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# THE PHONOSCOPE

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

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Vol. II

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## Principal Features of this Number



USEFUL INFORMATION REGARDING THE CARE AND  
OPERATION OF THE PHONOGRAPH

A SILVER DIAPHRAGM

NEW CORPORATIONS

OUR TATTLER

GENERAL NEWS

OUR CORRESPONDENCE

THE GIRL WHO SINGS INTO THE PHONOGRAPH

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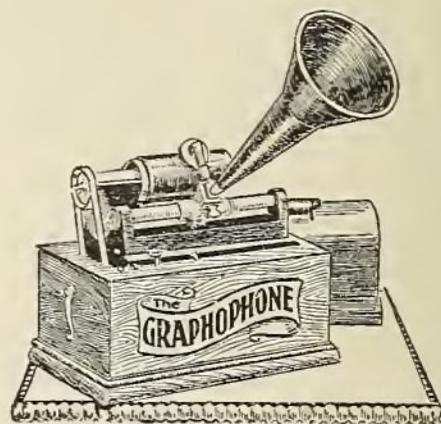
# GRAPHOPHONE

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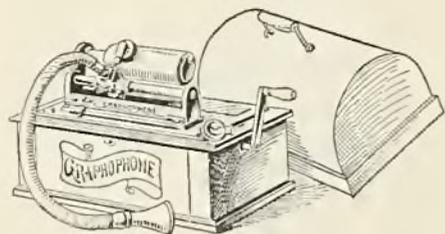
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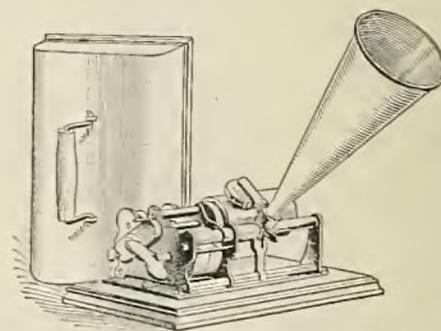
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# The Phonoscope

(Copyrighted, 1896)

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

Vol. II

NEW YORK, FEBRUARY, 1898

No. 2

## \* Useful Information Regarding the Care and Operation of the Phonograph

As previously stated, using the hearing-tubes gives the best results in every way. The reproduction is louder, clearer and more distinct. In the case of musical reproductions of bands, orchestras, quartettes, songs and piano, the notes of individual instruments and voices are easily distinguished and the result is a roundness and completeness which is very pleasing. With a horn reproduction these finer qualities of tone are to some extent lost and only the louder tones are distinguishable. Yet in the case of cornet, clarinet and xylophone solo records, of great force and loudness, the reproduction through a horn is fully as effective and for some reasons preferable, as they are apt to be unpleasantly loud and even harsh when heard through a single rubber tube.

One advantage in using the horn reproduction consists in the ability to throw the sounds into a large room so that a number of persons can hear at the same time instead of being obliged to listen through the tubes individually. To partially obtain this advantage with hearing-tubes a metal rail is now made that can be attached to the Phonograph so that from ten to twenty can listen at the same time each having a separate tube.

Experience shows that in obtaining the best results much depends upon the size and thickness of the rubber tubing used. If the tubing is small in circumference and the quality light and thin so that it is easily bent and "kinked," the record will be reproduced faintly and indistinctly. If the rubber tubing is of large size with a thick wall not easily bent, the results will be far more loud and clear. The standard size used and recommended is a tube fifteen-sixteenths inches in circumference and five-sixteenths inches in diameter, the diameter of the core being one-fourth of an inch.

Two styles of hard-rubber tips for inserting in the ears are in use—the bulb and the flange. The latter has a larger aperture, which is kept clean with less trouble and is recommended to exhibitors; but for private uses the former (bulb) style is considered most preferable. In either case these tips should be kept clean and neat by wiping occasionally with a cloth saturated with benzine or by using soap and water.

The planing or paring device for shaving off the surface of the wax cylinder is indicated by Fig. 2 in the diagram.

The governor, as the name implies (Fig. 8 in diagram), is used for regulating or governing the speed at which the mandrel containing the cylinder shall revolve, and performs a very important function in all the uses to which the Phonograph is applied. It is regulated by a small thumb-screw at the extreme left-hand side of the machine. By turning this screw with the thumb and forefinger a little to the left the speed of the mandrel is decreased; by turning to the right it is increased gradually until the mandrel finally ceases to revolve.

The turning of this screw, and the consequent lowering and raising of the speed, results in the lowering or raising of the tone or key of a musical or spoken record. It therefore becomes quite important, in order to obtain a correct reproduction of such a record, that the speed at which it is reproduced should be exactly the same as that at which it was recorded; otherwise it is not an exact reproduction in every respect.

The method usually adopted for determining the correct speed of a given reproduction, in the case of musical records, is to listen to the words of the announcement at the beginning of the cylinder, and when the tones of voice seem to be in a natural key, and neither too high and shrill nor too low and heavy, to assume that the proper speed has been reached. This is not, however, an absolutely correct test, as it is a matter of judgment merely on the part of the listener as to the naturalness of the tone of language used by the announcer, and that can only be guessed at, unless his voice is known to the listener. However, it serves all practical purposes in such cases, and this rule may be followed with good success and favorable results. The better and more exact method, which is now being adopted by many of the Phonograph companies, is to ascertain the number of revolutions per minute at which the mandrel is revolving before beginning to record, and announcing the speed at which the record is to be taken upon the cylinder, so that when the reproduction is about to be made the hearer is informed by the words at the beginning of the record as to the taking speed, which, of course, is the proper reproducing speed, and the governor can be adjusted accordingly, giving in the reproduction the exact speed of the original recording. In this way only can the absolute reproduction of tone and key be assured with mathematical certainty. The standard speed adopted by most of the Phonograph companies in recording is one hundred and twenty-five revolutions per minute, and this speed is recommended as one likely to produce the best results, all things considered.

To ascertain, for reproducing, the speed at which the mandrel is revolving, hold your watch in hand, touch your finger to the small screw on the left of the main shaft pulley (Fig. 7 in diagram), count the number of revolutions for a quarter or half a minute, and calculate the speed per minute therefrom. Then increase or lower the reproducing speed by turning the governor adjusting-screw until the proper rate is obtained. When a governor, for any reason, fails to govern properly, the result is a waver in the cylinder which is being recorded or reproduced, causing discord in musical tones, or a quiver in the voice, which is at once recognized as unnatural. The usual cause of such difficulty is the slipping of the governor-belt attached to the armature-shaft pulley (Fig. 21 in diagram) and which has probably become saturated with oil by a careless oiling of the machine. This

is easily remedied by replacing the oily belt with a new one at a trifling cost, or, if one can not be speedily obtained, by taking off the belt, washing, cleaning and replacing it, and the oil having been removed it will not be likely to slip. To remove this belt, loosen the screws of the governor and armature-shafts (Figs. 10 and 12), lift up the armature and governor-centers, and raise the governor, when it will fall out of place, and the belt can be easily detached. Replace in the same manner.

Another frequent cause of the slipping of this belt is that it is too loose. To ascertain whether such is the fact, press the forefinger upon the armature-shaft pulley (Fig. 21) and turn it towards the right (the current being cut off) and if this pulley revolves without at the same time revolving the governor, it indicates that the belt should be tightened. If, however, the governor revolves with the armature-shaft pulley, it shows that it has a proper tension.

To tighten this belt, unscrew the four governor-block screws until they move freely in the slots, then press the block to the left with the thumb and forefinger until the slack is taken up; hold the block in place and fasten by tightening the screws again.

There are two copper brushes attached to the electric-motor Phonograph, carrying a portion of the electric current—the governor side brush and the governor top brush. Both these brushes should be kept clean by wiping the points with a soft cloth saturated with benzine. This should be done once every two weeks, to keep them free from dust and oil. The governor top brush is attached to the adjusting screw. This brush should never be allowed to come in contact at the side with the governor-post as it would interfere with the proper regulation of the governor by the governor adjusting screw. If there is any failure to increase or decrease the speed of the governor when turning the screw, look carefully to see whether this brush is touching the main post; if so, by pushing it away from the main post the trouble will be removed.

The wooden block upon which the governor stands is called the governor-block, and upon the under surface is a fine copper wire called the governor shunt wire, used for the purpose of reducing the current at that point. This seldom requires adjustment, and attention is simply called to it as a part of the construction of the Phonograph. The governor should not be allowed to run at such a high rate of speed as to allow the silver-plated governor balls to strike the frame-guard, as injury might be done to the governor-springs by so doing. A small collar upon the governor-post, attached to most Phonographs, works excellently, and prevents all possibility of contact with the frame. The small steel springs

\*This article was commenced in our previous issue, in which also appear diagrams together with the proper technical terms of all the parts of the Phonograph.

of the governor, to which are attached the silver-plated governor-balls by a small screw at top and bottom. These screws should be examined in regulating the governor, and tightened if necessary, to insure smooth and even running. When the governor is running in perfect condition, the reflection of light upon these silver-plated balls should give the effect of a solid silver ring, with no "wobbling" motion.

The Phonograph armature coil, or motor, is wound to run with about two and a half amperes of current, although under certain circumstances a greater amperage is necessary, as, for instance, when the Phonograph is recording or cylinders are being planed off, either of these processes offering a much greater resistance to the revolving of the cylinder than the mere reproducing where no abrasion is made upon the surface of the cylinder. This armature coil revolves within a magnet-frame upon a shaft resting upon a brass pin at the bottom, and the momentum acquired by turning on the electric current continues to revolve this armature for several seconds after the current is cut off, unless stopped by pressure upon the brake. This bearing should be oiled by means of the oil-tube with a cap covering on which the word "oil" is stamped, at the back of the governor. A few drops of oil sent by means of this tube to the bearing will be sufficient to last a week's time.

At the top of this armature-coil is the commutator, upon which the motor-brushes rest, and through which the electric current is carried to the armature, and the Phonograph is put in motion. These two brushes (pin and flat connection) are attached to a rocker-arm, which can be unscrewed and the brushes pulled out upon a pivot when necessary to clean them or repair them, and replaced in the same way. Upon the proper condition and cleanliness of these brushes depends, to a great extent, the easy running and evenness of motion of the Phonograph. Therefore particular attention should be paid to this part of the machine. The brushes should be examined frequently, the points kept free from oil and dirt, and the commutator itself always be bright and clean.

To reach these brushes for cleaning them, lift the Phonograph from its box, or case, and set it upon a table. In order to handle it easily, lift the Phonograph up by the right-hand end and slide it to the right, which will then leave space for the fingers of the left hand to be inserted under the top plate at the left. After lifting out of the box, loosen the rocker-arm clamp-screw at the left under the top plate and pull the brushes out until they are clear. With a piece of cheese-cloth moistened with benzine carefully wipe all foreign matter, such as oil and dust, from the points of these brushes, and with a piece of fine emery-cloth polish outwardly the ends until they are bright and clean, being careful not to bend or separate the copper wires which are held together by a copper band. Replace in same manner. The commutator can be kept bright by polishing with narrow strips of fine emery-cloth whenever the brushes are cleaned as described.

In replacing the brushes do not press them too tightly against the commutator, or it will cause a humming sound when the armature revolves. They should be gently pressed against the center surface of the commutator, and if no "sparking" is observed it shows they have been properly set. The rocker-arm should then be held in this position and the screw tightened to hold the brushes in place. The wiring to these brushes should be bent so that it will not touch the armature when in motion. Never allow oil to drop on these brushes or upon the commutator; *these parts do not need oiling*. The condition of the armature

and brushes may be seen by removing the top plate cover of the machine (Fig. 33), thus saving the labor of lifting the Phonograph from its box or case.

Upon the upper part of the armature is the shaft pulley (Fig. 21) for the motor belt. This belt should be replaced when soiled by a new one, or removed and washed if a new one cannot easily be obtained. To do this, loosen the centers of the armature and main-shaft pulleys (Figs. 7 and 21), slip the belt off the small idler pulleys and replace in same way.

Wavering or uneven running of the Phonograph is sometimes caused by the slipping of this belt. To ascertain whether this is the case, press the forefinger upon the armature-shaft pulley (Fig. 21) and turn it to the right (the current being cut off). If the turning of this pulley revolves the main-shaft pulley (Fig. 7) it indicates a sufficient tension; if it slips it needs tightening. To tighten this belt, lift up the right-hand end of the Phonograph and with a long-handled screw-driver turn the projecting screw under the mandrel a few times, which will press the body forward and tighten the belt; or the body-holding screws, front and back, may be loosened and the body itself pressed to the right with the hands a sufficient distance to tighten the belt, held in place, and the screws tightened again. On the other hand, if the main or governor belts are drawn too tightly, it will prevent the free starting of the motor, and may cause unevenness in running, besides putting additional work upon the battery, causing a waste of current. The two small idler pulleys upon which the motor-belt revolves should be oiled occasionally, care being taken to keep the belt entirely free from oil.

The planing or paring device for shaving off the surface of the wax cylinder is indicated by Fig. 2 in the diagram, and, as will be seen by reference to it, is attached to the right-hand side of the diaphragm-arm (Fig. 14). It is adjusted by means of a curved lever at the back (Fig. 26) and has a gauge (Fig. 5) which prevents its being set too deeply and thus cutting off a greater thickness of wax than is desired.

The planing edge, or knife, is of sapphire, which can not rust and is not easily dulled by use. It can be removed from its setting and a new edge put in its place, however, should it become necessary. When a cylinder is to be planed off, the diaphragm-arm (Fig. 14) should be carried to the center of the cylinder and the arm-lever (Fig. 18) lowered—the Phonograph adjusting-arm (Fig. 16) being set to reproduce. Then lower the planing-knife lever (Fig. 26), which will bring the cutting edge against the cylinder. Again lift the arm-lever (Fig. 18), slide the arm to the extreme left, beyond the beveled end of the cylinder, lower it, and start the Phonograph by the governor-switch (Fig. 20), and the knife will begin to shave off the surface of the cylinder.

It will be advisable to lift the reproducer-weight by pressing it gently upwards with the finger until the recorder and reproducer-points have passed the beveled edge of the cylinder; it can then be lowered, or the weight can be held up by passing a rubber band around the diaphragm before beginning this operation. After the paring-knife has passed along the entire surface of the cylinder, the diaphragm-arm should be lifted and thrown all the way back, so that the planing-knife lever (Fig. 26) will strike the back part of the Phonograph and disengage the cutting edge from the surface of the cylinder. The cylinder can then be examined, either on or off the mandrel, and if any ridges, marks, or indentations are observed it should be replaced and the planing process continued until they are entirely obliterated and the surface is perfectly smooth, presenting a highly polished appearance.

The fine wax parings dropping from the cylinder while being planed are thrown by the chip-trough down into a large wooden chip-box seen in the engraving at the right-hand side of the Phonograph (Fig. 27), and thus kept from accumulating upon the surface of the cylinder and forming an obstruction. The accumulated dust and wax shavings can be removed at any time by slipping this box out from under the cylinder and emptying its contents in the waste-basket or other receptacle. Special attention must be given to the condition of the sapphire knife to keep it always smooth, sharp and properly adjusted, so that the cylinder surface will be free from roughness or scratches of any kind.

*Unless the cutting knife performs this function perfectly, a satisfactory record can not be obtained.* Therefore we give in greater detail the instructions necessary to obtain this important result, even at the risk of seeming to dwell at too great length upon it. The planing-knife lever (Fig. 26), which lowers or raises the cutting edge, may sometimes need readjusting, and when this occurs we should recommend the user to detach the whole planing device from the diaphragm-arm and send it to the nearest local company for repair. If this is inconvenient, then the following instructions should be observed in making the readjustment. On the side of the cutting-box to which the lever is attached is a nut having two sides cut off, through which passes the nut-screw. If the bar should fail to bind when the lever is drawn down to set the knife this nut should be gripped with a pair of small pliers and slightly turned forward. This will force the screw inward and bind it upon the square bar. In doing this, the lever should be pushed backward about a quarter of an inch, which will make a more perfect binding when the lever is fully drawn down. If the sapphire knife should fail to work properly, it should be examined as it rests upon the surface of the cylinder, to ascertain whether it has not been turned to one side or the other; if so, it should be adjusted parallel to the cylinder, so that it will cut on the center. If it then produces a rough or scratchy cutting it would indicate that the edge had been chipped off or injured, and it should be replaced by a new cutting edge by removing the chip-trough, unscrewing the square plate which holds it in position and attaching the new one. Should the chip-trough become clogged, or work unsatisfactorily in any way, it can be entirely removed and the knife used for planing without it, the only object of this trough being to keep the wax cuttings from dropping upon the surface of the cylinder and forming an obstruction. When the planing is done without using this trough, the wax cutting can be removed from the cylinder by the means of a soft camel's-hair brush or cotton passed lightly from left to right on the revolving surface.

The circular brass drum upon which the wax cylinder is placed for recording or reproducing is called the mandrel. The brass portion is four and three-quarter inches in length and made with a taper to prevent the reproducing-cylinder from being placed upon it in a reversed position and giving the record "backwards." At the larger end it is five and seven-eighths inches in circumference and at the smaller end five and seven-sixteenths inches, the difference being caused by the taper. This brass mandrel is fastened to the main shaft (Fig. 6), upon which it revolves, and is essentially a part of it, the whole being removed or replaced together in adjusting the machine. The left-hand portion of the main-shaft has a fine thread, or screw, cut upon it, the purpose of which is to carry forward the feed-arm (Fig. 3), which is connected with the diaphragm-arm by the nickel-plated collar sliding along the back rod (Fig. 4). The raising or lowering of the diaphragm-arm

(Fig. 18) raises or lowers this feed-arm, and as a consequence stops or carries forward the recording and reproducing diaphragm.

Attached to the lower side of this feed-arm are the twin nuts (Fig. 28), which fit into the threads of the shaft and carry forward the arm and its connections. The threads of the main shaft, and also of the twin nuts, should be oiled occasionally and kept clean and free from dust and lint by frequent wiping or brushing. When these twin nuts become worn by use they can be detached by unscrewing them at the top and new ones attached in their place. The threads of the shaft seldom need attention or show signs of wear, but should be carefully protected from injury, which might be caused by metallic substances or tools dropping upon them and breaking the thread.

The main shaft revolves upon finely polished adjustable steel centers, which should be kept oiled and clean. These centers can easily be removed and replaced by new ones should it ever be necessary, but with proper care they will last for years.

The Phonograph parts work mostly upon different adjustable centers, which can be renewed when worn. This renders the machine practically indestructible, and no one need be afraid that after a few months' use the Phonograph will get out of order or be worn out. New steel centers and other detachable parts can be procured at very slight cost and the machine always kept in good condition and repair, even after many years of use. The mandrel should be adjusted to run easily, without noise or friction. The centers should not be pressed too tightly against it, or it will put too much work upon the motor or cause it to revolve unevenly. Should there be a bumping or pounding noise when the mandrel revolves it will be found to be the result of too much play upon the centers, and by slightly turning the swinging-arm center (Fig. 12) with a screw-driver the noise will cease.

Attached to the top plate of the Phonograph and resting against the main-shaft pulley (Fig. 7) is a slotted piece of steel, the purpose of which is to hold the mandrel tightly in position when the swinging-arm (Fig. 11) is opened to remove or replace the cylinder. It should not be pressed too tightly against the pulley or it will cause a scraping sound when the mandrel is revolving. It can easily be adjusted to the right distance from the pulley. At the back of the diaphragm-arm (Fig. 14) is a long projecting screw-head which is not shown in the numbered diagram. Its purpose is to regulate to the proper degree of adjustment the relation between the feed-screws, or twin nuts, and the diaphragm-arm so that the nuts will rest upon the main shaft properly and carry forward the feed-arm and its connections. If the feed-arm should fail to carry forward when resting upon the shaft, loosen this long, projecting screw at the back of the diaphragm-arm, lower the diaphragm-arm lever (Fig. 18), and press the feed-arm down upon the shaft firmly, seeing that the diaphragm-arm is also resting squarely on the straight edge in front, and then tighten the screw again, which will remedy the difficulty. This should also be done whenever the diaphragm-arm will not rest solidly upon the straight edge, but shows a tendency to jump up and ride in the air above it.

We will now give a few plain instructions for the guidance of the beginner who is attempting to use the Phonograph for the first time as a commercial machine, and who desires to make a record which can be transcribed by his typewriter-operator or amanuensis with ease and dispatch.

Having placed the planed cylinder firmly upon the mandrel, as described elsewhere, and closed the swinging-arm (Fig. 11), start the motor by pushing the switch (Fig. 20) as far as it will go to

the left. The Phonograph is now running, and in order to obtain the greatest amount of recording surface turn the governor adjusting-screw (Fig. 19) until the cylinder revolves at a very low rate of speed, as shown by the governor-balls. Pull down the adjusting-arm as far as it will go to bring the reordering-point into position, slide the diaphragm-arm to the left until the recorder reaches the end of the cylinder (not beyond the bevel), attach the speaking-tube, and when ready to begin the dictation lower the diaphragm-arm lever (Fig. 18). The reordering-point is now cutting into the wax, and emits a soft, hissing sound through the recording tube. Hold the tube within a half inch of the lips, and in a distinct and clear tone of voice begin the dictation. Raise the lever whenever desired, to save the waste of surface, while collecting your thoughts, and lower again when you have decided upon the word, phrase, or sentence you desire to record. Continue in this manner until the end of the cylinder is reached by the recorder; then remove it carefully and place upon a peg to prevent breaking, and place the succeeding cylinder upon the mandrel in the way already indicated.

The successful user of the Phonograph for business purposes dictates to it exactly as he would to a stenographer, amending his sentences, saying "strike that out," giving his punctuation and the spelling of technical and peculiar words and names with the greatest freedom and rapidity, feeling sure he will be recorded accurately and that his intelligent transcriber will be able by listening to his words a little in advance of the printing of them, to put in the exact form desired the letter which he is to sign and send to his correspondent. To be able to speak at any rate of speed, without interruption by the amanuensis and to know that every word is being recorded with mathematical precision, is a luxury which can be enjoyed by any user of the Phonograph.

The start and stop-key (Fig. 31) is only intended for the transcriber in taking off dictations, and should not be used by the dictator.

A tin horn about fourteen inches in length can be attached to the Phonograph and used for dictating purposes instead of the speaking-tube, if it is desired to use both hands in holding letters or documents while dictating. Speaking tubes of any length to suit the wants of the dictator can also be obtained. A loud Phonograph record can not be made by holding the speaking-tube at a distance of several inches from the mouth of the dictator, or by turning the face to one side while dictating. *The requirement is that you shall talk directly to the machine in a distinct though not too loud a tone of voice, holding the tube within half an inch of the mouth.* This statement is made in view of the fact that many persons believe that a Phonograph gathers in and records plainly conversations and proceedings which occur in a room, no matter at what distance the parties may be from the instrument, or how indistinctly they may be uttered. This is not the case, though such sounds are often faintly distinguishable when the Phonograph is at a distance of several feet from them.

Maxim: A careful dictator makes an accurate transcriber. If you fail to enunciate your words distinctly your transcriber can not be expected to always reproduce them accurately.

Transcribing, or taking off dictations, from the Phonograph is a very simple matter, requiring on the part of the transcriber only attentive listening and putting into typewritten form the words that are reproduced through the hearing-tubes or reproducing-horn. The more intelligent the operator the better will be the transcript. A typewriter-operator who follows blindly the words of a dictation without regard to the meaning, context, or sense, may occasionally give a perfect transcription; the chances of obtaining such a perfect

transcript are much greater when using a Phonograph than when transcribing from shorthand notes, less judgment being required on part of the operator.

The commercial Phonograph is usually taken from the wooden box shown in the illustration and placed upon a typewriter-table made for the purpose, which allows the motor to fall below the surface of the table, out of sight, leaving the flat, iron top of the Phonograph on the level with the top of the table. A drawer under the table replaces the chip box (Fig. 27) and catches the wax paring from the machine. The top of the table projects far enough to the right to have plenty of space for the typewriter to be placed upon it, and this brings the Phonograph and the typewriter side by side in a convenient position for operating. On the left-hand side of the table are two drawers, one containing pegs for holding cylinders, the other in which to keep the hearing-tube when not in use, the oil can, brush, etc. The operator desiring to make a transcript sits in front of the typewriter, with the Phonograph at the left, slides the cylinder containing the record into position (as described elsewhere), moves the diaphragm-arm to the extreme left, sees that the diaphragm adjusting-arm is pressed upwards against the adjusting-screw and places the hearing-tubes to the ears, ready to listen. The diaphragm-arm lever during this time has been raised to allow the arm to move back freely. Now push the governor-switch to the left as far as it will go, which starts the motor. Lower the diaphragm-arm lever and listen. If the words are not distinctly reproduced, turn the adjusting-screw to the right or left, at the same time pressing the adjusting-arm up against it, until the words are distinctly heard. If the tone of voice seems too high or too low, turn the governor adjusting-screw to the right or left until the proper tone is obtained.

In transcribing a letter or other dictation it is well for the operator to listen to several sentences in succession before beginning to transcribe, so that the subject may be thoroughly understood and any corrections or changes made by the dictator noted in time to prevent errors in transcribing. Having done this, and ascertained the subject-matter, raise the lever, slide the reproducer-arm back again, lower the lever, and listen to six or eight words; then raise the lever and print the words upon the typewriter. Continue to lower and listen, and raise the arm and print in this manner until the end of the cylinder is reached. Practice will soon enable the operator to retain in the memory sentences of ten to fifteen words, and to print them accurately, thus reducing the frequency of the lowering and raising of the arm, until to the observer the operations of listening and printing are almost continuous and apparently done at the same time, just as a shorthand reporter listens to one sentence while at the same time he is recording the previous sentence in his notes.

Thus it will be seen that the speed of transcription depends entirely upon the skill and desire of the operator, and is not limited in any degree by the Phonograph itself. A transcriber's stop and start-key is sometimes attached to the commercial Phonograph, which can be used if preferred. By pressing the finger upon the key at either end, as shown in Fig. 31, the reproducer is raised or lowered in the same manner as if the diaphragm-arm lever already described was used. Special attention is called to directions for handling the wax cylinder and the removing of particles from the surface. When a letter or document has been transcribed, and is in typewriting, to verify the accuracy of the transcript listen to the dictation over again, at the same time following with the eye the typewritten copy, and in this way any omissions or errors will be easily detected.

# THE PHONOSCOPE

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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 of items appertaining to sound and sight would be acceptable.

## At Last!

The Edison, or rather the National Phonograph Company, have at last woke up and come to the conclusion that to be "in it" they must come out of the woods of Orange and join the Metropolitan procession. We understand that the Company have leased the entire lower floor of the elegant St. James Building, corner of Broadway and Twenty-sixth Street, New York, where they intend opening a magnificent salesroom.

This should have been done years ago. In the past, any one who contemplated purchasing a phonograph had to engage the services of a detective to find out where they were sold, and after obtaining this information, were obliged to grope their way down side streets, back alleys and through meat markets in order to purchase one.

The phonograph has always been recognized as one of the wonders of the nineteenth century; it is a machine that will find its way into every corner of the globe, where it will serve to illustrate the genius of its great inventor, Mr. Edison.

It has been a source of regret to note the very poor management given to the phonograph interests in the past, and it is therefore with pleasure that we notice the change which has taken place in this direction. We earnestly hope the phonograph business will improve in the future as much as it has in the past few months under the direction of the able National Company.

## Correction

We wish to correct a statement made last month in reference to the International Film Company retiring from business. We were misinformed on this subject. The International Film Company are still doing business and promise some novelties in the near future.

Not content with making their own advertisement a spoken part of the cylinders which they require the public to pay for, and with each production of a piece to patiently listen to, the Columbia Phonograph Company now even deny to intending purchasers of their selections the right to hear any piece before they buy it. The purchaser now is accorded only the great privilege (?) of looking over the catalogue of the company, from which he must select by titles only. He is given no opportunity of knowing whether or not the song is well sung, the piece is indifferently

spoken, or the music is miserably rendered, until after he has returned home with his newly purchased cylinders and has placed them upon his own instrument. Then, if he does not like them, he is granted by the Phonograph Company the glorious privilege (!) of carrying them back to their office, where he is allowed *eight cents* (in exchange, only) for each such cylinder, for which he has just paid them *fifty*. When a phonograph company shall come upon the market which shall recognize the fact that the purchasing public has some rights which it is bound to respect, the Columbia Phonograph Company will take a back seat with purchasers, or will be compelled to change its tactics."

The above article from *The Illustrated Phonographic World* is almost amusing enough for *Puck* or *Judge*. The article suggests "sour grapes" on somebody's part, probably the writer. If our friend would sit down quietly and consider a few moments he would realize, as Weber & Fields would say, "Foolish boy what you are."

The Columbia Phonograph Co. have adopted the plan of selling their product on the same basis as any commercial article, and by not allowing their patrons to hear records have established a valuable precedent in the talking machine business.

Any one who has a talking machine knows that records are, in a measure, perishable; they know that the value of a record is deteriorated by continually reproducing it. Now, why should the Columbia Co., to amuse a few cranky customers, be obliged to sell their other patrons in different parts of the country records that have been used over and over again for somebody's amusement at their home office. When we buy a book, do we sit down in the store and read it first to see if we like it? Well, not always.

A fair-minded person should appreciate the fact that they are getting a fresh record when purchasing rather than one which has been handled over and reproduced for the amusement of others.

People who buy records for talking machines generally, perhaps unconsciously, impose on good nature when allowed to hear records while purchasing. For instance, a party will sit down in front of a machine and hear a number of records that they never intend to purchase merely to satisfy their curiosity, not realizing that they are wearing out records somebody else will want to purchase who would be entitled to new cylinders.

Where there is one person who will inquire for and take a certain record there are three who will say "what have you got that's good?" "Let's hear something," or something equivalent. It is a great deal of trouble and requires a large force of help to wait on this class of trade. We are pleased to see that the talking machine record has become a commercial article, that is bought and sold as such, and is no longer a medium to amuse a few curious persons from out of town who stroll into the city "to see the elephant."

## New Corporations

The certificate of incorporation of the Universal Talking Machine company was filed in the County Clerk's office. The corporation will have its principal office in Yonkers. The amount of the capital stock is fixed at \$20,000, divided into 200 shares; the duration of the concern is fifty years, and the directors are Orlando J. Hackett, Edward A. Reser and William Mays, Jr., all of New York City.

The United States Mutoscope Company, Ltd., to give exhibitions with patented appliance; capital, \$3,000,000. Corporators—George C. Lyman

and George W. Mark, New York, and Howard K. Wood, East Orange, N. J.

A joint stock company to be known as The Prepaid Meter company, has been organized in this city, and incorporated under the laws of the state of Connecticut. James A. Howarth is its chief backer.

The directors are James A. Howarth, president; John A. Hull, treasurer; and Samuel McLaughlin, C. P. Mayer, Frank Hendrick, John H. Pomeroy, Samuel H. Williams, and N. G. Pomeroy. The capital stock is \$100,000, partly paid in. Shares will be sold at ten dollars each. The machines are now on exhibition at the American Fish Hook company, at No. 11 Artizan Street, of which company John A. Hull is secretary. Patents were taken out on them in August of 1897, January, 1898, and a third patent is expected in a short time.

The company will manufacture attachments which will be placed upon the old meters. The new machine is on the order of the nickel-in-the-slot affair and is designed for small consumers of gas. It is probable that a factory will be built for the manufacture of the new machines.

## A Silver Diaphragm

EDITOR PHONOSCOPE:

DEAR SIR:—You ask me to write you about the Silver Diaphragms that I am using in the phonographs and graphophones. I will try to do so though I have little time to spend with them now, and can dispose of them faster than I can make them.

In my use of the talking machines, I found the harsh, screeching noises very prominent and very objectionable, especially in band and instrumental records, also in the vocal selections where the voice was high. I found it impossible to recognize voices of my friends upon reproducing a record even immediately after making it. This led me to try diaphragms of different materials to try and find one that had the acoustic property of reproducing sounds more correctly.

I tried the common metals and alloys, also parchments, mica, aluminum, etc. A piece of very hard, calendered card board, such as is used in visiting cards, does very well on some classes of records, recitations and speeches. It is a little muffled, and, in an instrumental record lacks the clear ring of a more elastic substance.

Any one familiar with acoustics, knows that a silver bell gives the finest and purest tone of any material used, and, while glass may be more elastic, the quality and tone of glass used in reproducing sound does not compare with silver. I have made records, using silver recorder diaphragms, where the voice of each of several children could be recognized, and the ages of all were within a few years of each other.

By experimenting, I found that the thinness of the silver diaphragm affected the sensitiveness considerably, and that I got the best results by using one of only one-third the thickness of glass diaphragms. Silver rolled as thin as this and hard rolled, which gives the greatest elasticity, is apt to warp badly. Each diaphragm, after being cut out, is therefore, worked down to a flat surface by means of a jewellers burnisher. This gives it an additionally hard surface. The tone is considerably lower than with glass, and is much smoother. I found that by cementing the studs to the diaphragm with rubber cement, I got much clearer effects and less of the scratching noise, than by attaching rigidly with shellac. It is hardly

necessary to say that the silver diaphragm never breaks. How many of us have, with surprise and embarrassment, after inviting in our friends to a parlor concert, discovered upon taking out our reproducer, that the glass was broken! Some careless friend, perhaps, has dropped it down on the machine or table, point first, of course.

I hope by the time of your next issue to get diaphragms made ahead, when I shall be glad to send in an ad. I keep a copy of THE PHONOSCOPE in my grip and take advantage of every opportunity to show it up to those interested, and often hear the remark, "Well I wondered if there wasn't such a paper published" and THE PHONOSCOPE must know of everything that's going."

Respectfully yours,

H. W. KELLOGG.

## General News

John Wahl, of Upper Alton, Ill. has been awarded a patent for an improved slot machine.

The Lyric Trio are meeting with great success in the record-making business. Their records are in great demand.

Mr. E. D. Easton, President of the Columbia Phonograph Co., left New York this week to visit the various American offices of the company.

Mr. Bettini is experimenting on two talking machines, one large and the other small, which he claims will outshine anything yet produced in popular priced machines.

The Excelsior Phonograph Co., have removed their plant to No. 42 West 28th Street, where, with increased facilities, they will be able to supply the demand for records.

Russell Hunting has a new "Casey" which is selling equal to the "Census." It is entitled "Casey as a Fortune Teller" and is full of the wit that made the "Caseys" famous.

During an interview with Mr. Guth, of Kansas City, Mo., he informed our representative that he will leave for Cuba to take pictures of the Battle ship Maine, the fleet and divers. He expects to be gone about two weeks.

The International Film Co. succeeded in obtaining a panoramic film of the ill-fated U. S. S. Maine, as she lay in the Havana harbor, before the disaster. It is a fifty-foot film and is now being put on the market.

There are several new firms springing up for the making of original records, since the cheap talking machines have been placed on the market and judging from the great demand for same, we think there is room for a few more.

Mr. P. V. DeGraw, who was for many years Washington manager of the Limited Press, has been appointed manager of the Philadelphia office of the Columbia Phonograph Co., succeeding Mr. Geo. W. Lyle, who has taken charge of the Chicago office.

Russell Hunting is working on a telegraphic code which will contain over seven thousand sentences and phrases used in the talking machine trade. It will be called "The Hunting Talking

Machine Telegraphic Code," and will be placed on the market in a few days.

One of the most remarkable developments of the automatic machine is a "Doctor Cureall," in Holland. It is a wooden figure of a man, with compartments all over it, labeled with the names of various ailments. If you have a pain, find its corresponding location on the figure, drop a coin into the slot, and the proper pill or powder will come out.

Lena Read is a court stenographer in Terre Haute, Ind. She recently took the minutes of an important suit, then refused to typewrite them on the ground that she was to be married, and did not have time. To solve the difficulty, a phonograph was procured, and she read the notes into that. Fifty cylinders were made, and when the case comes up for a new trial they will be used as a record.

Engine Company No. 1 and Truck No. 1 of Newark, N. J., turned out last week so that a view might be taken for the biograph. The two companies, with Chief Kearstead and Assistant Chief Astley, took a short run down Broad Street. The men were also photographed coming down the poles. Only eight seconds were consumed by the members of the steamer company from the time of the alarm until the engine was out of the house.

The local situation has several points of interest to speculators. The situation of the graphophone seems really very bright. The stock sold at 15¼ yesterday, and the advance has been regular and most attractive to investors. The business of the concern is steadily increasing and there is every reason to believe that there is a continuance of this pleasant condition ahead. I learned that one order for 5,000 of the musical machines was received from Paris last month and that the factories are kept running night and day to keep up with the demand. There is branching out for other European markets all the time. The salaries are high and the best people are employed but this praiseworthy policy is well thought of by the stockholders.

The class of '71, College of the City of New York, gave a farewell dinner recently at the Military Club, Fifth Avenue and Fifty-eighth Street, to one of its members, Dr. Henry Newton Heineman, who leaves New York to reside permanently abroad.

A unique feature of the evening's entertainment was the recording by a member of the class, Mr. Joseph Bernhardt, of public school No. 21, on phonographic cylinders of the voices of all present for preservation and future reproduction at reunions of the class. The Doctor recorded his regrets at leaving the city of his birth, made his acknowledgments for the education received in the public schools and the free college, recalled college incidents, toasted the class and said farewell. The cylinder was placed in the custody of the president, and at forthcoming reunions the Doctor, though in Frankfort and Paris, will be talking by phonograph to his classmates in New York.

In return each member of the class inscribed an appropriate sentiment on a cylinder. This, with suitable ceremony, was presented to the Doctor. By placing it on the mandrel of a phonograph or graphophone he will be able to hear his New York classmates talking to him in Europe. The dinner was enlivened with phonograph music.

## What they Write About Us

THE PHONOSCOPE PUBLISHING CO.

GENTLEMEN:—For your most excellent publication, THE PHONOSCOPE, I enclose you the amount for another year's subscription.

As one of the oldest and first inventors of recording and reproducing Sound and Sight machines, the writer desires to unite his earnest approval and support of the best journal of its kind ever issued. During his long experience as investigator in this particular line has observed with regret the rise of a limited few and the fall of many ventures connected with these most remarkable of all machines ever designed, but feeling assured after the splendid edition with such bright, interesting news given us during the first year of THE PHONOSCOPE, it is destined to be a perpetual, living, well-patronized Journal which it certainly deserves.

T. W. SEARING,  
Harlem, N. Y.

THE PHONOSCOPE PUBLISHING CO.

GENTLEMEN:—Having the pleasure of reading a sample copy of your paper, and being very much interested in talking machines, am glad of the opportunity of subscribing for your most valuable paper. Inclosed find \$1.00 for one year's subscription.

Wishing you every success.

Yours truly,

C. S. DUNHAM, D. D. S.  
St. Louis.

THE PHONOSCOPE PUBLISHING CO.

GENTLEMEN:—I beg to inclose you clipping which I took from the December number of THE PHONOSCOPE, which would indicate that my subscription to the same had been cancelled. Please note that I sent to your address, on December 23d, '97, United States Express money order for one dollar, as payment for my subscription to THE PHONOSCOPE for the year 1898. I think that you will find my name among those of the first to subscribe when you made your bow to the people for patronage, as I have been engaged in the exhibition of phonograph musical and talking records during the past five years, I was therefore very quick to see the advantage to be derived from such a publication, and more especially for those who are engaged in the phonograph business. I assure you, sirs, that I take a great deal of pleasure in reading THE PHONOSCOPE as a source of important information on Sound and Sight.

Yours truly,

H. CELLEYHAM, JR.

## Our Tattler

In other hands.

Recently an employe of the American Graphophone Co. struck on a unique way of administering a call down to George Stapleton, one of his fellow workmen, and as the result both were discharged and put to the humiliation of apologizing to the office attaches.

Stapleton and the other employe worked on the same machine; one being on the day force and the other on the night force.

Stapleton did something to the machine that provoked the ire of his associate. The latter wanted to call "Stape" to account for it, but didn't want to do so to the latter's face.

A novel idea entered his cranium. He would have his call down recorded on a graphophone

wax cylinder and leave it with the ones his associate would test.

What the mechanic said to the machine and what the latter truthfully recorded is far from being printable.

He called Stapleton many "pet" names.

"Stapleton will boil when he hears that," thought the fellow as he chuckled to himself.

But alas, "there's many a slip 'twixt the cup and the lip" and instead of performing the duty it was intended to perform, the wax cylinder in some way, became mixed with the ones that were assigned to one of the young ladies in the office to test.

The cylinder being no respecter of persons spoke as freely to the young lady as it would have spoken to Stapleton—and worst of all, all the office attaches heard it.

For a minute the air in the office was flecked with blue streaks.

Everybody present was startled by the sounds the machine emitted. They thought the cylinder had gone insane.

The girls blushed a scarlet red and plainly showed their embarrassment.

The young lady who was testing the cylinder stopped the machine as soon as she recovered from her surprise.

The cylinder reproduced the voice of the man who uttered the words and Stapleton's name was mentioned.

The result: two men discharged; two men apologized; a wax cylinder melted.

While being arranged for pushing a woman out of a second-story window recently, the following conversation took place.

How do you earn a living, asked the Magistrate."

"I sing and whistle for phonograph companies, Judge, and it's worth more than ten dollars a week to me."

"What do you sing?"

"Anything that's called for, your Honor. All the popular songs of the day, most of the time. Once in a while I reel off a cylinder full of grand opera for some high-toned customer who wants to give a phonograph to his girl."

"What do you whistle?"

"Any tune you want to name—"The Mocking Bird" and the 'Darkies' Dream' are my whistling specialties."

"Can you whistle for a bondsman?"

"Not without my notes, Judge."

"Well, I will parole you for a week without bail to wait for the woman to recover."

The Morning Star Mission at 17 Doyers Street was holding a fair. At 8 o'clock in the evening on the first of the three nights of the fair, the rooms on the third story of the mission house were packed tight with as confused and confusing a crowd as was ever seen in New York. There were Chinese in Chinese clothes and Chinese in Caucasian clothes, there were Americans in Chinese clothes and Americans in everyday clothes. Everybody was there to look at everybody else. Except a Chinese string band and a Melican talking machine man, the entire activity of the assemblage was summed up in a unanimous mutual stare.

The orchestra is a thing that can be heard almost any night by the stranger who wanders through Chinatown. One would think the inhabitants would find little in its complex caterwauling that would excite curiosity. But never once in all the evening did it tune up without an instant congestion of the Chinese element of the crowd around the platform. They crowded over each other as if in anxiety to see who could get nearest to the instruments, and once in the front

row, they jabbered and chattered with as much complacency as if they had been in the first tier of boxes at the Metropolitan Opera House on a Wagner night.

The man with the talking machine alternated his performance with the band. He didn't charge anything for the exhibition of his machine. It talked through a trumpet and every one in his end of the room could hear what it said. The Chinese approached it fearlessly, but with unconcealed skepticism. They listened for a moment, and then laughed in one another's faces scornfully.

"Where man?" asked one of the nearest to the demonstrator.

"What do you mean?" said he.

"Man heap talkee. Where h'im hide?"

"Look and see," said the showman.

The Chinese felt all over the machine, peered into the horn, leaned over the counter and poked at the boxes and waste paper under it. One of them took hold of the machine itself.

"Lift?" he asked.

"Sure," said the showman.

The Chinamen tipped the thing on its edge and all the rest leaned over and peered at the space beneath. Great was the cackling when it was seen that the machine was not connected with anything outside of itself.

The Chinamen wound the machines for themselves, had them taken to different corners of the room, and went out to summon their friends, cheerfully paying the ten cents admission each time they passed the door. The showman told them what the machine would say when it was wound up and, lo! the machine was as good as his word.

A crafty-eyed, corpulent gentleman, with a four-foot pigtail and a gold-embroidered coat, was the only one in the opinion of his countrymen who came anywhere near exposing the fraud.

"Him talkee China talk?" was his question.

The showman was floored and he showed it. He reluctantly admitted that it could not.

"By and by," he said, "we'll make it talk like a Chinaman maybe."

"Humph," grunted the skeptical one. "Bime-by, him talkee China talk. I buy mebbe."

He walked away, smiling scornfully, followed by the approvingly derisive laughter of the rest.

After consultation with some of the American women connected with the mission whose truthfulness had been established by years of experiment, several of the wealthy Chinamen bought machines.

## The Girl Who Sings Into the Phonograph

Miss Estella Louise Mann is a pretty young woman of this city who makes her living singing into the phonograph. She used to be a concert soloist, but now it pays her to go up into the recording-room of the phonograph company and "talk" into the machine several hours every day. Miss Mann likes it, and is so used to it that the five big horns of the receiver seem like old and appreciative friends to her now.

It is not a very cheerful outlook to stand and sing with all your might and all your best talent and technique into several hollow tubes with reverberating sides and not to face a responsive eye or ear. Yet that is what this young person is fond of doing every day, and people all over the world afterward listen to her.

Miss Mann began some time ago, and has grown to be quite an expert in her art, for it takes especial art to sing in this extraordinary fashion

to this dumb audience. There are all sorts of bothering technical whys and wherefores in this business, but the main thing is that the tones have to be more forceful and higher. It is no easy thing to be able to fill without a falter or false note all five instruments, for a mistake and the whole thing has to be done over again. It is something of a strain on the strongest tones to throw them into this hungry set of receivers, that are waiting to snatch and carry them, just as they heard them, across continents if need be.

You have to have a fine voice that has captivated audiences, or the phonograph is not going to be anxious to reproduce it. Miss Mann was soloist for Sousa's band for some time, and studied in the College of Cincinnati under Prof. Tino Mattioli, and won a gold medal and certificate.

Miss Mann sings for the "talking machine" the most classical music—"Falka," "The Barber of Seville," Italian and Latin music and sacred songs. "The Huguenots" is one of her favorite selections, and she sings one hundred and fifteen songs, thirty operas and ever so much that she calls "just practice."

The practice is not hurting her voice, and she is able to sleep many more hours than the concert and opera singer, for she can go to bed early and keep herself in good condition.

The manager of the concern takes the little wax tube out of the room and listens to the reproduction of this songstress's notes critically, and then it is wrapped up in cotton and tissue paper and packed in sawdust or cork dust and sent to San Francisco and Chicago and Europe and everywhere that a phonograph goes to, and the people of the other half of the world can hear just how this extraordinary girl with a voice sings into the five tin horns under the skylights of the building on Broadway. *N. Y. World.*

## Where They Were Exhibited Last Month

### Projecting Kinetoscope

Opera House, Lykens, Pa.

### Vitagraph

North Reformed Church, Passaic, N. J.

### Biograph

Keith's, Boston, Mass.; Phillips Hall, Jersey City, N. J.; Pleasure Palace, N. Y. City; Grand Central Palace, N. Y. City; The Wonderland, Detroit, Mich.; Hopkins, Chicago, Ill.

### Veriscope

Fourteenth Str. Theatre, St. Louis, Mo.; Academy of Music, Charleston, S. C.; Academy of Music, Richmond Va.; The Columbia, Atlanta, Ga.; The Metropolitan, Minn.; The Metropolitan, St. Paul, Minn.; The Sherwood, Ottawa, Ill.; Opera House, Aurora, Ill.; Academy of Music, Sterling Ill.; The Auditorium, Philadelphia, Pa.

### Animotiscope

Presbyterian Church, Easton, Pa.

### Graphoscope

Delavan Opera House, Meriden Ct.; Able Opera House, Phillipsburg, N. J.

### Bioscope

Austin & Stone's Museum, Boston, Mass.

### Chronomatograph

Boston Music Hall, Boston, Mass.

## London Office of Maguire & Baucus

Some months ago we published in this journal under the heading of "The Growth of the Animated Picture Business" some illustrations of the American home of Maguire & Baucus, Limited. As this house is the largest dealer in films and projecting machines in the world, illustrations showing its London quarters, at Nos. 4 & 5 Warwick Court, High Holborn, W. C., will no doubt be of interest to our readers.

Messrs. Maguire & Baucus, Ltd., have long been sole agents for Great Britain, her colonies and the United States for the Lumiere photographic films, perforated to American (standard) gauge. As every well-informed exhibitor knows, these Lumiere films are justly celebrated. They have never been rivaled for the many good qualities which a picture ribbon should possess, and are particularly interesting to the trade because of their clear-cut photography and the very wide range of subjects catalogued, the photographs being taken all over the



MAGUIRE & BAUCUS, LTD. MAIN OFFICE



PRESIDENT'S OFFICE

world. This is one reason for the remarkable success which this house has had in marketing this product,—as great even as when they first introduced the Edison films and machines. With the Edison film, the standard of America, and the Lumiere film, the standard of Europe, they are prepared to supply the trade with the best and most satisfactory films and machines obtainable. A stock of 2,000 to 2,500 films is always kept on hand; in fact, they are the only house in the business which carries a stock of these goods on its shelves, thus avoiding unpleasant delays to their patrons. Nearly every machine and film manufacturer has had its goods tested by them, and as there are very few makes which have been found satisfactory they confine themselves strictly to the very best, and the result has justified the caution used. By handling only these two standard grades of films, the supply of which is continually being added to by first-class new subjects, they are enabled to supply the public with everything to be desired in this line. In this connection it is proper to call attention to the large number of new Edison pictures which have recently been taken, and to a number which are shortly coming on the market, these being the best yet produced by the Edison factory.

A duplicate film is worthless, and one of the most unsatisfactory features of this business is that new customers are very often deceived by unscrupulous dealers who offer them such films as originals. Messrs. Maguire & Baucus, Ltd., have never dealt in any but original films.

This firm is doing a large shipping trade with Germany, Russia, Holland and other countries; in fact, their business has grown so rapidly that they have been compelled to acquire additional space for their London offices in order to successfully take care of their trade.

It is an inestimable boon to a firm like this to have a really practical man at the head of affairs. When you deal with Messrs. Maguire & Baucus, Limited, you find that you deal with a gentleman who understands what you require (and has anticipated most of your wants beforehand) in the person of Mr. C. Urban. Mr. Urban can, if he wants to, "run" an animated photograph show as well as any one living, and all machines are personally tested by him before leaving the ware-rooms. That is why a good instrument is not spoiled by being wedded to an inefficient lantern or unsatisfactory accessories.



PRIVATE OFFICE

## New Films for "Screen" Machines

### MAGUIRE & BAUCUS

**NEGROES DIVING.** A scene in an African Village showing a number of Ashantees diving from the river banks and swimming. Also shows canoes arriving and village in the background, all active motion takes place in the foreground.

**BOXING MATCH.** A lively boxing bout between two first class artists, scene photographed out of doors with woods for background, very sharp, clear and full of action.

**DUEL WITH PISTOLS.** A duel "a la Morte" between two French gentlemen in which one of the combatants falls mortally wounded at the first fire, the victor is hurried away to a carriage by his seconds.

**GARDENER, THE BAD BOY AND THE HOSE.** This is the original of this famous picture and shows the bad boy playing practical jokes on the gardener. It ends in a thorough wetting for both and the total defeat of the mischievous urchin.

**SNOW BALLING.** A lively battle is in progress between a number of boys and girls in the foreground, when a youth attempts to wheel past on his bicycle, the combatants immediately cease pelting each other and turn their entire attention to the cyclist, who amid a vigorous bombardment from all sides takes a "header" and spreads himself and wheel over the foreground. After an exciting struggle the wheelman escapes, minus his cap.

**THE MECHANICAL BUTCHER.** A steam apparatus similar to a sausage grinder. A live pig is thrown into one end and comes out the other in the form of hams, spare ribs, bacon, etc., etc.

**BULL FIGHT SERIES, (four in number.)** These scenes were photographed at the famous old arena in Seville, Spain and shows an immense audience witnessing a bull fight. During the struggle several horses are gored by the enraged bull and the matadors narrowly escape a similar fate. A very popular subject, clear and full of action throughout the entire scene.

### EDISON FILMS

**LOADING BAGGAGE FOR KLONDIKE.** Shows the baggage of the miners, enroute to the new found Eldorado, being loaded aboard the S. S. "Queen" at Seattle, Wash. This picture was taken when the excitement was at its highest pitch and the crowd of anxious gold seekers, with their implements, provisions, clothing, etc., are shown life size. The huge derrick hoisting load after load, is shown to good advantage, while the hotel busses, driving up with passengers, add to the action. The picture is sharp and clear.

**FIRST AVENUE, SEATTLE, WASH.** A street scene taken during the "Klondike" excitement. The most notable feature lies in the fact that the buildings, trolley cars and vehicles are covered with large banners and signs with "Klondike" in large letters showing prominently.

**S. S. "QUEEN" LEAVING DOCK.** Shows S. S. "Queen" backing out from the dock of Northern Pacific R. R., Seattle, Wash., the decks covered with a mass of passengers, leaving for the new gold field.

**SUTRO BATHS No. 1.** Taken at the Sutro Baths, San Francisco, Cal., and shows a large crowd of bathers in a small area. The picture is full of action from beginning to end, caused by numerous and varied feats of diving, jumping, somersaults, etc. A toboggan slide fifty feet long, at an angle of forty-five degrees, furnishes sport for the bathers.

## 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 ❀ ❀ ❀ ❀ ❀

A Mother Is the Truest Friend of All Harding  
A Picture of My Baby on the Wall Harding  
As Your Hair Grows Whiter Porter  
At the Fair, Galop. Columbia Orchestra  
Ave Maria (Gououd) Miss E. Mann  
Bye and Bye You Will Forget Me. Spencer and Harding  
Casey Digging in the Klondike Gold Mines. Hunting  
Gavotte (Mignon) Miss E. Mann  
Charge of the Red Hussars Metropolitan Band  
Chimes of Trinity Porter  
Come Play With Me. Quinn  
Come, Send Around the Wine. Myers  
Coming Thro' the Rye Harding  
Cuban Trocha Dame (Violin Solo) William Cohen  
Day That's Gone Can Never Come Again, The Porter  
Dear Little Jappy-Jap-Jappy (Geesha) Miss E. Mann  
Departure from the Mountains. Schweifust  
Don't Let Her Lose Her Way. Gaskin  
Don't Say You Have No Friends Harding  
Dream of Passion Waltz. Issler's Orchestra  
El Capitan March. Rosey's Orchestra  
El Capitan March Song. Quinn  
Eli Green's Cake Walk. Rosey's Orchestra  
Embassador. Rosey's Orchestra  
Emmett's Lullaby. Quartette  
Erin, O Erin. Myers  
Eve and Her Pal Adam (Banjo accompaniment). Paine  
Every Day at the Station Porter  
Frog Song (May Irwin's hit) Miss E. Mann  
Geraldine, Farewell Harding  
Her name was Mary Wood, but Mary Wouldn't. Hunting  
Holy City, The Harding  
Hot Stuff Patrol (Banjo). Ossman  
I Can't Think of No One But You. Gaskin  
I Don't Care If You Nebber Come Back. Gaskin  
I Don't Blame You, Love. Gaskin  
I Loved Thee for Thyself Harding  
Irene, Good Night Harding  
I Was Once Your Wife Porter  
Jolly Bachelor March. Rosey's Orchestra  
Just For the Sake of Our Daughter Porter  
Just set a Light. Favor  
Light of My Life Harding  
Love, I Adore You Harding  
Loves Whisper. Issler's Orchestra  
Lulu Song. Spencer  
Mamie Riley. Quinn  
Mamma's Little Pumpkin Colored Coons Albert Campbell  
Medley Reels (Banjo Solo). Vess L. Ossman  
Medley of Coon Songs. Golden  
Mollie Dwyer. Quinn  
Mother Of My Best Girl, The Porter  
Monastery Bells (Orchestra Bells). Lowe  
Mr. Bogan Gimmie Gin. Spencer  
Mr. Finnegan and Mr. Flanigan. Hunting  
Mr. Vandyke from Klondyke Harding  
Oh! Poor Bridget. Hunting  
One Heart, One Mind (Xylophone Solo). Lowe  
On the Banks of the Wabash Porter  
Pilgrims' Chorus, from Tannhauser Edison's Band  
Pizzicati Polka Edison's Band  
Plinkey Plunkey. Favor  
Pom-Tiddley-Oh-Pom. Favor  
Pretty Molly Dwyer. Quinn  
Pull Away, Boys, Said the Captain Harding  
Rainbow Dauce. Rosey's Orchestra  
Reeve's March Edison's Band  
Russian Hymn Edison's Band  
Schubert's Serenade Edison's Band  
Scorcher March. Rosey's Orchestra  
Selections from Boccacio Edison's Band  
" Bohemian Girl " "  
" Daughter of the Regiment " "  
Send Back the Picture and the Ring Porter  
Series of Imitations. Girard  
She Lives On the Same Street With Me Porter  
She Never Did the Same Thing Twice Miss E. Mann  
She's My Warm Baby Harding  
Songs That Maggie Sings, The Porter  
Sounds From Home (Orchestra Bells). Lowe  
Stars and Stripes. Rosey's Orchestra  
Suppose She Were a Sister Of Your Own Porter  
Una Voce (Barber of Seville) Miss E. Mann  
Uncle Sam What are You Waiting For? Chas. Kenwick  
Wedding of the Chinese and the Coon. Spencer  
Won't You Be My Little Girl. Gaskin  
Words Cannot Tell My Love for Thee Harding  
Yer Baby's a Coming to Town. J. T. Kelly  
You can't stop a girl from thinking. Hunting  
You're n Good Daddy. Gaskin

## 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 ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀

At a Georgia Camp Meeting Harry Mills 9  
Baby, Will You Always Love Me True? Bob Cole 18  
Bay State March A. C. Kirkham 1  
Belles of the Beach Fred Eustis 1  
Bom-Ba-Shay Max Hoffman 1  
Bo Peep George Bowles 1  
Come Back and I'll Be Good Earnest Hogan 18  
Darkies' Jubilee Williams & Walker 1  
Dearest Mine Fay & Olliver 1  
De Captain of de Coontown Guards Dave Reed, Jr. 1  
Does True Love Ever Run Smooth? Leo Feist 13  
Don't Mention Her Name Chas. Graham 11  
Comes My Love To-Day C. F. Manney 7  
Down By the Old Ruined Mill Fitzpatrick 17  
From Prison to Mother's Grave Margaret Moore 17  
Girl Who Is Loved By All, The Tony Stanford 13  
Gracie May S. Stenhammer 16  
Happy Old School Days Frank Minnis  
Honey, I's In Town Hattie Starr 1  
Honey, You're the Warmest Girl in Town Jones 9  
Honey You'se Ma Lady Love Schottische F. W. Meacham  
I Can't Find Another Love Like Nell John T. Kelly 1  
I'm That Young Lady's Beau Harry Bennett 13  
If We Should Never Meet Again Gussie Lindner  
I Love My Dolly Best Malcolm Williams 4  
Just Ask If She's Forgotten Her Gussie Davis 11  
Let Her Go Her Way Thos. F. Morrissey 16  
Love Her, Tom, for My Sake Blanche Newcomb 14  
Love Me in the Land of Dreams H. G. Pelissier 1  
Lurline John W. Brattou 1  
Maloney and the Brick M. F. Casey 1  
Mary Malcne Dave Marion 12  
Mary's Not as Green as She Looks Ford & Bratton 1  
Mamma, Don't Be Cross With Me A. H. Fitz 15  
Miss Liberty Harry von Tilzer 13  
Miss Liudy Geo. Rareshide  
Miss Olivette A. H. Fitz 15  
Mlle. New York Maurice Levi 1  
Mr. Vandyke From Klondyke Wm. L. Berry 2  
My Heart Loves You, Too Roma 18  
My Honey, Sweet Angemiua Geo. W. Hetzel 18  
My Little May C. K. Champlin 18  
My Love's a Gambling Man Mathews and Bulger 1  
My Mamma's Lullaby A. H. Fitz 15  
My Sweetest Girl Leander Richardson 2  
My Sweetheart Plays the Violin Emily Smith 4  
Nancy Brown Dave Marion 9  
Nobody Cares for Me Harry von Tilzer 13  
Nothing's Too Good for My Girl Geo. M. Cohen 11  
On Sunday Morning Mathew & Bulger 1  
On the Chattahoochee J. R. Johnson 9  
Orpheus With His Lute C. F. Manning 7  
Pansy, I Loves You R. R. Hauch 16  
Parted W. S. Greiser 16  
Rose Maguire Harry Miller 12  
Sally Warner Round the Corner Chas. Graham 9  
Scientific Man, The Heury E. Pether 2  
Sermon That Touched His Heart, The Tony Stanford 13  
She's My Ouly Sister Chas. E. Bray 4  
Smart Man, Felix Casey Fernando Mock 1  
Story of a Broken Heart, The Tony Stanford 13  
Sure Thing Felix McGlennon 14  
Sweet Katie Carey Dave Reed, Jr. 1  
Syncopated Sandy Wayburn and Whiting 18  
That's What I Waut Santie to Bring Albert H. Fitz 15  
There May Be Eyes J. L. MacEvoy 12  
There's A Picture in my Memory Dave Fitzgibbon 1  
The Same Love is Waiting for You Cooper & Rubens 1  
Time is Money Tilbury and Barnes 2  
'Twas 27 Bells in the Waterbury Watch A. A. Powers 1  
Two Little Dolls Fred J. Hamil 2  
Uncle Jasper's Ball Sam W. Cousins 1  
Warmest Baby in the Bunch, The Geo. M. Cohen 11  
What Did She Know About Railways Beunett Scott  
What Yo' G'wiue to Do Foh Yo' Baby M. Williams 5  
When All the Rest Forsake You Ph. Greely 7  
When Gazing In Thine Eyes So Dear C. F. Manning 7  
When Mary Passes By Theodore Bendix 1  
Whisper Again, Sweet, I Love You M. Shirley 15  
You'll Never Find Another Coon Like Me Harding & Whitelaw 1

Note.—The publishers are designated as follows: 1 M. Witmark & Sons; 2 T. B. Harms & Co.; 3 Jos. W. Stern & Co.; 4 Myll Bros.; 5 Petrie Music Co.; 6 Howley, Haviland & Co.; 7 O. Diston Company; 8 Gagel Bros.; 9 F. A. Mills; 10 E. T. Paul; 11 Geo. L. Spaulding; 12 Hamilton S. Gordon; 13 Feist & Frankenthal; 14 Wm. B. Gray; 15 A. H. Fitz; 16 A. M. Hall; 17 National Music Co.; 18 Broder & Schlumu.

### Exhibitors' Directory Wants and For Sale

Kaiser, John,  
Judge Building, Fifth Ave., N. Y.

Brooklyn Talking Machine Co.  
1182 Bedford Avenue

Phonographic Exhibitor  
Moving Picture Exhibitor Brooklyn, N. Y.

Greenacre, George,  
Bangor, Maine

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.

WANTED.—Two practical duplicating machines. Must be efficient. State price. Address B., care of Phonoscope, 4 East 14th Street, New York.

FOR SALE.—A preparation to clean records without a knife, saves time and labor and makes

no dirt, any child can use it, agents can make big money selling it to people having a phonograph or graphophone, (costs 20 cents a quart.) Send \$2.00 for receipt. Address, Sam'l O. Paul, care Phonoscope Publishing Co., 4 East 14th Street, New York.

FOR SALE.—Aluminum horns for phonographs and graphophones; the best and the lightest horn made for small talking machines. When you want a large horn with little weight, try aluminum, 14 inch spun, no joints, \$2.50; special price in quantities. Address, Greater New York Phonograph Co., 4 East 14th Street, New York.

#### THE HUNTING

### TALKING MACHINE TELEGRAPHIC CODE

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Contains over seven thousand sentences and phrases used in the Talking Machine trade. Cipher words compiled in accordance with decisions of the recent International Telegraph Conference at Paris.

Contains a complete list of every Talking Machine manufactured, also every part and appliance.

Price, Paper Cover, 50 Cents; Cloth Cover, \$1.00

RUSSELL HUNTING

21 East 20th Street, N. Y., U. S. A.

### TALK IS CHEAP!

PRICE  
\$3.50  
INCLUDING  
1 RECORD  
25 NEEDLE POINTS



### Don't pay \$100 for a Talking Machine

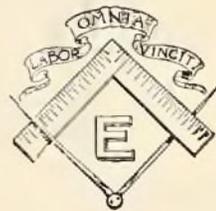
when you can buy one which for amusement will make the children happy and cause the old folks to smile. Complicated machines get out of order. THE UNITED STATES TALKING MACHINE is simple, durable; no parts to break or get out of order. Any child can operate it. It is neatly encased in a hard wood box, well finished, size 8 1/2 x 11 1/2 x 3 1/2 inches, with brass hinges and catch; has hearing tubes for two persons, one (Berliner's Gramophone) record and twenty-five needle points. Price complete with one Record (express charges prepaid) \$3.50, weight 4 lbs. Remit by Bank Draft, Express, or Post-Office money order. Agents wanted. Address

UNITED STATES-TALKING MACHINE CO., 57 E. 9th ST., NEW YORK CITY  
358 DEARBORN ST., CHICAGO, ILL.

# The Empire State

EDISON

# Phonograph Co.



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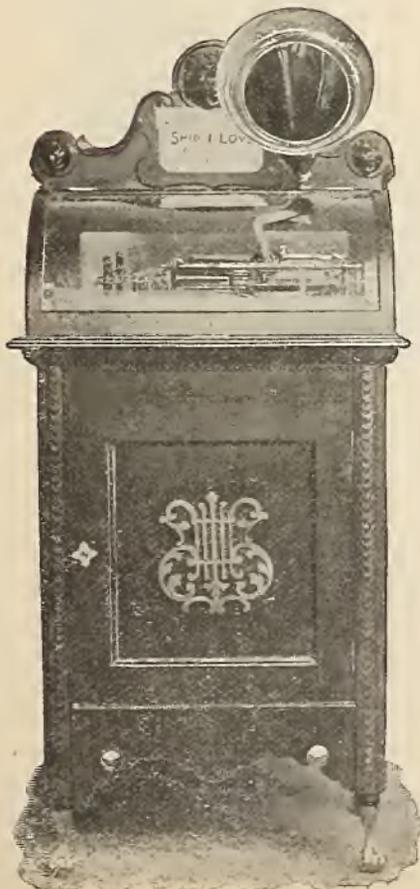
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GRAPH REPAIRS . . . .

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We are the sole dealers of the handsomest nickel-in-the-slot cabinets and the most reliable return mechanism in the world.

This mechanism has made the nickel-in-the-slot business practical. Send for Catalogue.

# HIGH STANDARD RECORDS

**GREAT VOLUME**

POSSESSING

**PERFECT REPRODUCTION**

AND **FINE QUALITY OF TONE**

MADE ONLY BY THE

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I. W. NORCROSS, Jr., Manager

EQUALLY ADAPTED TO

PHONOGRAPHS, GRAPHOPHONES AND TALKING MACHINES

NOTE.—With the Edison Recording Diaphragm and the Norcross Attachment we produce an absolutely perfect record possessing a wonderful volume of tone. For exhibition purposes we make a special master record capable of entertaining an audience of 5,000 or more. All our records are high-grade originals—we have no duplicates to sell at any price.

Our loudest masters are suitable for tube use, the tones being pleasant and agreeable to the ear.

PRICE, \$1.00 EACH  
\$10.00 per DOZEN

EXHIBITION MASTERS,  
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NEW FILM STOCK

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NEGATIVE AND POSITIVE

Made on CLEAR TRANSPARENT CELLULOID

FOR ALL MAKES OF

🔥 **CHRONOGRAPHIC CAMERAS** 🔥  
and **PROJECTING MACHINES**  
and Guaranteed NOT to PEEL

Price of Eureka Ribbon Film

Standard width $1\frac{3}{8}$ inches, plain (35 mm.)	Per foot 5 cents
Demeny's (French) width, 60 mm. $2\frac{3}{8}$ inches, plain,	" 9 "
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The above prices are Net Cash with order, F. O. B. Philadelphia

Special quotation on 5000 feet and over

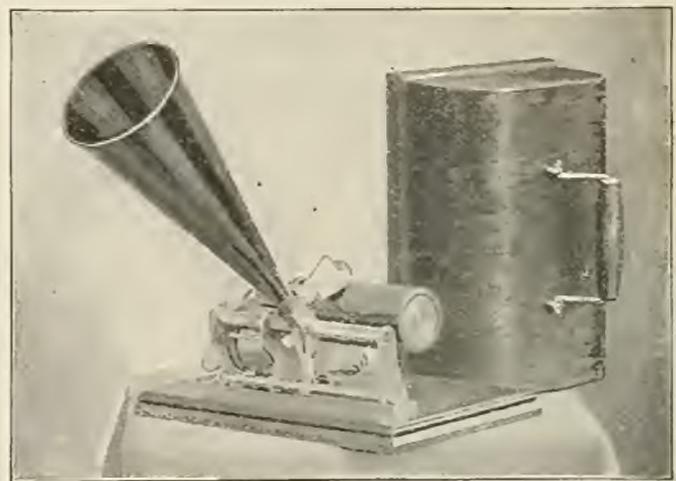
Manufactured by **John Carbutt**

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One Eagle Talking Machine, One Reproducer,  
One Horn, and One Two-Way Hearing Tube,

**Price, complete, \$10**

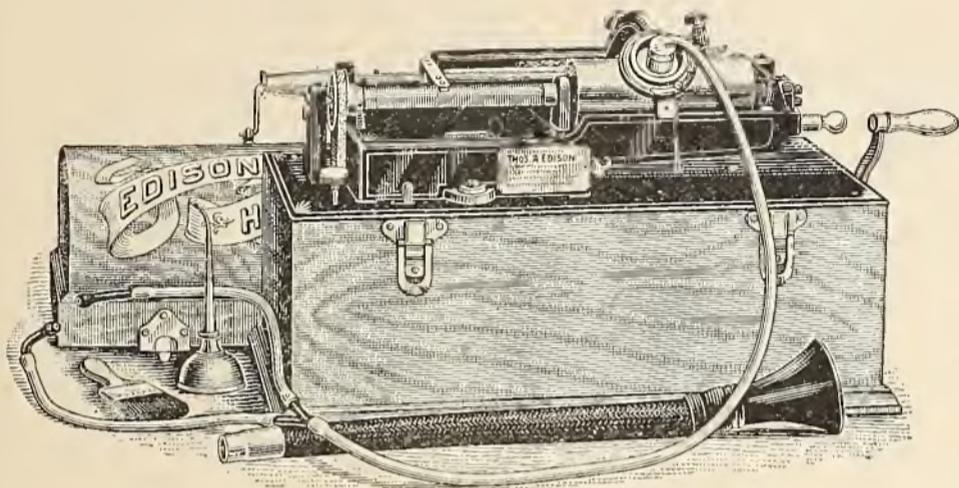
Best Selected Records of a Superior Quality. \$5.00 per Dozen

SPECIAL DISCOUNT TO AGENTS WRITE FOR PARTICULARS

**Manhattan Phonograph Co.**

202 BROADWAY, N. Y. CITY

# EDISON NEW HOME PHONOGRAPH



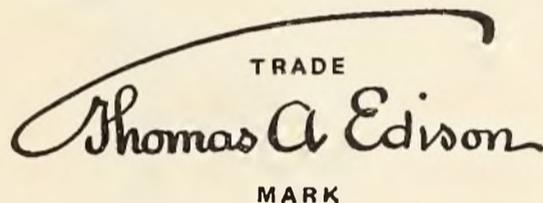
Complete with Edison Standard Speaker, with Recording and Reproducing Sapphires, a Sapphire Shaving Knife, Oak Case with Cover, one Speaking Tube, one Hearing Tube, one Winding Crank, one Oil Can, one Chip Brush; all for \$30.00. Handsome, Simple, Portable. Records, Reproduces and Shaves Blanks.

Equipped with spring motor that runs six records with a single winding; weighs 25 pounds.

Remember that all genuine Edison Phonographs, Records and Supplies are placed on the market by us.

CAUTION—Every genuine Edison Phonograph now being placed on the market bears a trade mark of which the following is a fac-simile.

## \$30.00



**EDISON RECORDS**  
50c. Each, \$5.00 per Doz.

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## LYRIC PHONOGRAPH CO.

**ORIGINAL RECORDS ONLY**

(ORIGINAL LYRIC TRIO)

Miss ESTELLA LOUISE MANN, Mezzo-Soprano  
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Original High Class Phonograph and Graphophone Records

ONLY COMPANY MAKING GRAND OPERA, COMIC OPERA, STANDARD AND POPULAR  
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Latest Edison Films at  
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Superior Master Records by Harding, Porter, Hunting, Johnson, Diamond and Curry, banjo,  
Cornet Solos, Piccolo Solos, Vocal Quartettes, Trios, Duets, Talking Records,  
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WE HANDLE NO DUPLICATES

ANY SPECIAL RECORDS MADE  
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