

Title (en)
Method and apparatus for the supply and storage of cans

Title (de)
Verfahren und vorrichtung zum zuführen und abstellen von kannen

Title (fr)
Procédé et appareil pour l'approvisionnement et le stockage de pots

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Application
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Abstract (en)

[origin: EP0953535A2] The movement of sliver cans, where empty cans are taken to a filling station and full cans are placed in a magazine. A given number of empty cans are placed on a carrier in the empty can magazine, the cans are passed to the filling point from the carrier and, when full, are transferred to a free carrier at the full can magazine. When the carrier is loaded with a given number of full sliver cans, the carrier is moved out of the magazine. The can carrier is locked in place at the empty and/or full can magazines. The carrier with the empty sliver cans is initially moved into a parked position at the empty can magazine, before it is positioned for the cans to be taken separately for filling and/or the can carrier at the full can magazine is taken from the reception position where the full cans are deposited in sequence into a ready position to be taken away. The cleared can carrier at the empty can magazine is moved across the direction of feed and takeoff, for transfer into the full can magazine to be loaded with full sliver cans. An Independent claim is included for a sliver can handling assembly with a feed at the empty can magazine (3) to move the cans (2) separately from the can carrier (5) to the filling station (1). The cleared can carrier (5) is carried across from the empty can magazine to the full can magazine (4), by lifting the carrier across or through a transfer movement where the carrier is not turned. Preferred Features: Locking systems are at the empty (3) and/or full (4) can magazines to secure the can carriers (5). The carrier transfer system is under the can carrier (5). The empty can magazine (3) has at least one parking surface (31) to take empty cans (2) and carrier (5), and a feed surface (32) to transfer the empty cans (2) to the filling station (1) and/or the full can magazine (4) has a holding surface (40) to take the filled cans (20) and a pickup surface (42) to load a carrier (5) with the full cans (20) to be carried onwards. The holding surfaces (31,32,40,41) of the empty (3) and full (4) can magazines are next to each other. A wedge extends as far as the parking surface (31), with the empty can (2) away from the filling station (1) brought against it as the can carrier (5) is moved from the parking surface (31) to the feed surface (32). The carrier transfer extends over a reduced total surface of the adjacent can holding surfaces of the magazines. When it is moved in one direction, it does not act on the carriers. On movement in the other direction, it collects all the carriers present in its movement range to transfer empty carriers from the empty can magazine (3) to the full can magazine (4). The can carrier (5) is a trolley, with at least one roller aligned in the direction of travel. The transfer system has a lifter to raise at least one end of the carriers away from the aligned roller, especially through an inflatable hose. The can carrier (5) has holders to align the sliver cans (2,20) in rows. The carriers have non-slip surfaces. Common guides, for both magazines (3,4), are parallel to the movement path of the carrier transfer, to ensure the relative positions of the can carriers (5) during their movement phases. The carrier transfer system has adjustable locks to hold them in place. The empty can magazine (3) has an adjustable guide, matching the width of a can carrier (5), to lead the carrier into the magazine. The two magazines (3,4) have monitors to ensure that a can carrier (5) can only be moved from the empty can magazine (3) when there is a free space at the full can magazine (4) and the loaded carrier has been moved away. The can filling station (1) has a can exchange mechanism to take a can from the feed and/or move a filled can into the full can magazine (4).

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Citation (search report)

- [XY] US 5471711 A 19951205 - KOVACS OTMAR [DE], et al
- [YA] US 5276947 A 19940111 - FRITSCHI ISIDOR [CH], et al
- [A] US 5634316 A 19970603 - LEIFELD FERDINAND [DE]
- [A] US 5729868 A 19980324 - LIEDGENS HANS-PETER [DE], et al
- [A] US 4227848 A 19801014 - KRIECHBAUM KURT, et al

Cited by
CN102115924A; CN107337030A

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