**PROBLEM 4.104**

The rectangular plate shown weighs 80 lb and is supported by three vertical wires. Determine the weight and location of the lightest block that should be placed on the plate if the tensions in the three wires are to be equal.

**PROBLEM 4.116**

Solve Problem 4.115, assuming that cable $EF$ is replaced by a cable attached at points $E$ and $H$.

**PROBLEM 4.115** The rectangular plate shown weighs 75 lb and is held in the position shown by hinges at $A$ and $B$ and by cable $EF$. Assuming that the hinge at $B$ does not exert any axial thrust, determine (a) the tension in the cable, (b) the reactions at $A$ and $B$.

**PROBLEM 4.120**

Solve Problem 4.118, assuming that the bearing at $D$ is removed and that the bearing at $C$ can exert couples about axes parallel to the $y$ and $z$ axes.

**PROBLEM 4.118** The bent rod $ABEF$ is supported by bearings at $C$ and $D$ and by wire $AH$. Knowing that portion $AB$ of the rod is 250 mm long, determine (a) the tension in wire $AH$, (b) the reactions at $C$ and $D$. Assume that the bearing at $D$ does not exert any axial thrust.
PROBLEM 4.144

A lever $AB$ is hinged at $C$ and attached to a control cable at $A$. If the lever is subjected to a 500-N horizontal force at $B$, determine (a) the tension in the cable, (b) the reaction at $C$.

PROBLEM 4.146

Two slots have been cut in plate $DEF$, and the plate has been placed so that the slots fit two fixed, frictionless pins $A$ and $B$. Knowing that $P = 15$ lb, determine (a) the force each pin exerts on the plate, (b) the reaction at $F$. 