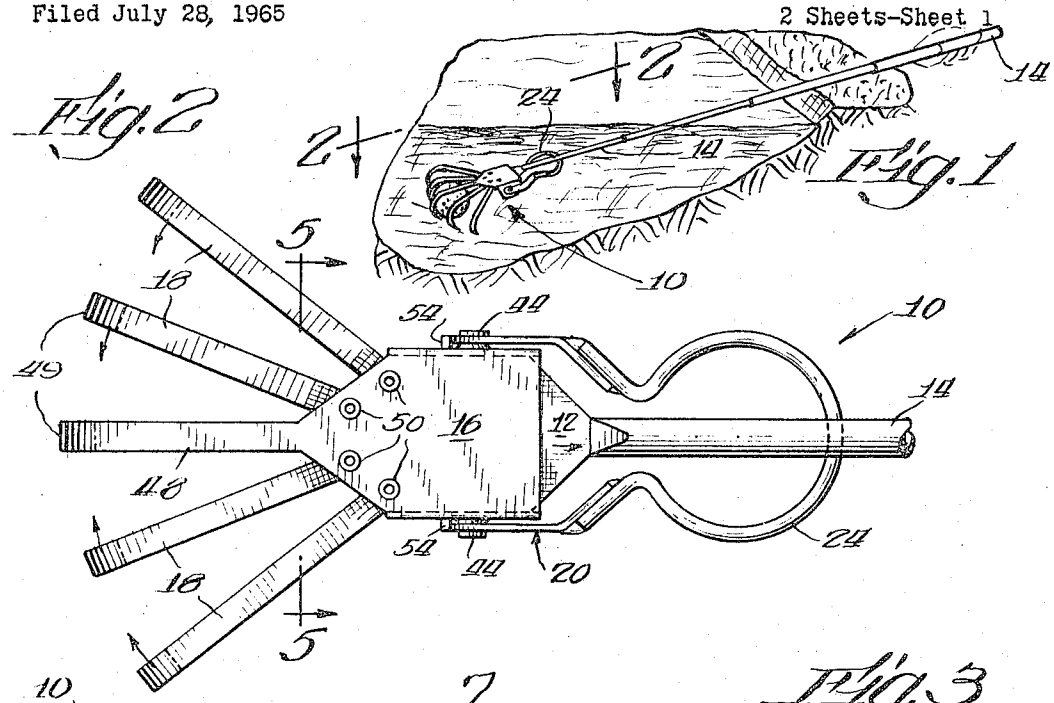
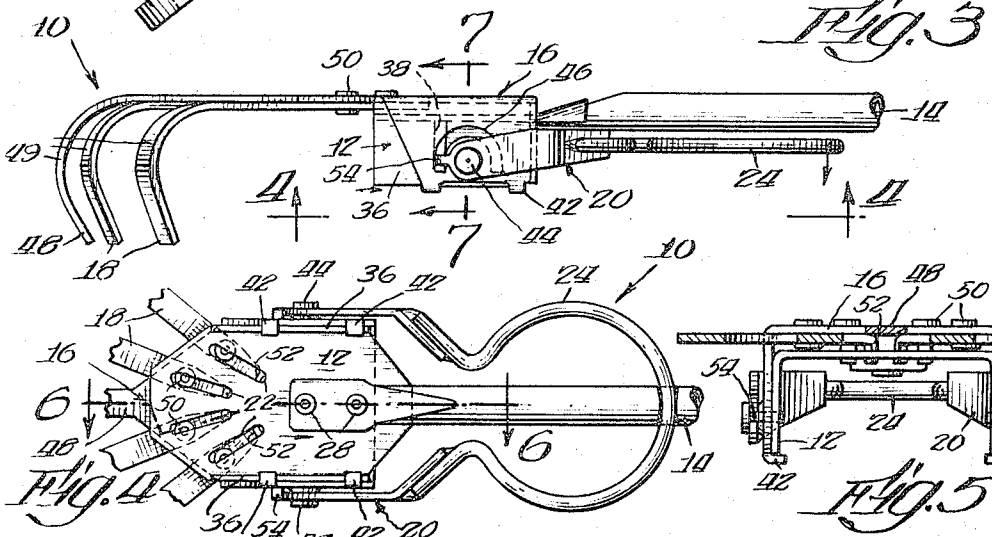
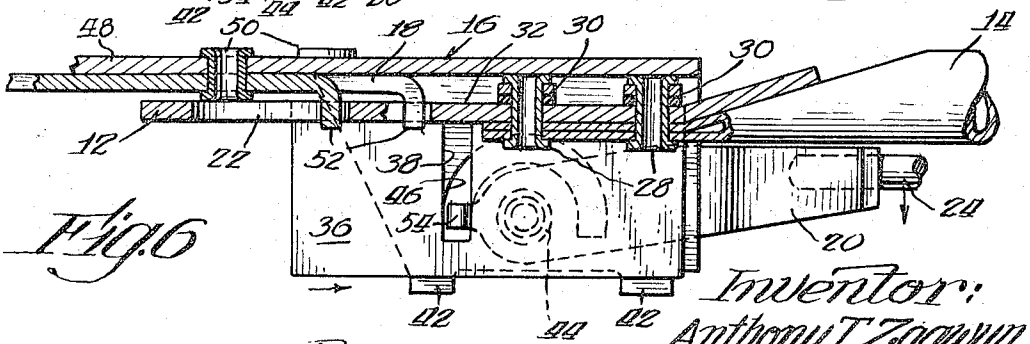
Feb. 28, 1967 A. T. ZAGWYN 3,306,650

GOLF BALL RAKE-RETRIEVER

Filed July 28, 1965 2 Sheets-Sheet 1







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GOLF BALL RAKE-RETRIEVER

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Fig. 7

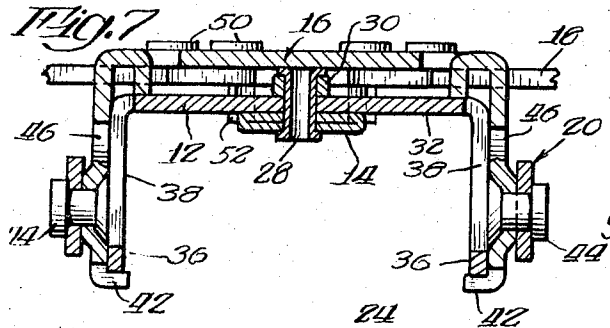


Fig. 8

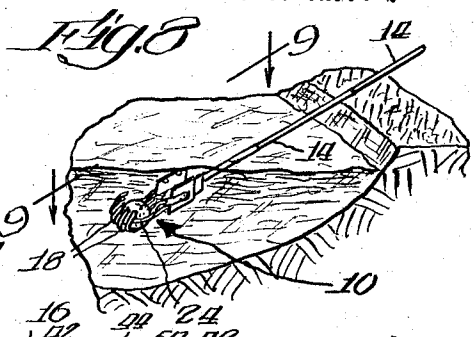


Fig. 9

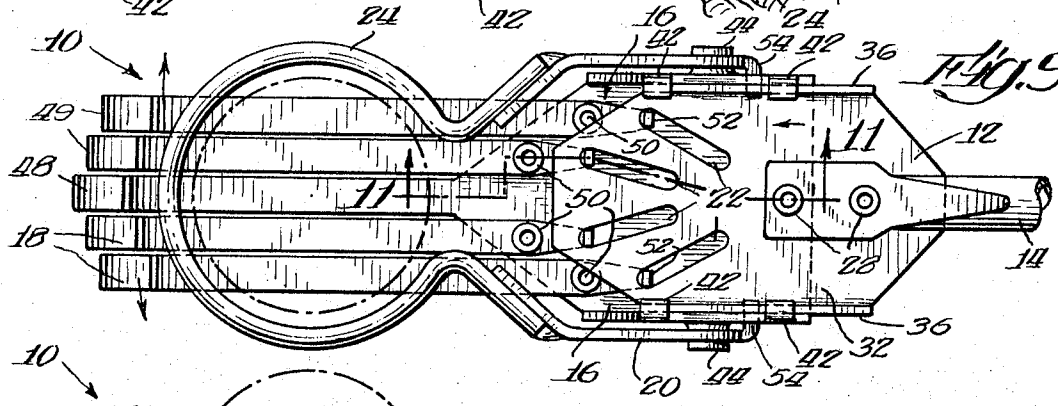


Fig. 10

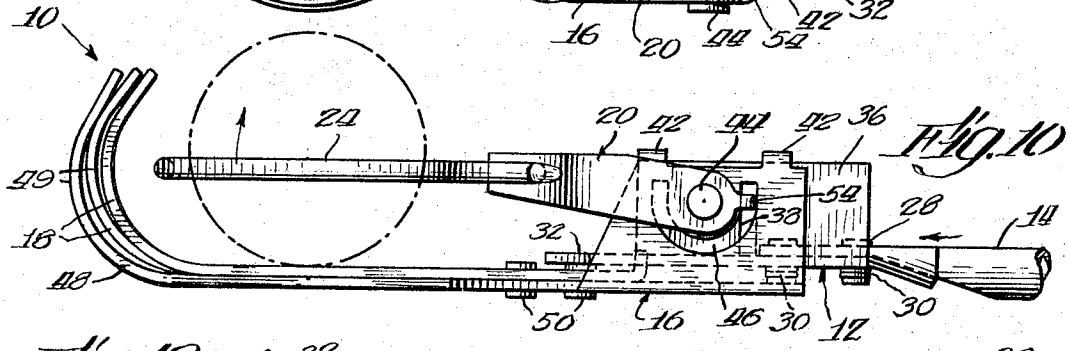


Fig. 12

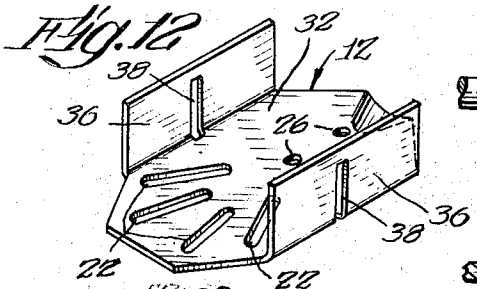


Fig. 11

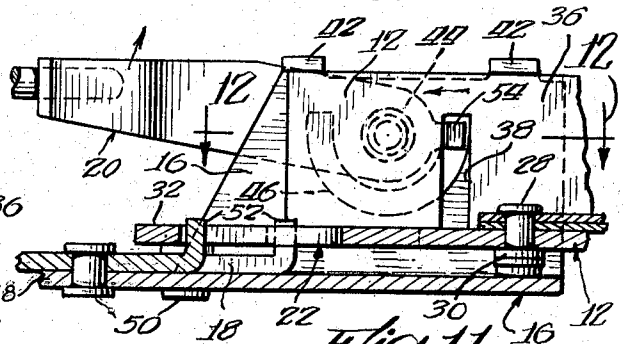
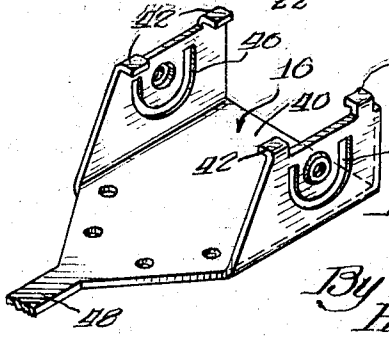


Fig. 13



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United States Patent Office 3,306,650 Patented Feb. 28, 1967

3,306,650

GOLF BALL RAKE-RETRIEVER

Anthony T. Zagwyn, Delavan, Wis., assignor to A J Industries Corporation, Delavan, Wis., a corporation of Wisconsin

Filed July 28, 1965, Ser. No. 475,497
3 Claims. (Cl. 294—24)

The present invention relates to golf ball retrieving devices and more particularly to a golf ball rake and retriever.

It is an object of the invention to provide a lightweight and compact golf ball retriever particularly suitable for carrying and employment by an individual golfer.

It is another object of the invention to provide a golf ball retrieving device for easily retrieving a golf ball from tall grass, water or ground obstacles, traps, etc.

It is a further object of the invention to provide a low cost golf ball retrieving device which selectively functions as either a ball netting apparatus or as a golf ball rake, in which selection of function is simply and rapidly accomplished by the golfer.

It is a more specific object of the invention to provide a golf ball retrieving device having a plurality of fingers which in one function are spread to form an effective golf ball rake, yet which fingers are quickly and easily closed to function as a golf ball retaining net or basket.

The above and other objects and advantages of the present invention will become apparent from the following detailed description when considered in conjunction with the accompanying drawings wherein:

FIG. 1 is a perspective view of an exemplary golf ball retriever embodying the features of the present invention, shown employed in a rake position;

FIG. 2 is a plan view of the golf ball retriever of FIG. 1;

FIG. 3 is a side view of the golf ball retriever of FIGS. 1–2;

FIG. 4 is a bottom view of the golf ball retriever of FIGS. 1–3;

FIG. 5 is a cross-sectional view taken along the line 5—5 in FIG. 2;

FIG. 6 is a cross-sectional view taken along the line 6—6 in FIG. 4;

FIG. 7 is a cross-sectional view taken along the line 7—7 in FIG. 3;

FIG. 8 is a perspective view of the golf ball retriever of FIGS. 1–7, shown employed in a golf ball netting or retrieving position;

FIG. 9 is a bottom view of the golf ball retriever of FIGS. 1–8, in the position shown in FIG. 8;

FIG. 10 is a side view of the golf ball retriever of FIGS. 1–9 in the position of FIG. 8;

FIG. 11 is a partial cross-sectional view taken along the line 11—11 of FIG. 9;

FIG. 12 is a perspective view of the base member of the golf ball retriever of FIGS. 1–11; and

FIG. 13 is a perspective view of the housing member of the golf ball retriever of FIGS. 1–11.

The exemplary golf ball rake and retriever disclosed herein includes basically an elongate handle to which is fixed a selective apparatus having a plurality of forked rake tines extending therefrom, which tines are movable from a substantially spread-apart rake position to a closely spaced position in which they provide, in combination with a member of the selective apparatus, a golf ball retaining basket. A dual purpose golf retrieving device is thereby provided, which device may be quickly and easily changed from a golf ball rake to a golf ball retrieving basket.

Referring now to the drawings, the exemplary golf ball retriever illustrated therein is indicated generally by the reference numeral **10**. Briefly describing the general relationships of this exemplary structure, a base **12**, individually illustrated in FIG. 12, is secured to an elongated telescoping handle **14**. A housing **16**, individually illustrated in FIG. 13, is slidably mounted over the base **12** and has secured thereto a plurality of extending rake tines **18**. A lever assembly **20** is pivotally secured to the housing **16** and provides a camming action against the base **12** so as to move the housing **16** with respect to the base **12**. The sides of cam slots **22** in the base **12** cause the rake tines **18** to pivot as the housing **16** is moved. Accordingly, as the lever assembly is rotated into a position overlying the rake tines **18**, the rake tines **18** close toward one another into a mutually closely spaced configuration underlying an aperture portion **24** of the lever assembly **20** and thereby defining a golf ball retaining basket.

Considering now in greater detail the retriever **10**, the handle **14** may be of any suitable construction and material. It is preferably of a multiple-section telescoping tubular aluminum construction so as to provide a lightweight handle of a substantial length suitable for retrieving golf balls from remote locations.

The base **12**, as may be seen from FIG. 12, may be constructed from a single shaped piece of sheet metal or other suitable material, in which appropriate apertures are formed. A pair of apertures **26** may be provided for receiving rivets **28** securing the base **12** to the end of the handle **14**. As may be seen in FIG. 6, 10 or 12, for example, the rivets **28** preferably extend substantially above the base **12**. This is provided by the placement of rivet spacers or washers **30** under each rivet. This provides a spacing means holding the base **12** away from the housing **16**, i.e., the rivet heads provide surfaces upon which the housing **16** may slide in spaced relationship over the base **12**.

Referring again to FIG. 12, it will be observed that the base **12** has a generally planar or horizontal surface **32**. In the surface **32** there is provided a plurality of spaced elongated apertures defining the cam slots **22**. The sides of the cam slots **22** are adapted to slidably engage the ends of the rake tines **18** to pivot the rake tines into and out of alignment with one another. The base **12** also includes a pair of opposing side extensions **36** upstanding from the horizontal surface **32**. Each of the side extensions **36** has an upwardly extending elongate slot **38** therethrough. This slot **38** is adapted to engage with a cam on the lever assembly **20** for the movement of the housing **16** with respect to the base **12**.

Considering next the housing **16**, as shown in FIG. 13, the housing **16** is generally similar in configuration and construction to the base **12** and is preferably adapted to closely slidably overlie the base **12**. Thus the housing **16** preferably has a horizontal surface **40** corresponding to the horizontal surface **32** of the base **12** and adapted to overlie the surface **32** in a closely spaced slidable relationship. The spacing therebetween is in part maintained by the extended rivets **28** as described above. Four tabs **42** are adapted to project inwardly over the edges of the side extensions **36** on the base and thereby secure the housing over the base. However, the housing is free to slide axially of the handle **14** and the base.

The housing **16** is adapted for the pivotal mounting thereto of the lever assembly **20**. The opposing sides of the housing have protruding apertured segments to accommodate large rivets **44** therethrough the rivets **44** pivotally fasten together the housing and the ends of the lever assembly **20**. Radially spaced around each rivet **44** there is preferably provided an approximately 180 degrees semi-circular slot **46**. This slot **46** provides an aperture through the housing **16** for the extension therethrough and unobstructed movement of a cam on the lever assembly **20**.

Preferably the housing **16** is also provided with one integral axially extending central rake tine **48**. Since the rake tine **48** is central the other rake tines it does not have to be moved to open the tines into a rake configuration. Thus it may be formed simply as a unitary extension of the housing **16**.

Considering all of the rake tines **18** it may be seen that they are preferably narrow, elongated resilient strips of steel or other suitable material, of a configuration providing a highly efficient raking action. The raking characteristics are not compromised or sacrificed to provide the ball netting or retrieving characteristics, as in prior structures. Each rake tine is preferably substantially curved at the free or outer end **49** to a radius somewhat less than that of a golf ball. As may be particularly seen in FIGS. 1–3, when the golf ball receiver **10** is in its raking position the rake tines **18** are spread apart in a radially furcate or forked configuration. In the exemplary structure two pivotable rake tines are provided on each side of the central tine **48**. The forked configuration provides an efficient raking since the tines rake a substantial total area and are adapted to catch the golf ball and rake it inwardly. Preferably the curved ends **49** of the rake tines are evenly spaced from one another in this position by a distance slightly less than the diameter of a golf ball, so that a golf ball may be raked out of water, weeds or other foreign material while allowing the foreign material to freely pass between the rake tines.

Each of the rake tines **18**, other than the central rake tine **48**, is preferably pivotally secured to the forward edge of the housing **16** by rivets **50**. The inner ends of the rake tines then preferably extend rearwardly for a short distance beyond the rivet **50**, thus extending between the housing **16** and the base **12**. These inwardly extending ends of the rake tines preferably terminate in angled lugs **52**. Each lug **52** is adapted to ride within one of the cam slots **22** in the base **12**, and to be radially positioned thereby. The rivets **50** also provide additional points of spacing and slidable engagement between the housing and the base.

The lever assembly **20** preferably provides the operating member for the switching of the apparatus **10** from a rake to a retriever, and also provides cooperation with the rake tines **18** in the retriever operation. Preferably the lever assembly **20** is an elongated generally U-shaped member, with the ends thereof pivotally secured to the housing **16** by the rivets **44** as previously described. The ends of the lever assembly preferably extend a short distance radially beyond the center of rotation about each rivet **44**. The ends preferably terminate with an inwardly projecting cam **54** extending freely through the semicircular slot **46** in the housing into the elongate vertical slot **38** in the base **12**. Rotation of the lever assembly **20** about the rivets **44** rotates the cam **54**, which acts against the sides of the slot **38** and thereby forces the housing **16** to slide with respect to the base **12**.

It will be observed that the lever assembly **20** is rotatable between two opposite positions. In the retracted position, as illustrated in FIGS. 1–6, the lever assembly is rotated away from the rake tines **18** and into alignment with and closely adjacent the handle **14**. In this position the lever assembly **20** is completely out of the way of the rake tines **18** and therefore, does not interfere in any way with the raking action. However, when the lever assembly **20** is rotated 180 degrees forward toward the rake tines it is moved into a forward position where it is overlying, and in parallel spaced relationship, with the rake tines. The aperture portion **24** of the lever assembly **20** preferably substantially defines a hoop slightly larger in internal diameter than the diameter of the golf ball. It may be formed from a loop of heavy wire or other suitable material. This aperture portion **24** preferably is spaced inside the curved ends **49** of the rake tines **18**, and spaced above the principal portion of all of the rake tines by a distance approximately equal to one-half

the diameter of a golf ball. Accordingly a golf ball is readily retained within the aperture portion by the combined action of the aperture portion **24** and the rake tines **18**. Further, the curved ends **49** of the rake tines are so situated as to assist in guiding a golf ball into the aperture portion **24**. As may be clearly seen in FIGS. 8 and 10 they extend upwardly around and somewhat above the aperture portion.

The operation of the golf ball retriever **10** from the viewpoint of the individual golfer is very simple and rapid. Pulling the lever assembly **20** to the retracted position allows the device to be used as a highly effective rake, as shown in FIG. 1. By rotating the lever assembly **20** into the forward position, which requires little effort, the device becomes a ball netting retriever as illustrated in FIG. 8.

Considering the operation of the mechanism itself, the only manual operation is that of moving the lever assembly **20** between the remote position and the forward position. The lever assembly is the only member which need be directly operated. The movement of the rake tines **18** is accomplished indirectly through a camming operation. As previously described, the cams **54** on the ends of the lever assembly **20** push against the sides of the slots **38** in the base **12** as the lever assembly is rotated. The reaction on the lever assembly **20** causes the housing to slide with respect to the base, since the lever assembly is pivotally secured to the housing. As the housing slides forward over the base the rake tines **18**, which are secured to the housing **16**, also move forward. This causes the lugs **52** at the end of the rake tines to slide forward in the cam slots **22** in the base. Due to the outwardly slanting configuration of the cam slots **22** the lugs **52** are cammed outwardly, which thereby pivots the rake tines inwardly. Thus as the lever assembly **20** reaches its fully forward position the rake tines **18** are closed together in a mutually closely spaced position. The central fixed rake tine **48**, of course, is not pivoted.

The width of each of the rake tines **18** is preferably such that in the mutually closely spaced position, the total width thereof is somewhat less than the diameter of the aperture portion **24** of the lever assembly. Accordingly a compact golf ball retriever of minimum profile is provided which may be inserted into difficult positions. It will be observed that the device is inverted when used for retrieving as compared to the raking operation. The curved ends **49** of the tines in effect provide resilient runners and fenders which assist in pushing the device through obstructions to successfully retrieve a golf ball.

It may be seen that there has been disclosed herein a novel lightweight golf ball retriever which provides rapidly and conveniently selectable operation as either an efficient golf ball rake or an effective golf ball retriever. Numerous modifications and variations of golf ball retrievers in accordance with the invention will be apparent to one skilled in the art, and it is intended to encompass in the following claims all such variations and modifications as fall within the true spirit and scope of the invention.

What is claimed is:

1. A golf ball retrieving device, said device comprising:
an elongated handle;
base means mounted to said handle;
a plurality of rake tine means extending from said base means, said rake tine means being movable between a mutually furcate rake position and a mutually closely spaced position;
and operating means on said base means operable between a first position and a second position;
said operating means when operated into said first position moving said rake tine means into said rake position and when operated into said second position moving said rake tine means into said mutually closely spaced position;

said operating means defining a golf ball retaining basket with said rake tines in said position.

2. A golf ball retrieving device, said device comprising:
an elongated handle;
a base secured to said handle;
a housing movably mounted to said base;
a plurality of rake tines extending from said housing and pivotable between a mutually furcate position and a mutually closely spaced position;
lever means engaging said base and movable between a retracted position and a forward position;
and camming means operated by said lever means for pivoting said rake tines from said furcate position to said closely spaced position when said lever means is moved from said retracted position into said forward position;
said lever means having a golf ball receiving aperture portion defining a golf ball retaining basket with said rake tines in said forward position.

3. A golf ball retrieving device, said device comprising:
an elongated handle;
a base secured to said handle;
a housing slidably mounted over said base;
a plurality of rake tines extending from said housing and pivotable between a mutually radially furcate position and a mutually closely spaced position;

a lever assembly secured to said housing and pivotable between a retracted position away from said rake tines and a forward position overlying said rake tines;
said rake tines having arcuate ends extending toward said lever assembly when said lever assembly is in said forward position;
camming means on said lever assembly for engaging and sliding said housing with respect to said base;
and further camming means on said base engaging and pivoting said rake tines from said furcate position to said closely spaced position when said lever assembly is pivoted from said retracted position into said forward position;
said lever assembly defining an individual golf ball retaining basket with said rake tines in said forward position.

References Cited by the Examiner

UNITED STATES PATENTS

2,738,214	3/1956	Zimmers	294—19
3,115,740	12/1963	Hartley	294—19

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