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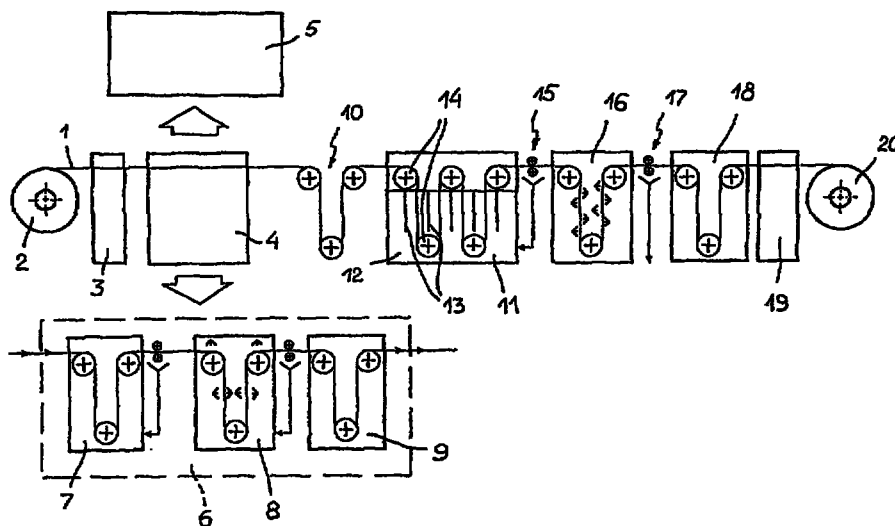
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(54) Title: AN ELECTROCHEMICAL METHOD FOR FORMING AN INORGANIC COVERING LAYER ON A SURFACE OF A COPPER MATERIAL



(57) Abstract: A method is provided for forming an inorganic layer on a surface of a copper material, made of copper or of a copper-based alloy: a browning anodic oxidation process is performed on the copper material in an electrolytic bath containing only an alkali (for example NaOH) at a specified concentration in aqueous solution, under controlled condition of temperature and anodic current density and for a period of time suitable to form a continuous layer basically formed of copper (I) oxide (Cu_2O): layers highly adherent to the copper substrate and having good mechanical behaviour are produced: different colors and optical properties may be obtained by controlling the process conditions so as to influence the crystalline form of the Cu_2O layers.