

Title (en)  
STORAGE DEVICE

Publication  
**EP 0290731 B1 19930728 (DE)**

Application  
**EP 88103427 A 19880305**

Priority  
CH 177887 A 19870511

Abstract (en)  
[origin: US4871125A] Objects (1) to be stored are fed between two rollers (9, 10) to a belt (2) taken off from a belt coil (5) of a belt reel (6) and wound up therewith (2), forming a storage coil (7), onto a storage reel (3). For the delivery of previously stored objects (1a), the belt (2) is taken off therewith (1a) from the storage coil (7), the objects separate from the belt (2) upon leaving the roller pair (9, 10), the belt (2) being rewound onto the belt coil (b 5). The reels (3, 6) are displaceably mounted; their coils (5, 7) are each supported on a fixedly mounted backing roller (12, 13). For driving the device, the backing rollers (12, 13) can be rotated at coincident peripheral speeds, or respectively one backing roller (12, 13) can be rotated by pulling off the belt (2) from the coil (5, 7) carrying same and the rotation of that backing roller can be transmitted to the other backing roller, or respectively one of the reels (3, 6) can be rotated by pulling off the belt (2) from its coil (5, 7) and the rotation of such reel can be transmitted to the other reel by means of an infinitely variable gear system (42, 43, 46, 47, 51-54, 57-60) in such a way that the peripheral speeds of both coils coincide. In this way, a belt, storage, and delivery speed at constant belt speed is attained which is independent of the respective diameters of the coils.

IPC 1-7  
**G07D 9/00**

IPC 8 full level  
**B65H 18/00** (2006.01); **B65H 5/28** (2006.01); **B65H 20/36** (2006.01); **B65H 29/00** (2006.01); **B65H 29/51** (2006.01); **G07D 9/00** (2006.01); **G07D 11/00** (2006.01); **G07F 11/68** (2006.01)

CPC (source: EP US)  
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Citation (examination)  
IBM TECHNICAL DISCLOSURE BULLETIN, Band 15, Nr. 12, Mai 1973, Seite 3609, New York, US; J.M. SPENCE: "Security cash register"

Cited by  
EP0953533A1; US5628258A; AU754143B2; DE10160585A1; DE19522998A1; DE19706130C1; DE102017113731A1; DE19858350A1; US6164585A; DE19961075A1; EP1108666A3; EP1243537A1; CN102918570A; DE19706131A1; DE19706131C2; US8297547B2; US10224370B2; US9972778B2; WO9836384A1; US9016611B2; US10096653B2; WO0036567A1; WO9805007A1; WO2011012216A1; WO9836385A1; US6186339B1; US7654485B2; US6199856B1; US7014188B2; US6234475B1; US10910561B1; US10290801B2; US10968064B2; WO0052649A1; WO0020314A1; WO9935619A1

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