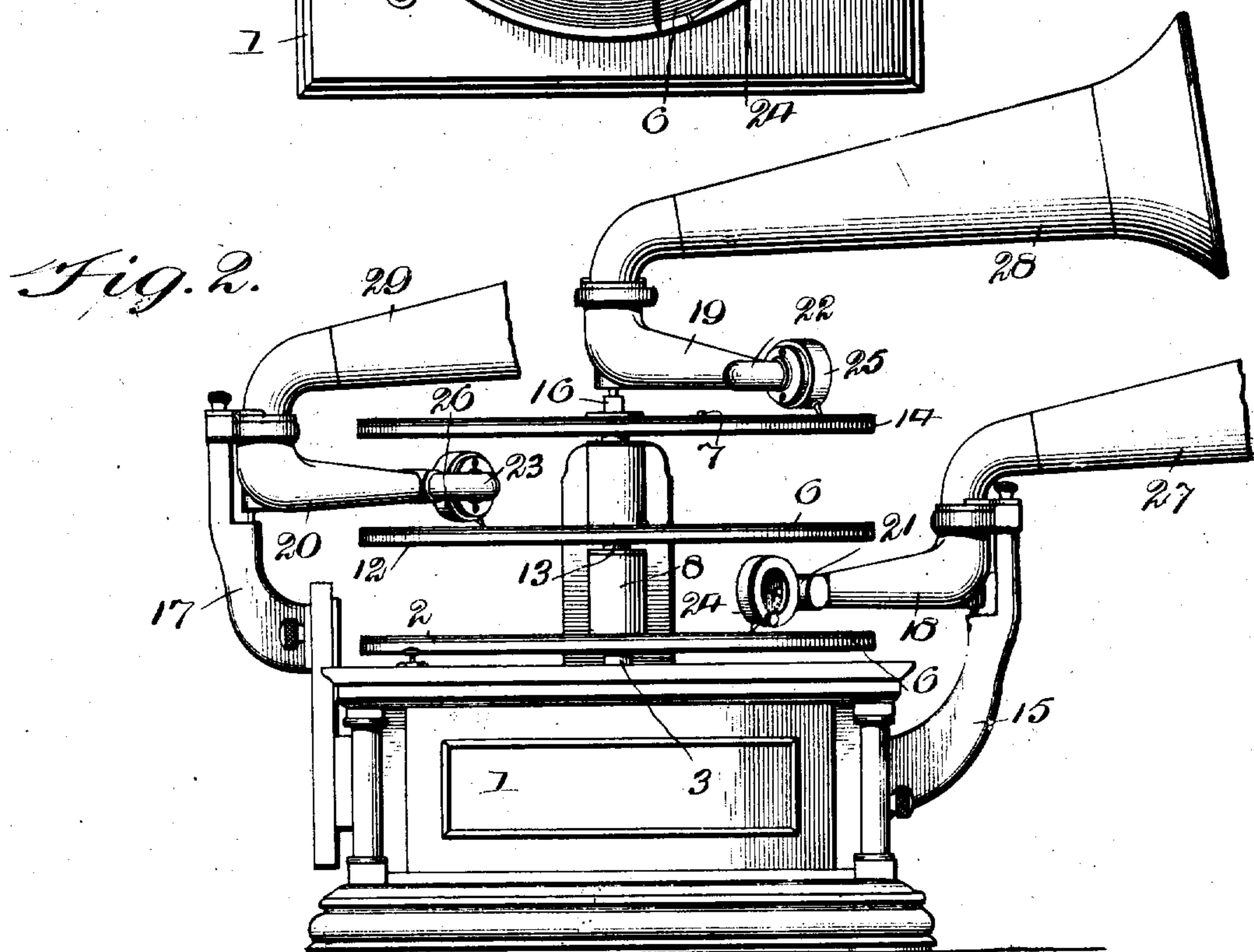
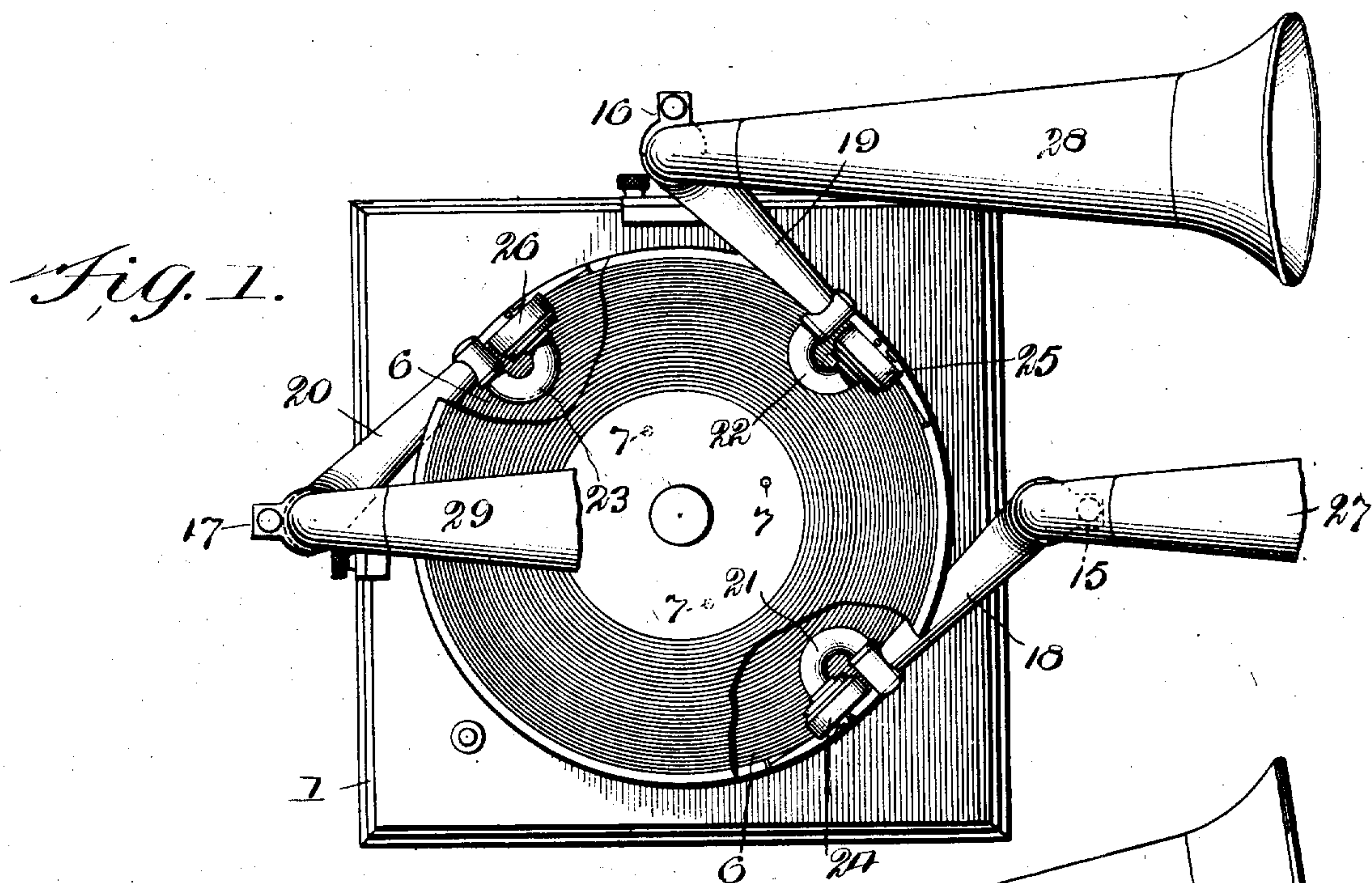


TALKING MACHINE.

Patented Mar. 8, 1910.
2 SHEETS—SHEET 1.

951,158.



*"F. C. Barry
Edw. W. Kille Jr.*

INVENTOR:

Clarence Vogt

by *Home Lett.*
ATTORNEY:

951,158.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 2.

Fig. 3.

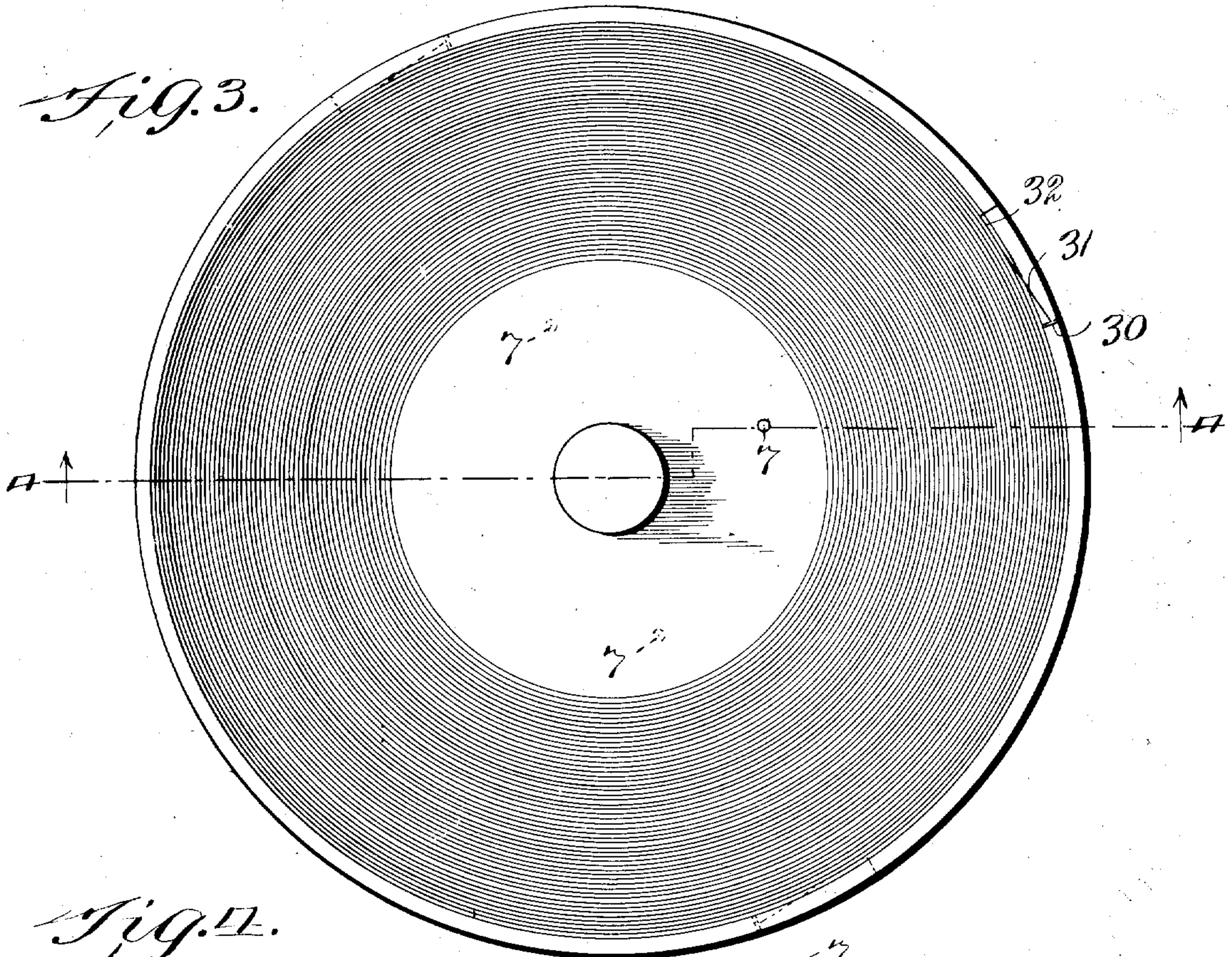
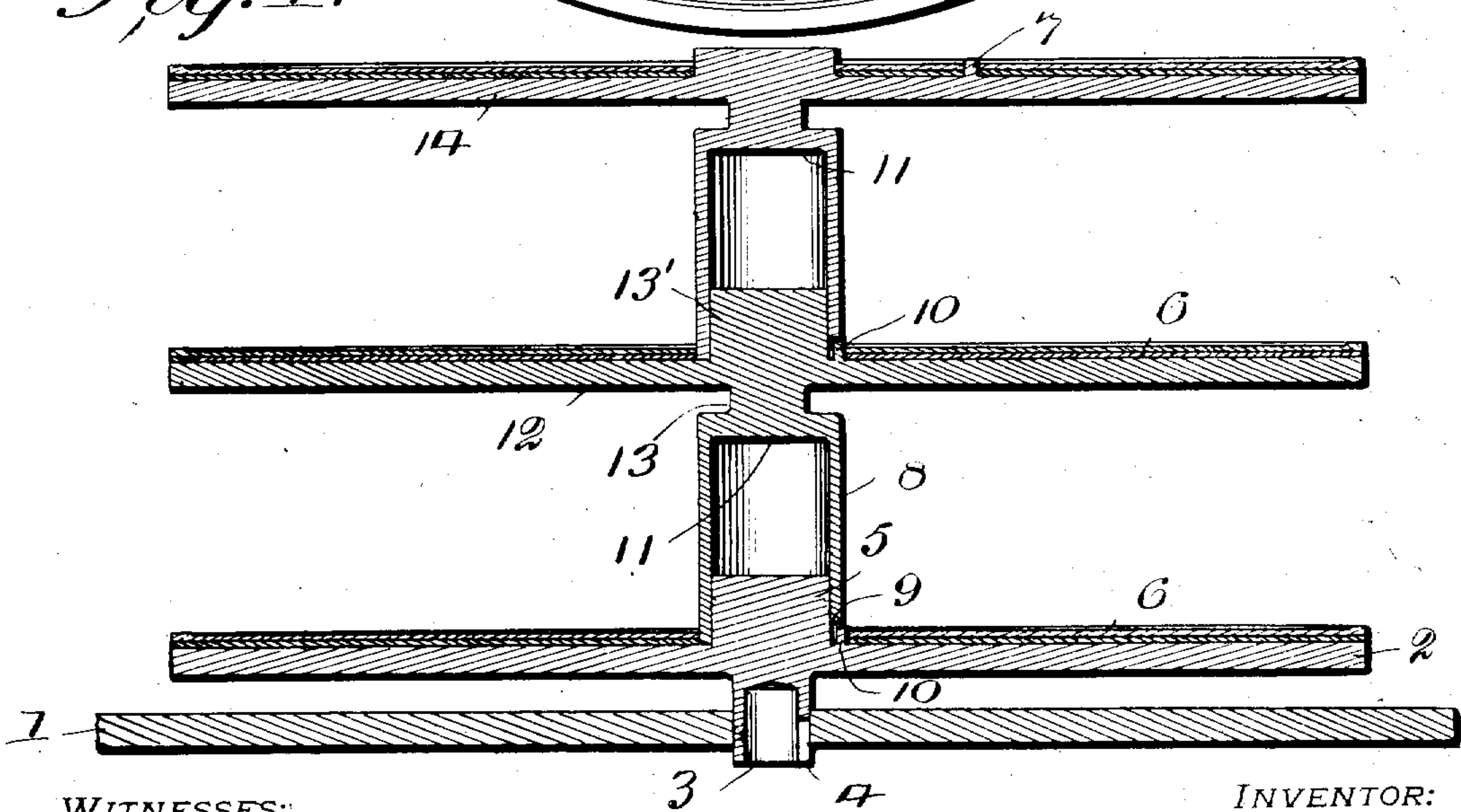


Fig. 4.



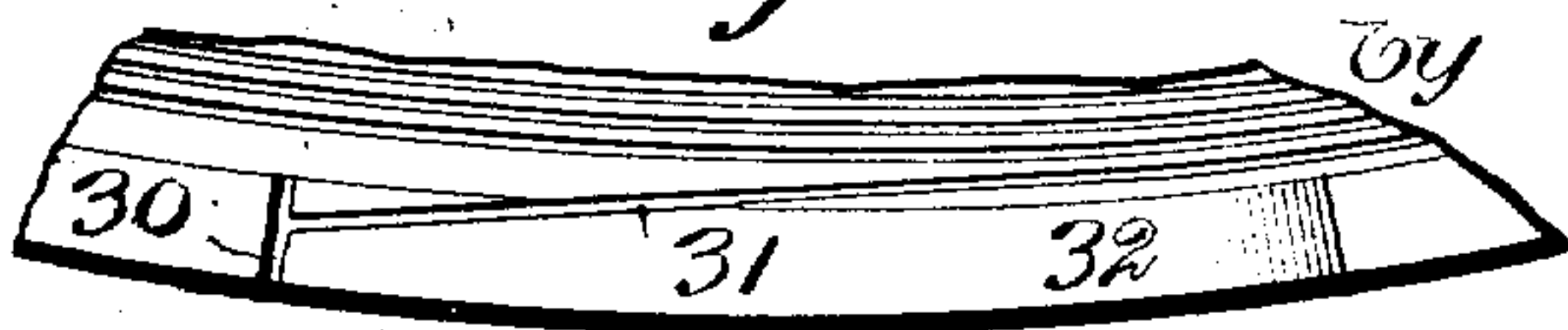
WITNESSES:

J. C. Barry
Eder. W. Vaile Jr.

INVENTOR:

Clarence Vogt

Fig. 5.



Wm. H. Bell

ATTORNEY:

UNITED STATES PATENT OFFICE.

CLARENCE VOGT, OF BERLIN, GERMANY, ASSIGNOR TO VICTOR TALKING MACHINE COMPANY, A CORPORATION OF NEW JERSEY.

TALKING-MACHINE.

951,158.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed March 29, 1905. Serial No. 252,623.

To all whom it may concern:

Be it known that I, CLARENCE VOGT, a citizen of the United States, and a resident of the city of Berlin, Germany, have invented certain new and useful Improvements in Talking-Machines, of which the following is a full, clear, and complete disclosure.

One object of my invention is to provide an improved talking machine, having a plurality of record supports, each support being provided with sound reproducing means adapted to cooperate therewith.

A further object of my invention is also to produce such arrangement of parts in the talking machine above mentioned, that the records may be accurately placed upon the carrying mechanism, so that the parts of the reproducing mechanism may have the correct relation with each other to cause the sounds produced from the records to harmonize, and to combine the sound waves, to produce the most musical and pleasing effects.

A further object of my invention is to so construct the parts of the talking machine that the same may be played as a talking machine having a single disk or record, and also may be played as a talking machine comprising a plurality of disks without the necessity of radical changes in the machine, or the adjustment of delicate parts.

In the accompanying drawings Figure 1 is a top plan view of a talking machine constructed in accordance with this invention, parts of the record disks and turntables being broken away to show the reproducing mechanisms more clearly; Fig. 2 is a front elevation thereof; Fig. 3 is a plan view of a record as the same appears in position upon the turntable; Fig. 4 is a sectional view taken substantially upon the line 4-4, Fig. 3, showing three superposed turntables and records, and Fig. 5 is a detailed view showing one edge of a record adjacent the starting point of the record groove.

Referring to the drawings, one embodiment of this invention comprises a casing 1 which contains a suitable driving mechanism, or motor, for rotating the record carrier or turntables, said driving mechanism being of any of the well known or suitable construction, but somewhat larger and stronger than is ordinarily employed for driving a single record. A turntable 2 is rotatably mounted upon the casing 1 and is connected with the motor mechanism in any well known man-

ner, the connection in this case consisting of a cylindrical socket 3 having a slot 4 adapted to be engaged by a suitable key on the shaft or spindle of the driving mechanism, or motor. The center of the upper side of the turntable 2 is preferably provided with a boss or stud 5, which is adapted to pass through a suitable opening in the center of the record 6. Said record 6 is also provided with a hole through which a suitable pin 7, carried by the turntable 2 and projecting upwardly therefrom, is adapted to pass, to prevent the said record from moving in relation to the turntable. Each of the turntables hereinafter described is also provided with a pin similar to the pin 7, just described, for holding its respective record in a predetermined position.

Telescoping over the boss 5 of one turntable is a cylindrical sleeve or bushing 8 carried by the adjacent superimposed turntable, having a notch 9 in one edge thereof, which is adapted to register with, and engage, a pin or key 10 carried by the lower turntable adjacent the base of the boss 5. The upper end of the bushing 8 is preferably closed, as indicated at 11, and supports the next superimposed turntable 12 in any suitable manner, as by a cylindrical neck 13. This superimposed or second turntable 12 is provided with a boss 13' similar to the boss 5, of the supporting turntable 2, and also with the corresponding pin 7 and key 10. The third turntable 14 is a duplicate of the second, with the exception that the notch 9 and the pin 7 have different relative positions in relation to each other, and also with the exception that the central boss is made somewhat lower than the boss 13' unless it is intended to use a fourth record carrier.

Supposing now that the machine is to be constructed to operate three records playing in unison, three sides of the cabinet 1 are provided respectively with supports 15, 16, and 17, which are adapted to pivotally support three reproducing mechanisms 18, 19, and 20, respectively. These mechanisms are preferably of the tapering hollow arm type, but it is obvious that the construction of my machine is not limited to the use of the particular form of reproducing mechanism herein shown. The arms 18, 19, and 20 are preferably movable only parallel with the record, or record carrier, and are pro-

vided at their outer ends with curved tubes 21, 22, and 23, respectively, which are connected to sound boxes 24, 25, and 26, of any preferred form. The supports or brackets 5 15, 16, and 17 also form means for holding in position the usual amplifying horns 27, 28, and 29. For simplicity and economy in manufacture, the hollow arms 18, 19, and 20 are preferably made of the same length 10 and shape, their axes being so located in relation to the motor casing 1, and the axis of the record carriers, that each will occupy relatively the same position with respect to the path of its stylus over its record.

15 It will be obvious that since the notes or sounds produced by all the records must exactly harmonize, it is necessary that the styluses or needles pass over the same relative points in the record groove at any given 20 instant; that is, the vibrations produced by the sinuosities or undulations of each groove should have exactly the same relation to its corresponding needle or stylus at any given instant. To produce this result, I provide 25 the arrangement most clearly shown in Fig. 5. The edge or margin of the disk, or plate, is provided with a transverse groove, or nick, 30, transversely to which extends a groove 31, which is of substantially the same 30 size and shape in cross section as the record groove, and which communicates with the record groove, as indicated at 32. The transverse groove 30 must have a definite relation to the holes in the records through 35 which the pins 7 pass, and in this manner it will be seen that when the record disks are placed upon the turntables they will all have the correct positions, so that when the point of the styluses or needles are in position 40 for starting they will all rest in the short transverse grooves 30 of the respective records. The motor then being started the records will all revolve together, and each needle will have the same position in 45 relation to the record groove within which it is resting.

From this description it will be seen that I have produced a machine which will not only greatly multiply the sound reproduced 50 by a talking machine, but will make the same more harmonious and pleasing, owing to the softening and intermingling of the tones of the different records. Furthermore, it will be seen that by properly proportioning and adjusting the recording 55 mechanism from which the records are made, each of the records may be caused to represent a particular range of tone, so that when said records are reproduced the 60 record in which the bass notes have been more strongly recorded, will combine with the record in which the tenor, or other parts, have been more strongly recorded, which, in combination with one of the 65 higher parts, will give a result having much

greater range and more harmonious tones than could otherwise be produced. It will be obvious that it is also not necessary that the records should each be made from the same instrument, or set of instruments. The 70 same may be caused to represent different kinds of music, such as some records may contain vocal music, or songs, while others may contain the accompanying instrumental parts, which would thereby allow great variety 75 in the combinations of the parts of the selections reproduced.

Having thus described this form of my invention, what I claim and desire to protect by Letters Patent of the United States, 80 is—

1. In a talking machine, a plurality of reproducing mechanisms, a motor, and a series of turntables, said turntables each being provided with a projection and a corresponding socket by which the same may 85 be successively superimposed to cause the same to be driven by said motor.

2. In a talking machine, a plurality of reproducing mechanisms, a motor, a plurality of turntables comprising disks having 90 sockets and projections on opposite sides thereof, said projections and sockets being adapted to engage each other to cause said turntables to be rotated by said motor, said 95 projections and sockets being provided with keys or similar devices for maintaining the correct relative positions of said turntables.

3. In a talking machine, the combination with a motor, of a plurality of record supports, and reproducing mechanism for each 100 support, said supports being connected solely by means carried thereby.

4. In a talking machine, a plurality of reproducing mechanisms and a plurality of 105 turntables arranged one above the other, each comprising a disk having a downwardly extending central socket and an upwardly extending central stud or projection, the former engaging the stud on the 110 disk below and the latter engaging the socket on the disk above.

5. In a talking machine, a plurality of reproducing mechanisms, a plurality of 115 turntables arranged one above the other, each comprising a disk having a downwardly extending central socket and an upwardly extending central stud or projection, the former engaging the stud on the disk below and the latter engaging the socket on 120 the disk above, and means for maintaining said studs and projections in rigid arrangement.

6. In a talking machine, a plurality of reproducing mechanisms, a plurality of 125 turntables arranged one above the other, each comprising a disk having a downwardly extending central socket and an upwardly extending central stud or projection, the former engaging the stud on the 130

disk below and the latter engaging the socket on the disk above, and means consisting of a slot and key for maintaining said studs and projections in rigid arrangement.

5 7. In a talking machine, the combination with a motor, of a plurality of record supports, one of said supports being driven by said motor, and carrying the remainder of said supports.

10 8. In a talking machine, the combination with a motor, of a plurality of record supports, one of said supports being driven by said motor, and carrying the remaining supports super-imposed thereon.

15 9. In a talking machine, the combination with a motor, of a plurality of record supports mounted to rotate upon the same axis, and a reproducing mechanism for each of said supports, one of said supports being
20 driven by said motor and driving and entirely supporting the remaining supports.

10. In a talking machine, the combination with a motor, of a series of turn tables, said
25 turn tables each being provided with means whereby one turn table may be super-imposed upon and carried by an adjacent turn table.

11. In a talking machine, a plurality of record supports being provided with means
30 whereby said supports may be super-imposed one upon the other in axial alinement.

12. In a talking machine, the combination with a motor, of a disk record support driven thereby, and a second similar record
35 support driven exclusively by said first mentioned support.

13. In a talking machine, the combination with a motor, of a record support driven thereby and a second support super-imposed
40 upon said first mentioned support in axial alinement with and driven thereby.

14. In a talking machine, the combination with a motor, of a record support driven thereby and provided with a stud projecting
45 centrally upon the upper side thereof, and a second record support provided with a sleeve upon the under side thereof fitting over said stud.

15. In a talking machine, the combination
50 with a motor, of a record support driven thereby and provided with a stud projecting centrally upon the upper side thereof, and a second record support provided with a sleeve upon the under side thereof fitting
55 over said stud, and reproducing mechanism for each of said supports.

16. In a talking machine, the combination with a motor, of a turn table driven thereby, a turn table above said first turn table, and
60 means for connecting said turn tables whereby said first turn table carries said second turn table.

17. In a talking machine, the combination with a motor, of a turn table driven thereby,
65 a turn table above said first turn table, and

means for connecting said turn tables whereby said first turn table carries said second turn table, said means comprising a stud upon one turn table terminating between the turn tables, and a sleeve upon the other turn
70 table fitting over said stud.

18. In a talking machine, the combination with a turn table, of means to rotate the same, a second turn table, and means entirely
75 between said tables whereby said second table is rotated simultaneously with and solely by said first table.

19. In a talking machine, a plurality of record supports, each of said record supports being connected to an adjacent support solely
80 by means entirely between said supports.

20. In a talking machine, a plurality of rotary record supports, one of said supports being entirely carried by another of said supports, and said supports being held
85 against rotation with respect to each other but being freely separable.

21. In a talking machine, a plurality of concentric rotary record supports, one of said record supports being entirely sup-
90 ported by an adjacent record support, and said supports being held against rotation with respect to each other but being freely separable longitudinally of their axis of rotation.
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22. A record support for talking machines, said support having means carried thereby, whereby said support may be connected to a similar support, and whereby said second support may be entirely carried by said first
100 mentioned support.

23. A record support for talking machines, having a stud on one side and a sleeve on the opposite side for detachably connecting said support between two similar supports.
105

24. In a talking machine the combination with a motor, of a plurality of disk record supports, and a reproducing mechanism for each of said supports, one of said supports being driven by said motor and driving the
110 remaining supports.

25. In a talking machine the combination with a motor, of a plurality of disk record supports mounted to rotate about the same axis, and a reproducing mechanism for each
115 of said supports, one of said supports being driven by said motor and driving the remaining supports.

26. In a talking machine, a plurality of record supports provided with means where-
120 by said supports may be superimposed one upon the other and whereby each support will be held against rotation with respect to its adjacent support.

27. A record support for a talking ma-
125 chine, said record support comprising means projecting in opposite directions therefrom whereby said support may be connected between two similar supports and held against rotation with respect thereto, and whereby
130

one of said supports will form the sole support of said first mentioned support.

28. In a talking machine, a disk record support having a stud projecting upwardly and centrally therefrom for the attachment of a second support.

29. A record support for a talking machine, said support being provided with a stud projecting from one side thereof, and a corresponding sleeve projecting from the other side thereof whereby said support may be connected between two similar supports.

30. In a talking machine, a disk record support having a stud projecting upwardly and centrally therefrom for the attachment of a second support, and a sleeve projecting centrally from the opposite side of the said support for the attachment of said support to a motor spindle.

31. In a talking machine the combination with a reproducing mechanism, of a record therefor, said record having a main groove and a starting groove having a definite indicating means at the point of commencement of the starting groove, and means for holding said record in a predetermined relation to said reproducing mechanism, said means having a definite position in relation to said point of commencement of said starting groove.

32. In a talking machine the combination with a plurality of reproducing mechanisms, of records therefor, each record being provided with a main groove, and a starting groove having a transverse groove leading into said starting groove adjacent the point of commencement thereof, and means for holding each record in a predetermined relation to its corresponding reproducing mechanism, said means having a definite position in relation to said point of commencement of said starting groove.

33. In a talking machine, the combination with a motor, of a plurality of record supports, and reproducing mechanism for each support, one of said supports being entirely supported by another of said supports.

34. In a talking machine, the combination with a plurality of reproducing mechanisms, of a motor, and a plurality of record supports, each of said supports being provided with means whereby the same may be superimposed in axial alinement to be driven by said motor.

35. In a talking machine, the combination with a plurality of reproducing mechanisms, of a motor, and a plurality of record supports, each of said supports being provided with a projection and a corresponding socket, the projection of one support fitting snugly in the socket of an adjacent support.

36. In a talking machine, a plurality of record supports, each of said supports being provided with a stud, and a corresponding socket, the stud of one support fitting snugly

in the socket of a second support for connecting said supports.

37. The combination with a record support for talking machines, of means carried thereby, whereby said support may be connected to a second support and whereby said second support may be entirely carried by, and held against rotation with respect to, said first mentioned support.

38. The combination with a disk record support for talking machines, of means carried thereby and projecting axially therefrom whereby said support may be connected to a second similar record support, and whereby said second support may be entirely carried by said first support, said second support being movable axially with respect to said first support, but being held against rotation with respect thereto.

39. A record support for talking machines, having a stud for detachably connecting said support to a second support.

40. A record support for talking machines, having a stud and a socket for detachably connecting said support between two other supports.

41. A record support for talking machines, having a stud and a corresponding socket for detachably connecting said support between two similar supports.

42. In a talking machine, a plurality of rotary record supports, one of said supports entirely supporting and rotating the remaining supports.

43. In a talking machine, the combination with a motor, of a record support driven thereby, and a second similar record support driven by said first mentioned support.

44. In a talking machine, the combination with a motor, of a disk record support driven thereby, and a second disk record support driven by said first mentioned support.

45. In a talking machine, the combination with a motor, of a record support driven thereby, and a second record support in axial alinement with said first mentioned support and driven exclusively thereby.

46. In a talking machine, the combination with a motor, of a plurality of record supports, and a reproducing mechanism for each of said supports, one of said supports being driven by said motor and driving and entirely supporting the remaining supports.

47. In a talking machine, the combination with a motor, of a record support driven thereby, a second record support driven and carried exclusively by said first mentioned support, and reproducing mechanism for each of said supports.

48. In a talking machine, the combination with a motor, of a record support driven thereby, a second record support entirely supported by said first mentioned support and driven thereby, and a reproducing mechanism for each of said supports.

49. The combination with a record support for talking machines, of a second record support, and means carried by said first mentioned support, whereby said support is connected to said second support, and whereby said second support is entirely carried by, and held against rotation with respect to, said first mentioned support.

50. The combination with a disk record support for talking machines, of a second record support similar to said first mentioned support, and means carried by said first support and projecting axially therefrom,

whereby said first support is connected to said second support, and whereby said second support is entirely carried by said first support, said second support being movable axially but being held against rotation with respect to said first support.

In witness whereof, I have hereunto set my hand this eleventh day of March, 1905.

CLARENCE VOGT.

Witnesses:

THEO. BIRNBAUM,
HENRY HASPER.

Corrections in Letters Patent No. 951,158.

It is hereby certified that in Letters Patent No. 951,158, granted March 8, 1910, upon the application of Clarence Vogt, of Berlin, Germany, for an improvement in "Talking-Machines," errors appear in the printed specification requiring correction as follows: Page 3, line 41, the word "with" should read *therewith*, and same page, line 91, after the word "support" the words *to rotate the same* should be inserted; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 5th day of April, A. D., 1910.

[SEAL.]

C. C. BILLINGS,

Acting Commissioner of Patents.

49. The combination with a record support for talking machines, of a second record support, and means carried by said first mentioned support, whereby said support is connected to said second support, and whereby said second support is entirely carried by, and held against rotation with respect to, said first mentioned support.

50. The combination with a disk record support for talking machines, of a second record support similar to said first mentioned support, and means carried by said first support and projecting axially therefrom,

whereby said first support is connected to said second support, and whereby said second support is entirely carried by said first support, said second support being movable axially but being held against rotation with respect to said first support.

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