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Computer simulation of the classical entanglement of U-shaped particles in three dimensions BRIAN MADDOCK, JOHN LINDNER, The College of Wooster — Classical entanglement is important in a wide range of phenomena, such as velcro hook-and-loop-fasteners, seed dispersal by animal fur, and bent liquid crystal molecules. We present a computer simulation of the entanglement of U-shaped particles in three dimensions. We represent the particles by phenomenological potentials and evolve them by integrating Newton's laws of motion. We drop them into a virtual cylinder, shake them, and ultimately release the cylinder. As the particle piles relax, we quantify their entanglement by the exponential decay times of their heights, which we correlate to the particles' height-to-length ratios.

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