Aug. 12, 1958 H. F. SCHMIEGE 2,846,812

COMBINATION HOOP AND BALANCE STICK

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Fig-3

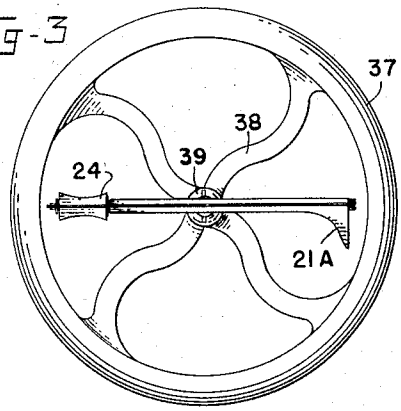


Fig-2

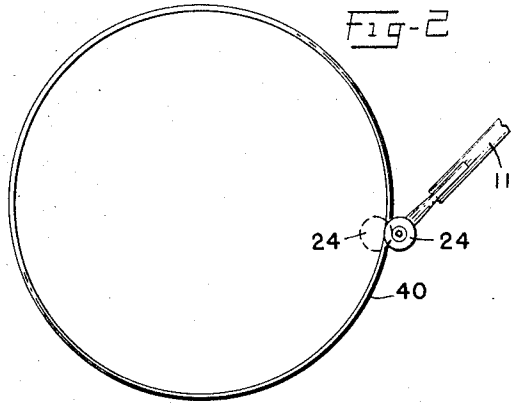


Fig-1

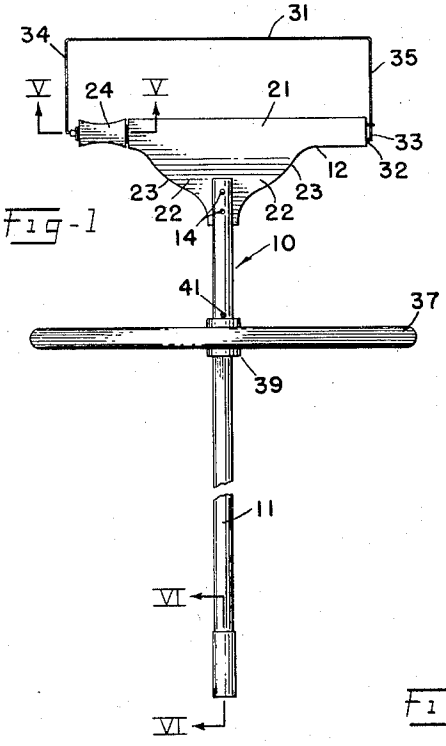


Fig-4

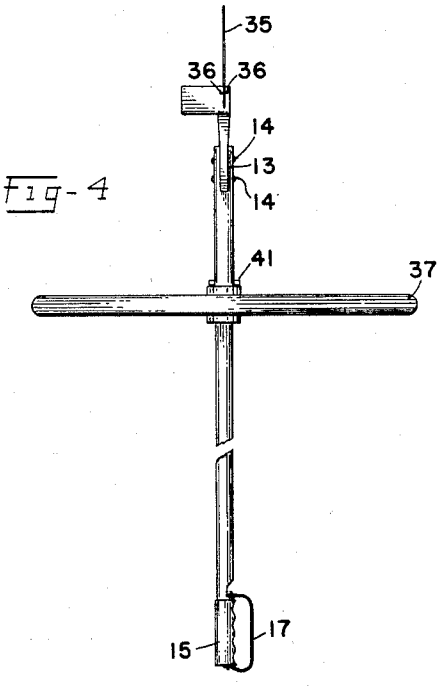


Fig-5

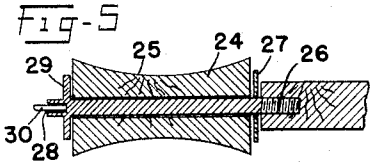
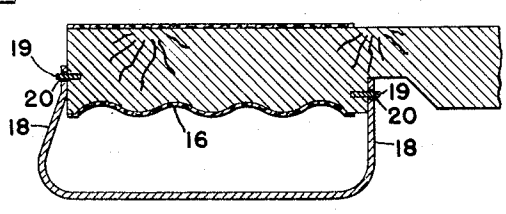


Fig-6



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COMBINATION HOOP AND BALANCE STICK

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3 Claims. (Cl. 46—220)

This invention relates to toys, and more particularly it relates to a child's toy called a "balance stick."

A primary object of the invention is to induce the user to employ originality and imagination in using the balance stick; to induce him to become interested and hence use mental and visual concentration, to balance and to alter pushing or pulling a hoop or wheel as he goes along. This is accomplished by use of a versatile face section on the balance stick, and other novel arrangements in connection therewith, which are used to either push or pull the hoop or wheel.

The invention takes advantage of a child's natural curiosity in the art of balancing and enables him to propel and steer a round object in many directions.

The user's interest in the balance stick is further maintained because of its adaptability to enable spinning of the wheel thereon, and to turn the wheel thereon by moving the stick in a circle about the user.

The foregoing explanation will be sufficient to indicate the usefulness of my invention in the field of amusement to which it is especially adapted.

With the foregoing and certain other objects in view, which will appear later in the specification, the invention is found in the novel construction, arrangement and combination of means illustrated in the accompanying drawing, and particularly pointed out in the appended claims, it being understood, however, that the claims are not intended to be limited to the form of the parts illustrated and described further than a limitation to the described form as is necessary to distinguish it from the prior art.

In the drawing:

Figure 1 is a side elevational view of the balance stick showing a wheel thereon;

Figure 2 is a view of a hoop and shows the face portion of the balance stick in engagement therewith;

Figure 3 is an end view of the balance stick and wheel shown in Figure 1;

Figure 4 is an end view of the balance stick and wheel shown in Figure 1;

Figure 5 is a sectional view of the roller and is taken on line V—V of Figure 1;

Figure 6 is a side sectional view of the handle and guard taken on line VI—VI of Figure 1.

Referring now to the drawing, the numeral **10** generally denotes the "balance stick." Said balance stick comprises a shaft **11**, and a face portion plate **12** which is in secured engagement with one end of the shaft. The face portion plate is adapted to fit a groove **13** at one end of the shaft and is secured thereto by the rivets **14**. A handle **15** is fastened about the opposite end of the shaft and includes a finger grip **16** for holding the balance stick. A detachable guard **17** is fastened to the handle and may be removed from the handle by springing either of the ends **18** from the pins **19** on the handle. Both of the ends **18** have openings **20** thereon for securing the guard to the handle.

The face portion plate **12** comprises a substantially flat upper leading edge **21** as viewed in Figure 1 having a

tapered end **21A** (Figure 3). Oppositely positioned with respect to leading edge **21** are shoulders **22** adjacent one end of the shaft **11** where the face plate **12** attaches to the shaft **11**. The edges **23** of the shoulders are properly curved to enable easy handling of the wheel or hoop.

A roller **24** (Figures 1 and 5) having a concave surface **25** thereon, is fastened to one side of the leading edge and is designed to be mounted on the bolt **26**. The bolt **26** is in threaded engagement with the face portion **12**. A washer **27** separates the roller from the leading edge and a recess **28** is formed in the head **29** of the bolt to enable seating therein of one end **30** of a rigid wire **31**. The other side edge of the face portion **12**, opposite the roller has a like recess **32** therein for seating another end **33** of the rigid wire. The rigid wire further comprises the sides **34** and **35** and is adapted for rigid positioning on the face of the balance stick by positioning the side **35** between the pins **36** (Figure 4) adjacent the tapered end portion **21A**.

The rigid wire may be removed from the face portion in a like manner as the detachable guard, or by springing one end **30** from the appropriate recess **28**.

The wheel **37** comprises the spokes **38** which support a sleeve **39** in the center portion thereof. The hoop is designated by the reference character **40**.

Referring now to Figures 1 and 4, it may be seen that by holding the handle **15** and inverting the structure indicated therein, it is possible to spin the wheel about the shaft **11**. The wheel is maintained an appropriate distance from the face portion by the pin **41** in the shaft, and irrespective how the wheel is made to revolve, as by spinning same on the shaft, or by turning the shaft in a circle about the user, the sleeve of the wheel rides smoothly over the side surface of the pin **41**.

The balance stick may be used either with or without the rigid wire, but for purposes of illustration let it first be assumed that the rigid wire has been removed from the face portion.

Inasmuch as a variety of uses may be put to the toy only a few will be mentioned herein. It will become apparent that numerous others exist but the finding of some may be left to the imagination of the user. Assuming further the structure of Figures 1 and 4, the rigid wire having been removed, the user has only to snap-off the guard and remove the wheel from the shaft. He can then either roll the wheel or start it from a stationary position, and by use of either the roller **24**, the leading edge **21**, or the tapered end **21A** can alter the direction of travel of the wheel **37**. He can likewise pull the wheel by using the roller since the roller **25** rotates on its contact with the wheel **37** and the component of pulling or pushing force is transmitted to the wheel **37** without tendency of the roller **25** to climb the wheel **37** in the direction of rotation, and regardless of how this particular operation is maintained, he can continue to enjoy the sensation of balancing the wheel. When the rigid wire is left in position it can be used as a brake against the wheel **37** or hoop **40**.

Likewise, when using the hoop **40** the user may either push or pull said hoop, for as indicated in Figure 2 the roller may be placed on either the inner or outer surfaces of the hoop. The hoop can likewise be pushed by either the leading edge or the tapered end.

If the user desires to have greater control over the hoop he may place the rigid wire inside the hoop and snap the wire into position on the face portion. The rigid wire will then act as a brake on the hoop and can likewise be further used to control the direction of travel of the hoop. Inasmuch as the rigid wire essentially comprises a further leading edge for the balance stick, the user may choose to manipulate the wheel or the hoop by using

said rigid wire and not attempting control with the tapered end or the roller.

It may further be seen that by placing the rigid wire in the sleeve 39 of the wheel and snapping said rigid wire onto the face portion, another interesting possibility is created. In such a case the portion **34** or **35** of the rigid wire 31 serves as an axle for the wheel **37**.

The invention has been substantially created of light materials, such as wood and plastics, and because of such materials a child is able to enjoy the invention without tiring. The art of controlling the balance stick is interesting sport and a child will quickly learn to manipulate the wheel or hoop and will train the eye and hand while amusing himself.

Having fully described my invention what I desire to secure by Letters Patent is:

1. In a hoop and balance stick structure, the combination comprising: a shaft having a handle grip at one end thereof; a stop pin substantially midway of said shaft; a guard member detachably secured over the grip portion of said shaft; a face portion plate transversely attached at the end of said shaft opposite said grip, said face portion plate defining a tapered end and an upper leading edge; a roller attached to said face portion plate and comprising a rotatable extension from the leading edge thereof; a rigid bail-like wire detachably engageable with the ends of said face portion plate and secured against rotation; and a wheel slidably removable and rotatably secured to said shaft and positioned on said shaft by said stop pin.

2. In a balance stick structure, the combination comprising: a shaft; a handle and detachable guard secured to one end of said shaft; a face portion plate transversely

secured to the end of said shaft opposite said handle; a leading edge defining the upper portion of said face portion plate; a tapered extension of said leading edge at one end; a roller secured to rotate and extending outwardly from the end of said face portion plate opposite said tapered extension; and a bail-like wire extending from said face portion plate and said roller and detachably secured thereto against rotation.

3. In a balance stick structure with wheel retaining means, the combination including: a shaft provided with a handle with finger grips at one end and defining a groove at the other end thereof; a stop pin transversely through said shaft; a detachably secured guard member bridging said handle on said shaft; a face portion plate transversely positioned in the groove of said shaft and defining a leading edge on its upper face; a tapered extension of said leading edge of said face portion plate at one end thereof; a bolt extending from the edge of said face portion plate opposite the end provided with said tapered extension; a concave faced roller rotatable on said bolt; a wire having substantial rigidity detachably secured on the axis of said bolt and extending bail-like over and outwardly paralleling said face portion plate and secured against rotation to the other end of said face portion plate; and a wheel accommodated by said shaft and secured on said shaft between said stop pin and said detachable handle guard.

References Cited in the file of this patent

UNITED STATES PATENTS

1,499,216	Hart	June 24, 1924
2,381,581	Entringer	Aug. 7, 1945
2,562,522	Boyd	July 31, 1951