J. B. KOHLER.

PERCUSSION MUSICAL INSTRUMENT.

APPLICATION FILED NOV. 19, 1914.

**1,210,950.** Patented Jan. 2, 1917.

Fig. 1

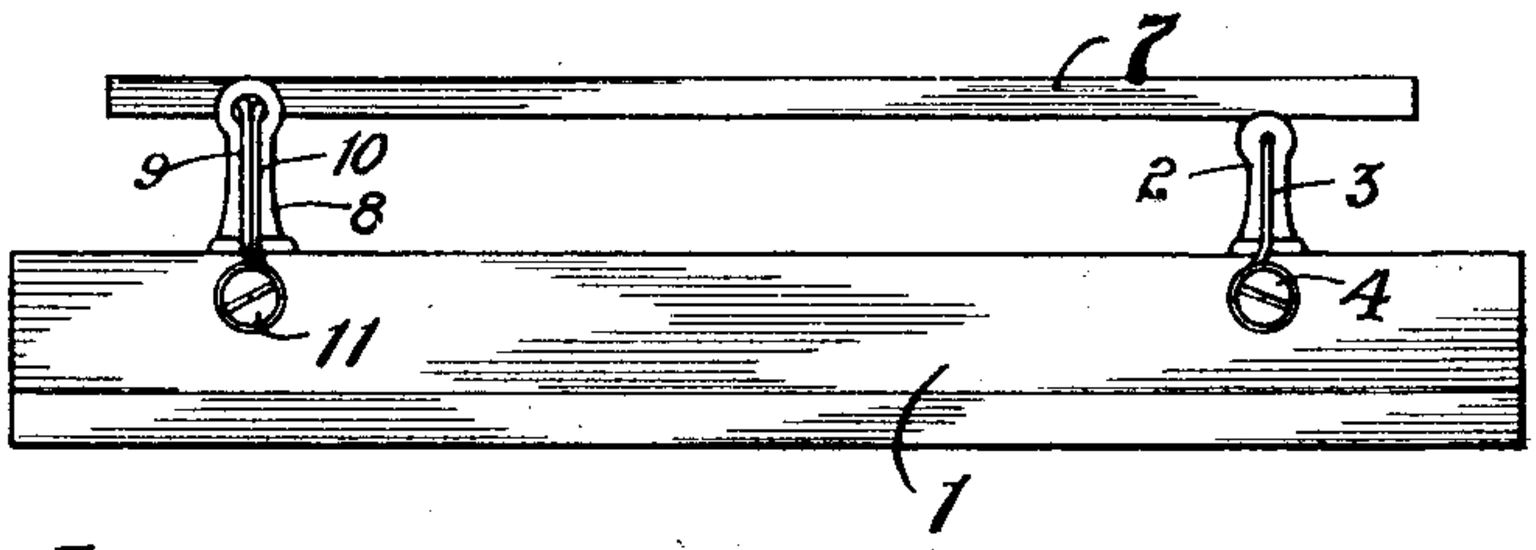



Fig. 5

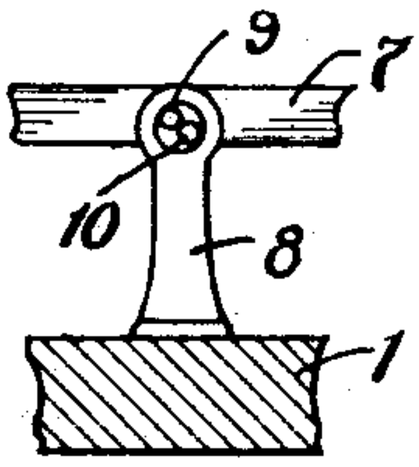



Fig. 3

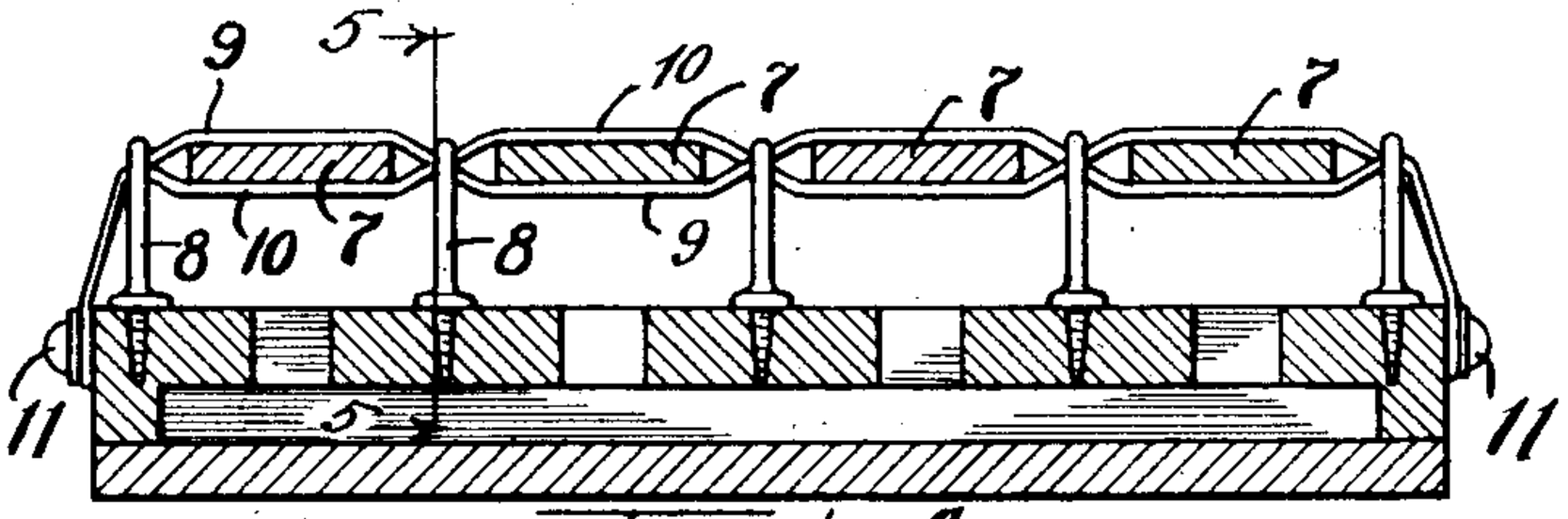



Fig. 6

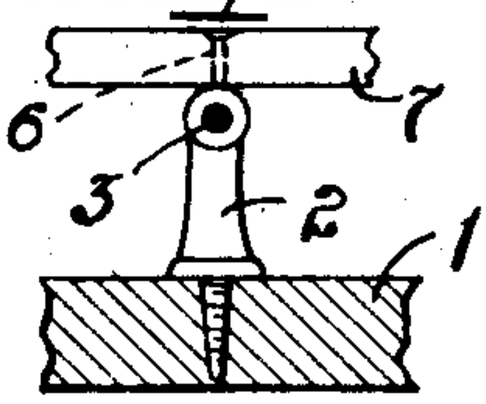



Fig. 4

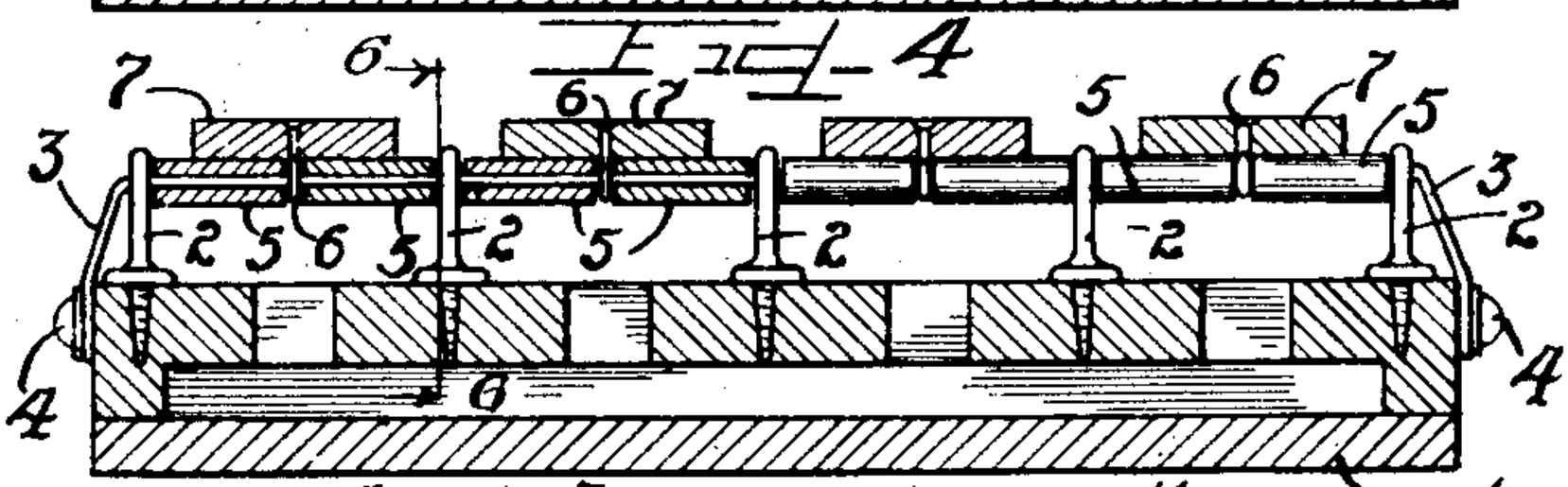



Fig. 7

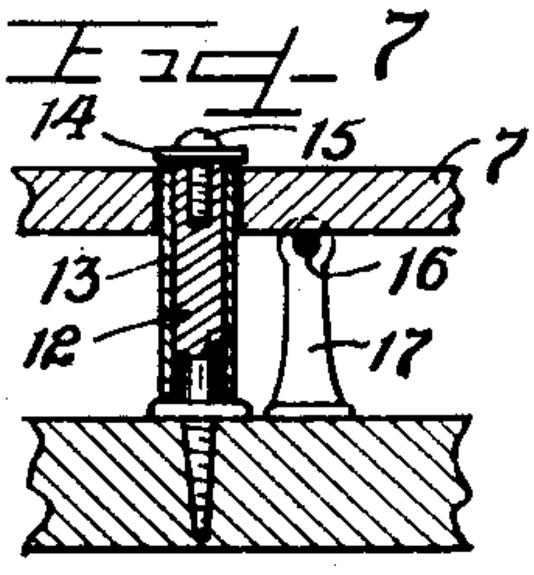
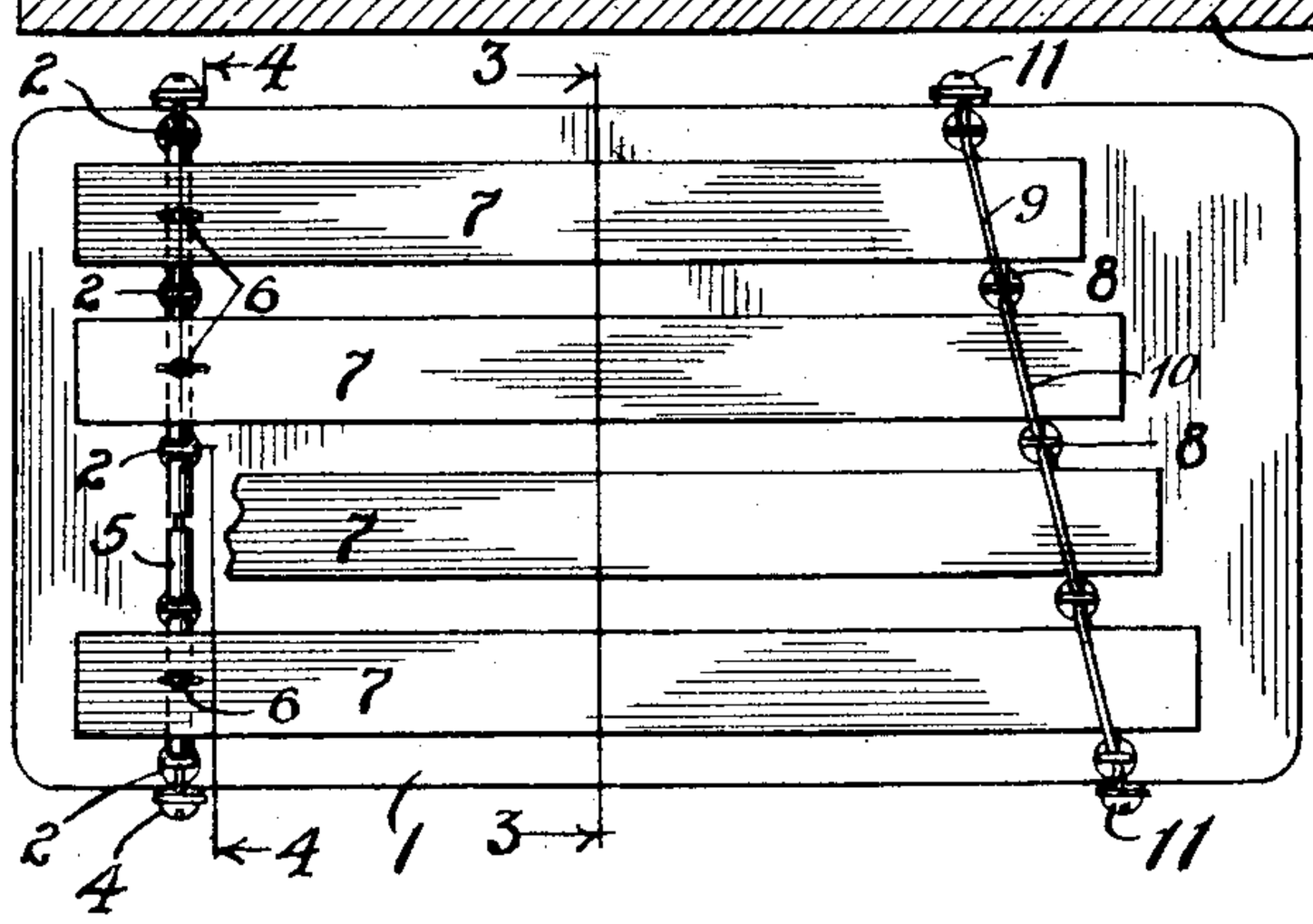



Fig. 2




Witnesses

Victor Siljander

Charles D. Gillock. by

Inventor

John B. Kohler.

Charles W. Reid Atty

# UNITED STATES PATENT OFFICE.

JOHN B. KOHLER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE KOHLER-LIEBICH COMPANY, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE.

## PERCUSSION MUSICAL INSTRUMENT.

1,210,950. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed November 19, 1914. Serial No. 872,932.

*To all whom it may concern:*

Be it known that I, JOHN B. KOHLER, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Percussion Musical Instruments; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

A great many different types of percussion musical instruments have been constructed commonly known as dinner chimes for household use, of which the most familiar is that wherein a number of tubes are suspended at their upper ends from a suitable support, thus permitting a natural vibration of the tubes to take place when the same are struck. It has been found that a richer and more mellow tone is secured from instruments in which the sounding members are mounted on supports on a resonance-box, but due to the manner in which the sounding members have heretofore been attached to the supports, it has been found that the vibrations of the sounding members are communicated through the supports directly to the resonance-box.

This invention relates to an improved form of support for the sounding members upon a resonance-box whereby there is no possibility of the vibrations of the sounding member being communicated through its supports to the resonance-box.

It is an object therefore of this invention to construct a sounding device wherein the sounding members are freely supported, permitting the device to be held in any position and when struck giving off a rich and pleasing tone entirely free from the harsh metallic note of other constructions of this type.

It is also an object of this invention to construct a sounding device wherein the sounding members are each at one end supported upon silk cord and at their other end are loosely held from movement by another cord, the manner of support permitting natural vibrations of the sounding members to take place when the same are struck by a blow from the soft headed beater provided for the purpose.

It is furthermore an important object of this invention to construct a chiming device in which the sounding members are positively connected at one of their ends upon a silken cord with spacing sleeves threaded on the cord and upon which the sounding members rest, said sounding members also yieldably supported at their other ends permitting the device to be held in any position and to produce the proper tone when struck by the beater.

It is finally an object of this invention to construct a sounding device easy and cheap to manufacture, the chiming members being so mounted above a suitable resonance-box as to sound only the pure fundamental tone thereof.

The invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

In the drawings: Figure 1 is a side elevation of a device embodying the principles of my invention. Fig. 2 is a top plan view thereof partly broken away. Fig. 3 is a section taken on line 3—3 of Fig. 2. Fig. 4 is a section taken on line 4—4 of Fig. 2. Fig. 5 is a fragmentary section taken on line 5—5 of Fig. 3. Fig. 6 is a fragmentary section taken on line 6—6 of Fig. 4. Fig. 7 is a fragmentary detail section illustrating a modified means of connecting the sounding members to the resonator.

As shown in the drawings: The device consists of a resonance-box or sounding box 1, the details of construction of which form the subject matter of another of my applications for patent. Said resonance-box is provided on one side thereof near the end with uprights 2, threaded therein, and inserted therethrough is a silken cord 3, which, at its ends, is secured by means of screws 4, to the side walls of the resonance-box. Threaded on said silken cord 3. between the uprights 2, are fiber or rubber spacing sleeves 5, of a length to afford a gap between the adjacent ends thereof, and threaded on said silken cord and disposed in the space between said sleeves are eye pins 6, which are rigidly secured near one end in sounding members 7. The sounding members are flat bars made of a specially tempered bell steel, though, of course, not necessarily so, and as clearly shown in Fig. 2, each of said bars is of a different length, in order that the pitch of the tone of each

thereof shall be different. A yieldable support is provided for the other end of each of said sounding members, and for this purpose a number of uprights 8, are secured on the top surface of the resonance-box, and threaded therethrough are two silken cords 9 and 10, which are crossed above and beneath each of said sounding members, as clearly shown in Fig. 3, thus holding each member in position and yet without any rigid connection between the sounding members and the resonance-box. Said cords 9 and 10, are secured at their ends on the side of the resonance-box by screws 11, and suitable washers for the purpose in a similar manner to that already described.

In the modification of my invention illustrated in Fig. 7, I have shown an upright 12, secured on the resonance-box, one for each of the sounding members 7, which are apertured to fit loosely over said upright with a soft rubber or fiber sleeve 13, therebetween. A washer 14, is held over the upper surface of the sounding member by a screw 15, engaging in the upright 12, and the weight of the sounding member is supported upon a cord 16, extending through the eyes of small standards 17.

The operation is as follows: It has been found that sounding members mounted in the manner described may be struck at any point in the length thereof to give the natural and fundamental tone of the sounding member, but of course it is preferable to strike the same substantially at the middle thereof, as a deeper tone is thereby obtained. By mounting the sounding members 7, at each of their ends upon silken cords a very pure and mellow tone is obtained when any one of the sounding members is struck a blow with a soft beater. It is obvious that the device will operate in any position whatsoever, and may be laid conveniently upon a table in a horizontal position or hung vertically upon a wall.

In the modified attaching means for the sounding members shown in Fig. 7, the sounding member fits loosely over the vertical upright with the weight of said members supported by the silk cord, the upright merely preventing displacement of said sounding member.

I am aware that various details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:

1. In a sounding device, a resonance-box, uprights secured thereon, sounding members, means connected with certain of said uprights to support and hold one end of each of said sounding members in spaced relation with one another, and cords alternately crossed above and below said sounding members connected with the remaining uprights supporting the opposite ends of said sounding members.

2. In a device of the class described, a resonance-box, a cord mounted thereabove, sounding members, members secured thereon and engaging said cord for mounting said sounding members on said cord, and means on said cord adapted to hold the sounding members in spaced relation with one another.

3. In a device of the class described, a sounding box, supports thereon, a silken cord threaded therethrough, sounding members, means connected with one end of said sounding members and with said cord, sleeves on said cord, said means and sleeves supporting and holding the sounding members spaced in proper relation with respect to said supports and with one another, and cords alternately crossed above and below the other ends of said sounding members to support the same.

4. In a device of the class described, a resonance-box, a plurality of uprights secured on the upper surface thereof, silken cords strung through said uprights, sounding members, means connecting one end of each of said members to one of said cords, the remaining cords engaged about the other ends of said members supporting the same in position upon said resonance-box to prevent displacement of said members.

5. In a device of the class described, a sounding box, uprights secured at one end thereof, a silken cord threaded therethrough, spacing sleeves on said cord between said uprights, sounding members, an eye secured in each of said sounding members, and engaged on said cord between said spacing members to support one end thereof, and means yieldably supporting the other end of said sounding members on the sounding box to prevent displacement of the sounding members.

6. In a device of the class described, a resonance-box, sounding members, means supporting the same at each of the ends of said respective sounding members, and spacers on one of said means to hold the sounding members spaced in proper position upon the resonance-box.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JOHN B. KOHLER.

Witnesses:
CHARLES W. HILLS, Jr.,
FRANK K. HUDSON.