HOOP AND SUPPORTING HANDLE AND RELEASABLE STARTER THEREFOR

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ABSTRACT OF THE DISCLOSURE

An innovation for use in launching a slotted hoop characterized by a handle channel-shaped in cross-section, provided at a rearward end with a handgrip and at its forward end with a crosshead to traverse from forward to backward to maneuver the hoop. The handgrip is hollow and provides a chamber which serves as a housing for releasably actuable mechanism embodying a latch finger. The latch finger terminates in a detent. A trigger is pivotally mounted in the handgrip and a spring finger has one end operatively engageable with the trigger.

The present invention relates to trundling toys, generally speaking, and has reference more in particular to a specially constructed hoop and supporting and releasable starting and launching means therefor.

It is old in the art to provide a hoop handling and trundling stick which has appropriate handle means at the upper end adjacent the user, has a runway or track which guides the hoop from an upper starting point to the lower or leading end and to provide the latter end with a right angularly disposed as well as arcuately shaped pushing, handling and braking member.

For background information reference can be made to Entingen’s Hoop Stick, 2,381,581, and Hight et al., 2,976,645.

An object of the present invention is to improve upon prior art adaptations such as, for example, the patents above identified and, in accomplishing the desired result, to provide a trigger operated latch mechanism which functions to maintain the hoop at a given starting point before it is launched and permitted to guidingly roll down the track toward and on the floor, pavement or other surface.

In carrying out the principles of the present invention the handle means or stick comprises a shank which is channel-shaped in transverse cross-section and wherein the shank is preferably longitudinally bowed, particularly at the lower or hoop releasing end. A significant improvement resides in providing the upper grippable end with an appropriately shaped and angled handgrip. The handgrip is novel for the reason that it provides a chamber in which the triggered latch or release mechanism is operatively mounted and spring biased and is accordingly maintained in a releasable state.

A further improvement resides in utilizing the hollow chamber of the handgrip as a sound producing and amplifying device whereby to enable the user to operate the trigger and latch mechanism in a manner to produce an audible intermittent click-clack noise.

The invention features two forms or embodiments of the spring biased latch mechanism one of one-piece construction and the other made up of two component cooperating parts (trigger and tripappable latch). Then, too, novelty is predicated on providing the hoop with a special arrangement of apertures one constituting a keeper slot and to adapt the web of the channel or track to coact in proper oriented relationship with respect to the slot in the hoop.

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 drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view in perspective of a hoop handling and trundling stick or unit and a cooperating hoop which is shown in its latched but releasable position for launching and subsequent roll-along and control purposes.

FIGURE 2 is an enlarged fragmentary view with parts in section and elevation taken on the plane of the line 2—2 of FIG. 1;

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

FIGURE 4 is a fragmentary perspective view of a portion of the hoop and

FIGURE 5 is a view also fragmentarily shown and in section and elevation similar to FIG. 2 but showing a modified latch mechanism.

With reference now to the views singly and collectively it is to be noted that the form of the invention appearing in FIG. 5 is basically the same as that of FIG. 2, the latch mechanism being the only difference. It is also true that the hoop is the same in both embodiments. To simplify this presentation the hoop wherever it appears is denoted by the numeral 8 and it is a regular broad rim endless type, the same being denoted at 10. A predetermined segmental portion of the rim denoted at 12 (FIG. 4) is provided with several apertures. The main central aperture comprises an elongated slot which is here referred to as a keeper slot 14 and which has beveled ends 16. To the left and right of this slot, as shown in FIG. 2, substantially square holes or apertures are provided as at 18 and 20 and these apertures make it possible to use either one or the other as will be hereinafter clarified.

It is also true that the essential components of the hoop handling and trundling stick or unit are the same in construction and for this reason like reference numerals are employed to designate like parts in the views for example, FIGS. 2 and 5. This to the end the overall stick or unit is denoted by the numeral 22 and has a shank portion which is channel-shaped in cross-section and includes a web 24 with marginal outstanding flanges 26 which coact in defining a channel-like hoop guiding and launching track. The lower or forward end portion is accurately curved as suggested generally at 28 and this end portion is open and provided with a tongue 30 which serves to mount the right angularly disposed hoop maneuvering crosshead 32. This head comprises a longitudinally bowed or arcuate strip member 34 which is superimposed on the extension 30 and is riveted or otherwise connected thereto as at 36 and which has terminal end portions 38 and 40 to the left and right of the user, that is, when he is using the stick. The upper portion of the web is provided with a longitudinally elongated slot 42 with which the coacting end portion 44 of a hollow handgrip 46 is connected. This handgrip comprises an elongated cylindrical shell 48 defining a hollow chamber 50 which serves not only to entrap and amplify sound waves for noise-making purposes but also provides a satisfactory enclosure or housing for the hoop holding and releasing mechanism. Since the mechanism in FIG. 2 differs from that shown in FIG. 5, it will be described first.

Before discussing the manually regulatable mechanism 52 it is to be pointed out that the channel-shaped track in the views of the drawing is provided just below the slot 42 with an outstanding positioning lug 54 which is adapted to receive and temporarily key the hoop in its set position, that is, by way of the selectively usable holes 18 and 20. This is to say in both FIGS. 4 and 5, when one desires to bring the hoop into a starting position ready
for the launch either one of the two holes 18 and 20 can be lined up with the lug 54 and when this is accomplished as shown in the drawings the keeper slot 14 in the hoop is registered with the latch accommodating slot 42.

The mechanism 52 appearing in FIGS. 1 to 3 comprises a shaft 56 mounted between the side walls of the handgrip and serving to support a hub 58. The hub is provided on one side to the left in FIGS. 2 and 3 with an integral holding and releasing latch, sometimes described as a finger and denoted at 60 and which extends through the slots 42 and 14 and has a detent 62 on its free end which is engageable with the beveled coating end of the keeper slot 14 when the hoop is in its set or starting position. The sector-shaped trigger 64 is connected to a diametrically opposite side of the hub and is operable through a slot 66 provided in the bottom of the hollow handle, said trigger having a flanged lower edge 68 which provides a satisfactory fingerpiece. The upper corner portion of the trigger is provided with a stud 70 which is cooperable with an aligned end portion of a suitably anchored leaf spring 72. FIG. 2 shows how the flat springs 72 (in full lines) normally urges the trigger to its outward ready-to-use position. This figure also shows (in dotted lines) how when one depresses the trigger through the slot 66 the unit 52 comes into play to pivot the latch and to release the detent 62 from the keeper slot so that the temporarily hitched hoop is released and allowed to gravitate down the trackway onto a pavement or other roll-over surface.

In practice it is necessary to line up either one of the holes 18 and 20 with the piloting lug 54 as shown in FIGS. 1 and 2 in particular. When this is done the two slots 14 and 42 are then in registry so that the end portion of the latch finger projects through and beyond both of the slots permitting the detent 62 to be releasably engaged with a coating end portion of said latch projecting through and beyond said latch accommodating slot and keeper slot.

Referring now to the variation in the latch mechanism shown in FIG. 5 the mechanism is here denoted generally by the numeral 52A and is much like that already described except that independent parts are used. This is to say that the trigger 74 is sector-shaped in side elevation and has a portion projecting into a hollow portion of said handgrip, and is operable through the slot 66 with the enclosed portion provided with a lateral lug 78 engaging the spring 72. The lefthand end portion of the trigger is provided with a hub 80 operable on a fixed pivoting shaft 82 mounted in the chamber. This is an extended shank portion beyond the hub which is provided with lateral pin means 84 operable between the fingers of the fork means 86 at one end of the releasable latch 88. The latch in this case is pivoted between its ends as at 90 and the lefthand end portion as shown in FIG. 5 is fashioned into a suitable hook or detent 90 which is releasably engageable with a selected end of the keeper slot 14 in the hoop.

Generically it will be understood that the latch finger is registrable with any part of the track and hoop, that is the slots 42 and 14, detent means being provided to obtain the desired spring held latching association between the hoop and track. It follows that one can readily position the hoop in its starting place as shown in the views of the drawing. It may be necessary to trigger the latch to the desired position to permit the parts to be oriented for the starting step. Once, however, the parts are ready to go with will be evident that the trigger is depressed against the tension of the spring and the hoop is released and allowed to gravitate along the track for launching.

It is submitted that a careful consideration of the specification in conjunction with the views of the drawings will enable the reader to obtain a clear and comprehensive understanding of the subject matter of the invention, the features and advantages and the manner of appropriating and using the same. Accordingly, a more extended description is thought to be unnecessary.

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. In combination, a hoop handling and trundling stick embodying an elongated shank channel-shaped in cross section and embodying a web portion having opposed lengthwise marginal flanges and defining and providing a hoop holding, launching and guiding track, said shank having an upper end provided with a cooperatively aligned handgrip having a lower end provided with an arcuate crosshead fixed at right angles to the lengthwise dimension of said shank and constituting a hoop guiding and maneuvering member, a manually tripplable handgrip operatively mounted on the said trigger, said trigger being carried by said handgrip and operatively connected with said latch, and a hoop positioned for temporary retention in an initial starting position at the upper end of the track adjacent said handgrip, said hoop having a keeper slot, and said latch having an end portion oriented with an end passing through said slot and terminating in a detent releasably engageable with an edge portion of said slot.

2. The combination set forth in claim 1, and wherein the upper portion of said web is provided with a latch accommodating slot aligned with said keeper slot, and a coating end portion of said latch projecting through and beyond said latch accommodating slot and keeper slot.

3. The combination set forth in claim 1, and wherein the upper portion of said web is provided with a latch accommodating slot aligned with said keeper slot, and a coating end portion of said latch projecting through and beyond said latch accommodating slot and keeper slot.

4. The combination set forth in claim 1, and wherein the upper portion of said web is provided with a latch accommodating slot aligned with said keeper slot, and a coating end portion of said latch projecting through and beyond said latch accommodating slot and keeper slot.

5. The structure according to claim 2 and wherein said web portion is provided with an integral outstanding hoop locating and position orienting lug, the rim of said hoop having, in addition to said slot, longitudinally spaced holes, said holes being adapted to be releasably connected with said lug to expedite the step of lining up said slots.

6. The structure defined in claim 1 and wherein said trigger and latch are independent but have simultaneously cooperating parts joined with a hub, means in said handgrip on which said hub is mounted for oscillation, said latch having a terminal end portion provided with a detent for co-operation with the keeper slot in said hoop.

7. The structure defined in claim 6 and wherein said trigger is sector shaped in side elevation and has a portion projecting into a hollow portion of said handgrip,
and a leaf spring having one end anchored in said hand grip and the free end portion operatively engageable with a coaxing marginal portion of said trigger.

8. The combination according to claim 1 and wherein said trigger is sector-shaped in side elevation and pivotally mounted in a hollow portion of the handle and is spring-biased to assume a normally projected ready-to-function position, and wherein said latch is an independent element pivotally mounted in the hollow portion of said hand grip and provided on one end with a detent and provided at its opposite end with fork means, and an adjacent portion of said trigger having a component operatively connectible with said fork means.

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