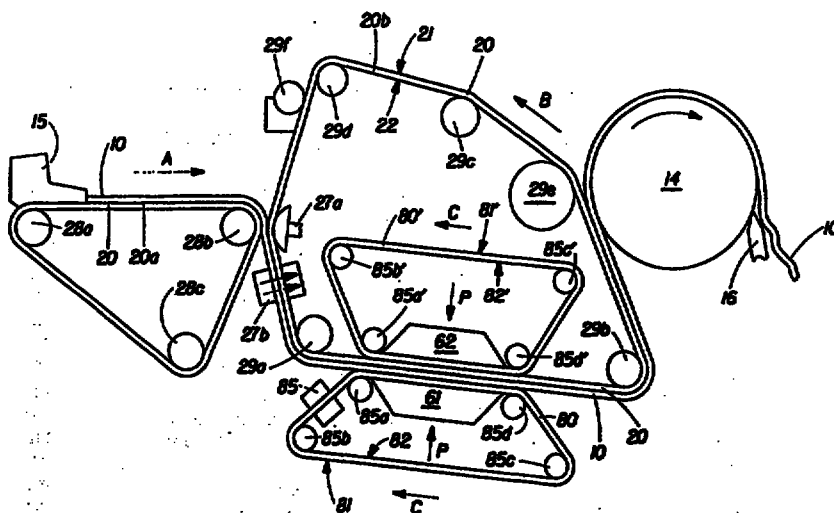


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(54) Title: FIBROUS STRUCTURE AND PROCESS FOR MAKING THE SAME



(57) Abstract

A differential micro-regions single lamina fibrous web is disclosed. The fibrous web comprises at least two pluralities of micro-regions disposed in a non-random and repeating pattern: a first plurality of micro-regions comprising fibers interconnected with a fiber-bonding substance, and a second plurality of micro-regions, preferably not interconnected with the fiber-bonding substance. The fiber-bonding substance is selected from the group consisting of hemicelluloses, lignin, polymeric extractives, and any combination thereof. The fibers of the first plurality of micro-regions are bonded together by a process of softening, flowing, and immobilization of the fiber-bonding substance between the cellulosic fibers. The process for making the fibrous web comprises the steps of heating the web containing the fiber-bonding substance to a temperature sufficient to cause the fiber-bonding substance to soften; pressurizing the fibrous web thereby causing the fiber-bonding substance to flow and interconnect those fibers which are mutually juxtaposed in the first plurality of micro-regions; and then immobilizing the fiber-bonding substance thereby creating fiber-bonds between the fibers which are interconnected in the first plurality of micro-regions.