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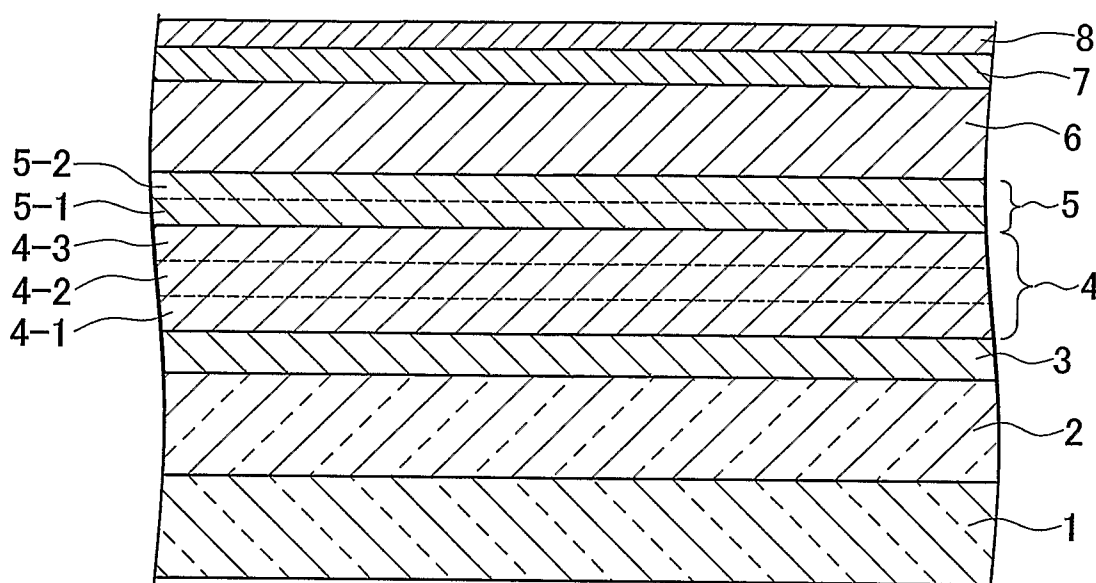
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(54) Title: PERPENDICULAR MAGNETIC RECORDING MEDIUM, AND PERPENDICULAR MAGNETIC RECORDING AND REPRODUCING APPARATUS



(57) Abstract: The invention provides a perpendicular recording medium with high recording density, and a magnetic recording and reproducing apparatus, by improving the function of magnetic anisotropy of a soft magnetic underlayer. The perpendicular recording medium has at least a soft magnetic underlayer and a perpendicular magnetic recording layer on a non-magnetic substrate, wherein when $K_u^{\perp}$ (erg/cm³) is defined as a perpendicular magnetic anisotropic energy, and M_s (emu/cm³) is defined as a saturation magnetization of the soft magnetic underlayer, $K_u^{\perp}$ of the soft magnetic underlayer has a negative value and $K_u^{\perp} < -2\pi M_s^2$. As a result, the easy axis of a magnetization of a soft magnetic underlayer is oriented strongly in the substrate surface plane, which is effective to suppress the WATE phenomena and spike noise.



RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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