(No Model.) 2 Sheets—Sheet 1.

E. L. FOSTER.

DEVICE FOR AMUSING CHILDREN.

No. 602,215. Patented Apr. 12, 1898.

Fig. 1.

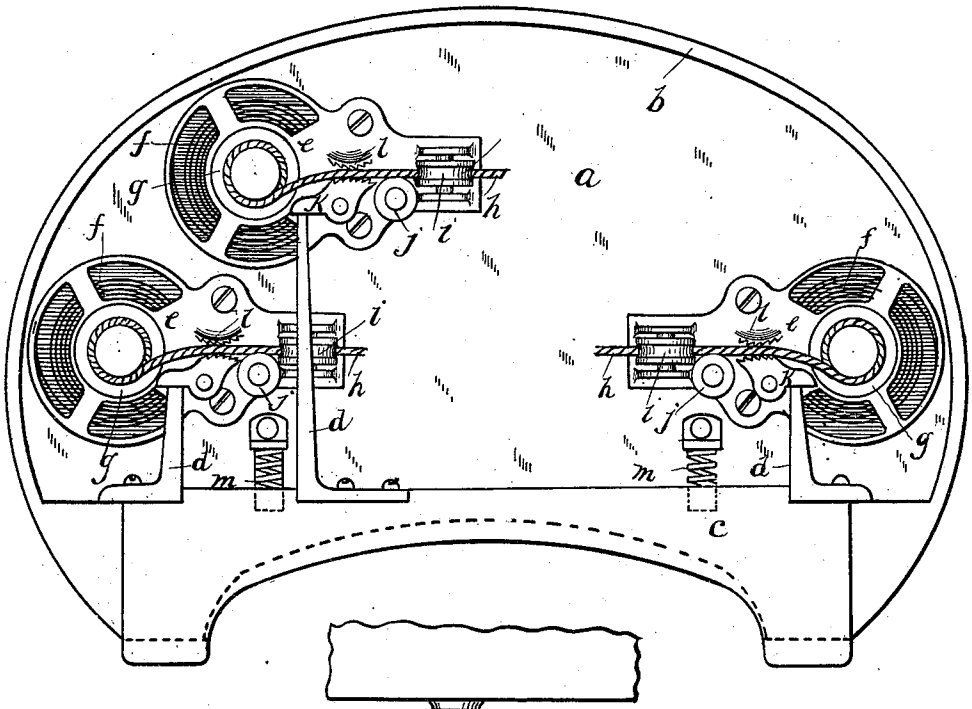


Fig. 2.

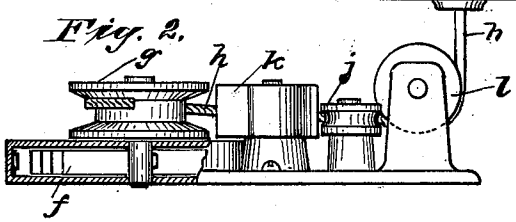


Fig. 3.

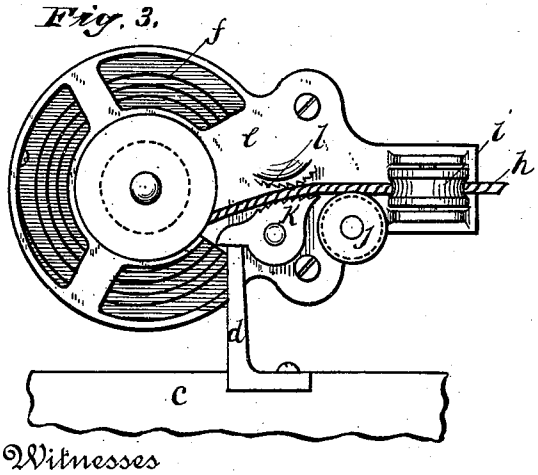
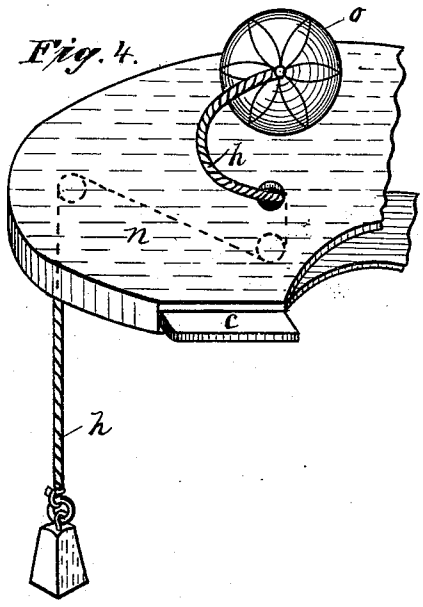


Fig. 4.



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(No Model.)

2 Sheets—Sheet 2.

E. L. FOSTER.

DEVICE FOR AMUSING CHILDREN.

No. 602,215. Patented Apr. 12, 1898.

Fig. 5.

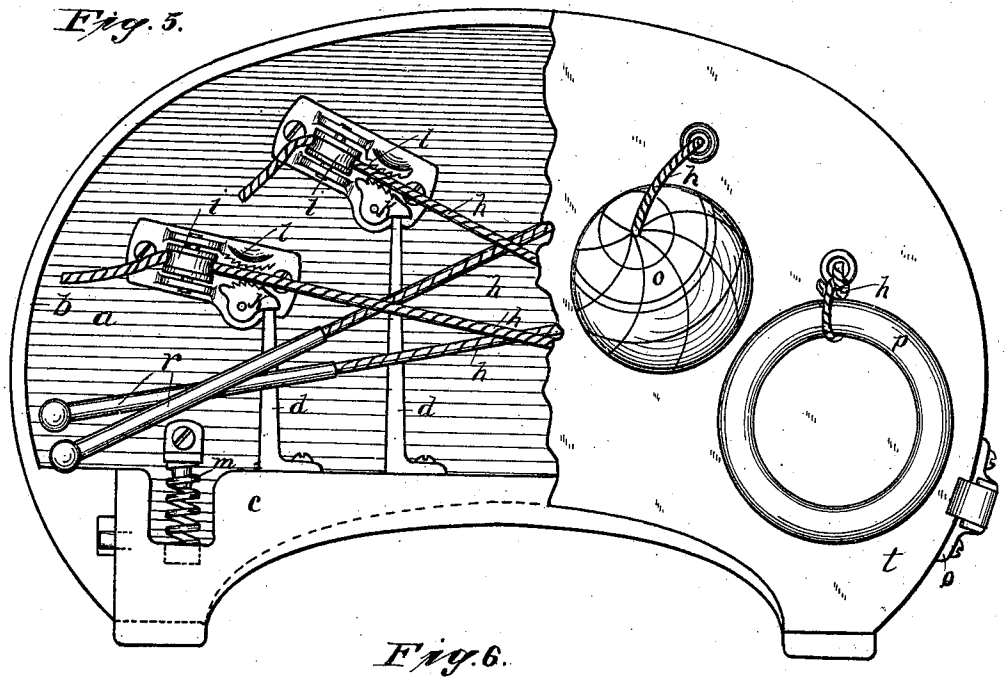


Fig. 6.

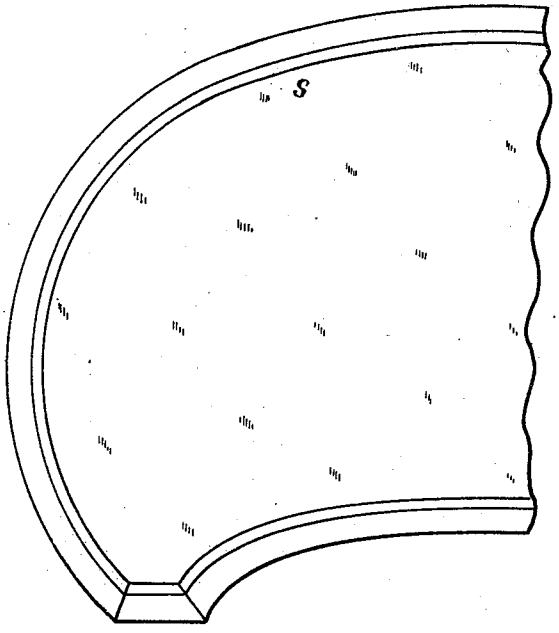
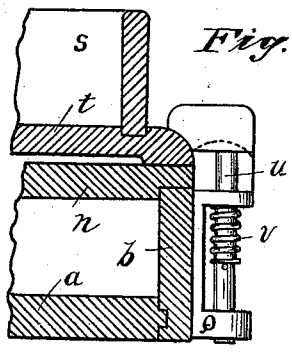


Fig. 7.



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UNITED STATES PATENT OFFICE.

EDWIN L. FOSTER, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO THOMAS E. KING, OF SAME PLACE.

DEVICE FOR AMUSING CHILDREN.

SPECIFICATION forming part of Letters Patent No. 602,215, dated April 12, 1898.

Application filed March 22, 1897. Serial No. 628,657. (No model.)

To all whom it may concern:

Be it known that I, EDWIN L. FOSTER, a citizen of the United States of America, residing in Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Children's Trays and Devices for Amusing Children, of which the following is a specification, reference being had to the accompanying drawings and letters of reference marked thereon.

The objects of my invention are to produce a device, especially designed for small children, which will contain mechanism by which toys may be placed within easy reach of the child and when thrown from the device will under certain conditions be automatically returned, and to produce a device which may be readily attached to a chair or carriage within easy reach of the child, and a device, also, which while serving as a toy-carrier may readily be converted into a tray having an ordinary unbroken surface.

I accomplish the objects of my invention by the construction herein shown; and my invention consists in the construction herein pointed out.

In the accompanying drawings, in which like letters of reference indicate like parts, Figure 1 is a plan view of the toy-tray, the cover being removed. Fig. 2 is a side elevation, on an enlarged scale, of the preferred form of mechanism by which the toy-retaining cord is automatically returned to its normal position. Fig. 3 is a plan view of the same. Fig. 4 is a perspective view of a portion of a tray, illustrating a modification in the construction wherein a weight is substituted for a spring. Fig. 5 is a plan view of a toy-tray with a part of the cover broken away, illustrating a construction wherein elastic cord is employed as a substitute for a spring or weight. Fig. 6 is a plan view of a part of a supplementary tray adapted to be secured to the toy-tray, thus converting the device into a tray having an unbroken surface or bottom; and Fig. 7 is a sectional elevation illustrating the relation of the two trays to each other when the upper tray is placed in position and illustrating the preferred form of latch by which the upper or plain tray is held in position upon the toy-tray, this figure being upon an enlarged scale.

In detail, *a* indicates the base or lower portion of the toy-tray; *b*, a raised border or rail thereon; *c*, a movable releasing device; *d*, a trip-rod; *e*, a casting in which the spring and appliances operating therewith are mounted; *f*, a flat coil-spring; *g*, a spool upon which the cord is mounted; *h*, cord; *i* and *j*, guide-pulleys; *k* and *l*, retaining-latches between which the cord is grasped; *m*, springs adapted to return the movable releasing device *c* to its normal position; *n*, cover or top of the toy-tray; *o* and *p*, toys; *q*, bracket in which the locking-latch is mounted; *r*, elastic cord; *s*, side wall or rail of the upper tray; *t*, bottom of the upper tray; *u*, latch-rod; *v*, latch-spring, and *w* latch.

The construction and operation of my device will be readily understood on reference to the drawings, from which it will be observed that the toy is secured by a cord to a returning device, which may consist of a spring of any desired construction, an elastic cord, or a weight, and intermediate of the returning device and the toy I arrange a stop or retaining device which, while permitting the cord to be drawn outwardly to its whole extent, will automatically operate to grasp the cord and prevent its being returned to its normal position until the stop device is acted upon, thus causing the release of the cord and allowing the returning mechanism to operate and draw the cord inwardly, and thus return the toy to its normal position.

For the purpose of releasing the stop device and allowing the returning device to operate as before stated I provide the toy-tray with a movable plate *c*, it being adapted to be moved inwardly a short distance, and being maintained in its outer or normal position by springs, preferably arranged as shown at *m*, this plate being properly connected in any convenient manner with the stop device, so that upon the plate being forced inwardly the stop device will be tripped and its engagement with the cord released, so that, as before stated, the returning mechanism will be free to operate.

It will be seen that as the natural tendency

of the ordinary child is to grasp the toys before it and to throw them from the tray it will for that purpose seize a toy and draw upon the cord until a considerable length of cord is drawn outwardly, and the child then ordinarily throws the toy from it, and as the toy disappears over the edge of the tray the child leans forward to either see what has become of it or to again obtain possession of the toy, and in the act of leaning forward the body is brought in contact with and pressed against the movable part *c*, which of course projects a short distance beyond the wall of the toy-tray, and this pressure forces the part *c* inwardly, and through the medium of the tripping device, shown in the drawings as a pin *d* extending from the part *c* to the stop device *k*, the stop device is turned or moved and the cord released, which allows the returning device to operate, drawing the cord inwardly and returning the toy to its normal position, thus affording to a child a constant source of amusement and diversion.

A tray may be provided with a single returning device or several such devices may be located in the same tray, and in Fig. 1 I have illustrated three of such returning devices, consisting of a flat coil-spring mounted in a suitable frame and provided with a spool, around which the cord is passed, and I have also shown a pivoted stop-latch *k*, one portion of which is in engagement with the trip-rod *d*. Inward movement of the trip-rod operates to turn the stop-latch *k* on its pivot and throw it out of engagement with the cord *h*. The stop-latch may be provided with a spring to cause it to bear against the cord, or the spring may be omitted and the engaging face of the latch provided with teeth or serrations which will cause it to turn upon its pivot and bind the cord between the latch or abutment *l* and the engaging face of the stop-latch *k*, the latch being preferably shaped so as to bind the cord when it is turned upon its pivot in one direction and to release it when turned in the opposite direction. For the purposes of maintaining the cord in the desired position with reference to the face of the stop-latch I prefer to provide a guide-pulley *j*, and to allow the cord to pass from its horizontal to a vertical direction I provide a guide-pulley *i*.

As a substitute for the spring construction I may use a weight, as shown in Fig. 4, the cord being by preference passed over suitable guide-pulleys, so that the weight will be located in a position where it will not be interfered with by the child's body, and in this event a similar stop device to that before described is arranged within the tray-body, through which stop device the cord passes, and as another modification in the spring construction or returning mechanism I may employ elastic cord or tape, as illustrated in Fig. 5, thus again doing away with the necessity of a coil-spring and spool, and of course it will be obvious that a spiral spring might be substituted for the elastics.

For the purposes of converting the tray into an ordinary tray having an unbroken surface or bottom I provide the supplementary tray shown in Figs. 6 and 7, its bottom being preferably recessed, so that the same will clear the cords, and when this supplementary tray is placed in position the toy-cords are drawn outwardly a sufficient distance to allow the toys to hang over the edge of the tray, and the raised bottom of the supplementary tray will rest over the cords.

To conveniently secure the supplementary tray in position, I provide a latch construction, (illustrated in Fig. 7,) the latch *w* being shaped to engage the projecting ledge on the supplementary tray and this latch being provided with a stem *u*, mounted in a supporting-bracket *q*, and I prefer to provide the spring *v*, bearing against a pin in the latch-stem and against the lower face of the upper projection of the bracket, so that the tendency of the spring is to draw the latch downwardly and to cause it to bear upon the supplementary tray and thus hold it in fixed position, and the latch is suitably shaped, so as to be conveniently grasped and lifted and turned out of engagement with the supplementary tray, and I prefer to provide the toy-tray with a recess which will permit the latch to rest within it and its upper portion be flush with the top of the toy-tray when the supplementary tray is not in position.

It will readily be observed that, of course, the supplementary tray is not a necessary feature of the device and that various modifications may be made in the detail of the construction of the several parts without departing from the spirit of my invention.

Having therefore described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a tray or support for a ball or the like, a returning device mounted therein, a cord extending from the returning device through an opening in the tray the free end of the cord, or a ball or other article attached thereto, being adapted to rest upon the tray, a stop device in proximity to which the cord passes, said stop automatically checking the return of the cord, when drawn out, to the returning device, and a tripping device, mounted in said tray, having operative connection with said stop device to release the same, substantially as described.

2. The combination of a tray or support for a ball or the like, a cord arranged therein, a returning device to which the cord is attached, a stop device and a tripping device to release the stop, normally extending beyond the edge of the tray, and arranged to be operated by pressure against the edge thereof, substantially as described.

3. The combination of a tray, a movable piece *c* arranged therein, a returning device,

a cord extending from the returning device through the wall of the tray, a stop device arranged between the returning device and the free end of the cord and means extending from the movable piece *c* to the stop device whereby the stop device may be operated allowing the returning device to operate, substantially as shown.

4. The combination of a tray or support for a ball or other toy, a returning device mounted therein, a cord extending therefrom, and passing through an aperture in the tray, a pulley arranged near said aperture to change the direction of said cord from horizontal to vertical, a stop device for automatically holding said cord when drawn out, and a tripping device for releasing said stop device, arranged to be actuated from the edge of the tray, substantially as described.

5. The combination of a suitable support, a movable piece *c* arranged therein, springs arranged to maintain the piece *c* in its normal position, a cord, a returning device therefor, a stop to engage the cord and prevent return movement and a tripping-rod extending from the piece *c* to the stop whereby the cord is released when the piece *c* is operated, substantially as and for the purposes stated.

6. The combination of a toy-tray, a supplementary tray having a recess below its bottom to set over and clear toys or toy-cords resting on the lower tray, latches extending upward from the toy-tray, and having overhanging fingers for grasping the supplementary tray, and springs for pressing said latches down upon said supplementary tray when the latter is in position, substantially as described.

7. The combination of a toy-tray, a supplementary tray having its bottom raised to clear toys on the lower tray, and spring-actuated fingers extending from one of said trays and over the edge of the other tray and holding the two together, substantially as described.

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Witnesses:
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E. C. STICKNEY.