

Title (en)  
MANHOLE COVER.

Title (de)  
SCHACHTABDECKUNG.

Title (fr)  
DISPOSITIF DE FERMETURE DE PUITS.

Publication  
**EP 0433410 B1 19931027 (DE)**

Application  
**EP 90908928 A 19900618**

Priority  
CH 258489 A 19890711

Abstract (en)  
[origin: WO9100942A1] The invention concerns a manhole cover with a frame (1) and a grating (3) or cover fitting flush with the frame (1). In order to secure the grating (3) or cover in such a way that it can be easily removed and put back in place, a cone-piece securing element (4a) made of spring steel is attached to the frame (1), the securing element (4a) having a locking element (7) at the end of a clip-like retaining element (6) extending upwards at an angle. The locking element (7) engages against a surface (9) at the bottom of a recess (8) in the surface of the grating (3) or cover. To unlock the manhole cover, the locking element (7) can be pulled away from the surface (9) with a special tool, e.g. pair of pliers, the retaining element (6) being bent back elastically. The securing element (4a) is mounted on the frame (1), embracing shoulders (5a, 5b) so that it is secured by a snap-action connection. The securing element can also be attached to the cover or grating and engage against a surface on the frame.

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**E02D 29/14; E03F 5/06**

IPC 8 full level  
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CPC (source: EP US)  
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Cited by  
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**WO 9100942 A1 19910124;** AT E96485 T1 19931115; AU 5746890 A 19910206; AU 636355 B2 19930429; BR 9006850 A 19910806;  
CA 2035884 A1 19910112; CH 678639 A5 19911015; DD 296520 A5 19911205; DE 59003244 D1 19931202; DK 0433410 T3 19931227;  
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ES 90908928 T 19900618; IE 250190 A 19900710; PT 9466690 A 19900711; US 65140091 A 19910417