

[54] **HOCKEY STICK**

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Assistant Examiner—Richard J. Apley
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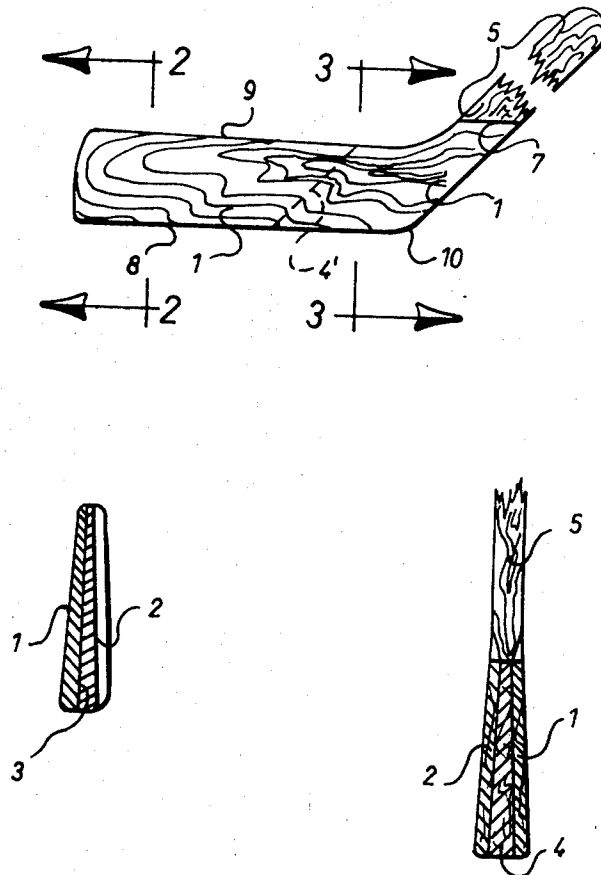
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[57] **ABSTRACT**

A hockey stick in which the end of the handle adapted to be joined to the blade, forms a wedge and the blade is made of two laminations or plies overlapping the handle wedge, resulting in a stronger joint and easier and less expensive manufacture of the hockey stick.

7 Claims, 5 Drawing Figures



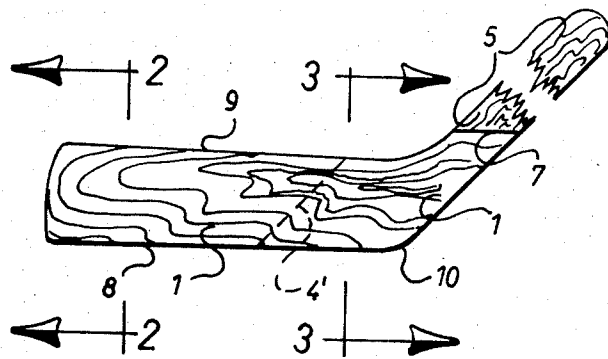


Fig. 1

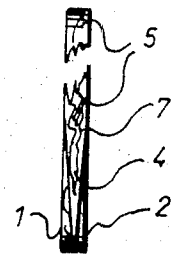


Fig. 4

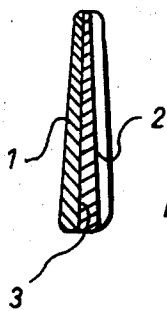


Fig. 2

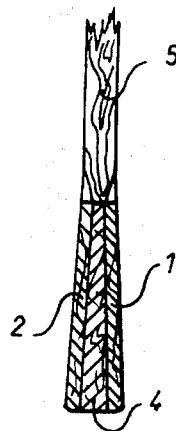


Fig. 3

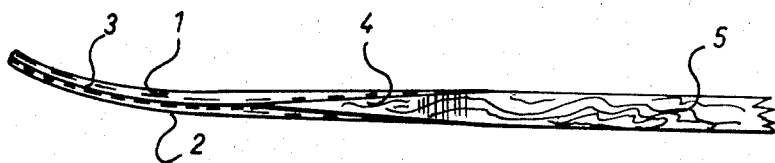


Fig. 5

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HOCKEY STICK

The present invention relates to hockey sticks more particularly intended for use in the game of hockey and it has for its chief object to provide an improved wooden stick having a stronger and yet more flexible joint between the handle and blade, while providing for easier and less expensive manufacture than hockey stick constructions at present generally in use.

The foregoing and other objects of the invention will become more apparent during the following disclosure and by referring to the drawings, in which:

FIG. 1 is a side elevation, with the handle broken away, of the hockey stick in accordance with the invention;

FIGS. 2 and 3 are cross-sections along lines 2—2 and 3—3 respectively of FIG. 1;

FIG. 4 is a partial back end elevation; and

FIG. 5 is a bottom plan view of the stick.

In the drawings, like reference characters indicate like elements throughout.

The wooden blade of the stick consists of two plies or laminations 1 and 2 glued, or otherwise adhered together, along a plane parallel to the plane of the blade and over the major portion of the blade, as indicated by the joint surface 3. As in conventional hockey stick construction, the length of the blade is between five and twelve times the width of the wooden handle 5, said handle width being defined as the dimension transverse to handle 5 and in the general plane of the blade.

Each blade lamination 1 and 2 is preferably made of one piece of wood with the grain running longitudinally of the blade. Each lamination 1 and 2 has substantially the same thickness throughout the length of the blade, but tapers across the blade from the lower edge 8 of the blade to the upper edge 9 thereof.

The heel portion 10 of the plies 1 and 2 forms an angular extension terminated by a feather edge 7 which is disposed above the upper edge 9 and substantially parallel thereto. Thus, this extension above upper edge 9 continues to taper upwardly to form the feather edge 7.

The elongated handle or shaft 5 has its grain running longitudinally thereof, and its end portion adapted to join with the blade at the usual angle used in known hockey sticks, is tapered both longitudinally of the handle and longitudinally of the blade to form a wedge 4 which terminates at 4' as a feather edge which is substantially parallel to the long axis of the handle 5. Feather edge 4' is offset from the top edge surface of the handle 5 in the direction of the toe of the blade, so as to provide sufficient width for the wedge 4. Preferably, the width of the wedge 4 in a direction transverse to the handle and in the plane of the blade is about $3\frac{1}{2}$ times the width of the handle.

The wedge 4 is inserted between the plies 1 and 2 and adhered thereto by means of water-proof glue or synthetic resin adhesive.

In order to save wood when making the wedge 4, a separate piece is glued to the handle proper along a line which forms an extension of the inner upper edge of the handle. Because the separate piece, which completes wedge 4, has a substantial thickness, it will firmly adhere and be rigid with the handle proper.

Once the separate piece has been adhered to the handle, the handle and wedge are submitted to a chamfering operation at its outer surfaces to form wedge 4. Similarly, it is easy to chamfer the outer surfaces of laminations 1 and 2. After these operations have been effected, the inside faces of the laminations 1 and 2 and the main side faces of the wedge 4 of the handle are coated with an adhesive and the three pieces joined together. After the pieces are cured, they are subjected to the usual finishing operation to obtain the finish product.

The blade laminations 1 and 2 are preferably longitudinally bent to form a blade with a longitudinal curve, as shown in FIG. 5, as found in present-day hockey sticks which permit more precise shooting of the puck. Obviously, the blade could be made straight, if so desired.

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The resulting hockey stick is easier and less expensive to manufacture than conventional hockey sticks and has a blade and joint of increased strength and longer life. It also permits easier longitudinal bending of the blade.

As noted above, chamfering of the two blade laminations and of the lower end of the stick is much easier, because it is carried out on the outside surfaces of these pieces and there is no difficult chamfering of a slot, as in conventional hockey sticks, wherein the handle is always provided with a tapered slot or splicing recess at its lower end.

The joint between the blade and the handle is stronger than in conventional sticks, because it is possible to overlap the blade with the handle over a much greater area than in the stick of usual construction, wherein the wedge of the blade enters the tapered recess of the stick. In fact, in conventional sticks, the width of the heel portion of the handle taken in the direction transverse to the handle proper, is equal to a maximum of only two times the width of the handle proper, compared to $3\frac{1}{2}$ times for the wedge portion of the stick in the construction in accordance with the present invention.

This follows from the fact that the tines of the fork produced by the recess made in the handle of the conventional stick cannot be spread apart to receive the tapered wedge portion of the blade, because this would split the wood of the handle and, therefore, the tines have to be made very thin and, therefore, cannot extend to any substantial distance along the blade. On the contrary, in the joint of the invention, the single wedge portion of the handle which replaces the two tines of the conventional handle, may therefore have twice the thickness of said tines and can extend much farther along the blade until it ends in the feathered edge 4'.

Due to this large contact area between the blade laminations and the handle, it is possible to make the joint of smaller width for increased flexibility of the hockey stick while preserving the strength of the joint of conventional sticks.

The joint of the invention is longer lasting, because there is no exposed feather edge in the blade region, as in conventional sticks. In the stick of the present invention, the only exposed feather edges are edges 7 which are well above the blade and are thus not as exposed to breakage, because they are not as much subjected to impact as the blade proper.

Because the blade is made of two laminations, it is much stronger than a blade made of a single piece of wood.

I claim:

1. A wooden hockey stick comprising an elongated handle and an elongated blade having one end portion joined and secured to one end portion of the handle and making an obtuse angle with the latter, said blade having a length of between five and twelve times the width of said handle, said handle width being defined as the dimension transverse to said handle and in the general plane of said blade, said one end of said handle tapering longitudinally outwardly of said handle and tapering longitudinally of said blade to form an integral wedge terminating in a feather edge along a line laterally offset from said handle, said blade made of at least two laminations co-extensive with said blade, said wedge disposed between and adhered to said two laminations to be embraced thereby, said laminations protruding from said feather edge and directly adhering to each other at their protruding portion.

2. A wooden hockey stick as claimed in claim 1, wherein said feather edge is substantially straight and substantially parallel to the longitudinal axis of said handle.

3. A wooden hockey stick as claimed in claim 2, wherein said wedge has a width at least three times said width of said handle, said wedge width being defined as the dimension transverse to said handle and in the general plane of said blade.

4. A wooden hockey stick as claimed in claim 3, wherein each blade lamination has a substantially uniform thickness longitudinally of said blade and tapers from the lower edge to the upper edge of said blade.

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5. A wooden hockey stick as claimed in claim 4, wherein said one end portion of each lamination forms a feather edge merging with said handle at a higher level than the upper edge of said blade and substantially parallel with said upper edge.

6. A wooden hockey stick as claimed in claim 5, wherein said laminations are longitudinally curved to form a longitu-

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dinal curved blade.

7. A wooden hockey stick as claimed in claim 1, wherein said laminations are longitudinally curved to form a longitudinally curved blade.

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