

OVERHAULING YACHTS.

HINTS FOR CORINTHIANS.*

By A. J. Kenealy.

NO matter how small a craft the yachtsman owns she will, after a winter's lay-up, require a good deal of attention before she is fit for the water; and there is no reason why a keen yachtsman who owns a tidy little craft, should not fit her out himself in his spare time. In fact, I am acquainted with many boat-owners who find nearly as much delight in getting their own vessels into proper fettle for the season's sport as they do in navigating them. There is much to be said in favor of this enterprise. The principal argument is that a man overhauling the hull of the boat which belongs to him will not be at all likely to "scamp" the work. On the contrary, it is to his interest to do the job thoroughly while he is about it, for he is improving his own property; whereas if he employs a mechanic to do it by piece work, or by the day, the task may be performed in a manner more or less perfunctory, or at any rate without the attention to minor details which the actual proprietor would be expected to bring to the task.

I would not counsel a man to attempt repairs which call for the skilled shipwright or boat-builder. The result would in all probability be a lamentable failure, and in the end a mechanic would have to be called in. But the work of cleaning, painting and varnishing a hull intrinsically sound may be accomplished by the man or boy of average intelligence and industry.

What is true about a hull is still more so of her rig. When I first went to sea on a deep-water voyage, as soon as the ship was out of soundings the crew's first duty was to undo the work of the professional rigger, stay the masts anew by shrouds and backstays, and replace the hurried botch-work of knots and splices, by seamanlike and shipshape work.

Anything in the shape of a boat may be made water-tight, no matter how leaky she may be, if treated with careful ingenuity, I would be the last

man to suggest patching and puttying up a ramshackle craft whose frames and planking are rotten. Supposing, however, that the hull is fairly sound, but through exposure to the hot sun her planks are cracked in sundry places and that in fact she leaks like a sieve, there is no season why she should be condemned. There is a lot of good fun to be got out of a craft of this kind, if the proper repairs are made. If put in the hands of a professional boat-builder the cost would be very high, even if he could be induced to undertake the work. Here, then, is where a handy man or boy has a capital opportunity to try his hand as a craftsman. I repaired an old 18-foot boat in my younger days, when money was scarce and I had the alternative of giving up my pet diversion of sailing or making the ancient bucket tight.

This is how I went about it.

The craft in question was hauled out on the shore above high-water mark. She had been abandoned by her rightful owner, who had moved inland and left her to the tender mercies of the sun in summer and the snow in winter. For sixteen months she lay on the beach neglected. Every day I cast covetous eyes on her. I will make a clean breast of it now in my old age and confess that I had contemplated stealing her. That sin was, however, spared me, as I found her owner's address and wrote, asking if he would sell her. He replied that he would give her to me and welcome, and thus made me the happiest youth in the laud.

The boat was originally a first-class little lapstreaker of good model, built of teak throughout and copper-fastened; but there were many cracks in her planks and most of her fastenings were loose, and in a general way she might be described as "nail-sick" all over. With the help of a couple of chums I placed her on chocks and shored her up on an even keel, supporting her well so that she should not suffer from any

*A number of additional valuable and money-saving hints on overhauling a boat may be found in Captain Kenealy's "Boat Sailing, Fair Weather and Foul," published by OUTFIT.

unequal strain, when I filled her later on with water. She was very dirty inside, and I remember it took me the greater part of a day to thoroughly clean her with soap, hot water, and a scrubbing brush. Then I put the plug in and started to fill her up with water. Although I had plenty of help from the village boys, who were never so joyous as when pottering about a boat, it took a long time to fill her, for the water poured out of her like the streams from a shower-bath. But her dry and thirsty planks soon began to swell a little and the leaks to diminish. I kept her as full of water as possible for two or three days, marking with chalk every leak that appeared. I may remark that the chocks on, which her keel was raised were high enough for me to crawl completely under her bottom and get at every part of her. Her hull, which originally had been varnished to show the grain of the natural wood, was pretty well checkered with chalk-marks by the time I had finished. Then I let the water drain out of her, and waited until she was dried thoroughly by wind and sun.

Meanwhile I bought a lot of copper nails of the requisite length and rooves to match, with the use of which I had become thoroughly familiar from watching the men in the boat-shop hard by. Then I began operations, aided by an apprentice from the boatbuilder's establishment whom I induced, by the proffer of pocket money, to turn out of his bed at dawn and lend me a hand till the clang of the bell summoned him to his daily toil. We replaced all the rivets that had worked very loose, with new ones of a larger size, and drove an additional nail between every two originally driven. The old nails, which were only a little slack, I hardened with a few taps of the hammer from the inside, while Toby, the, afore-mentioned apprentice, "held on" against the heads of the nails with another hammer on the outside. This was slow and tedious work, but it paid in the long run, for it made the boat almost as good as new, her frames, as I have already mentioned, being in capital condition.

My next operation was to borrow a pitch-kettle from the boat-shop and to put in it a pound of pitch and a gallon of North Carolina tar. Kindling a fire under it I let it boil until the pitch

had melted, stirring it constantly. This mixture I applied boiling hot to the inside of the boat with a paint-brush, filling every crevice and ledge up to the level of the underside of the thwarts. It was astonishing what a quantity of this composition the planks absorbed. I put only half a ladleful of the tar into my paint-pot at a time, so that it should not stand long enough to cool, replenishing every few minutes from the boiling kettle. Tar when at the boiling point is comparatively thin, and has superior penetrative qualities, so it can be worked with the point of the brush into every crevice, no matter how minute. When it hardens it forms a watertight seam which possesses, from the nature of its ingredients, a certain amount of elasticity.

There were a number of sun-cracks in the planking, which I filled with fish glue, run in hot from the outside. This composition dries very hard and does not crack. My next task was to sand-paper the outside, smoothing the very rough places with pumice-stone after wetting them well. I ached all over by the time this process was completed, but I got her as smooth as glass. Then I gave her outside a couple of good coats of raw linseed oil applied on a hot day. As a finish, not caring to waste money on varnish, I gave her a final coat of boiled linseed oil, in which a generous lump of rosin had been melted. This is the mixture used from time immemorial by the Dutch on the bottoms and topsides of their galliots, and it wears well and looks well, resisting the action of both fresh and salt water. I may say that this method of making my boat watertight was economical and successful. The example may be followed with similar results by anybody who owns a leaky lapstreak craft.

Another method, as practised on a St. Lawrence skiff that was badly checked and rotten in places, is thus described by a veteran boatman who made the successful experiment: "The boat was of lapstreak construction, and many of the seams had opened. I went entirely over the boat, first closing the seams as much as possible by drawing together with clout-nails. Next, where there were cracks through the 3-16-inch planking, I cleaned the painted surface, and where the paint had blistered I removed all of it by scraping. When the sur-

face was in proper condition I cut a strip of eight-ounce duck of a length and width to cover the crack (generally $\frac{3}{4}$ -inch was wide enough) and smeared one side, by means of a stick, with liquid glue. The canvas was applied to the crack and pressed down, and the glue-stick drawn over the raveled ends from the center outward, to make them adhere closely to the boat. Then the canvas and surrounding wood were brushed over with enamel paint. The painting must be done before the glue sets, as otherwise the canvas is apt to warp. Open cracks $\frac{1}{8}$ inch wide were covered in this manner, and also cracks at the butts of the strakes. After all of the cracks were treated I gave the boat two good coats of paint over all, and the result was a comparatively smooth surface, and one that was absolutely watertight." The veteran very truly adds that an old boat repaired in this way will not stand any rough usage, and the patches are not proof against being dragged over rocks, or even a sand-beach; but by a little labor a boat that is practically worthless may be so made serviceable for an indefinite time.

By either of the methods mentioned above a lapstreak boat may be made tight as a bottle. A carvel-built craft—that is, one with the planks flush, edge and edge, and the seams between calked and payed—may generally be made tight by recalcing her with threads of cotton prepared for that purpose and sold by ship-chandlers, driving the cotton well home with iron and mallet, and afterward putting up the seams. Care should be taken, however, not to put the cotton in too tight, or drive it right through the seam. Serious damage has often been done to a boat in the way of increasing her leakiness by too hard calking. Or the boat's hull may be completely covered with light duck nailed on with copper tacks, and afterward well painted. This, however, is rather difficult for a greenhorn to accomplish so as to make a neat fit of it; but I have seen several boats repaired and renovated in this manner by young men gifted with ingenuity, and a great deal of patience. I may say that the result, if the work is well done, is worth the pains thereon expended.

Rowboats, sailboats, and launches propelled by any kind of power may have their hulls treated after one of these

fashions, with quite satisfactory results.

If the owner does not think he is sufficiently handy to undertake the stopping of leaks he can, at any rate, paint and varnish his craft. To paint a boat outside or inside a perfectly smooth surface is necessary, and to obtain this all rough spots should be smoothed with pumice-stone and sandpaper. Enamel paint should be used above the water-line, and the bottom may be painted with any one of the excellent compositions now in the market, which prevent grass and barnacles from flourishing too luxuriantly on the underbodies of boats.

The interior of the boat, after being thoroughly washed and scrubbed, should also have a coat or even two coats of enamel paint, as this composition is lasting and wears three times as long as the ordinary preparation of white lead, oil, turpentine, and pigment. One thing, however, is worth remembering. Never use washing soda or boiling water to clean wood covered with enamel paint. Rub it with a sponge or flannel cloth dipped in lukewarm water and a little soap. For protecting and beautifying natural wood above deck or below, use a good brand of spar varnish. This will resist the damp, salt air of the ocean, or the more penetrating moisture of freshwater lakes and rivers, far better than the higher grade of varnish used for the indoor decoration of dwelling houses, which, when it gets damp, acquires a plum-like bloom on its surface by no means beautiful.

Mr. W. Baden-Powell, than whom there is no better authority, says very truly, that there is no more dangerous time in their lives for the spars of canoes than when stowed away in a boat-house roof for the damp winter's rest. Bamboo spars are more liable to suffer than pine, or solid spruce, but each and all are in danger of splitting or kinking, especially so in the case of built spars, if glued up, instead of screw-built. With such convenient lengths as are found in canoe spars, there is no excuse for leaving them in damp boat-houses, as they can be stacked in a room corner, on end, and the sails and rigging in drawers or boxes. In this way each item of rigging can be overhauled, mended, improved, and set in order for the coming year just as convenient spare time offers.