



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <p>(51) International Patent Classification <sup>7</sup> :<br/><b>H02G 15/013</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>A1</b>                  | <p>(11) International Publication Number: <b>WO 00/45491</b></p> <p>(43) International Publication Date: <b>3 August 2000 (03.08.00)</b></p> |            |                            |    |            |                            |    |
| <p>(21) International Application Number: <b>PCT/US00/02088</b></p> <p>(22) International Filing Date: <b>25 January 2000 (25.01.00)</b></p> <p>(30) Priority Data:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">60/117,376</td> <td style="width: 30%;">27 January 1999 (27.01.99)</td> <td style="width: 40%;">US</td> </tr> <tr> <td>09/457,837</td> <td>9 December 1999 (09.12.99)</td> <td>US</td> </tr> </table> <p>(71) Applicant: <b>3M INNOVATIVE PROPERTIES COMPANY</b><br/>[US/US]; 3M Center, P.O. Box 33427, Saint Paul, MN 55133-3427 (US).</p> <p>(72) Inventor: <b>SMITH, Russell, P.</b>; 6801 River Place Boulevard,<br/>Austin, TX 78726-9000 (US).</p> <p>(74) Agents: <b>FORTKORT, John, A. et al.</b>; 3M Innovative Properties<br/>Company, Office of Intellectual Property Counsel, P.O. Box<br/>33427, Saint Paul, MN 55133-3427 (US).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                                                                                                                                              | 60/117,376 | 27 January 1999 (27.01.99) | US | 09/457,837 | 9 December 1999 (09.12.99) | US |
| 60/117,376                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 27 January 1999 (27.01.99) | US                                                                                                                                           |            |                            |    |            |                            |    |
| 09/457,837                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 9 December 1999 (09.12.99) | US                                                                                                                                           |            |                            |    |            |                            |    |
| <p>(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (Utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b></p> <p><i>With international search report.</i></p> <p><i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                                                                                                                                              |            |                            |    |            |                            |    |
| <p>(54) Title: <b>END SEAL ASSEMBLY FOR A SPLICE CASE</b></p> <p>(57) Abstract</p> <p>An end seal assembly is adapted to seal the space between at least one cable and a closure to restrict fluid transfer through the seal. The end seal assembly includes an end seal having a body formed from an elastic, flexible material. The body includes a core portion (20) and an extended tail portion (22). The core portion has an outer peripheral surface, spaced ends, and a wall forming at least one cylindrical opening (24) through the core portion. The cylindrical opening extends between the spaced ends. The wall has two edges communicating with the outer peripheral surface of the core portion to define between the two edges an entrance slot (21) to the at least one of the cylindrical openings (24). The extended tail portion is integral with and extends from the outer peripheral surface of the core portion (20). Moreover, the tail portion (22) has a surface tangential to the wall forming the at least one opening. In addition, the tail portion has sufficient length to wrap about the outer peripheral surface of the core portion to form a wrapped end seal such that the tail portion covers the entrance slot (21) of the at least one opening and a cable to be placed therein. The assembly further includes a rigid collar having first and second collar portions (90, 91) that are pivotably interconnected. The first and second portions have inner surfaces that conform to and enclose the wrapped end seal to form an inner cavity between the wrapped end seal and the first and second portions of the collar. The collar also has an outer surface adapted to sealingly abut an end of the closure. Furthermore, the assembly provides for injection of a sealant composition to fill the inner cavity and to bond together the wrapped end seal, the cable (which is placed in the opening), and the rigid collar.</p> |                            |                                                                                                                                              |            |                            |    |            |                            |    |
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