



US 20120325947A1

(19) **United States**

(12) **Patent Application Publication**

Levy et al.

(10) **Pub. No.: US 2012/0325947 A1**

(43) **Pub. Date: Dec. 27, 2012**

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

(76) Inventors: **Frank Levy**, Quogue, NY (US); **Sergio Dell'Orco**, Capalle (IT)

(21) Appl. No.: **13/135,002**

(22) Filed: **Jun. 22, 2011**

**Publication Classification**

(51) **Int. Cl.**  
**B02C 23/08** (2006.01)

(52) **U.S. Cl.** ..... **241/81**

(57) **ABSTRACT**

Apparatus for separating components of post-consumer carpet—pile, adhesive, and primary/secondary backings—may initially comprise spectrographic face fiber identification. Separating substantial portions of pile from backing comprises feeding carpeting into a rotating pinned drum, with separated pile U's dropping, while a residual composition, being primarily backing, travels with the drum, to be separated therefrom using vacuum pressure, with the composite backing being sent to a press. Vacuum pressure delivers the separated U's to a spinning perforated squirrel cage to remove dislodged pieces of adhesive, by vacuum pressure applied to an interior top portion of the cage to draw pieces therein. Rotating the perforated squirrel cage, which is sealed on the exterior using a belt, permits the U's to drop into a hopper. A mesh shaker box vibrates to separate any remaining backing from the pile U's. Hammers in a fibermill remove remaining adhesive attached to the separated pile U fiber.

