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(71) Applicant (for all designated States except US): **3M INNOVATIVE PROPERTIES COMPANY** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HOFELDT, David, L.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **BROTT, Robert, L.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **CARLSON, Daniel, H.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **DOBBS, James, N.**

[US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **JAWORSKI, Andrzej, P.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **JERRY, Glen, A.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **STRAND, John, T.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **SYKORA, Michael, J.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). **STENSVAD, Karl, K.** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

(74) Agents: **BAKER, James A., et al.**; 3M Center, Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

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

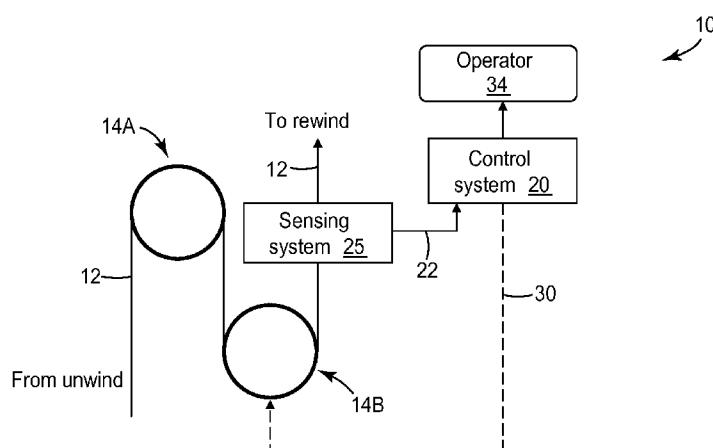


FIG. 1

(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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