

Title (en)  
Method and apparatus for spraying a metered quantity of a semi-liquid product.

Title (de)  
Verfahren und Vorrichtung zur Zerstaubung von einer bestimmten Menge halbflüssigen Materials.

Title (fr)  
Procédé et appareil pour la pulvérisation d'une quantité prédéterminée d'un produit semi-liquide.

Publication  
**EP 0000610 A1 19790207 (EN)**

Application  
**EP 78200113 A 19780720**

Priority  
US 82050877 A 19770801

Abstract (en)  
Spray dispensing of a metered quantity of a preferably semi-liquid product from a filled container having a fixed wall (28) provided with at least one and preferably a plurality of generally open and unobstructed discharge passageways (30). A moveable wall (32) spaced apart from the fixed wall (28) is impacted with a moving mass to induce a pressure pulse in the product sufficient to surge a metered quantity of product less than the entire content of the container through the generally open and unobstructed discharge passageways (30) with sufficient velocity as to break away from the passageways (30) and the remaining product within the container for ballistic travel generally normal the fixed wall (28) outwardly of the container. A plurality of uniform discharge passageways (30) and a proper match of product formulation and energy input produces a generally uniformly moving cluster of generally uniformly defined and moving particles.

IPC 1-7  
**B05B 11/00**; **A45D 34/00**; **A47K 5/12**; **A61M 11/00**; **B05B 17/04**

IPC 8 full level  
**A45D 34/00** (2006.01); **A47K 5/12** (2006.01); **B05B 11/00** (2006.01); **B05B 11/02** (2006.01); **B05B 9/04** (2006.01); **B05B 17/06** (2006.01); **B05B 1/18** (2006.01)

CPC (source: EP US)  
**A45D 34/00** (2013.01 - EP US); **A47K 5/1202** (2013.01 - EP US); **B05B 11/02** (2013.01 - EP US); **B05B 11/1092** (2023.01 - US); **B05B 17/06** (2013.01 - US); **B05B 1/083** (2013.01 - EP); **B05B 1/18** (2013.01 - EP US); **B05B 11/1092** (2023.01 - EP)

Cited by  
DE3733523A1; NL1008999C2; US10487548B2

Designated contracting state (EPC)  
BE CH DE FR GB NL SE

DOCDB simple family (publication)  
**EP 0000610 A1 19790207**; **EP 0000610 B1 19810211**; AU 3848378 A 19800207; AU 517272 B2 19810716; BR 7804939 A 19790306; CA 1096823 A 19810303; DE 2860468 D1 19810326; ES 472219 A1 19790316; GR 70690 B 19821220; IT 7826349 A0 19780731; JP S5463583 A 19790522; MX 145624 A 19820316; PH 16206 A 19830805; US 4167245 A 19790911

DOCDB simple family (application)  
**EP 78200113 A 19780720**; AU 3848378 A 19780731; BR 7804939 A 19780801; CA 308426 A 19780731; DE 2860468 T 19780720; ES 472219 A 19780731; GR 780156903 A 19780731; IT 2634978 A 19780731; JP 9408778 A 19780801; MX 17436878 A 19780731; PH 21432 A 19780727; US 82050877 A 19770801