

No. 829,848.

PATENTED AUG. 28, 1906.

J. V. CRUSO.
PHONOGRAPH ATTACHMENT.
APPLICATION FILED APR. 10, 1906.

2 SHEETS—SHEET 1.

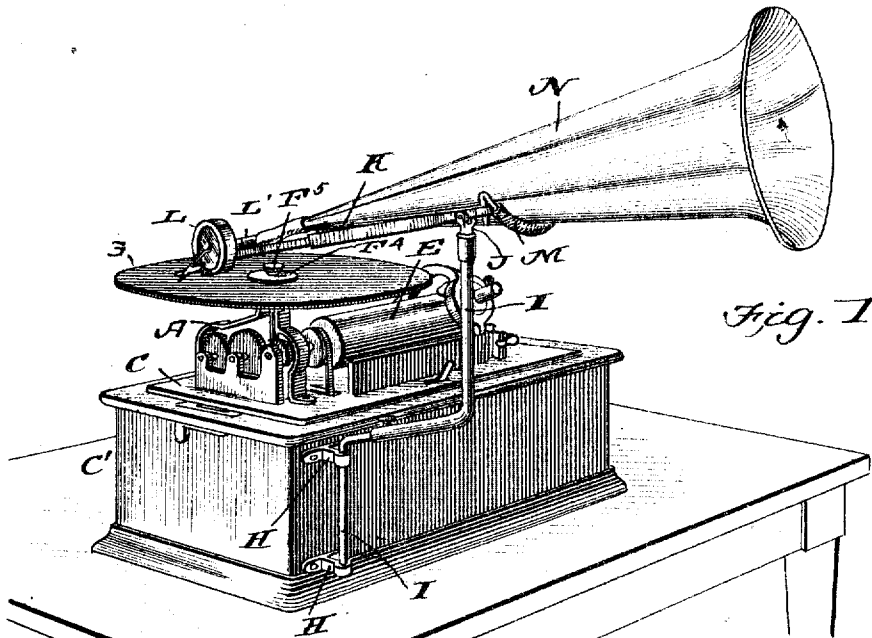


Fig. 1.

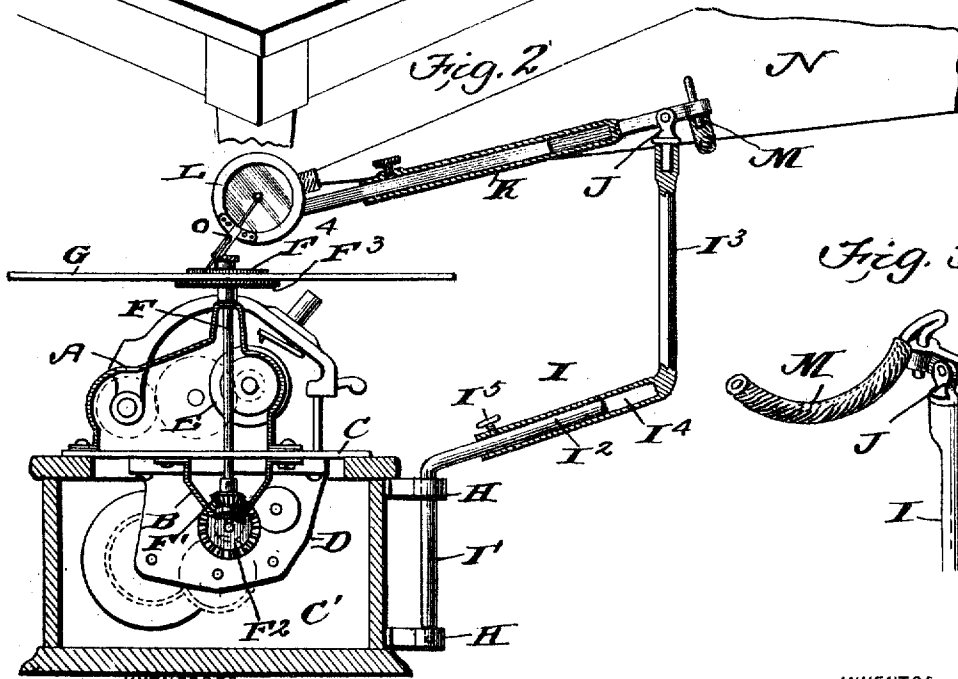
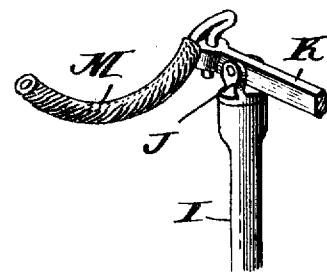


Fig. 3.



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PHONOGRAPH ATTACHMENT.

No. 829,848.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed April 10, 1905. Serial No. 254,863.

To all whom it may concern:

Be it known that I, JAMES VINCENT CRUSO, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Phonograph Attachments, of which the following is a specification.

This invention relates to an improved phonograph attachment, and has for its object to provide a device by which the ordinary cylinder-record-operating machines may be employed for operating a disk-record, and thus adapting the one machine to both forms of records.

The invention comprises certain and peculiar details of construction and novel arrangement of parts, as will be fully described in the following specification, and pointed out in the claim, reference being had to the drawings, in which—

Figure 1 is a perspective view illustrating my improvements applied to the ordinary cylinder-record machine. Fig. 2 is a sectional elevation of the same. Fig. 3 is a detail view showing the horn-supporting device. Fig. 4 is an enlarged sectional face view of a machine having my invention applied. Fig. 5 is a detail view illustrating the reproducer and the manner in which it is secured to the supporting-lever. Fig. 6 is a detail section of the same drawn on the line 6 6 of Fig. 5, and Fig. 7 and Fig. 8 are detail views of the reproducer, showing the form of stylus-holder I employ, and Figs. 9, 10, 11, and 12 are detail views of the stylus-holder, Fig. 11 being of the blank of which a portion of the holder is made.

In the drawings I have shown an ordinary cylinder-record machine of the Edison type; but I desire it understood that my attachment is equally adaptable to other makes and styles of cylinder-record machines.

Referring now to the drawings, it will be seen I employ two brackets A and B, which are suitably fixed to the upper and lower faces, respectively, of the base-plate C of the casing C' and to which is also connected the operating mechanism D and cylinder-record holder E and also the other parts which constitute the machine as a whole. In the brackets A and B is journaled a shaft F, carrying at its lower end a beveled pinion F', which meshes a beveled gear F'', that is secured to one of the shafts of the motive

power D, and in order to provide for a ready attachment of the gear I make it with an elongated hub f, which fits over the projecting end of the shaft and carries a set-screw f' for tightly securing the gear in position. To the opposite or upper end of the shaft is connected a face-plate F³, upon which rests the record-disk G, and to securely hold the disk upon the face-plate I provide a suitable binding-plate F⁴ and nut F⁵, which operates upon the end of the shaft and engages the disk, as will be readily understood.

By the arrangement just described it will be readily seen that when the mechanism for operating the cylinder-record is set in motion movement will be imparted to the disk-record and the latter revolved. Of course for this arrangement means must be provided for supporting the reproducer which carries the stylus that engages the disk and also a suitable support for the horn, which is connected to the reproducer, and to that end I employ brackets H, which are secured to the side of the casing and in which is journaled the swinging arm I, having a swiveled head J, in which is pivotally held a lever K, carrying a clamp K' at its forward end for holding the reproducer L, and a swinging bracket-arm M at its opposite end, which forms a support for the horn N, and to accommodate various sizes and weights of horns, so that an even balance of the lever may be had to permit the stylus of the reproducer the proper pressure upon the disk, I construct the arm I in sections, the lower section comprising a vertical portion I' and an upper angle portion I'', and the upper section of a vertical portion I³ and a lower tubular angle portion I⁴, which fits over the angle portion I'' of the lower section and is securely held in place by a set-screw I⁵. By this arrangement it will be seen that should a large heavy horn be employed the sections may be adjusted so that the swivel-carrying end of the arm will be greater distance from the disk-shaft than if a lighter horn be used, and the bracket carried by the lever will engage the horn at such a point that the proper balance will be had. The arm K is also made in sections telescopically connected to accommodate the adjustments of the arm I and permit the reproducer to properly rest upon the record, the sections being held together by means of a set-screw, as shown.

The bracket M for supporting the horn is preferably constructed of a single piece of wire bent at one end to provide a vertical shank, which is designed to enter an opening in the outer end of the lever, and its opposite end bent to provide a semicircular portion, which forms the rest for the horn, and in practice I propose to cover the latter portion with rubber to avoid defacing the horn in any way. I also provide a special arrangement for holding the stylus to the reproducer, and to that end I employ a bracket O, which is constructed of a single piece of metal bent to provide a tubular member O', from which extend arms O², by which the bracket is secured to the reproducer. A spring-arm O³ is held in a portion of the tubular member of the bracket and has its outer end projecting through an opening therein, which end is bent to provide a spring-hook O⁴, which encircles the stylus when the latter is placed in the remaining tubular portion of the bracket, and through the tendency of the hooked end to spring out of alinement with the tubular portion of the bracket the stylus will be firmly clamped in position. The rear end of the spring-arm O³ is bent inwardly and has its extreme end bent into circular form, as shown at O⁵, through the opening of which is passed a screw or rivet, by which the arm is firmly held to the diaphragm of the reproducer. In practice I propose to make the reproducer with an elbow tubular section L', which affords ready attachment for the rubber tube carried by the horn.

From the foregoing it will be seen that I provide an exceedingly cheap, simple, and highly efficient device by which the ordi-

nary cylinder-operating mechanism may be utilized for operating a disk-record. It may be stated, however, that when my invention is in operation the cylinder for supporting the cylindrical records is operated, but of course the reproducer and stylus are held from contact therewith; but should it be desired to use both records simultaneously the regulating mechanism may be readily adjusted so that both records will be operated at the same speed; but of course when this is done a separate horn will be connected to the reproducer operating upon the cylindrical record.

It will thus be seen that I provide a very useful construction, and a further detail description of the operation of the machine is deemed unnecessary, as it will readily appear to those experienced in operating such machines; but it may be added, however, that either record may be operated independently and that the operation of either will not affect or impair the operation of the other.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a phonograph, a base-plate, upper and lower brackets secured to opposite faces of the base-plate, a shaft extending through the base-plate and journaled in the brackets, means for rotating the shaft, and a disk-holding plate carried by the shaft above the upper bracket.

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