Feb. 28, 1967 J. R. BRANDELL 3,306,619

GOLF PUTTING TARGET

Filed Sept. 11, 1963

FIG - 1

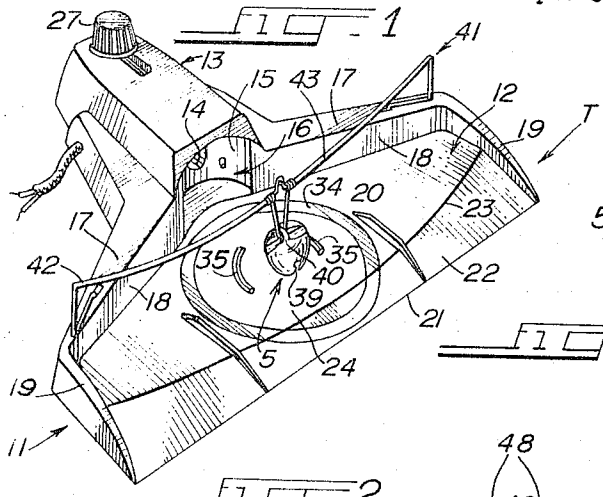


FIG - 4

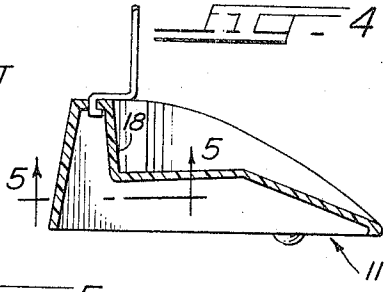


FIG - 5

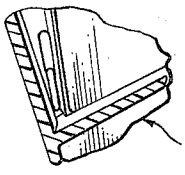


FIG - 2

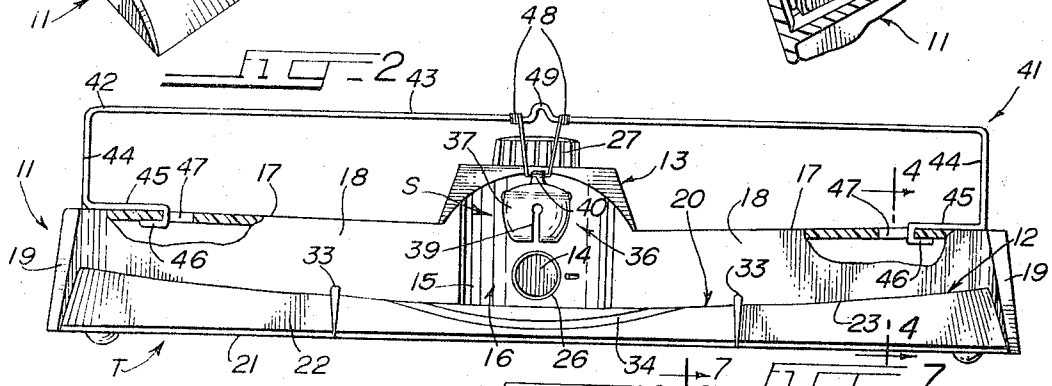


FIG - 3

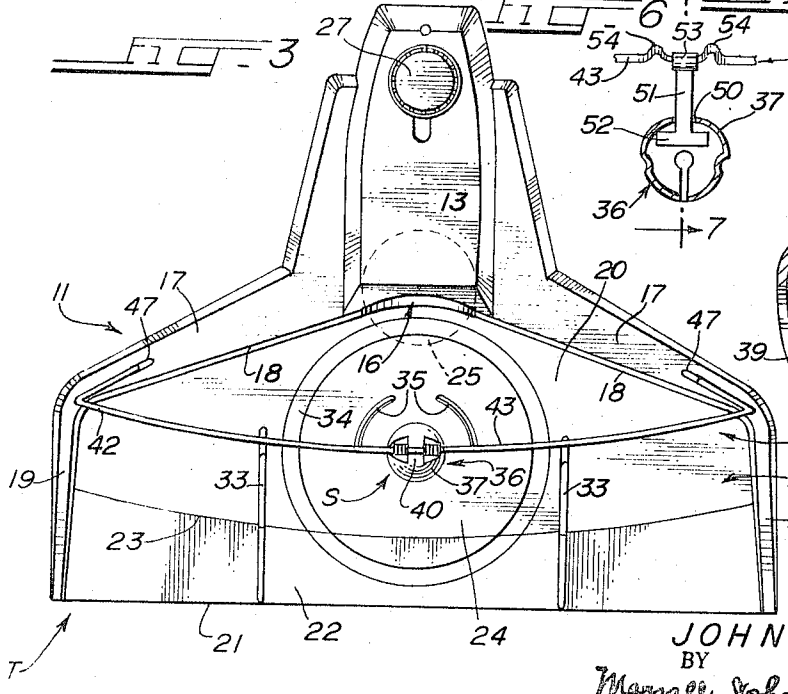
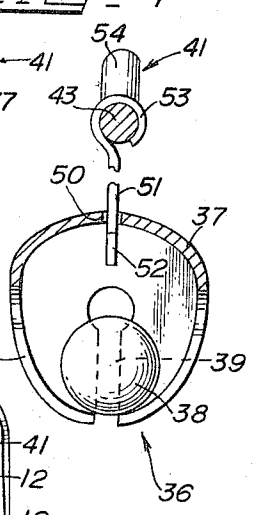


FIG - 6

FIG - 7



INVENTOR.

JOHN R. BRANDELL

BY

Marzall, Johnston, Cook & Root

ATTYS.

United States Patent Office 3,306,619
Patented Feb. 28, 1967

3,306,619

GOLF PUTTING TARGET

John R. Brandell, 300 N. State St., Chicago, Ill. 60610

Filed Sept. 11, 1963, Ser. No. 308,263
5 Claims. (Cl. 273—179)

The present invention relates in general to game apparatus, and has more particular reference to ball target devices.

An important object of the present invention is to provide a ball target device embodying exceedingly simple and inexpensive means for signaling the reception of balls directed into the target area with substantially dead center accuracy.

Another important object of the invention is to provide a game device including movable signaling means for distinguishing or differentiating balls delivered within the target area with bullseye or dead center accuracy from inaccurately directed or off-center balls received in the target area.

Another important object is to provide an inexpensive signaling device suspended in the path of accurately directed balls entering the target area, and movable thereby to signal the passage of such balls into the target area while remaining inoperative in response to the entry of inaccurately directed balls; a further object being to provide for suspending the signaling device in position to be actuated by and without impeding the entry of accurately aimed balls into the target area; a still further object being to provide for mounting the device for free rotation about a suspension axis to thereby permit a device striking ball to travel freely and without obstruction into the target area past the signaling device.

Another important object is to provide exceedingly inexpensive means for mounting a signal device for operation upon the frame of a target device, in the manner described; a still further object being to employ a preferably single length of wire attached at its opposite ends in spaced mountings formed in the frame of the target device, the wire, intermediate its attached ends, providing a support rod; a further object being to provide a supporting stirrup for suspending the signaling device for rotary movement upon its mounting rod; a still further object being to provide a supporting stirrup comprising a length of wire having a medial portion for supporting the signaling device and opposite ends helically wrapped about the mounting rod to form journals; a still further object being to form the mounting wire with an open device positioning loop between the helically wound end portions of the legs of the suspension stirrup.

The foregoing and numerous other important objects, advantages, and inherent functions of the invention will become apparent as the same is more fully understood from the following description, which, taken in connection with the accompanying drawings, discloses preferred embodiments of the invention.

Referring to the drawings:

FIG. 1 is a perspective view of a target device embodying the features of the present invention;

FIGS. 2 and 3, respectively, are front and top elevation views of the device shown in FIG. 1;

FIGS. 4 and 5 are sectional views respectively taken substantially along the lines 4—4, in FIG. 2, and 5—5, in FIG. 4;

FIG. 6 is a sectional view taken through a signal device to illustrate a modified bell suspension arrangement; and

FIG. 7 is an enlarged sectional view taken substantially along the line 7—7 in FIG. 6.

To illustrate the invention the drawings show a ball target device T and a signaling instrumentality S operable to signal the reception, in the target device, of a ball directed therein with dead center accuracy. While the signaling arrangement of the present invention may be

applied in any sort of target device toward which aimed balls may be rollingly directed, the target device shown in the drawings comprises an automatic ball return golf putting practice device of the sort shown in my U.S. Patents Nos. 2,709,594, 3,003,769 and 3,030,113.

As shown, the target device T comprises a frame **11** of any suitable material, including molded plastic. The frame provides a ball receiving tray **12** and a preferably integral housing **13** for a ball return kicker, which may conveniently comprise an electrically operable solenoid device, of the sort illustrated in my aforesaid U.S. patents. Such a device may have an axially shiftable solenoid actuated ball striking armature formed as a rod or stem **14**. The tray and housing preferably form a symmetrical structure on opposite sides of a plane extending medially thereof and containing the axis of the rod **14**. As shown, the housing **13** may be formed with a semi-cylindrical partition wall **15** defining a ball receiving pocket **16** opening upon the ball receiving tray **12**, at one end of the housing **13**. The frame may also include mutually inclined wall forming portions **17** extending outwardly of the housing **13** on opposite sides of the pocket, said portions providing upstanding wall surfaces **18** facing upon and defining the rear edge of the ball receiving tray **12**. The outer ends of the wall forming portions **17** may be curvingly merged into side wing walls **19** forming abutments along the opposite sides of the ball receiving tray **12**.

It will be seen that the ball receiving pocket **16** opens upon the ball receiving tray **12**, medially between the wing walls **19**, the pocket being preferably sized to snugly receive a standard golf ball therein, whereby to position the same in alinement with the ball striking armature rod **14** of the kicker, which is supported in the frame, behind the ball receiving pocket. The kicker is operable in response to the presence of a ball in the pocket to impel the same forceably outwardly of the device in the direction of the axis of the armature rod **14**.

The frame **11** may also provide a preferably integral bottom wall or floor **20** for the ball receiving tray **12**, said floor having a forwardly facing edge **21** along the front of the tray, between the wing walls **19**. Inwardly of said edge, the floor may form an upwardly inclined hill **22** terminating in a ridge **23**, so that a ball reaching the device with sufficient momentum to climb the hill and pass over the ridge would otherwise roll a few inches past the target device, and hence would have sufficient momentum to reach and drop into a conventional golf putting cup. Inwardly of the ridge **23**, the floor of the tray may provide an inclined portion **24** extending downwardly and rearwardly from the ridge **23** toward the pocket **16** at the rear tray remote from the front edge **21**.

The floor portion **24** may be of upwardly facing concave configuration, symmetrically disposed on opposite sides of the medial vertical plane through the tray forming frame, all areas of the floor portion **24** being inclined toward the ball receiving pocket **16**, so that balls will tend to roll directly toward said pocket after passing over the ridge **23**.

The pocket **16** is preferably deep enough to receive a substantial portion of a golf ball **25**, as clearly shown in FIG. 3 of the drawings, whereby to properly aline the ball with the kicker rod **14**. The pocket defining wall **15** may be formed centrally with an opening **26** communicating the pocket **16** with a kicker receiving cavity formed within the housing **13**, behind the wall **15**, to provide for the reception and enclosure of the kicker and also for the support of suitable solenoid adjusting means operable, as by a manually adjustable control knob **27**, to control the kicker, the armature rod **14** having a ball striking head projectable through the opening **26** and into the ball receiving cavity **16**.

A pair of spaced apart upstanding ribs or abutments **33** may be formed on the floor portions **22** and **24**, said

ribs extending from and at right angles with respect to the front edge 21 of the tray toward the wall forming portions 17. The forward ends of the ribs 33 preferably merge with the inclined floor portion 22 and terminate at the edge 20. The rear ends of the ribs 33 may be spaced from the walls 18 only just sufficiently to permit a golf ball to roll along the wall 18 past the inner or rear ends of the ribs 33 without engaging the same. The ribs or abutments 33 are spaced apart a distance sufficient to define therebetween a putt sinking target zone sized to simulate the ball receiving cup of a conventional golf putting green, a cup indicating target ring 34 of color contrasting with that of the floor 20 being applied upon the floor portions 22 and 24 immediately between the ribs 33, with the center of the ring 34 preferably lying in the medial plane of the target device 11, the ribs 33 being equidistant from said medial plane, on opposite sides thereof.

If desired, a pair of arcuate ribs 35, concentric with respect to the ring 34 and having adjacent ends spaced apart sufficiently to permit a golf ball to freely roll therebetween upon the inclined surface of the floor portion 24, may be formed on said floor portion in position equidistant from and on opposite sides of the medial plane of the device.

It will be seen from the foregoing that a golf ball, when delivered toward the device 11 from a remote putting station, may travel up the hill 22 and pass over the ridge 23 and upon the floor portion 24, and may then gravitate into the pocket 16 for return thence, by operation of the kicker rod 14, in the direction of the medial plane of the device, toward the remote putting station from whence the ball was initially directed toward the target device. In the event that the ball is directed into the target device, as a perfect or dead center putt, it will pass over the ridge 23, diametrally through the putt sinking target zone defined by the ring 34, between the ribs 33, the ball passing between the facing ends of the arcuate ribs 35 directly into the pocket 16. The ribs 35 thus define a dead center or optimum accuracy putt receiving area.

The ribs 33 provide means for visually distinguishing or discriminating between balls delivered into the target device with sufficient accuracy to enter the putt sinking target zone between the ribs 33, as holed putts, and balls inaccurately delivered as missed putts which enter the tray outwardly of the central holed putt zone. Such missed putts, after ascending the inclined hill 22 between either of the ribs 33 and the rib adjacent wing wall 19, will pass over the ridge 23 and gravitate downwardly on the floor 24, passing between the rear end of the rib 33 and the facing wall 18, thence into the ball return pocket 16, following an appreciable time delay interval sufficient to clearly distinguish such missed putts from balls delivered accurately into the holed putt zone between the ribs 33.

In order to provide for distinguishing between substantially perfect or dead center putts and somewhat less accurately directed putts which, nevertheless, enter the putt sinking or holed putt zone, between the ribs 33, outwardly of the dead center area defined by the forward ends of the ribs 35, the present invention contemplates the provision of inexpensive means operable to signal the delivery of a ball within the dead center or optimum accuracy putt receiving area, such area preferably comprising substantially the medial one-third portion of the zone between the ribs 33. To this end, the present invention contemplates the suspension of a signaling device or element 36 above the center of the target area, medially between the ribs 33 defining the holed putt zone, the device 36 being suspended preferably at such an elevation that it will be engaged and actuated for signaling purposes only by accurately aimed balls entering the medial portions of the zone.

The signaling device 36 may be constituted to provide either a visual or an audible signal, or a signal that is both visual and audible, in response to the delivery of a ball substantially centrally in the target area. To these ends, the signaling device 36 may comprise an inexpensive bell or rattle capable of emitting an audible signal when bumped by the entry of an accurately putted ball into the central portions of the putt sinking zone. By providing means for suspending the device 36 for rotary spinning movement about a horizontal axis when struck by an accurately aimed ball, a visual accuracy indication will be given. Where the device 36 comprises a bell or rattle suspended for rotary movement about a horizontal axis, it will give a visual as well as an audible signal indicating the delivery of a ball in the target area with substantially dead center accuracy.

The foregoing objectives may conveniently be attained by forming the signaling device 36 as a hollow formed shell 37, as of sheet metal, containing a ball or pebble 38 of material capable of generating a rattling sound when the shell is shaken. As shown, the shell at one end may be formed with intersecting slits 39 extending to the equatorial portions of the shell, means being provided on the shell, remote from the slits 39, for suspending the same in operable position.

As shown in FIGS. 1, 2 and 3, the shell may be formed with an integral loop 40 forming a suspension bail, at the top of the shell remote from the intersection of the slits 39; and the signaling device 36 may be suspended on and from a support element 41 mounted on the frame 11. As shown, the support element 41 may conveniently comprise a single length of relatively stiff wire 42 having a medial section 43 of length sufficient to extend across the tray 12, between the wing walls 19. At the opposite ends of its medial portion 43, the wire may be bent to form dependent legs 44 adapted to support the medial portion 43 at a desired elevation on the frame 11, the terminal ends of the wire forming the legs being bent to form support feet 45, at the bottom of the legs 44 and extending in a direction to overlie the top of the wall portions 17 at the outer ends thereof, where the same join with the wing walls 19. The inner ends of the feet 45 may be rebent to form terminal hooks 46 adapted to interfit in slots 47 formed in the top of the housing wall portions 17, said slots 47 being preferably tapered, toward their outer ends adjacent the wing walls 19 to wedgingly receive the hooks 46 snugly in said tapered ends.

The medial portion 43 of the support element is preferably of such length as to assume a bowed configuration, as shown in FIGS. 1 and 3, when the hooked ends 46 of the wire are mounted in the slots 47, to thereby employ the resilience of such bowed portion 43 to urge and retain the hooks 46 snugly and wedgingly in mounted position in the outer tapered ends of the mounting slots 47. The bowed configuration of the medial section 43 of the support element 41 also may be such as to dispose the center of said section vertically above the center of the ring 34 which defines the putt sinking zone, means being provided for suspending the signaling element 36 on the section 43 at its center.

As shown in FIGS. 1, 2 and 3, the signaling element 36 may be supported on the section 43 by means of a stirrup comprising a length of filamentary wire having central portions extending through the bail of the element 36 and a pair of legs terminating in helically wound portions forming journals 48 snugly yet turnably embracing the wire forming the section 43. In order to keep the suspended signal element 36 centered on the section 43, an upstanding open loop 49 may be formed centrally on the section to separate the helical journals 48. Because of the flexibility and resilience of the filamentary wire material forming the suspension stirrup, it, with bell attached, may be applied onto the wire support element 41, before it is mounted on the frame 11 of the target device, merely by threading the helical journals 48 of the stirrup in succession upon and sliding the same along the wire mounting element from one end thereof until the

medial portions of the section **43** are reached, the flexibility of the wire journals **48** permitting the same to pass around the bent corners of the wire forming the hook **46**, the loop **49** and the junction of the leg **44** with the section **43** and with the foot portion **45**.

As shown in FIGS. 6 and 7, the signaling element **36** may be provided with an elongated slot **50**, in place of the bail **40** of the signaling element shown in FIGS. 1, 2 and 3. The element **36**, shown in FIGS. 6 and 7, may be suspended centrally on the section **43** of the wire support element **41** by means of a stirrup comprising a preferably sheet metal strip **51** formed at one end with a crossbar **52**. The strip including its crossbar may be passed into the shell **37**, through a pair of the slits **39**, and thence outwardly of the shell through the slot **50**, the shell being thus swingingly suspended upon the ends of the crossbar **52** at and outwardly of the opposite ends of the slot **50**. The end of the stirrup strip **51** which extends outwardly and upwardly of the shell **37** through the slot **50** may be curled about the wire forming the medial portions of the section **43**, to thereby form said curled end of the strip as a bearing **53** mounted for rotary movement about the section **43**. The wire forming said section may be formed with a spaced pair of bent open loops **54** at the center of the section **43**, in order to retain the bearing **53** against axial displacement on the support **41**.

It will be seen from the foregoing that the signaling element or indicator **36**, as well as the means for mounting the same in position on the frame **11**, are of exceedingly inexpensive character adding but a few cents to the cost of manufacturing the target device. It will be understood, also, that the signaling element **36** is adapted to give a visual or audible, or a visual and audible signal in response to the delivery of a ball substantially into the center of the target area. The signaling element **36** is preferably suspended at an elevation such that it will be contacted and actuated only by balls delivered into the target device along the middle third of the target area defined between the abutments or ribs **33**; but if it be desired to actuate the signaling element **36** only in response to balls which enter the target along the center line thereof, the elevation at which the signaling element **36** is suspended may be increased to a level at which the lower edge of the signaling element **36** will be engaged only by the top of a rolling ball passing through the very center of the target area.

When hit by a putted ball, the element **36**, if it contains a sound producing ball or pebble **38**, will emit an audible sound signal; and where the signaling element is mounted for rotary movement about an axis defined by the wire section **43**, as described, it will be spun around said axis when struck by the ball, thereby giving a visual signal.

The horizontal section **43** of the wire bracket **41** may also serve an additional useful function in preventing balls that are putted into the target area at excess speed from jumping entirely over the rear wall portions **17** of the frame. In this connection, balls that are putted into the target area at high speed may tend to jump over the wall portions **17** as a result of a too rapid ascension of the inclined plane **22**. Such a jumping ball, however, upon impinging the horizontal bracket section **43**, will either be propelled forwardly into the area in front of the target device or will be directed downwardly into the target area and gravitate thence into the ball return pocket **16**. In any event, most if not all balls delivered into the target device at excess speed will be stopped by the support bracket and thus prevented from rolling rearwardly of the target device.

It is thought that the invention and its numerous attendant advantages will be fully understood from the foregoing description, and it is obvious that numerous changes may be made in the form, construction and arrangement of the several parts without departing from the spirit or scope of the invention, or sacrificing any of its attendant advantages, the forms herein disclosed being preferred embodiments for the purpose of illustrating the invention.

The invention is hereby claimed as follows:

1. A ball target device comprising a frame forming a ball receiving target zone, a rod supported on the frame in position extending horizontally above said target zone, a signaling device mounted for rotary spinning movement on the rod in response to entry of a ball into the target zone, and a stirrup for suspending the signaling device on the rod comprising a length of wire having springy resilience and having a medial portion carrying the signaling device and a pair of spaced apart arms turnably mounted on the rod, said frame having spaced latching slots formed therein, said rod at its opposite ends having leg portions bent abruptly downwardly and abruptly bent hooks formed at the extremities of the leg portions in position for detachable engagement in said latching slots to anchor the rod demountably on the frame, and an abruptly bent loop formed medially between said legs to maintain the stirrup and supported signaling device against movement axially of the rod, said arms of the stirrup terminating in helically coiled portions, each embodying a plurality of loops and forming laterally flexible journals sized to turnably embrace the rod, whereby the signaling device and stirrup may be mounted on the rod by applying said journals upon and moving the same axially of the rod, said axially flexible journals being adapted to slide on the rod and to pass freely around said abruptly bent portions thereof.

2. A ball target device comprising a frame forming a tray providing a floor, spaced abutments at the opposite sides of the tray defining a ball receiving area on the floor between the abutments, and upstanding walls extending at and along the rear of the floor and merging with said abutments, said floor having an upwardly inclined surface extending between said abutments, at and rearwardly of the front edge of the floor, to a ridge disposed inwardly of said front edge, and a downwardly inclined floor portion extending rearwardly from the ridge toward said upstanding walls, a retaining rod, latch keeper means comprising spaced latching slots formed in the frame and hooks forming latches on and at the opposite ends of the rod for detachable engagement in said slots to anchor the rod on the frame in position to block balls, directed upon the upwardly inclined surface at excess speed, from clearing the upstanding walls, without preventing balls from rolling over the ridge and upon the downwardly inclined floor portion, and a signaling device mounted for rotary spinning movement on the rod in response to entry of a ball into a target zone.

3. A ball target device comprising a frame forming a tray providing a floor, spaced abutments at the opposite sides of the tray defining a ball receiving area on the floor between the abutments, a mounting rod, latch keeper means comprising spaced latching slots formed in the frame and hooks forming latches on and at the opposite ends of the rod for detachable engagement in said slots to anchor the rod on the frame in position extending above and transversely of the floor, between the abutments, said rod comprising a length of resilient laterally bendable wire, the latching slots being spaced to support the wire in laterally bowed condition, so that the lateral resilience of the bowed wire serves to hold the hooks in latched engagement in the slots, and a signaling device mounted for rotary spinning movement on the rod in response to entry of a ball into a target zone disposed beneath the signaling device.

4. A ball target as set forth in claim **3**, wherein the signaling device is suspended on a link comprising a strip of sheet metal having a curled end providing a journal spinningly embracing the rod, and a pair of opposed fingers at the journal remote end of the link for interfitting connection with a slotted portion of the signaling device.

5. A ball target as set forth in claim **3**, wherein the

signaling device is suspended on a link comprising a strip of sheet metal having a curled end providing a journal spinningly embracing the rod, and a pair of opposed fingers at the journal remote end of the link for interfitting connection with a slotted portion of the signaling device, said rod having a pair of spaced loops at the opposed ends of said journal to maintain the link against movement axially of the rod.

References Cited by the Examiner

UNITED STATES PATENTS

718,924	1/1903	Foulis	273—127
746,993	12/1903	Roat	273—127
971,626	10/1910	Nelson	273—127
1,101,203	6/1914	Lueder	273—178
1,224,080	4/1917	Deibel	273—127 X
1,568,852	1/1926	Kohler et al.	273—127
1,961,060	5/1934	McCarthy	273—184 X
2,582,290	1/1952	Smith	273—127 X
2,626,153	1/1953	Denney	273—127 X
2,719,719	10/1955	Sherwan	273—183 X
3,003,769	10/1961	Brandell	273—179

RICHARD C. PINKHAM, *Primary Examiner.*

DELBERT B. LOWE, ANTON O. OECHSLE, *Examiners.*

G. J. MARLO, *Assistant Examiner.*