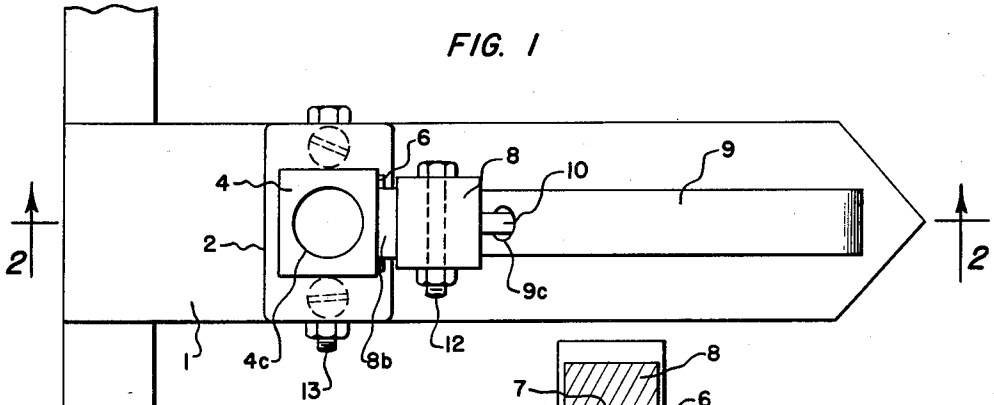
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DEVICE FOR VERTICAL PROJECTION OF BALLS FOR BATTERS

Filed July 9, 1951

FIG. 1



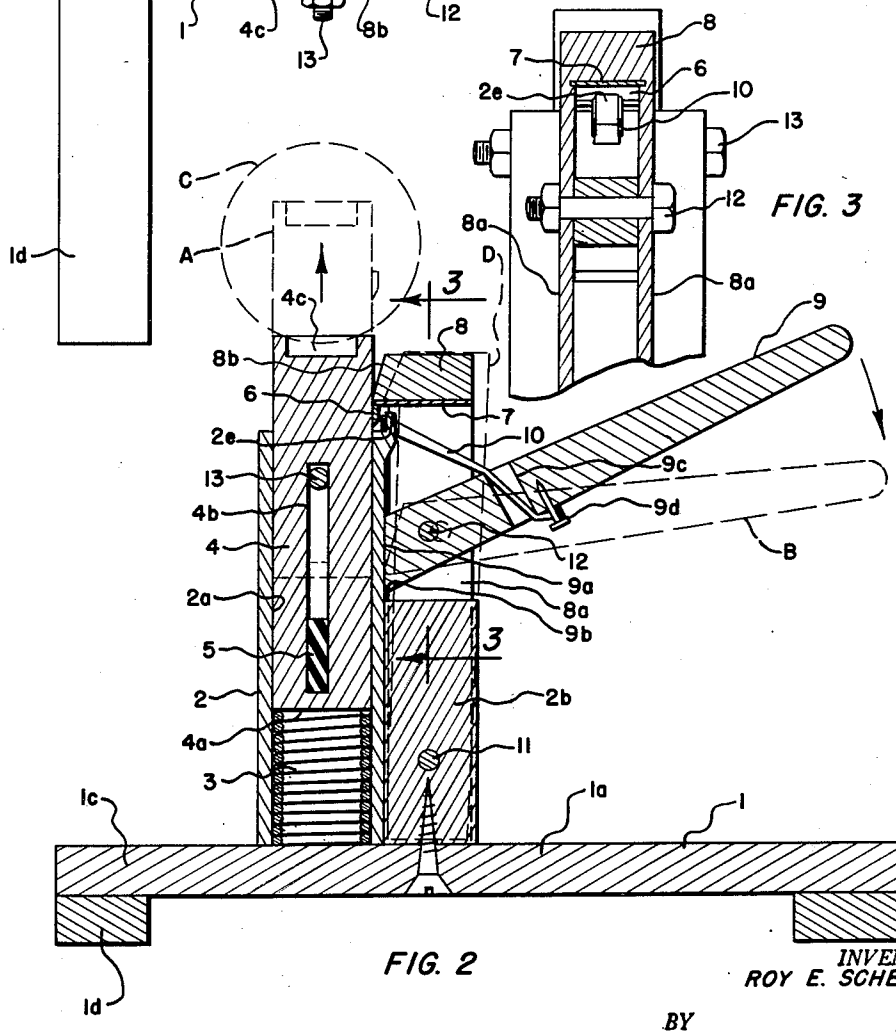


FIG. 3

FIG. 2

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DEVICE FOR VERTICAL PROJECTION OF BALLS FOR BATTERS

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2 Claims. (Cl. 124—16)

My invention relates to a device for vertical projection of balls for batters, and the objects of my invention are:

First, to provide a device of this class which relieves the batter of the manual effort of tossing a ball in the air for practice batting;

Second, to provide a device of this class which promotes the teaching of good batting form;

Third, to provide a device of this class which promotes the holding of the bat in a normal manner by the batter's two hands, permitting him to trip the device by the rearward motion of the bat previous to a normal forward swing for hitting the ball after it has been projected into the air;

Fourth, to provide a device of this class which is very durable and which may be made of non-critical material;

Fifth, to provide a device of this class which may be used by inexperienced operators whereby young persons may learn the art of batting with a minimum of practice in a short length of time;

Sixth, to provide a device of this class having a self cocking trip lever so that each time the device is operated, the ball projecting plunger is automatically engaged when depressed into position for receiving a ball to be projected into the air; and

Seventh, to provide a device of this class which is very simple, and economical of construction, efficient in operation and which will not readily deteriorate or get out of order.

With these and other objects in view as will appear hereinafter, my invention consists of certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings, and to the characters of reference thereon forming a part of this application in which:

Figure 1 is a fragmentary top or plan view of my device for vertical projection of balls for batters; Fig. 2 is a vertical sectional view thereof taken from the line 2—2 of Fig. 1 and Fig. 3 is a fragmentary sectional view taken from the line 3—3 of Fig. 2.

Similar characters of reference refer to similar parts and portions throughout the several views of the drawings.

The base **1**, plunger casing **2**, spring **3**, plunger **4**, plunger cushion **5**, sear members **6** and **7**, sear lever **8**, trip lever **9**, resilient member **10**, and bolts **11**, **12**, and **13** constitute the principal parts and portions of my device for vertical projection of balls for batters.

The base **1** is a T-shaped base having a longitudinal beam **1***a* supported at its rear end by the foot **1***b* which is adapted to engage the ground and secured to the forward end **1***c* of the beam **1***a* is the cross member **1***d* which engages the ground at its opposite end. Fixed to the beam **1***a* and vertically disposed thereon is the plunger casing **2** having a bore **2***a* in which the plunger **4** is vertically reciprocally mounted. Positioned in the bore **2***a* and engaging the lower end **4***a* of the plunger **4** is the compression spring **3**. The plunger **4** is provided with a longitudinal slot **4***b* in the middle thereof in which the plunger cushion **5** is positioned. This plunger cushion **5** is preferably made of resilient material such as rubber or the like and extending through this slot **4***b* and through opposite sides of the plunger casing **2** is the bolt **13** which is engageable by the plunger

cushion **5** when the spring **3** projects the plunger **4** upwardly into the dash line position A, all as shown best in Fig. 2 of the drawings. Fixed to the beam **1***a* of the base **1**, and in continguous relationship to the plunger casing **2** is the sear support **2***b* through which the bolt **11** extends. The sear lever **8** is a bifurcated lever having two opposed legs **8***a* straddling the member **2***b* and these legs **8***a* are pivotally mounted on the bolt **11**. Pivotally mounted to the legs **8***a* of the sear lever **8** and intermediate the same is the trip lever **9**. This trip lever **9** is provided with an angular end portion engageable with the outer side of the plunger casing **2** and the angular end **9***a* is provided with a corner **9***b* which is slightly rounded and adapted to slidably bear on the side wall of the plunger casing **2** when the trip lever **9** is moved downwardly into the dash line position B about the axis of the bolt **12**. The plunger casing **2** is provided with a projection **2***e* adjacent the trip lever **9** and intermediate the legs **8***a* of the sear lever **8** upon which resilient member **10** is engaged. The opposite end of this resilient member **10** extends through an opening **9***c* in the trip lever **9** and is fixed to the pin **9***d* secured to the lower side of the trip lever **9** all as shown best in Fig. 2 of the drawings. The sear member **6** is fixed to the outer side wall of the plunger **4** and is engageable with the sear member **7** which is a plate fixed to the sear lever **8** intermediate the legs **8***a* near the upper end of the sear lever **8** all as shown best in Fig. 2 of the drawings. It will be noted that the sear lever **8** adjacent to the plunger **4** is provided with a downwardly and inwardly beveled portion **8***b* over which the sear member **6** is adapted to slide which causes outward pivotal movement of the sear lever **8** about the axis of the bolt **11** during passage of said sear member **6** downwardly to a position below the sear member **7** as shown in Fig. 2 of the drawings. It will be noted that the resilient member **10** holds the sear lever **8** together with the trip lever **9** in the position as shown in Fig. 2 of the drawings tending to maintain the sear members **6** and **7** in engagement with each other.

The upper end of the plunger **4** is provided with a recess **4***c* adapted to be engaged by a ball as indicated by dash lines C promoting the precise placement of the ball C in concentric relationship with the reciprocal axis of the plunger **4**.

The operation of my device for vertical projection of balls for batters is substantially as follows.

The plunger **4** is depressed to the position as shown in Fig. 2 of the drawings wherein the spring **3** is under compression and the sears **6** and **7** are engaged. A ball as indicated by dash line C is placed on the upper end of the plunger **4** maintained concentric therewith by engagement at the outlines of the recess **4***c*. The batter holds the bat in both hands, in regular batting form. As he moves the bat rearwardly preparatory to swinging the same, he touches the trip lever **9** forcing the same downwardly toward the dash line position B which causes the edge portion **9***b* of the lever **9** to act as a cam against the side of the plunger casing **2** which forces the sear lever **8** into the dash line position D which causes disengagement of the sears **6** and **7** permitting the spring **3** to forcefully project the plunger **4** together with the ball C upwardly.

During the rapid movement of the plunger **4** upwardly in the bore **2***a* in the casing **2**, the spring **3** causes abutment of the cushion member **5** with the bolt **13**, which prevents ejection of the plunger **4** from the casing **2** and also prevents undue shock or breakage of any of the parts of the device. In order to re-set the device for subsequently projecting a ball into the air, the batter simply depresses the plunger **4** to the position as shown in Fig. 2 of the drawings wherein the sears **6** and **7** are engaged. The resilient member **10** automatically causes engagement of the sears **6** and **7** as hereinbefore described so that the batter may place the ball on the upper end of the plunger **4** as hereinbefore described. It will be noted that the rearward movement of the bat in tripping the trip lever **9** is a normal movement and does not hurry the batter and therefore permits him to swing the bat with proper form and accuracy which very quickly educates a baseball player.

Though I have shown and described a particular construction combination and arrangement of parts and portions, I do not wish to be limited to this particular construction, combination and arrangement but desire to include in the scope of my invention, the construction, combination and arrangement substantially as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a ball projecting device, a base, a casing secured thereto, a plunger in said casing, means biasing said plunger to move vertically, said plunger having a slot, a bolt extending through said slot and connected to said casing limiting the travel of said plunger, a resilient cushion in said slot, a sear support connected to said base, a first sear means on said plunger externally of said casing, a second sear means pivoted to said sear support, a trip lever connected to said second sear means, said lever having a cam end portion engageable with said casing, said plunger being restrained by said first sear means in engagement with said second sear means and being released by actuating said trip lever, so that said cam end forces said second sear means away from said plunger and out of engagement with said first sear means.

2. In a ball projecting device, a base, a casing secured thereto, a plunger in said casing, means biasing said plunger to move vertically, said plunger having a slot, a bolt extending through said slot and connected to said casing limiting the travel of said plunger, a resilient cushion in said slot, a sear support connected to said base, a first sear means on said plunger externally of said casing, a second sear means pivoted to said sear support, a trip lever connected to said second sear means, said lever having a cam end portion engageable with said casing, said plunger being restrained by said first sear means in engagement with said second sear means and being released by actuating said trip lever, so that said cam end forces said second sear means away from said plunger and out of engagement with said first sear means, resilient means connected at one end to said trip lever and at the other end to said casing to bias said second sear means and said trip lever toward said casing.

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