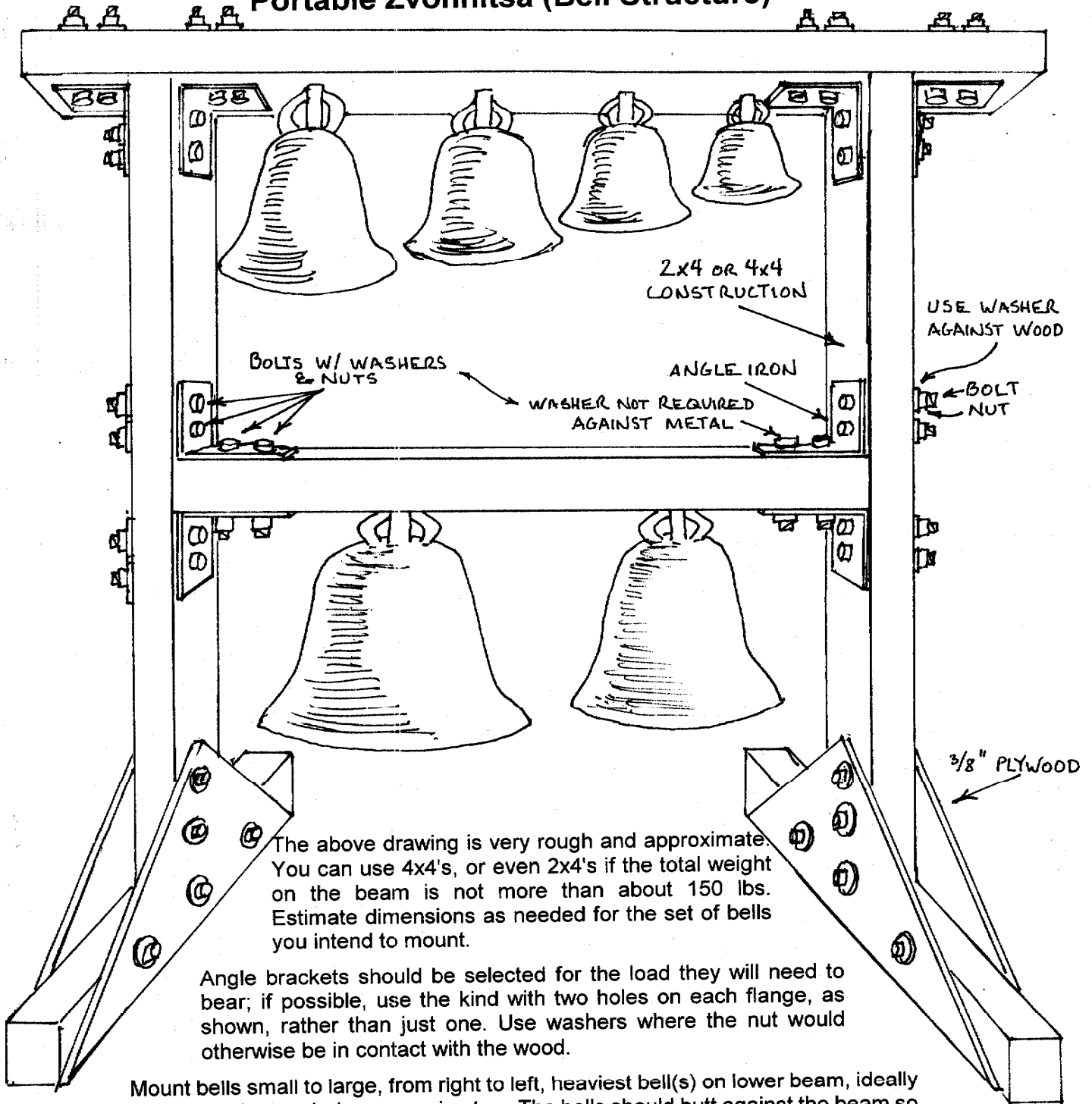


Portable Zvonnitsa (Bell Structure)



The above drawing is very rough and approximate. You can use 4x4's, or even 2x4's if the total weight on the beam is not more than about 150 lbs. Estimate dimensions as needed for the set of bells you intend to mount.

Angle brackets should be selected for the load they will need to bear; if possible, use the kind with two holes on each flange, as shown, rather than just one. Use washers where the nut would otherwise be in contact with the wood.

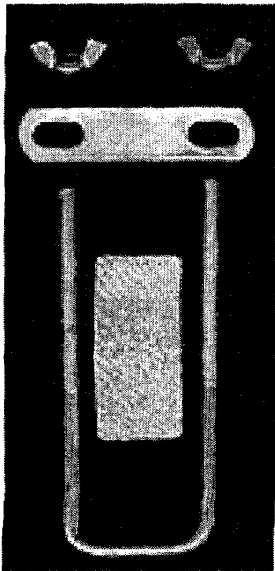
Mount bells small to large, from right to left, heaviest bell(s) on lower beam, ideally in pairs so that each ringer can ring two. The bells should butt against the beam so they don't sway when struck, but should have a little play to absorb the shock. You can mount the bells either with J- or U-bolts, or with nylon rope (but be *sure* to use a knot appropriate to nylon, such as that shown on the following page!)

Methods of mounting Russian bells

In bell-ringing parlance, Russian bells are "hung dead". That means they do not swing, but remain stationary, and the sound is produced by pulling on the clapper.

Bells should be mounted firmly, but not rigidly, against the beam, so that swaying is minimized. If you find that vibration transferred to the beam is a problem, you can insulate the bell from the beam with a piece of rubber, perhaps taken from an old tire.

Bells may be mounted either by metal brackets, by cables, or by nylon rope. Be sure in any case to use material with a load limit appropriate to the bell you're mounting.

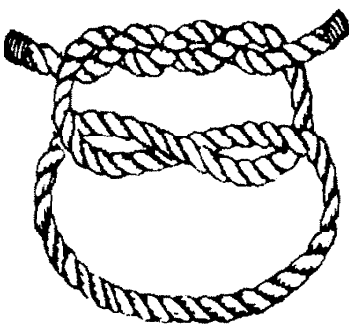


Bell mounting assembly

Our preferred method of mounting bells to their frame is a standard U-bracket which is available at any large hardware store.

Be sure to select brackets that are long enough to extend from the ears of the bell all the way above the beam, with at least a half-inch of thread above the nut, in case the nuts loosen.

This type of bracket comes in several lengths and also for both 2x4 and 4x4 construction. Shown to the left is a bracket assembly for a 2x4 beam.



Knot for securing bells to frame:

PLEASE NOTE that nylon rope is very slippery. If you use nylon rope, you **MUST** use a proper knot! A square knot is *guaranteed* to fail, and a falling bell *will seriously injure, maim, or kill* anyone who happens to be standing under it!

At the left is a variation of a square knot which works effectively.

It is your responsibility to check the condition of your knots before and after each use of the bells!