

997,905.

Patented July 11, 1911

2 SHEETS—SHEET 1.

Fig. 1.

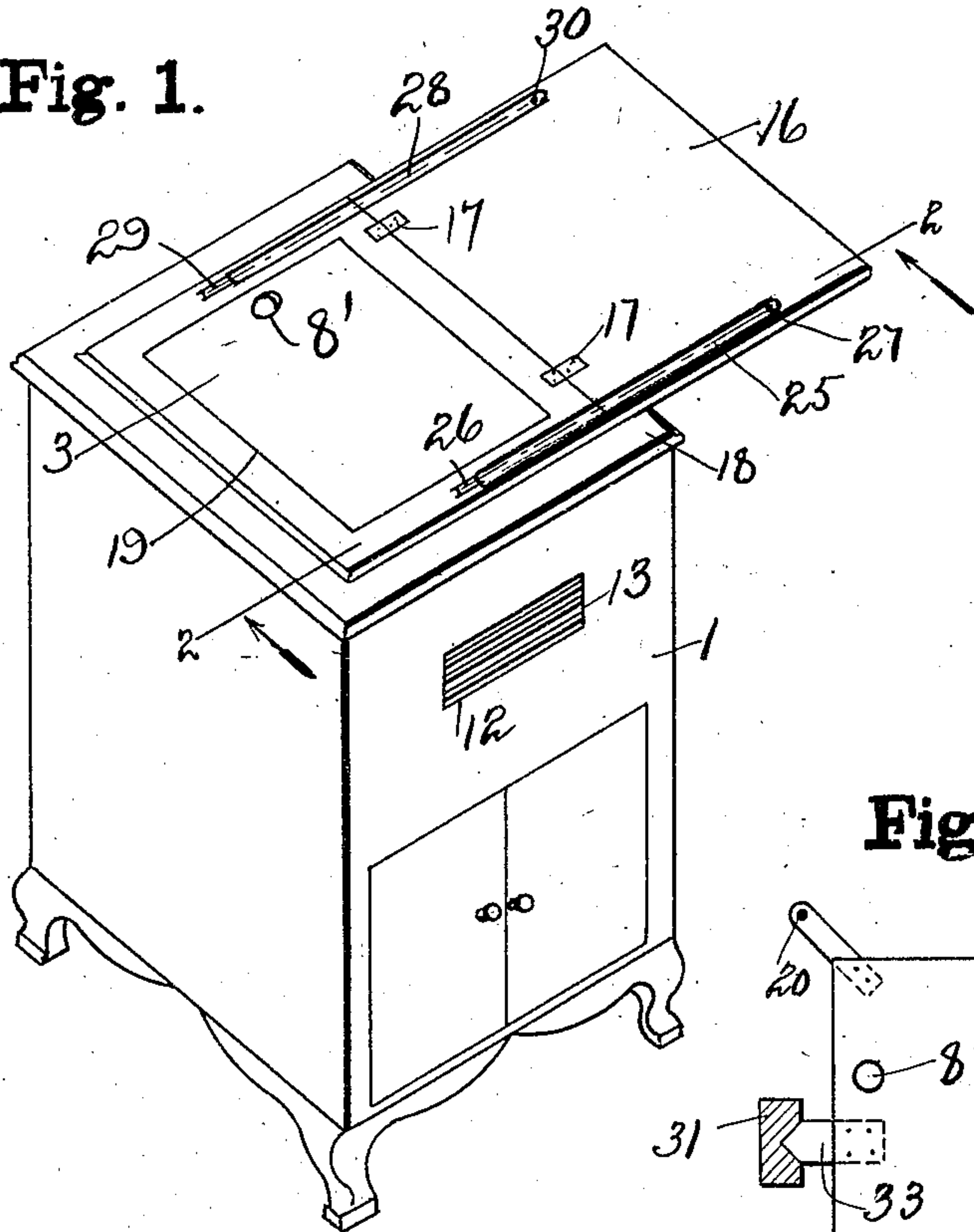


Fig. 3.

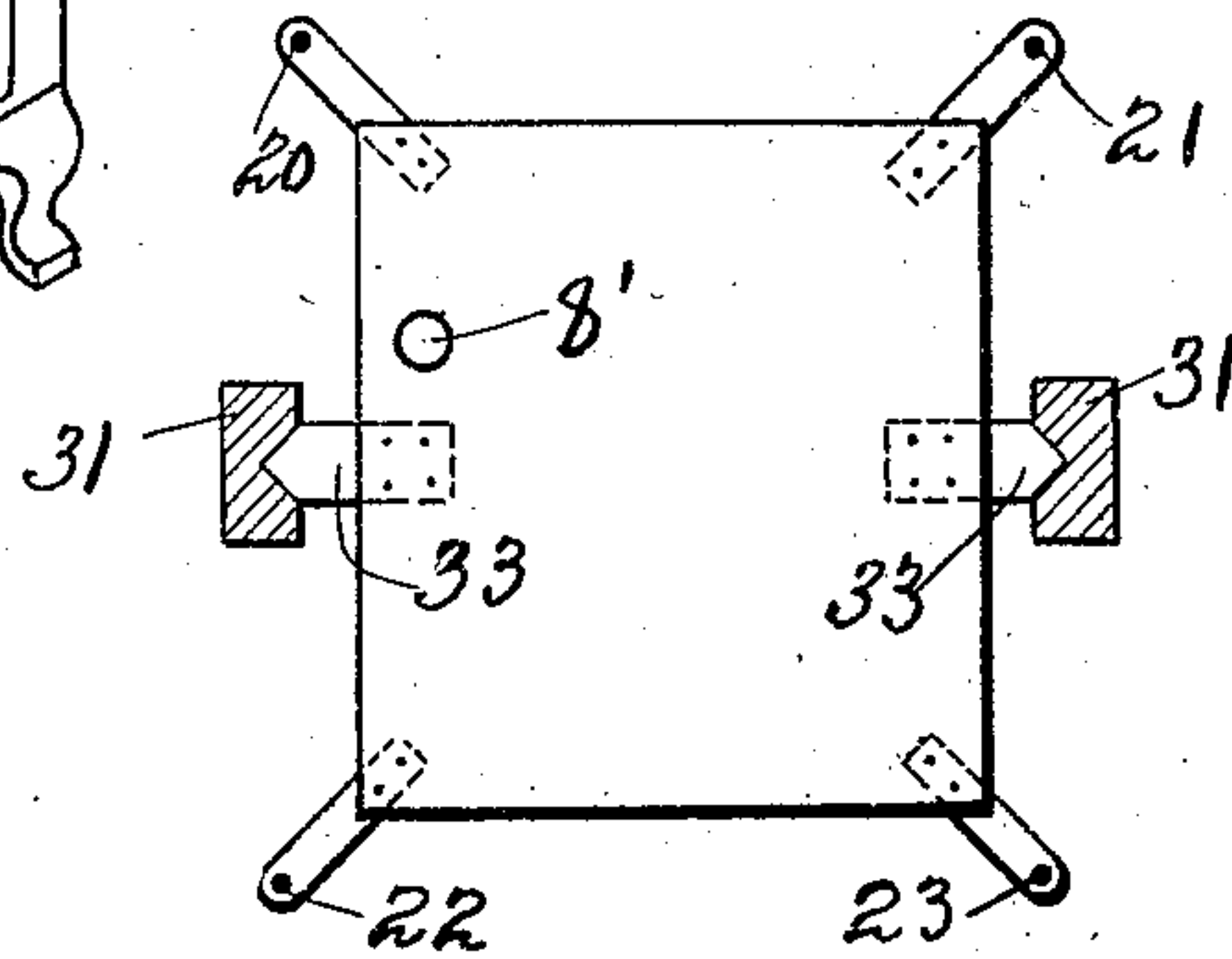
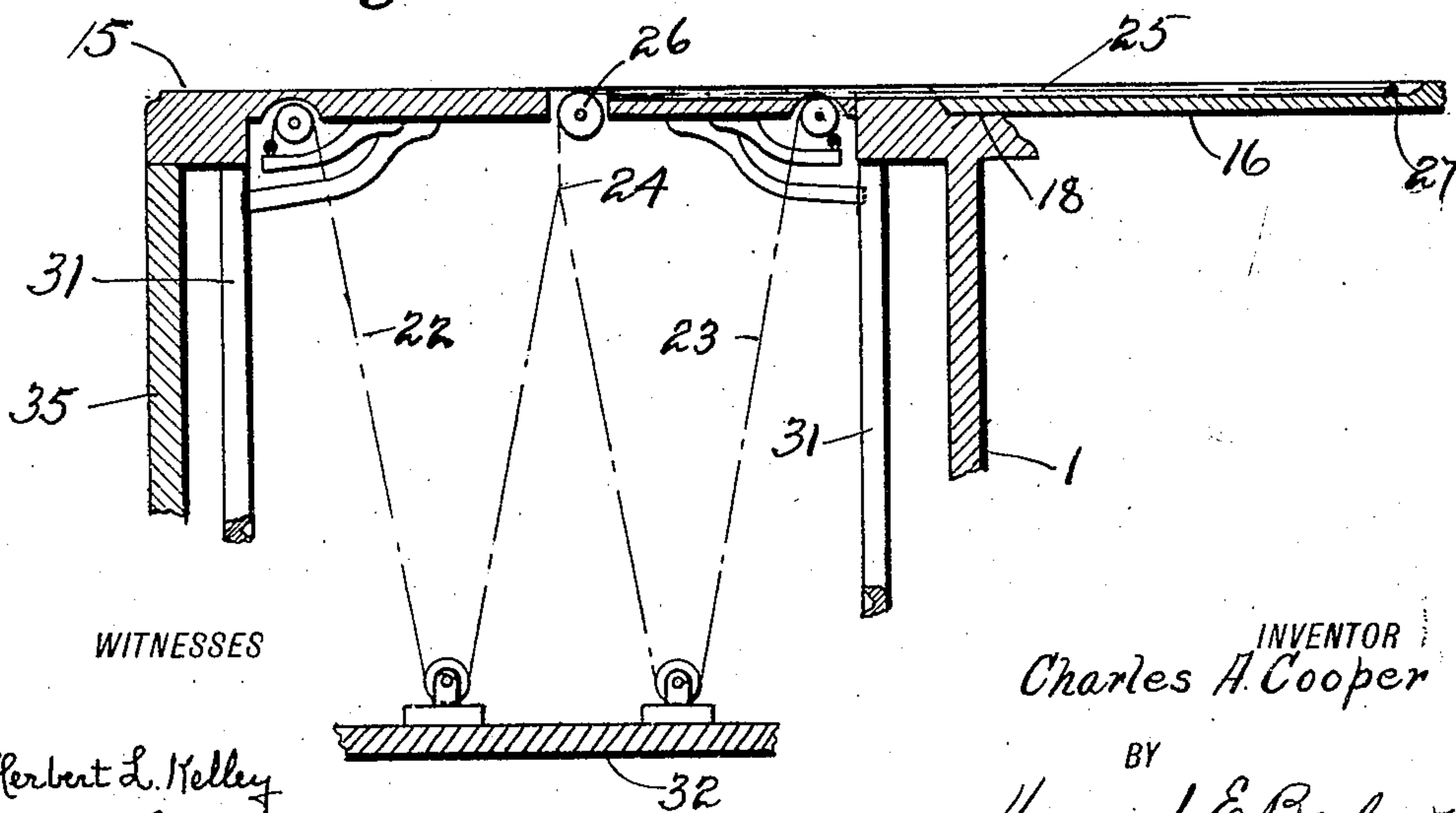


Fig. 2.



WITNESSES

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 PHONOGRAPH CABINET.
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2 SHEETS—SHEET 2.

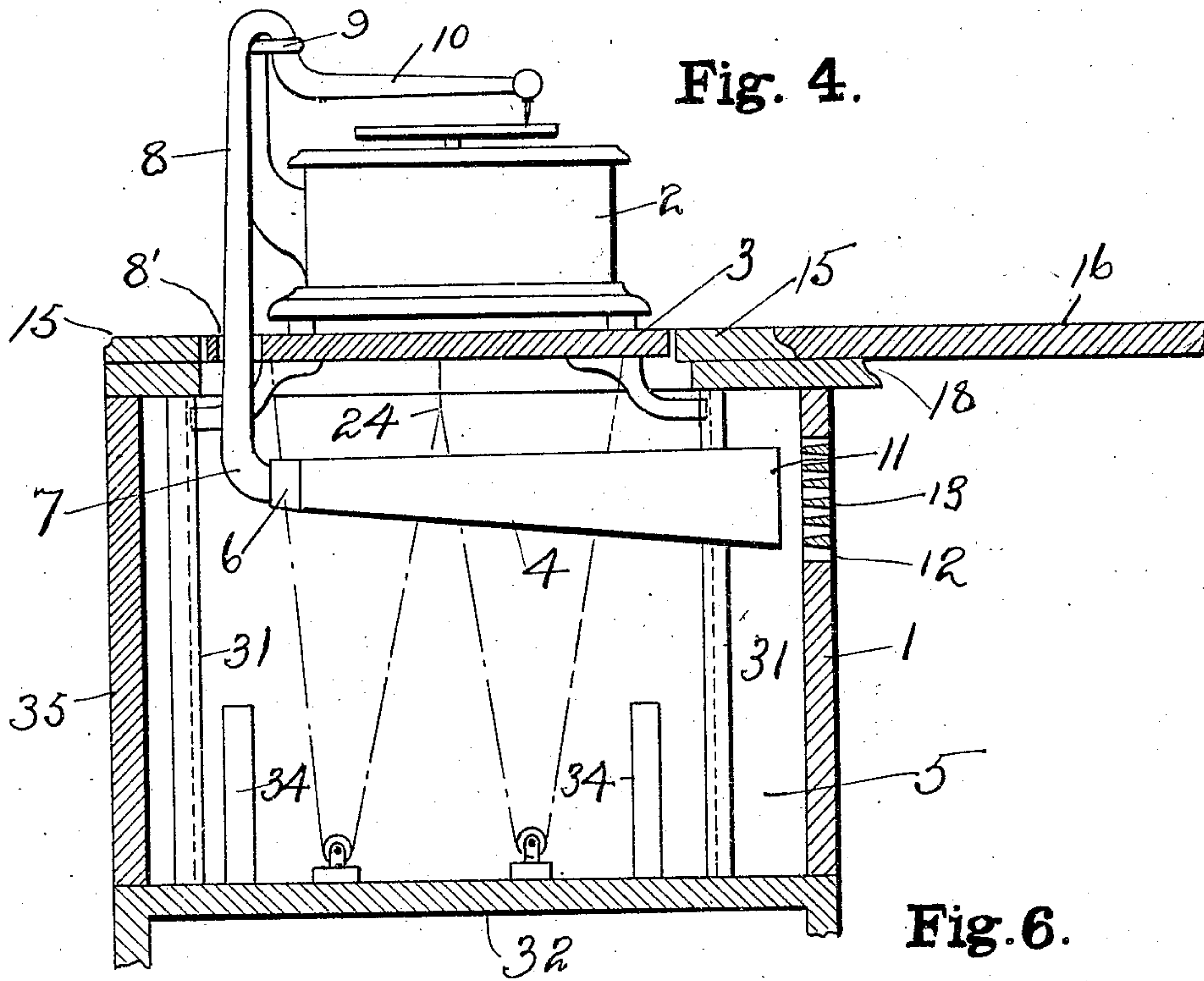


Fig. 4.

Fig. 6.

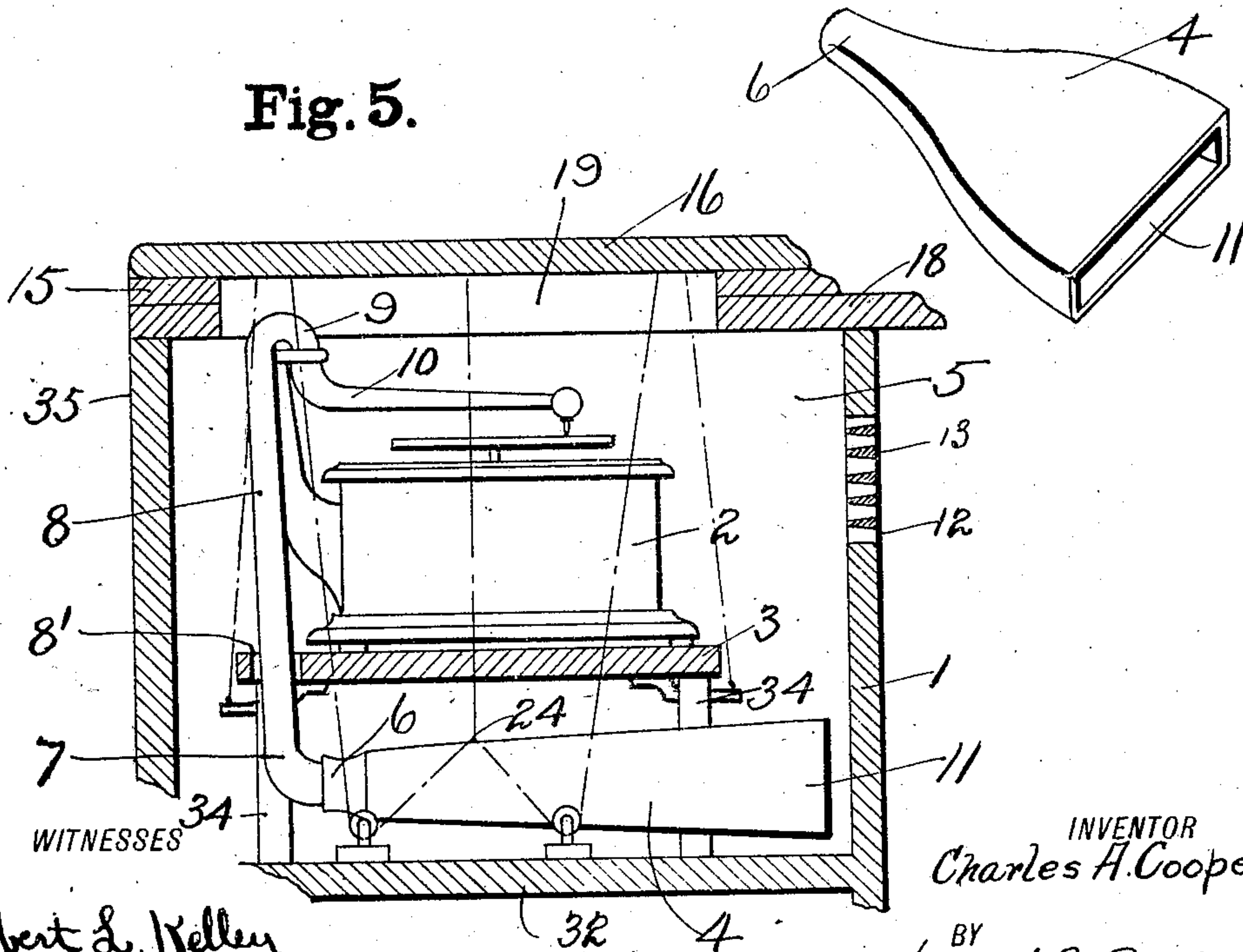


Fig. 5.

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UNITED STATES PATENT OFFICE.

CHARLES A. COOPER, OF NEW YORK, N. Y., ASSIGNOR TO HOUSEHOLD CABINET WORKS,
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PHONOGRAPH-CABINET.

997,905.

Specification of Letters Patent. Patented July 11, 1911.

Application filed April 15, 1910. Serial No. 555,623.

To all whom it may concern:

Be it known that I, CHARLES A. COOPER, a citizen of the United States, residing at the city of New York, in the county of New York, and State of New York, have invented certain new and useful Improvements in Phonograph-Cabinets, of which the following is a specification, reference being had therein to the accompanying drawing.

The object of this invention is to provide a drop-head table or cabinet, in which a panel, head, or movable section is arranged to support a sound reproducing instrument, such as a phonograph or the like, said instrument being provided with a horn or suitable device for enlarging, intensifying and diffusing the sound produced by said instrument, said horn being mounted beneath the panel within the cabinet and arranged to be raised and lowered with the instrument and said movable panel.

A further object of the invention is to provide an opening through the outer wall of the cabinet adapted to register with the mouth of the horn when raised to its operative position, to permit the sound to pass out therethrough, said opening being provided with a plurality of longitudinal bars or members to aid and assist the acoustic properties of the horn.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings: Figure 1— is a perspective view illustrating a cabinet having a drop head or movable section, the same being in its raised position and the operating leaf in its extended position. Fig. 2— is an enlarged sectional view on line 2—2 of Fig. 1 through the hoisting mechanism, illustrating the movable section in its raised position. Fig. 3— is a plan view of the drop head showing the relative position of the vertical guides and the members by which the head is supported. Fig. 4— is a central sectional side

elevation of the cabinet showing the instrument in position on the drop head and the horn supported from said instrument within the cabinet, the whole being in its raised or operative position. Fig. 5— is the same as Fig. 4 showing the cabinet as closed and the instrument and horn lowered into the cabinet to its inoperative position. Fig. 6— is a detail of one style of horn which may be supported within the cabinet to be raised and lowered with the phonograph and the drop head.

Referring to the drawings 1 designates the cabinet which is designed more particularly for the support and reception of a phonograph 2 or other sound reproducing instrument, which is adapted to rest upon the drop head or movable section 3 thereof. The horn 4 or sound elaborating device is designed to be supported by any suitable means below the drop head and within the cabinet chamber 5, so that said horn will move up and down with each movement of said head. This horn may be of any desired or convenient shape and is preferably mounted in a horizontal position, its rear end being provided with a contracted neck portion 6 into which fits the lower end 7 of the tube 8, this tube then extends upward therefrom through the opening 8' in the drop head, the upper end of said tube being connected at 9 to the usual sound transmitting arm 10. When the horn and drop head are in their raised or operating position the mouth 11 of the horn is brought into a position to register with the opening 12 in the front wall of the cabinet. Thin bars 13 of wood or other suitable material, preferably tapering in cross section from the outside inward, are placed at close intervals longitudinally across this opening primarily for the purpose of aiding in obtaining a more effective distribution of the sound emitted through the horn. These bars also serve as an ornament in the design of the cabinet for partially closing the opening 12. The top portion 15 of the table or cabinet is preferably provided with an outwardly swinging or extending leaf or member 16

hinged at 17 and when in its extended position it lies against and is supported on the ledge 18. This top portion is provided with an aperture 19 into which is
 5 designed to fit the instrument supporting drop head or movable section 3. Cords 20, 21, 22 and 23 are preferably connected to the four corners of this movable section, the cords 22 and 23 being brought together
 10 as at 24, see Fig. 2, into the single cord 25, led out over pulley 26 and secured at 27 to the extension leaf, see Fig. 1, while the cords 20 and 21 on the opposite side of the movable section are brought together in a
 15 similar manner and led out by the single part 28 over pulley 29 and is fastened at 30 to the opposite edge of the extension leaf 16. Suitable guide bars 31 are arranged to extend from the table top down to an inclosing
 20 partition 32, which bars are engaged by the ends of the guide arms 33. I do not restrict myself to this particular arrangement for operating this drop head as any desirable or suitable means may be employed for this
 25 purpose.

The space above the partition 32 forms a convenient inclosing receptacle into which the drop head with its horn and its supported machine may be lowered, said head
 30 being adapted to rest upon the four upright supporting posts 34, which receive the weight and prevent the horn from coming into contact with said partition.

The lower portion of this cabinet may be
 35 provided with shelves or otherwise arranged for the reception of the collection of record disks used in connection with the phonograph.

In the operation of my improved phonograph cabinet the leaf 15 is swung back to its extended position, as shown in Fig. 1. The phonograph is set upon the drop head, the horn 4 is passed through the removable
 40 section 35 in the back of the cabinet and connected to the machine by means of the tube 8, which may serve, if desired, as the only supporting means for said horn. By this arrangement the horn is entirely concealed and the tone is rendered soft and
 45 mellow by being conducted down through the cabinet 5 and out through the barred opening in the wall thereof. By this means the large, unwieldy and in some cases unsightly horn, ordinarily employed with this
 50 class of phonograph is entirely eliminated, enabling the machine and all of its attachments to be inclosed within the cabinet when desired.

When the phonograph is no longer required for immediate use it is only necessary to raise the free end of the leaf 3 and fold it over the top of the cabinet, whereby the drop head with its supported machine and horn will at once descend bodily into
 60 the compartment below, the aperture left

by the retreating head being covered by the leaf, leaving the face of the table plain and clear for other purposes. The machine and its attachments thus disposed of are entirely inclosed, are out of the way and protected from dirt and dust. 70

When it is again desired to operate the machine it is only necessary to raise the leaf, swing it outward on its hinges, thereby bringing the machine up level with the surface of the table and the mouth of the horn in position to register with the opening in the cabinet wall, it being then only necessary to position the records and the machine is ready for operation. 75 80

As shown by comparing Figs. 4 and 5, the phonograph and its amplifying horn are not changed as to their relationship whether raised or lowered or during raising or lowering. Therefore the instrument could be started playing while in the position shown in Fig. 4 and then lowered to the position shown in Fig. 5 while still continuing to play. When in the latter position, the volume of sound of course would be materially reduced so far as the sound can be emitted from the receptacle portion of the cabinet. In brief no adjustment whatever has to be made of any of the parts or the relationship of some parts to others whether the instrument is to be brought out to play with full volume of sound, or is to be retired into the receptacle. 85 90 95

It will be observed that the drop head or instrument supporting section 3, when in raised position as shown in Fig. 4, substantially closes the opening in the top of the cabinet, thus confining the sound issuing from the horn to the space within the cabinet so that the sound issuing from the cabinet must come through the portion 12 where the acoustic properties of the horn can be softened or controlled. While in this operative position the disk or records of the instrument may be changed without shifting drop head 3, and when desired the entire apparatus can be lowered entirely into the cabinet either while playing or when silent. The horn being under the section 3, and the latter closing the opening in the cabinet, result in the sound being exceedingly mellow, while still permitting the records of the instrument to be changed. 100 105 110 115

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is: 120

The combination with a cabinet having an opening in its top, and a drop head adapted to close said opening, of a sound reproducing instrument supported on said drop head, a horn connected with said instrument and located below said drop head, said cabinet having a sound outlet opening with which the outlet of said horn coincides when said drop head is raised, means in said last men- 125 130

tioned opening for diffusing the sound
emitted from said horn, whereby the full
volume of the sound is emitted when said
drop head is in raised position, and means
5 for operating said drop head, whereby the
said horn may be lowered below the plane
of said sound outlet opening to direct the
sound emitted from said horn against the

wall of said cabinet to deflect the same be-
fore it reaches said outlet opening. 10

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

CHARLES A. COOPER.

Witnesses:

GARRETT D. COOPER,
H. I. CHATFIELD.