BAMBOO FLOORING -- LOOSING FAVOUR
Bamboo flooring is beautiful and reasonably durable -- but it is falling out of favour. Ecologically bamboo is a sustainable resource as it is a very fast growing grass, so bamboo production on a piece of land is far more profitable than growing trees on that same land. However that has led to secondary ecological problems as many groups now criticise bamboo from China because China is converting vast areas of good agricultural land from food production to the more profitable bamboo production to provide bamboo flooring to the Western world. Add to that the fuel costs of shipping bamboo from China and it becomes not such a green product when sourced from China, where most of it comes from. There are a lot of adhesives in bamboo flooring as well, often formaldehyde which is being removed from most of the engineered wood floorings.
In North America, installers are pulling away from bamboo because it not as hard as hardwood and tends to wear in heavy traffic areas. Secondly it gets into trouble in houses with wide humidity fluctuations from summer to winter. Hence there are more consumer complaints that will hardwood products. But here as with many things, there are many grades of bamboo and considerable differences in hardness and hence resistance to scratches and dents. Although difficult to find the specialized flooring stores, bamboo flooring is easy to find in the box stores -- but not much information is available on its quality.
On the ecological side you will want to look for bamboo that carries the Forestry Stewardship Council (FSC) label certifying good harvesting and manufacturing practices.
So a bamboo floor in a kitchen or bathroom where spills can be frequent is probably not a good idea. Used in an environments where humidity is stable all year long and foot traffic is limited or as in Asia, always walked on with bare feet or slippers, it can make a beautiful functional floor.

WORKING WITH NATURALLY ROUND BAMBOO
Despite its hardness, bamboo is not a wood but is considered a member of the grass family. Its rapid growth, variety of sizes, length and great strength make it one of the most used building materials in the world. But you do need to understand it if you want to work with it. Today you can buy natural bamboo from garden centres or even T&G flooring from floor covering stores.

Bamboo normally grows in very humid climates, like tropical jungles and I was totally awed when I first had the chance to run through a bamboo forest in Japan. The bamboo grew very tall, reaching up for some sunshine but spreading out leaves at the top that totally killed off all other growth below. As the leaves lost the sun to the newer growth higher up, they fall to the ground, creating a thick flat mat on the forest floor. Nothing else grows there except mushrooms.
When you bring bamboo into our dry climate, it tends to split like crazy, sometimes literally exploding as it dries out. You can avoid that splitting if you understand what causes it. Bamboo grows with large hollow sections separated by full membranes where the leaves grow. When the outer shell of the bamboo starts to shrink, the dry dead membrane inside prevents it from simply making a smaller tube, so it sets up stresses that pull the tube around the membranes until they split. Usually it is so stressed that when it does crack it can run the split the full length of the bamboo in one loud pop. If you get full round bamboo that has not cracked yet, and you break out those membranes with a long rod, I use concrete re-bars, the bamboo will stay intact. This can be important if you want to use it in the garden to carry water.
If you do want to have half a bamboo for a trough rather than a pipe, do not try cutting it. Rather you use the natural split lines. You can put the side of a chisel into a split and use a hammer to drive it the
full length of the bamboo. Back where it came from, they would use a machete and force it through both sides at the same time.

If you drive a screw into bamboo, it will probably split its full length because of the pushing out pressure of the screw shank. Even if you drill a clearance hole first, if you tighten up a flat head screw, the bevel can be enough to split the bamboo. To successfully screw bamboo into place you should countersink the screw hole and use a round head screw, like a sheet metal screw, that pushes flat down on the bamboo and does not try to force the fibres apart. Yes you need to use extra precautions if you are trying to nail down tongue and groove bamboo floor boards because it is all too easy to split off the tongue with your nailing. The best is to either pre-drill for the nails, or use blunt nails in a power nailer that will punch a hole through the bamboo rather than try to sneak in-between the fibres.

Working successfully with bamboo turns around realizing that it is extremely hard, extremely strong along the fibres and very easy to split between the fibres.

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