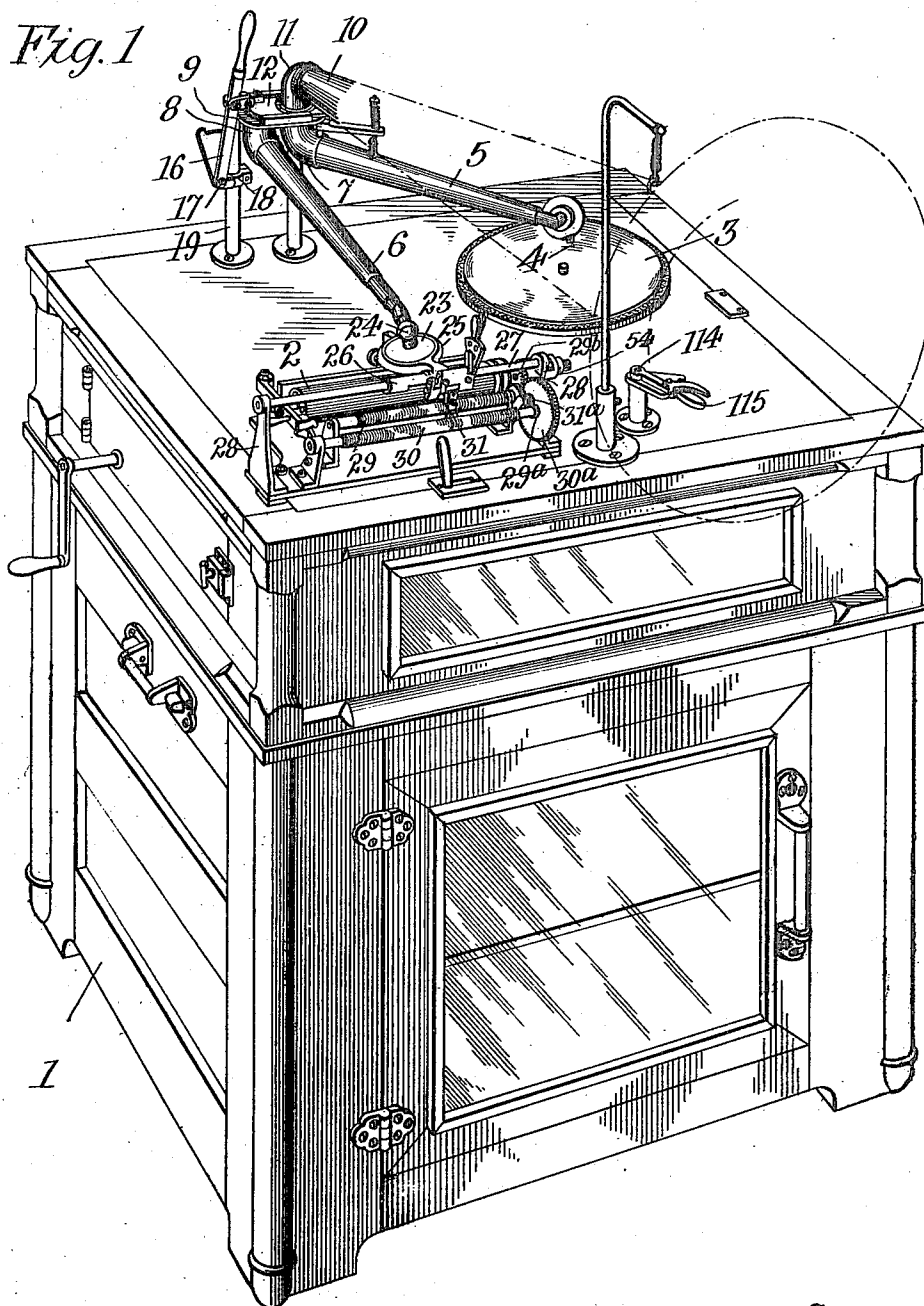


J. HOSLER.
 COMBINED PHONOGRAPH AND GRAPHOPHONE AND OPERATIVE MECHANISM THEREFOR.
 APPLICATION FILED FEB. 29, 1912.

1,063,262.

Patented June 3, 1913.

4 SHEETS—SHEET 1.



Witnesses
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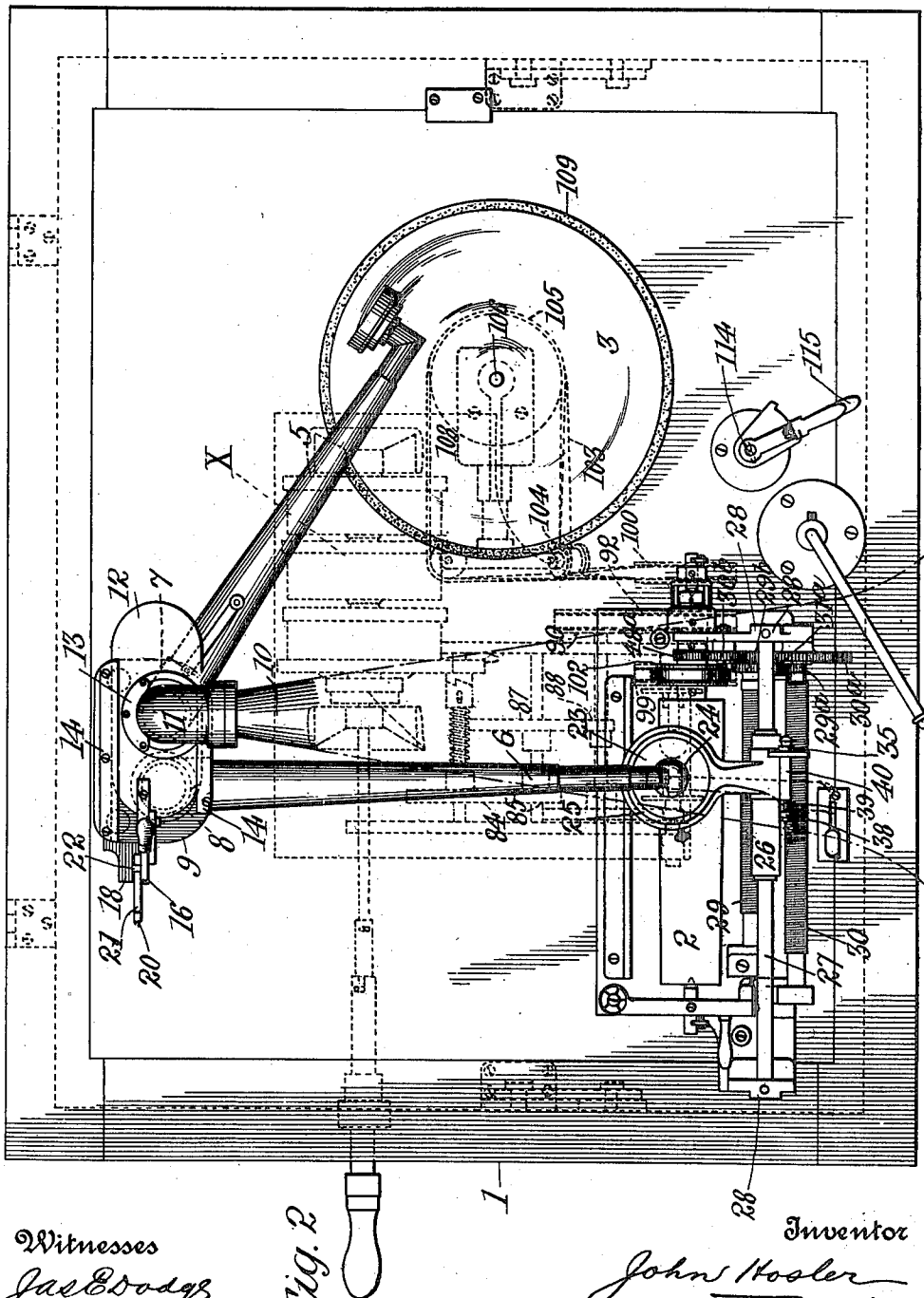
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4 SHEETS—SHEET 2.



Witnesses
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Fig. 2

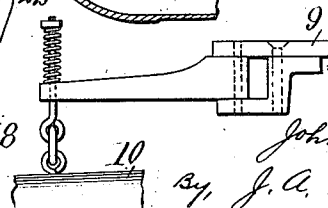
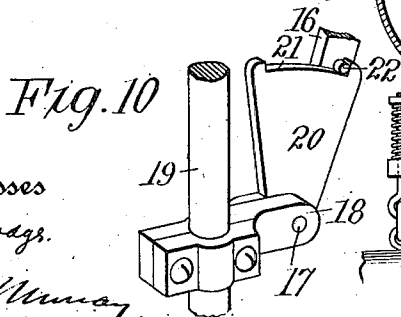
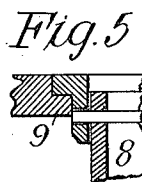
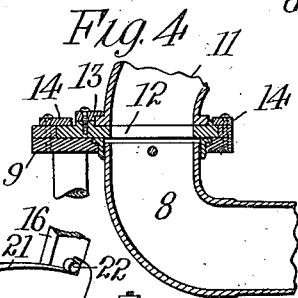
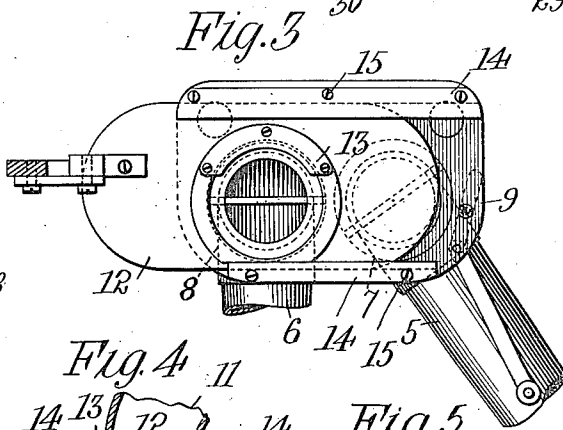
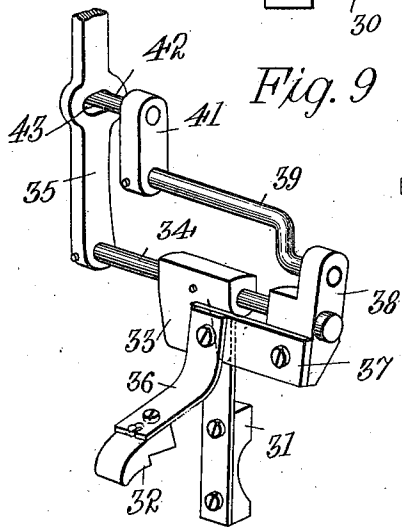
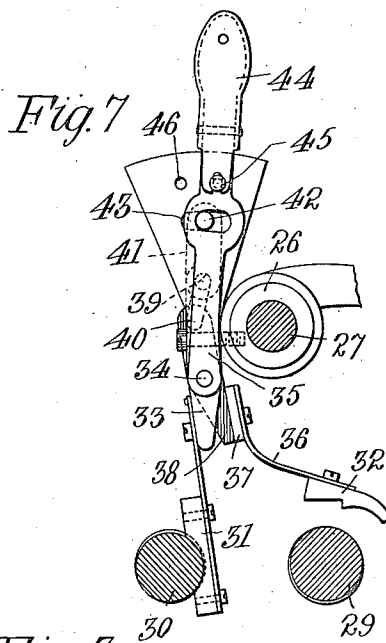
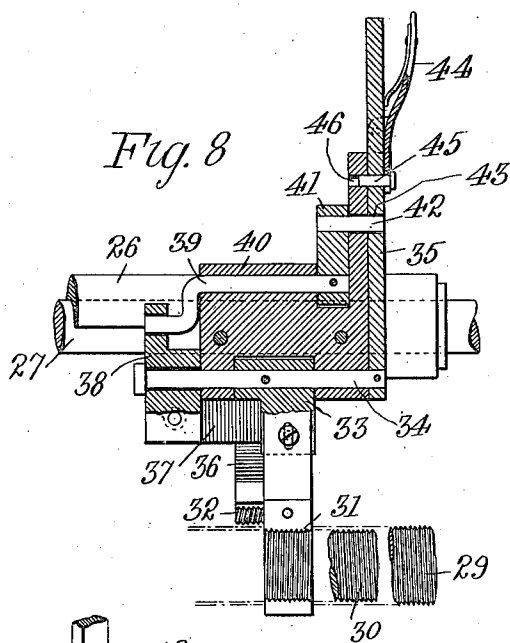
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

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COMBINED PHONOGRAPH AND GRAPHOPHONE AND OPERATIVE MECHANISM THEREFOR.

1,063,262.-

Specification of Letters Patent.

Patented June 3, 1913.

Application filed February 29, 1912. Serial No. 680,716.

To all whom it may concern:

Be it known that I, JOHN HOSLER, a citizen of the United States, residing at Llewellyn, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Combined Phonographs and Graphophones and Operative Mechanism Therefor, of which the following is a specification.

The present invention relates to a combined phonograph and graphophone and has for its purpose to provide a machine of that character embodying various and novel features, to wit: a machine capable of playing from either a disk or cylinder record, and wherein the mechanism for selecting one or the other is of simple construction and easy to operate.

With this and other objects in view the invention consists in the arrangement and combination of parts hereinafter claimed, and, while the invention is not restricted to the exact details shown and described, still, for the purpose of disclosure, reference is had to the accompanying drawing, in which like reference characters designate the same parts in the several views, and in which,

Figure 1 is a perspective view disclosing the invention; Fig. 2 is a top plan view thereof; Fig. 3 is a top plan view of the horn shifting mechanism; Fig. 4 is a central sectional view of the horn and tone arm connection; Fig. 5 is a similar view taken at right angles to Fig. 4; Fig. 6 is a detailed view in elevation of the tone arm support; Fig. 7 is a side elevational view of the cylinder feed shifting device; Fig. 8 is a central sectional view thereof; Fig. 9 is a perspective view of the same, with parts removed for clearness; Fig. 10 is a detail perspective view of the horn shifting device; Fig. 11 is a front elevational view showing the driving means, and associated parts, of the disk record.

Referring to the construction in further detail, 1 designates the casing within which the greater part of the mechanism is contained and which, on its top or cover, has suitably mounted supporting means for a cylinder record 2 and a disk record 3. The usual stylus 4, carried by a tube or pipe 5, transmits the sound waves from the disk 3, as will be understood. In like manner, a stylus carried by the tube 6 engages with the cylinder 2. The tubes 5 and 6 are con-

nected by elbows 7 and 8 respectively with a supporting plate 9, (see Figs. 3, 4 and 5), and said plate 9 is cut away to communicate with the elbows 7 and 8. The horn shown in outline in Fig. 1 has the pipe 10 thereof provided with an elbow 11, which is adapted to be brought into register with either one of the openings in the plate 9 accordingly as the machine is playing on a disk or cylinder record. The elbow 11 is swiveled in a plate 12 by means of an arcuate piece 13, the purpose of which being to allow the plate 12 to be shifted from side to side.

The plate 9 has secured to either side thereof a guiding strip 14, which pieces are fixed through the medium of screws 15, as shown. The plate 12 is shifted through the medium of a lever 16 that is fulcrumed at 17 to a member 18 which is in turn fixed to a supporting post 19 (see Figs. 1 and 10). An arcuate plate 20 is likewise secured to the supporting piece 18 and has a cut-away edge 21 to receive a stud 22 carried by the lever 16, whereby said lever 16 is limited in its swinging movements. When the lever is moved in one direction, the horn is connected to communicate with the tube 5 of the disk record, and when said lever 16 is moved in the full opposite direction, said horn communicates with the tube 6 of the cylinder record, as will be understood. The stylus tube 6 has its shiftable end connected to the stylus support 23 by the common universal joint 24, and the member 23 is mounted in a ring 25, which ring is provided with a tubular section 26 that reciprocates on a rod 27 that is mounted in bracket arms 28. The member 26 is caused to be reciprocated through the medium of two screw threaded shafts 29 and 30 accordingly as the cylinder record 2 is grooved to run at a two minute, four minute or other speed. The cylinder shaft is provided with a fixed pinion 48^a that drives the shaft 30 through the medium of a larger pinion 30^a, and an intermediate pinion 30^b. The shaft 29 is driven from the shaft 30 through the medium of pinions 29^a and 29^b mounted on the shafts 30 and 29 respectively, and an interposed pinion 31^a.

The means for selecting the speed desired consists in a threaded piece 31^f adapted to engage with the shaft 30 and a similar piece 32 adapted to engage with the shaft 29. The member 31 (see Fig. 9) is secured

to a piece 33 that is in turn fixed on a shaft 34 and said shaft 34 is the fulcrum member on which is mounted the shifting lever 35. As the lever 35 is moved in either direction, it will therefore follow that the engaging piece 31 is moved in the reverse direction. The piece 32 is mounted on an arm 36 which in turn is secured to a piece 37 that is fastened to a block 38. The block 38 is mounted to turn on the shaft 34, and at its upper end said block 38 has engagement with a bar 39 which acts in the manner of a crank. The bar 39 is journaled in a block 40, which is cut away on its lower side (see Fig. 8) to receive the block 33. Said block 40 also provides the bearing or journal for the shaft 34. A piece 41 is secured to the opposite end of the shaft 39, and on its upper end said piece 41 is provided with a stud 42 that engages within a slot 43 in the lever 35. With this construction it will be apparent that as the lever 35 is moved in either direction, the block 32 is moved in the same direction. The lever 35 is provided with a grip 44 which carries, at its lower end, a stud 45 which is adapted to engage within the openings 46 and hold one of the members 31 or 32 into engagement with its respective shaft.

A spring motor is provided as at *x* and is adapted to drive the cylinder and disk record through a suitable gearing comprising a pinion 84 that meshes with a pinion 85. The pinion 85 is fixed on a shaft 86 which carries a larger pinion 87 and said pinion 87 meshes with a smaller pinion 88 that is keyed on a shaft 89. The shaft 89 is fitted with a belt pulley 90 for driving a belt 91. The belt 91 runs on a second pulley 92 (see Fig. 11), and said pulley 92 is splined on a shaft 93 that is suitably supported from the casing by brackets 94. The pulley 92 has clutch elements 95 and 96 adapted to engage respectively with similar elements 97 and 98 on pulleys 99 and 100 respectively. A belt 101 runs on the pulley 99 and on a second pulley 102 for driving the cylinder supporting shaft. The means for driving the disk record support is of a similar arrangement and comprises a belt 103 that runs over guiding pulleys 104 and over the pulley 105 which is secured to the shaft 106. Said shaft 106 is journaled in suitable arms 107 and 108, and at its upper end is fitted with the disk supporting base 109. The belt 103 is, of course, driven by the pulley on the shaft 93. The means for shifting the pulley 92 to drive either the belt 101 or the belt 103 consists in an arm 110 pivoted at 111 to the machine frame and connected by a bar 112 to the cranked end 113 of a shaft 114. The upper end of the shaft 114 is connected to a lever 115 through the medium of which said shaft 114 may be turned, as will be understood.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of my invention, and, therefore, I do not wish to be limited to such features, except as may be required by the claims.

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

1. In a combined phonograph and graphophone having a cylinder support and a disk record support and means for actuating the same, the combination of a single horn transmitter therefor; a tone arm for each of said supports; a common means for mounting said arms; and means for shifting said horn to communicate with either of said arms, substantially as described.

2. In a combined phonograph and graphophone having a cylinder support and a disk record support with means for supporting and actuating the same; the combination of a single horn transmitter therefor; a tone arm for each of said supports; a supporting plate constructed with guideways and having apertures communicating with said tone arms; and a plate slidably mounted within said guideways and having connected thereto one end of the horn transmitter, said plate adapted to be shifted to bring the horn transmitter into communication with either of said tone arms, substantially as described.

3. In a combined phonograph and graphophone having a cylinder support and a disk record support with means for supporting and actuating the same; the combination of a single horn transmitter therefor; a tone arm for each of said supports; a supporting plate constructed with guideways and having apertures communicating with said tone arms; a plate slidably mounted within said guideways on said supporting plate and provided with an aperture; means for swivelly connecting one end of the horn transmitter to said slidable plate; and a device for manually shifting the slidable plate whereby to bring the swiveled end of said horn transmitter into communication with either of the tone arms, substantially as described.

4. In a combined phonograph and graphophone having a cylinder support and a disk record support with means for supporting and actuating the same; the combination of a single horn transmitter therefor; a tone arm for each of said supports; a supporting plate constructed with guideways and having apertures communicating with said tone arms; a plate slidably mounted within said guideways on said supporting plate and provided with an aperture; means for swivelly connecting one end of the horn transmitter to said slidable plate; a lever having a link connection with said slidable plate for manually shifting said plate whereby

to bring the horn transmitter into communication with either of said tone arms; and an arcuate plate having stops adapted to limit the movement of said lever.

- 5 5. In a combined phonograph and graphophone having a cylinder support and disk record support with means for supporting and actuating the same; the combination of a single horn transmitter therefor; a tone
10 arm for each of said supports; a supporting plate; strips secured on said plate providing guideways; a plate slidably mounted on said supporting plate within said guideways, said slidable plate having an aperture
15 and a countersunk portion adapted to receive one end of the horn transmitter; an

arcuate plate secured to said slidable plate and retaining said transmitter horn end within the countersunk portion; a lever having a link connection with said slidable plate 20 adapted for shifting said plate whereby to bring said transmitter horn into communication with either of said tone arms; and an arcuate plate provided with stops for limiting the movement of said lever, sub- 25
stantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN HOSLER.

Witnesses:

FRANK LITTLE,
I. A. REED.