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3,214,168

CLUB

Original Filed June 1, 1961

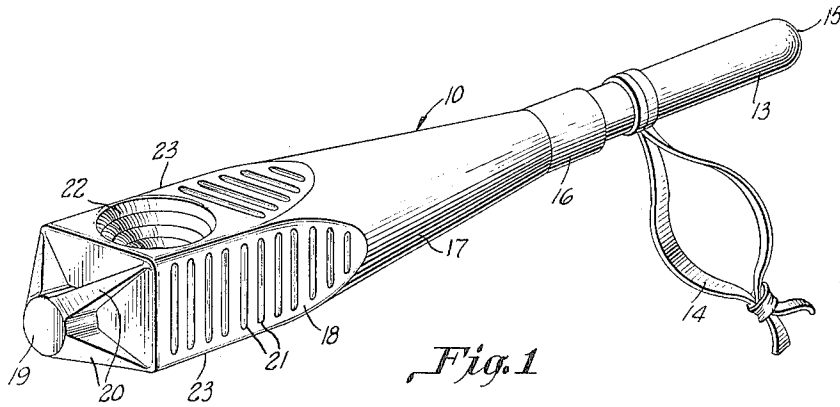


Fig. 1

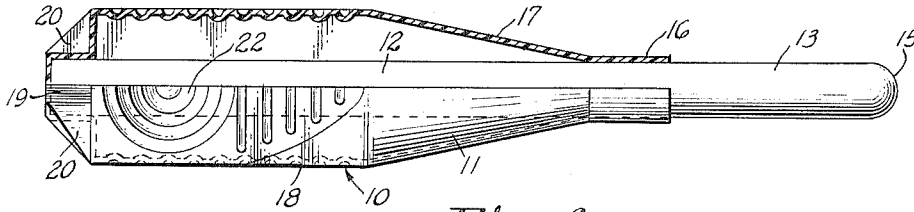


Fig. 2

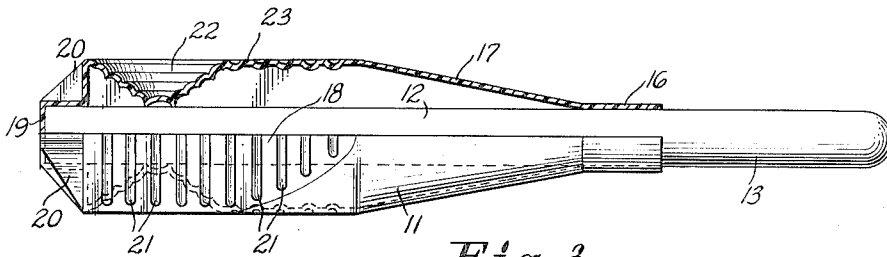


Fig. 3

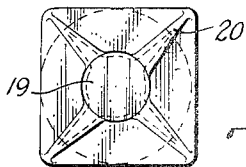


Fig. 4

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Original application June 1, 1961, Ser. No. 114,148, now Patent No. 3,121,945, dated Feb. 25, 1964. Divided and this application June 7, 1963, Ser. No. 289,768  
5 Claims. (Cl. 273-67)

This application is a division of application Ser. No. 114,148 filed June 1, 1961, and now Patent Number 3,121,945.

This invention relates to a club or "shinny" stick for driving a ball, puck or the like, and more particularly to a stick or club which is hollow and somewhat resilient, yet adapted to positively drive an object such as a ball or the like.

It is well known that team-play games utilizing a stick or a club wherein goals are scored by driving a ball or other object past the opponent's goal are vigorous and frequently require protective clothing for the participants, particularly about the legs and shins. The present invention involves an effective club or stick for such team-play games, which, being hollow and resilient, affords quite a safety factor particularly when used in games played by children.

It is accordingly the principal object of this invention to provide a stick or club which is resilient in nature, yet sufficiently rigid to afford driving application to a ball or other object to be struck by the club.

Another object is to provide a club having a handle projecting at one end but extending through the hollow portion of the club to an anchor point at the lower or basal end.

Still another object of the invention is to provide various surfaces of the resilient portions of the club with faces contoured to engage and drive a ball in various attitudes such as in an arc or a straight line, for example.

These and other objects and advantages will become more apparent as the following description proceeds, taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of the stick or club;

FIG. 2 is a side elevation of the club, partly in section;

FIG. 3 is another side elevation rotated ninety degrees from the view illustrated in FIG. 2; and

FIG. 4 is an end view of FIGS. 3 and 4.

Referring now in greater detail to the drawings, the numeral 10 represents a club or stick comprising a hollow lightweight portion 11, through which extends a shaft 12, preferably solid, terminating outside the hollow portion 11 in a hand engaging handle 13. This handle 13 may be further provided with a thong 14 to be slipped over the wrist of the user and a rounded end 15.

The hollow portion 11 may be made of any suitable material, preferably a thermo-plastic material capable of being blown. The upper end of the hollow portion 11 is provided with a sleeve 16 through which the shaft 13 forming the projecting handle extends. Downwardly from this sleeve 16, the hollow portion flares frusto-conically outwardly at 17 and at the base of such frustum is shaped into a length of polygonal cross-section 18, substantially square. The basal end of portion 18 is closed and provided with a central socket 19 braced by four integral ribs 20 joining the outer surfaces of the socket 19 with the closed base of the portion 18. It is within this socket 19 that the other end of the shaft 13 is seated. Suitable fastening means, not shown, secure the shaft into said socket and sleeve 19 and 16 respectively.

The portion 18 of polygonal cross-section provides three or more sides or faces, and in the preferred square cross-section two opposite sides provide faces which are

substantially flat except for a series of ribs 21 transverse to the shaft, provided to drive a ball or object in substantially a straight line normal to the ribbed surface. The other opposite sides or faces of the preferred square sectioned hollow end of the club are provided with angular faces and preferably with ribbed depressions 22, which are provided to give lift or an arced trajectory to a ball or object when struck by that portion of the club. All corners of the club such as 23 are rounded or provided with a radius for further safety.

It will thus be observed that a club or bat is provided that, although sufficiently rigid to drive a ball or other object struck by it, is likewise sufficiently resilient, due to the relatively thin walls of the blown plastic material, to avoid injury to the participant when accidentally (or purposely) struck with the club.

The club illustrated is particularly well adapted to be used with a ball in a game of iceless, or ground hockey where several players constituting teams alternately defend or attack goals established.

A method of producing such a club as described above involves the step of forming a split mold to the desired external shape, inserting a heated tube of thermo-plastic material into the mold, and blowing it to conform to the contours of the mold and to provide an internal basal socket and external reinforcing ribs reinforcing the basal end and socket. After removal from the mold, the piece is closed at its bottom end but open at its top. Thereafter, a shaft is inserted through the sleeve and secured to the socket and/or upper sleeve end, which shaft is sufficiently long to provide an external handle.

Having described a preferred embodiment of my invention and method of producing same, it will be understood that numerous changes will be suggested to those skilled in the art, and all such changes as come within the spirit of this invention are intended to fall within its scope as best defined in the appended claims, wherein there is claimed:

1. A club comprising a hollow lightweight plastic portion having a plurality of sides and closed at one end, at least one of said sides being flat and provided with a ribbed surface and at least another of said sides having an angular surface, means in said closed end forming a socket, a hollow lightweight plastic conical portion extending from the other end of said first mentioned hollow portion and terminating in a sleeve, and a solid shaft extending axially within said hollow portions and spaced from the sides thereof, said shaft being secured in said socket within the said closed end and within said sleeve, said shaft extending outwardly beyond said sleeve providing a handle for said club.

2. A club as claimed in claim 1, in which said side having an angular surface takes the form of a flat side having a fractional spherical depression therein.

3. A club as claimed in claim 2, in which said fractional spherical depression is provided with a series of concentric ribs.

4. A club comprising a hollow lightweight plastic portion having a plurality of sides and closed at one end, a pair of opposite sides being flat and provided with a ribbed surface and another pair of opposite sides having a concentrically ribbed depression therein, means in said closed end forming a socket, ribs reinforcing said socket and extending outwardly from said socket to the base of said plurality of sides, a hollow lightweight plastic conical portion extending from the other end of said first mentioned hollow portion and terminating in a sleeve, and a solid shaft extending axially within said hollow portions and spaced from the sides thereof, said shaft being secured in said socket within the said closed end and within

3

said sleeve, said shaft extending outwardly beyond said sleeve providing a handle for said club.

5. A club comprising a unitary hollow lightweight plastic portion having a plurality of discrete sides and closed at one end, means in said closed end integrally forming a socket, another hollow lightweight plastic portion extending integrally from the other end of said first mentioned hollow portion and terminating in a sleeve having its lateral dimensions substantially equal to that of said socket, a shaft extending axially within said hollow portion and spaced from the sides thereof except within said socket and sleeve where its relationship is close fitting, said shaft being secured at least to one of said socket and sleeve against longitudinal movement, and at least one of said discrete sides presenting a face substantially paral-

4

lel to the longitudinal axis of said shaft, while at least another of said discrete sides presents a face angular to said shaft axis, said shaft extending outwardly beyond said sleeve providing a handle for said club.

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