Oct. 23, 1962 A. BLEVINS, JR., ET AL 3,059,273

SNOWBALL FORMING AND EJECTING DEVICE

Filed March 17, 1961

Fig. 1

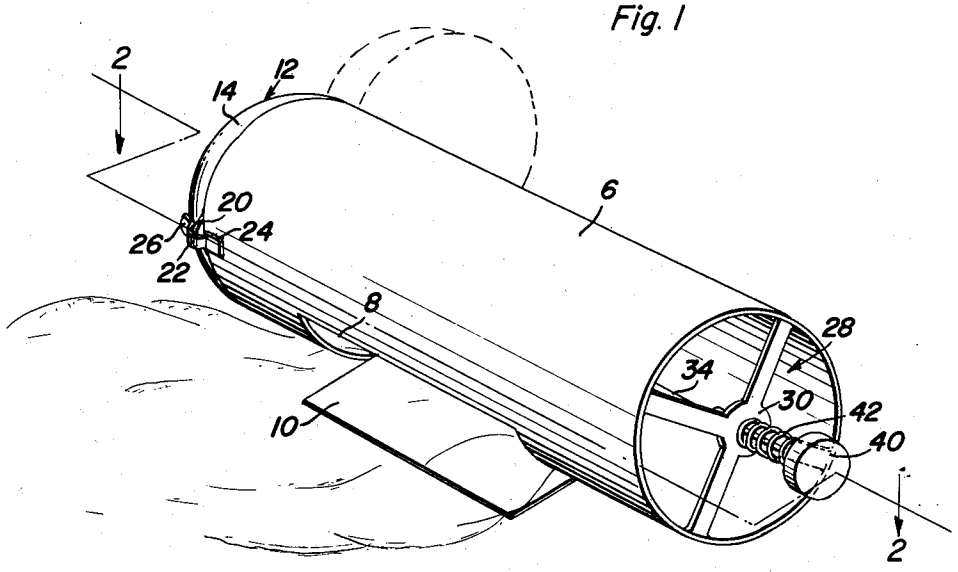


Fig. 2

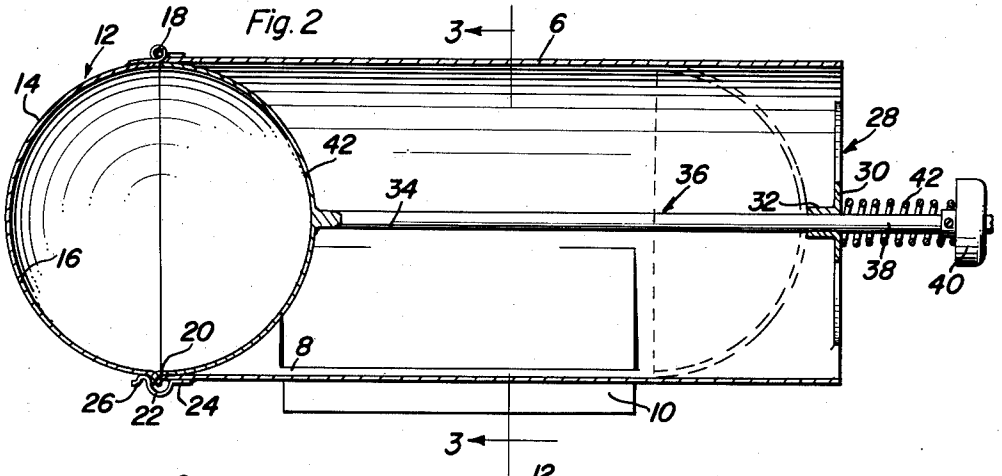
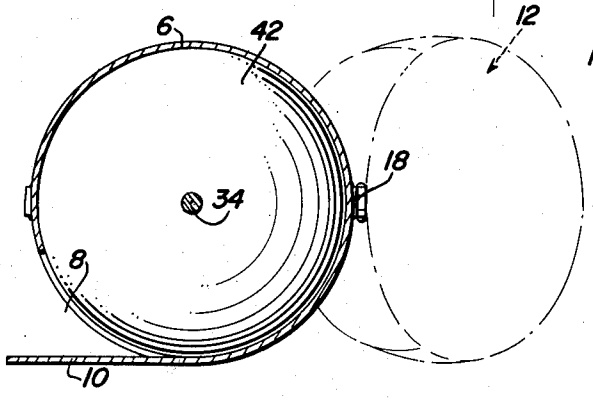


Fig. 3



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United States Patent Office

3,059,273

Patented Oct. 23, 1962

3,059,273

SNOWBALL FORMING AND EJECTING DEVICE

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Filed Mar. 17, 1961, Ser. No. 96,445

5 Claims. (Cl. 18—1)

The present invention relates to an improved manually usable simple mechanical device, a simple practical and expedient toy, which is designed and adapted for the entertainment of children given to fun provoking and snowball throwing activities.

An object of the invention is to provide an easy-to-use toy-like device having a cylinder which may be conveniently grasped in the hand of the user, properly raked across the surface of a pile or batch of snow in a manner to scoop up the snow and trap it in the snow receiving space of said cylinder. To the end that the desired snowball may be formed into desired shape novel means is provided. This means is hereinafter referred to broadly as forming and ejecting means.

More specifically, novelty is predicated on a snow trapping and accumulating cylinder having a lengthwise slot in one side and a tangential outwardly projecting lip or flange whereby to thus provide an easy-to-handle snow scoop.

Another improvement resides in providing the discharge end of the cylinder with a cover or lid. This lid is hingedly mounted and held in closed position by a suitable and accessible catch. More particularly the lid comprises a hemispherical shell or cover whose concave side faces into the receiver space of the cylinder in a manner to mold a one-half portion of the snowball.

This invention also features a novel spring returned plunger comprising a reciprocable rod which is reciprocable axially in the receiver portion of the cylinder and which is provided on its inner end with an ejecting head. More in particular this head takes the form of a hemispherical cup and its concave side faces the concave side of the lid or cover whereby the two component parts provide a satisfactory mold for the snowball.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view in perspective showing a snowball forming and ejecting device constructed in accordance with the principles of the instant invention;

FIGURE 2 is a view on a larger scale with parts in section and elevation taken on the plane of the line 2—2 of FIGURE 1; and

FIGURE 3 is a cross-section on the line 3—3 of FIGURE 2.

The means for scooping up, trapping and accumulating the potential snowball comprises an open-ended cylinder **6**. This cylinder is of a cross-section that it may be caught hold of in the hand of the user and employed as a handle. The cylinder is provided with means whereby it may be loaded with snow. More specifically the means comprises an elongated slot or opening **8** in the median portion between the respective open ends of the cylinder. This slot is formed by striking out the metal or other material from which the cylinder is made. The struck out tongue is bent tangentially or radially as shown in FIGURES 1 and 3 and constitutes a scooping lip or flange **10**. The closing means for the discharge end of the cylinder comprises a lid or cover **12**. This lid comprises a hemispherical shell the convex side of which is denoted at **14** and the concave side at **16**. This shell or lid has

its concave side **16** facing and conformingly aligned with the discharge end of the cylinder through which the finished snowball is ejected. The diameter is such that it provides a satisfactory closure as is evident from the drawing. The lid is hingedly mounted on one side as at **18**. The other side is provided with a lug **20** which constitutes a keeper and with which the bent portion **22** of the catch or latch **24** is cooperable as shown in FIGURES 1 and 2. The catch has a free end portion fashioned into a suitable fingerpiece as at **26** so that it may be readily snapped to an open position to allow the lid to be swung open as shown in phantom lines. Since the concave side of the lid is in proper alignment with the receiver space or portion of the cylinder it will be obvious that as the snow is forced into the lid the latter molds or shapes a one-half portion of the snowball. The other end of the cylinder is provided with a suitable spider **28** having a central hub portion **30** with an inwardly and axially positioned guide **32**. This guide serves to accommodate the rod **34** of the ejecting means. Specifically the ejecting means comprises a plunger **36** embodying the rod with an outer end portion **38** projecting beyond the spider and provided with a knob or hand-grip **40**. The numeral **42** designates a coil spring which surrounds the projecting portion of the rod and bears at the left against the hub **30** and at the right against the knob **40**. The head on the inner end of the plunger rod comprises a hemispherical cup **42**. This cup is of a diameter to slide freely as shown in full and dotted line positions in FIGURE 2 within the confines of the cylinder. The concave side faces the concave side **16** of the aforementioned lid. Thus the two component parts **12** and **42** provide a spherical ball shaping mold.

In operation the cylinder **6** is grasped in the hand and the slotted flanged side is raked across the surface of the snow in such a manner that the lip or flange scoops the snow into the receiver portion of the cylinder, the snow entering the cylinder by way of the slot **8**. Assuming that the lid **12** is latched in its closed position and that the cylinder has been charged with snow and that the plunger is in its retracted position the molding or forming step is undertaken. The user simply presses in on the knob-equipped rod or handle which in turn slides the hemispherical cup **42** within the cylinder from the righthand end toward the opposite lefthand end. This action gathers the snow that has been deposited in the cylinder and compresses it in that area shown in full lines in FIGURE 2. With the ball thus shaped the user simply unlatches the lid and swings it open on its hinge and the snowball is ready for use as is obvious.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows.

1. A snowball forming and finished-ball ejecting device comprising an open-ended cylinder having a side slot intermediate its ends and provided along an edge of said slot with a tangential outstanding snow-scooping flange, a shaping and releasing lid normally closing the discharge end of said cylinder, a catch carried by the cylinder and serving to releasably retain the lid closed, said lid being hemispherical and providing not only a closure but a mold for that portion of the snow which is forced and temporarily trapped therein, and a spring-returned plunger comprising a slidingly mounted rod having an outwardly projecting end with a hand-grip and a portion extending axially into the receiver space of the cylinder and

provided with a hemispherical ball molding cup, said cup being reciprocable in cylinder, the concave sides of the lid and cup facing and registering with each other.

2. A snowball forming and finished-ball ejecting toy comprising an open-ended snow trapping and accumulating cylinder having means for conveniently filling the snow receiving space of the cylinder with a predetermined quantity of loose snow taken from a pile of fresh snow, a hemispherical lid hingedly mounted on the discharge end of said cylinder with its concave side lined up with the discharge end and normally covering and closing said end, means on the cylinder and lid for holding the lid in a closed but easy-to-open position, a spider affixed to the other end of said cylinder having a central guide in axial alignment with the axis of the cylinder, a plunger having a rod slidable in said guide, a hand-gripping knob on the outer end of said rod, a coil spring encircling the rod and bearing against the spider and knob, respectively, and an ejecting head fixed on the inner end of the rod and slidable in the receiving space, said head embodying a hemispherical cup the concave side of which faces the concave side of said lid.

3. For use by a youngster when making a snowball to be thrown by hand; a snowball forming end ejecting implement comprising snow trapping and accumulating means having an openable and closable completed-ball discharge end, and ball shaping and ejecting means carried by said first-named means, said first-named means comprising an open-ended cylinder, said cylinder being provided in one side with a snow intake slot and an aligned cooperating outstanding snow scooping flange commensurate in length with the length of said slot, said cylinder being of a cross-section that it may be conveniently grasped in a hand of the user, whereby to permit the user to catch hold of the cylinder, dip the flanged slot into a batch of snow and scoop it into the receiver portion of the cylinder in a manner to load the latter with the accumulated snow.

4. For use by a youngster when making a snowball to be thrown by hand; a snowball-forming implement comprising an elongated cylinder having an open discharge end, said cylinder being rigid and of a length that it may be conveniently held in one hand of the user, said cylinder being provided in one side with an elongated snow intake slot and being further provided with an integral tangential outstanding snow scooping flange extending along one lengthwise edge of the slot and commensurate in length with the length of the slot, said slot and flange being located intermediate the respective ends of the cylinder, a shaping and releasing lid normally closing the otherwise open end of said cylinder, said lid being hemispherical and providing not only a closure but a mold for that portion of the snow which is forced and temporarily trapped and pressed therein, one marginal edge portion of said lid being hingedly joined to the cooperating end portion of said cylinder, coacting means on the side diametrically opposite said hinge adapted to hold the lid in its intended closed but easy-to-open position, said means being cooperable with exterior adjacent surface portions of the cylinder and lid, the end of the cylinder opposite to said open end being provided with an axial guide, a plunger having a rod slidable in said guide, a portion of the rod projecting axially into said cylinder and being provided with a hemispherical cup, said cup being slidable in the bore of the cylinder and having an edge portion thereof in sliding contact with the encircling wall portions of the cylinder, said cup having a concave side facing and aligned with the concave side of said lid, a portion of said rod projecting outwardly and beyond said guide and terminating in a knob adapted to be operated by hand in a manner to project and retract the plunger relative to the cylinder.

5. The structure defined in claim 4 and wherein said guide comprises a spider affixed to the last-named end portion of the cylinder, said spider having an axial hub and the cooperating portion of the rod being slidable in said hub, and a coil spring encircling the cooperating portion of the rod and interposed between said knob and the hub portion of said spider.

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