United States Patent [19]

Lane

[11] **3,921,976**

[45] **Nov. 25, 1975**

[54] **BATTING PRACTICE DEVICE**

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[22] Filed: **Aug. 7, 1974**

[21] Appl. No.: **495,398**

Related U.S. Application Data

[63] Continuation of Ser. No. 358,616, May 9, 1973, abandoned.

[52] **U.S. Cl.** ..... **273/26 R;** 273/84

[51] **Int. Cl.²** **A63B 69/40**

[58] **Field of Search** ..... 273/26 R, 26 B, 26 E, 67 R, 273/84, DIG. 4, DIG. 10, DIG. 29, 82; 43/18 R

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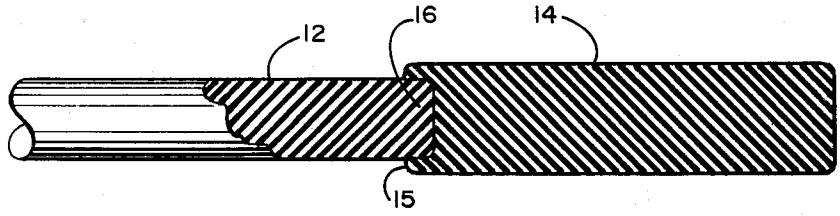
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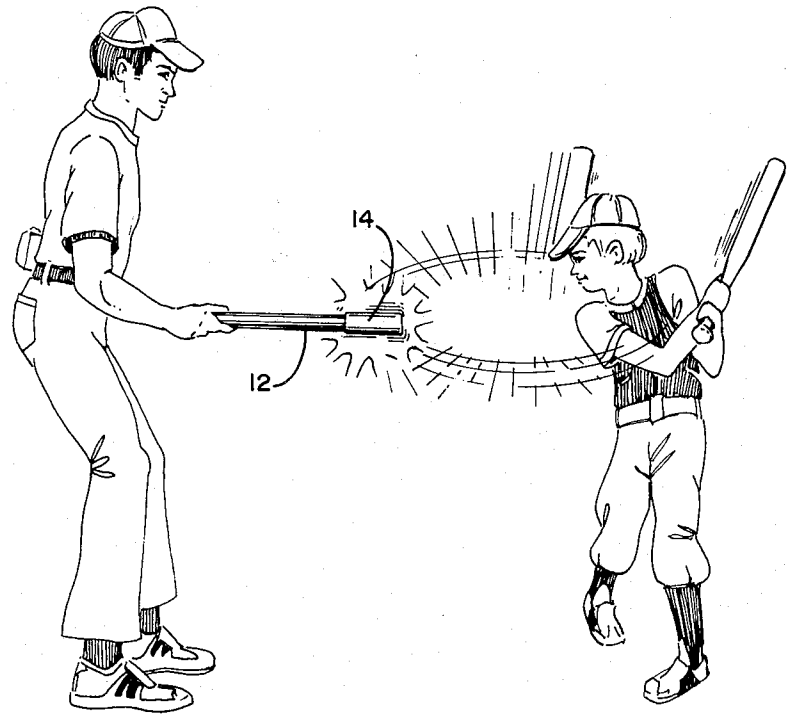
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[57] **ABSTRACT**

A batting aid device comprises an elongated handle and a resilient head member integrally secured to one end of the handle and which head is preferably composed of natural rubber or a synthetic elastomer having a Durometer Shore Hardness between about 55 and about 65. The device is utilized in batting practice or training by holding the handle and directing the head toward the batter while the batter swings the bat to make contact with the resilient head.

7 Claims, 3 Drawing Figures





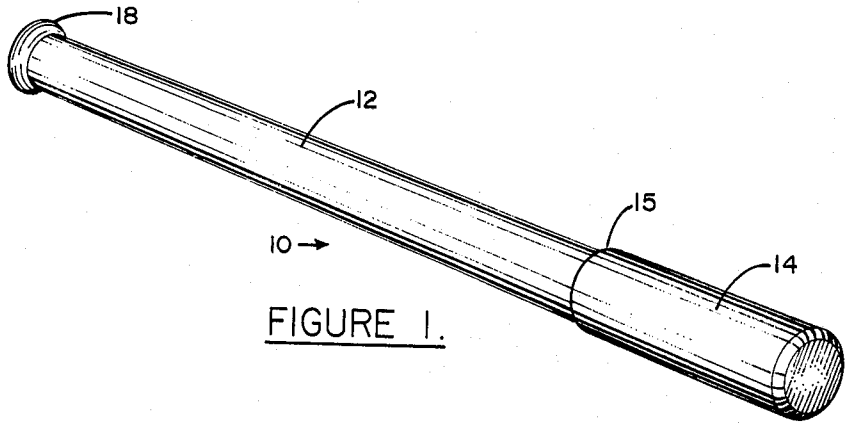


FIGURE 1.

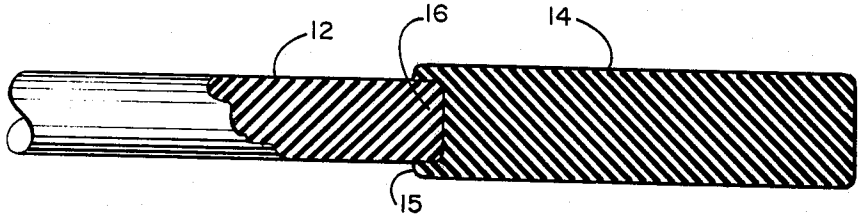


FIGURE 2.

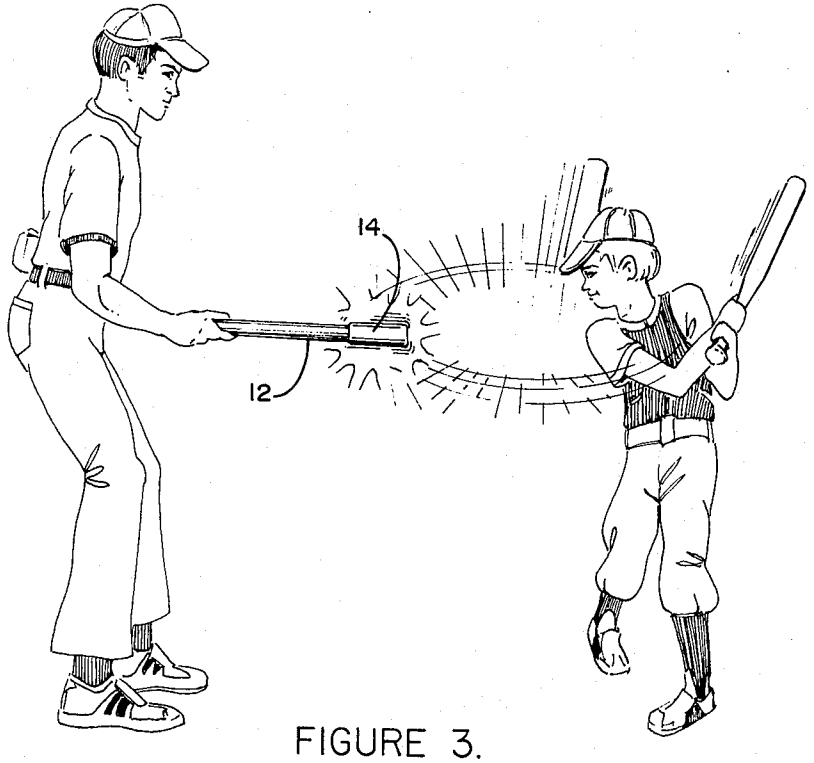


FIGURE 3.

BATTING PRACTICE DEVICE

No. 358,616, filed May 9, 1973 and since abandoned.

BACKGROUND OF THE INVENTION

A number of batting aids have been proposed including automatic pitching devices and the lie. However, few of such devices afford the opportunity for the batting coach or instructor to extensively observe the form and posture of the batter. Such instruction is especially important for young or beginning ball players, and often the balls are pitched rather rapidly so as to interfere somewhat with the instruction. Moreover, such devices are inconvenient to use since they are often not reaily available ore in the proximity of the pracitce session. Further, such devices are rather expensive and thus are simple not practical for home use or daily practice sessions at playgrounds or parks where young ballplayers normally practice.

SUMMARY OF THE INVENTION

The device of the invention is a useful batting practice aid for ballplayers of all ages. However, it is especially adaptable to young or beginning ballplayers whereby a batting coach or even another player can hold the device while a batter practices his swing. The device comprises an elongated handle and a resilient head member which is to be struck by the bat as the batter swings during practice. Because of the resiliency of the head, it gives a feel very much like hitting an actual baseball and yet offers none of the disadvantages of requiring a pitcher as well as a fielder to chase the ball. The specific detail of the construction as well as its use will be more fully explained hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a side elevational view of the batting practice aid of the invention;

FIG. **2** is a partial side sectional elevation illustrating the integral attachement of the head to the handle of the device; and

FIG. **3** illustrates the use of the device in batting practice.

DETAILED DESCRICRITPTION OF THE INVENTION

Referring to FIG. **1,** the batting aid device **10** of the invention includes an elongated handle **12** to which is attached at one end thereof a resilient head member **14.** The opposite end of the handle from the head, preferably terminates in a flange **18** which assists in holding the device and preventing it from slipping out or away from the hands of the person holding it, much like the end of a baseball bat handle.

The handle is preferably cylindrical so that it may be conveniently held, like a baseball bat,, in either or both hands of the user or batting instructor. However, the handle may also be tapered somewhat as desired and may also include outer corrugated surface features or indentations for placing the fingers to assist in better grasping the device if desired. The handle may also be constructed of any material including wood or metal although preferably it comprises a natural rubber or elastomer so that it is somewhat flexible. Material of this latter type is preferred because it will absorb shock when the head is hit with a bat thereby being much safer to use. The material will not crack or break during use and will not cause injuries such as bruising the user's hands when the device is hit with a baseball bat. Further, such a material will be more easily molded in preparing the device and will als be conveniently attached or secured to the resilient head to achieve an integral device as will be more fully explained hereinafter.

Referring also to FIG. **2,** the device includes a resilient head member **14** secured to the end of the handle as shown. The shape of the head is not particularly critical but is preferably elongated and cylindrical and has at least a slightly greater diameter than that of the handle. Thus, the head member will have a shoulder portion **15** at its end adjacent the handle end. The resiliency of the head is critical so as to achieve the desired feel to the batter when struck by the baseball bat during use. For this purpose, the head comprises natural rubber or a synthetic elastomer. Preferred synthetic materials include styrenebutadiene copolymers, polybutadiene, neoprene, butyl rubber, polyisoprene, nitrile rubbers and ethylene-propylene copolymers. Since such resilient elastomers are well known to those skilled in the art and are readily available commercially, they need not be further described herein except by way of their preferred and critical physical properties. In addition to synthetic elastomers set forth, silicone rubber may also be used which is understood to comprise silicone or siloxane structure of sufficient molecular weight to achieve the properties and characteristics of rubber as appreciated by those skilled in the art.

The necessary physical characteristics of the head, composed of a material selected from the above-named elastomers has a resiliency which is conveniently determined using a Durometer hardness test. This test indicates the indentation hardness and is inversely related to the penetration and is dependent on the elastic modulus and viscoelastic properties of the material. Accordingly, the indentation hardness, using a Durometer, type A-2, manufactured by the Shore Instrument and Manufacturing Company, and referred to hereinafter as the Durometer Shore Hardness, is between about 50 and about 70 and preferably between about 55 and about 65 and most preferably about 60±2. The Durometer Shore Hardness defined herein is determined with indentation pressure maintained on the material for **10** seconds. The head member also has a density or specific gravity of between about 1.25 and about 1.35 grams per cubic centimeter. Moreover, the composition of the head comprises solid natural rubber or elastomer so that it is substantially homogeneous throughout.

Although, as previously mentioned, the handle may comprise any suitable material, it is preferably of the type used in the head with the advantages as previously noted. However, the handle resiliency as determined by Durometer Shore Hardness is not critical as it is in the head. A preferred device is molded from the described materials with the head having a cavity for receiving the end of the handle. Thus, if the handle is made of a different material or of a same or similar elastomer but separtely molded the two components can be joined while the material is soft at elevated temperature and under pressure so that they will form a substantially unitary device. The common or adjacent surfaces between the handle and the head cavity may also be sealed together with glue or other coupling agent so that they are substantially permanently joined and will not be pulled or forced apart even during extensive use.

Such techniques are well known to those skilled in the art and it will be appreciated that any method of joining the handle to the head may be utilized so long as the components are secured. It will also be understood that the device can be molded from a single material so that the step of joining the two components during manufacturing is not necessary. However, the preferred device is illustrated in FIG. **2** with the end **16** and handle **12** being inserted into the cavity at the base of head **14** adjacent shoulder **15.**

By way of example, a suitable device is one wherein the head member is between about 4 and about 6 inches long and has a diameter of between about 1½ and 2 inches with the handle being approximately 15–20 inches long although it may be longer or shorter as desired, having a diameter of between about 1 and about 1½ inches. In a preferred device, a handle comprising an elastomer as previously set forth may have a Durometer Shore Hardness of between about 70 and about 90 and preferably between about 80 and 90. With a density of both handle and head of between about 1.25 and about 1.35, such a device is lightweight and conveniently handled by a young ballpayer and yet is strong enough to withstand impact by even a strong batter without causing injury to the person holding the batting aid.

The use of the device is illustrated in FIG. **3** with a coach or other person holding the device by handle **12** so that the head is directed toward the batter as shown. The person holding the device should of course be standing back far enough to avoid getting hit with the swinging bat. The batter then observes the position of the head and swings at it as if it were a ball. With the device having eh properties as described hereinabove, upon impact of the bat with the head, it will give the feel of hitting an actual baseball with the bat being similarly deflected upon impact. At the same time, the coach or person holding the device can observe the batter's swing and make on the spot corrections and give advice. Accordingly, it will be evident that the device of the invention provides a very effective means for instructing ballplayers, and especially youth, is convenient to use and handle, and thus offers significant advantages for such instruction.

I claim:

1. A batting aid device for being hit by a baseball bat for batting practice comprising an elongated handle for being manually held and a resilient head member for being hit by a batting implement, both said handle and head member being solid and formed of an elastomeric material, said head member having a Durometer Shore Hardness of between 50 and 70 and said handle member having a Durometer Shore Hardness of between 70 and 90 and wherein the hardness of said handle is greater than the hardness of said head member.

2. The device of claim **1** wherein said handle is cylindrical and said head is elongated and extends outwardly from said handle along the axis thereof.

3. The device of claim **2** wherein said head member has a cavity formed in one end thereof and wherein one end of said handle is received and secured in said cavity.

4. The device of claim **1** wherein said head and hanel are a synthetic rubber polymer selected from the group consisting of styrene-butadiene, polybutadiene, neoprene, butyl, polyisoprene, nitrile, ethylene-propylene and silicone rubber.

5. The device of claim **4** wherein said head has a density f between about 1.25 and about 1.35 grams/per cubic centimeter.

6. The device of claim **4** wherein said head has a Durometer Shore Hardness of between 55 and 65.

7. The device of claim **6** wherein said handle has a Durometer Shore Hardness of between 80 and 90.

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