

No. 754,709.

PATENTED MAR. 15, 1904.

O. A. SCADDING.  
TOY.

APPLICATION FILED JUNE 27, 1903.

NO MODEL.

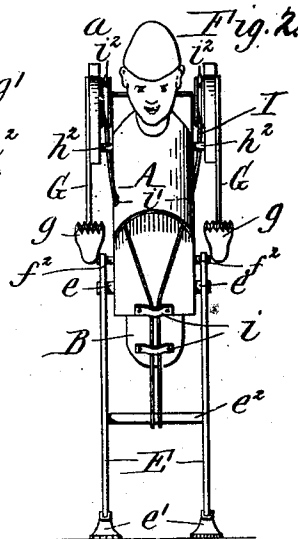
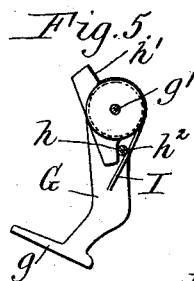
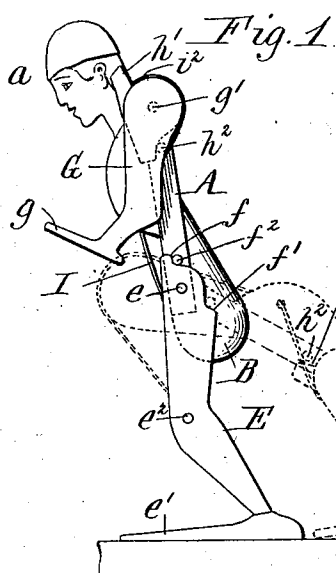


Fig. 3.

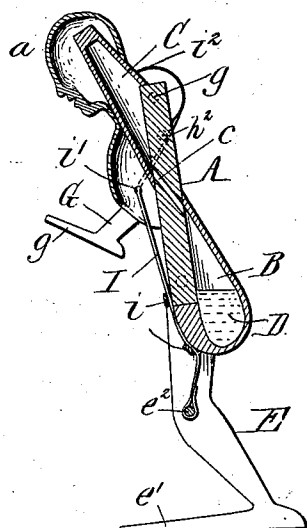
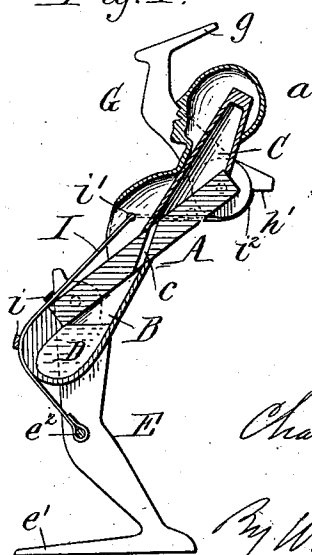


Fig. 4.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES ALFRED SCADDING, OF BUFFALO, NEW YORK.

## TOY.

SPECIFICATION forming part of Letters Patent No. 754,709, dated March 15, 1904.

Application filed June 27, 1903. Serial No. 163,325. (No model.)

*To all whom it may concern:*

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

This invention relates to a toy, preferably the figure of a person, adapted to automatically perform a series of movements closely imitating handsprings or somersaults.

The object of the invention is to provide an amusing and pleasing toy of the character stated which is of simple and inexpensive construction.

In the accompanying drawings, Figure 1 is a side elevation of a toy embodying the invention, showing the same in full lines on one of a flight of steps, and indicating by dotted lines successive positions assumed by the toy in performing the handsprings or somersaults down the flight of steps. Fig. 2 is a front elevation of the toy. Fig. 3 is a longitudinal sectional elevation thereof. Fig. 4 is a view similar to Fig. 3, showing a different position of the parts. Fig. 5 is an inside elevation of one of the arms.

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

A represents a body or trunk, which is hollow or provided at its opposite ends with chambers B and C, which communicate by one or more restricted intermediate passages *c*.

D represents a shiftable weight or heavy substance—such, for instance, as mercury—which is confined in the body and is adapted to pass from one chamber to the other through the connecting passage or passages when the body is inverted. The body may be constructed of any suitable material and may vary in form, the chambers being preferably so shaped that the mercury or shifting weight will pass smoothly through the passage or passages *c* from one chamber to the other. The outer configuration of the body conforms more or less to the shape of a person's body and is provided with a head *a*.

E represents members pivoted at *e* in any suitable manner to the body or trunk adjacent to one end thereof. The members E are preferably

shaped to represent legs and are provided with feet *e'* and are connected together at the knees by a transverse bar *e''*, which prevents the legs from spreading. The legs being connected move together and, in effect, constitute a single member. The legs are provided at the opposite sides of their pivots *e* with stop faces *f f'*, adapted to engage a stop projection *f''* on the body to limit the swing of the legs in opposite directions.

G represents members, preferably in the form of arms provided with hands *g*, and pivotally connected at *g'* in any suitable manner to the body or trunk adjacent to the upper end thereof, or end opposite to that to which the legs are pivoted, and adapted to swing on said pivots. As shown, the arms are detached; but they may be connected similar to the legs to move as one member. The body is provided at opposite sides adjacent to the shoulder-pivots with stops *h''*, against which cooperating stop-faces *h h'* on the inner sides of the arms are adapted to strike to limit the swing of the arms in opposite directions beyond the positions shown by full and dotted lines in Fig. 1.

The parts of the toy are so proportioned as to weight and size that when the figure is placed on a supporting-surface in an upright position, as indicated by full lines in Fig. 1, the body will balance and remain in the forwardly-inclined position shown with the stops *f''* thereof in engagement with the stop-faces *f* on the legs. In this position of the figure the shifting weight or mercury is in the lower chamber B in rear of the hip-pivots *e* of the legs. If the body is given a slight rearward push or movement, the weight will cause the same to swing downwardly and backwardly on the hip-pivots to the first position, (shown by dotted lines in Fig. 1,) and the stops *h''*, which are in engagement with the stop-faces *h* on the arms, will carry the latter around with the body. The arms are so shaped and proportioned as to weight and size that when the body swings downwardly they will be thrown around by the momentum of the moving body or their inertia until their stop-faces *h'* engage the stops *h''* on the body. The arms will thus be stopped in such a position that

the hands will strike on the supporting-surface in rear of the feet of the figure, as indicated by the dotted lines in Fig. 1. When the body swings downwardly on the hip-pivots, the weight or mercury will run through the passage or passages connecting the chambers B and C into the chamber C beyond or in rear of the shoulder-pivots, thereby overbalancing the weight of the body and legs in front of the shoulder-pivots and causing the body to swing slowly backwardly on the shoulder-pivots. In the first portion of the rearward movement of the body on the shoulder-pivots the legs will be carried around with the body by the engagement of the stops  $f^2$  with the stop-faces  $f'$  on the legs until the center of gravity of the legs is carried beyond their hip-pivots, when they will swing rearwardly on the hip-pivots until their stop-faces  $f$  engage the stops  $f^2$  on the body. If the figure is placed on one of a flight of steps or a series of step-like surfaces, the figure when turning on the arms, as above described, will light on the feet on the next lower step in the upright position. (Indicated by dotted lines in Fig. 1.) The figure is now in substantially the same position as it was when originally placed on the first step, and the mercury which shifts from one chamber of the body to the other causes the figure to repeat the movements just explained, alternately lighting on the hands and feet on the successive steps of the flight, thereby performing a series of complete handsprings or somersaults down the entire flight of steps.

If preferred, instead of relying upon the momentum of the body and inertia of the arms swinging rearwardly to throw the arms around on the shoulder-pivots, the latter can be positively swung on the shoulder-pivots in the following manner: I represents flexible threads or cords, which are attached at their lower ends in any suitable manner to the cross-bar connecting the legs or to any other suitable portion of the legs, and pass upwardly through guides or loops  $i$  on the lower portion of the body, thence through suitable guides  $j$  at the side of the body and around the shoulders of the arms, to which they are secured at  $i^2$ . The shoulders are preferably curved concentric with the shoulder-pivots and are grooved peripherally to form retaining-channels to hold the threads on the curved faces of the shoulders. When the figure is

in its upright position with the body inclined forwardly on the hip-pivots, as indicated in Fig. 3, the cords are slack and do not pull on the arms. When the body swings rearwardly, however, the lower portion thereof engages the cords above their connection with the legs and draws the cords, thereby swinging the arms rearwardly on the shoulder-pivots, as indicated in Fig. 4.

The figure may be clothed or otherwise ornamented or decorated to represent a clown, acrobat, or other person or may have any other desired exterior form and appearance. For the sake of clearness no clothing or the like is shown in the drawings.

I claim as my invention—

1. The combination of a body provided at opposite ends with chambers connected by one or more passages, a shiftable weight in said body which passes from one chamber to the other, members pivoted to said body adjacent to said chambers, and alternately serving as supports on which said body turns, and means for limiting the relative swinging movement between said members and the body, substantially as set forth.

2. The combination of a hollow body, a shiftable weight confined in and movable lengthwise of said body, legs pivoted to said body adjacent to one end thereof, arms pivoted to said body adjacent to the opposite end thereof, means for limiting the relative swinging movement between said body and said arms and legs, said arms and legs alternately serving as supports on which said body turns, substantially as set forth.

3. A figure comprising a body provided at opposite ends with chambers connected by one or more restricted passages, mercury confined in said body and movable from one chamber to the other through said passage or passages, arms pivoted to said body adjacent to one of said chambers, stops to limit the swing of said arms, legs pivoted to said body adjacent to the other chamber, stops to limit the swing of said legs, said figure operating automatically to perform a series of handsprings or somersaults down a flight of steps, substantially as set forth.

Witness my hand this 25th day of June, 1903.

CHARLES ALFRED SCADDING.

Witnesses:

CHAS. W. PARKER,

CLAUDIA M. BENTLEY.