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(54) Title: COMPOSITE IMPELLER AND METHODS OF FORMING SAME AND OF FORMING MOLDED COMPOSITE ARTICLES

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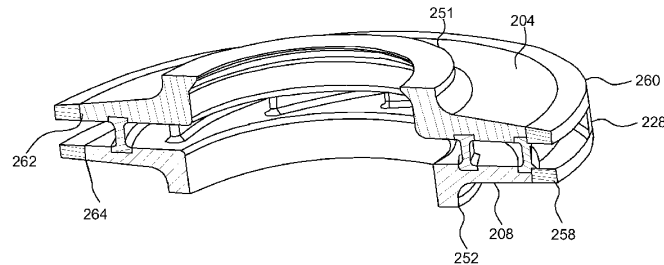


FIG. 24

(57) Abstract: An impeller for use with centrifugal compressors or pumps is provided and described along with methods for making such multicomponent polymeric articles such as open or closed impellers and other assembled molded articles, which may optionally include openings therein. The impeller includes a composite comprising a matrix material selected from at least one thermoplastic polymer or at least one thermosetting polymer; and at least one continuous reinforcing fiber. The impeller includes at least one first flange comprising the composite, the first flange having an exterior surface and an interior surface, the first flange defining a first opening extending longitudinally therethrough; and at least one rib having a first end and a second end, the at least one rib positioned such that its first end engages the at least one first flange. Ring members and additional, second flanges, and optionally outer banding rings may be provided in various designs.

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