

**FIGURE 3-14**

Crank-shaper quick-return mechanism

- 7-87 Figure 3-14 (p. 122) shows a crank-shaper quick return mechanism with the dimensions: $L_2 = 4.80$ in, $L_4 = 24.00$ in, $L_5 = 19.50$ in. The distance from link 4's pivot (O_4) to link 2's pivot (O_2) is 16.50 in. The vertical distance from O_2 to point C on link 6 is 6.465 in. Use a graphical method to find the acceleration of point C on link 6 when the linkage is near the rightmost position shown with $\theta_2 = 45^\circ$ measured from an axis running from an origin at O_2 through O_4 . Assume that link 2 has a constant angular velocity of 2 rad/sec CW.
- *7-88 Use the data in Problem 7-87 and an analytical method to calculate and plot the acceleration of point C on link 6 of that mechanism for one revolution of input crank 2.