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(54) **DURABLE SEMI-RIGID FLEXIBLE DUCT**

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This patent is subject to a terminal disclaimer.

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(52) **U.S. Cl.**  
USPC ..... **138/133; 138/125; 138/127; 138/131;**  
**138/134; 138/149; 428/36.91**

(58) **Field of Classification Search**  
USPC 138/125, 127, 131, 133, 134, 149; 428/36.91  
See application file for complete search history.

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(57) **ABSTRACT**

A durable, semi-rigid, flexible duct including a pair of coaxial sleeves, namely an inner sleeve and an outer sleeve disposed parallel to and about the inner sleeve and a resilient wound element disposed between the sleeves. Each of the inner sleeve and the outer sleeve constitutes an aluminum foil ribbon. The wound element imparts corrugations to the two sleeves, such that the duct is extendible between a compacted configuration suitable for storage and for shipping and an extended configuration suitable for installation in a gas transport arrangement. Closely and evenly-spaced ridges that are situated in between the corrugations, add rigidity and durability to the duct. Both the inner sleeve and the outer sleeve are of a predetermined thickness rendering the duct substantially rigid when in an extended configuration and enabling the duct to maintain its substantial rigidity upon extension from a compacted configuration.

**29 Claims, 25 Drawing Sheets**

