



$O_4O_6 = 1.00$	$L_3 = AB = 4.248$	$L_6 = 1.542$	$DB = 3.274$
$L_2 = 1.556$	$L_4 = 2.125$	$CD = 2.158$	$\angle CDB = 36^\circ$

**FIGURE 3-34**

Stephenson's III sixbar with  $180^\circ$  oscillation of link 6 when crank 2 revolves fully (Source: Hain<sup>(22)</sup>, pp. 448-450)

- 7-63 Find the angular acceleration of link 6 of the linkage in Figure 3-34 part (b) for the position shown ( $\theta_6 = 90^\circ$  with respect to the  $x$ -axis) assuming constant  $\omega_2 = 10$  rad/sec CW.

a. Using a graphical method.

†b. Using an analytical method.

- †7-64 Write a computer program or use an equation solver such as *Mathcad*, *Matlab*, or *TKSolver* to calculate and plot the angular acceleration of link 6 in the sixbar linkage of Figure 3-34 as a function of  $\theta_2$  for a constant  $\omega_2 = 1$  rad/sec CW.

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