

**FIGURE P2-21**

Problems 2-58 to 2-62 (Some illustrations from Dijkman, E. A., *Motion Geometry of Mechanisms*, Cambridge Press, London, 1976)

- 2-58 Figure P2-21a shows a “Nuremberg scissors” mechanism. Find its mobility.
- 2-59 Figure P2-21b shows a mechanism. Find its mobility and classify its isomer type.
- 2-60 Figure P2-21c shows a circular saw mounted on the coupler of a fourbar linkage. The centerline of the sawblade is at a coupler point that moves in an approximate straight line. Draw its kinematic diagram and determine its mobility.
- 2-61 Figure P2-21d shows a log transporter. Draw a kinematic diagram of the mechanism, specify the number of links and joints, and then determine its mobility:
- For the transporter wheels locked and no log in the claw.
  - For the transporter wheels locked with it lifting a log.
  - For the transporter moving a log to a destination in a straight-line.
- 2-62 Figure P2-21e shows a plow mechanism attached to a tractor. Draw its kinematic diagram and find its mobility including the earth as a “link.”
- When the tractor is stopped and the turnbuckle is fixed. (Hint: Consider the tractor and wheel to be one with the earth.)
  - When the tractor is stopped and the turnbuckle is being adjusted. (Same hint.)
  - When the tractor is moving and the turnbuckle is fixed. (Hint: Add the moving tractor’s DOF to those found in part a.)