United States Patent [19]

Landures

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[54] **DEVICE FOR MONITORING GOLF PRACTICE SWINGS**

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[73] Assignee: **Dynasty Oil and Minerals Corporation**, Salt Lake City, Utah

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[52] **U.S. Cl.** ..... **273/186 R**, 273/195 A

[51] **Int. Cl.** **A63b 69/36**

[58] **Field of Search** 273/186, 195, 183, 273/196, 197, 198

[56] **References Cited**

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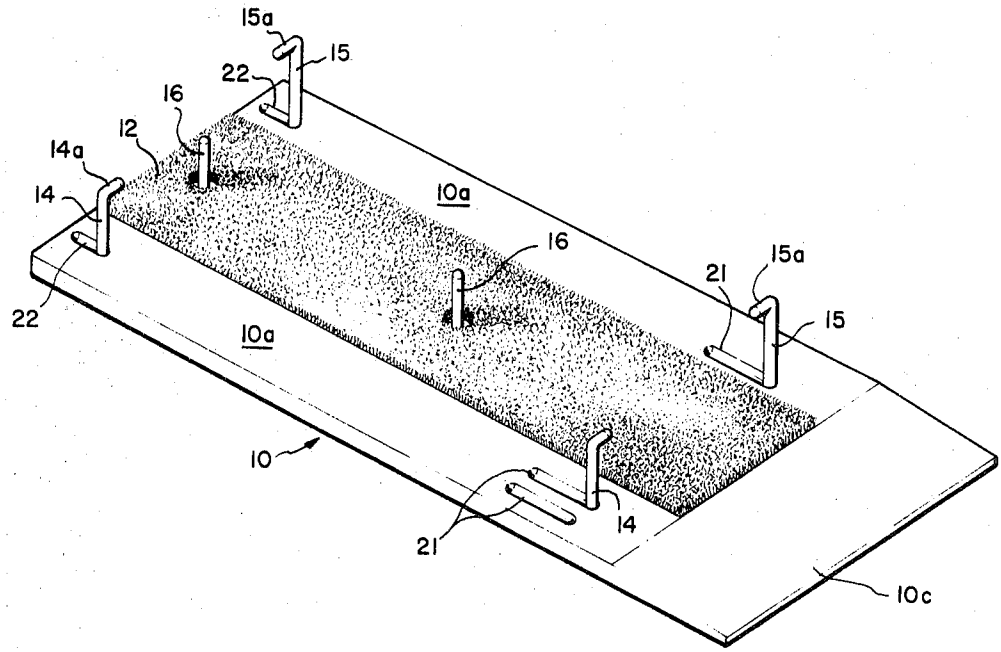
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[57] **ABSTRACT**

A device for monitoring golf swings during practice with a golf club utilizes knock-down pegs pivotally mounted in a practice pad in mutually spaced relationship along a strip of artificial turf. Each peg has a preferably integral foot formed as a transverse pivot pin and rotatably received by a journal recess formed in the underside of the practice pad, the normally upright portion of the peg extending upwardly through the practice pad to be knocked down if and when hit during a practice swing. The practice pad is molded from a flexible resilient material to provide integral detents bordering the recesses. These yield to permit insertion of the pegs from the underside of the pad and serve to retain the pegs in operative position once inserted.

6 Claims, 10 Drawing Figures



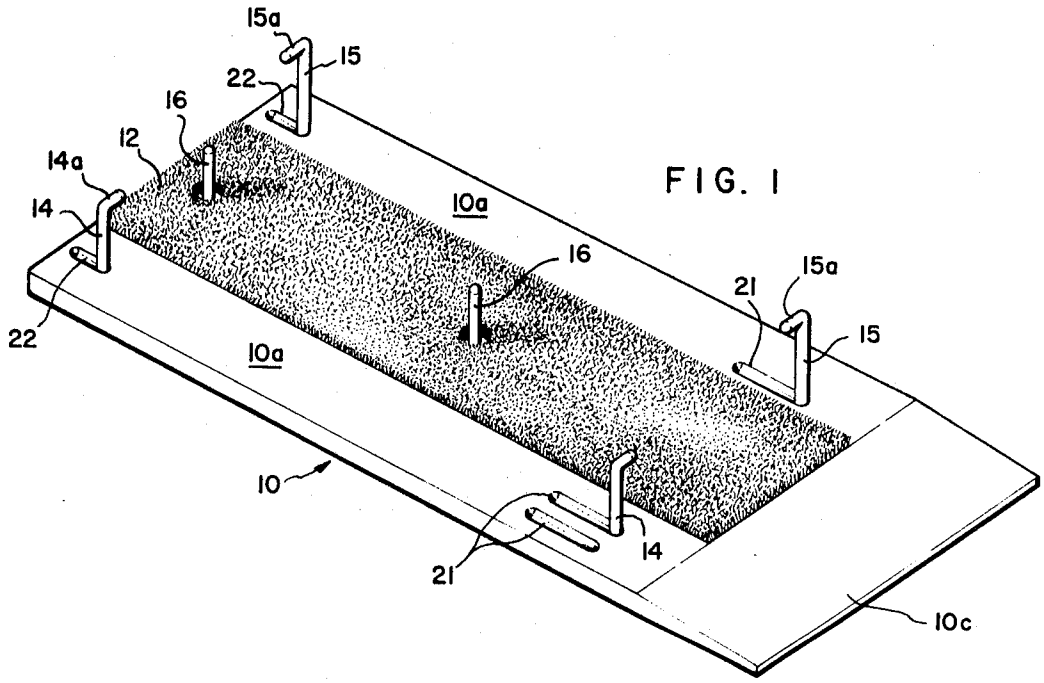


FIG. 1

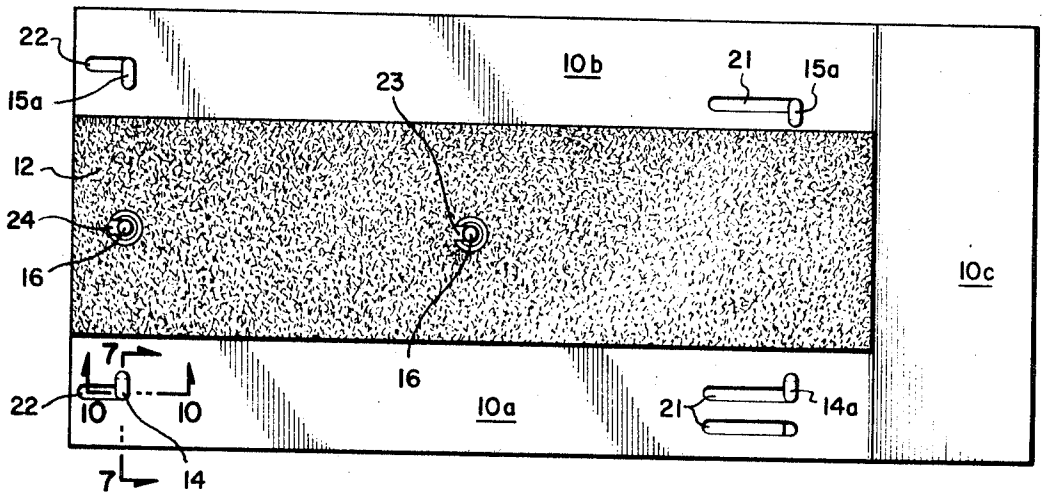


FIG. 2

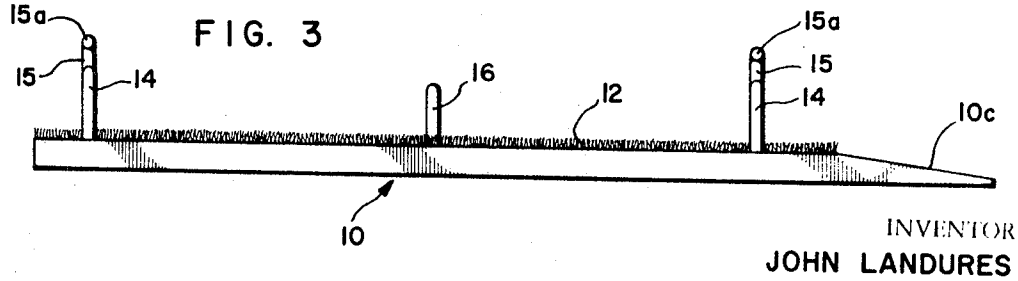


FIG. 3

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FIG. 4

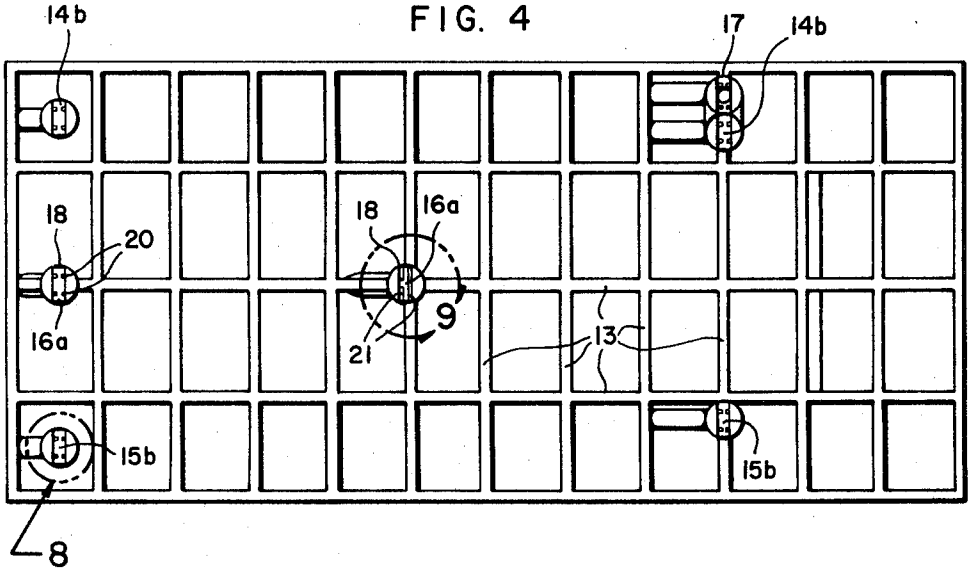


FIG. 8

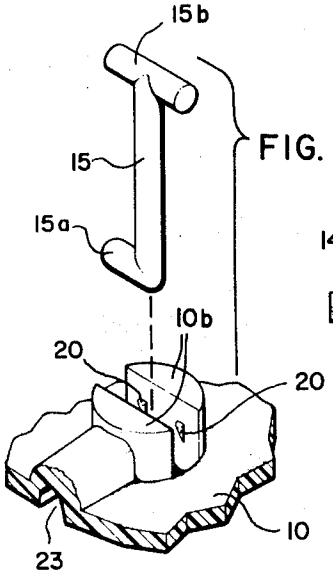


FIG. 5

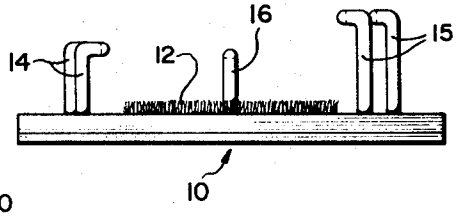


FIG. 7

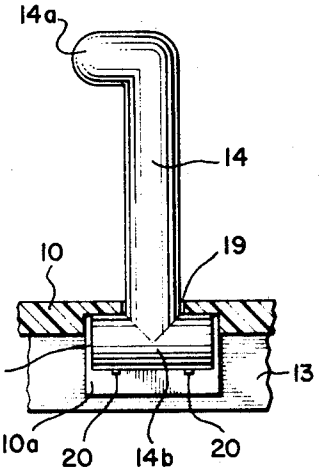


FIG. 6

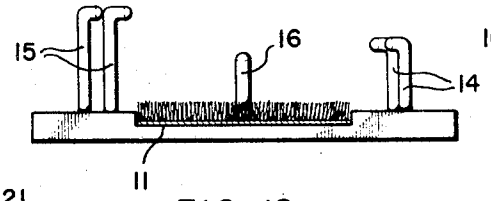


FIG. 9

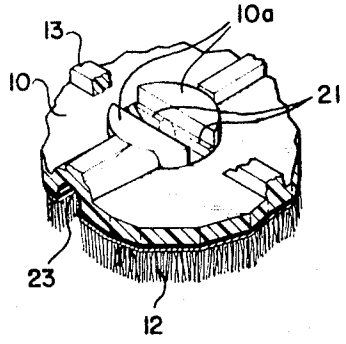
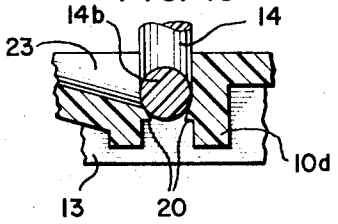


FIG. 10



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DEVICE FOR MONITORING GOLF PRACTICE SWINGS

BACKGROUND OF THE INVENTION

1. Field

The invention is in the field of golf practice devices, particularly those equipped with knock-down pegs for monitoring golf club swings to visually record deviations from an approved path of swing.

2. Prior Art

Golf practice devices of the general type concerned are not new, see for example U. S. Pat. Nos. 3,018,109; 3,107,920; and 3,113,780. In all instances, however, the great impact force exerted on the knock-down pegs by a golf club swung without restraint has made it extremely difficult to prevent uprooting of the pegs and to insure a reasonably long useful life for the device.

SUMMARY OF THE INVENTION

In accordance with this invention, a practice pad is molded from flexible resilient material to provide recesses opening into the underside of the pad for receiving respective knock-down pegs having feet formed as transverse pivot pins. Although the normally upright stem portion of each peg extends upwardly through the pad from the foot-receiving recess and such pad is channeled in front of the peg to permit the peg to assume a knock-down position when hit by a golf club, upper portions of the pad overlying the recess serve as strong and durable retainers for the pivot pin foot against forward driving forces imparted to the peg by club impact.

Each peg is installed in place from the underside of the practice pad, there being detents molded integrally from the flexible resilient material of the pad along the borders of the recess to yield and permit insertion of the pivot foot of the peg under installation pressure but to retain the peg in operative position once installed.

THE DRAWINGS

A specific embodiment of the device presently regarded as the best mode of carrying out the invention is illustrated in the accompanying drawings, in which:

FIG. **1** is a perspective view of the device with all pegs in normal upright position ready for a practice swing;

FIG. **2**, a top plan view of the same;

FIG. **3**, a view in side elevation;

FIG. **4**, a bottom plan view;

FIG. **5**, an end elevational view, looking in the same direction as the golf swing;

FIG. **6**, an opposite end elevational view;

FIG. **7**, a fragmentary, transverse, vertical section taken along the line **7—7** of FIG. **2** and drawn to a considerably larger scale;

FIG. **8**, a fragmentary, exploded view in perspective of that portion of FIG. **4** encircled by the broken line **8**, drawn to a considerably enlarged scale, and showing how a knock-down peg is inserted in a receiving, journal recess in the underside of the practice pad, such recess being bordered by one type of peg-retaining detents;

FIG. **9**, a similar view of that portion of FIG. **4** encircled by the broken line **9**, but with knock-down peg removed entirely and a different type of detent utilized in place of the type shown in FIG. **8**; and

FIG. **10**, a fragmentary, longitudinal, vertical section taken along the line **10—10** of FIG. **2** and drawn to the same larger scale as FIG. **7**.

DETAILED DESCRIPTION OF ILLUSTRATED EMBODIMENT

In the specific form illustrated, the device of the invention comprises a practice pad **10** molded from a tough flexible-resilient material to provide a longitudinal channel **11**, FIG. **6**, running between monitoring strips **10***a* and **10***b*, which constitute opposite lateral margins of the pad, and extending from an upwardly sloping ramp **10***c* at one end of the pad to the opposite end of such pad, so as to receive a strip of artificial turf **12** as a simulated golf green. The turf **12** is securely attached in place, as by means of an adhesive. For the sake of both strength and the saving of weight, the underside of pad **10** is ribbed in what may be regarded as a network formation, see **13**, FIG. **4**.

The material from which practice pad **10** is molded may be a rubber or synthetic elastomer composition, vulcanized to have strength and other characteristics suitable for the purpose. However, there are many plastic materials that can be used along with conventional molding procedures.

For monitoring practice golf swings made by a golfer or would-be golfer standing beside the device and confronting it laterally of the swing-monitoring zone made up of the monitoring strips **10***a* and **10***b* and of the strip of turf **11**, knock-down pegs **14** and **15** are provided at appropriately spaced locations in the monitoring strips **10***a* and **10***b*, respectively, and knock-down pegs **16** in the strip of turf **11**. When a practice swing is properly executed, its path will be confined to the turf median strip **11** and only correct stroke monitoring pegs **16** will be knocked down. Deviations will be visually recorded by the knocking down of one or more of the pegs **14** and **15** at either side of such median strip.

It is a preferred feature of the invention that the deviant stroke monitoring pegs **14** and **15** have transverse bars **14***a* and **15***a*, respectively, at their upper ends, reaching toward the turf strip as shown in FIGS. **1** and **2**, to significantly extend their effective coverage from a monitoring standpoint. Another preferred feature is that the pegs along the monitoring strip closest to the swinger of the golf club, here the pegs **14**, are shorter than the pegs along the other, more remote monitoring strip, here the pegs **15**.

A very important feature of the invention is the manner in which the knock-down pegs are mounted in the practice pad **10**, so there is no danger of their being uprooted under impact by a golf club swung vigorously through practice drives. Each peg **14** has a foot **14***b* in the form of a transverse pivot pin, see particularly FIG. **4**, and each peg **15** has a similar foot **15***a*. Likewise, each peg **16** has a pivot pin foot **16***a*. Practice pad **10** is provided with recesses **17** at the underside of monitoring strips **10***a* and **10***b* for receiving and journaling the feet **14***b* and **15***b* of pegs **14** and **15**, it being realized that left-hand swingers require reverse positioning of these pegs from that shown. Similar recesses **18** are provided at the underside of the pad below turf strip **12** for receiving and journaling the feet **16***a* of respective pegs **16**. All of these recesses open into the underside of the pad and communicate directly with holes, see **19**, FIG. **7**, that extend upwardly through the pad to the upper surface thereof for receiving the normally up-

standing stem members of the pegs. In the form illustrated, the recesses are provided at and partially in respective bosses **10***d* molded integrally with the pad **10** and being of about the same depth or somewhat less than the ribs **13.** For permitting convenient insertion and removal of the pegs and for securely retaining them in their respective recesses after insertion, detents are provided bordering the recesses. These are molded into the pad along the open mouths of the respective recesses from the same material as the pad and may be of various functional forms, such as the spaced protuberances **20,** FIGS. **7** and **8,** or the elongate ribs **21,** FIG. **9.**

So that the pegs **14** and **15** can be knocked down by practice drives without damage to themselves or to pad **10,** such pad has its upper surface channeled, as at **21** and **22,** FIGS. **1** and **2,** to accommodate the stem members of such pegs in the knock-down positions of the pegs. Pad **10** is similarly channeled at **23** and **24,** FIG. **2,** for accommodating the knock-down positions of pegs **16.**

The several pegs may be differently arranged if desired to achieve different monitoring results. Thus, the practice pad may be provided with extra peg-receiving recesses and accommodating channels at various locations, see the side-by-side recesses **17,** FIG. **4,** and channels **21,** FIGS. **1** and **2,** and the relative placements of the several recesses and channels may be varied to achieve any desired arrangements of the several pegs relative to one another. It is preferred that the individual pegs be molded integrally from a high impact strength plastic material.

Whereas this invention is here illustrated and described with respect to a certain preferred form thereof, it is to be understood that many variations are possible without departing from the inventive concepts particularly pointed out in the claims.

I claim:

1. A device for monitoring golf club swings during practice, comprising a practice pad molded from a tough, flexible-resilient material to provide, superficially thereof, a swing monitoring zone; knock-down pegs removably and replaceably journaled in said pad at swing monitoring positions relative to said zone, each of said pegs having a normally upright stem member and a solid foot of transverse pivot pin formation adapted to be journaled in said pad; journal recesses formed in said pad at the underside thereof and open at said underside for the insertion thereinto of the pivot pin feet of respective knock-down pegs; holes extending through said practice pad from the respective journal recesses to the upperside of the pad for receiving the stem members of said respective knock-down pegs; channels in the upperside of said practice pad extending in the direction of peg knock-down from the respective holes for accommodating said stem members when the respective pegs are knocked down; and yieldable detents bordering the openings of the respective journal recesses at the underside of said practice pad, for permitting insertion and removal of the knock-down pegs from said underside and being in direct engagement with the pivot pin feet of the respective pegs when in place for normally retaining said pegs in operative position within said practice pad.

2. A device in accordance with claim **1,** wherein the practice pad is molded with an elongate channel extending between opposite, elongate, monitoring strips; and artificial turf is secured within and along said channel.

3. A device in accordance with claim **2,** wherein correct-stroke monitoring pegs are located along the artificial turf, and deviant-stroke monitoring pegs are located along the monitoring strips.

4. A device in accordance with claim **3,** wherein the deviant-stroke monitoring pegs have transverse reach bars at their upper ends directed toward the artificial turf.

5. A device in accordance with claim **4,** wherein the deviant-stroke monitoring pegs along one of the monitoring strips are significantly shorter than those along the other of the monitoring strips.

6. A device in accordance with claim **1,** wherein the practice pad is molded with a network of strengthening ribs on its underside and bosses of the flexible-resilient material are molded within said network, the journal recesses being provided within respective bosses.

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