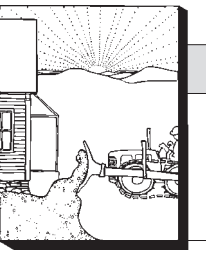


How to Spin Buildings in the Northern Hemisphere

by Elliot Burch

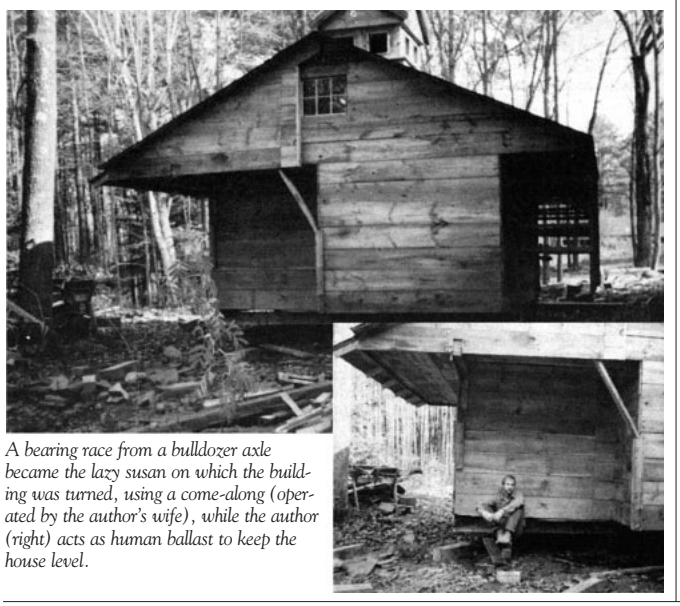
To become a wing of the author's house, this former outbuilding had to be spun 90 degrees and moved 20 feet. The woodpile was added later; but the move was so smooth that several dozen canning jars inside made it intact.

Moving a building usually means moving it to one side or another in a straight line, or putting it on a flat bed and hauling it away.

In my case, though, it wasn't quite that easy; I wanted to spin an outbuilding about 180 degrees, then move it sideways about 20 feet to connect it to the main house. This would not only enlarge the house, but would also make way for the impending septic system.

The stick-frame outbuilding in question was approximately 20 feet square, resting on a dry-laid stone foundation. The floor plan and the layout of the windows and doors made it necessary to rotate the outbuilding one-half turn before moving it sideways to connect it to the house. After pondering my various options for spinning a building of this size, including the rather expensive possibility of renting a crane, I was lucky enough to have a friend drop by with a bulldozer axle bearing. Excitedly, like a couple of children, we began scheming how we could use this bearing race (a mere 4 inches in diameter) as a giant lazy susan on which to turn the building.

The race was designed to support at least 10 tons of pressure, so we knew it could handle the load. We decided I could jack the building up, position the race dead center beneath the building, and simply spin the building around. That was the plan, and it worked. But it took lots of work to get it all set up, and it involved a strategic balancing act as well.



A bearing race from a bulldozer axle became the lazy susan on which the building was turned, using a come-along (operated by the author's wife), while the author (right) acts as human ballast to keep the house level.

First, I jacked up the building about 2 feet, so I could insert some 8x10-inch oak timbers underneath. Two timbers went across, beneath the floor joists, with about 10 feet between them. Cribbing supported the four ends, which stuck out about a foot past the perimeter, and the building was lowered onto them. That was a big job in itself and took the better part of a day.

Next, I took an 8x12-inch timber and positioned it flat beneath and perpendicular to the first two timbers so that it lined up with the center of the building. Beneath the midpoint of this timber I placed the bearing race, sandwiched between two pieces of 1/4-inch steel plate, and resting atop a big block of oak that was dug partially into the ground. Finally, I took out the cribbing and lowered the building's full weight onto the timbers and the race.

At this point, the building was about 2 feet off the ground. Unfortunately, it wasn't perfectly balanced, and it slowly tilted over until the ends of the timbers dug into the dirt.

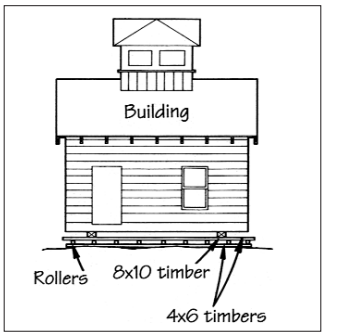
No problem. We went inside and moved some furniture around, and got the building level again. Now we were ready to spin! Using a come-along between nearby trees and the appropriate timbers, we spun the building a click at a time. A couple of times it tipped to one side or the other, requiring more furniture moving or a little human ballast (see photo) at the end of one of the timbers. But it was never scary or dangerous — it would just very slowly droop over, then we'd level it again and continue.

The actual rotation took less than 30 minutes. Had we had four people, one on each corner, we could have just walked the thing around. The timbers held up surprisingly well, despite the large span and load. Miraculously, we didn't break even one of the 12 to 15 dozen canning jars that were stored on the shelves inside.

The next step was to move the building toward the house. I cribbed under the ends of the two long timbers and removed the central timber and the roller bearing race. Then I placed new 4x6-inch timbers flat on the ground, one line under each side like a railway, heading in the direction that I wanted to move the building (see illustration). In my case, this was perpendicular to the orientation of the two long supporting timbers.

On top of my "rail" timbers I placed rollers — old foot-long sections of Lalley columns, five or six on each side. On top of these rollers I laid another timber (one per side). This formed a "roller sandwich" on which the building and its two long supporting timbers rested.

When we lowered the building onto the rollers and timber rails, the come-along moved it with ease. As it slowly rolled along the track, rollers would pop out the back, and we would grab them and reinsert them in front. Now and then we had to tap one back into proper alignment with a sledge hammer.



To move the building sideways, the author sandwiched Lalley-column "rollers" between timbers supporting the house and timbers set along the ground as "tracks."

As the building moved, we laid new pieces of "track" along the ground. Again, setup took some time, but the actual moving was easy and took only minutes. When we reached the house, the building was once again supported by cribbing while the track was removed. Cement piers were poured, and eventually the building came to rest on its new foundation.

One final word of advice: Don't forget to plan and prepare for the "mating" of the two buildings. Tear away clapboards, cut back trim, and so on before the buildings get too close to each other. It's exciting to watch one building approaching another; it kind of makes you feel like an astronaut docking with another ship — except spaceships don't have roof overhangs. ■

Elliot Burch makes and repairs stringed instruments and helps build timber-frame houses in East Alstead, N.H.