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(71) Applicant: **SEC TECHNOLOGIES, S.R.O.** [SK/SK];
Družstevná 5, 031 01 Liptovský Mikuláš (SK).

(72) Inventors: **VICENÍK, Jiří**; Gaštanová 511/5, 031 04 Lip-
tovský Mikuláš (SK). **SEDLÁČKOVÁ, Zina**; Gaštanová
511/3, 031 04 Liptovský Mikuláš (SK).

(74) Agent: **BRICHTA & PARTNERS S.R.O.**; Grosslingová
6-8, 811 09 Bratislava (SK).

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(54) Title: METHOD FOR REMOTE DETECTION OF GASEOUS SUBSTANCES IN THE ATMOSPHERE BY THE DIAL SYSTEM WITH TWO LASERS AND A REMOTE DETECTOR

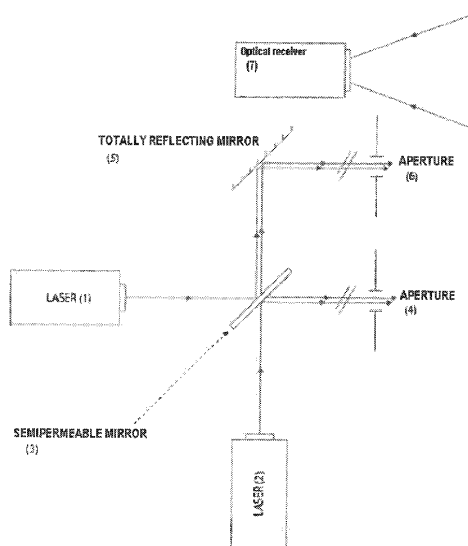


Fig. 1

(57) Abstract: A remote detector of gaseous substances in the atmosphere by a DIAL system with two lasers is described, which comprises a first laser (1) and a second laser (2), wherein at the intersection of the axes of their laser beams a semipermeable mirror (3) is located, which merges the beams of said two lasers (1, 2) so as to output a first and a second merged beams, each of which comprising 50% of laser beam power from the first laser (1) and 50% of laser beam power from the second laser (2); downstream the semipermeable mirror (3), a totally reflecting mirror (5) is located; the first merged beam is transmitted through a first aperture (4) located in a first direction from the semipermeable mirror (3), and the second merged beam is transmitted through a second aperture (6) located in a second direction after being reflected from the totally reflecting mirror (5); and the first and second merged beams are directed to the same target. Also disclosed is a corresponding method.

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