

[54] **METHOD OF APPLYING A HYDROPHILIC COATING TO A POLYMERIC SUBSTRATE AND ARTICLES PREPARED THEREBY**

[75] **Inventors:** Abraham Schwartz; Jane Graper, both of Durham; Joel Williams, Cary, all of N.C.

[73] **Assignee:** Becton, Dickinson and Company, Paramus, N.J.

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[58] **Field of Search** 427/2, 230, 307, 353, 427/393.5; 428/36, 411.1, 413.1, 451; 604/516-522, 264, 266; 138/145; 2/167, 168

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,216,983	11/1965	Shelanski et al.	260/88.3
3,695,921	10/1972	Shepherd et al.	427/2
3,939,049	2/1976	Ratner et al.	204/159.13
4,055,682	10/1977	Merrill	427/2
4,087,567	5/1978	Sullivan	427/230

4,100,309	7/1978	Micklus et al.	427/2
4,112,925	9/1978	Sullivan	128/760
4,119,094	10/1978	Micklus et al.	126/132 R
4,143,423	3/1979	Sternlieb	427/2
4,169,163	9/1979	Judd et al.	426/413
4,373,009	2/1983	Winn	428/424.2
4,381,008	4/1983	Thomas et al.	604/265
4,459,317	7/1984	Lambert	427/2
4,482,577	11/1984	Goldstein et al.	427/2

FOREIGN PATENT DOCUMENTS

1796134 2/1978 Fed. Rep. of Germany ... 427/393.5

Primary Examiner—John F. Niebling
Assistant Examiner—Terryence Chapman
Attorney, Agent, or Firm—Richard E. Brown

[57] **ABSTRACT**

A method to impart increased lubricity to the surface of a polymeric substrate includes contacting the substrate with a solution of a hydrophilic polymer in a solvent and heating the substrate to evaporate the solvent. The substrate retains a coating of the hydrophilic polymer, which, when dry, has about the same lubricity as the uncoated substrate. When wet, the coating becomes significantly more lubricious than when dry. The invention includes articles which have a lubricious surface when wet prepared by the method of the invention.

13 Claims, No Drawings