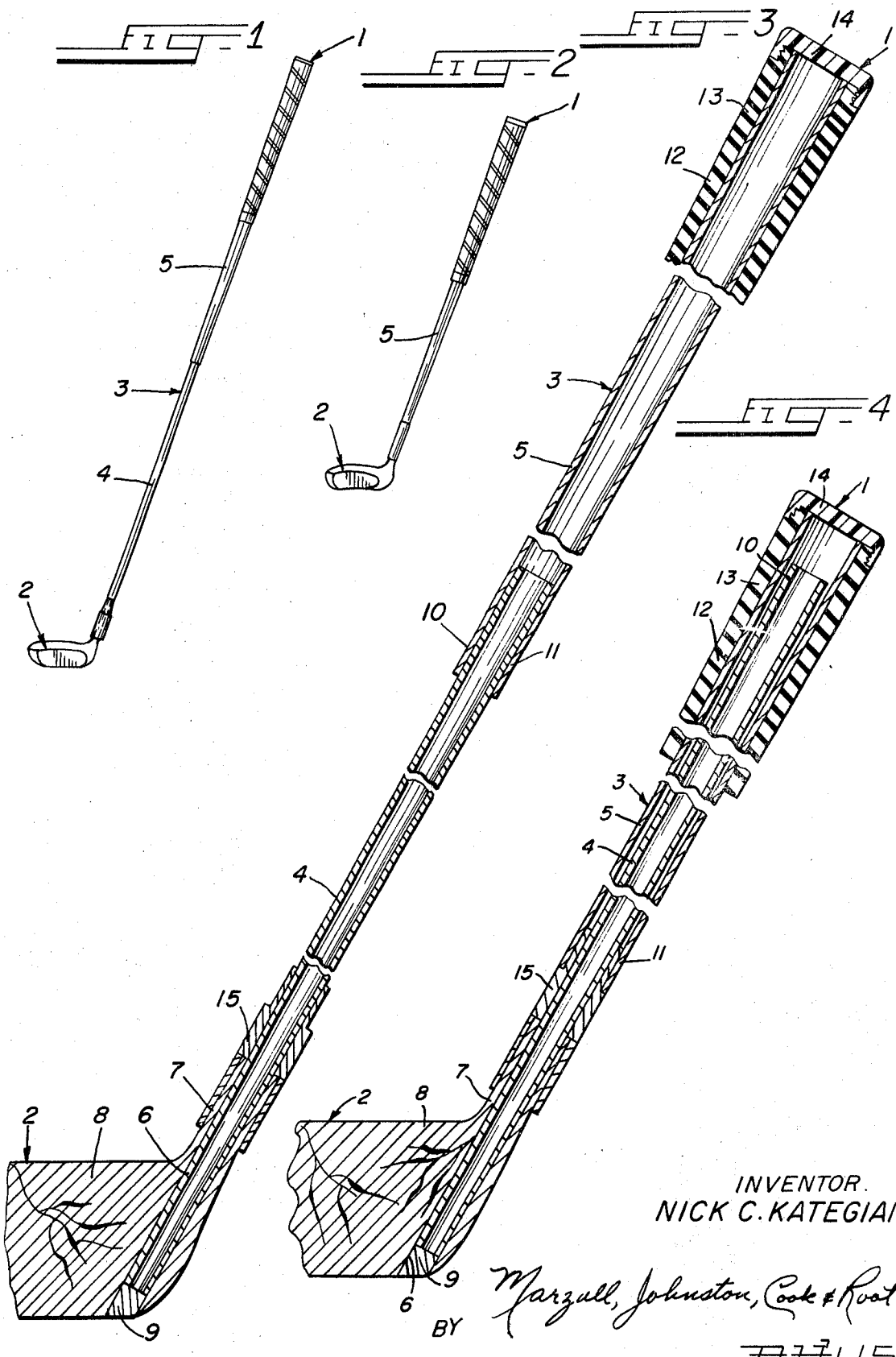
Sept. 15, 1970 N. C. KATEGIAN 3,528,660

COLLAPSIBLE GOLF SHAFT

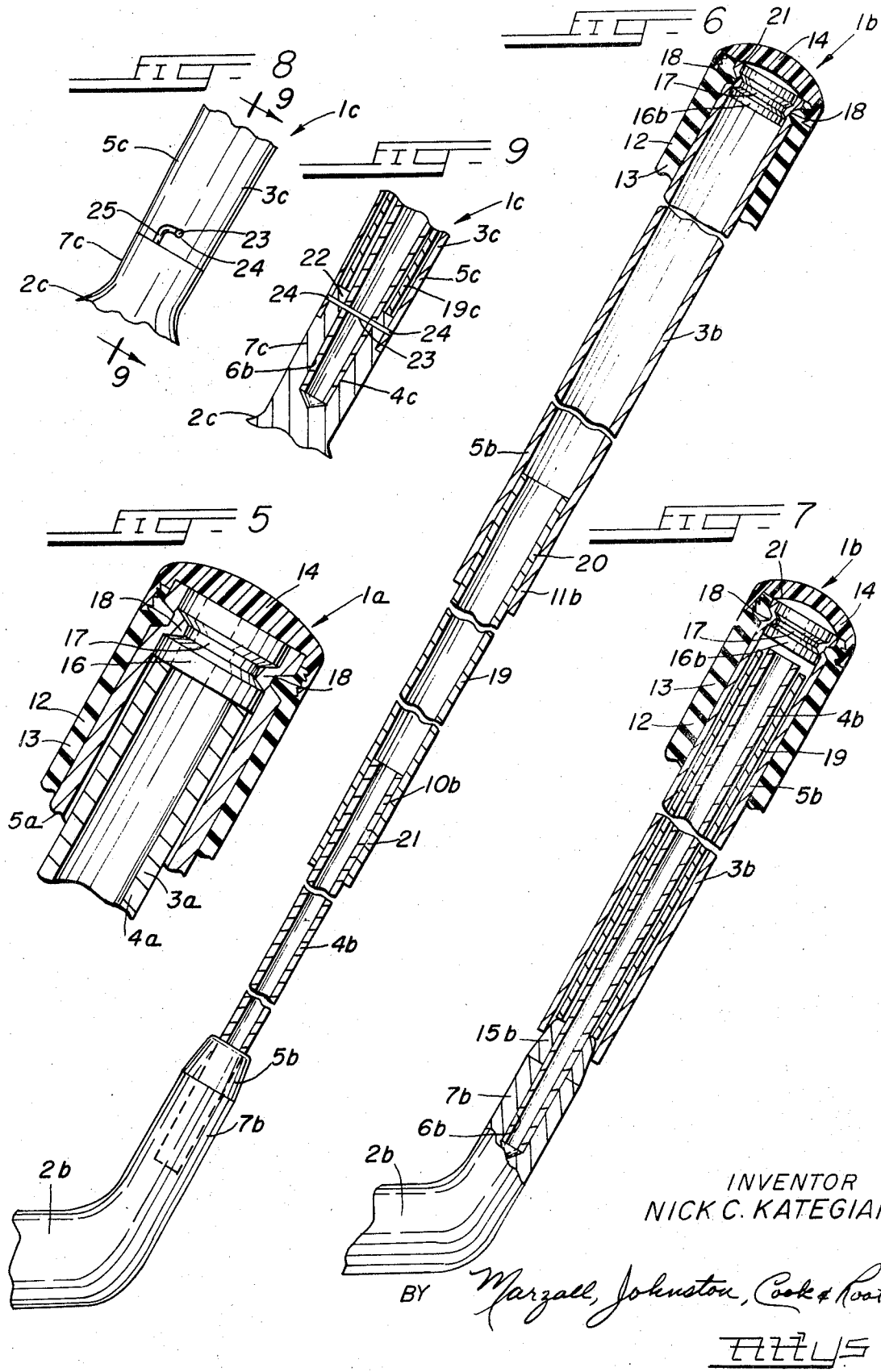
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COLLAPSIBLE GOLF SHAFT

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3,528,660

COLLAPSIBLE GOLF SHAFT

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Int. Cl. A63b 53/12

U.S. Cl. 273—80 9 Claims

ABSTRACT OF THE DISCLOSURE

A golf club having an axially collapsible shaft comprising a plurality of telescoping tubular sections, which, in fully extended position, are securely frictionally held against rotation relative to each other. The sections are releasably held in collapsed position by a bayonet slot connection or by a frictional fit between the inside of the outer section and the outside of a ferrule fixed on the neck portion of the club head.

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of my copending application, Ser. No. 668,271, filed Aug. 7, 1967, now abandoned, which is a continuation of an application, Ser. No. 322,851, filed Nov. 12, 1963, now abandoned, which was copending therewith.

BACKGROUND OF THE INVENTION

The present invention relates to golf clubs, and has particular reference to shafts for golf clubs.

An important object of the invention is to provide a telescopic shaft for golf clubs, whereby clubs embodying the shaft, when not in use, may be collapsed to minimal length, of the order of fifteen inches or less, to facilitate transportation and storage thereof and allow the same to be packaged for sale in containers of convenient size for storage and shipment.

Another important object of the invention is to provide an axially extensible and collapsible golf club shaft embodying tubular interfitting sections and having simple and exceedingly inexpensive means for holding the shaft components in collapsed condition and also firmly and rigidly in extended position; a further object being to provide means operable to rigidly interconnect the telescopic shaft sections together in extended position to form a composite shaft that is the substantial equivalent of a single continuous element of unitary construction, so that the collapsible shaft in extended position will have substantially the same flexibility and whipping action as a unitary shaft of conventional formation.

Another important object is to provide a sectional telescopically collapsible and extensible golf club shaft that is particularly well adapted to all of the golf club forms commonly known as "putters," "irons" and "woods," a feature of the shaft structure being that its component parts may be collapsed substantially within the confines of the handle portion of the club, so that the overall length of the club, when in collapsed condition, comprises substantially the length of the handle section plus the length of the club head; a further object of the invention being to form a seat at the upper end of the neck of the club head sized to snugly and frictionally fit within the lower end of the handle section, when the club is in collapsed condition, to thereby retain the club head in frictional engagement with the lower end of the handle section and thus hold the sectional club components in collapsed condition housed within the handle section.

Another important object of the invention is to provide a novel collapsible golf club shaft structure embodying a plurality of shaft sections collapsible one within the other, with the inner and outer sections being so sized and tapered that, when forcibly drawn to extended position, with a jerk, the sections will become wedgingly locked together, by the tight, frictional engagement of the interfitting tapered portions of the shaft sections, to thereby interconnect the sections as a unitized shaft affording, substantially, the flexing action or "feel" of an integral, unitary shaft.

Yet another object is to enable a novel collapsible golf club shaft structure of the aforementioned type to be afforded wherein one of the shaft sections is a head carrying section adapted to be secured in the neck of a club head at the lower end of the section, and another of the sections is a handle section disposed around the head carrying section, with the upper end of the head carrying section and the lower end of the handle section being so sized and tapered to become wedgingly locked together, when manually forcibly drawn to extended position with a jerk.

A further object is to enable a novel collapsible golf club shaft structure to be afforded which embodies a plurality of shaft sections collapsible one within the other and including a head carrying section adapted to be secured in the neck of a club head at one end of the section, and sized for enclosure within an intermediate section of slightly larger sectional size, the intermediate section in turn being sized for reception within another still larger section, the upper ends of the head carrying and intermediate sections being tapered to snugly and wedgingly interfit tightly within the correspondingly tapered lowered ends of the slightly larger sections within which they are received, so that, when forcibly drawn to extended position in the aforementioned manner, the sections become so wedgingly locked together.

Another object is to afford a novel golf club embodying a head mounted on the lower end of a shaft, with the shaft embodying a plurality of telescopically disposed sections, including a handle section at the upper end thereof, with the sections being so sized and tapered that, by forcibly drawing them to extended position, with a jerk, they may be so securely frictionally engaged with each other that the force exerted on the head during a normal ball-striking swing of the club, is insufficient to turn the head relative to the handle section; and, by pounding on the outer end of the handle section, axially of the shaft, the sections may be freed from the aforementioned extended position for collapsing one within the other.

Another object is to afford a novel handle structure for collapsible golf club shafts; a further object of the present invention being to afford a novel outer end construction for such handle sections; and another object being to afford a novel outer end construction for such handle sections which is effective to facilitate such freeing of shaft sections from extended position by such pounding, and which is effective to protect such handle sections against being damaged by the collapsing of other sections thereinto.

A further object is to enable the head portion of a collapsible golf club to be protected against damage in a novel and expeditious manner.

Another important object is to provide a collapsible golf club shaft structure comprising a head carrying section of minimal sectional size, a handle section of maximum sectional size, and, optionally, one or more intermediate sections of intermediate sectional size, the sections being axially collapsible and extensible each within the next adjacent section; a further object being to form the upper ends of the head carrying and any such inter-

mediate sections with externally tapered portions of appreciable length and to form the lower ends of the handle and of any such intermediate sections internally with tapered portions to snugly and wedgingly receive the upper ends of the enclosed sections, when the parts are in extended position.

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.

DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a side elevational view of a collapsible golf club, embodying the principles of the present invention, showing the golf club in extended position;

FIG. 2 is a side elevational view of the golf club shown in FIG. 1, showing the club disposed in collapsed position;

FIG. 3 is an enlarged, fragmentary, longitudinal sectional view through the golf club shown in FIG. 1;

FIG. 4 is an enlarged, fragmentary, longitudinal sectional view through the golf club shown in FIG. 2;

FIG. 5 is a detail, sectional view of the upper portion of a handle section, showing a modified form of the present invention;

FIG. 6 is a fragmentary, longitudinal sectional view of a golf club, showing a modified form of the present invention, with the golf clug shown in extended position;

FIG. 7 is a fragmentary, longitudinal sectional view of the golf club shown in FIG. 6, with the club shown in collapsed position;

FIG. 8 is a fragmentary elevational view of the head connected end of the shaft in collapsed condition to show a modified latching arrangement; and

FIG. 9 is a sectional view taken substantially along the line 9—9 in FIG. 8.

DESCRIPTION OF THE EMBODIMENTS SHOWN HEREIN

A golf club **1**, embodying the principles of the present invention, is shown in FIGS. 1 to 4, inclusive, of the drawings to illustrate the presently preferred embodiment of the present invention.

The golf club **1** embodies, in general, a ball striking head **2** mounted on the lower end portion of an elongated shaft **3**. The head **2** is of the style commonly referred to as a "wood." However, as will be appreciated by those skilled in the art, any suitable style of head, such as, for example, that for an "iron" or a "putter" may be used without departing from the purview of the present invention.

The shaft **3** embodies two telescopically interfitting, tapered, tubular shaft sections, including a lower or head carrying section **4** and an upper or handle section **5**. The lower end of the lower section **4** is snugly and tightly fitted into a preferably tapered socket **6** formed in the neck **7** and the body **8** of the head **2**, FIGS. 3 and 4, the section **4** being firmly secured in place in the socket **6** by any suitable means, such as, for example, an epoxy resin cement. A plug **9** preferably is mounted in the socket **6**, below the shaft section **4** and secured therein by suitable means, such as epoxy resin cement, to thereby close the bottom of the socket **6**.

The head carrying section **4** and the handle section **5** are of such size and taper that the upper end portion **10** of the head carrying section **4** fits wedgingly within the lower end portion **11** of the handle section **5**, when the golf club **1** is in extended position. In order to insure joint tightness, when the golf club **1** is extended, the sections **4** and **5** are preferably of such size and taper that the overlap between the tightly wedges portions **9** and **10** thereof, respectively, is of substantial length, preferably of the order of one to three inches. The sections **4** and **5** are preferably made from steel tubing having a wall thickness in the order of .017 to .020 of an inch. At the overlap between the portions **10** and **11**, in the extended golf club **1**, the taper of both the inner and outer surfaces of the sections **4** and **5** preferably is in the order of .010 to .014 of an inch per inch of length. Preferably, the sections **4** and **5** are of round transverse cross section throughout their lengths.

A conventional hand grip sleeve **12** is mounted on the upper end portion of the upper section **5** of the shaft **3** and is secured thereto by any suitable means such as, for example, by epoxy resin cement. Preferably, the hand grip sleeve **12** embodies a tubular body portion **13** and an end cap or plug **14** threaded onto the outer end of the body portion **13**, as shown in FIGS. 3 and 4.

A ferrule **15** is mounted on the upper end portion of the neck **7** of the club head **2**, and preferably extends upwardly therefrom a short distance along the lower end portion of the head carrying section **4** of the shaft **5**, FIGS. 3 and 4. Preferably, the ferrule **15** is of such cross sectional size that when the golf club **1** is disposed in collapsed position, as shown in FIGS. 2 and 4, the lower end of the handle section **5** of the shaft **3** is engaged therewith with a snug frictional fit for purposes which will be discussed in greater detail presently.

In assembling the golf club **1**, the head carrying section **4** may be inserted downwardly through the handle section **5**; the body portion **13** of the hand grip **12** may be cemented to the upper end portion of the handle section **5**; the plug **14** may be threaded into the hand grip body portion **13**; the lower end portion of the head carrying section **4** may be cemented into the socket **6**; and the lower end portion of the socket **6** may then be closed by cementing the plug **9** therein.

When the club shaft **3** is in collapsed condition, FIG. 4, the head carrying section **4** fits loosely within the handle section **5**, with the lower end portion of the handle section **5** extending downwardly over the upper end portion of the ferrule **15**. It will be remembered that the lower end portion of the handle section **5** is of such size that it snugly engages the outer surface of the ferrule **15**. Preferably, the lower end portion of the handle section **5**, in collapsed position, engages the ferrule **15** with a snug sliding fit so that it is effective to frictionally secure the parts together, thereby releasably holding the club components in collapsed condition.

Preferably, the lengths of the shaft sections **4** and **5** are such that when the golf club **1** is in collapsed condition, the upper end of the head section **4** is disposed in downwardly spaced relation to the end cap **14** of the hand grip **12**, FIG. 4.

Conventional "woods" and "irons" normally have overall lengths of the order of thirty-six to forty-three inches, including approximately five inches in the heads of the "woods" and three inches in the heads of the "irons." Conventional "putters" normally have lengths of the order of thirty-three to thirty-six inches including approximately three inches in the heads thereof.

In the practice of the present invention, the golf club **1** may be readily constructed in the form of a "wood" having an overall extended length of forty-three inches and an overall collapsed length of twenty-five and one-quarter inches, while affording a three inch overlap between the sections **4** and **5** in extended position; one inch clearance between the upper end of the head carrying section **4** and the end plug **14** of the hand grip **12**, in collapsed position; and an overlap of one-half inch between the lower end of the handle section **5** and the upper end portion of the ferrule **15**, in collapsed position. For example, to accomplish this with a five inch club head, the head carrying section **4** may have an overall length of twenty-four inches and be inserted four and one-quarter inches into the head **2**; and the handle section **5** may have an overall length of twenty-one and one quarter inches and

be of such cross sectional size at the lower end thereof that it will extend downwardly over the ferrule **15** a distance of one-half inch, when the club **1** is disposed in fully collapsed position.

If in the practice of the invention the golf club **1** is constructed in the form of an "iron" or "putter" having a head length of three inches and an overall extended length of thirty-six inches, such a club may be readily constructed to have an overall collapsed length of twenty-two and three-quarter inches while affording a three inch overlap between the shaft sections **4** and **5** in fully extended position; a clearance of one inch between the upper end of the head carrying section **4** and the end cover **14** of the hand grip **12**, in collapsed position; and an overlap of one-half inch between the lower end portion of the handle section **5** and the ferrule **15**. This may be accomplished by using a head carrying section **4** having an overall length of nineteen and three-quarter inches, and which extends into a three inch club head the distance of one inch; and a handle section **5** having an overall length of twenty and one-quarter inches, which is of such cross sectional size at the lower end portion thereof that it extends downwardly over the upper portion of the ferrule **15** a distance of one-half inch when the club **1** is in fully collapsed position.

When the club **1** is in collapsed position, and it is desired to condition it for use, it is merely necessary to manually pull the head carrying section **4** and the handle carrying section **5** apart with a sufficient jerk to firmly seat the upper portion **10** of the head carrying section **4** in wedging engagement with the lower portion **11** of the handle section **5**. With a golf club constructed in the manner of the golf club **1** shown in the drawings, the average adult male will find no difficulty in manually jerking the sections **4** and **5** apart with sufficient force that the portions **10** and **11** are wedged so firmly together that a normal golf ball striking swing of the club **1** is incapable of turning the head **2** relative to the handle section **5**.

With the club **1** thus disposed in fully extended position, it may be readily collapsed by grasping the head **2** as a handle and pounding the upper end of the handle section **5** against any firm unyielding body, such as a floor or pavement. By thus tapping the upper end of the handle section **5** upon a firm base, the wedged portions **10** and **11** may be released, after which the parts of the club **1** may be readily moved to the fully collapsed position shown in FIG. 4, in which the lower end of the handle section **5** is disposed in snug frictional engagement with the upper end portion of the ferrule **15**, to thereby releasably hold the parts of the club **1** in such collapsed position.

A modified form of the present invention is shown in FIG. 5, and like reference numerals have been used on like parts, and the same reference numerals with the suffix "*a*" have been used on parts which are similar but which have been substituted for parts of the preferred form of the present invention.

It will be observed that the changes made in the modified form of the present invention shown in FIG. 5 comprise the following: a hardened steel plug **16** has been mounted in the upper end portion of the handle section **5***a*; and the lengths of the head carrying section **4***a* and the handle section **5***a* have been adjusted so that in fully collapsed position, as shown in FIG. 5, the upper end of the head carrying section **4***a* is disposed in abutting engagement with the lower face of the plug **16**.

The plug **16** may be made of any suitable material such as, for example, case hardened steel, and preferably is substantially cylindrical in shape, with an annular groove **17** extending around the periphery thereof substantially midway of its length. The plug **16** preferably is of such size that, on assembling the club **1***a*, it may be readily inserted into the upper end of the head section **5***a*, and is disposed therein with a relatively snug, freely slideable fit. Preferably, the plug **16** is cemented into the end of the head section **5***a* with a suitable cement such as, for example, an epoxy resin cement. Thereafter, the plug **16** is staked in position in the head section **5***a* by swedging the head section **5***a* inwardly into the groove **17** at a plurality of spaced points **18**.

The hand grip **12** is mounted on the upper end portion of the head section **5***a* in the same manner as heretofore described with respect to the mounting of the hand grip **12** on the head section **5** shown in FIGS. 1–4, and the end cap **14** preferably rests on the outer end of the plug **16**.

With the club **1***a* constructed in the manner shown in FIG. 5, it will be seen that the plug **16** affords a structure which is effective in assisting in absorbing pounding shock when collapsing the shaft **3***a*. Also, it affords effective protection against the end cap **14** of the hand grip **12** being dislodged, or being cut or otherwise damaged by the head carrying section **4***a*.

In FIGS. 6 and 7 another modified form of the present invention is shown, and parts which are the same as parts shown in FIGS. 1–4 are indicated by the same reference numerals, and parts which are similar to but which have been substituted for parts shown in FIGS. 1–4 are indicated with the same reference numerals with the suffix "*b*" added thereto.

The golf club **1***b* shown in FIGS. 6 and 7 is in the form of an "iron" and embodies a ball striking head **2***b*, and a collapsible shaft structure **3***b* which embodies three telescopically interfitting, tapered, tubular shaft sections, including a head carrying section **4***b*, a handle section **5***b* and an intermediate spacing section **19**. The lower end of the head carrying section **4***b* is snugly and tightly fitted into a preferably tapered socket **6***b* formed in the neck or hozel **7***b* of the golf club head **2***b*, and is firmly secured in place in the socket by suitable means such as, for example, an epoxy resin cement.

The upper ends of the head carrying section **4***b* and the spacing section **19** are sized respectively to fit wedgingly within the lower ends of the spacing section **19** and the handle section **5***b*, when the club is in extended condition. In order to insure joint tightness, when the golf club **1***b* is extended, the upper end portions **10***b* and **20** of the sections **4***b* and **19**, respectively, are preferably of such size and outside taper that the overlap between them and the lower end portions **21** and **11***b* of the intermediate section **19** and the handle section **5***b*, respectively, when the overlapped portions are in fully extended, tightly wedged relation to each other, is of substantial length, preferably of the order of one inch to three inches. The sections **4***b*, **5***b* and **19** are preferably made from steel tubing having a wall thickness in the order of .017 to .020 of an inch. At the overlap between the portions **4***b* and **19** and the portions **19** and **5***b*, in the extended golf club **1***b*, the taper of both the inner and outer surfaces of the sections **4***b*, **5***b* and **19** preferably is in the order of .008 to .009 of an inch. Like the sections **4** and **5** shown in FIGS. 1–4, the sections **4***b*, **5***b* and **19** preferably are of round transverse cross section throughout their lengths.

The conventional hand grip sleeve **12**, embodying a tubular body portion **13** and an end cap or plug **14** threaded thereonto, is mounted on the upper end portion of the handle section **5***b* in the same manner as heretofore discussed with respect to the corresponding hand grip **12** shown in FIGS. 1–4. A plug **16***b*, which is a modified form of the plug **16** shown in FIG. 5, is mounted in the upper end of the handle section **5***b*. The difference between the plug **16***b* and the plug **16** is that the plug **16***b* embodies a radially outwardly projecting flange **21** at the outer end portion thereof, which has a diameter corresponding to the outside diameter of the upper end of the handle section **5***b*. In the golf club **1***b*, the plug **16***b* is secured to the handle section **5***b* by cement, and by the staking **18** with the head-remote, or upper end of the handle section **5***b* disposed in abutting engagement with the lower face of the flange **21**.

A ferrule or bushing **15***b*, in the form of a hardened steel bushing, is mounted on the upper end portion of the hozel **7***b* of the club head **2***b*, and preferably extends upwardly therefrom a short distance along the lower end portion of the head carrying section **4***b* of the assembled club **1***b*. Preferably, the lower face of the ferrule **15***b* is of the same cross sectional size as the upper face of the hozel **7***b*, and the ferrule **15***b* slopes upwardly and inwardly therefrom to the top thereof. The upward and inward taper of the ferrule **15***b* is such that when the club **1***b* is disposed in collapsed position as shown in FIG. 7, the lower end portion of the handle section **5***b* is disposed on the upper end portion of the ferrule **15***b* with a snug, slideable fit so that they are frictionally held together, to thereby releasably hold the club components in fully collapsed condition.

Golf club heads for "irons" and "putters" are normally made of forged steel. With the club **1***b* constructed in the aforementioned manner, the ferrule **15***b* not only affords a latching member for frictional engagement with the handle section **5***b*, but affords an effective member for protecting the upper end portion of the hozel **7***b* of the head **2***b* from being cut or otherwise damaged by the lower ends of the sections **5***b* and **19** of the shaft **3***b*.

In assembling the golf club **1***b*, each of the sections **4***b* and **19** may be assembled through the larger end of its enclosing section **19** and **5***b*, respectively, after which the upper end of the handle section **5***b* may be closed by fastening the plug **16***b* therein in the previously described manner, to provide a stop for engaging the upper end of the intermediate section **19** and prevent emergence thereof through the upper end of the handle section **5***b* when the club **1***b* is being collapsed. Thereafter, the hand grip **12** may be cemented to the upper end portion of the handle section **5***b*; the ferrule **15***b* may be secured to the upper face of the hozel **7***b* by suitable means such as an epoxy resin cement; and the lower end portion of the head carrying section **4***b* may then be cemented into the ferrule **15***b* and the socket **6***b* in the hozel **7***b* with a suitable cement, such as the aforementioned epoxy resin cement.

When the club shaft **3***b* is in collapsed condition, FIG. 7, the intermediate section **19** extends loosely around the head carrying section **4***b*, and fits loosely within the handle section **5***b*. It will be remembered that in this condition of the club **1***b*, the lower end portion of the handle section **5***b* fits snugly around the upper portion of the ferrule **15***b*, to thus frictionally secure the head **2***b* and the handle section **5***b* together and thereby releasably hold the club components in collapsed condition. Preferably, the lengths of the shaft sections **4***b*, **5***b* and **19** are such that when the golf club **1***b* is in collapsed condition, the upper ends of the sections **4***b* and **19** are disposed in downwardly spaced relation to the plug **16***b*, FIG. 7.

It will be remembered that conventional "woods" and "irons" normally have overall lengths of the order of thirty-six to forty-three inches, and conventional "putters" normally have lengths of the order of thirty-three to thirty-six inches. Accordingly, for a thirty-six inch "iron" or "putter," the sections **4***b*, **5***b* and **19** may be made about one foot in length, so that the club, when collapsed, will measure about fifteen inches from the bottom of the club head to the head remote end of the handle. For example, in affording a thirty-six inch putter, the sections **4***b* and **19** may be made twelve and one-eighth inches long, with a one inch overlap between each of the sections, and with the head carrying section extending into the ferrule **15***b* and the head **2***b* a distance of one inch; and the handle section **5***b* may be made twelve and three-quarter inches long, with the plug **16***b* extending downwardly thereinto a distance of three-eighths of an inch. With such construction, the putter which is thirty-six inches long in fully extended position, with a three inch head, will be between fifteen and fifteen and three-quarter inches long in fully collapsed position. By increasing the length of each of the

three sections **4***b*, **5***b* and **19** by the same amount, a longer extended shaft length, which is a multiple of the aforementioned amount, is provided. Thus, a longer extended shaft length may be provided without greatly increasing the collapsed length of the club.

As with the club **1**, shown in FIGS. 1–4, when the club **1***b* is in collapsed position, and it is desired to condition it for use, it is merely necessary to manually pull the handle and head carrying sections apart to a fully extended position with a sufficient jerk to firmly seat the wedging portions **10***b* and **20** in the surrounding lower portions **21** and **11***b* of the respective enclosing sections **19** and **5***b*. The club **1***b* may be readily collapsed from fully extended position by grasping the head **2***b* as a handle and pounding the upper end of the handle section **5***b* upon any firm unyielding body, such as a floor or pavement. By thus tapping the upper end of the handle section **5***b* upon a firm base, the wedging portions **10***b* and **20** of the sections **4***b* and **19**, respectively, may be released, usually successively, from wedging engagement with the lower ends **21** and **11***b* of the shaft sections **19** and **5***b*, respectively. After such release of the wedged sections, the parts of the club **1***b* may be readily moved to the fully collapsed position shown in FIG. 7, in which the lower end of the handle section **5***b* is disposed in interfitting engagement with the upper end of the ferrule **15***b* disposed on top of the neck or hozel **7***b* of the club head **2***b*.

In FIGS. 8 and 9 another modified form of the present invention is shown, and parts which are the same as parts shown in FIGS. 6 and 7 are indicated by the same reference numerals, and parts which are similar to but which have been substituted for parts shown in FIGS. 6 and 7 are indicated with the same reference numerals with the suffix "*c*" substituted for the suffix "*b*."

In the golf club **1***c* shown in FIGS. 8 and 9, the lower end of the handle section **5***c* is preferably sized to snugly yet slidingly engage a seat **22** formed at the top of the neck **7***c* of the club head **2***c*. A head holding pin **23** extends through the seat portion **22** of the neck **7***c* and through the head holding section **4***b* of the shaft **3***c* to thereby secure the section **4***b* to the head **2***c*. The opposite ends of the pin **23** extend outwardly from the seat **22** to form diametrically opposed latching detents **24** for releasable reception in bayonet slots **25** formed on opposite sides of the lower end of the handle section **5***c* to hold the shaft components in collapsed condition.

From the foregoing it will be seen that the present invention affords a novel golf club wherein the shaft portion thereof may be quickly and easily changed between a fully extended position and a substantially shorter collapsed position.

In addition, it will be seen that with a collapsible golf club constructed in accordance with the principles of the present invention, when it is disposed in fully extended position, the shaft sections thereof are so firmly wedged together that a normal golf ball striking swing of the club is incapable of turning the head thereof relative to the handle thereof.

Also, it will be seen that movement of the club shaft sections to fully extended position and to fully collapsed position may be readily effected.

In addition, it will be seen that the present invention affords a novel, practical collapsible golf club wherein securing of the portions thereof in fully extended position may be quickly and easily effected in a novel and expeditious manner.

In addition, it will be seen that the present invention affords a novel collapsible golf club which is practical and efficient in operation, and which may be readily and economically produced commercially.

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 ar-

rangement of the several parts without departing from the spirit or scope of the invention, or sacrificing any of its advantages, the forms herein disclosed being preferred embodiments for the purpose of illustrating the invention.

I claim:

1. A golf club having
(a) a ball striking head, and
(b) a collapsible shaft embodying
(1) a tubular handle section and
(2) a plurality of additional shaft sections telescopically extensible and collapsible one within another and all within the handle section,
(c) said additional sections including
(1) a head carrying shaft section
(a') secured at one end to the ball striking head of the club and
(b') extending telescopically within another of said additional sections,
(d) said ball striking head being formed with a shaft connecting neck in which the head carrying shaft section is secured,
(e) said handle section having an end sized to circumferentially engage the neck when the shaft is collapsed,
(f) interengageable latch means on the neck and on the neck engaging end of said handle section for holding said shaft in collapsed condition,
(g) said latch means on said neck engaging end comprising a latching slot, and
(h) said latch means on said neck comprising a projection latchingly receivable in said slot to hold said shaft in collapsed condition.

2. A golf club comprising
(a) a ball striking head, and
(b) a collapsible shaft comprising a plurality of elongated shaft sections
(1) telescopically extensible and collapsible in an axial direction between
(a') a fully extended position relative to each other, and
(b') a fully collapsed position wherein they are disposed one within the other, and
(2) including
(a') a head carrying section, at one end, secured to said ball striking head in such position that said head projects laterally therefrom, and
(b') a handle section at the other end,
(c) said handle section being the radially-outermost one of said shaft sections when said shaft sections are disposed in said fully collapsed position,
(d) each of said shaft sections which is disposed within another of said shaft sections having a uniform tapered outer peripheral surface which is overlappingly wedgingly engaged with a matingly tapered inner surface of a respective other shaft section when said shaft sections are manually jerked to said fully extended position,
(e) said overlappingly engaged surfaces being of sufficient extent that when they are so wedgingly engaged they are frictionally engaged with each other with sufficient force by reason of said frictional engagement alone to prevent movement of said head carrying section in any direction relative to said handle section by reason of the forces applied to said head by a normal golf ball striking swing of the club.

3. A golf club as defined in claim 2, and in which
(a) the portions of said shaft sections which are frictionally engaged with each other when said shaft sections are disposed in said fully extended position are substantially circular in transverse cross section.

4. A golf club as defined in claim 2, and in which
(a) said shaft sections include an intermediate shaft section disposed between said head carrying section and said handle section.

5. A golf club as defined in claim 2, and in which
(a) end closure means are mounted at the head remote end of said handle section for closing the latter, and
(b) said closure means includes a plug mounted in and secured to said head remote end of said handle section.

6. A golf club as defined in claim 5, and in which
(a) said plug has a radially outwardly projecting flange disposed in abutting engagement with the head remote end face of said handle section.

7. A golf club comprising
(a) a ball striking head, and
(b) a collapsible shaft comprising a plurality of elongated shaft sections
(1) telescopically extensible and collapsible in an axial direction between
(a') a fully extended position relative to each other, and
(b') a fully collapsed position wherein they are disposed one within the other, and
(2) including
(a') a head carrying section, at one end, secured to said ball striking head, and
(b') a handle section at the other end,
(c) said handle section being the radially-outermost one of said shaft sections when said shaft sections are disposed in said fully collapsed position,
(d) said shaft sections, when in said fully extended position, being frictionally engaged with each other with sufficient force to prevent rotation of said head carrying section relative to said handle section by reason of the forces applied to said head by a normal golf ball striking swing of the club, and
(e) a ferrule mounted around said head carrying section, adjacent to said head, in position to engage said handle section when said shaft sections are disposed in said fully collapsed position.

8. A golf club as defined in claim 7, and in which
(a) said ferrule has an outer surface
(1) tapering inwardly toward said handle section, and
(2) sized to engage in said handle section with a frictional fit effective to releasably hold said handle section and said head carrying section stationary relative to each other when said shaft sections are disposed in said collapsed position relative to each other.

9. A golf club as defined in claim 7, and in which
(a) said ferrule is made of hardened steel.

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