

ABSTRACT

INK AMOUNT DETECTING DEVICE AND RECORDING APPARATUS
PROVIDED WITH SUCH A DEVICE

An ink detecting device is used for a recording apparatus which records on a recording medium by use of a plurality of recording means for recording on the recording medium while being shifted correlatively with respect to the recording medium corresponding to a plurality of different colors of ink, which is capable of detecting the amount of ink in a plurality of ink reservoiring means shiftable together with the recording means correlatively with respect to the recording medium. The detecting device comprises a transparent member provided for the wall of each of the ink reservoiring means; light emitting means for emitting light provided in a given position along the shifting passage of the ink reservoiring means in order to emit light to the transparent member arriving at the given position; light receiving means for receiving the light which is emitted from the light emitting means and totally reflected at least once on the inner surface of the transparent member in the ink reservoiring means wherein the light emitted from the light emitting means to said transparent member reaches the light receiving means when totally reflected at least once on the inner surface of the ink reservoiring means which is not in contact with the ink, and is transmitted without any total reflection through the inner surface of the ink reservoiring means which is in



contact with the ink; and detecting means for detecting
per ink reservoiring means whether the light receiving
means has received the light or not when the plural ink
reservoiring means arrive at the given position. Thus,
5 it is possible to detect the remaining quantity of ink
in an ink container reliably, leading to the provision
of a highly reliable and simply structured apparatus at
a low cost.

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