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| 9-51  Estimate the safe **static load *F***for the weldment shown in the figure if an E6010 electrode is used and the design factor is to be 2. The steel members are 1015 hot-rolled steel. Use conventional analysis.  n = 2  1015 hot-rolled steel |  |

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| 9-54  Hardware stores often sell plastic hooks that can be mounted on walls with pressure-sensitive adhesive foam tape. Two designs are shown in (*a*) and (*b*) of the figure. Indicate which one you would buy and why. |  |

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| 9-56  Program the shear-lag solution for the shear-stress state into your computer using Eq. (9–7). Determine the maximum shear stress for each of the following scenarios:  Provide plots of the actual stress distributions predicted by this analysis. You may omit thermal stresses from the calculations, assuming that the service temperature is similar to the stress-free temperature. If the allowable shear stress is 800 psi and the load to be carried is 300 lbf, estimate the respective factors of safety for each geometry. Let *l* 5 1.25 in and *b* 5 1 in. |  |