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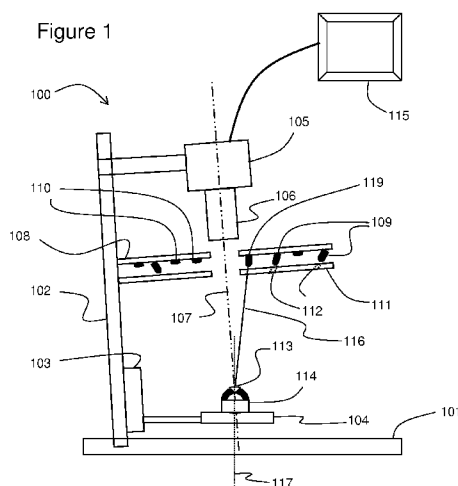
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(54) Title: GEMSTONE VIEWER



(57) Abstract: An apparatus for viewing images of a gemstone is described. The apparatus comprises a support structure for supporting the gemstone at an observation position. An illumination structure comprises a plurality of directional light sources directed towards the observation position so as to illuminate the gemstone. The support structure and illumination structure are relatively rotatable relative to one another about a rotation axis. An imaging device is arranged to obtain images of the gemstone at the observation position at a variety of relative rotational positions between the illumination structure and support structure: the imaging device has an imaging axis passing through the observation position. The support structure is arranged so that the gemstone can be placed at the observation position in such a way that the normal to a selected facet of the gemstone is within a range of tilt angles from the rotation axis. The arrangement of directional light sources is such that, for any tilt angle within the range, at least one of the directional light sources will be specularly reflected from the selected facet into the imaging device for at least one rotational position of the support structure.