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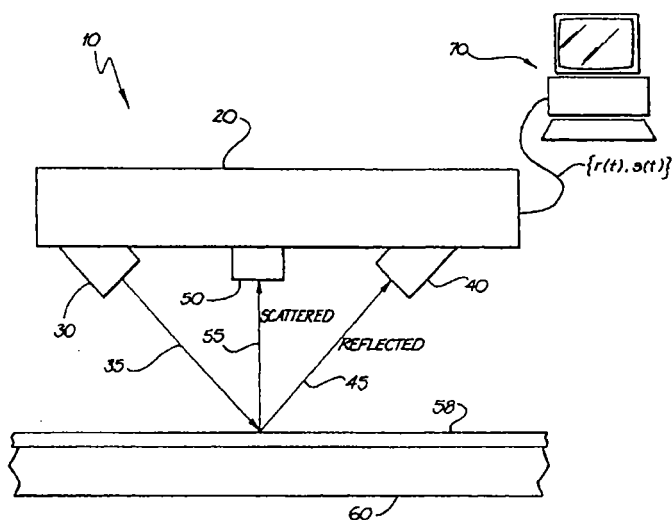
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(54) Title: **INK AND DAMPENING SOLUTION DETERMINATION IN OFFSET PRINTING**

(57) Abstract: An optical instrument for determining properties of the imaging and non-imaging areas of offset printing plates is disclosed. A laser light source (30) directs a laser beam (35) at the surface layer (50) of an offset printing plate (60). A specularly reflected beam (45) is detected by a light detector (40). Additionally, scattered light (55) is detected by a light detector (50). The detectors (40, 50) produce light intensity signals for the reflected and scattered light, respectively. A data processor (70) processes the intensity signals to determine various properties relating to the dampening solution and ink present on the non-imaging and imaging areas of the printing plate, respectively. These properties include the thickness of dampening solution in non-imaging areas, the image density in imaging areas of a moving printing plate, and the occurrence of scumming in non-imaging areas of a printing plate. The processed intensity signals also may be utilised to control the application of ink and dampening solution to an offset printing press.



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