

INSTRUCTIONS FOR WORKING BAMBOO — SPLITTING — BENDING — FASTENING — ETC .

A Set of Instructions Once Provided by Ken Sykora of Old Time Model Supply

Bamboo is a type of grass which grows in many parts of the world. Tonkin is a variety with thick hard skin used mostly in expensive fishing equipment. The other end of the scale is the fishing pole cane which you buy for the kids to fish with at your lake vacation resort. The skin on these is usually too thin with a weak soft inside not suitable for models generally. The bamboo which you have bought has a thicker strong layer than these fish poles and is strong and tough — just right for many model parts.

1. Bamboo can be worked when it is fresh but it is always best to soak the bamboo in water over night before trying your luck at fabricating parts.
2. Soaked or not, the bamboo usually needs to be split. The splitting starts suddenly so use caution to avoid cutting your fingers. Splitting off a thin piece usually results in the piece gradually becoming thinner or narrower as the split progresses. However splitting in the center of the stick helps to keep the pieces straight. Proceed slowly and if one piece widens a little, push the knife hard against the wide side.* This will tend to guide the split back to the center. Where curved parts are needed in multiple, splitting carefully after bending will make the parts alike.
3. Bamboo can be shaved with a sharp knife. It may be scraped too. Thus you can round edges or streamline pieces. In scraping, it is best to pull the straight pieces along a table with one hand while holding a scraper or knife blade with the other hand. To scrape between a knife and a finger or thumb is inviting fine needle-like slivers to stick you. So please be careful.
4. Bending by softening the natural gums within the material is the procedure used. Steaming is a good way to blister the fingers, and steam is hardly hot enough to do the job. If not held in a form after steaming the bends will relax and the curve will no longer be what you wanted. Even with a form to hold the part while drying and cooling there is a considerable springback when removed from the form. Dry heat works better and the resulting bends have much less springback after forming. By dry heat is meant heat from a soldering iron or similar hot object but not from a direct flame such as a candle or lamp. A candle or lamp heating a curved piece of metal may be used. In fact these devices are shown in old model books — see sketch. To bend the bamboo have your pattern ready. Heat the bamboo over the length or part of the length of the curve required. The stiffness can be felt to relax and the piece fitted to the pattern. Work the part back and forth over the heat source to get uniform heating for the bend and to avoid scorching. Hold the bend briefly while the gums in the wood cool and set. There is very little spring back after forming. Slight browning is OK but avoid blackening, smoke, and sudden cracking of the work. A little practice will make you an expert in no time at all.
5. Fastening bamboo, because of its good strength requires extra care and thought. Butt joints are definitely no good. Where length must be increased, use lap joints of several times the thickness of the parts at the joint. A tougher glue or cement such as Ambroid works well. The thin surface on bamboo is varnish-like and may be scraped off to allow the cement to stick better and save weight. Epoxy cements are brittle and crack loose from bamboo rather easily. Thread binding with a tough rather than brittle cement works well.* Thin slivers of bamboo are used to protect the entering edges of free flight propellers and the places where the rubber bands hold wings. The slivers are inset using cement to retain them. Cyanoacrylate cements work fine but should be coated with Ambroid type cements for high stressed joints.

