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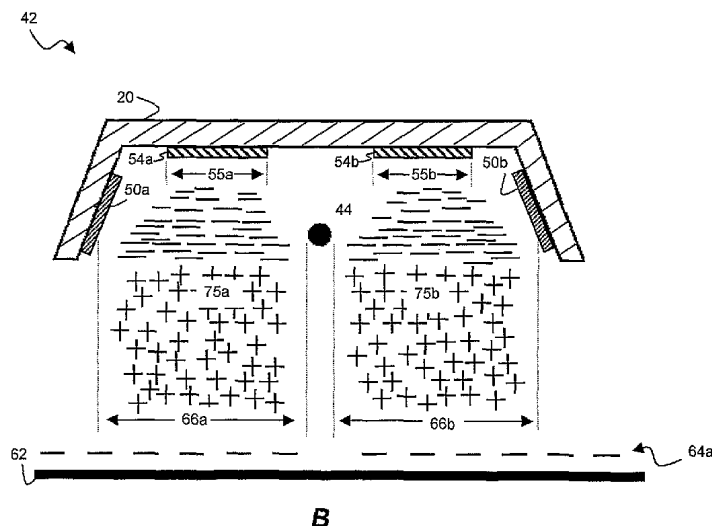
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Previous Correction:

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(54) Title: WIDE RANGE STATIC NEUTRALIZER AND METHOD



(57) Abstract: Static neutralization of a charged object is provided by generating, in an ionizing cell or module, an ion cloud having a mix of positively and negatively charged ions, and reshaping the ion cloud by redistributing the ions into two regions of opposite polarity by using a second voltage. The second voltage creates an electrical field, which is preferably located in the vicinity of the ion cloud. The redistribution of the ions increases the effective range in which available ions may be displaced or directed towards the charged object. The electrical field redistributes ions that form the ion cloud. Ion redistribution within the ion cloud occurs because ions having a polarity corresponding to the polarity of the second voltage are repelled from the electrical field, and ions having a polarity opposite from that of the electrical field are attracted to electrical field. Redistribution of the ions into two regions of opposite polarity in the ion cloud in turn reshapes the ion cloud so that a portion of the cloud corresponding to the repelled ions is displaced by ions attracted to the electrical field, thus enhancing the range in which the ions may be dispersed or directed. This manner of redistributing ions into two regions is sometimes referred to as "ion polarization" in the disclosure herein.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: B23K 10/00(2006.01)

USPC: 219/121.36,121.54,121.57,121.59;361/250

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 219/121.36,121.54, 121.57, 121.59; 361/250, 315/111.21

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,653,638 B2 (FUJII) 25 NOVEMBER 2003, SEE ENTIRE DOCUMENT.	1-59
A	US 5,847,917 A (SUZUKI) 08 DECEMBER 1998, SEE ABSTRACT.	1-59
A	US 6,636,411 B1 (NOLL) 21 OCTOBER 2003, SEE ENTIRE DOCUMENT.	1-59
Y	US 2003/0011957 A1 (NILSSON) 16 JANUARY 2003, SEE FIGURE 1.	1-59
A	WO 00/384484 A1 (NOLL ET AL) 29 JUNE 2000, SEE ENTIRE DOCUMENT.	1-59

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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