

Title (en)  
Plate freezer loading and unloading device.

Title (de)  
Besckickungs- und Entleerungsvorrichtung für einen Plattengefrierapparat.

Title (fr)  
Dispositif de chargement et de déchargement pour surgélateur à plaques.

Publication  
**EP 0399883 A1 19901128 (FR)**

Application  
**EP 90401334 A 19900518**

Priority  
FR 8906641 A 19890522

Abstract (en)  
Plate freezer loading device comprising a conveyor (12) making it possible to bring the products to be frozen in front of the plates (10) and to the level of the latter, and a pusher (14) making it possible to transfer the products by translation from the conveyor onto the plates, said pusher being connected to pusher chains (16) which are in engagement with driving pinions (18). <??>In order to be able to exert a strong and controlled force by means of the loading device, without having to overdimension its members, use is made of chains (16) with short links so that they can wind around pinions (18) and are in engagement with these over a quadrant approximately, and the pinions are fixed to a shaft (22) which can be driven in rotation by a motor/reduction gear/brake group (26) mounted in a floating manner on said shaft and comprising a torque recovery arm connected to the chassis of the freezer by a dynamometer (28). <IMAGE>

IPC 1-7  
**F25D 25/04; F25D 31/00**

IPC 8 full level  
**F25D 13/06** (2006.01); **B65G 1/04** (2006.01); **F25D 25/04** (2006.01); **F25D 31/00** (2006.01)

CPC (source: EP US)  
**F25D 25/04** (2013.01 - EP US); **F25D 31/001** (2013.01 - EP US)

Citation (search report)

- [A] GB 2053831 A 19810211 - BABCOCK SAMIFI SPA
- [A] FR 981511 A 19510528
- [A] DE 2012615 A1 19700924
- [A] GB 1359211 A 19740710 - JACKSTONE FROSTER LTD
- [A] GB 2182761 A 19870520 - BABCOCK SAMIFI SPA
- [A] FR 2531522 A1 19840210 - BABCOCK SAMIFI SPA [IT], et al
- [A] US 2808921 A 19571008 - KNOWLES FRANK W
- [A] US 1680441 A 19280814 - ADAMS CHARLES A

Cited by  
CN104890961A

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