Oct. 14, 1924. 1,511,211

L. E. BAUBLITZ

TOY

Filed Jan. 18, 1924

Fig. 1.

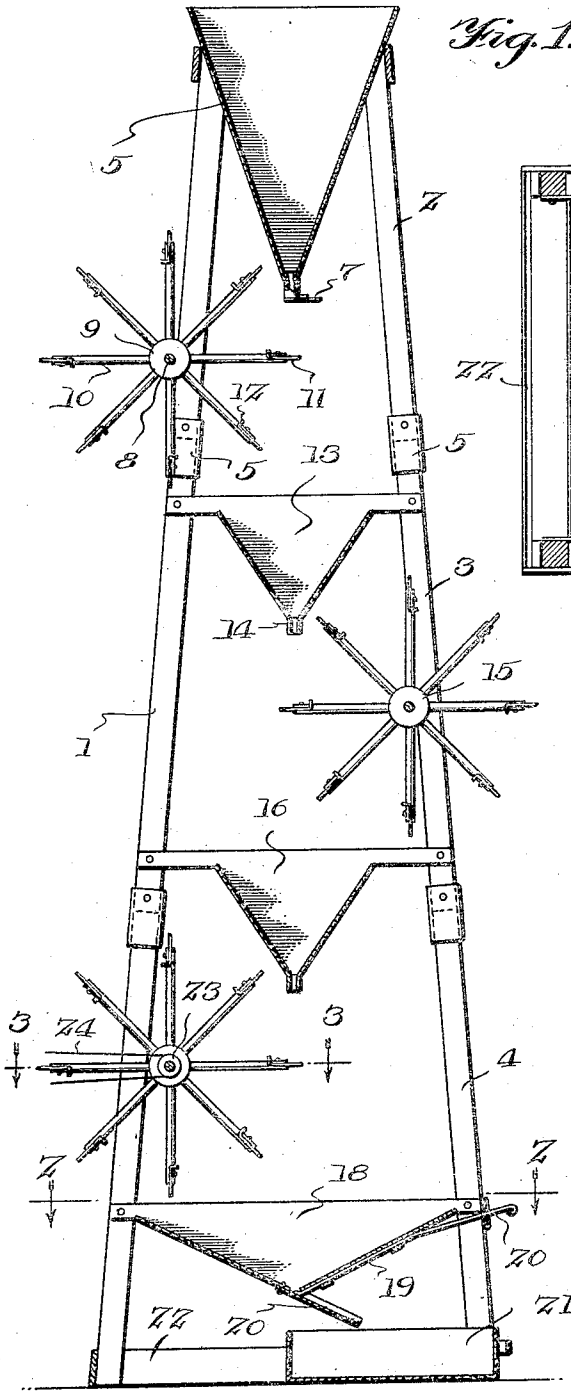



Fig. 2.

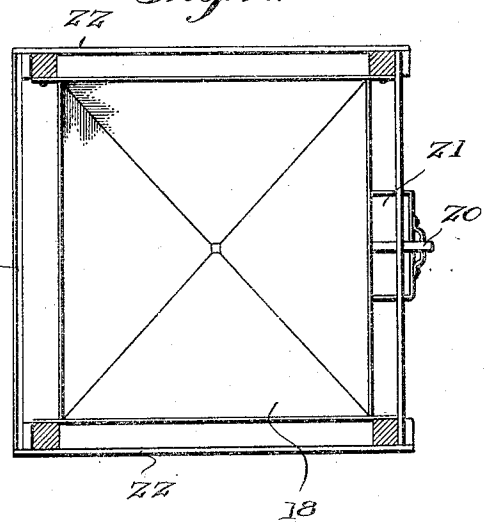
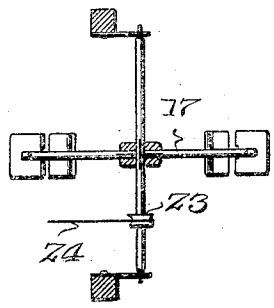



Fig. 3.




WITNESS:

L. E. Baublitz
INVENTOR

BY Victor J. Evans
ATTORNEY

Patented Oct. 14, 1924. 1,511,211

# UNITED STATES PATENT OFFICE.

LUTHER E. BAUBLITZ, OF WASHINGTON, DISTRICT OF COLUMBIA.

## TOY.

Application filed January 18, 1924. Serial No. 687,083.

*To all whom it may concern:*

Be it known that I, LUTHER E. BAUBLITZ, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Toys, of which the following is a specification.

My present invention has reference to that class of toys commonly known as sand toys, although the device may be operated by any granular substance or by liquids.

An object is the production of a toy of this character in which any desired number of paddle wheels are journaled in bearings on the sides of a frame and have successively delivered to the paddles thereof the sand or other operating medium whereby the wheels on both sides of the frame will be revolved but in opposite directions with respect to each other so that a pleasing effect will be produced, and also wherein the operating means is delivered against the paddle wheels slowly so that the toy will operate for a comparatively great length of time.

A still further object is the production of a toy of this character comprising a frame made up of removably connected sections, each of said sections having journaled thereon a paddle wheel, the upper section carrying a valve controlled feed hopper, the intermediate sections carrying directing funnels, and the lowermost section carrying a valve controlled receiving hopper having a pan or receptacle therebelow, and whereby the operating medium, such as sand or the like may be successively delivered from the feed hopper on to the paddle wheel therebelow, the paddle wheel delivering the said medium into the directing funnel therebeneath to cause the same to be directed on to the next paddle wheel, and so on until the operating medium is delivered into the receiving hopper, the construction of the feed hoppers and directing funnels being such that the operating medium will be slowly directed therefrom so that the toy will operate for a comparatively great length of time when the feed hopper is charged, and also wherein the valve controlling the outlet of the receiving hopper into the pan may be operated at desired intervals so that the operating medium in the pan may be delivered therefrom into the feed hopper, and in this manner the toy may be operated for an indefinite period.

It is a still further object to produce a sand toy in which sand is delivered on to paddle wheels at the adjacent sides of a frame to cause the simultaneous rotation of the paddle wheels in opposite directions, and wherein the paddle wheels are differently colored to add to the pleasing effect in the operation of the toy.

To the attainment of the foregoing and other objects which will present themselves as the nature of the invention is better understood, reference is to be had to the drawing which accompanies and which forms part of this application.

In the drawing:—

Figure 1 is a substantially central vertical longitudinal sectional view through a toy in accordance with this invention.

Figure 2 is a sectional view on the line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is a sectional view on the line 3—3 of Figure 1, looking in the direction of the arrows.

As disclosed in Figure 1 of the drawing, I make use of a frame or tower which is broadly indicated by the numeral 1. The uprights of the frame are arranged at an inward angle from the bottom to the top thereof. The frame is made up, in the showing of the drawing, of three separable sections, indicated for distinction by the numerals 2, 3 and 4. The uprights of the sections 2 and 3 of the frame have their lower ends provided with projecting sleeves 5 that receive therein the confronting ends of the adjacent sections and whereby the said sections are, as stated, removably associated. In ordinary instances, the frictional engagement between the sleeves and the frame sections is sufficient to hold these elements associated but, of course, suitable sustaining means such as small tacks or screws may be employed, it being understood that the sleeves are of metal and the uprights of the frame are preferably of wood.

The upper frame section 2 carries at its top a depending feed hooper 5. Preferably, the feed hopper is of inverted frusto-pyramidal formation and the reduced outlet thereof is preferably round. This outlet or mouth has the passage therethrough controlled by a hand operated valve 7.

Journaled in suitable bearings, preferably provided in plates that are secured to the uprights on one side of the section 2 there are trunnions on the ends of a shaft 8 to which is centrally connected a hub 9. From

the hub there radiate spokes 10, and each of the spokes has at its outer end a metal plate in the nature of a paddle 11. Each of the paddles is preferably let in a slot at the outer end of the spokes 10, and the inner end of each of the paddles is bent angularly, as at 12.

Below its sleeve connection with the section 2, the intermediate frame section has secured thereto a directing funnel 13. The funnel 13 is also preferably of an inverted hollow frusto-pyramidal formation and is provided at its reduced end with a restricted outlet 14. On the side of the frame section 3, opposite the side of the frame section 2 provided with a paddle wheel, there is journaled a paddle wheel 15, of a similar construction to the paddle wheel carried by the section 2.

Secured to the uprights of the frame 3, below the paddle wheel 15 there is a directing funnel 16 of a similar construction to the funnel 13.

Journaled in suitable inwardly extending bearings on the sides of the frame section 4, in a line with the paddle wheel carried by the frame section 2 there is a paddle wheel 17 of a construction similar to the paddle wheels above described, and secured to all of the uprights of the said section 4 there is a receiving hopper 18. The receiving hopper, as disclosed in Figure 2 of the drawing is also of an inverted hollow frusto-pyramidal formation as is the reduced outlet therefor. This outlet is normally closed by a slidable valve 19, the handle 20 of the valve passing through a suitable bearing plate on one side of the frame section 4. The receiving hopper has preferably secured upon its under face a trough 20 that extends a suitable distance beyond the outlet opening therein, and this trough is designed to direct the operating medium into a receiving pan 21 that rests on the floor on which the frame is sustained and that is slidably received in the frame between two of the uprights of the frame section 4, the remaining uprights being preferably connected by reinforcing plates 22.

Preferably on one side of the hub of the paddle wheel 17 there is secured a grooved wheel or pulley 23 that has trained thereabout an endless cord or belt 24. The belt may be hitched to the pulley wheel of some toy machinery for the operation thereof.

A granular substance, such as sand, sugar, flour or the like is delivered into the feed hopper 5 when the valve 7 closes the outlet thereof. In lieu of such substance, it will be apparent that a fluid, such as water, may be employed, in which instance the valve 7 is in the nature of a cock. The operating agent, from the hopper 5, when the valve 7 is opened, will be directed on to one of the paddles 11 on the paddle wheel carried by the section 2. Because of the peculiar formation of the walls of the hopper 5 and the restricted outlet thereof, the operating medium will flow slowly from the feed hopper on to the paddles. The medium, of course, causes the turning of the paddle wheel in one direction and also causes the said paddle wheel to deliver the medium into the directing funnel 13. The operating medium, flowing through the funnel 13, on to the paddles on the wheel 15, will revolve the same in an opposite direction to that in which the first mentioned paddle wheel is turned and the medium will be delivered from the paddle wheel 15 into the directing funnel 16 and from thence against the paddles of the wheel 17. The operating medium is delivered from the paddle wheel 17 into the receiving hopper 18, and when the valve 19 thereof is opened the said medium will flow into the receiving pan 21. Preferably the paddle wheels on the opposite sides of the frame are differently colored, as may be the superimposed directing funnels, feed hopper and receiving hopper. This has a pleasing effect upon the eye of the observer. The feed hopper is of a size to hold a sufficient quantity of the operating medium to cause the continuous rotation of the paddle wheels for a comparatively great length of time, say fifteen or twenty minutes, but it will be apparent that by opening and closing the valve 19 to permit of the desired amount of the operating medium being received in the pan and from thence delivered into the feed hopper, the operation of the toy may be continued indefinitely.

It is believed that the foregoing description, when taken in connection with the drawing, will fully set forth the simplicity of the construction and operation of the improvement.

Having described the invention, I claim:—

1. A sand toy, comprising a frame, paddle wheels journaled in bearings on the opposite sides thereof and disposed in staggered relation, a valve controlled feed hopper at the top of the frame, directing funnels supported on the frame above the remaining paddle wheels whereby when sand is let out of the feed hopper and delivered in a stream on to the paddle wheel adjacent thereto the funnels will direct the said sand on to the remaining paddle wheels to cause the simultaneous turning of all of the wheels, and a valve controlled hopper on the frame receiving the sand from the lowermost paddle wheel.

2. In a sand toy, a frame comprising spaced pairs of inwardly directed uprights, said frame constituting removably associated sections, a sand feed hopper on the upper section having a restricted outlet which is valve controlled, paddle wheels journaled in bearings on the opposite sides

of each of the sections, directing funnels supported from the frame above all except the upper paddle wheel, a receiving hopper having a valve controlled outlet below the lower paddle wheel, whereby sand delivered from the feed hopper on to the upper paddle wheel will rotate the same and deliver the sand therefrom into the hopper adjacent thereto and to the remaining paddle wheels, the funnels and hopper to cause the simultaneous rotation of the paddle wheels in opposite directions, said hoppers and funnels being of hollow frusto-pyramidal formation, and a belt wheel carried by one of the paddle wheels.

In testimony whereof I affix my signature.

LUTHER E. BAUBLITZ.