Dec. 29, 1925. 1,567,323

H. I. JORDAN

GOLF CLUB

Original Filed Oct. 19, 1921

Fig. 6.

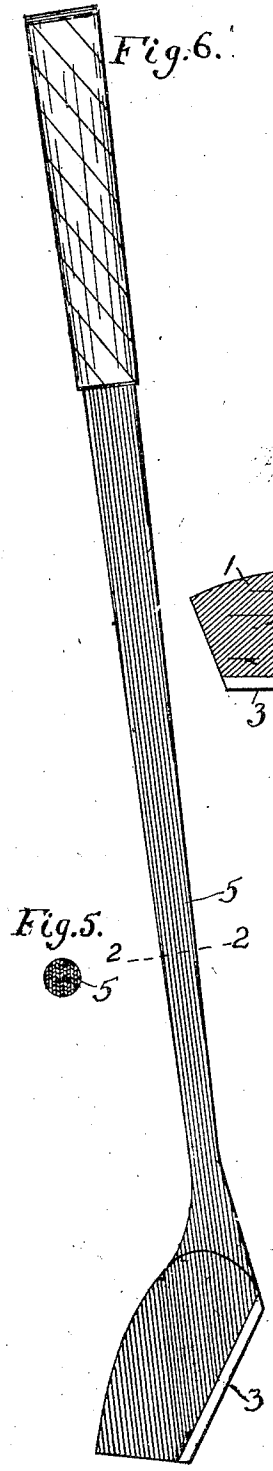


Fig. 1.

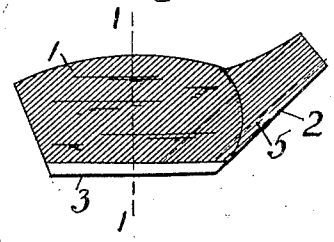


Fig. 3.

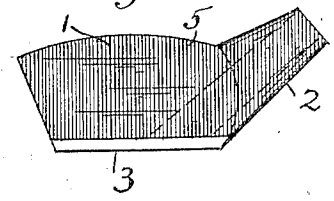


Fig. 4.

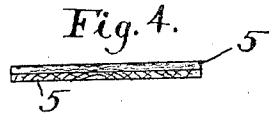
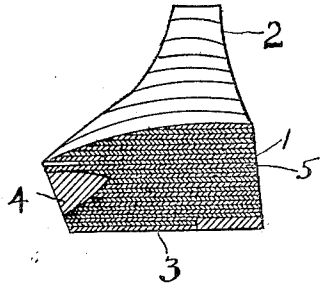


Fig. 5.

Fig. 2.



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Patented Dec. 29, 1925. 1,567,323

UNITED STATES PATENT OFFICE.

HARRY I. JORDAN, OF AUBURN, MAINE, ASSIGNOR TO LAMINO MANUFACTURING COMPANY, A CORPORATION OF MASSACHUSETTS.

GOLF CLUB.

Application filed October 19, 1921, Serial No. 508,707. Renewed March 14, 1925.

To whom it may concern:

Be it known that I, HARRY I. JORDAN, a citizen of the United States, residing at Auburn, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Golf Clubs, of which the following is a specification.

My invention relates to the construction of wooden golf club heads for drivers, brasseys, spoons and the like.

The object of the invention is to construct such a head of fabricated or laminated wood so formed and arranged as to give a very hard and non-elastic playing surface.

The driver as commonly made of compressed hickory is so cut that the grain of the wood runs parallel with the face of the club and in the general direction of the shaft.

Thus, as the club is used, pieces of the wood in the form of splinters tend to form on the face and become loosened finally ruining the playing face.

It has been found that a wooden club having a hard non-elastic driving face has a marked effect in increasing the driving distance of the club. It has thus come to be a practice to insert into the face of the driver sections of hard material like ivory or wooden pins, with their ends flush with the driving face of the club.

Such hard non-elastic faces resist any tendency to yield under the impact of the ball and the latter thus springs away from the club with the full force of its rebound.

I have produced such a club head of fabricated or laminated wood commonly called ply-wood, by subjecting the material in process of making to high pressure. This pressure amounting in practice to 1500 lbs. per square inch being applied at right angles to the layers of wood, these latter are very greatly compressed and solidified. In making up my club head, the layers of wood are arranged with their lateral edges in the playing face of the club and preferably so that the grain in half will be at right angles to the face and half parallel to it. Thus, the impact of the ball will come against these compacted edges.

The grain of alternate layers being at right angles to each other, the playing face is thus made up of alternate strips in which the end of the grain is in this surface and other strips having the grain parallel with the surface. By arranging the plies or layers as I have described, half of the playing face is made up of wood having the end of the grain in the face and the other half made up of narrow strips with the grain parallel to the face but firmly held by strong water-proof glue between adjacent strips.

When the head is made up of this fabricated material it is difficult to tell how the grain runs as it is so thoroughly crossed and interlocked. Such a club head has a surface impossible to compress by any impact with the ball and a surface which will always remain integral.

I have illustrated my invention in the accompanying drawing in which:

Fig. 1 is a side elevation of a wooden club head constructed according to my invention with the pieces arranged in the preferable form,

Fig. 2 is a section taken on the line 1—1 of Fig. 1,

Fig. 3 is a side elevation of a modified form showing another manner of arranging the plies,

Fig. 4 is an end view of a pair of plies showing the manner in which the grain of the wood crosses at right angles,

Fig. 5 is a cross section on Fig. 6 and,

Fig. 6 is a side view of a one piece club with a connecting joint between the head and the shaft.

In the drawing, similar letters indicate similar parts.

In the drawing, referring to Figs. 1 to 4, 1 is the playing face of the club, 2 is the socket, 3 is the sole and 4 is the weight. The club is made up of the plies 5.

In making up the club head, the plies are made of veneer strips of maple or any other strong hard wood suitable for the purpose. They are then formed up in stocks of about three inches thickness, the grain of each ply crossing the grain of the two adjacent plies at right angles.

The surface of each ply is then coated with a special water-proof glue and the whole body is then subjected to a very high pressure at right angles to the plies. This pressure amounts to 1500 to 2000 lbs. per square inch and the result is a very hard compact wood, the fibres of which are crossed and locked together so that no portion of the wood can be detached.

The club head is sawed and turned from

this material by any well known process. This arrangement on the playing face produces a corrugated surface which tends to remain corrugated since the strips having the end of the grain in the face will wear longer than the other strips where the wear comes on the side of the grain and will project farther than the other strip. Such a corrugated surface tends to get a better holding effect on the ball and prevents slicing and hooking.

In cutting out the head, it is so arranged that preferably the plies are at substantially right angles to the playing face of the club and lie in the general direction of the shaft. By this arrangement the plies extend lengthwise of the socket and give it the greatest possible strength while the exposed edges of the plies terminate in the playing face of the head giving a hard, inflexible surface, a playing face practically impossible to chip or splinter and a material which can be cheaply made of low priced wood.

Good hickory such as heads have hitherto been made of is becoming very scarce and the demand for golf clubs is increasing rapidly.

Thus, a cheap fabricated material which will do the work as well or beter than hickory is of considerable value.

In Fig. 4, I have shown a modified construction in which the plies are arranged vertically and at right angles to the playing face of the club. This arrangement while giving the same hard playing face does not give quite as much strength at the socket.

In Figs. 5 and 6, I have shown a one piece club in which the same plies which constitute the head are continued to form the shaft, the plies being arranged as I have pointed out, namely, with the plies substantially at right angles to the playing face of the head.

Such a one piece club has long been desired because the absence of a joint where the head joins the shaft leaves that portion of the shaft with a perfect spring action and quickly follows the rebound of the ball and adding its resiliency to the rebounding effect of the expanding ball. The spring of the shaft is edgewise of the plies but the composition of the body of the shaft is so homogeneous that the direction of the plies has litle or no effect on the resiliency of the shaft.

It is evident that the plies may be arranged in various ways in respect to the direction of the grain of the wood. The plies may be arranged so that the grain in adjacent strips will be transverse or will cross each other or they may be arranged so that the grain in adjacent strips will be substantially parallel.

Different characteristics of the head will result from the various arrangements of the plies with respect to the direction of the grain of the wood.

If the plies of the veneer are arranged with the grain of adjacent strips crossing each other at right angles and the edges of the head terminating in the playing face of the club the resulting face will give alternate strips with the grain terminating in one strip and the grain parallel with the face in the adjacent strip so that the face will be provided with alternate hard and relatively soft strips.

Thus, when the face of the club begins to wear a roughened surface with alternate hard and relatively soft strips such a face will take firmer hold on the ball than a perfectly smooth face where all the layers were of the same degree of hardness.

I claim:—

1. A golf club head having its playing face on one side, composed of wood veneer strips cemented and pressed together, a portion of said strips having their edges terminate in the said playing face of the club and having the grain of the wood also terminate in the said playing face.

2. A golf club head having its playing face on one side, composed of wood veener strips cemented and pressed together, a portion of said strips having their edges terminate in the playing face of the club with the grain of the wood also terminating in said playing face, the grain of all alternate strips crossing each other.

HARRY I. JORDAN.