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(54) Title: METHOD FOR THE LIGHTWEIGHTING AND/OR DESIGNING OF AN ADDITIVELY MANUFACTURED ARTICLE

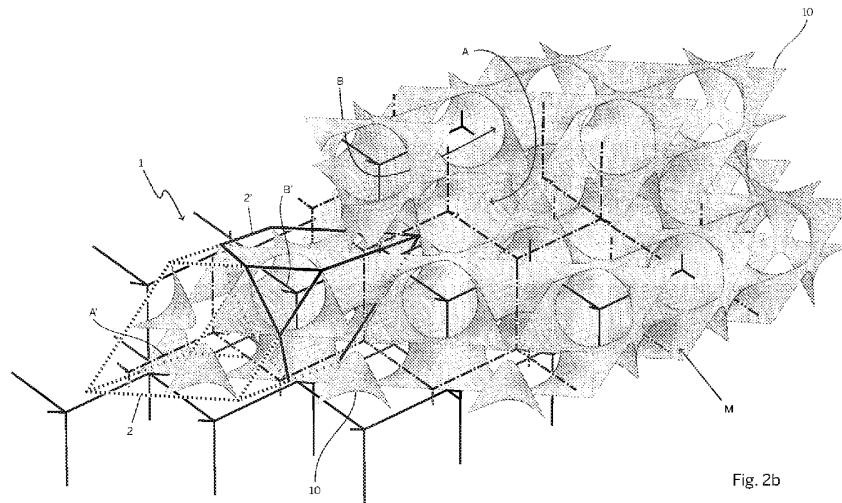


Fig. 2b

(57) Abstract: The present invention relates to a method for the lightweighting and/or designing of an additively manufactured article. The invention further relates to a computer program product adapted for executing the method of the present invention as well as an additively manufactured article obtainable by the method according to the present invention all according to the preambles of the independent claims. The Method comprises the step(s) of infilling and/or building each of the one or more integral article parts with a quasi-crystalline structure. The additively manufactured article obtainable by performing the method comprises a quasi-crystalline structure and/or a quasiperiodic minimal surface infill and/or quasiperiodic minimal surface design structure and/or aperiodic minimal surface design structure and/or aperiodic minimal surface infill. The invention further relates to the use of a skeleton graph for a preprocessing in an additive manufacturing process.

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