United States Patent [19]

Sakamoto et al.

[11] **4,051,706**

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[54] **METHOD OF MAKING ANISOTROPIC PERMANENT MAGNETS OF MN-AL-C ALLOYS**

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[52] **U.S. Cl.** ..... **72/253 R;** 29/608; 148/120; 72/467; 72/700; 72/DIG. 31

[58] **Field of Search** ..... 29/608; 72/467, 253, 72/700, DIG. 31; 148/120; 75/134 M

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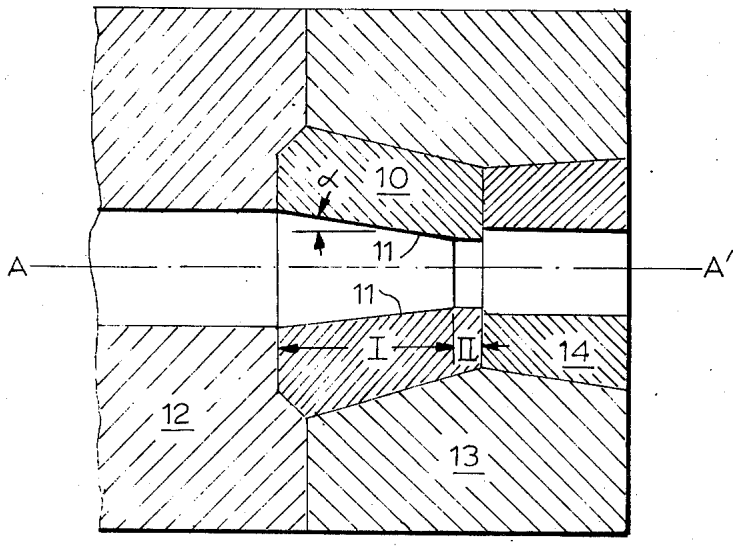
[57] **ABSTRACT**

Anisotropic permanent magnets of Mn-Al-C polycrystalline alloy are produced by warm extrusion at a temperature of 530° to 830° C utilizing converging or tapered dies with lubricant interposed between the polycrystalline body and the converging die. With dies of rather small semiangles, alloys with improved magnetic properties with regard to (BH)max, and especially Br are obtained.

6 Claims, 4 Drawing Figures