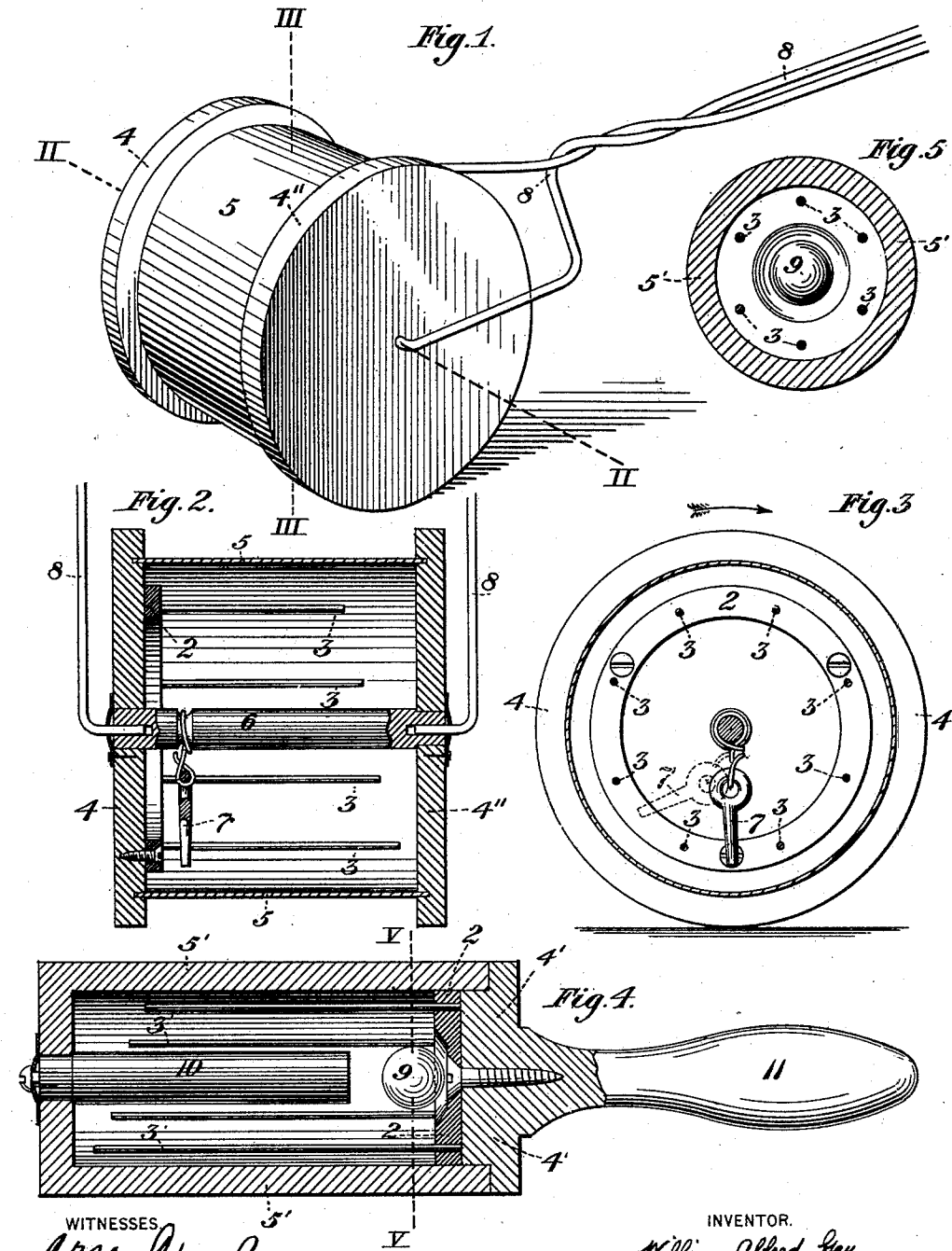


(No Model.)

W. A. GAY.
MUSICAL TOY.

No. 464,863.

Patented Dec. 8, 1891.



WITNESSES
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UNITED STATES PATENT OFFICE.

WILLIAM ALFRED GAY, OF CORRY, PENNSYLVANIA.

MUSICAL TOY.

SPECIFICATION forming part of Letters Patent No. 464,863, dated December 8, 1891.

Application filed April 8, 1891. Serial No. 388,173. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ALFRED GAY, of Corry, in the county of Erie and State of Pennsylvania, have invented a new and useful Improvement in Musical Toys, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a perspective view of a musical roller toy constructed in accordance with my invention. Fig. 2 is an axial section thereof on the line II II of Fig. 1. Fig. 3 is a vertical cross-section on the line III III of Fig. 1.
15 Fig. 4 is a longitudinal section of a modified construction of my invention. Fig. 5 is a vertical cross-section on the line V V of Fig. 4.

Like symbols of reference indicate like parts in each.

20 My invention relates to an improvement on the musical toy for which, on January 29, 1884, United States Letters Patent No. 292,645 were granted to me; and its object is to provide a toy which shall be of cheaper construction and which shall produce more pleasing effects in quality of the chimes or musical notes emitted by it when in use.

To this end my invention consists, first, in a musical toy having a series of rods or
30 tongues adapted in vibration to give a musical sound, and arranged, not radially, as shown in the drawings of my said patent, but at an angle, preferably a right angle, to their base or supporting-surface; second, it consists in a musical toy having a series of vibratory rods or tongues arranged on a device
35 which can be rolled along the ground or otherwise rotated, as by a crank, together with a loose clapper or striking piece, which, by engaging the rods or tongues, produces a succession of musical notes; third, it consists in a musical toy whose vibratory arms or rods are cast into and thus rigidly secured to a supporting ring or base. It also consists in
40 certain other combinations and preferred constructions of the parts hereinafter described, and more particularly indicated in the claims.

Referring now to Figs. 1, 2, and 3 of the
50 drawings, 2 represents a metal ring or base, and 3 3 are solid or hollow rods of resilient vibratory metal, preferably steel, which pro-

ject therefrom at right angles and are parallel to each other. These rods are preferably of different lengths, so as to emit different
55 musical notes; but said lengths are so chosen that the notes shall be harmonious and not discordant. In making the article I preferably arrange the rods in proper position and cast the metal ring around their ends. This
60 unites them very firmly, thus improving the quality and clearness of the notes produced and materially cheapens the cost of manufacture. It should be understood that in thus describing the rods as parallel and extending
65 at right angles to the plane of the ring I do not limit my invention thereto, since the rods may be divergent at a greater or less angle, if desired. Said rods and ring or disk constitute the principal elements of my invention,
70 the other parts being in a manner accessory, although claimed by me herein. The ring 2 is secured to the inner side of a disk 4, which may be of wood, and which forms part of a hollow barrel or roller 5, constructed, preferably,
75 as shown in Figs. 1 and 2. A central shaft or axle 6 connects the disk 4 with the disk 4', which constitutes the other head of the roller, and a clapper 7, which may consist of a piece of metal, is loosely hung on
80 the axle 6, near the disk 4, so that it may be capable of swinging freely thereon, and so that as the roller is rotated it may hang in a vertical position.

8 is a bail or handle attached axially to the
85 roller, so that by moving it along the floor the child using the toy may rotate the barrel in the manner of a wheel. As it is so rotated the rods 3 strike the clapper successively, Fig. 3, and are set in vibration thereby, so that
90 they produce clear and full musical notes, giving the effect of chimes. The resonance of the toy is greatly enhanced by the securing of the ring or base to the disk 4, which acts as a sounding-board, and by inclosing
95 the parts in the casing which constitutes the barrel. When so constructed, the device constitutes a most attractive and interesting toy for children, and by the exercise of ordinary musical judgment in selecting the vibratory
100 rods the sound emitted is made very pleasing to the ear.

It will be understood that many modifications of the device within the scope of my in-

vention may be made. Thus instead of arranging the parts so that the sound is produced by trundling the roller over the floor it may be arranged to be rotated by a hand-crank or otherwise, and very agreeable effects may be produced by providing it with toothed gearing, belting, or other means for multiplying the motion, so that a very rapid rotation may be imparted to the barrel. When thus rotated rapidly, the clapper will not strike every one of the rods successively, but will pass over some of them, and will thus produce combinations of sounds the order of which cannot be foreseen. The toy is thus made even more interesting and agreeable than otherwise.

In Figs. 4 and 5 I show a modification of the invention in which the instrument is designed to serve as a child's rattle. In this case the base 2, carrying the vibratory rods, is fixed to a plate or block 4', which is simply a modification of the disk 4, and is inclosed in a case 5'. A pellet 9 is placed within the rods 3 and is confined in place by a post 10, which extends within the circle of the rods from the end of the case. The toy has a suitable handle 11, and on shaking it the pellet 9 by striking the rods sets them in vibration and produces the chiming sound, which is a characteristic of my invention.

The modification just described will suggest to the mind of the mechanic many other adaptations of which the invention is susceptible. Thus toys may be made in the form of band-wagons or fire-hose carts, with the axle passing through the wagon-body, in which or on which the barrel, the vibratory rods, and the base may be set.

Without, therefore, limiting myself precisely to what is herein shown and described, what I claim as new, and desire to secure by Letters Patent, is—

1. In a musical toy, a series of vibratory

rods cast in a metal base from which they project, and means for causing the rods to vibrate, substantially as and for the purposes described.

2. In a musical toy, the combination of a series of vibratory rods secured to a metal ring and projecting therefrom transversely, and means for striking said rods and causing the same to vibrate, substantially as and for the purposes described.

3. In a musical toy, the combination of a metal ring, vibratory rods projecting transversely, a central shaft, and a clapper hung on the shaft, substantially as and for the purposes described.

4. In a musical toy, the combination of a rotatory barrel, a ring or base fixed in the barrel and having transversely-projecting vibratory rods, and means for striking and vibrating said rods, substantially as and for the purposes described.

5. In a musical toy, the combination of a rotatory barrel, a ring or base fixed in the barrel and having a series of vibratory rods projecting transversely therefrom, and a clapper suspended from a central shaft in the barrel, substantially as and for the purposes described.

6. In a musical toy, the combination of a series of vibratory rods secured to a base from which they project transversely, a handle or support to which the base is fixed, a casing, and a striker set within the rods and adapted to strike the same when the toy is shaken or rotated, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 3d day April, A. D. 1891.

WILLIAM ALFRED GAY.

Witnesses:

MARY L. BRAMAN,
THOS. R. BUCK.