the first diameter d_1 of the upper portion 192. A tapered portion 197 connects the bottom portion 196 to the upper portion 192. (The degree of taper is exaggerated in the drawings.) A conveyor belt entering either of the skirted drive towers from the bottom has some amount of initial tension in the outside edge of the belt. As the inside edge of the conveyor belt begins to collapse as it rides spirally up the skirt portion of the tower, the diameter of the tower decreases slightly in the skirt portion to help relieve the tension in the outside edge of the conveyor belt.

Thus, the spiral conveyors of FIGS. 11–18 positively drive a conveyor belt without overdrive along a helical path with drive members that engage the inside edge of the belt with a ridge that is initially guided into a driving position against a drive face on the belt. And the spiral conveyor system also allows the use of belts whose inside turn radius does not match the radius of the drive tower.

~~What is claimed is:~~