



$L_2 = 1.000$ $L_3 = 3.800$ $L_5 = 1.286$ $L_6 = 0.771$ $O_4B = 1.286$ $O_4D = 1.429$ $O_2O_4 = 3.857$ $O_2O_6 = 4.643$
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**FIGURE 3-35**

Washing machine agitator mechanism - constant speed motor drives link 2 and agitator is oscillated by link 6 at  $O_6$

- 6-75 Figure 3-35 (p. 143) shows a Stephenson's sixbar mechanism. Find all its instant centers in the position shown:
- In part (a) of the figure.
  - In part (b) of the figure.
- 6-76 Find the angular velocity of link 6 of the linkage in Figure 3-35 (p. 143) with  $\theta_2 = 90^\circ$  assuming  $\omega_2 = 10$  rad/sec CCW.
- Using a graphical method (use a compass and straightedge to draw the the linkage with link 2 at  $90^\circ$ ).
  - Using the method of instant centers (use a compass and straightedge to draw the the linkage with link 2 at  $90^\circ$ ).
  - Using an analytical method.
- 6-77 Write a computer program or use an equation solver such as *Mathcad*, *Matlab*, or *TKSolver* to calculate and plot the angular velocity of link 6 in the sixbar linkage of Figure 3-35 (p. 143) as a function of  $\theta_2$  for a constant  $\omega_2 = 1$  rad/sec CCW.