(No Model.)

A. C. WESTON.

TOY MUSICAL WHEEL.

No. 562,995. Patented June 30, 1896.

Fig. 1.

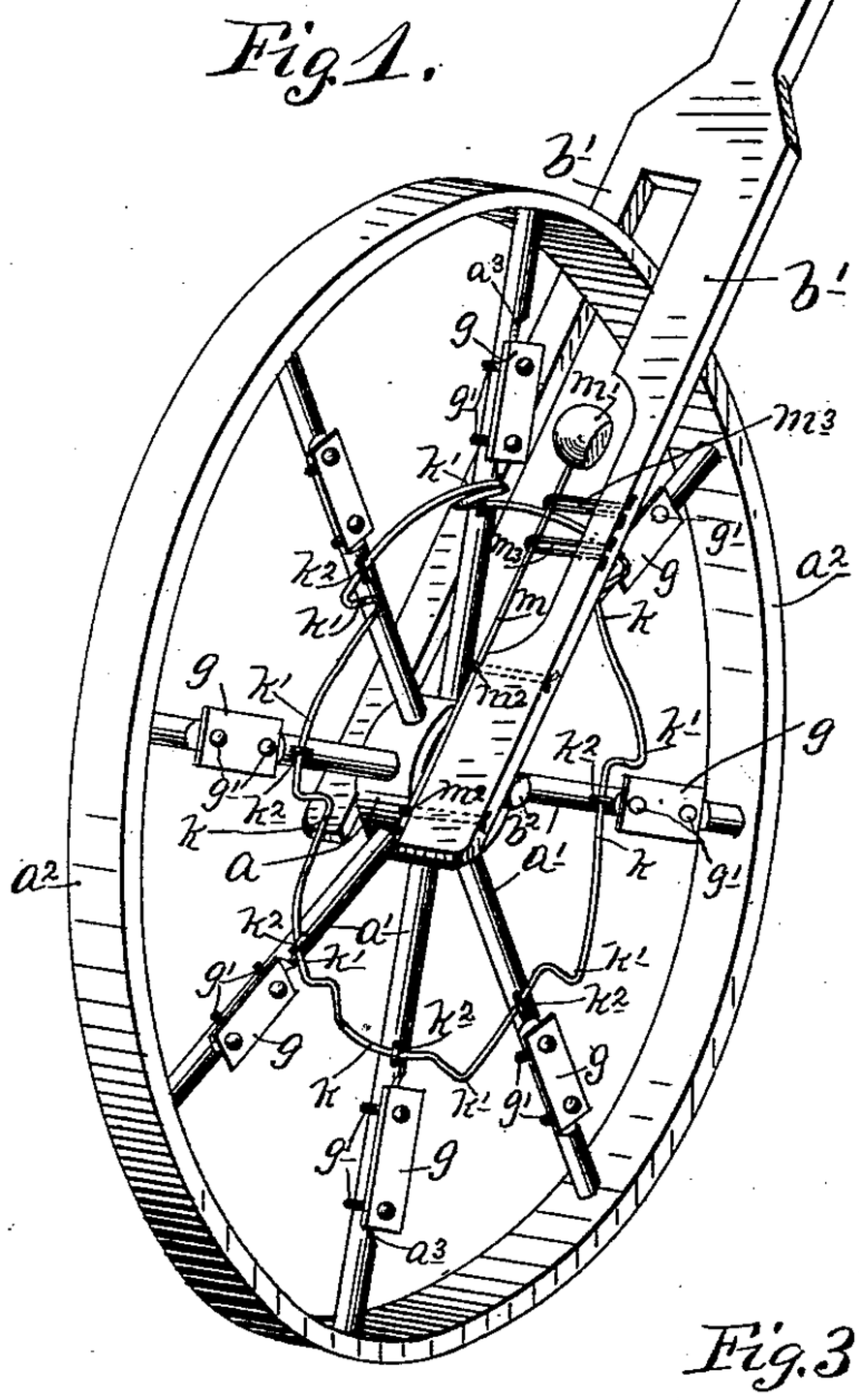

Fig. 2.

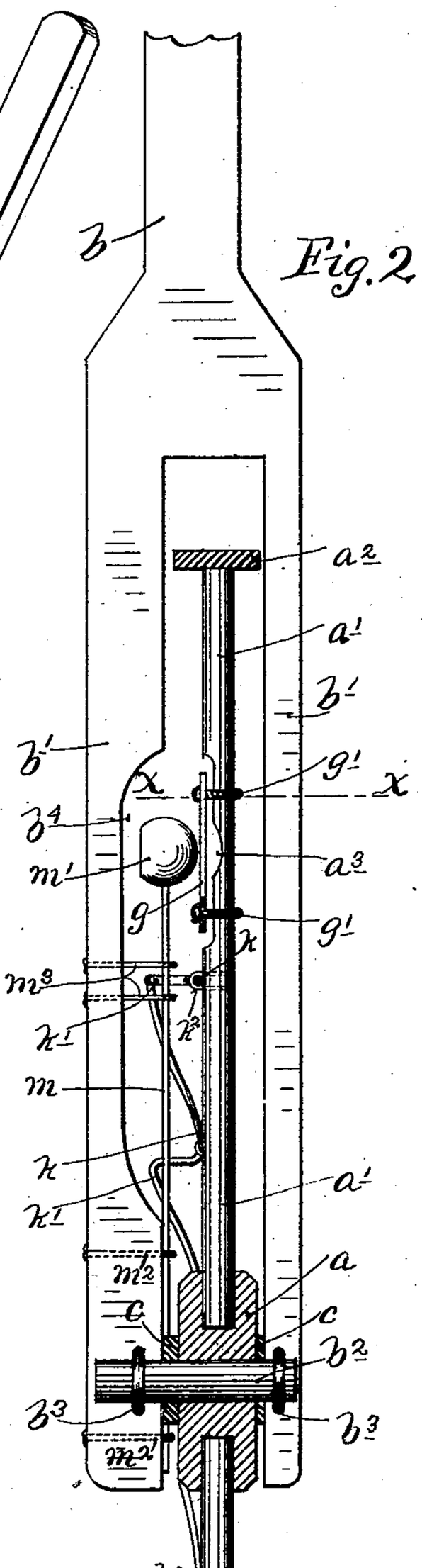

Fig. 3.

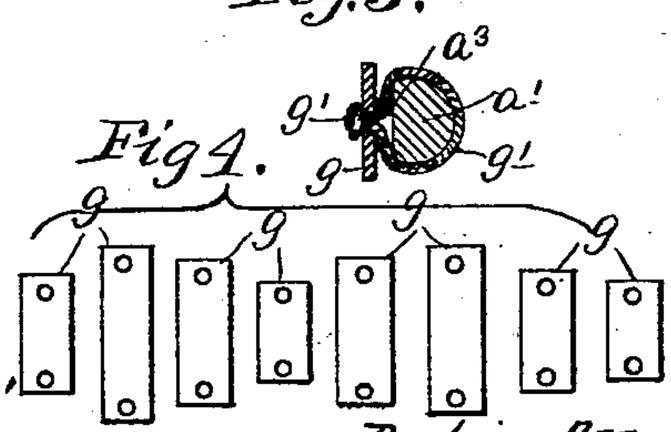

Fig. 4.

Witnesses.
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R. D. Merchant.

Inventor.
Allan C. Weston.
By his Attorney
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UNITED STATES PATENT OFFICE.

ALLAN C. WESTON, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO SAMUEL ALEXANDER, OF SAME PLACE.

TOY MUSICAL WHEEL.

SPECIFICATION forming part of Letters Patent No. 562,995, dated June 30, 1896.

Application filed September 12, 1895. Serial No. 562,244. (No model.)

To all whom it may concern:

Be it known that I, ALLAN C. WESTON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Toy Musical Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an improved toy musical wheel which will be simple and cheap in construction.

To these ends my invention comprises the novel devices and combinations of devices hereinafter defined, and described in the claims.

The preferred form of my invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout the several views—

Figure 1 is a perspective view of the entire device. Fig. 2 is a view, partly in bottom plan and partly in section, with some parts broken away. Fig. 3 is a transverse section through one of the spokes of the wheel and one of the note or sounding plates, taken on the line X X of Fig. 2; and Fig. 4 shows the series of note or sounding plates assembled together for the purpose of showing their relative dimensions.

a a' a^2 indicate the wheel, of which a is the hub, a' the spokes, and a^2 the rim of said wheel.

b is a combined handle and hammer support, which is bifurcated or provided with prongs b' at its lower end, that straddle the wheel. The wheel is journaled on a short shaft or axle b^2, rigidly secured by means of staples b^3 to the ends of the said prongs b'. As shown, the wheel-hub a is held out of frictional contact with the prongs b' by means of washers c.

In the wheel shown there are eight spokes, each of which is cut away, as shown at a^3, to receive a gong or sounding device. As shown and preferred, the gongs herein employed are in the form of flat note or sounding plates g, of some resonant material, such as steel or bell-metal. The sounding-plates g are preferably secured in position by cords g', of some soft fibrous material, such as yarn, which cords are wrapped around the spokes a' and have their ends passed through perforations in the ends of said plates and tied in knots, which serve to hold the note or sounding plates g in operative positions. These cords g are preferred because they give the least interference with the vibratory action of the sounding-plates; but the plates might of course be secured in position by various other, though less efficient, devices.

k is an endless rod or wire that is bent to form a series of cam-sections k', corresponding in number to the number of note or sounding plates, and secured in position on the spokes of the wheel by means of staples k^2.

m m' is a spring-hammer, comprising the spring rod or stem m and head portion m'. The end of the spring-stem m is secured to one of the prongs b' of the handle b by means of staples m^2. In the normal position of the hammer, the head m' is held a slight distance away from the line of the sounding-plates, as shown in Fig. 2, by means of one or more staples m^3, projecting from one of the handle-prongs b' and engaging the spring-stem m.

It will be here noted that the particular prong b' to which the spring-stem m' is secured is cut away, as shown at b^4, to permit the outward cam movement of the hammer-head m'. It will also be observed that the cam-sections k' are so positioned, with respect to the sounding-plates g, that under the action of rotating the wheel they will engage the spring-stem m, force the same outward against its own spring action, and then release said stem m just as the corresponding sounding-plate g comes in line or adjacent to the hammer-head m'. When the hammer-head m' is thus released by the passage of the cam-section k' from the spring-stem m, the said head of course will be immediately thrown inward against the adjacent sounding-plate by the spring action of said spring-stem m. Under this action, it will be understood, the momentum of the hammer-head m' causes the spring-stem m to bend sufficiently to permit the head m' to strike the said sound-

ing-plate; but the spring-stem *m* immediately recovers its normal position, thereby moving the hammer-head out of contact with the sounding-plate and permitting the free vibration of the same.

In the preferred arrangement of the device, the note or sounding plates *g* are so constructed as to give different tones or scale-notes, and are placed in such arrangement on the wheel as to give a succession of tones or notes which produce a tune or strain of music. The usual arrangement of the sounding-plates would be such as to produce, under the rotation of the wheel, a strain of some popular air. In the arrangement shown in the drawings there is a complete octave or eight note or sounding plates; but the number of these sounding-plates might, of course, be increased or decreased at will, so long as a sufficient number are employed to give some character to the music or sounds produced. The variation in the tones of these sounding-plates may be caused by varying either the thickness, breadth, or width of said plates. In the accompanying drawings I have shown the variation in the length of these plates as the cause of the variable tones of the same.

It will be understood, of course, that this device has been designed principally for the amusement of the children, and that in the operation of the same the operator, by taking hold of the handle *b*, runs the wheel by pushing the same ahead of the person.

It must be obvious that the above device, in virtue of the simplicity of its construction, may be made at a very low cost. At the same time the device is strong and durable.

The device makes a very attractive toy for children, serving at once as a push or run wheel and as a musical device.

It will be understood, of course, that various alterations in the details of construction of this device may be made without departing from the spirit of my invention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a wheel having a series of sounders secured to the spokes thereof, and a series of cam-sections formed by the endless wire or rod secured to said spokes, of a combined handle and hammer support to which said wheel is mounted, and the spring-hammer carried by said support and subject to the action of the cam-sections of said wheel, substantially as described.

2. The combination with the wheel a' a^2, having its spokes a' recessed at a^3, of the sounding-plates *g* secured in said recesses a^3 by means of the cords g', the cam wire or rod k k' secured to said spokes concentrically to the hub *a*, the handle-piece b b', the hammer m m' the spring-stem of which is secured to one of the prongs b' of said handpiece by means of staples m^2 and one or more staples m^3, engaging said hammer-stem *m* inward of the hammer-head m' and serving to hold said head m' out of the plane of the sounding-plates *g*, substantially as and for the purpose set forth.

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

ALLAN C. WESTON.

Witnesses:

JAS. F. WILLIAMSON,

SAMUEL ALEXANDER.