

## Title (en)

Cable type window winder with simplified kinematic chain and electrical or manual drive.

## Title (de)

Seilfensterheber mit vereinfachter, kinematischer Kette und elektrischem oder manuellem Antrieb.

## Title (fr)

Lève-vitre à câble avec chaîne cinématique simplifiée et commande électrique ou manuelle.

## Publication

**EP 0653538 A3 19950823 (EN)**

## Application

**EP 94500179 A 19941111**

## Priority

ES 9302365 A 19931112

## Abstract (en)

[origin: EP0653538A2] The invention relates to a window winder with an closed cable-type, kinematic chain (6) of great simplicity as regards its components and their arrangement, in which all the traditional items for guiding, driving or tensing the cable have been eliminated, as have the supports and parts which are welded or riveted together, all of which makes for great ease of construction, which can be performed simply, practically automatically, with the consequent very considerable saving in time and, therefore, in manufacturing cost. Moreover, a very compact unit is presented, especially in the simple electrical version, which becomes a single item secured to the vehicle door by tightening three nuts which have been previously arranged on the corresponding bolts or screws fastened to it, thus making the assembly operation extremely easy, being extended to its use in a double rail by simply duplicating its kinematic chain and adding the synchronizing element between both. There is a rail or guide element (1) along which a drive slide (2) moves. The rail is equipped with a set of end supports and the drive slide is connected to a steel cable (6) which travels through these supports, with the ends of the cable converging at a tensioner drum (5) mounted on the rail. <IMAGE>

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**E05F 11/48**

## IPC 8 full level

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## CPC (source: EP)

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## Citation (search report)

- [A] DE 3220431 A1 19831006 - NIPPON CABLE SYSTEM INC [JP]
- [A] DE 3740579 A1 19880728 - CARTO METALURGICA [BR]
- [A] DE 3136890 A1 19830421 - HUELSBECK & FUERST [DE]
- [A] FR 2385869 A1 19781027 - SESSA T [IT]
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## Cited by

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## DOCDB simple family (application)

**EP 94500179 A 19941111**; DE 69421361 T 19941111; ES 9302365 A 19931112; ES 94500179 T 19941111