Jan. 11, 1944. M. WESTMAN 2,338,697

GOLF PRACTICE DEVICE

Filed Aug. 31, 1942 2 Sheets-Sheet 1

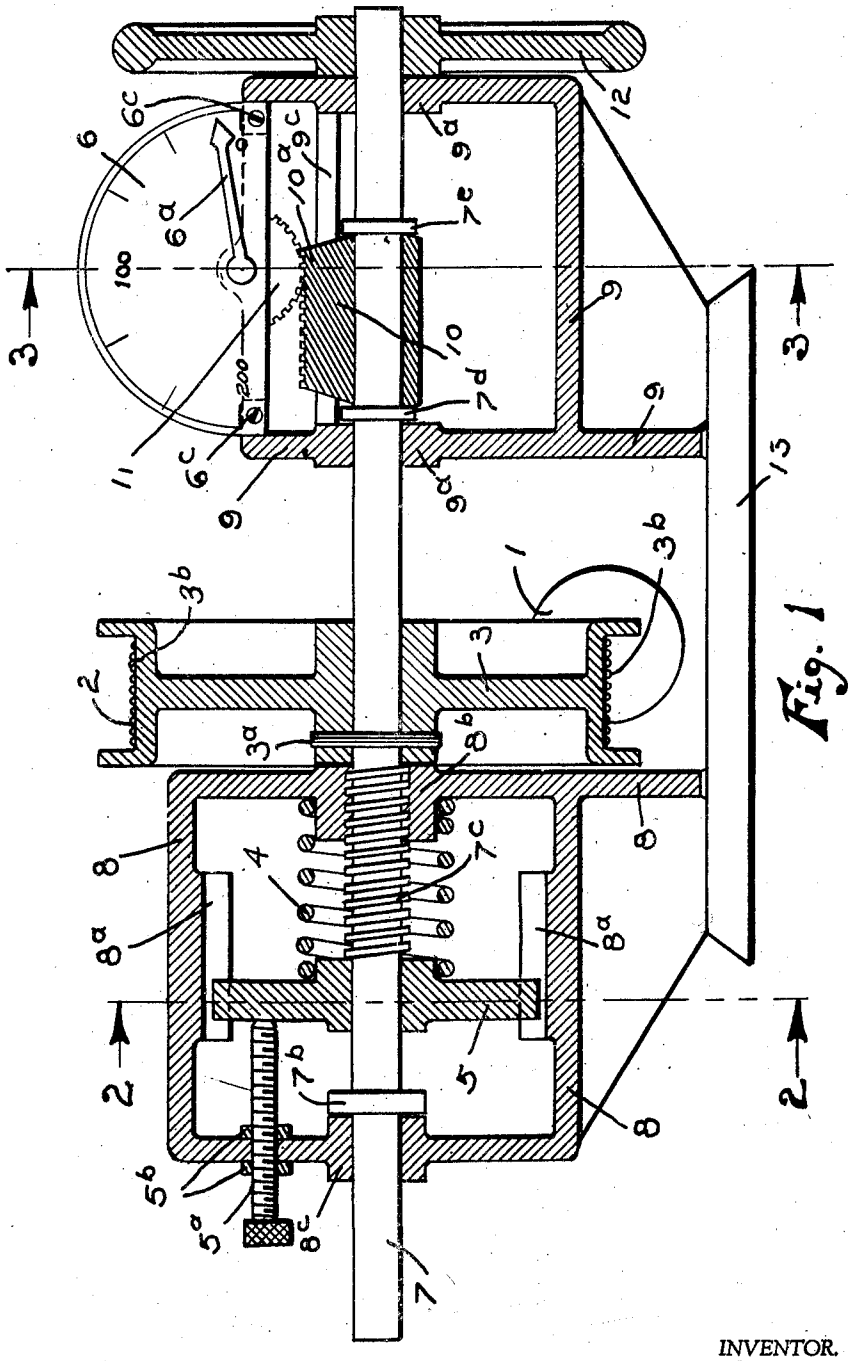


Fig. 1

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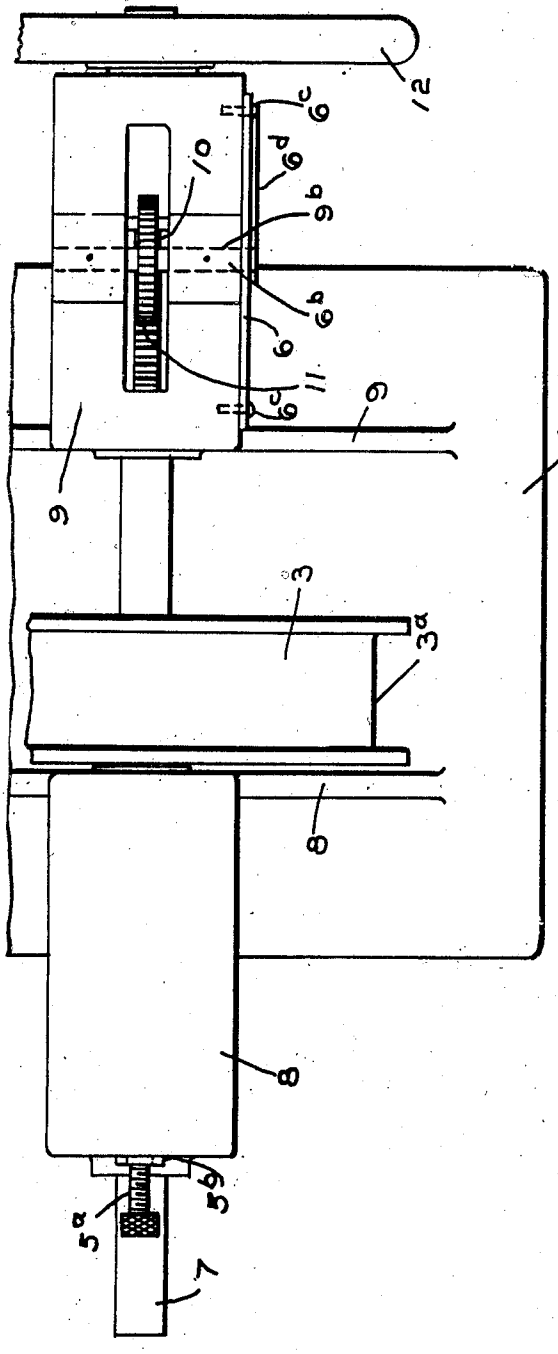


Fig. 4

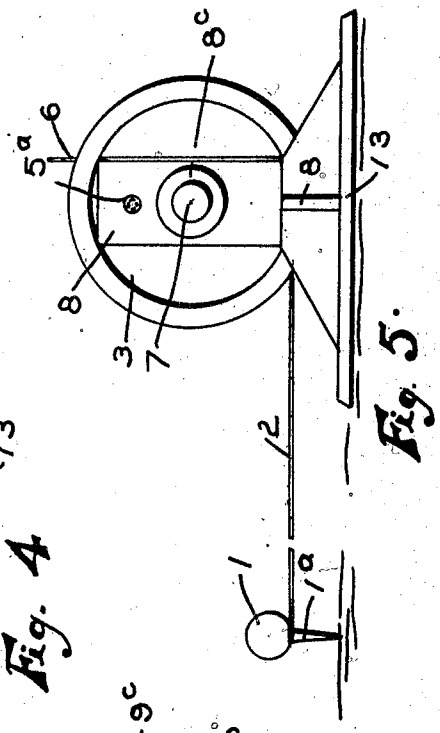


Fig. 5.

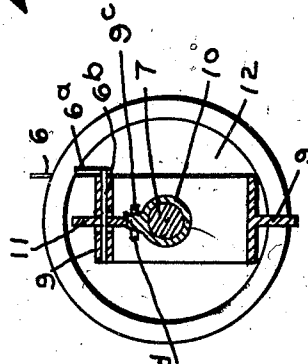


Fig. 3

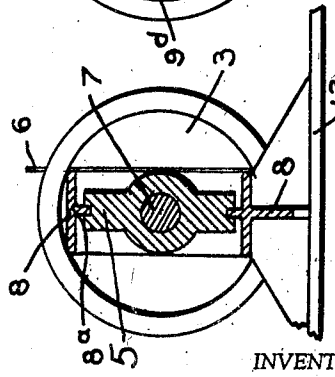


Fig. 2

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Patented Jan. 11, 1944 2,338,697

UNITED STATES PATENT OFFICE

2,338,697

GOLF PRACTICE DEVICE

Magnus Westman, Encanto, Calif.

Application August 31, 1942, Serial No. 456,735

4 Claims. (Cl. 265—22)

My invention relates to a golf practice device, more particularly to a golf practice device of the captive ball type in which the driving force of the ball when hit may be indicated and registered and the objects of my invention are:

First, to provide a golf practice device of this class which utilizes as a portion thereof, a captive ball connected to a cord which is in turn wound about a rotating drum;

Second, to provide a golf practice device of this class which utilizes as a portion thereof a spring or other resistance mounted in such a manner as to retard the unwinding motion of the drum when the ball is hit;

Third, to provide a golf practice device of this class which utilizes as a portion thereof an adjustable clamp that may be operated to control the spring tension;

Fourth, to provide a golf practice device of this class on which is mounted a calibrated scale and a means for recording the velocity of the ball when the ball is hit;

Fifth, to provide a golf practice device of this class which may be used with substantially all of the customary golf thrills in a restricted area;

Sixth, to provide a golf practice device of this class in which a regulation golf ball is used, thereby giving the player the same sensation he would have if using a free ball;

Seventh, to provide a novel golf practice device of this class; and

Eighth, to provide a golf practice device of this class which is very simple and economical of construction, easy to operate, efficient in its action 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 which form a part of this application in which:

Figure 1 is a longitudinal sectional view of my golf practice device showing the mechanism in position before the ball is hit and showing some of the parts in elevation to facilitate the illustration; Fig. 2 is a sectional view on a reduced scale taken from the line 2—2 of Fig. 1 showing parts and portions in elevation to facilitate the illustration; Fig. 3 is a similar sectional view taken from the line 3—3 of Fig. 1; Fig. 4 is a top or plan view of the golf practice device and Fig. 5 is a diagrammatic side elevational view on a reduced scale of the device showing the ball mounted in position and ready to be hit.

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

The golf ball 1, cord 2, rotating drum 3, resisting spring 4, adjustable resistance clamp 5, calibrated scale 6, main shaft 7, supporting frames 8 and 9, gear rack member 10, gear 11, rewinding wheel 12 and supporting base 13 constitute the principal parts and portions of my golf practice device in its preferred form.

The rotating drum 3 is rigidly mounted on the shaft 7 by means of a locking pin 3*a* and is provided with a grooved surface 3*b* on the outer circumference upon which is wound the cord 2 at the end of which is fastened a regulation golf ball 1. The shaft is supported in the frames 8 and 9 by means of bearings 8*b* and 9*a*. The threaded portion of the shaft 7*c*, as shown best in Fig. 1 of the drawings, causes the shaft 7 to travel endwise when the drum 3 is set in motion because of the threaded guide bearing 8*b*.

When the drum 3 is set in motion causing the shaft 7 to move endwise, the shouldered portion 7*b* of the shaft 7 engages the adjustable resistance clamp 5 sliding on guides 8*a* to compress the tension spring 4, thereby slowing down the rotary motion of the shaft 7. An adjusting screw 5*a* held in place by lock nuts 5*b* and mounted in the end portion of the frame 8 serves to regulate the tension of the spring 4 by causing the clamp 5 to operate against the spring 4. On the opposite end of the shaft 7 mounted in the bearing 9*a* and supported by frame 9 is mounted a gear rack member 10 provided with an extended rack portion 10*a*. This gear rack is supported between two collars 7*d* and 7*e* secured on shaft 7 so that the shaft 7 turns independent of the gear rack. This gear rack is held from turning by frame members 9*c* and 9*d* on opposite sides of the rack portion 10*a*. Operated by the gear rack 10 is a gear 11 mounted on a shaft 6*b* supported by a bearing 9*b*. A pointer 6*a* secured to the end of the shaft 6*b* serves to indicate on a calibrated scale 6 mounted on the supporting frame 9 by means of screws 6*c*, the amount of thrust applied to the ball 1. A rewinding wheel 12 is provided at one end of shaft 7 to return the drum to its normal position after the ball has been hit and the force expended. The entire mechanism is supported by a heavy base plate 13.

The operation of my golf practice device is substantially as follows: The regulation golf ball

1 supported by a golf tee 1*a* and connected by cord 2 to the rotating drum 3 is placed a short distance from the mechanism. When the player hits the ball 1, the cord 2 tends to unwind from the drum 3 causing the drum 3 to move the shaft 7 in a rotary direction and endwise because of the threaded portion 7*c* of the shaft 7 in the threads in the bearing 8*b*. The endwise shift of the shaft 7 also causes the gear rack 10*a* to shift endwise, thereby revolving the gear 11 to which is attached the pointer 6*a* which indicates on a calibrated scale 6 the amount of thrust applied to the ball 1. The rotary speed of the shaft 7 is reduced when the shouldered portion 7*b* of the shaft 7 coming in contact with the adjustable resistance clamp 5 causes the spring 4 to be compressed, thereby creating a resisting force. By using an adjusting screw 5*a*, the cord 2 may be provided with an initial slackness while the ball 1 is being hit.

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 golf practice device of the class described, the combination of a golf ball, a cord with one end attached to said golf ball, a drum on which the other end is wound, a revoluble and longitudinally shiftable shaft on which said drum is rigidly mounted, bearings in which said shaft is rotatably and longitudinally shiftable, said shaft being provided with a threaded portion mounted in a threaded guide bearing causing the shaft to move endwise when set in rotary motion.

2. In a golf practice device of the class described, the combination of a golf ball, a cord with one end attached to said golf ball, a drum on which the other end is wound, a revoluble and longitudinally shiftable shaft on which said drum is rigidly mounted, bearings in which said shaft is rotatably and longitudinally shiftable, said shaft being provided with a threaded portion mounted in a threaded guide bearing causing the shaft to move endwise when set in rotary motion, said shaft in its endwise movement being arranged to operate against an adjustable compression spring thereby producing a braking action on the shaft.

3. In a golf practice device of the class described, the combination of a golf ball, a cord with one end attached to said golf ball, a rotatable drum on which the other end is wound, a revoluble shaft on which said drum is rigidly mounted, bearings in which said shaft is rotatably and longitudinally shiftable, said shaft being provided with a threaded portion mounted in a threaded guide bearing causing the shaft to move endwise when set in rotary motion, said shaft in its endwise movement being arranged to operate against an adjustable compression spring thereby producing a braking action on the shaft, a rack mounted on said shaft, a gear meshing with said rack and a calibrated indicator operated by said gear for indicating the amount of thrust applied to the ball when hit.

4. In a golf practice device of the class described, the combintaion of a golf ball, a cord with one end attached to said golf ball, a rotatable drum on which the other end is wound, a revoluble shaft on which said drum is rigidly mounted, bearings in which said shaft is rotatably and longitudinally shiftable, said shaft being provided with a threaded portion mounted in a threaded guide bearing causing the shaft to move endwise when set in rotary motion, said shaft in its endwise movement being arranged to operate against an adjustable compression spring thereby producing a braking action on the shaft, a rack mounted on said shaft, a gear meshing with said rack, a calibrated indicator operated by said gear for indicating the amount of thrust applied to the ball when hit, and a means to facilitate the returning of said drum to the normal starting position after the ball is hit.

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