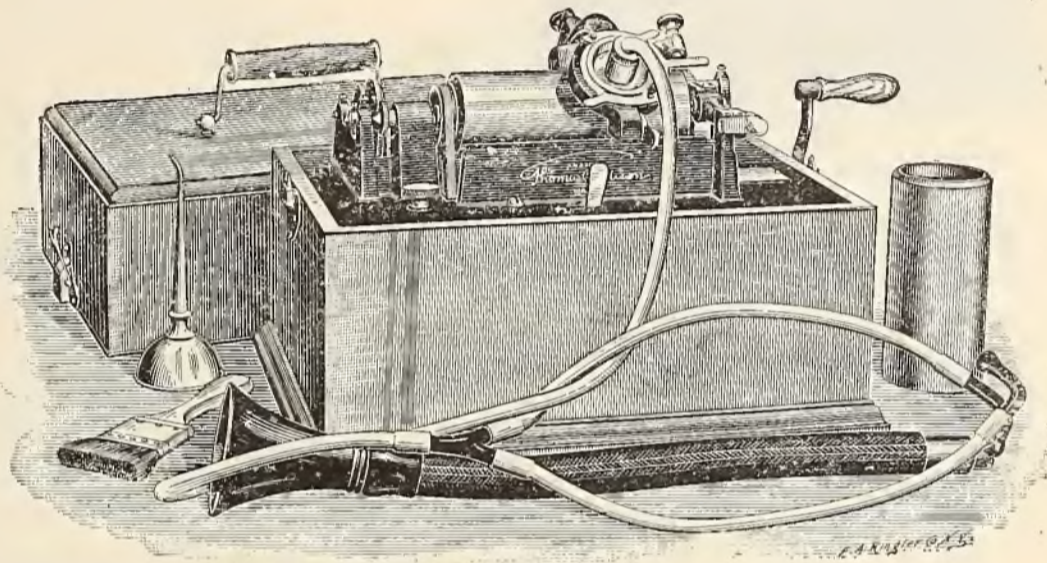
4 East 14th Street,
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SUPPLIES AND ACCESSORIES FOR
ALL KINDS OF TALKING-MACHINES

SEND FOR CATALOGUE

SELECTED RECORDS

Originals \$1.00 each
\$10.00 per doz.
xxx
Duplicates 50 Cents each
\$5.00 per Doz.



New Standard Phonograph, \$20.00

THE VITAPHONE

THE VITAPHONE, in mechanical construction and audible results, is the highest type of the talking machine art. It is the Gramophone perfected. It will last forever. It is manufactured under basic patents owned by the American Graphophone Company. It runs by spring motor. The records are imperishable; they will not wear out or break.

Records are furnished by number from our catalogue, and include all the desirable selections usually offered talking machine patrons.



OUR GUARANTEE IS MADE A PART OF EVERY OUTFIT

These machines are offered to the Public with the utmost confidence by us that they will meet the popular favor they deserve

VITAPHONES sell at retail for \$15.00
RECORDS = = = = per dozen, 6.00
NEEDLES = = = = 400, 25 Cents



AGENTS WANTED
WRITE FOR DISCOUNTS

CONSOLIDATED SUPPLY COMPANY

100 New Street

NEWARK, N. J.

THE "HOME GRAND" GRAPHOPHONE



A Wonderful Talking Machine of the Genuine Grand Type for **\$100**

Not an Imitation but the Real Thing!

Reproduces the same records as the Graphophone Grand with the same marvelous effects

To meet a demand for a Graphophone of less expensive construction than the Graphophone Grand, but embodying the same principles, a new form of Graphophone has been designed, known as

The "Home Grand," Price, \$100.

The farthest step forward ever made in the talking machine art, crossing the threshold of a new world of possibilities, was the discovery, in our laboratory, of the principles applied in the construction of the Graphophone Grand, which, when first publicly exhibited seven months ago, made a tremendous sensation by its marvelously loud and perfect reproductions of sound. Scientists hailed this achievement as a great discovery, for it swept aside the limits that had barred the way to absolutely perfect sound-reproduction. These principles are now applied with equal success in the production of the new "HOME GRAND" which is a machine of the genuine "Grand" type and not an imitation.

The "Home Grand" with Columbia Grand records brings, in audible effect, the living singer or musician actually into the presence of the listener.

Reproduces music, song or speech as loud and louder than the original, with all the original sweetness and melody.

The real music; the actual voice; not a diminished copy or a "far away" effect.

The "Home Grand" is handsome and durable in construction and simple in operation. It is provided with a tandem-spring motor that will run several Grand records at one winding.

No talking machine, except the Graphophone Grand, will compare with the new machine in point of volume or smoothness of tone.

New Prices for Grand Records

\$2.50 } June 1st the following prices for Columbia "Grand" records and blanks go into effect
 RECORDS - - - - - \$2.50 BLANKS - - - - - \$1.50

The Five Dollar Graphophone

A Graphophone cheap but not a cheap Graphophone

This new Graphophone, as marvelous in its performance as in its price, is well-made and reproduces musical and other records brilliantly and perfectly. Clockwork motor.

PRICE - - \$5.00

Including Reproducer, 10-inch Japanned tin horn

PRICE, with recorder added - - - \$7.50 When accompanied by a recorder this Graphophone can be used for making records. The \$5.00 Graphophone is furnished when desired with a hand cabinet of neat design and a nickeled horn.

PRICE - - - - - \$10.00 Including—Bent wood hand cabinet, 10-inch Nickeled horn, Reproducer and Recorder.



The Five Dollar Graphophone

The Graphophone has been found to be the most satisfactory machine for exhibitors to handle. Outfits are arranged especially to suit the needs of the exhibitor. When a large amplifying horn is used the reproductions of music are loud enough to fill large exhibition halls.

This Company's establishment is manufacturing headquarters of the world for all Graphophone and talking machine supplies. COLUMBIA RECORDS have become famous because they are made under the direction of the most expert record makers. Our facilities enable us to supply records unrivalled in quality at less than the cost at which others can make inferior ones.

Amplifying Horns, Musical and other Records and Supplies of all kinds can be obtained at any of our offices

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 ST. LOUIS, 720-722 Olive Street
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PHILADELPHIA, 1032 Chestnut Street
 WASHINGTON, 919 Pennsylvania Avenue
 BALTIMORE, 110 E. Baltimore Street
 BUFFALO, 313 Main Street

BERLIN, 55 Kronenstrasse

NOTICE**NOTICE**

We, the undersigned, wish to notify our subscribers, advertisers and friends that owing to circumstances entirely unavoidable **The Phonoscope** is always dated three months later than the month in which it is issued. As it is entered in the N. Y. Post Office as second-class mail matter **it must be regularly issued at stated intervals and bear a date of issue and numbered consecutively** (this is done to protect the public.) No matter what date the publication bears, we assure the public that they are receiving the latest and most accurate news pertaining to Sound and Sight.

Thanking all for the many past favors and hoping to receive your future patronage, we are,

Yours respectfully

The Phonoscope Publishing Co.

Lyric Phonograph Company

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Of Highest Quality, Tone and Volume

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"PHONOSCOPE"

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IS RELISHED BY THE WISEST MEN."
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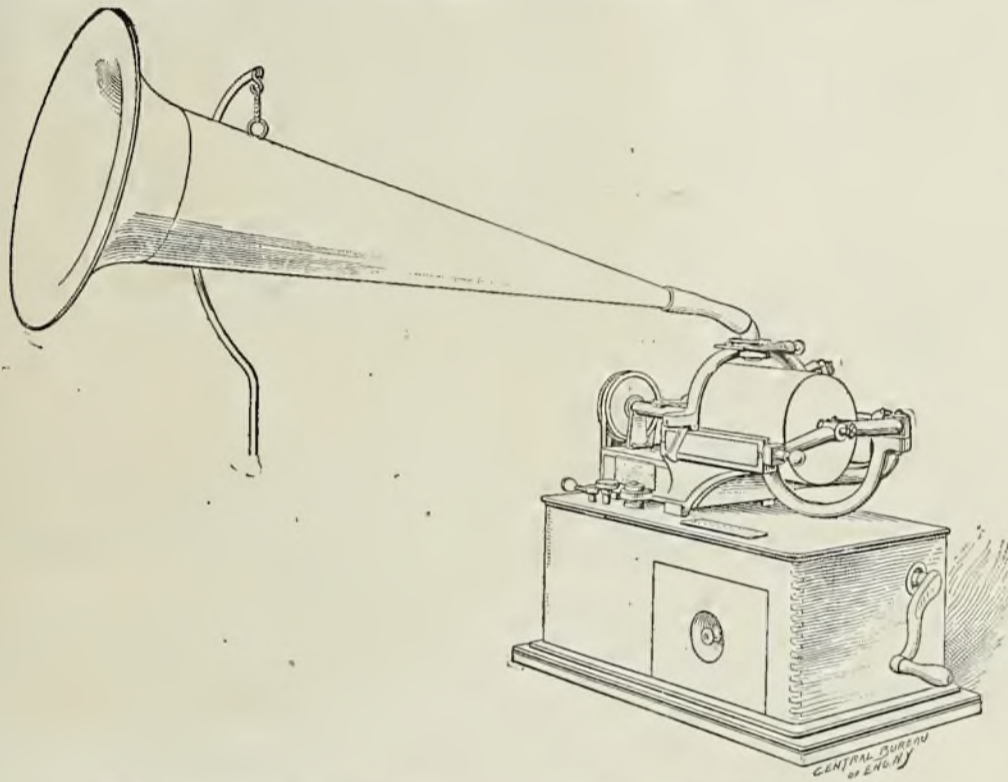
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From the Laboratory
Thomas A. Edison.
Orange, N. J. August 29, 1898

Mr. C. E. Stevens is engaged in the sale
of various apparatus manufactured
by myself. I consider him perfectly
reliable and trustworthy

Thomas A. Edison



EDISON'S CONCERT PHONOGRAPH, \$100.

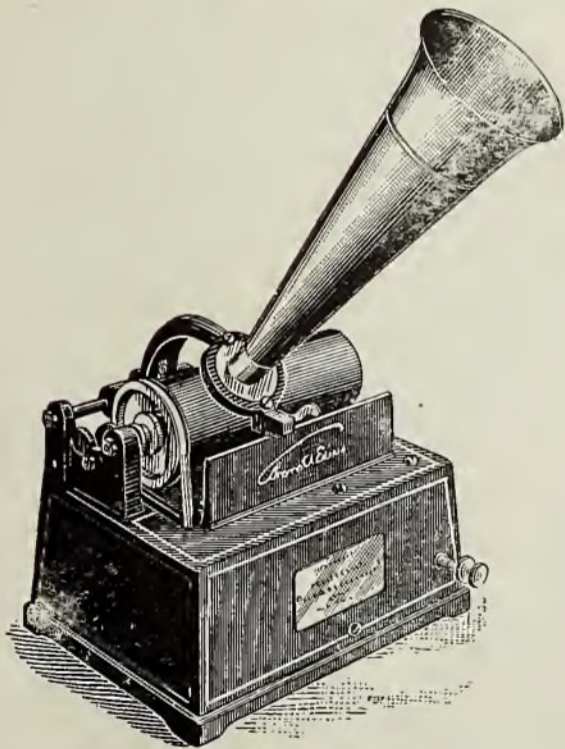
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New Improved '99 Model EDISON PROJECTOSCOPE . . \$85.00

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New Improved '99 Model COMBINED PROJECTOSCOPE AND

STEREOPTICON \$110.00

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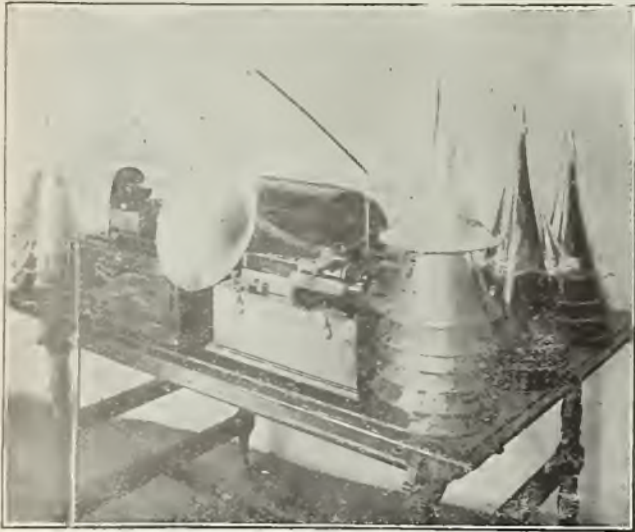
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GIVE THE FINEST TONE AND VOLUME**

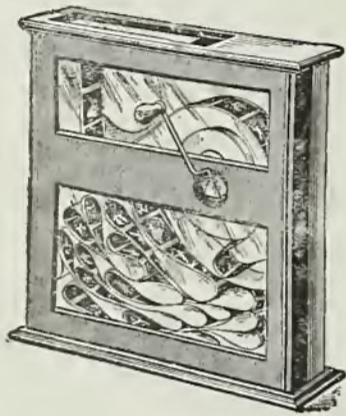


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A Moving Picture Machine for Everybody

Just the thing for the Children's Christmas

Price as above and including six different films \$5.00
Send for catalogue and list of films Extra films, each 30 cents

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Using powerful dry batteries, good for 10 hours use during a period of 100 days.

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Send for catalogue of other lamps and novelties

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ELECTRIC LAMP NECKTIE
\$2.00

Extra Batteries each, 25 cents

BICYCLE LAMP
all Nickel Plated,
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SURGICAL AND DENTAL LAMP, \$4.00

Extra Batteries for 10 hours' use each, 30 cts.

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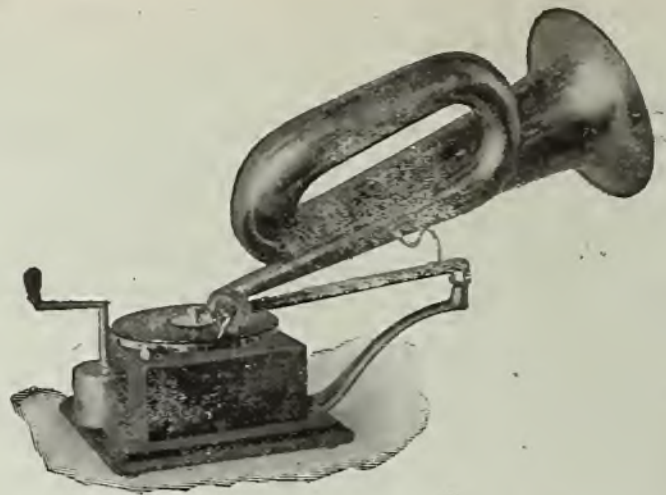
For the family, sewing circles and schools, yachts, sailors, etc. Does as accurate work as a foot power machine. Strong and well made.

PRICE, \$10.00

Agents wanted Send for circular



GRAM-O-PHONE WITH NEW CORNET HORN



Makes the new Gram-o-phone easily the best of all talking machines. Makes the volume of band and instrumental records as loud and natural as the original music.

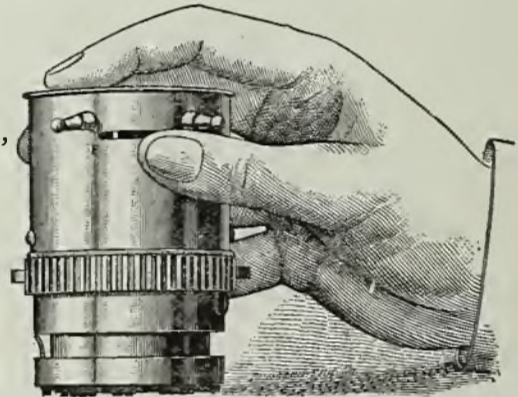
Price as above \$35.00

Selling Agents wanted everywhere for Export
Write for catalogue of Gram-o-phones and records.

EMERSON'S TIME DATING STAMP

To date and time arrival of letters, telegrams, hotel guests, to time renting of bicycles, horses, carriages, etc.

Useful in offices, hotels, etc., as office clock, paper weight and time dating stamp.

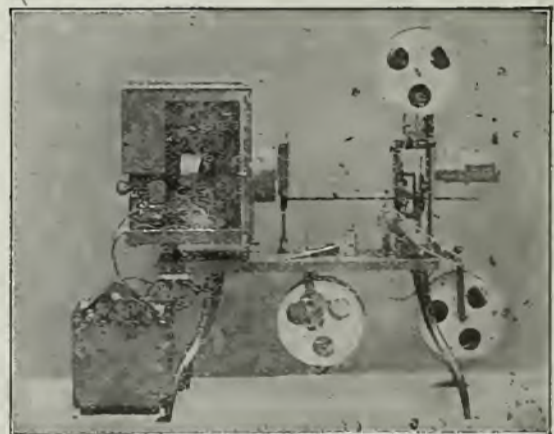


PRICE, \$6.00

COMBINED CINEOGRAPH AND STEREOPTICON 1899 MODEL

Films \$7.50 per 50 feet
Passion Play, \$11.00 per 50 feet

Send for list of films and catalogue of outfits.



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