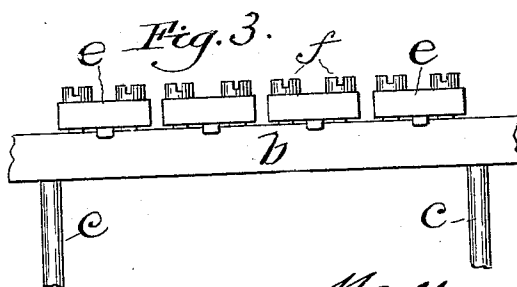
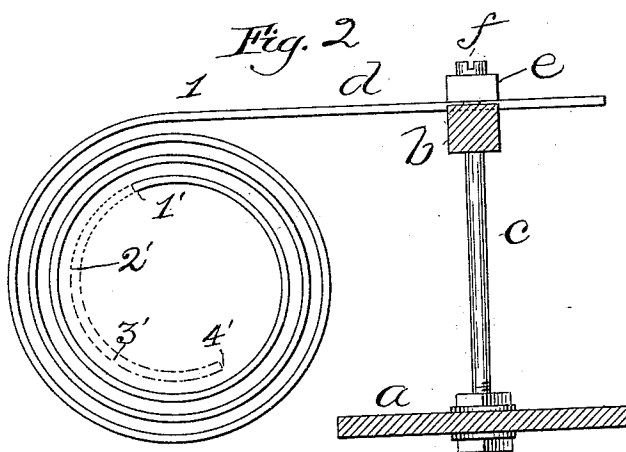
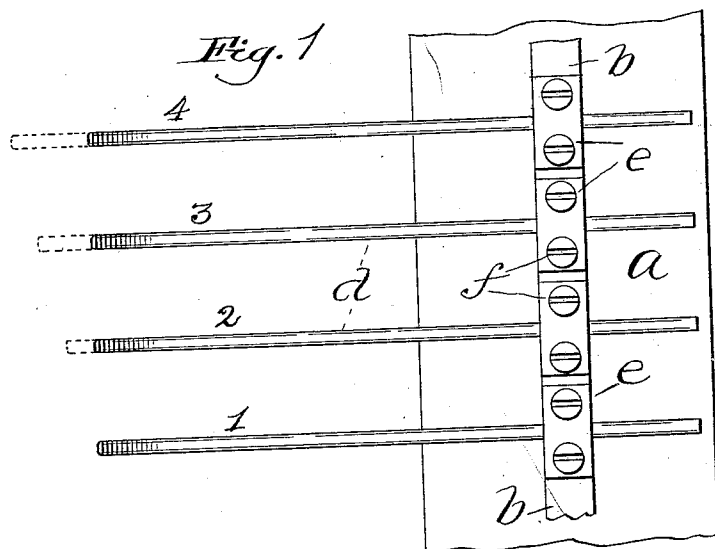


(No Model.)

W. C. LADD.
CHIME.

No. 559,805.

Patented May 12, 1896.



Witnesses:
C. C. Fletcher
Marion B. May

Inventor:
W. C. Ladd.
By *Arthur W. Cooley*
Att'y.

UNITED STATES PATENT OFFICE.

WYLLYS C. LADD, OF BRISTOL, CONNECTICUT.

CHIME.

SPECIFICATION forming part of Letters Patent No. 559,805, dated May 12, 1896.

Application filed November 11, 1895. Serial No. 568,555. (No model.)

To all whom it may concern:

Be it known that I, WYLLYS C. LADD, of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Chimes, of which the following is a specification.

This invention has relation to musical devices arranged in series and adapted to produce harmonized sounds or sounds in harmony or accord, the said musical devices being of the kind or class generally known as "chimes."

It is the object of the invention to provide such improvements in instrumentalities of the character mentioned as will enable the several instruments or gongs to not only exercise their sound-giving functions to the maximum extent, and so as that it may be of the best quality, but also so as that they may be readily and most delicately adjusted within wide limits on the sounding bar or head, in order to tune them to any desired correspondence in or proportion of sound.

To these ends the invention consists of a series of gongs or sounding-wires of varying length, or in some instances it may be of the same lengths, each secured at one end upon a sounding bar or head, the clamping means being of such structural character as will enable them to be readily relaxed in order that the gongs may be adjusted on the head to any desired degree, so as to tune the said gongs to each other in any wished-for diatonic succession or arrangement, all as I will now proceed to describe more in detail, and then point out with particularity in the appended claims.

Reference is to be had to the annexed drawings, and to the letters and figures marked thereon, forming a part of this specification, the same letters or figures designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a plan view of my invention, showing four gongs or sounding-wires arranged in harmonic succession and illustrating the method of their adjustment. Fig. 2 is a sectional view of the same. Fig. 3 is a rear view of the upper part of the same.

In the drawings, *a* designates the base or support of suitable character, and *b* the

sounding bar or head sustained on suitable uprights or standards *c*, connected at their lower ends to the base *a*.

d designates the gongs or musical devices, consisting of tuning-wires of the same or graduated lengths. As is represented in the drawings, the wires are of varying lengths, the wire 1 terminating at 1', while wire 2 is extended to the point 2', wire 3 to 3', wire 4 to 4', and so on throughout a series making up a full scale or measure or more or less. In order that the gongs *d* may be adjusted or tuned with the utmost nicety, so that they may sound in consonance, rhythm, or harmony, or so that they may be arranged and adjusted to suit desires or circumstances, according as to whether they may be employed as a peal, chime, or carillon, or in combination to constitute a musical device of other name or character, I secure one end of each wire upon the sounding bar or head by means of a clamp, which in the present instance consists of a block *e*, provided in its ends with holes through which pass the shanks of screws *f*, which are tapped into the sounding-bar and between which screw-shanks the said end of the wire extends, being held by turning the screws home and clamping the wire between the said blocks and the sounding-bar. This is given merely as one form of clamp that may be employed in the adjustment or tuning of the wires.

The dotted lines extending from the coiled part of wires 2, 3, and 4 in Fig. 1 show how adjustments for the purpose of tuning may be made, and it will be fully understood, without further description, that the range of adjustment with the said clamping devices is quite extensive and can be made with the utmost readiness, while they are such as to hold the wires firmly upon and in connection with the sounding-head, so that their vibrations may not be deadened or in any degree interfered with. By my improvements the tone is not dependent upon the length of the wire, but rather upon its adjustment on the sounding-head, so that in case the chimes should from any cause get out of tune they can readily be tuned without resort to the expensive and tedious method heretofore employed of cutting off their free ends.

It will be understood that the wires com-

posing the gongs may be straight instead of coiled, as shown, or may be bent into other form than that illustrated.

5 The clamping means in connection with the sounding bar or board and the range of adjustment are important features of the invention.

The invention may be employed in connection with any suitable means for striking
10 the gongs to sound the same.

As has hereinbefore been indicated, the gongs employed may be in number sufficient to make up one or more octaves or less than an octave, according to the range or scope of
15 tunes or music that it may be proposed to produce thereon.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which
20 it may be made or all of the modes of its use, it is declared that what is claimed is—

1. A chime or similar musical device, comprising in its construction a series of gongs

consisting of wires combined with a sound- 25
ing-bar upon or in connection with which one end of each wire is placed and a clamp for clamping each wire so that they may be readily
adjusted to extend at varying distances from
the bar. 30

2. A chime or similar musical device, comprising in its construction a series of gongs consisting of wires combined with a sounding bar or head upon or in connection with
35 which one end of each wire is secured, the said wires being adjustably connected with the said bar or head, whereby the wires are adapted to be tuned without changing their lengths.

In testimony whereof I have signed my 40
name to this specification, in the presence of two subscribing witnesses, this 5th day of November, A. D. 1895.

WYLLYS C. LADD.

Witnesses:

ALICE E. BROWN,
JOHN J. JENNINGS.