(No Model.)

A. L. BERNARDIN.

TOY.

No. 560,833. Patented May 26, 1896.

FIG. 1.

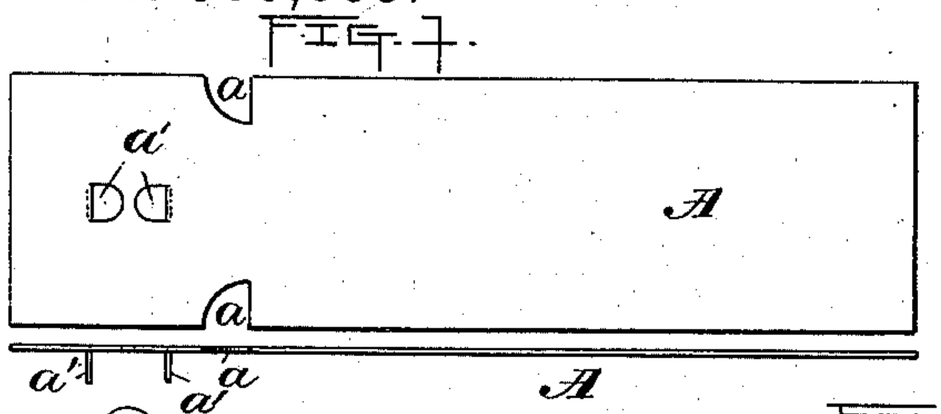


FIG. 9.

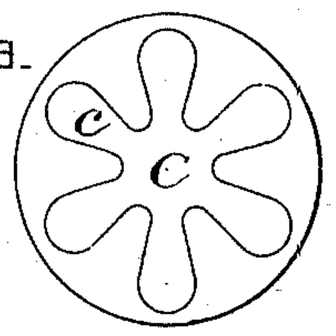


FIG. 2.

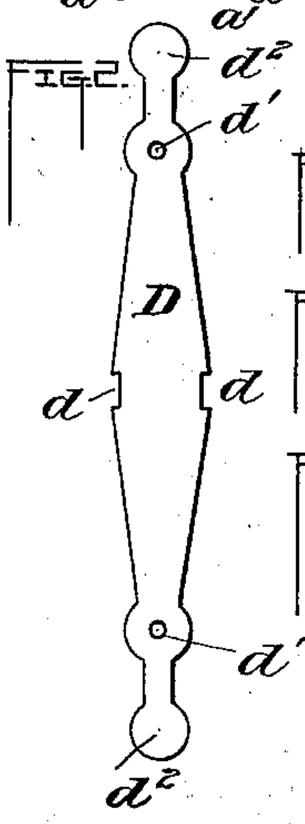


FIG. 3.

FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

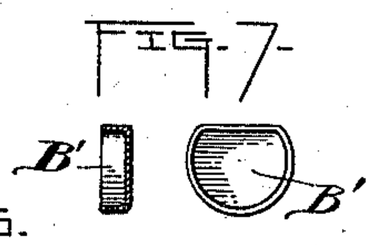


FIG. 8.

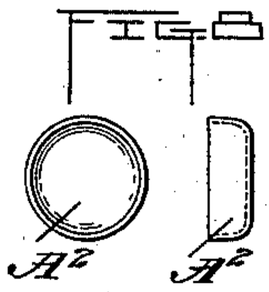


FIG. 10.

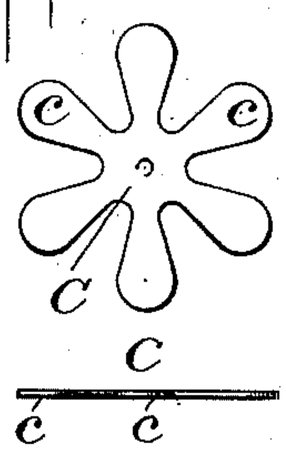


FIG. 13.

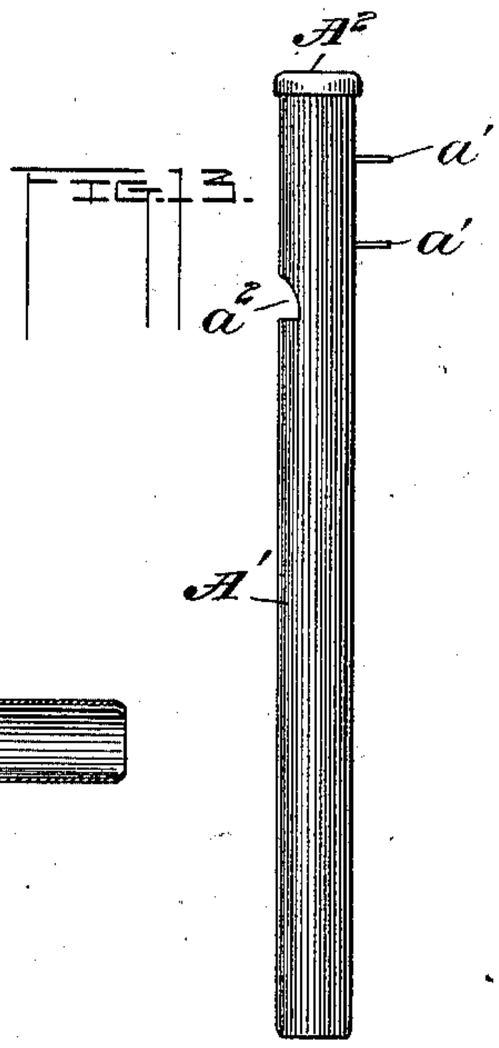


FIG. 11.

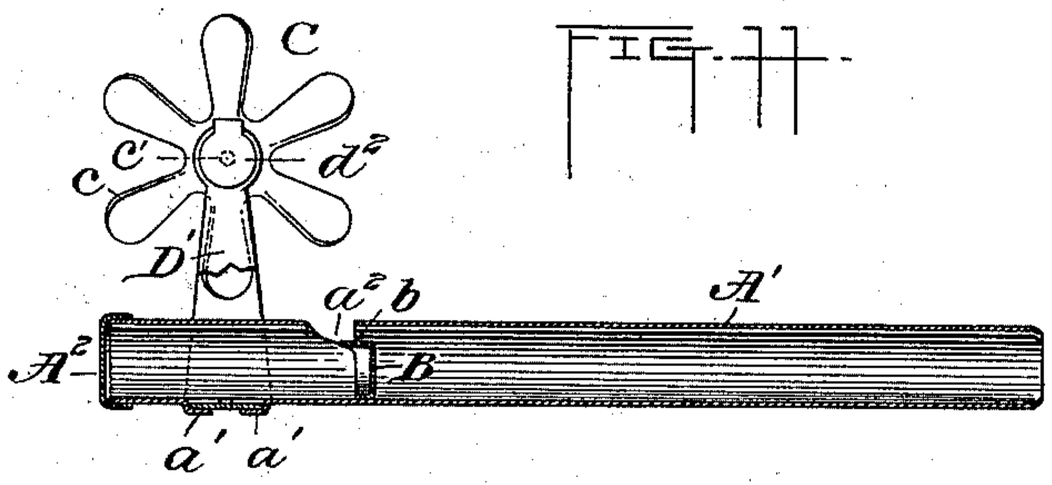
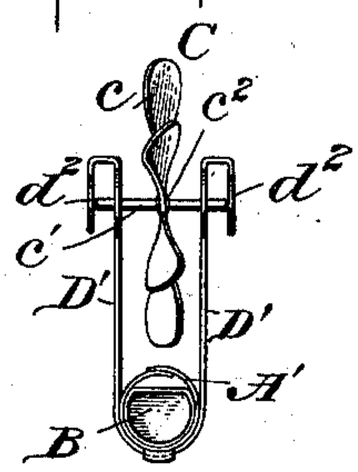


FIG. 12.



Witnesses
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UNITED STATES PATENT OFFICE.

ALFRED L. BERNARDIN, OF EVANSVILLE, INDIANA.

TOY.

SPECIFICATION forming part of Letters Patent No. 560,833, dated May 26, 1896.

Application filed August 15, 1893. Serial No. 483,193. (No model.)

To all whom it may concern:

Be it known that I, ALFRED L. BERNARDIN, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Toys; 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.

This invention relates to toys, but more particularly to a combination toy and whistle designed more especially for the amusement of children; and the object is to produce a toy which may be manufactured and sold at a nominal price and which will not be easily broken or injured in use.

The invention will first be described with reference to the accompanying drawings, which form a part of this specification, and then pointed out in the claims at the end of this description.

In the drawings, Figure 1 represents a plan and a side elevation or edge view of the blank from which the tube or pipe of the whistle is formed. Fig. 2 is a plan of the blank from which is formed the standard in which the wind-wheel is journaled. Figs. 3, 4, and 5 represent a side view, a sectional view, and a plan, respectively, of the whistle plug or tongue. Fig. 6 is a front end view of the tongue. Fig. 7 represents a sectional view and a front end view of a modified form of tongue. Fig. 8 represents a front view and a side view of the end cap. Fig. 9 is a plan of the blank from which the wind-wheel is cut. Fig. 10 represents a plan and an edge view of the wheel as cut from the blank, Fig. 9, prior to twisting the blades. Fig. 11 represents a longitudinal section of the pipe or tube with the wheel journaled thereon. Fig. 12 is a front view of the same, the end cap being removed, so as to more clearly show the plug or tongue inserted within the pipe; and Fig. 13 is a side view of the pipe.

The device consists, essentially, of a pipe or tube within which is fitted a plug or tongue in proximity to and slightly below an air-outlet, the tube having its front end closed by means of a suitable cap or cover and having mounted thereon in rear of said outlet a wind-wheel which is journaled in a standard rising from the tube and has the upper ends of its arms turned outward and downward, so as to serve as stops and guards to hold the axle or spindle of the wind-wheel in proper position and to protect the projecting ends of the same. The pipe or tube is preferably formed from a blank A, Fig. 1, of metal or other suitable material, which may be cut, stamped, or otherwise formed of the shape shown, having in its opposite edges the notches a a and in front thereof, centrally of the blank, pendent lugs or cleats a' a', which latter are formed by cutting and turning down the metal or material of the blank at this point. The yoke or standard D is also preferably formed from a blank of metal, though any suitable material may be used, and may be cut, stamped, or otherwise formed of the shape shown in Fig. 2, with the notches d d centrally thereof and with perforations d' d' and rounded ends or extensions d^2 d^2, which latter are to be turned back for the purpose stated.

The wheel C may be cut or stamped in a single piece from a blank of tin or other suitable material, Fig. 9, forming a blank, Fig. 10, with radial arms or blades c, which may be given a slight twist, so as to provide suitable impact-surfaces for the action of the wind issuing from the air-outlet a^2 in the tube and acting upon said blades for the purpose of revolving the wheel.

The plug or tongue D may be of the shape shown in Figs. 3 to 6 or of the form shown in Fig. 7, and consists, preferably, of a segmental cup-shaped structure which may be formed from a flat circular plate of tin or other suitable material by means of a suitable die or in any proper manner by turning or drawing down a portion or segment of the circular plate, so as to form a segment greater than a semicircle with a straight edge or upper surface b, the projecting edge of which may extend slightly beyond the front edge of the major portion or greater segment, as at b', Figs. 3 to 5, or may be cut off flush with the front edge of the greater segment, as in Fig. 7, in which latter figure the letter B′ is used to designate this modified form of tongue.

The parts shown in Figs. 1 to 8 may be assembled and secured together for use in the following manner: The blank A, Fig. 1, is first bent so as to form a pipe or tube A′,

Figs. 11 and 13, with overlapping edges, Fig. 12, the notches a being thus brought together so as to provide an air-outlet a^2. The plug B or B′ is then inserted in the pipe and moved along the same until its rear smooth face or end passes slightly back of the outlet a^2, in which position it will be retained in such manner as to cause the air as it passes across or over the plug and out of said outlet to produce a shrill whistle and at the same time cause the wheel C to revolve. An end cap or cup-shaped cover A^2, Figs. 8 and 11, is then placed over the front end of the tube, so as to close said end and hold the overlapping edges of the tube together. The blank D is now placed crosswise of the tube with the notches d resting between and engaging the pendent lugs or cleats a', and the latter are thereupon turned down flatwise, so as to secure the blank to the tube. The free ends of the blank are then turned up, so as to form a U-shaped standard or yoke D′, Figs. 11 and 12, and the extremities or extensions d^2 thereof are turned back or outward and downward, so as to adapt them to serve as stops to prevent endwise movement of the axle or spindle c' of the wind-wheel, and also to serve as guards to protect the projecting ends of said spindle. The wheel C may be attached by simply springing apart the ends of the yoke sufficiently to permit the ends of the spindle to be inserted in the openings d', whereupon the yoke-arms by their resiliency will close upon the wheel and hold the same properly journaled in position to be impelled by the air issuing from the air-outlet a^2. I preferably secure the wheel upon the spindle by swaging or upsetting the metal of the spindle at either side of the hub or wheel center, as shown at c^2, Fig. 12, which is a simple, economical, and efficient method of connecting said parts and securing the wheel firmly in place.

The device with the several parts thereof properly assembled and secured in position in the manner described is then preferably lacquered, either by dipping the same in a suitable solution or by applying the lacquer thereto in any proper manner, and after drying, preferably by artificial means, all joints between the edges of the pipe and the connections between the same and the end cap and yoke will be effectually sealed.

It will be observed that by forming the air-outlet a^2 in the manner described instead of cutting an opening in the body of the blank the overlapping edges are placed above the straight edge of the whistle plug or tongue B and a tight joint is secured between the contacting surfaces of the plug and tube. The standard or yoke is also firmly secured by the cleats a', and all the parts of the device are connected together without the use of solder or other fastening means, such as are usually required in order to bind the parts together. I thus produce a very complete, substantial, and efficient device, which may be manufactured at a small cost and which will not easily get out of order or be broken in use.

The peculiarly-shaped tongue is adapted to fit snugly and closely within the tube and to be confined therein without the use of solder or any fastening, being simply pushed into the tube and held by close contact between the parts, the tube being adapted to open or yield as a spring to permit the insertion of the tongue and by its recoil to bind the tongue in a stationary position therein, and the straight edge of the tongue provides an aperture between the same and the upper curved wall of the tube adjacent to the air-vent. It may be desirable in some cases to use the tube with the air-vent and wind-wheel only without the tongue, thus dispensing with the whistle, or with the tongue, but without the wind-wheel and yoke, making simply a whistle; and while I preferably use a tongue of the peculiar construction herein described and shown other forms may be employed in combination with other elements of the device without departing from the scope of my invention, and the end of the pipe nearest the air-vent may also be closed in any proper manner; but an end cap of the form shown is preferable and provides a simple and efficient means for this purpose.

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

1. A toy comprising the pipe formed from a flat blank which is bent into tubular form and closed at one end; said blank having pendent lugs on the under side thereof near said closed end, and provided with notches in its edges which register to form an air-vent in the pipe, the yoke-arms rising from said pipe and clasped thereto by said lugs, the tongue fitting within the pipe adjacent to said air-vent, and the wind-wheel journaled in said yoke-arms, substantially as described.

2. A toy comprising the pipe or tube formed from a blank which is bent into tubular form and provided on its under side with pendent lugs and with notches in the adjacent overlapping edges thereof adapted to form an air-vent in the tube, the yoke mounted on said tube and secured thereto intermediate its ends between said lugs, the tongue fitting within the tube adjacent to said air-vent, and the wheel journaled in said yoke-arms; the end of the tube near said air-vent being closed, substantially as described.

3. In a toy, the combination with the tube having the overlapped edges and an air-vent therein, of the tongue of cup-shaped segmental form fitting closely within the tube adjacent to said air-vent with the chord of the circle or the straight edge thereof horizontally arranged below said air-vent, so as to provide an aperture between said straight edge and the upper curved wall of the tube; the tongue being confined within the tube by spring-pressed binding-contact therewith, substantially as described.

4. In a toy, the pipe formed from a blank which is bent into tubular form and provided near one end with integral pendent lugs or cleats, and the cap placed over said end so as to clasp and close the same, in combination with the yoke having notches in the edges thereof engaging said lugs, the latter being turned down so as to clasp and bind the yoke to the pipe; whereby the several parts are assembled and secured together without the use of solder or other fastening means, substantially as described.

5. A toy comprising the pipe formed from a blank having notches in the edges thereof and integral pendent cleats or lugs on the under side of the tube, the yoke secured by and between said cleats and having the wind-wheel journaled in the free ends thereof, the cap fitting over the rear end of the tube, and the cup-shaped segmental tongue or whistle-plug fitting within the pipe adjacent to said air-vent, substantially as described.

6. A toy comprising a tube or pipe having overlapping edges provided with notches or recesses adapted to provide an air-vent in the upper surface of the tube, the cap clasping one end of the tube, the yoke mounted upon the tube and having a wind-wheel journaled in the free ends thereof, and the segment-shaped tongue fitting closely within the tube adjacent to said air-vent with the chord of the segment uppermost, the joints between the several parts being properly sealed, substantially as described.

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

ALFRED L. BERNARDIN.

Witnesses:

CHAS. E. RIORDON,

WM. B. CROWELL.