No. 724,082. PATENTED MAR. 31, 1903.

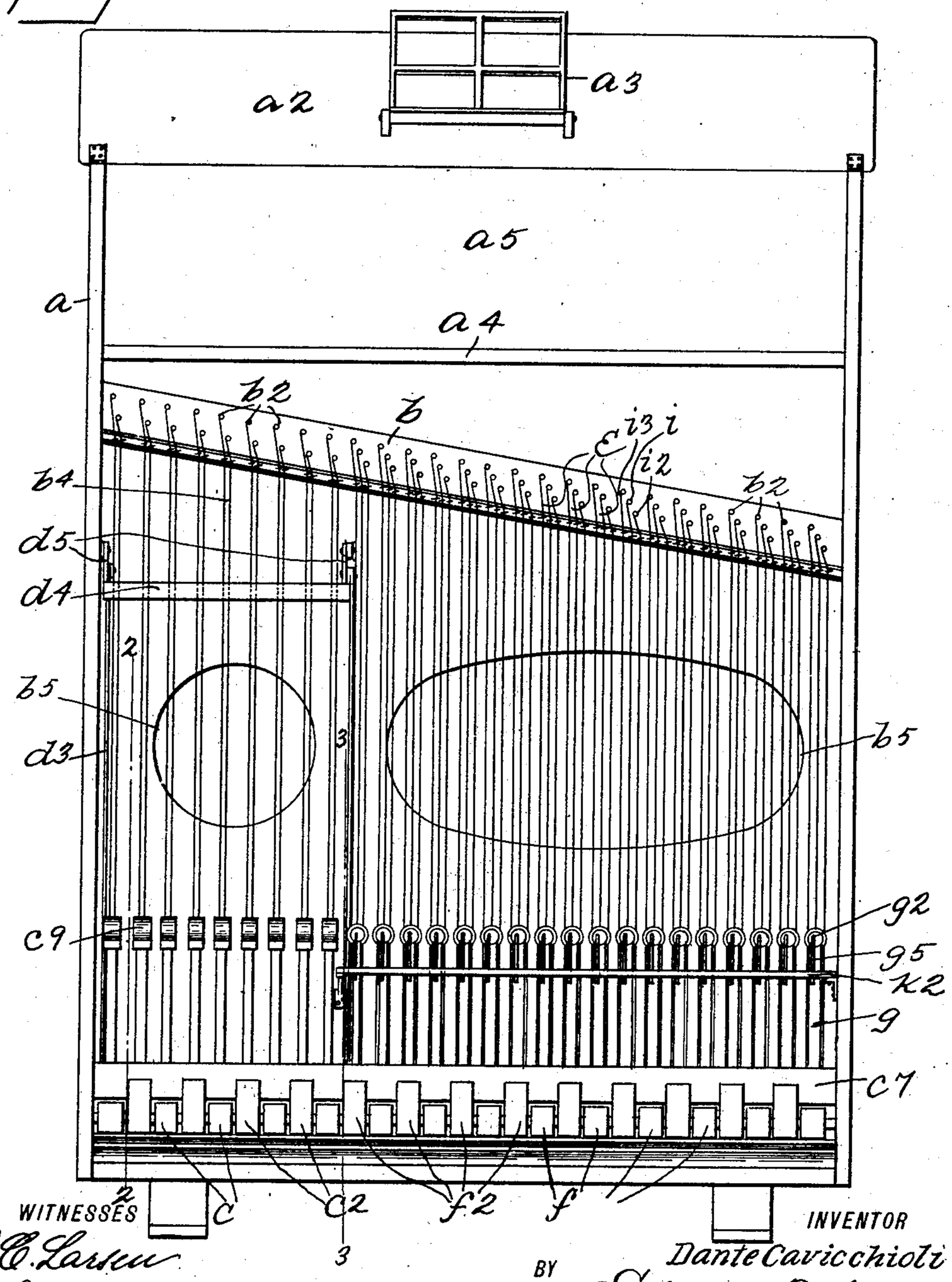
D. CAVICCHIOLA.

ACCOMPANIST FOR MUSICAL INSTRUMENTS.

APPLICATION FILED SEPT. 13, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2

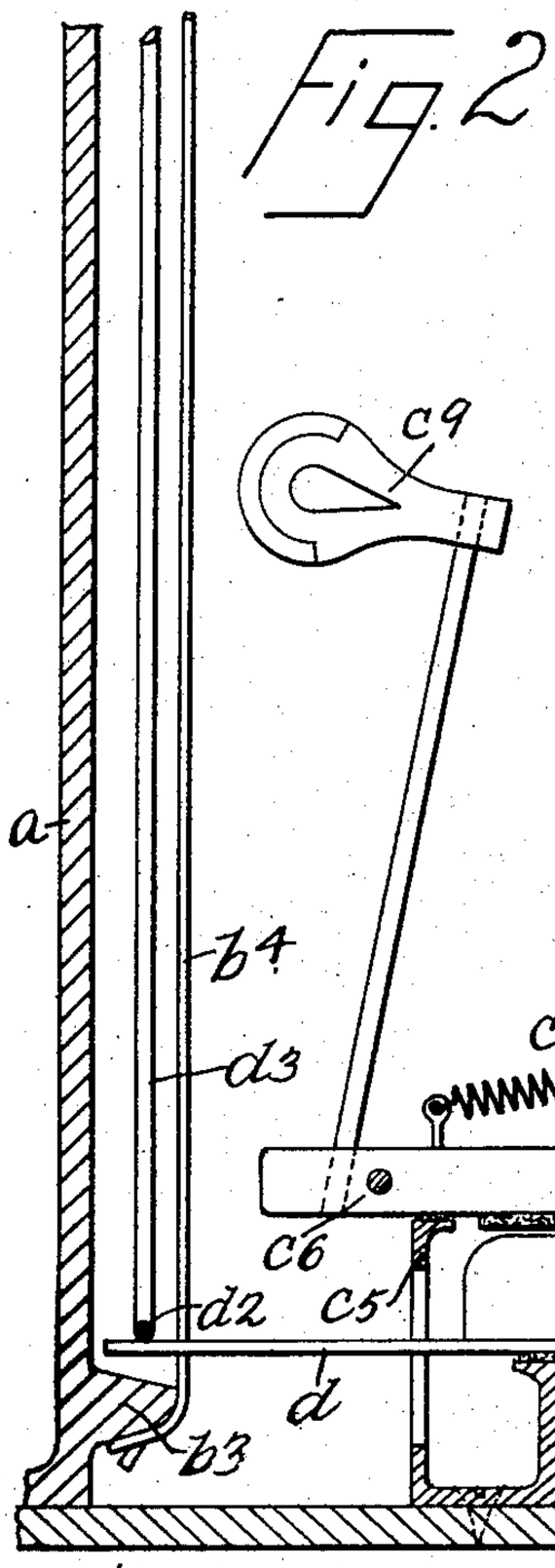


Fig. 3

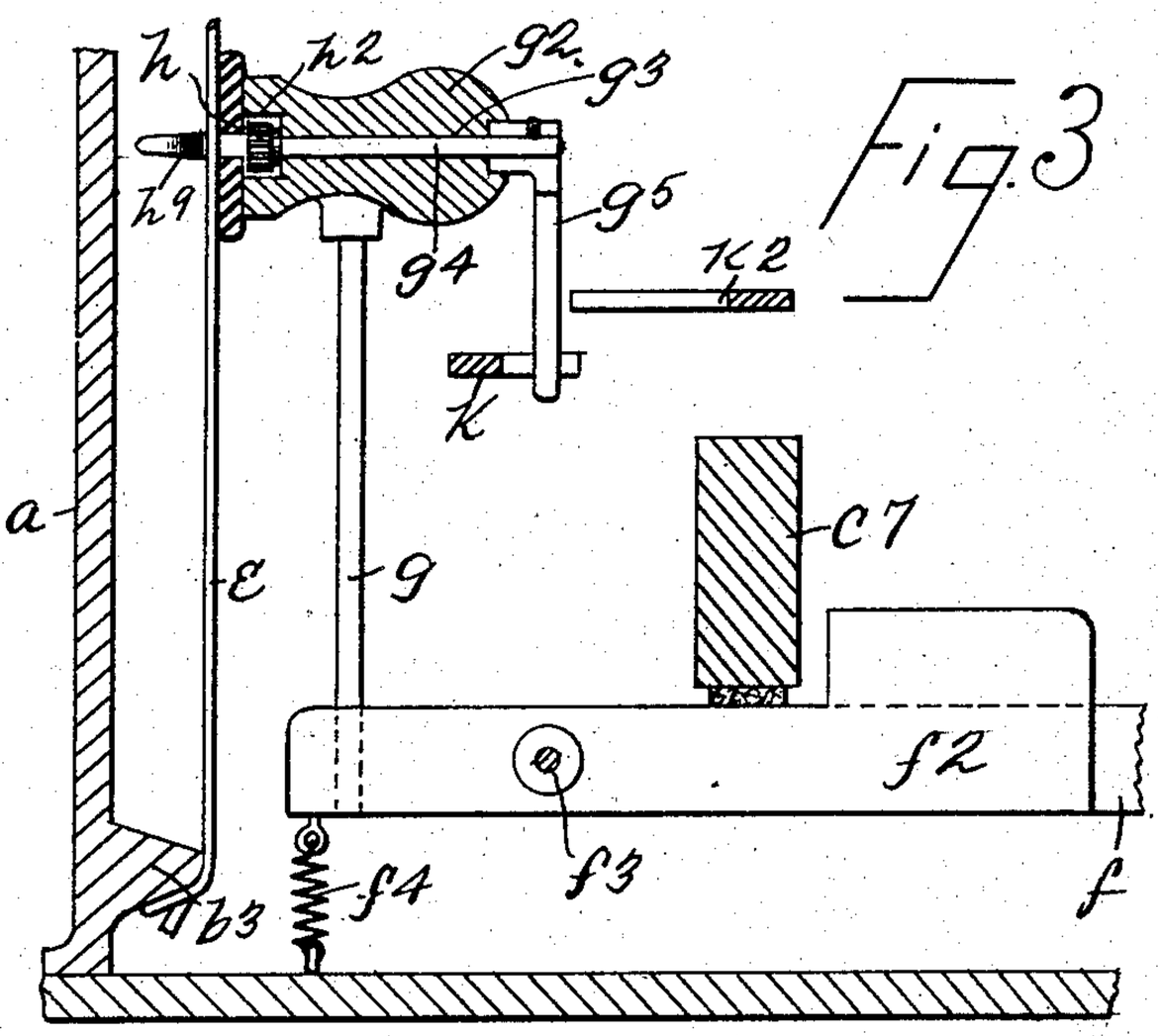
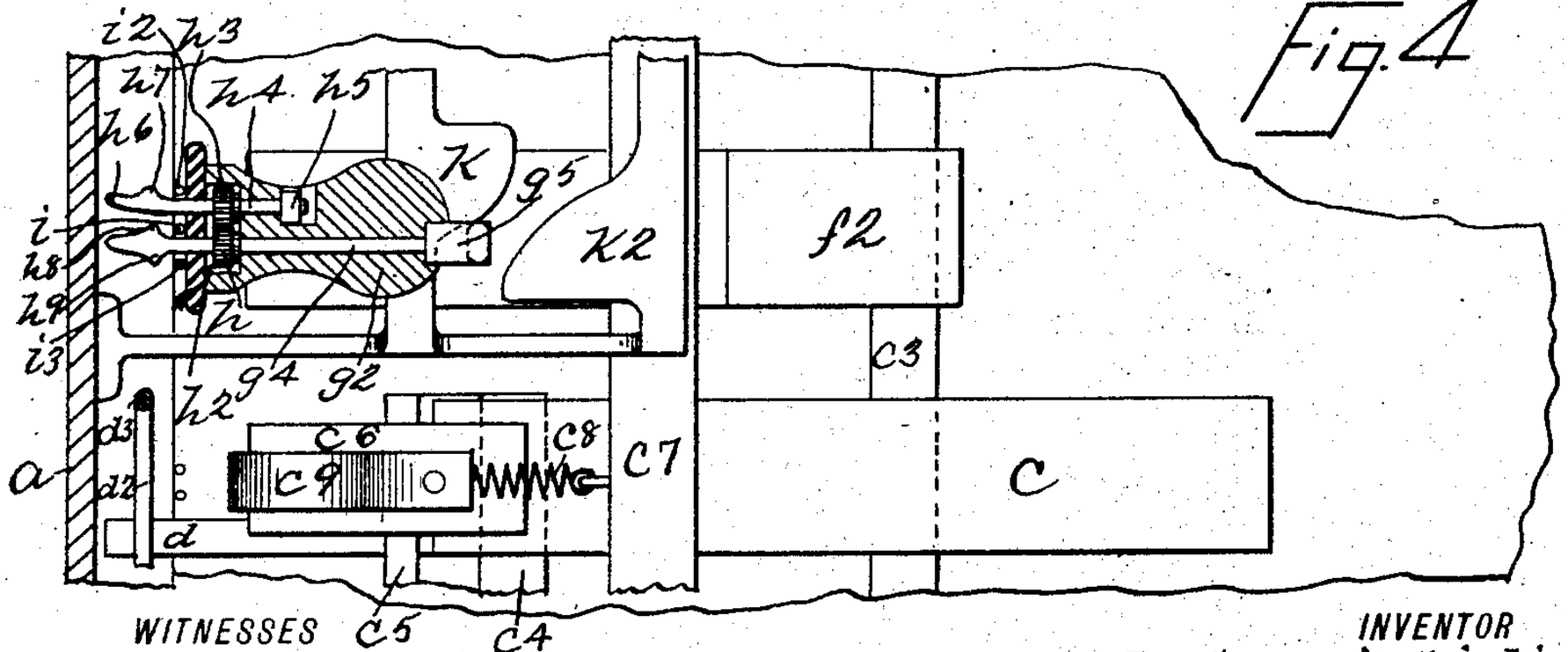


Fig. 4



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UNITED STATES PATENT OFFICE.

DANTE CAVICCHIOLI, OF NEW YORK, N. Y.

ACCOMPANIST FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 724,082, dated March 31, 1903.

Application filed September 13, 1902. Serial No. 123,207. (No model.)

To all whom it may concern:

Be it known that I, DANTE CAVICCHIOLI, a citizen of the United States, residing at New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Accompanists for Musical Instruments, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an accompanist for the use of a performer upon a banjo, mandolin, flute, or other musical instrument requiring the use of the performer's hands, said accompanist being adapted to be performed upon by means of the performer's feet, a further object being to provide an accompanist which will be light and compact and easily carried, serving also as a case for the musical instrument to be performed upon by the hands, as well as a music rack or holder.

My invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a front elevation of my accompanist; Fig. 2, a partial section on the line 2 2 of Fig. 1, showing a striking device which I employ; Fig. 3, a section on the line 3 3 of Fig. 1, partly in section and showing a pick which I employ; and Fig. 4, a plan view thereof.

In the practice of my invention I provide a casing a of any suitable size, shape, or material, which is provided with a hinged top a^2 and a music-rack a^3, mounted thereon, and at any suitable place within the case a I provide a shelf or partition a^4, which forms a compartment a^5, within which the instrument for melody may be placed, as well as sheet-music or any other object required or desired.

Beneath the partition a^4 is a beam b, provided with a plurality of posts b^2, adapted for strings as at present employed in pianos, and at the bottom of the casing is another beam b^3, upon which the lower ends of the strings b^4 are secured in any desired manner, and the back of the casing a may be provided with sound-holes b^5, thereby forming a sounding-board.

Pivotally mounted at the bottom of the casing a are a plurality of arms c, serving as keys, between which in their proper positions are shorter arms c^2, projecting above the keys c, and these arms serve as the keys for sharps and flats, corresponding to the black keys on a piano. Secured to the bottom of a and serving as limiting-stops for keys c and c^2 are blocks or strips c^3 and c^4, the block c^4 being provided with an upwardly-directed member c^5, which acts as a rest or stop for the striker or hammer levers c^6, one of which is pivoted above each of the shorter or inner arms of the keys c and c^2, and secured to each of the hammer-levers c^6 and to a transversely-arranged block c^7 is a coil-spring c^8, which operates to draw back the hammer c^9 to the position shown in Fig. 2, and by means of this construction it will be seen that the downward pressure of the keys c and c^2 by means of the performer's foot will force the hammer c^9 against the strings b^4. Secured to each of the keys c and c^2 is an arm d, which extends inwardly between the strings b^4, and resting upon these arms is a transverse rod d^2, to the end of which are secured vertical rods d^3 and d^4, which are connected at their tops with a deadening-plate d^4, this deadening-plate being pivotally hung to the back of the casing a by means of links d^5, as shown in Fig. 1, and when the keys c and c^2 are operated the hammer c^9 strikes the strings b^4, and the deadening-plate d^4 is raised, but when the keys c and c^2 are released the deadening-plate drops and rests upon the strings, as will be readily seen, thus preventing vibration of the strings. This construction just described applies to that part of my apparatus shown at the left of the drawing Fig. 1, which represents the bass notes of my instrument, the strings of which are preferably of steel. The strings to the right of that portion just described are preferably gut and, as will be obvious, cannot be struck in the manner just described to produce harmonious sounds, and in Figs. 3 and 4 I have shown the means which I employ in connection with gut strings, which are indicated at e.

The strings e are preferably arranged in sets

of three each and must be picked rather than struck to produce vibration, and at f and f^2, Figs. 3 and 4, I have shown keys similar to c and c^2, which are pivoted at f^3, and the transverse block c^7 serves as a limiting-stop to the upward movement of the outer ends of the keys f and f^2, and at the inner end of each of the keys f and f^2 is a coil-spring f^4, connected with the bottom of the casing a, which operates to draw the inner end of each of the keys f and f^2 downward, and thereby carries the upright arms g and pick-heads g^2 at their top inward toward the strings e. The pick-heads g^2 are each provided with a longitudinal hole g^3, passing therethrough, and through which passes a rod g^4, to the outer end of which is secured a downwardly-projecting arm g^5, which is free to swing, and near the inner end of the rod g^4 is secured a small gear-wheel h, which is free to rotate in a cavity or recess h^2 in the end of the pick-head g^2 and engages with a similar gear-wheel h^3, also in the cavity h^2, through which passes a rod h^4, rotatably secured at h^5, and the outer end h^6 of the rod h^4 is provided with a projection h^7 on its outer side, and this end h^6 passes between the center string i and right-hand string i^2 of one of the sets of strings e. The rod g^4 also projects beyond the gear-wheel h and between the strings i and i^3 of the set of strings e and is provided with projections h^8 and h^9 on opposite sides thereof, as shown in Fig. 4, and normally these projections h^7 and h^8 and h^9 when the ends of the rods g^4 and h^4 project between the strings are in a horizontal position, and their shoulders are adapted to catch and pull the strings i, i^2, and i^3 outwardly when the key f or f^2 is pressed downward.

Arranged adjacent to each of the arms g^5 of the pick-heads g^2 are wedge-shaped plates k and k^2, with which the said arm g^5 is adapted to engage, and the wedge-shaped plates k of all the keys may be of one piece, as may the wedge-shaped plates k^2.

When a key f or f^2 is operated by being pressed down, the arm g and pick-head g^2 are drawn away from the strings, and the shoulders of the rods g^4 and h^4 pull the strings i, i^2, and i^3 of the corresponding set of strings e outwardly until the said strings slide past the shoulders of the rods g^4 and h^4 and springing back into their normal position are set in vibration, producing the desired sound, and the pressure on the key f or f^2 still being exerted the arm g^5 comes in contact with the inclined edge of the plate k^2 and is forced into a slanting position, the rod g^4 and projection thereon being turned thereby, and by means of the gear-wheels h and h^3 the rod h^4 and shoulder thereon are also turned into a slanting position.

The rod g^4 is held from turning too easily by friction in the longitudinal hole g^3 and remains in its slant position until the pressure on the key f and f^2 being removed the coil-spring f^4 draws the inner end of said key downward and the rod g and pick-head g^2 inward toward the strings e, and because of the slant position of the projections on the rods g^4 and h^4 said rods may pass freely between their respective strings. At this time the arm g^5 comes in contact with the slant edge of the plate k and is forced into its normal position, the projections of the rods g^4 and h^4 again becoming horizontal and ready to again engage the strings when the key f or f^2 is again operated, and each of the sets of strings e is provided with a pick-head g^2, as described, as well as a rod g and key f or f^2, and by operating the several keys with the feet in either of the constructions shown music may be produced to serve as an accompaniment for any instrument the performer may be playing and which requires the use of his hands.

In the drawings forming part of this specification I have shown the contacts protected by means of felt, rubber, or other suitable material, and, as will be readily understood, wire or gut strings may be used exclusively in my accompanist, the necessary hammers or picks being provided in either case throughout, and various other changes in the construction herein shown and described may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. A foot-operated accompanist comprising a casing, a plurality of strings, arranged in sets mounted therein, a pedal or foot-key arranged for each of said sets, a vertical arm mounted thereon, a pick-head secured at the top of said vertical arm, a rod passing therethrough and provided with a downwardly-directed arm at its outer end and a gear-wheel near its inner end, a supplemental gear-wheel operating in connection with said first-mentioned gear-wheel, a rod passing through said supplemental gear-wheel, projections on the inner ends of said rods, said ends projecting between said strings, and means for returning said parts to their normal position, substantially as shown and described.

2. A pick for musical instruments provided with strings, consisting of a head, a rod passing through said head, a gear-wheel secured near the inner end of said rod, a supplemental gear-wheel in operating connection with said first-mentioned gear-wheel, a rod passing therethrough and rotatably secured in said head, said rods passing beneath and beyond said strings, projections on the side of the inner ends of said rods passing between and beyond said strings, and means for operating said rods and heads substantially as shown and described.

3. A pick for musical instruments provided with strings, consisting of a head, a rod passing through said head, a gear-wheel secured near the inner end of said rod, a supplemental gear-wheel in operating connection with said first-mentioned gear-wheel, a rod pass-

ing therethrough and rotatably secured in said head, said rods passing beneath and beyond said strings, projections on the side of the inner ends of said rods passing between and beyond said strings, an arm secured to the rear end of said first-mentioned rod, wedge-shaped plates secured adjacent to said arm and adapted to engage the same and means for operating said heads.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 12th day of September, 1902.

DANTE CAVICCHIOLI.

Witnesses:
F. A. STEWART,
C. E. MULREANY.