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HOOP IMPELLER

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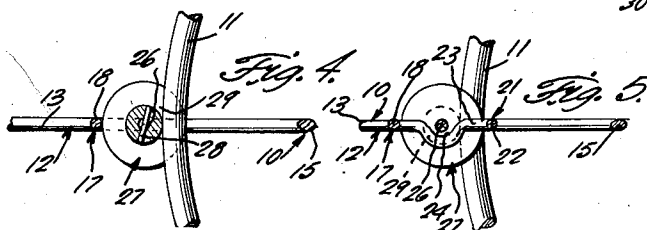
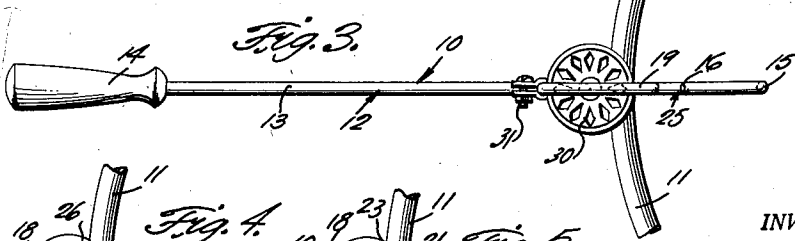
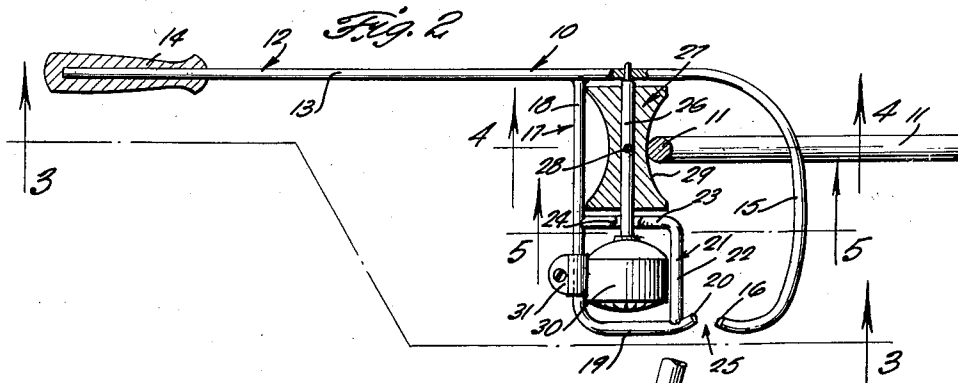
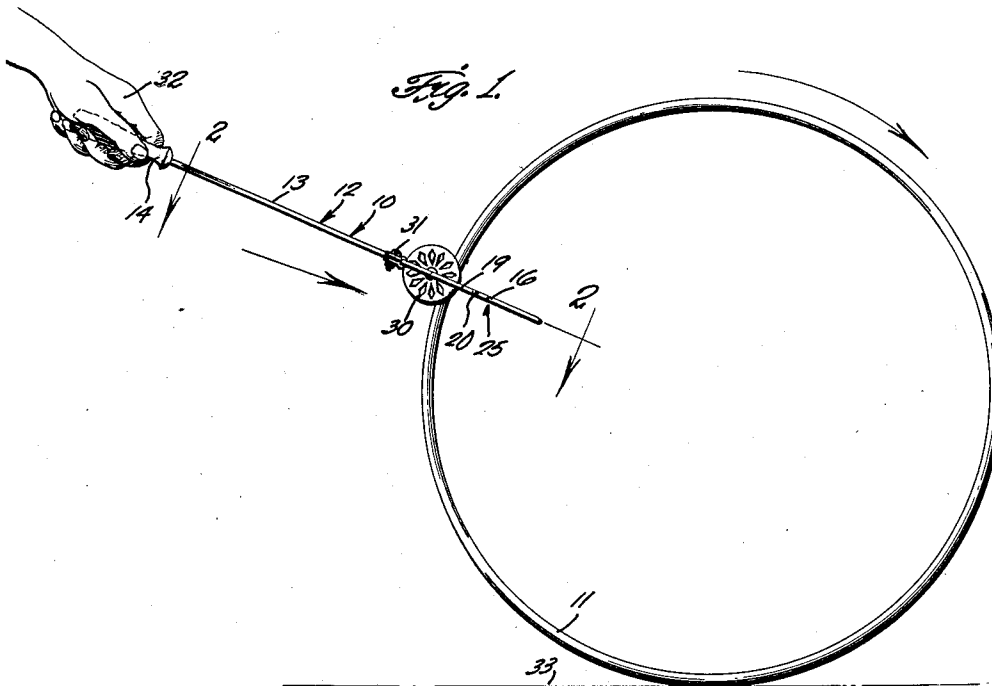


Fig. 5.

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HOOP IMPELLER

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1 Claim. (Cl. 46-114)

The present invention relates to a hoop trundle or impeller.

An object of the present invention is to provide a hoop impeller which is adapted to be used by children or the like whereby a hoop can be readily and conveniently trundled or impelled along a sidewalk or the like so as to provide amusement and recreation to the user.

Another object is to provide a device of the character described which is adapted to be used as an exercising device by youngsters or children and wherein the hoop impeller of the present invention will serve to reawaken interest in hoops and help contribute to the health and welfare of using the same.

Another object is to provide a device of the character described that may be utilized speedily and with precision by even inexperienced users, and still another object of the invention is to provide such a hoop impeller that is economical to manufacture and efficient in operation and which is rugged in structure and foolproof in use.

Further objects and advantages are to provide improved elements and arrangements thereof in a device of the character described that is economical to produce, durable in form, and conducive to the most economical use of materials and uniformity of members formed therefrom.

Still further objects and advantages of the invention will become apparent in the subsequent description in the specification.

In the drawings:

FIGURE 1 is a side elevational view illustrating the hoop impeller of the present invention being used for impelling or trundling a hoop.

FIGURE 2 is an enlarged sectional view taken generally on the line 2-2 of FIGURE 1.

FIGURE 3 is a sectional view taken on the line 3-3 of FIGURE 2.

FIGURE 4 is a sectional view taken on the line 4-4 of FIGURE 2.

FIGURE 5 is a sectional view taken on the line 5-5 of FIGURE 2.

Referring in detail to the drawings, the numeral 10 indicates the hoop impeller or trundle of the present invention which is adapted to be used for impelling or trundling a hoop such as the hoop 11, and the hoop impeller 10 of the present invention is shown to comprise a main stem that is indicated generally by the numeral 12, and the main stem 12 embodies a straight portion 13 which has a handle 14 on one end thereof, and there is provided on the other end of the straight portion 13 a transversely disposed extension 15 which terminates in an arcuate inwardly offset hook or end portion 16, FIGURE 2.

There is further provided a bar which is indicated generally by the numeral 17, and the bar 17 includes a straight section 18 which is secured to or formed integral with the straight portion 13, and the section 18 is arranged at right angles with respect to the portion 13. The bar 17 further includes a projection 19 which is arranged substantially at right angles with respect to the straight section 18, and the projection 19 terminates in an inwardly offset end portion or hook portion 20, and as shown in FIGURE 2 the inwardly offset portions 16 and 20 are spaced from each other so as to define or provide a throat or space 25 which permits a portion of the hoop 11 to

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pass therethrough, as for example when the hoop is being inserted or removed from the hoop impeller 10 of the present invention.

The numeral 21 indicates a support member that includes a first portion 22 which is arranged substantially at right angles with respect to the projection 19, and the portion 22 is secured to or formed integral with the projection 19. The support member 21 further includes a second portion 23 which is arranged at right angles to the first portion 22, and the second portion 23 is secured to or formed integral with the section 18 of the bar 17. The portion 23 is provided with an offset shoulder 24, FIGURE 5.

The numeral 26 indicates a shaft or rod which extends through the shoulder 24, and a roller 27 is mounted on the shaft 26, and the roller 27 is adapted to be fixedly secured to the shaft 26, as for example by means of a securing element or pin 28. As shown in the drawings the roller 27 is provided with a continuous tapered or flaring groove 29 which is constructed or arranged whereby the roller 27 has a greater diameter at its end portion than it does at its intermediate portion. The roller 27 is interposed between the straight portion 13 of the stem 12 and the straight section 18 of the bar 17 and the second portion 23 of the support member 21, as for example as shown in FIGURE 2.

The numeral 30 indicates an accessory which is operatively connected to the shaft 26, and the accessory 30 may be a siren so that as the roller 27 turns due to frictional engagement with the hoop 11, the shaft 26 will be turned or rotated so as to turn or rotate the siren 30 whereby a sound will be produced which will enhance or increase the pleasure for which the device is used. The siren or accessory 30 is adapted to be arranged in the space defined between the first and second portions 22 and 23 of the support member 21, and the projection 19 and straight section 18, and the siren or accessory 30 is adapted to be connected to the straight section 18, as for example by means of a clamp 31.

In FIGURE 1 the numeral 32 indicates the user's hand which is adapted to grip the handle or hand grip 14 when using the present invention.

From the foregoing, it is apparent that there has been provided a hoop impeller, and in use with the parts arranged as shown in the drawings, it will be seen that the handle 14 is adapted to be gripped in the hand such as the hand 32 shown in FIGURE 1, and with the hoop 11 engaging the grooved portion 29 of the roller 27, it will be seen that the hoop 11 can be impelled or trundled along a surface 33 which may be a sidewalk or the like, and as the hoop 11 rotates or revolves, the roller 27 will revolve since the roller 27 is in frictional engagement with the outer periphery of the hoop 11. Since the roller 27 is affixed as at 28 to the shaft 26, this rotation of the roller 27 will cause corresponding rotation of the shaft 26, and with an accessory such as a siren 30 connected to the shaft 26, it will be seen that as the hoop 11 is impelled or trundled, the siren or other accessory 30 will be actuated to provide a pleasing effect or sound.

The parts can be made of any suitable material and in different shapes or sizes.

While a siren 30 has been illustrated in the drawings, it is to be understood that other accessories are adapted to be used with the hoop impeller of the present invention, and for example other sound producing, spark producing or color producing accessories or mechanisms or any combination of these can be utilized.

While hoops have been used as toys for many years, the usual procedure for rolling a hoop is to hit it with a stick, and recently the use of hoops as toys has fallen off to a considerable extent and it is thought that one of the reasons for the use of hoops diminishing is that in

this day and age of complicated toys and gadgets, the simple hoop and stick do nothing to stimulate the imagination of youth and thus have little to offer in the way of sustaining interest. This is thought to be bad because youngsters do not get the fine exercise of running which playing with the hoop affords, and it is thought that today especially children need more exercise than they are getting, and in the interest of providing this exercise, the toy mechanism of the present invention has been provided for use with hoops which will help reawaken interest in hoops and consequently contribute to the health and welfare of youth.

The hoop impeller is arranged or constructed so that the hoop such as the hoop 11 can be inserted in the hoop impeller and then pushed at a reasonable speed, and the hoop will roll along in an upright position, and this can be achieved by pushing the hoop at a fast walk or a slow trot. Of course, the faster the user runs, the greater the speed of the hoop and naturally the greater the thrill and exultation. Slower speeds can be used as desired or required, and since the hoop impeller of the present invention will have to serve youths of varying efficiencies and capabilities, it has this broad operational efficiency which permits slow or fast speeds.

FIGURE 1 illustrates the hoop impeller being held by the hand 32 and in operational position relative to the hoop 11. The handle 14 is adapted to be suitably attached to the main stem 12 which in turn holds the impeller head assembly. The extension 15 which forms the top of the head is a safety guard which serves to prevent the hoop from running away and it is necessary because the acceleration of the hoop is generally more constant than that of the person impelling it and is apt to get away. In any event if a person could not keep up with the hoop, the safety guard 15 would capture it, and the danger of a loose hoop running into people, traffic or the like will be eliminated or prevented.

The bottom part of the head which is the bar 17 is attached to the main stem 12 and encompasses the roller 27 and the sound or spark or color producing element 30. The end portions 16 and 20 are turned in slightly as shown in FIGURE 2 and they serve the following purpose. They serve as additional safety guards which would throw the hoop back into the operational area if the hoop should bounce off the roller, and these guards will keep or help prevent the hoop from getting away from the user. The space 25 between the end portions 16 and 20 defines an aperture for inserting the hoop, and this aperture is approximately the size of the diameter of the hoop or possibly slightly smaller, and this means that the hoop will have to be snapped into the head which will be additional insurance to the user that the hoop will not run away from him or her through the side opening or aperture.

The roller 27 is adapted to be made of a suitable material such as hard rubber, wood, plastic or the like, and when in operation, the hoop presses against the roller 27 and rotates the roller, and the roller is on a shaft 26 which is adapted to be rotatably connected to one side of the main stem. The mechanism 30 is connected to the shaft

26, and the mechanism 30 may be a toy siren or some other type of sound producing mechanism, spark producing mechanism, or color producing mechanism or a combination of any of these.

It is to be noted that when the roller 27 rotates, the mechanism 30 is actuated because both are on the same shaft so that whenever sound, spark or color effect is desired it will be produced. The roller 27 is adapted to have a deeper groove at its center in order to best retain the hoop and to work most efficiently, and the diameter of the ends of the roller are adapted to be considerably larger than the diameter of the center.

The hoop impeller can be made of any suitable material such as aluminum, wood, tubing, steel, plastic or the like, and the hoop impeller is a safe toy which is particularly constructed or arranged so that it insures maximum safety for children. It is thought that the hoop impeller will not only provide recreation and amusement but will also be beneficial since it will help children to more readily and vigorously exercise than they are likely to undertake.

Although the invention herein described is fully capable of achieving the objects and providing the advantages hereinbefore mentioned, it is to be understood that it is merely illustrative of the presently preferred embodiment of the invention and that the invention is not to be limited to the details of construction herein described other than as defined in the appended claim.

What is claimed is:

A hoop impeller comprising a main stem which includes a straight portion having a handle on one end thereof and a transversely disposed extension on its other end, and said extension terminating in an arcuate hook portion; a bar including a straight section arranged at right angles with respect to said straight portion and affixed thereto, said bar including a projection arranged substantially at right angles with respect to said straight section, a support member including a first portion arranged approximately at right angles with respect to said projection and affixed thereto, and said support member further including a second portion arranged at right angles to said first portion, and said second portion being affixed to the straight section of said bar, there being an offset shoulder in said second portion intermediate the ends thereof, a shaft arranged contiguous to said shoulder, and a roller fixedly mounted on said shaft and said roller being interposed between the straight portion of the stem and the straight section of the bar and the second portion of the support member, said roller having a tapered groove therein intermediate the ends thereof, and the diameter of the roller being greater at its ends than it is at its center, an accessory connected to said shaft and arranged in the space defined between the first and second portions of the support member, and the projection and the straight section of the bar, said accessory being a siren, and a clamp connecting the siren to the straight section of the bar.

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