



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

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| <b>(51) International Patent Classification <sup>6</sup>:</b><br><br><b>F42B 39/00</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>A2</b>                   | <b>(11) International Publication Number:</b> <b>WO 99/10704</b><br><br><b>(43) International Publication Date:</b> 4 March 1999 (04.03.99) |                           |    |            |                             |    |            |                         |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>(21) International Application Number:</b> PCT/US98/17623<br><br><b>(22) International Filing Date:</b> 26 August 1998 (26.08.98)<br><br><b>(30) Priority Data:</b><br><table border="0"> <tr> <td>60/056,389</td> <td>26 August 1997 (26.08.97)</td> <td>US</td> </tr> <tr> <td>60/075,340</td> <td>20 February 1998 (20.02.98)</td> <td>US</td> </tr> <tr> <td>09/121,916</td> <td>24 July 1998 (24.07.98)</td> <td>US</td> </tr> </table><br><b>(71) Applicant:</b> GALAXY SCIENTIFIC CORPORATION<br>[US/US]; Building 11, 2500 English Creek Avenue,<br>Pleasantville, NJ 08232 (US).<br><br><b>(72) Inventor:</b> WEINSTEIN, Edward, M.; 23 Harbour Lane,<br>Margate, NJ 08402 (US).<br><br><b>(74) Agents:</b> GOWDEY, Peter, W. et al.; Cushman Darby &<br>Cushman Intellectual Property Group of Pillsbury Madison<br>& Sutro, 1100 New York Avenue, N.W., Washington, DC<br>20005 (US). |                             | 60/056,389                                                                                                                                  | 26 August 1997 (26.08.97) | US | 60/075,340 | 20 February 1998 (20.02.98) | US | 09/121,916 | 24 July 1998 (24.07.98) | US | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR,<br>BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE,<br>GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ,<br>LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,<br>MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,<br>TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent<br>(GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent<br>(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent<br>(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT,<br>LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI,<br>CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>Without international search report and to be republished<br/>         upon receipt of that report.</i><br><br><div style="text-align: center;"> <p>This Sheet Has Been Replaced</p> </div> |
| 60/056,389                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 26 August 1997 (26.08.97)   | US                                                                                                                                          |                           |    |            |                             |    |            |                         |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 60/075,340                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20 February 1998 (20.02.98) | US                                                                                                                                          |                           |    |            |                             |    |            |                         |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 09/121,916                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 24 July 1998 (24.07.98)     | US                                                                                                                                          |                           |    |            |                             |    |            |                         |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**(54) Title:** EXPLOSION RESISTANT ASSEMBLY INCLUDING MUTUALLY ENGAGEABLE FLANGES**(57) Abstract**

A lightweight explosion-mitigating assembly including at least a containment structure and a door is disclosed. The containment structure and door each include at least one set of engagement flanges. The flanges are movable between an interlocking arrangement and a non-interlocking arrangement. In the non-interlocking arrangement, the flanges are sufficiently relatively operatively free from each other to permit movement of the door relative to the containment structure between open and closed positions. On the other hand, in the interlocking arrangement, the door is in the closed position and the flanges are both mutually engageable and slidable relative to each other into mutual engagement and out of mutual engagement. When mutually engaged, the containment-structure flange and the door flange are not pivotable relative to each other between the interlocking and non-interlocking arrangements, yet sliding movement of the flanges relative to each other out of mutual engagement permits at least one of the containment-structure flange and the door flange to be moved relative to each other between the interlocking and non-interlocking arrangements. This structure may be lightweight, especially when elongated flanges are used, and does not rely on the bending stiffness of the structure to mitigate explosive forces.