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METHOD OF PREPARING A DIAMOND-ABRASIVE MIXTURE
(Description of an invention for an author's certificate)

by

M.S. Pivovarov, D.D. Loginenko, et al.



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HUMAN TRANSLATION

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U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

Block	Italic	Transliteration	Block	Italic	Transliteration
А а	<i>А а</i>	A, a	Р р	<i>Р р</i>	R, r
Б б	<i>Б б</i>	B, b	С с	<i>С с</i>	S, s
В в	<i>В в</i>	V, v	Т т	<i>Т т</i>	T, t
Г г	<i>Г г</i>	G, g	У у	<i>У у</i>	U, u
Д д	<i>Д д</i>	D, d	Ф ф	<i>Ф ф</i>	F, f
Е е	<i>Е е</i>	Ye, ye; E, e*	Х х	<i>Х х</i>	Kh, kh
Ж ж	<i>Ж ж</i>	Zh, zh	Ц ц	<i>Ц ц</i>	Ts, ts
З з	<i>З з</i>	Z, z	Ч ч	<i>Ч ч</i>	Ch, ch
И и	<i>И и</i>	I, i	Ш ш	<i>Ш ш</i>	Sh, sh
Й я	<i>Й я</i>	Y, y	Щ щ	<i>Щ щ</i>	Shch, shch
К к	<i>К к</i>	K, k	Ъ ъ	<i>Ъ ъ</i>	"
Л л	<i>Л л</i>	L, l	Ы ы	<i>Ы ы</i>	Y, y
М м	<i>М м</i>	M, m	Ь ь	<i>Ь ь</i>	'
Н н	<i>Н н</i>	N, n	Э э	<i>Э э</i>	E, e
О о	<i>О о</i>	O, o	Ю ю	<i>Ю ю</i>	Yu, yu
П п	<i>П п</i>	P, p	Я я	<i>Я я</i>	Ya, ya

*ye initially, after vowels, and after ъ, ь; e elsewhere.
When written as ѣ in Russian, transliterate as yě or ě.

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

Russian	English	Russian	English	Russian	English
sin	sin	sh	sinh	arc sh	\sinh^{-1}
cos	cos	ch	cosh	arc ch	\cosh^{-1}
tg	tan	th	tanh	arc th	\tanh^{-1}
ctg	cot	cth	coth	arc cth	\coth^{-1}
sec	sec	sch	sech	arc sch	sech^{-1}
cosec	csc	csch	csch	arc csch	csch^{-1}

Russian English

rot curl
lg log

GRAPHICS DISCLAIMER

All figures, graphics, tables, equations, etc.
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(Description of an invention for an author's certificate)

Pivovarov, M.S., Loginenko, D.D., Skripnik, A.V.,
Shelyakov, O.P., Polashchenko, L.F., Kondrashenko, N.G., and
Baglyuk, Ye.P.

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(72) Pivovarov, M.S., Loginenko, D.D., Skripnik, A.V.,
Shelyakov, O.P., Polashchenko, L.F., Kondrashenko, N.F., and
Baglyuk, Ye.P.

(71) Applicant: Scientific-research and Design-engineering Institute
of Enameled Chemical Equipment and the Poltavskiy Plant of Artificial
Diamonds and Diamond Tools

(54) Method of Preparing a Diamond-abrasive Mixture

The invention pertains to the manufacturing of diamond tools.

A method is known in which the diamond-abrasive mixture is
prepared by means of mixing the abrasive grain with a vulcanite binder.

The purpose of the invention is to ensure the grinding of the
vulcanite binder and the uniform distribution of components.

This is achieved by means of adding ferromagnetic particles to the mixture and then exposing them to a rotating magnetic field.

The mixture is prepared in vessels made out of weakly-magnetic or nonmagnetic material.

The ferromagnetic particles, when exposed to a rotating magnetic field, go into intensive chaotic movement, creating together with the fillers and the vulcanite crumb a pseudoliquified layer. Moving along the working chamber of the vessel at different rates, the ferromagnetic particles and the components of the fillers grind the vulcanite crumb. At the same time there is a redistribution of components of the fillers throughout the layer, as a result of which a uniform distribution of all the components in the mixture is created. The qualitative preparation of the diamond-abrasive mixture on a vulcanite base using the proposed method increases the cutting properties of the tool and improves the cleanliness of surfaces which are machined with such a tool.

Subject of the invention.

A method of preparing a diamond-abrasive mixture by means of mixing abrasive grain with a vulcanite binder, characterized by the fact that for the purpose of ensuring the grinding of the vulcanite binder and the uniform distribution of components ferromagnetic particles are added to the mixture, and then they are exposed to a rotating magnetic field.