

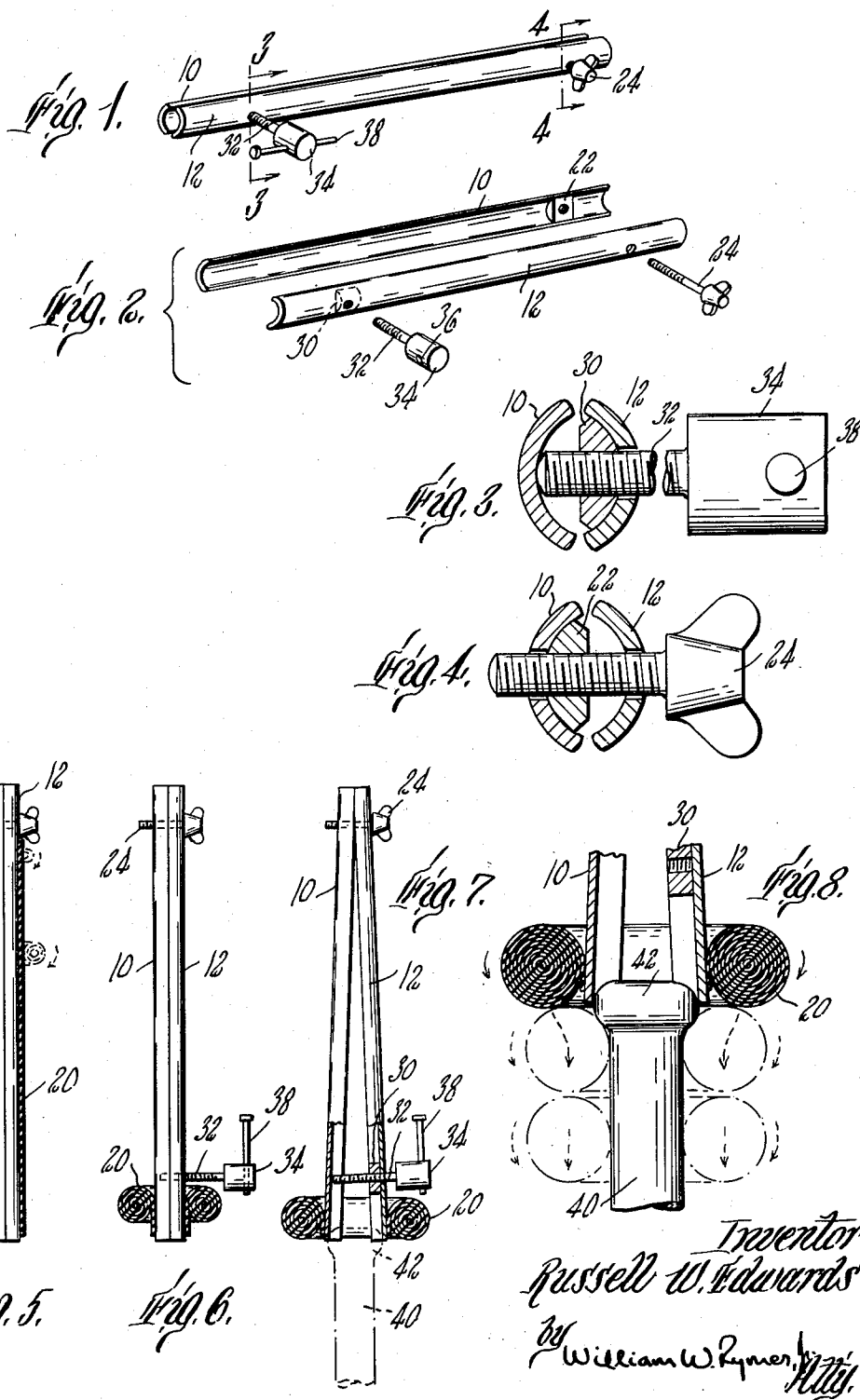
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METHOD FOR APPLYING GRIPS TO HOCKEY STICKS AND THE LIKE

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1 Claim. (Cl. 29—450)

This invention relates to a method of applying rubber grips to field hockey sticks or the like.

Field hockey sticks characteristically have a long handle, generally oval in cross-section, with a knob of substantially greater peripheral length at the end. The handle, below the knob, is usually covered with a long rubber grip, the cross-sectional inner periphery of which is ordinarily about the same as the cross-sectional outer periphery of the handle to supply a tight fit on the handle. These grips have to be renewed from time to time, and getting such a grip onto the handle presents a considerable difficulty in getting the grip past the knob in the handle end. The difficulty is aggravated by the fact that in order to move the rubber grip over even the smaller handle portion it must be rolled, since friction is too great to permit sliding. When rolled the grip takes the torus form of a doughnut, and the force with which it then clasps even the smaller part of the handle is greatly increased. To stretch this rolled doughnut sufficiently to move it past the bulge at the end of the handle is however especially difficult and requires great force.

Heretofore it has been the custom to use as a grip applicator a solid wooden device with an elongated round portion (over which the rubber grip may just barely be slipped), and having adjacent thereto and merging therewith a conical surface terminating in a diameter large enough to go over the bulge at the end of the hockey stick. This end of the applicator is scooped out slightly to facilitate seating of the applicator against the end of the hockey stick. In using this applicator the rubber grip must first be rolled up into a doughnut on the elongated portion, and then the doughnut must by main force be rolled up over the conical portion to expand its inner periphery to get it past the hockey handle end bulge. Not only does this require great strength in the person rolling and expanding the doughnut-shaped grip along the conical surface, but ordinarily a second person must hold the hockey stick steady while a third person must hold the applicator thereagainst.

It is an object of the present invention to make possible application of such grips to such hockey sticks without undue effort or strain, and by one person without need of assistance from others.

It is a further object of this invention to provide for easy expansion of the inner periphery of the rolled-up rubber grip to clear the bulge at the end of the hockey stick, and for moving said rolled-up rubber grip thereonto.

It is a further object to provide for the applicator's gripping the stick while the doughnut-shaped grip is rolled thereonto.

Other objects, advantages, and features will appear from the following description of a preferred embodiment of the invention, taken together with the drawings, in which:

Fig. 1 is an isometric view of an applicator embodying the invention;

Fig. 2 is an exploded isometric view of said applicator;

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Fig. 3 is a partial sectional view taken at 3—3 of Fig. 1;

Fig. 4 is a partial sectional view taken at 4—4 of Fig. 1;

Fig. 5 is a side elevation of said applicator with the spreader screw removed, showing the rubber grip fitted thereover and indicating in dotted lines the manner in which said grip is rolled into doughnut form;

Fig. 6 is a similar side elevation showing the grip rolled into a doughnut at the bottom of the applicator and the spreader screw inserted thereabove;

Fig. 7 is a similar side elevation, partially in section, showing said spreader screw operated to expand said doughnut to clear the hockey stick end bulge; and

Fig. 8 is a similar view, enlarged, showing the spreader screw removed and the applicator gripping the hockey stick handle by virtue of the force exerted by the grip, and in dotted lines indicates the way the grip is then rolled over the bulge at the end of the handle and onto the main body of the handle.

Referring now to the drawings, there is shown in Fig. 1 a grip applicator which includes a facing pair of iron grip supports 10 and 12 of size such that when brought together as shown in Fig. 5 a grip 20 of rubber or other flexible, elastic material just slides easily thereover, the outer periphery defined by the grip supports 10 and 12 together being only slightly less than the inner periphery of a grip 20.

The grip supports 10 and 12 may suitably be crescent shaped in cross-section. The grip support 10 has integral therewith near the upper end thereof boss 22 threaded therethrough to accept wing nut 24, which extends through the grip support 10 and holds the grip support 12 in position with respect thereto. The grip support 12 has a hole therethrough to permit free passage of the wing nut 24, and near the opposed end has integral therewith boss 30 threaded to accept spreader screw 32, which as shown for example in Fig. 3 butts against the inner surface of grip support 10 to force apart the two grip supports to the extent desired. The spreader screw 32 includes a shank 34 having therethrough a hole 36 to removably accept a handle 38 to facilitate tightening the same.

In operation and to practice the new method, a hollow cylindrical rubber grip is slipped over the opposed pair of grip supports 10 and 12, as shown in Fig. 5, the spreader screw 32 being removed for the purpose, and the grip supports being held together by wing nut 24. The grip is then rolled down on the grip supports, as indicated in the dotted lines of Fig. 5, to form a doughnut positioned below the threads of the boss 30, and the spreader screw 32 is then inserted, all as shown in Fig. 6. The grip supports 10 and 12 are then spread at their lower extremities by tightening the spreader screw 32, to expand the inner periphery of the now doughnut-shaped grip 20, and the inner surfaces of the grip supports 10 and 12 are slipped over the end of the hockey stick 40, all as shown in Fig. 7. The spreader screw 32 is thereupon released, permitting the great contracting force of the doughnut-shaped grip to firmly clamp the supports 10 and 12 onto the knob. This permits the adapter and stick to be handled as a unit and the operator can hold the adapter with one hand and roll the now expanded doughnut over onto the stick with the other without having to exert undue force because the doughnut has been expanded, and the latter is thereupon rolled down over the bulge 42 at the end of the hockey stick onto the handle thereof. The ends of the adapter may then be spread again by the spreader screw 32, if necessary for removal from the hockey stick.

The doughnut is then rolled on down the handle, as in the prior art, until the lowest portion to be covered by the grip 20 is reached. Thereupon the grip 20 is

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unrolled upwards to cover the handle of the hockey stick in the desired manner.

When the grip supports are spread at their lower end, as shown in Fig. 7, the other ends may be permitted to spread by loosening the wing nut 24, to hold the grip supports 10 and 12 parallel while the doughnut is being rolled onto the hockey stick. If desired, provision may be made for inserting a pin through a hole provided in the wing nut, or other suitable means, for holding said grip supports securely in parallel relation.

It will be apparent to those skilled in the art that variations from the above-described embodiment of the method and apparatus of the invention may be made without departing from the spirit thereof.

I claim:

The method of applying a cylindrical grip of flexible elastic material to a hockey stick handle having a bulge at the end thereof which comprises slipping said grip onto

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a spreadable support having an outer periphery slightly less than the inner periphery of said grip, rolling said grip on said spreadable support to form a torus near an end thereof, spreading said support at said end thereof to stretch said torus and increase the inner periphery thereof, placing said spread support over said bulge, clamping said support thereupon by means of the force exerted by said stretched torus, and rolling said torus over said bulge onto said handle.

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