UNITED STATES PATENT OFFICE.

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BASE-BALL APPARATUS.

1,203,027.


Application filed January 14, 1915. Serial No. 0,151.

To all whom it may concern:

Be it known that I, ALEXANDER McMILLAN, a citizen of the United States, and a resident of Princeton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Base-Ball Apparatus, of which the following is a full, clear, and exact specification.

This invention relates to base-ball apparatus, and particularly to means for mechanically pitching a ball to a batter, as in batting practice or as a sort of amusement.

In former devices of this kind, it has been necessary to use a system of inclined planes and overhanging structure, which has been found to be not very successful for automatically feeding or delivering the batted balls to the pitching apparatus, or to employ a boy to manually pick up the batted balls and place them in the feeding device which must necessarily be in an elevated position in order that the balls may fall by gravity therefrom onto the pitching device for automatically releasing said device.

The principal object of the present invention is to provide improved and simplified means for automatically delivering or feeding the batted balls to the pitching or discharging device, whereby the more elaborate structure heretofore used and found to be objectionable as obstructing or limiting the area within which the balls may be batted is dispensed with and it is not necessary to employ a boy or attendant for manually delivering the balls to the feeding apparatus.

Another object is to combine the new feeding apparatus with the speed varying and resetting device disclosed in my Patent No. 1,114,012, issued Oct. 20, 1914.

Further objects will appear as the description proceeds.

The invention will be first hereinafter described in connection with the accompanying drawings, which constitute a part of this specification, and then more specifically defined in the claims at the end of the description.

In the accompanying drawings, wherein similar reference characters are used to designate corresponding parts throughout the several views, Figure 1 is a side elevation of the mechanical baseball pitching apparatus constructed in accordance with the present invention, the inclosing screen and ball arresting curtain being shown in section, Fig. 2 is an enlarged detailed side view of the pitching device and feeding apparatus, the raised position of the feeding arm being illustrated in dotted lines, as well as the positions of the other parts of the apparatus when the common actuating lever is moved forward, and Fig. 3 is a plan view showing more particularly the arrangement of the branch trough at the middle point of the transverse trough in front of the ball arresting curtain.

Referring more particularly to the drawings, A designates the sides of a screened inclosure arranged in front of the batter's position or plate B and extending a suitable distance longitudinally, vertically and laterally. These sides, as well as the top C of the inclosure, may be made of woven wire or other suitable material. Across the end of the inclosure farthest from the plate B, there is placed a ball arresting curtain or screen D, which may also be made of woven wire or any other suitable fabric.

In front of the screen D and about midway between the sides of the inclosure, the pitching mechanism and ball feeding device are arranged. The pitching mechanism comprises a lever or arm E pivoted at e to a rigid supporting frame F so as to swing in a vertical plane determined by the middle of the plate B. The upper end of the lever E carries the ball holder G, corresponding to the fingers or hand of a pitcher's arm, and a hook or catch H normally engaged by the trigger device K which is pivoted to the frame F at k and has a portion k' projecting above the extension G to be engaged by a ball delivered onto said extension from the feeding chute to be presently described. The trigger K is normally held in engagement with the catch H on the arm E by a spring L.

A heavy operating spring M is connected to the lower end of the arm E, while a lighter resetting spring N is attached to said arm above its pivot. The spring N is connected to the frame F, while the spring M is attached to the upper end of a bell crank lever O pivoted at o to a supporting frame F'. To the lower end of the bell crank lever O there is connected a rod P which extends to a point near the plate B where it is in
turn connected to the lower end of a lever R having a hand actuated pawl r adapted to interlock with a segmental rack s.

At the bottom of the ball arresting curtain or screen D, there is formed a transverse trough T which is inclined toward the center of the inclosure and is adapted to deliver batted balls to an inclined branch trough t extending longitudinally of the inclosure toward the frame F, as shown in Figs. 2 and 3. The floor of the inclosure is inclined from a transverse line U toward the trough T in one direction and toward the batter's position in the other direction, as clearly illustrated at u and u', Fig. 1, so that the batted balls will be delivered either to the trough T or back to the batter. The branch chute t is equipped with a check lever V to which is attached a spring v. One end of the lever V is normally engaged by the lower end of the automatic feeding arm W, and is held in the depressed position illustrated in solid line Fig. 2, against the tension of the spring v. When the arm W is raised, as will be presently described, the spring v will move the lever V to the position illustrated in dotted line, Fig. 2 thereby permitting one of the balls X to pass the check end v' of said lever, so as to be delivered to the feeding arm W when the same is lowered again.

The feeding arm W is pivoted at w to the frame F and has its shorter arm connected by a link Y to one arm of a bell crank lever Z which is pivoted at z to the frame F'. The other arm of the bell crank lever Z is connected by a link 11 to the lower arm of the bell crank lever O. It will thus be seen that when the lever R, which is arranged near the batter's position, is moved rearwardly or in a direction away from the pitching apparatus, the bell-crank levers O and Z and the feeding arm W will be moved into the positions illustrated in dotted lines in Fig. 2. A feeding chute 12 is constructed at the top of the frame F, which chute is adapted to deliver balls placed therein to the extension G of the pitching arm E. The free end of the arm W is equipped with a cup or basket 13 into which the balls are delivered, one at a time, from the branch chute t by means of the check lever V as already described. When the arm W is raised to the dotted line position, the ball is carried upward in said cup or basket 13 and delivered into the upper end of the delivery chute 12 from which it immediately passes down onto the extension G of the pitching arm E. It will be observed that when the bell crank lever O is moved to the dotted line position, Fig. 2, the tension of the spring M is greatly increased, so that when the ball X is delivered onto the extension G of the pitching arm E and strikes the projecting end k' of the trigger K, thereby releasing said pitching arm, the latter will be actuated by the spring M to pitch the ball to the batter. When the lever R is moved back again to the solid line position, Fig. 2, the bell crank levers O and G and the feeding arm W will all be returned to their solid line position. This return movement of the bell crank lever O will reduce the tension on the spring M sufficiently to permit the resetting spring N to pull the pitching arm E back into interlocking engagement with the trigger K. It will thus be seen that the feeding arm W is actuated to deliver a batted ball to the chute 12 simultaneously with the tensioning of the spring M by means of the lever R.

As fully explained in my patent referred to above, the segmental rack S permits the spring M to be drawn to different tenses, thus varying the speed at which the balls will be pitched.

Having thus fully described my invention what I desire to secure by Letters Patent of the United States is:

1. In a device of the character described, the combination with means for mechanically pitching a ball, of means for accumulating batted balls in position to be fed to the pitching means, means for resetting said pitching means after a ball has been pitched, means for mechanically feeding the balls, thus accumulated, one at a time, to the pitching means, and means for simultaneously returning said feeding means to position to receive the next ball to be fed and resetting the pitching means.

2. In a device of the character described, the combination with means for mechanically pitching a ball, of means for accumulating batted balls in position to be fed to said pitching means, including an inclined trough, a check lever arranged in said trough and having one end normally projecting into the path of the balls, resilient means tending to withdraw said projecting end of the lever, and means for mechanically feeding said balls one at a time to the pitching means, said feeding means being adapted to engage the other end of the check lever for holding it in normal position against the tension of the spring.

3. In a device of the character described, the combination with means for mechanically pitching a ball, of means for accumulating batted balls in position to be fed to the pitching means, including an inclined trough, and a check lever in said trough for allowing only one ball to pass at a time, and a lever having a cup on its free end for receiving said balls and feeding them to the pitching means, said cup being adapted to actuate said check lever at each operation.

4. In the device of the character described, the combination with a lever for mechanically pitching a ball, of a trigger on said lever normally holding it in working posi-
tion and adapted to be actuated for releasing said lever when a ball is dropped into position to be pitched, a delivery chute arranged above the pitching lever, means for accumulating batted balls in position to be fed to the pitching lever, a pivoted arm having means on its free end for receiving the balls and feeding them to the delivery chute, an operating spring attached to the pitching lever and normally at low tension, and means for simultaneously increasing the tension of said spring and actuating said arm from a point near the batter's position.

5. In a device of the character described, the combination with means for mechanically pitching a ball, of means for accumulating batted balls in position to be fed to a position for delivery to the pitching means, including an inclined trough, and a yielding check means for allowing only one ball to pass from the trough at a time, and a lever having a cup on its free end for receiving said balls and feeding them to the position for delivery to the pitching means, said cup being adapted to actuate said check means at each operation.

In testimony whereof I have signed my name to this specification in the presence of two attesting witnesses.

ALEXANDER McMILLAN.

Witnesses:
H. C. Brown,
WM. R. Matthews.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."