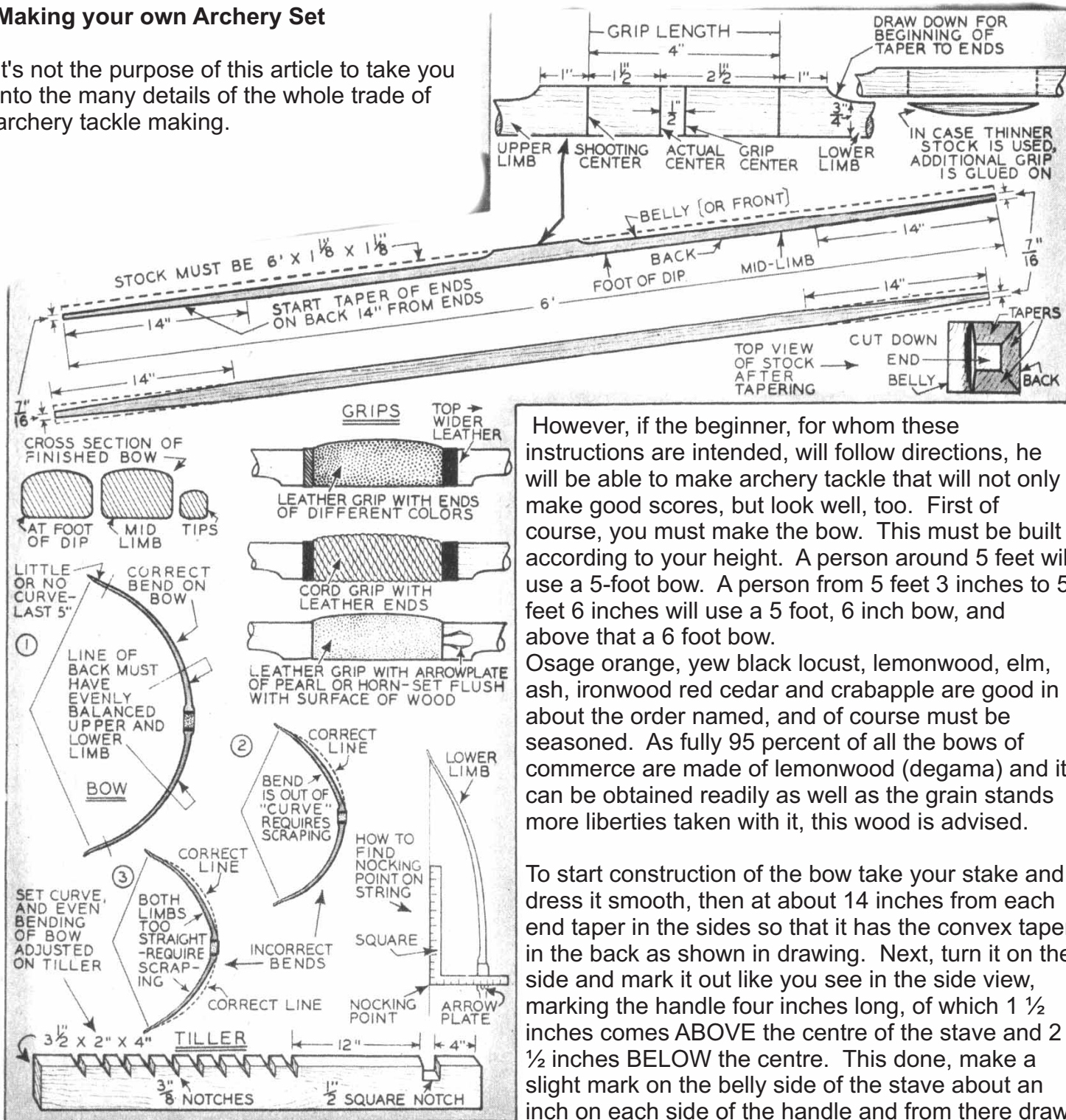




# new zealand ARCHERY

## Making your own Archery Set

It's not the purpose of this article to take you into the many details of the whole trade of archery tackle making.



However, if the beginner, for whom these instructions are intended, will follow directions, he will be able to make archery tackle that will not only make good scores, but look well, too. First of course, you must make the bow. This must be built according to your height. A person around 5 feet will use a 5-foot bow. A person from 5 feet 3 inches to 5 feet 6 inches will use a 5 foot, 6 inch bow, and above that a 6 foot bow. Osage orange, yew black locust, lemonwood, elm, ash, ironwood red cedar and crabapple are good in about the order named, and of course must be seasoned. As fully 95 percent of all the bows of commerce are made of lemonwood (degama) and it can be obtained readily as well as the grain stands more liberties taken with it, this wood is advised.

To start construction of the bow take your stake and dress it smooth, then at about 14 inches from each end taper in the sides so that it has the convex taper in the back as shown in drawing. Next, turn it on the side and mark it out like you see in the side view, marking the handle four inches long, of which 1 1/2 inches comes ABOVE the centre of the stave and 2 1/2 inches BELOW the centre. This done, make a slight mark on the belly side of the stave about an inch on each side of the handle and from there draw it down for the dips.

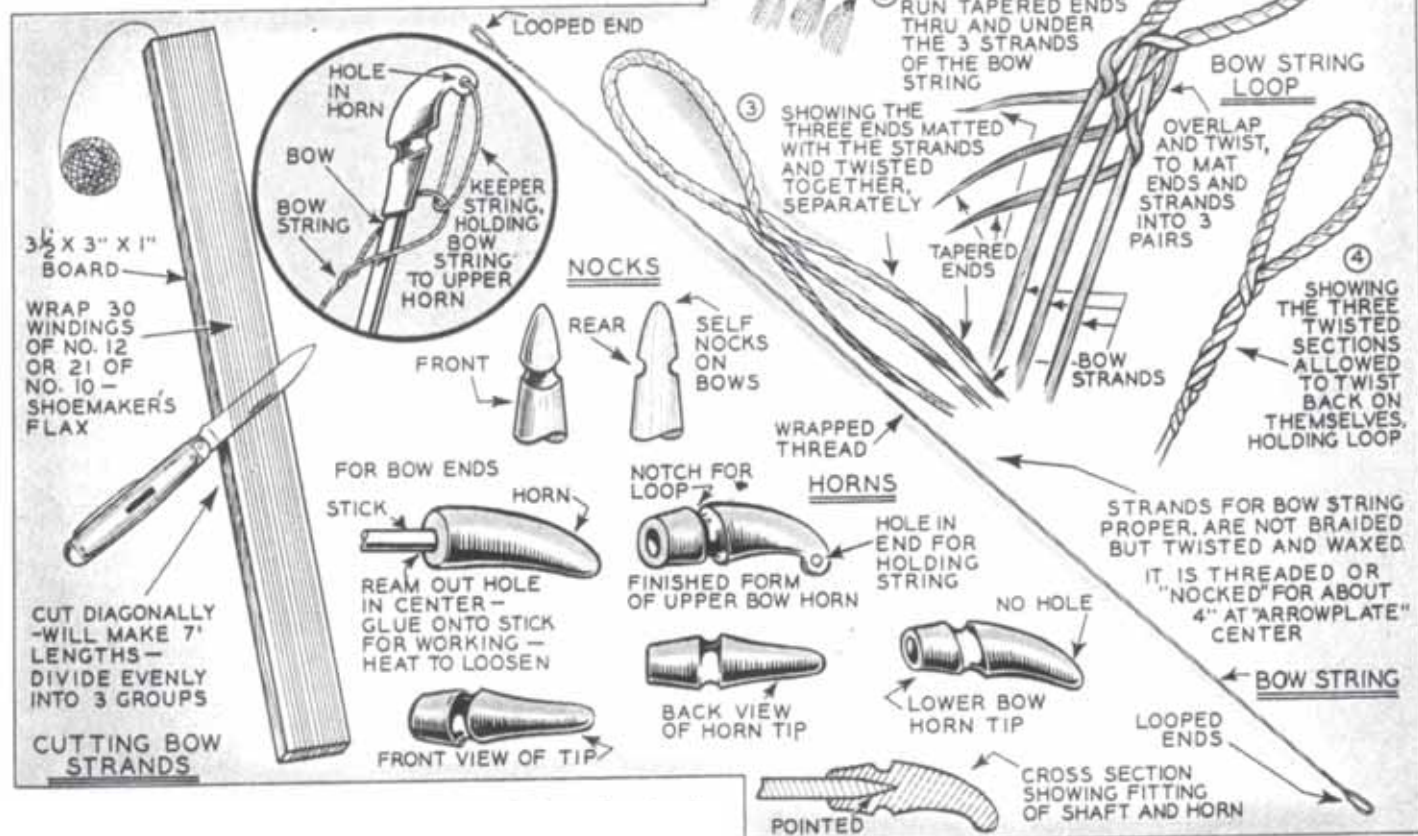
The thickness of the bow should be about 3/4 of an inch tapering to a scant 7/18 inch at the tips. Round the handle section as shown, putting in a small piece of wood to fill out the handle. This is glued on when you are ready to put the grip on the bow. The back corners of the bow are rounded just enough to make them smooth and the belly side rounded until the cross sections appear like those in the drawings.

If you are not using horn tips you can cut the nocks in the ends of the bow as shown in illustration of "self" nocks.



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Archery tackle usually considered too costly for use in average recreation can now be made in the home workshop. Here is explained, in full, the making of quality archery sets and accessories.



This done it is ready for tillering. If you wish to use horn tips you merely cut temporary nocks 1/2 inch from the end but do not round them. The tiller is next made. This is merely a piece of 2x4 planking about 3 1/2 feet long notched in the manner shown in the diagram. This jig is used in bending the bow. After bending the bow it is ready for stringing. There are elaborate string boards used by professionals, but if you will cut a piece of board 3 1/2 feet long and 1 inch thick and 3 inches wide then take Barbour's shoe makers flax and wind it around the flat of the board about 3/16 of an inch apart, then cut diagonally across the windings as shown in the drawings, you will get the right length for the 6 foot bow. For a 40 pound bow you will require about 30 strands of no. 12 or 21 strands of No. 10 flax. In the latter case you must wind off three strands. The cord is cut as shown and then waxed well, especially at the ends. When you get the three sections of 10 each together start at a point about 8 inches from the end and twist each section of strands in turn, twisting away and laying it TOWARD you. Do this to each section

Until at last you have a hard twisted section about two inches long. This is then doubled back on itself to form the loop. Hook the loop over the nock of the bow and at a point about 4 inches below the opposite nock start the other loop and proceed as before, twisting and waxing the string enough to hold it together. The centre should be well wrapped with thread about the size that you use on fish rods. After stringing the bow find the arrow plate, the point above the grip where the arrow rests, and place a square on the string so that the arm crosses the plate. The corner of the square shows where the arrow will rest on the string when shooting.



Length of Bow	Length of Arrow
4 ft.	21 inch
4 ft. 6in.	23 inch
5 ft.	24 or 25 inch
5 ft. 3 in.	25 inch
5 ft. 6 in.	26 inch
5 ft. 9 in.	27 inch
6 ft.	28 inch or 29 inch

The sleeve on the tool is to guide the shaft so that the cut is true and straight. After cutting the tenon, put on either the 30 cal. Bullet jacket or parallel points and then take a fine drill and put a hole in it about ¼ inch from the opening and pin them to the shaft. Since the regular arrow points are obtainable all over the country there is no need to use makeshift heads.

Cut the nock in the end of arrow, using three hack saw blades tied together, then smooth out with a small bastard cut rat-tailed file.

Now sand and straighten the arrows using care so as not to break them. Next come the feathers. Get good clean turkey wing feathers, goose or pelican is they are available. About ¼ of the way up from the large end cut into the quill of the feather to the middle and then split it up to the narrowest point possible and cut off. Split out as many of these as you need and either cut off 2 ¾ inches long for target or 4 ½ inches long for hunting arrows and then put into a long hinge or between two thin pieces of steel, clamp in a vice and then take a rasp and file them down to about 1/16 inch thick. With shears trim the bottom to about 1/16 inch wide all along. Use three feathers of the same wing and of as near the same texture as possible on each arrow. It is advisable to use a different colour of feather on the cock feather for identification. This feather is set at RIGHT ANGLES to the nock and the others at one-third way round making a perfect triangle.

Attach the feathers to the arrows with cellulose cement using pins to hold them in place until the cement dries. Finish off the arrows by attaching coloured cellulose "scotch" tape bands around each end of the feathers. The arrows are ready for use after varnishing.

For the more advanced archer a finger glove and arm guard as well as a quiver are needed. These may be constructed from odd pieces of leather and laced together with horsehide. By carefully following the various steps made clear by the pictorial plans practical archery equipment is certain to result.