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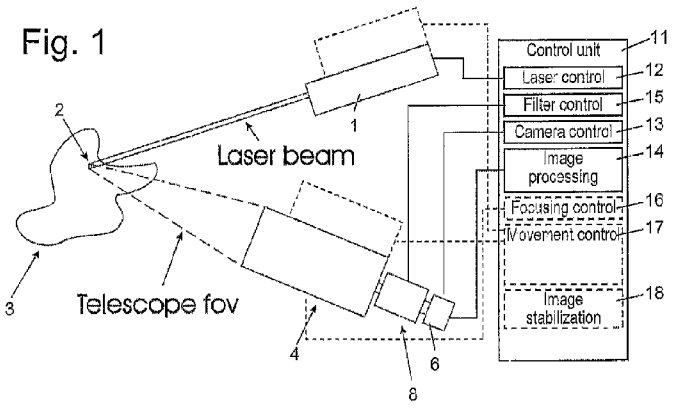
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(54) **Title**: DETECTING SMALL AMOUNTS OF SUBSTANCES

Fig. 1



(57) **Abstract**: In determining whether an object contains e.g. a hazardous substance or molecules of a hazardous substance the object (3) is illuminated with light of a definite wavelength. A telescope (4) collects and concentrates light scattered by the object and a plurality of individual picture elements in a picture element array in a camera (6) receives and detects the collected and concentrated light. The detection signals from each of the individual picture elements are individually analyzed to produce a Raman-spectrum or some similar spectrum valid for the subarea of the illuminated area of the object that corresponds to the respective picture element. The subarea of the illuminated area that corresponds to one of the individual picture elements can be chosen to have a width or dimension chosen to correspond to the size or a dimension of a particle or a molecule of the hazardous substance. A filter (8) that can be tunable can be used for filtering the collected and concentrated light before being received by the camera, so that at each instance light of only one wavelength range is detected.

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