

AMATEUR ROD-MAKING.

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ONE of the immediate results of an acquired appetite for angling is the desire to possess a good rod, and, in many cases, the wish to make one's own. Within recent years the brisk competition in rod manufacturing, the special machinery and facilities, enable a maker to turn out a dozen rods, time considered, for the cost of one to the amateur maker; but it is no mean accomplishment to be able to build one's own rod. The points of excellence are strength, lightness, and balance or "hang."

The prevailing woods are lance, betha-bara, maltese, greenheart, and dagama—all foreign woods. The last named is the best all-round wood for the amateur, because of its grain, or lack of grain rather, and the facility with which it can be worked up. It is of light yellow color, similar to lancewood, and can be planed from either end. It is of lighter weight than the others mentioned, and is susceptible of very high finish, while for elasticity, strength, and reliability it is not excelled. These woods can be bought of any dealer, in the "square" or turned, the former being preferable to one who desires to make his rod from start to finish.

It would be folly for the amateur to attempt to split a bamboo rod, in the face of the many makers who have the requisite machinery and facilities for turning them out mechanically perfect, where honest inspection is the rule. But it is not actually necessary to purchase any foreign wood to procure a good and serviceable rod. There is an American wood, everywhere common, which makes a rod which, for toughness and service, excels; that is the hornbeam, or more commonly known as ironwood. If a fisherman were compelled to limit himself to a single rod, his best reliance would be an ironwood, for the reason he would never be disabled to continue his day's fishing by reason of an accident to his rod. Ironwood seldom breaks. Under sufficient strain it splinters, like this—



and when this happens it can be straightened, wound with cord, and made to do service for the time being. This is sometimes a great desideratum when it is not convenient or desirable to suspend operations. Betha-bara and greenheart become weak and brittle with age and use, and the angler never knows what minute a rod of either make will fail him.

Let us suppose the choice of wood is made, the style of rod is then determined. That depends largely upon the character of the fishing. Assuming it is for inland lake and stream fishing, for trout, bass or perch principally, it is not hard to decide unless the rod is solely for trout fishing. All experiences demonstrate that Dr. Henshall, royal angler that he is, has set the appropriate pattern as to length—three joints of thirty-three inches each. Any material variations from this length are found, after trial, to be inadvisable.

To fish with the reel above the hand is at all times absurd, but with an automatic reel it is doubly so; and accordingly we will calculate in constructing our rod to place the reel-seat below the hand-grasp or at the end of the butt. The necessary trimmings are to be purchased, consisting of a reel-seat, ferrules, winding check, rings or tie-guides and top. They are to be had in brass, nickel or German silver, the last much preferred for ferrules. The winding-check is not absolutely necessary unless the hand-grasp is wound.

We are supposed to have decided in favor of a rod similar to a "Henshall" bass rod with the variation of reel-seat below, instead of above, the hand. But this rod is a little "stiffish" for trout fishing, or for fly-fishing for either trout or bass. Let us try to remedy that by making the entire rod a trifle (and trifles in rod-making are not as light as air) lighter, aiming at seven-ounce weight; we will then add an extra fly-tip, a trifle longer than the bait-tip and a trifle slimmer. Thus we have a rod for the all-round purposes of bait fishing for bass; if from a boat it is not so long as to be unwieldy, while the fly-tip enables us to cast in boat or on shore.

An important factor in the enjoyment

of the sport is the "hang" of the rod. The aim is to have the weight as near the hand as possible, so that, with the reel in place, the rod would balance with the fulcrum at the winding-check.

There are two ways that can be employed in making the butt-piece, viz., by working down from the handgrasp on wood of sufficient diameter, or, by gluing on to wood of smaller diameter, pieces sufficiently thick for the handgrasp; the latter plan is preferable, except with ironwood. Some very artistic effects can be produced by pieces of fancy woods, mahogany, ebony, rosewood, or any close-grained wood glued upon the butt to be worked down for the handgrasp. The reel-seat can be three-fourths or seven-eighths in diameter, no larger; and the handgrasp should not be greater than one and one-eighth inches diameter at its thickest part, tapering to five-eighths, which is the largest diameter of the winding-check.

The female ferrule of the butt is three-eighths inch in diameter, inside measurement, thus permitting a gradual taper from the handgrasp to the ferrule.

Supposing the wood to be square we take dividers and strike a circle from the center of the ferrule end, of exactly three-eighths in diameter; that is the guide to work to. We commence at the mark previously made for the winding-check, with a sharp plane, and work off the corners systematically and in turn until that portion of the butt is reduced to a tapering octagon. Then we set the plane finer and work off the octagonal edges, thus securing the first stages of a perfect round. The next stages are scraping and smoothing. For a scraper we use an old table-knife that has been filed to a half-round in three sizes—one for butt, one for second joint, and one for tip, thus:



The edges of the scraper are beveled to the angle of an ordinary chisel. It is no easy matter to maintain a perfect round. The rule is to keep turning the wood to present a new surface to the scraper. The smoothing comes next; this is done with two grades of sandpaper—medium first, and finest lastly.

While the sandpaper in one hand is traveling back and forth, the joint should be rolled to and fro under the other hand on a flat board, table or bench, in a transverse direction. This takes practice and elbow-grease. It is best to provide grooved blocks of wood, seven inches or more in length, with large groove for butt and small groove for second joint and tip. When the sandpaper is laid over the groove the pressure conforms it to the surface of the rod equally.

Now the joints are shaped, but the rod is only commenced. There remain the fitting of the reel-seat and ferrules, the winding of the tie-guides or rings and top, and such intermediate windings as the fancy may dictate. The second joint should be a true taper from three-eighths inch to one-fourth inch. The tip should be a true taper from one-fourth inch to nothing, or the point. With three joints free from check or cross-grain, but the half of a reliable rod is secured. The other half lies in the good fitting of substantial ferrules. Here, let us say, the doweling of rods is relegated to back ages. It is a false notion that they are of the slightest possible benefit. They are detrimental; their tendency is to work loose and present unequal strain to sockets already weakened by boring out for dowels. The greatest strength is obtained where the inside ferrule butts flush against the wood within the outside ferrule. Take our advice and believe that dowels are a snare and delusion.

The tendency with the amateur rod-maker is to hurry the fitting of ferrules, with the inevitable result that the wood shrinks and has play within the ferrule. This should be avoided, and can be by patience and care. The barometer is concerned in the well-fitting of ferrules. If the air is humid or moist the wood absorbs moisture and swells; ferrules fitted upon such a day will drop

off on a dry day, and the puzzled workman can't understand how it is "they went on so hard yesterday and now appear to be too large." We have no faith in water-proof ferrules with metal bottoms, for the reason that it is always best for the wood to push through and through the ferrule, thus securing a

visible fit and enabling it to be crowded a notch further in case of unavoidable shrinkage. The best water-proofing is pure whitelead applied the last thing when ready to drive the ferrule home.

The black bass of American waters is a great rod-smasher. Before he is landed, if you have a weak spot in your rod or tackle he will find it. It is said we are unduly strong under excitement, and when a man in average health finds that he has lost two or three "old sock-dolagers," as Sam Drake styled them, he doesn't feel the immense strain he puts upon his rod in his anxiety to make sure of hooking the next fellow.

But our rod is not complete. We have the three joints, snugly fitting, and we feel so far it is fit to cope with anything in the fish line. It must now be oiled and rubbed; take boiled linseed oil and apply with the bare hand, rubbing it in briskly. Now we have to decide the manner of the finishing. There are two methods; one is known as the hard-oil finish, which means unlimited and repeated rubbings with boiled oil, at intervals of not less than a day apart (more in damp weather), applied with a pad of cotton cloth backed by batting or wool, a very little at a time, and rubbed briskly until the pad commences to stick or get "tacky." With this process no varnish is needed for the rod proper, but shellac or other varnish is essential for the windings,

How your patience will be tried in the winding! As a rule, there cannot be too many rings upon the second joint or tip, provided they are adjusted evenly and in line; they not only strengthen a rod, but they distribute the strain when a fish is hooked. We like rings better than standing tie-guides; the latter are more permissible on the butt, care being taken to have them not too near the hand, as they interfere with the play of the line in paying out for casting. Two guides or rings are ample for the butt, say one at the base of the ferrule and the other six inches lower. There should be at least five rings upon the second joint and seven upon the tip, counting the fop as one. As to tops, there is nothing equal to a plain pear-shaped loop bent to line with the rings. It is wound on neatly, like the ring-keepers, generally with scarlet A corticelli silk. The novice may be curious to know that the

winder lays a small loop of silk upon the rod where wound, winding it over for several times, after which the end of the winding silk is tucked through the loop and drawn in, securing the end completely without visible fastening, thus:



It is well not to pull the end entirely through, nor is it advisable to pull the catching loop entirely out, but, after drawing snugly under, take a pair of fine pointed scissors or sharp knife and snip off the slack close to the windings. A little practice is required to make neat windings. Care should be taken to have the windings equi-distant throughout the entire rod. This can be done by measurement and marking the points upon the rod as put together,

Extra fine finish upon varnished rods is obtained by rubbing each coat down with rotten-stone and oil, or the finest pumice-stone. Ample time should be given for drying between each coat.

Our rod is well-nigh finished. The handgrasp is at the option of the maker. It may be cane-whipped, wound in silk or thread, or not wound at all. If wound, of course the reel-seat and winding-check are to cover ends. Avoid hard ridges in the winding of the grasp, for if one fishes a great deal the friction will make a sore palm. On this account the best handgrasp we use is of ebony, which has been rubbed as smooth as a baby's cheek, with repeated applications of hard oil. The moisture of the skin enables a good grip and the rod handles better than any other.

A word also about the balance. It isn't the weight of a rod that makes it heavy; it is the distribution of that weight. It is sometimes advisable to add weight at the reel-seat by boring into the wood and filling with lead, thereby securing better balance. If you have a good rod, take care of it, wipe it clean after using it; have wood or metal stops for the ferrules; keep the joints in a grooved form or at least a bag, and don't let the rod lie in the hot sun until the varnish or finish is fried off. The enthusiastic amateur can make an excellent rod by following the method outlined, and the pride of possession of a rod made by one's own skill will amply repay the labor.