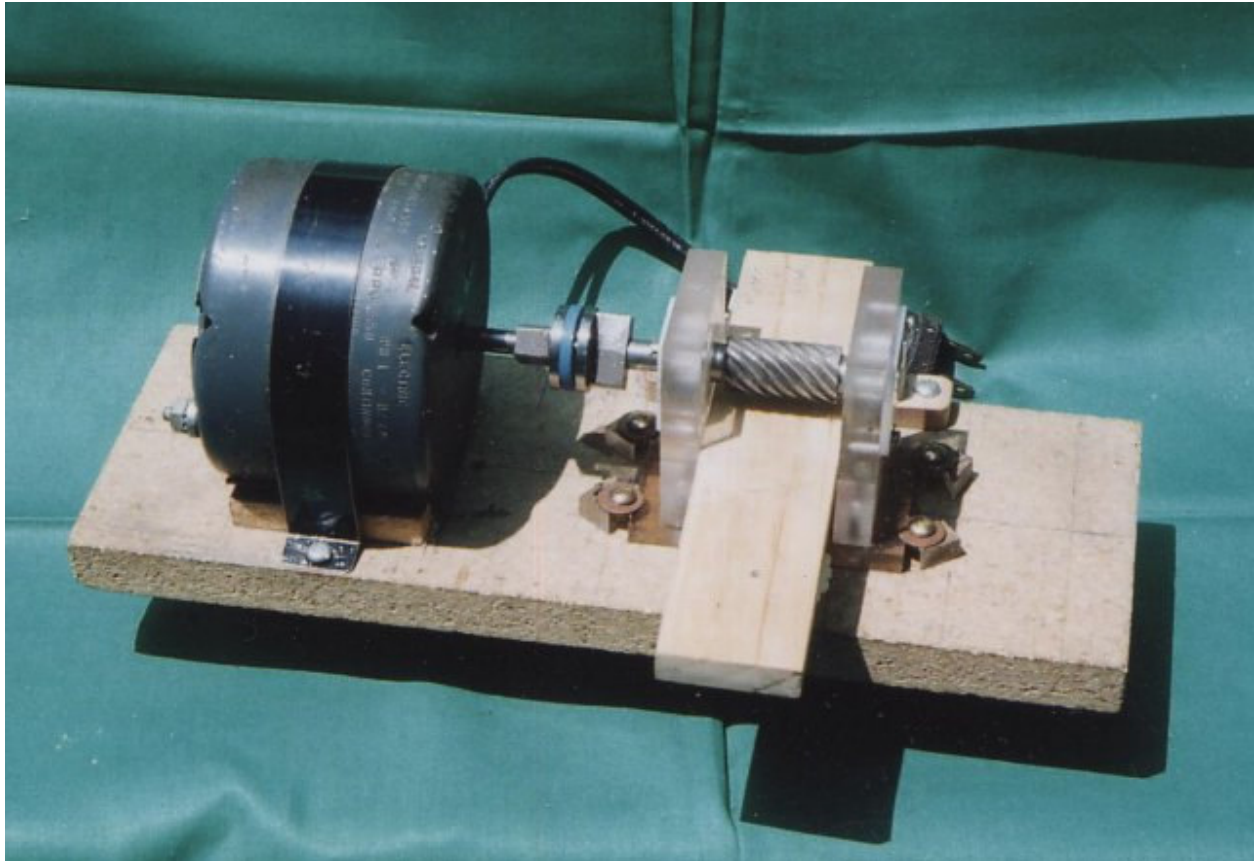


Home Made Thickness Planer

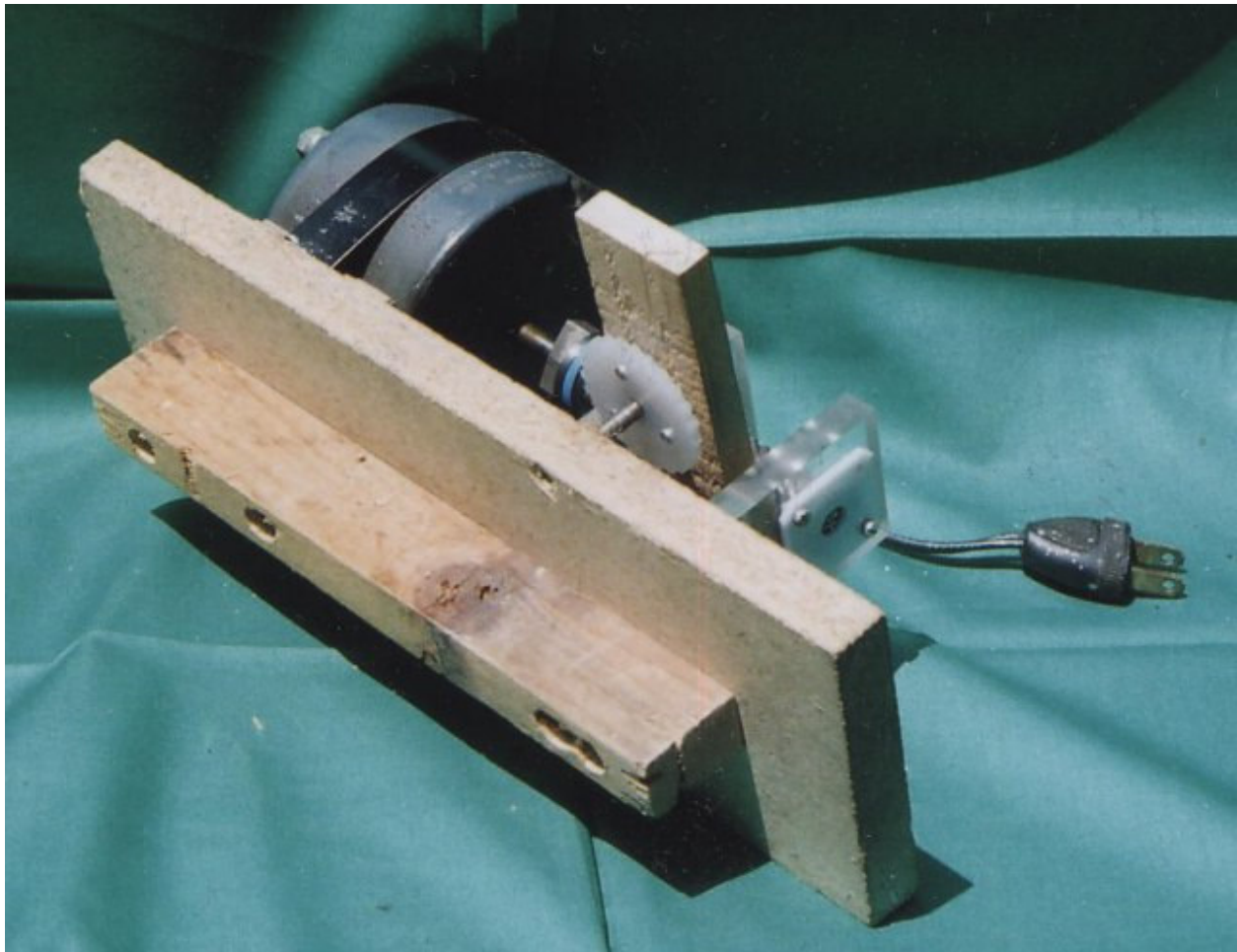
by
Al Gruber

My thickness planer is built around a cutter from a pencil sharpener. The gear pressed into one end of the cutter was removed, leaving a uniform through-bore. A shaft was machined to fit the cutter and run-in ball bearings. (Brass sleeve bearings 1-1/2 diameters long would serve in lieu of ball bearings.) The bearings are mounted in acrylic plastic standards which are fastened to a sub-base. The shaft height is arbitrary, but happened to be just right for the motor available.



The work table below the cutter is 1-3/8" wide x 6" long. The table is supported on each side at the back by a pivot pin (made from a nail) fitted into an angle bracket. The front is supported by a screw that raises and lowers the table to adjust the thickness of the work. The pivot-mounting is adjusted to have the table surface parallel to the axis of the cutter to ensure uniform thickness of the work across its width. The adjustment screw is 10-32 size machine screw and threads into the base with its head supporting the table. It is fitted with a large plastic disk to allow access for adjustment. One turn of a 32-pitch screw advances it 1/32" (0.032)., but due to the 2 to 1 lever ratio the space changes 0.016" for a full turn of the screw and eight thou (.008") for a half turn, so very fine adjustments can be made.

The depth of cut must be chosen with regard to the width and thickness of the work. I usually keep to small cuts, 3 to 5 thou. I've been able to plane 0.18" wide strips to a thickness (thinness?) of 0.015" as measured with a micrometer.



The base is 3-7/8" wide x 10-1/2" long x 5/8" thick. The motor is about 3/16 HP and runs at 1550 RPM no load. The motor is 3-3/8" diameter x 2-1/4" long. The "switch" is of the plug it in and unplug it variety. Although I haven't had any unfortunate incidents, it would be a good idea to install a guard over the cutter.