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(54) **APPARATUS AND PROCESS FOR SEPARATING CARPET FIBERS**

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(57) **ABSTRACT**

Separating pile, adhesive, and primary/secondary backings of post-consumer carpet includes spectrographic fiber identification. Separating substantial portions of pile from backing comprises contacting a rotating pinned drum, with separated pile U's dropping, while a residual composition, being primarily backing, travels with the drum for subsequent delivery to a press. Dislodged pieces of adhesive are removed from separated U's by a spinning perforated squirrel cage utilizing vacuum pressure. A shaker table receives substantially separated U's upon a first screen. Eccentric motor(s) cause vibrations therein separating remaining backing and adhesive from U's, with the U's and adhesive falling through openings in the first screen onto a second screen, and with adhesive falling through openings in the second screen. The angle of the screens and frequency/direction of vibrations are adjustable to optimize a rate of production and a degree of separation. Hammers in a fibermill remove remaining adhesive attached to separated pile U's.

