Oct. 25, 1938. F. H. DICKSON 2,134,328

PRACTICE APPARATUS

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Fig. 1.

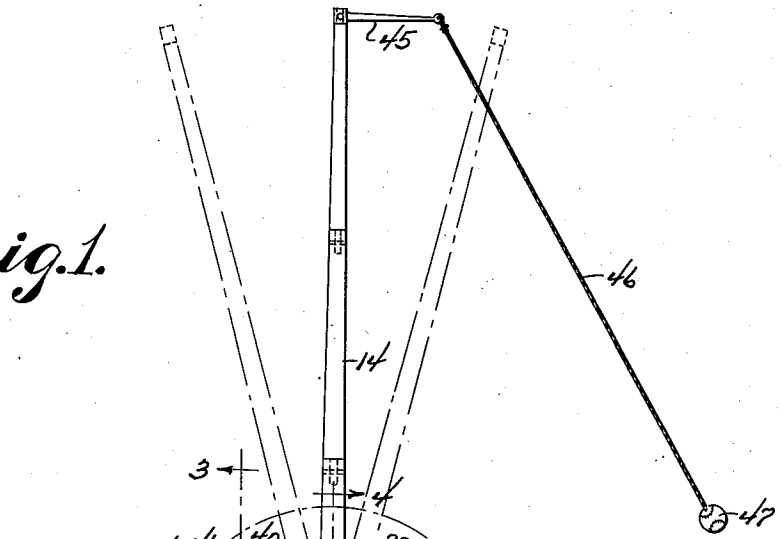
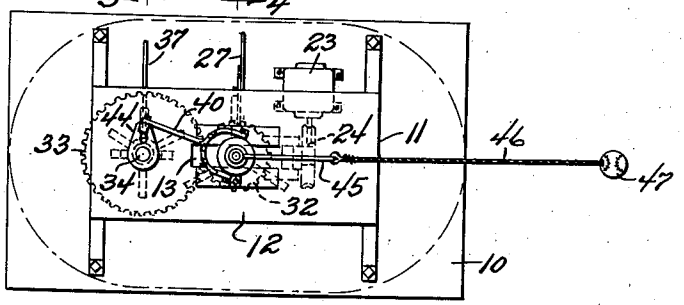



Fig. 2.




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Fig. 3.

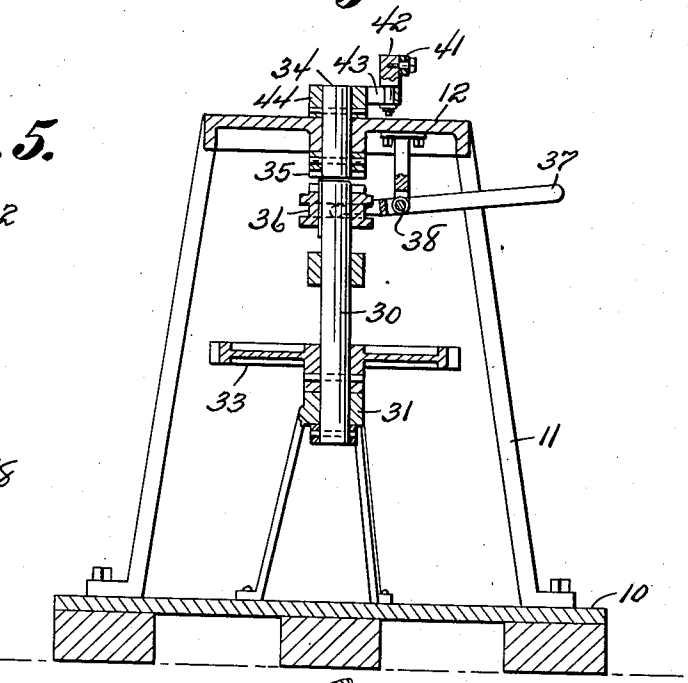
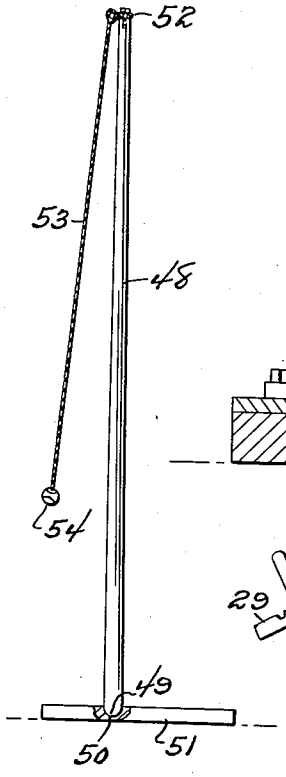



Fig. 5.



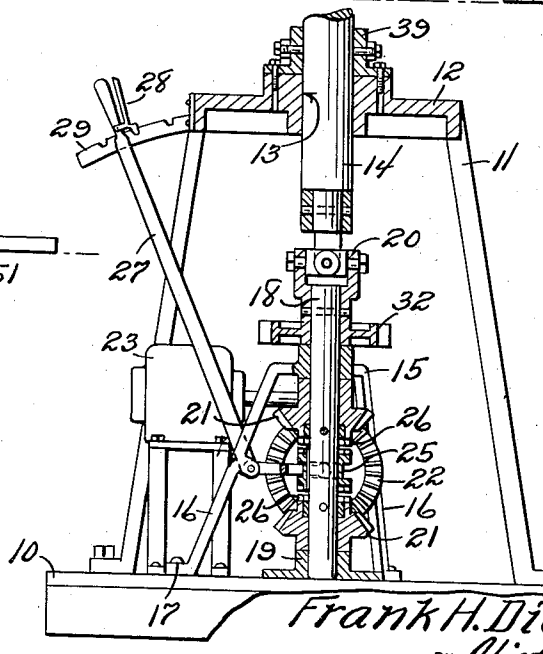




Fig. 4.

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Patented Oct. 25, 1938

2,134,328

# UNITED STATES PATENT OFFICE

2,134,328

## PRACTICE APPARATUS

Frank H. Dickson, Auburn, N. Y.

Application June 30, 1937, Serial No. 151,278

4 Claims. (Cl. 273—26)

The invention relates to a practice apparatus and more especially a ball throwing apparatus or device for batting practice.

The primary object of the invention is the provision of an apparatus or device of this character, wherein a ball can be thrown automatically so that batters may practice the striking of the ball while in motion, thereby enabling baseball players to improve their batting and hitting averages through the use of such apparatus or device.

Another object of the invention is the provision of an apparatus or device of this character, wherein the ball to be hit is suspended from a flexible element carried by an oscillatory and rotary staff or pole, the latter being driven for the swinging of the ball in a circuitous course for the purpose of enabling batters to practice the hitting of the ball while in motion, the momentum to the staff or pole being effected either manually or mechanically.

A further object of the invention is the provision of an apparatus or device of this character, which is simple in construction, thoroughly reliable and effective in operation, strong, durable, enabling baseball players to practice batting and inexpensive to manufacture.

With these and other objects in view the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which disclose the preferred and modified forms of embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is an elevation of an apparatus or device constructed in accordance with the invention, showing by full lines one position of the staff or pole and by dotted lines other positions thereof when the device or apparatus is active.

Figure 2 is a top plan view.

Figure 3 is an enlarged vertical sectional view on the line 3—3 of Figure 1 looking in the direction of the arrows.

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a side elevation partly in section of a modified form of apparatus or device.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, particularly Figures 1 to 4 inclusive, the apparatus or device in a preferred embodiment comprises a platform or base 10 which in this instance is substantially rectangular in shape and is constructed from wood although it may be of any other shape and made from any suitable material. Upon this platform or base 10 rises a stand 11 involving a top 12 which is elevated the required distance from the platform or base 10, the top 12 in this instance being of substantially rectangular shape having at its center an elongated slot 13 disposed longitudinally in said top and through which passes an upstanding staff or pole 14 preferably sectional, these being separably joined with each other for rigidity in said staff or pole throughout the longitudinal extent thereof.

Interiorly of the stand 11 and centered with respect to the longitudinal axis of the staff or pole 14 is a legged bearing 15, its legs 16 being secured at 17 to the platform or base 10 and within this bearing is journaled a vertically disposed driven shaft 18 which is also journaled in a supplemental bearing 19 at the platform or base 10. The driven shaft 18 through a universal joint 20 has direct connection with the staff or pole 14 while loose on this driven shaft 18 are the spaced reversing gears 21, these meshing with a companion gear 22 driven in this instance from an electric motor 23, the connections of the latter with said gear 22 being indicated at 24. Between the reversing gears 21 and splined or keyed upon the driven shaft 18 is a shiftable clutch 25 adapted for alternate engagement with clutch faces 26 on said reversing gears 21 so that either of these gears may be locked with the driven shaft 18 and thus controlling the direction of rotation of the staff or pole 14. The clutch 25 is operated by a throw lever 27, it having a hand release latch 28 coacting with a segment keeper rack 29 so that the lever 27 can be held in its thrown position. The rack 29 is carried by the stand 11.

At one side of the driven shaft 18 is a second driven shaft 30 journaled in a bearing 31 rising from the platform or base 10 while fixed to the said shafts 18 and 30 are the meshing gears 32 and 33, respectively, so that motion from the shaft 18 will be transferred to the shaft 30 for the rotation of the latter.

Journaled in the top 12 of the stand 11 in vertical alignment with the shaft 30 is a rotatable crank shaft 34 carrying a clutch part 35 fixed thereto while splined or keyed to the shaft 30 is a sliding clutch 36 cooperative with the clutch part 35 for the clutching of the crank shaft 34 with the shaft 30. The sliding clutch 36 is oper-

ated by a throw arm 37 pivoted in a hanger 38 fixed to and depending from the top 12 within the stand 11.

Loosely fitted about the staff or pole 14 is a collar 39 to be held against longitudinal displacement on said staff or pole 14 but permitting the latter to freely rotate within this collar. Pivoted to the collar 39 is a forked link 40 which is also pivoted at 41 to a coupling pin 42 loosely playing within a slot 43 in the crank 44 of the crank shaft 34. This crank shaft 34 when rotated imparts oscillatory or rocking movement to the staff or pole 14, it playing freely within the slot 13 under such rocking or oscillatory movement and at the same time the said staff or pole 14 will be rotated by the driven shaft 18.

At the upper end of the staff or pole 14 is fixed a sling arm or bracket 45 which is at right angles to the latter and on the outer end of this arm or bracket is attached a sling cable, cord or other flexible element 46 on which is held at its outer opposite end a ball or other flight object 47. Under oscillation and rotary motion imparted to the staff or pole 14, the ball or other object 47 will be caused to swing or become set in motion so that a batter can practice the hitting of the ball while in motion for practice purposes.

In Figure 5 of the drawings there is shown a modified form of apparatus or device, wherein a pole or staff 48 at its lower end 49 is swiveled in a socket or seat 50 provided in the upper face of a stand plate or bed 51 while rotatably carried at the upper end of this pole or staff 48 is a coupling head 52 having attached thereto a sling cable, cord, rope or the like 53 which at its outer or opposite end carries a ball 54. This staff or pole is manually operated by a user thereof when standing upon the stand plate or bed 51 for giving flight to the ball 54 and setting it in motion for batting practice. The staff or pole 48 when manually operated is turned in a rotary path and can be wobbled for changing the direction of motion of the ball 54 in flight.

What is claimed is:

1. An apparatus of the kind described comprising an upstanding pole, means rotatably supporting said pole, a flexible sling element connected with the pole at the uppermost portion thereof, means for rocking the pole during rotary movement thereof, and a striking object carried by said sling element.

2. An apparatus of the kind described comprising an upstanding pole, means rotatably supporting said pole, a flexible sling element connected with the pole at the uppermost portion thereof, means for rocking the pole during rotary movement thereof, a striking object carried by said sling element, and means for imparting rotation to the supporting means.

3. An apparatus of the kind described comprising an upstanding pole, means rotatably supporting said pole, a flexible sling element connected with the pole at the uppermost portion thereof, means for rocking the pole during rotary movement thereof, a striking object carried by said sling element, means for imparting rotation to the supporting means, and means associated with the last-named means for reversal of rotation thereof.

4. An apparatus of the kind described comprising an upstanding pole, means rotatably supporting said pole, a flexible sling element connected with the pole at the uppermost portion thereof, means for rocking the pole during rotary movement thereof, a striking object carried by said sling element, means for imparting rotation to the supporting means, means associated with the last-named means for reversal of rotation thereof, and manually operated means for moving the second-named means into and out of action, and manually actuated means for moving the reversing means to positions for reversal of rotation of the pole-supporting means.

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