

Title (en)

# SAFETY DEVICE FOR CRANES

Publication

**EP 0406419 A4 19911127 (EN)**

Application

**EP 89904237 A 19890406**

Priority

- JP 8900368 W 19890406
- JP 33019788 A 19881227

Abstract (en)

[origin: EP0614845A2] A crane safety apparatus for displaying a schematic diagram of a part of a crane mechanism on a two-dimensional screen dynamically as the crane mechanism is operated, and displaying on the same screen a predetermined operation zone as a visually discriminative zone pattern. The operation zone pattern is displayed on the screen in response to the key command by an operator during a selected crane operation mode, while referring to the schematic crane mechanism diagram currently displayed on the screen. <IMAGE>

IPC 1-7

**B66C 13/46; B66C 23/90**

IPC 8 full level

**B66C 13/18** (2006.01); **B66C 13/46** (2006.01); **B66C 15/00** (2006.01); **B66C 23/88** (2006.01); **B66C 23/90** (2006.01)

CPC (source: EP KR)

**B66C 13/46** (2013.01 - KR); **B66C 23/90** (2013.01 - KR); **B66C 23/905** (2013.01 - EP)

Citation (search report)

- [X] WO 8505614 A1 19851219 - PIETZSCH LUDWIG GMBH & CO [DE]
- [X] US 4752012 A 19880621 - JUERGENS DIETER [US]
- [X] EP 0008210 A1 19800220 - EATON CORP [US]
- [A] GB 2050294 A 19810107 - COLES CRANES LTD

Cited by

FR2720438A1; EP0539207A1; US8538670B2

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

**EP 0406419 A1 19910109; EP 0406419 A4 19911127; EP 0406419 B1 19950628; EP 0406419 B2 20020828;** AT E124381 T1 19950715; AT E185772 T1 19991115; AU 5629990 A 19920109; AU 618900 B1 19920109; DE 68923278 D1 19950803; DE 68923278 T2 19951026; DE 68923278 T3 20040805; DE 68929092 D1 19991125; DE 68929092 T2 20000608; DE 68929092 T3 20050120; EP 0614845 A2 19940914; EP 0614845 A3 19941026; EP 0614845 B1 19991020; EP 0614845 B2 20040512; KR 910700194 A 19910314; KR 940009268 B1 19941006; RU 2093452 C1 19971020; WO 9007465 A1 19900712

DOCDB simple family (application)

**EP 89904237 A 19890406;** AT 89904237 T 19890406; AT 94201063 T 19890406; AU 5629990 A 19900605; AU 5629990 D 19900605; DE 68923278 T 19890406; DE 68929092 T 19890406; EP 94201063 A 19890406; JP 8900368 W 19890406; KR 900701879 A 19900824; SU 4830987 A 19890406