METHOD OF MAKING GOLF CLUB GRIPS

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Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

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My present invention is a novel and improved grip for golf clubs, and includes an improved process of making the same. It is customary at present to fit the great majority of golf clubs with handles or grips of leather strips of predetermined length by winding them spirally about the top portion of the club shaft. The two ends of each strip are then fastened to the shaft by pins or tacks, and both ends further secured by "windings" of thread or twine. Invariably, however, these windings break, the pins or tacks fall out, and the grips begin to unwind, with the result that the grips are continually in need of repair. This unwinding faculty of the present accepted form of golf grip has been most annoying and bothersome to all golfers, as well as unsatisfactory and expensive.

Heretofore, various types of rubber grips have been devised, some made in strips similar to the leather variety, others as unitary tubes adapted to slide over the end of the shaft. Most of these rubber grips, however, have been of the novelty variety, such as grips supplied with small holes to assure to the user a firmer hold, or grips with one part thicker than the rest, forming ridges to receive more suitably the hands and fingers. Such grips have not been found sufficiently durable nor satisfactory in use and, therefore, have had no sustained commercial value, so that today, few, if any, rubber grips are being manufactured.

Important objects of my invention, therefore, are to produce rubber grips combining, on the one hand, all the advantageous features of the leather grip, and, on the other, eliminating the objectionable elements; together with a novel and improved method of making the same. I accomplish these desirable results by extruding a seamless rubber tube of suitable diameter and thickness, mounting same on a mandrel while still in an uncured condition, spirally winding a cord throughout any desired length of it under enough pressure to indent a groove in the outer surface, subsequently curing or vulcanizing the tube, and thereafter removing the cord. Thus I obtain a unitary seamless rubber tube provided with a spiral groove to simulate spirally wound leather strips, and also to aid the player in gripping the club more securely. Preferably, the rubber tube is made of less interior diameter than the diameter of the shaft, so that when the tube is forced over the end of the shaft, it is held tightly by the friction thereof, although glue, cement, tacks, windings, or the like may also be employed.

Another object of my invention is to devise a grip that will at all times prevent the hands of the user from slipping. Many golfers are troubled continuously during the warm weather by the slippery qualities inherent in leather grips. The oil in the leather, plus the perspiration of the hands, combine to make a difficult condition to overcome. Also, when playing in the rain, leather grips are useless unless covered with gauze or tape. My rubber grips, however, obviate these difficulties, supplying a gripping surface which, due to the inherent qualities of the rubber, and aided by the spiral groove, prevent all slipping of the hands regardless of the playing conditions. This is a most important feature and a great advantage of my rubber grip.

Another object of my improved rubber golf grip relates to its simplicity of structure and to its very low production cost. By the extruding process, rubber tubing is made most inexpensively and is then very easily cut into correct lengths to be mounted on golf shafts. Leather grips, on the other hand, cost considerably more and must be cut into strips of correct length and width before being wound around the shaft of the club, an operation involving skilled labor and added expense.

Referring to the drawing, wherein I show a preferred embodiment of my invention and the process of making,

Fig. 1 is a fragmentary cross-sectional view of the rubber extruding apparatus;

Fig. 2 is a reduced side view of the rubber tube on a mandrel, showing the cord spirally wound thereon prior to the curing process;
Fig. 3 is a fragmentary cross-sectional view of the same.

Fig. 4 is a side view of a finished strip of rubber tube with the cord removed, and

Fig. 5 shows a golf club fitted my improved rubber grip.

In the drawing, 10 designates any ordinary rubber extruding apparatus filled with uncured plastic rubber 11, and fitted with any usual type of extruding screw, partly shown at 12. As the screw 12 is turned, the rubber 11 is forced out through the narrow circular groove 13, formed by the end of the screw 12 and the spaced sides of the opening in the portion 9 of the apparatus 10, thus assuming the form of a rubber tubing 15. Thereafter, the tube 15 is mounted on a mandrel 14, said mandrel 14 being of suitable diameter proportional to the side of the rubber tube 15.

As shown in Fig. 2, a cord 16 is then spirally wound on the outer surface throughout the length of the uncured tubing 15, the spirals being spaced to simulate the spiral winding of leather grips, and the cord wound with tension or pressure sufficient to produce a permanent groove in the tube. Thereupon the rubber is cured or vulcanized by any usual process and thereafter the cord 16 is removed and the rubber tube 15 dismounted from the mandrel 14, resulting in a seamless rubber tubing fitted with a spiral groove throughout its length, as shown in Fig. 4. This rubber tubing is then cut into any suitable predetermined lengths for golf grips, one being shown at 18 in Fig. 5 fitted to the shaft 19 of the golf club 20 and held by friction of the rubber and the wood.

It will thus be seen that I have devised a novel, inexpensive, yet extremely practical rubber grip for golf clubs which closely resembles, in appearance, a leather grip, yet which embodies the advantages of being a unitary tube grip, and also preventing any slipping of the hands—an extremely important factor to all golfers.

I have also devised a method for making my grip which I believe to be entirely novel and, therefore, I wish to claim same herein broadly.

I claim:

1. The method of manufacturing rubber golf grips, which comprises the steps of extruding a seamless rubber tube, mounting said tube in its uncured condition upon a mandrel, spirally winding a cord throughout the length of said uncured tube under sufficient pressure to indent said cord in said uncured tube, curing said tube, and then removing said cord, whereby a seamless rubber grip in simulation of the spirally wound leather grip is produced.

2. The method of manufacturing rubber golf grips, which comprises the steps of extruding a seamless rubber tube, mounting said tube in its uncured condition upon a mandrel, spirally winding a cord throughout the length of said uncured tube under suffi-
CERTIFICATE OF CORRECTION.


GEORGE L. LAWRENCE.

It is hereby certified that the name of the assignee in the above numbered patent was erroneously written and printed as "Tyler Rubber Company" whereas said name should have been written and printed as "Tyer Rubber Company", as shown by the records of assignments in this office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 7th day of February, A. D. 1933.

M. J. Moore, Acting Commissioner of Patents.