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- (54) Title: METHOD AND DEVICE FOR QUANTIFICATION OF GASES IN PLUMES BY REMOTE SENSING

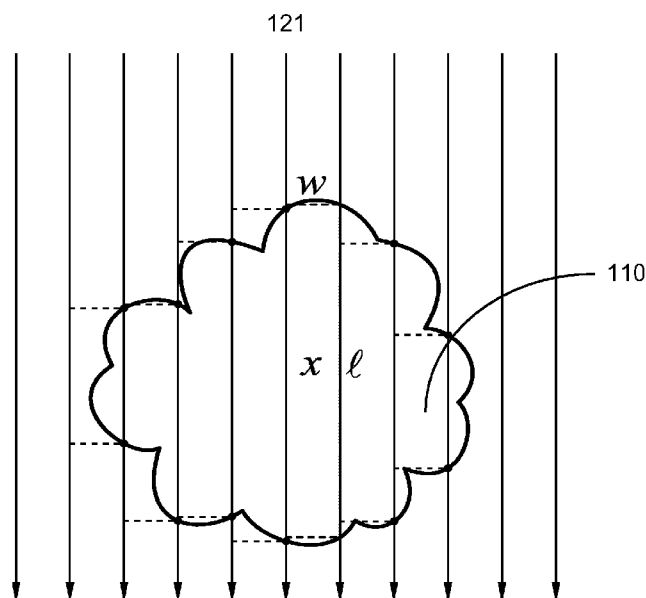


Fig. 1

(57) Abstract: Method and device for quantifying ingredients of a plume. In one embodiment, the method includes sweepingly directing a beam of light through the plume to a surface on which the beam of light is scattered, acquiring the scattered light scattered from the surface, and processing the acquired scattered light to determine an amount of ingredients of the plume. In one embodiment, the height of the back of the vehicle is measured as the top of the plume for calculating the total mass-per-distance of the plume. In another embodiment, by comparing the absorption spectrum of the plume and the background absorption spectrum of which no plume exists, the non-methane hydrocarbons (NMHC) of the plume emitted from a vehicle can be quantified.

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