18–29.

A motor supplies a constant torque or twist of $M = 120\ \text{lb} \cdot \text{ft}$ to the drum. If the drum has a weight of 30 lb and a radius of gyration of $k_O = 0.8$ ft, determine the speed of the 15-lb crate A after it rises $s = 4$ ft starting from rest. Neglect the mass of the cord.