(19) Europäisches Patentamt
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(11) **EP 2 654 045 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
25.01.2017 Bulletin 2017/04

(43) Date of publication A2:
23.10.2013 Bulletin 2013/43

(21) Application number: **13161913.2**

(22) Date of filing: **02.04.2013**

(51) Int Cl.:
G21K 1/06 *(2006.01)*

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(30) Priority: **17.04.2012 CZ 20120265**

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(54) **X-ray telescope**

(57) X-ray telescope which displays the X-ray radiation with wavelength (λ) is formed by a parabolic strip assembled from bent monocrystalline plates (1,2) with atomic planes (5) parallel with the surface of these monocrystalline plates (1,2), where their mutual distance in each monocrystalline plate (1,2) varies according to the equation

$$d = \frac{n\lambda}{2p}\sqrt{x^2 + p^2}\ ,$$

where n is a natural number, which determines the number of wavelengths (λ) belonging to the difference of the ray travel distances when reflecting from two neighbouring atomic planes (5), and p is double the distance of the focal line (F) from the vertex line (V) of the parabolic strip,
i.e. for given monocrystalline plate (1,2) laid between (x_{min}) and (x_{max}) the following equation applies

$$\frac{d}{d_0} = \frac{\sqrt{x^2 + p^2}}{\sqrt{x_{\min}^2 + p^2}},$$

where (d_0) is the distance between the neighboring atomic planes (5) at the point with coordinate (x_{min}) and (d) is the distance between the atomic planes (5) at the point with coordinate (x). Such course can be achieved by distribution of temperatures in different places according to experimentally measured dependence of the grid parameter y on the temperature

$$T(x) = T(x_{\min}) + \frac{1}{\gamma}\left[\frac{n\lambda}{2pd_0}\sqrt{x^2 + p^2} - 1\right].$$

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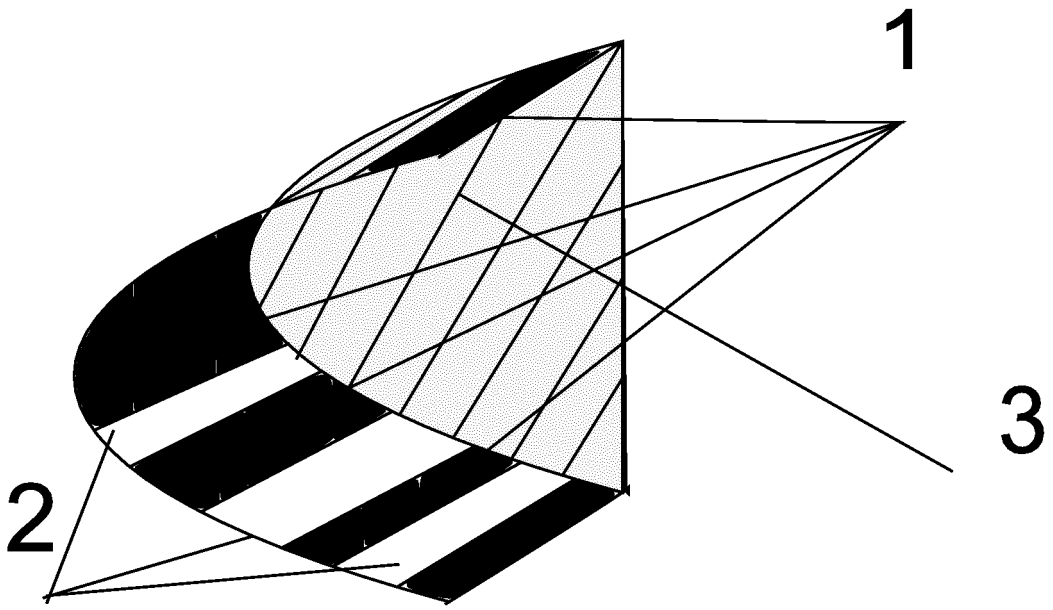

FIG. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 13 16 1913

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	16 December 2016	Oestreich, Sebastian

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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EPO FORM 1503 03.82 (P04C01)

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82