

March 22, 1949.

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2,464,850

SECTIONAL GOLF CLUB SHAFT

Filed Dec. 4, 1946

2 Sheets—Sheet 1

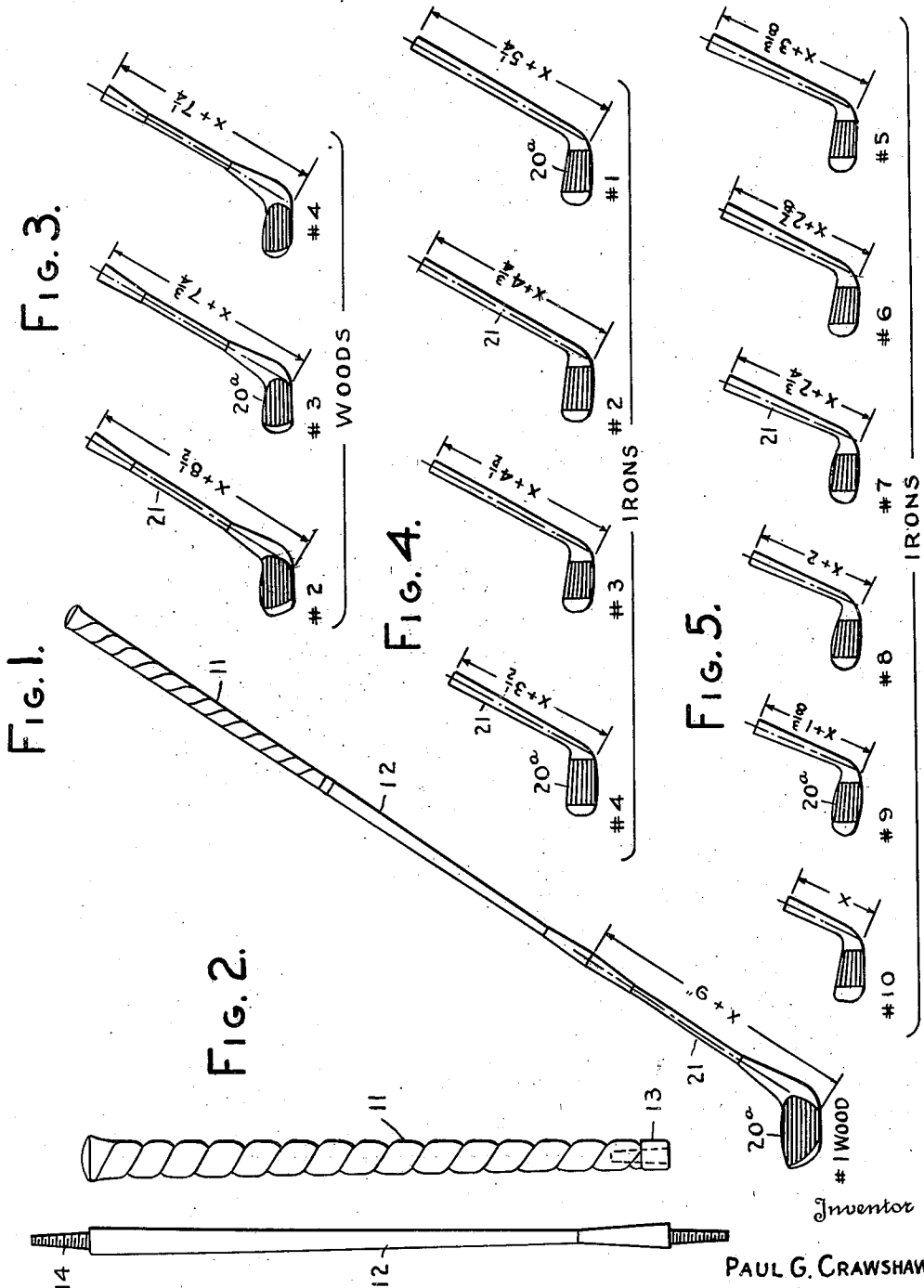


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

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2 Sheets-Sheet 2

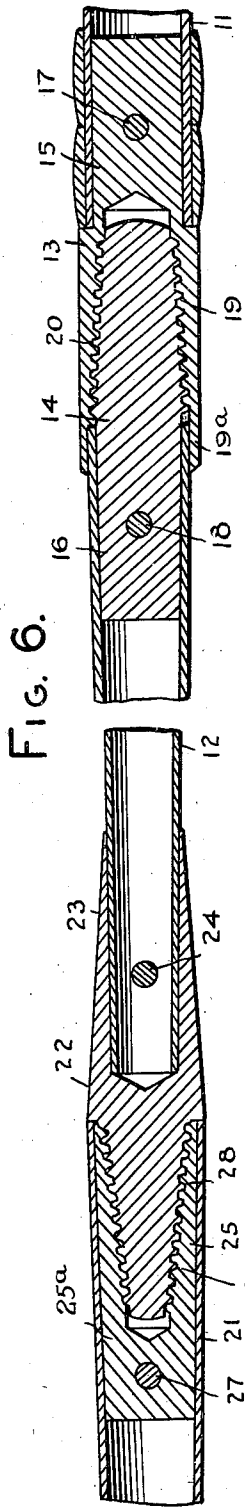


FIG. 6.

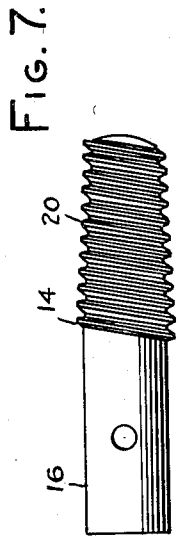


FIG. 7.

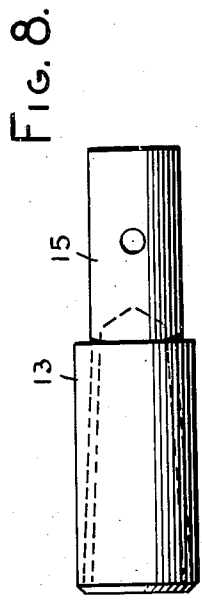


FIG. 8.

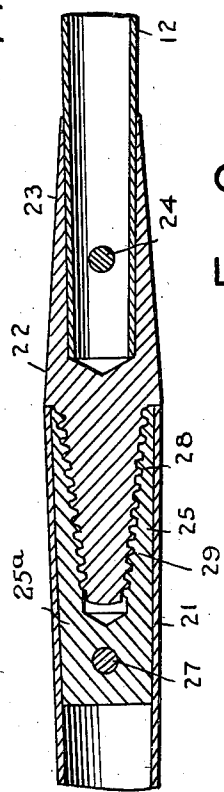


FIG. 9.

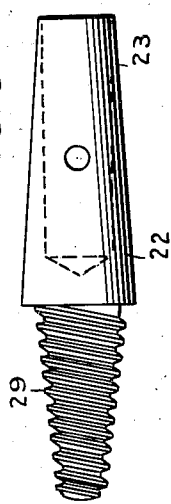


FIG. 10.

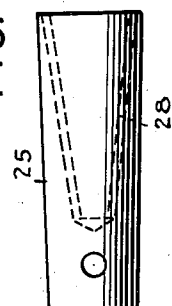
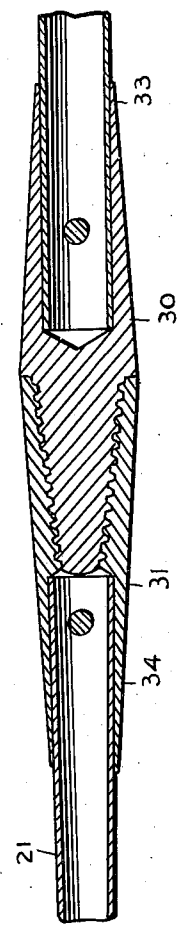


FIG. 11.



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SECTIONAL GOLF CLUB SHAFT

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1 Claim. (Cl. 273—80)

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This invention relates to improvements in sectional golf sets.

It has heretofore been proposed to provide a golf club with a detachable head so that different type heads can be used interchangeably with the same shaft, and to construct the shaft so that the length of the same can be increased or diminished to correspond with the character of the particular head used. Constructions of this kind are advantageous in that only a single shaft is required for a set of heads but such constructions have serious drawbacks. In changing from one head to another it is not only necessary to disconnect one head and attach another but to also adjust the length of the shaft to suit the particular head selected. Furthermore, the shaft must be provided with telescoping sections with means for locking the adjustable section in adjusted position. The adjustment of the length of the shaft to correspond with the different heads used is left more or less to guess work, and even if some form of markings or graduations are provided in connection with the adjustable section of the shaft, time and care are required in making the proper adjustment and there is also the chance of error on the part of a player in not making the proper adjustment required to suit the particular head selected.

By applicant's invention the difficulties referred to are entirely overcome. The present invention comprehends the provision of a golf club with a shaft of predetermined length or the length of which remains the same when the club is in use, together with a set of various types of heads, the heads being provided with shank portions of varying lengths so that when the respective heads are connected with the shaft, the over-all length of the club will correspond to that required for the particular head. In changing heads, all that is necessary is to detach one head and connect another. The change can be quickly made and the proper over-all length of the club to suit the particular club selected is always assured. No adjustment of the length of the shaft is required and the necessity for providing the shaft with an adjustable section for locking the same in adjusted position is entirely avoided. A further advantage is that since the golf club shaft is of fixed or predetermined length during the use of the golf club the same may be made up of two sections of approximately equal length, this facilitating storage and shipment.

The primary object of the invention is to provide an improved golf set that provides for the use of heads of different types interchangeable with a single shaft and whereby the change from one type head to another and the change in the over-all length of the club required for the particular type of head selected can be quickly and accurately made.

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Another object of the invention is to provide an improved golf club set of the character referred to in which heads of different types may be used interchangeably with a single shaft and the necessity for constructing the shaft with telescoping sections and providing means for locking the adjustable section in adjusted position will be avoided.

Another object of the invention is to provide an improved golf set of simple, durable, inexpensive construction that will provide for quickly changing from one head to another and which when the head is connected with the shaft will be securely and rigidly attached.

A further object of the invention is to provide a golf club set of the character referred to in which the shaft is formed of two sections of approximately the same length detachably connected together to facilitate shipping and storing.

The invention, with other objects and advantages thereof and the particular construction, combination and arrangement of parts comprising the same will be understood from the following detailed description when considered in connection with the accompanying drawings forming part hereof and illustrating one embodiment of the invention.

In the drawings:

Fig. 1 is a side elevation of a golf club constructed in accordance with the present invention;

Fig. 2 is a side elevation of the shaft disjoined;

Fig. 3 is a side elevation of Nos. 2 to 4 woods of the golf set provided with different length shanks in accordance with the present invention;

Fig. 4 is a side elevation of Nos. 1 to 4 irons;

Fig. 5 is a side elevation of Nos. 5 to 10 irons;

Fig. 6 is a detail longitudinal section, on an enlarged scale of the screw joint between the two sections of the shaft, and the joint between the shank portion of one of the heads and the lower end of the intermediate shaft section;

Figs. 7 and 8 are detail views of the members of the joint between the shaft sections;

Figs. 9 and 10 are detail views of the members of the joint between the lower end of the intermediate shaft section and the shank of one of the heads; and

Fig. 11 is a detail longitudinal section of a modified construction of screw joint for connecting the shank portions of the heads with the intermediate shaft section.

While a preferred embodiment of the invention is illustrated in the drawings, it will of course be understood that minor changes and modifications may be made in the particular construction shown and the invention may be embodied in other forms as will appeal to those

skilled in the art and falling within the scope of the appended claim, without departing from the spirit of the invention.

Referring to a detailed description of the particular embodiment of the invention illustrated in the drawings, the construction shown comprises a set of golf club heads including woods Nos. 1 to 4, and irons Nos. 1 to 10. The shaft of the club is composed of an upper grip section 11 and a lower section 12, the two sections being of approximately equal length and being shown of tubular form constructed of metal. The shaft sections are detachably secured together by a screw joint comprising members 13 and 14 having solid portions 15 and 16 respectively fitting within adjoining end portions of the shaft sections 11 and 12 and secured thereto by rivets 17 and 18. The member 14, which is connected to the lower section 12 of the shaft, has a double pitch tapering threaded solid portion 20 projecting outwardly therefrom. The member 13, which is connected to the upper grip section 11 is provided with a socket projecting outwardly therefrom, said socket having a double pitch threaded tapering part 19 of substantially the same length as said threaded solid portion 20 to cooperate therewith, and said socket having a part 19a extending outwardly from the outer end of its threaded part 19 and of an interior diameter to fit over the upper end portion of the lower shaft section 12.

Means is provided for detachably connecting the heads to the shaft so that they can be used interchangeably therewith. The club heads designated 20^a insofar as the design of the head itself is concerned, are regulation standard type heads but in accordance with the present invention the heads are provided with shank portions 21 of different lengths, the length of the shank portion of the respective heads being such that when connected with the shaft the over-all and effective length of the club will be that suitable for the particular head, the length of the shaft being predetermined or remaining the same when the club is in use. The means for detachably connecting the heads to the shaft comprises a metal member 22 having a tubular sleeve portion 23 secured on the lower end portion of the shaft section 12 by a rivet 24, and metal members 25, one for each of the heads, and each fitting within and secured to the shank portion 21 of the head by a rivet 27. The members 25 each have an inner solid part 25^a and a double threaded tapering socket 28 to receive a correspondingly formed double threaded tapering portion 29 on the metal member 22 of the lower shaft section 12. Instead of securing a female coupling member 25 on the shank portion 21 of each head and the male coupling member 22 on the lower shaft 12, a male coupling member 22 may be secured to the shank portion 21 of each of the heads and a female coupling member attached to the intermediate shaft section. The members 13 and 14 of the screw joint for the upper grip section 11 and the intermediate shaft section 12 may be similarly reversed.

The golf set illustrated in the drawings is for a right hand player, the parts 19, 20 and 28, 29 having left hand threads. For a left hand player these parts would be provided with right hand threads.

In Fig. 11 of the drawings is illustrated a slightly modified form of screw joint for connecting the shank portions 21 of the heads with the

lower end of the lower shaft section. In this view, 30 and 31 designate the coupling members of the screw joint. In this modified construction the coupling members are each provided with tubular portions 33 and 34 respectively to fit over the tubular parts with which they are associated instead of having portions fitting within the same as in the construction hereinbefore described.

It will be noted that by the particular construction and arrangement of parts hereinbefore set forth a golf set is provided which provides for the use of different type heads interchangeably with a single shaft and whereby all that is necessary in changing heads is to detach one head and attach another. The proper over-all length of the club suitable to the particular type head selected is always assured. The change can be quickly made. No adjustment of the length of the shaft is required and the necessity for providing the shaft with an adjustable section and with means for locking the same in an adjusted position is entirely avoided. The construction is simple and it provides for a firm, rigid connection of the parts and a strong, durable, satisfactory golf club that can be produced at low cost.

What I claim is:

A golf club including a shaft composed of an upper tubular metal grip section and a lower tubular metal section, said sections being of substantially equal length, means for detachably connecting the sections comprising two members, one of said members being of solid formation and fitting within and secured to the lower shaft section, and having a tapering threaded portion projecting outwardly therefrom, and the other member having a solid portion fitting within and secured to the upper shaft section and having a socket projecting outwardly therefrom, said socket having a tapering threaded part of substantially the same length as said tapering threaded portion of the other member to cooperate therewith, and said socket having a part extending outwardly from the outer end of its threaded part and of an interior diameter to fit over the upper end portion of said lower section, a head having a tubular metal shank, and means for detachably connecting said shank to the lower section of said shaft comprising a member having a sleeve portion fitting over and secured to the lower end portion of the lower shaft section and having a solid tapering threaded portion projecting from said shaft section, and a second member fitting within and secured to the shank of the head, said second member having an inner solid part and having a tapering threaded socket extending outwardly therefrom to receive said last mentioned tapering threaded solid portion of the other member, said sleeve portion and said second member each increasing in diameter from its inner to its outer end.

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