No. 690,852. Patented Jan. 7, 1902.

C. GORDON.

TOY.

(Application filed Apr. 1, 1901.)

(No Model.)

Fig. 1.

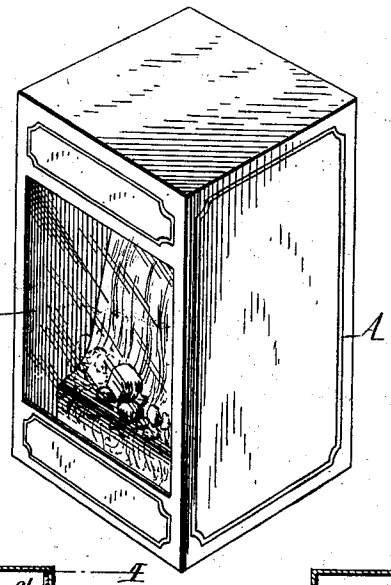


Fig. 2.

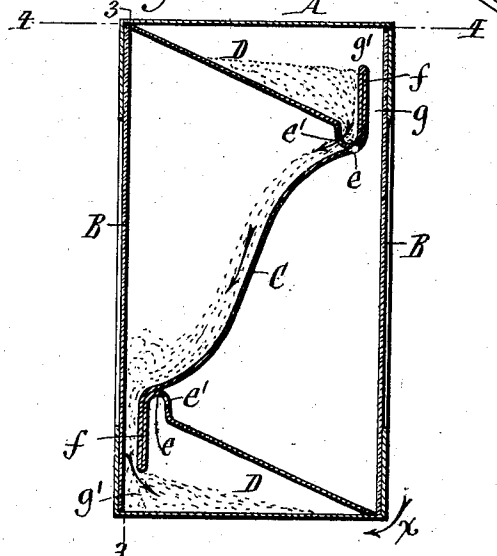


Fig. 3.

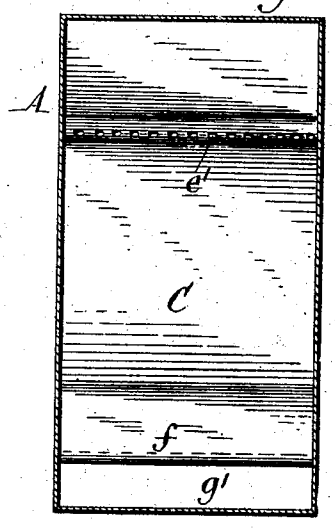


Fig. 4.

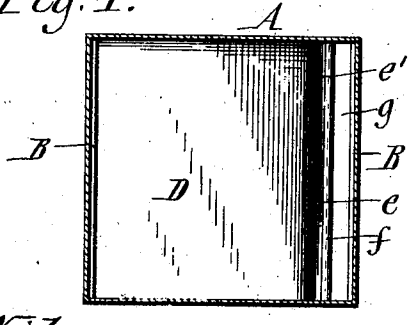
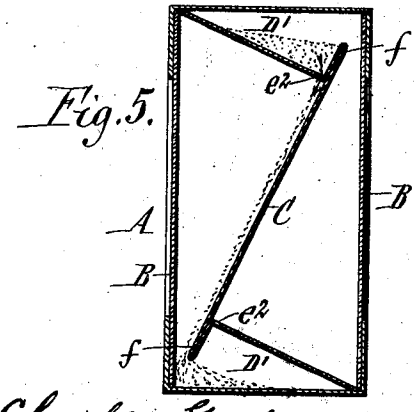


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES GORDON, OF BUFFALO, NEW YORK, ASSIGNOR OF THREE-FIFTHS TO JOHN G. MARCHAND, OF BUFFALO, NEW YORK.

TOY.

SPECIFICATION forming part of Letters Patent No. 690,852, dated January 7, 1902.

Application filed April 1, 1901. Serial No. 53,860. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GORDON, a citizen of the United States, residing at the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Toys, of which the following is a specification.

This invention relates to a toy which embodies a steep inclined plane designed to represent a waterfall—for instance, Niagara Falls—and in which the water going over the fall is simulated by a stream of sand or similar material flowing from a hopper over the inclined plane.

The object of my invention is to provide a cheap toy of this character which affords amusement and recreation.

In the accompanying drawings, Figure 1 is a perspective view of my improved toy. Fig. 2 is a transverse vertical section thereof. Fig. 3 is a vertical section in line 3 3, Fig. 2. Fig. 4 is a horizontal section in line 4 4, Fig. 2. Fig. 5 is a transverse vertical section of a modified construction of the toy.

Like letters of reference refer to like parts in the several figures.

A is a rectangular box or case which forms the body of the toy and which may be made of pasteboard or any other suitable material. The case is closed on all sides and at its ends, and the greater portion of two of its opposite walls—say the front and rear walls—consists of windows or transparent panes B.

C is a partition arranged in the box so that its sides face the windows B and preferably extending diagonally nearly from the top to the bottom of the case, as shown. This partition is preferably of ogee form, as shown in Fig. 2, and represents the precipice of a waterfall. As shown in Figs. 3 and 4, the partition extends across the full width of the case.

D D are hoppers arranged reversely at opposite ends of the case and serving alternately as supply and receiving hoppers upon reversing the case end for end. The sides of these hoppers are formed by the side walls of the case, and their bottoms are inclined and extend from diagonally-opposite corners of the case to the adjacent end portions of the inclined partition C. The sloping bottom of these hoppers preferably terminates in a transverse trough *e*, provided in its front wall with a horizontal row of perforations or passages *e'*, through which the sand or similar material escapes and flows over the surface of the inclined partition. The upright rear wall *f* of the trough *e* is substantially parallel with the opposing wall of the case and is separated therefrom by a passage *g*, while the free end of the trough-wall *f* terminates short of the end of the case to leave a passage *g'*. The passages *g* and *g'* permit the sand to flow from the foot of the inclined partition into the inverted hopper D, which for the time being forms the receiving-hopper, as shown in Fig. 2.

If desired, the incline C, the bottoms of the two hoppers D, and the troughs *e* may be cheaply bent from a single strip of tin, cardboard, or other suitable material, as shown in Fig. 2, the portions of the strip which form the outer walls *f* of the troughs being in this case doubled upon themselves, as shown.

Before the ends or heads of the case are closed one of the hoppers D is filled with a suitable granular material, preferably sand or powdered emery or with a liquid.

In the use of the toy upon holding the case A upright with the filled hopper at the top the sand escapes from the hopper in numerous streams through the perforations of its trough *e* and flows over that side of the inclined partition C on which said perforations are located, the sand descending over the partition in imitation of a waterfall. The sand discharged over the foot of the incline falls upon the bottom of the case through the passages *g g'* and rises into the inverted hopper at the lower end of the case. After all the sand has been discharged from the upper hopper the case is reversed end for end in the direction of the arrow *x*. (Shown in Fig. 2.) This brings the lower hopper into the righted position before occupied by the former hopper, and the sand now flows from this upper hopper over the other side of the incline C, this operation being repeated every time that the case is reversed, upon the principle of the hour-glass. As the falling sand is visible

through the transparent wall which for the time being forms the front of the case the toy is an amusing diversion.

While I prefer to curve the inclined partition C, as shown in Figs. 1 and 2, the same is not necessarily of that form, but may be straight, as shown in Fig. 5.

The troughs *e* of the hoppers are also an unessential feature of my improvement and may be omitted, if desired, as shown in Fig. 5. In this case the hoppers D′ are provided in their deepest portions with discharge-openings e^2.

To obtain a closer imitation of a waterfall, both sides of the incline C may be suitably decorated to represent a waterfall.

I claim as my invention—

1. A toy comprising a case having transparent panes in opposite walls thereof, a stationary partition arranged within the case to face said panes and extending nearly from end to end of the case, and reversely-arranged hoppers having their discharge-passages located at opposite ends of said partition and on opposite sides thereof, substantially as set forth.

2. A toy comprising a case having transparent panes in opposite walls thereof, a stationary, inclined partition arranged within the case to face said panes, and extending nearly to diagonally opposite corners of the case, and reversely-arranged hoppers having their discharge-passages located at opposite ends of said partition and on opposite sides thereof, substantially as set forth.

3. A toy comprising a case having transparent panes in opposite walls thereof, a stationary, inclined partition arranged within the case to face said panes and terminating near diagonally opposite corners of the case, reversely-arranged hoppers located at opposite ends of the case and provided in their deepest portions with discharge-troughs arranged at opposite ends of said partition and on opposite sides thereof and each provided in its front side with delivery-openings, substantially as set forth.

4. A toy comprising a case having transparent panes in opposite walls thereof, a stationary partition arranged within the case to face said panes and extending nearly from end to end of the case, and reversely-arranged hoppers having their discharge-openings located at opposite ends of said partition and on opposite sides thereof, said partition and the bottoms and rear walls of both of said hoppers being bent from a single strip of flexible material, substantially as set forth.

Witness my hand this 27th day of March, 1901.

CHARLES GORDON.

Witnesses:
THEO. L. POPP,
CARL F. GEYER.