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(71) Applicant *(for all designated States except US)*: **COLGATE-PALMOLIVE COMPANY** [US/US]; 300 Park Avenue, New York, NY 10022 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **PILCH, Shira** [US/US]; 909 South Park Avenue, Highland Park, NJ 08904 (US). **MASTERS, James, G.** [US/US]; 1 Stephen Court, Ringoes, NJ 08551 (US).

(74) Agent: **TRAUT, Donald**; Colgate-Palmolive Company, 909 River Road, P.O. Box 1343, Piscataway, NJ 08854 (US).

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(54) Title: IMPERMEABLE CAPSULES

(57) Abstract: A capsule comprising a core and a shell surrounding and enclosing the core, the shell comprising at least one first polymer having a first water solubility parameter, and at least one second polymer having a water solubility parameter higher than the first water solubility parameter, wherein the second polymer is crosslinked, and/or all of the at least one second polymer is present in an amount that is less than all of the at least one first polymer. Upon exposure to an aqueous medium, the first polymer begins to swell, and water begins to leak into the capsule. Also, the second polymer is attracted to the entering water. As the second polymer absorbs water and swells, the mean free space in the shell decreases and the tortuous pathway for materials crossing the boundary of the wall increases. As a result, leakage rates across the capsule wall decrease.