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(54) Title: PRECISION CONTROL OF WEB MATERIAL HAVING MICRO-REPLICATED LENS ARRAY

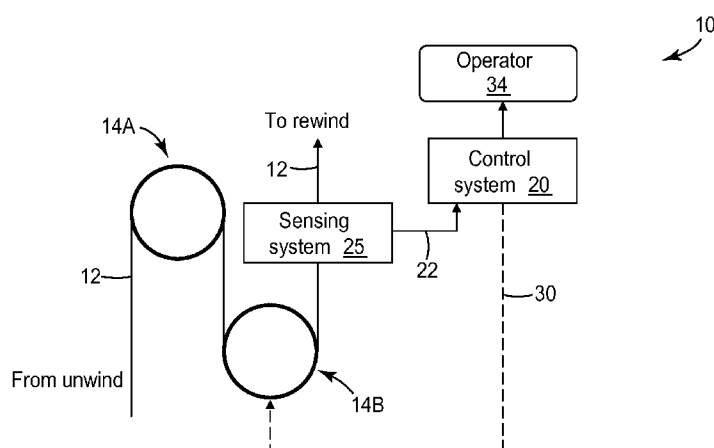


FIG. 1

(57) Abstract: A manufacturing system includes a sensing system that provides high-resolution feedback for web guiding and tension control. The system may be especially useful for web material that is manufactured to include micro-replicated structures with micron size scale. A micro-replication station forms a pattern of micro-replicated lenses on a web material. The sensing system illuminates a measurement area on the web material and detects an angular distribution of light exiting a set of the micro-replicated lenses within the first measurement area. A control system that adjusts at least one process control parameter of the transport system based on the detected angular distribution.



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