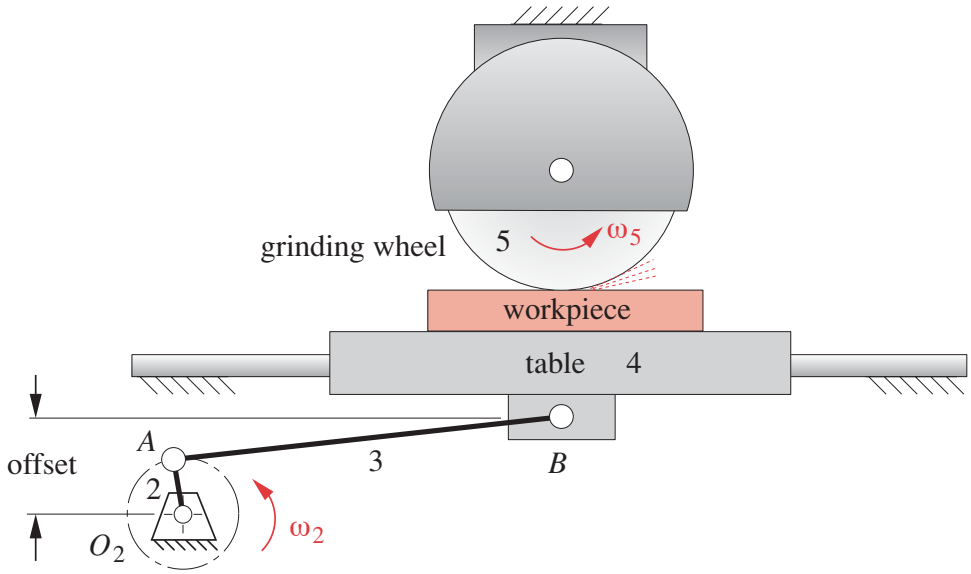

FIGURE P7-20

Problem 7-50 A surface grinder

†7-50 Figure P7-20 shows a surface grinder. The workpiece is oscillated under the spinning 90-mm diameter grinding wheel by the slider-crank linkage which has a 22-mm crank, a 157-mm connecting rod, and a 40-mm offset. The crank turns at 30 rpm, and the grinding wheel at 3450 rpm. Calculate and plot the acceleration of the grinding wheel contact point relative to the workpiece over one revolution of the crank.

† These problems are suited to solution using *Mathcad, Matlab,* or *TKSolver* equation solver programs.