

Title (en)
MULTI-HEIGHT HYDRAULIC PIT PROP.

Title (de)
MEHRSTUFIGER HYDRAULISCHER GRUBENSTEMPEL.

Title (fr)
ETANCON HYDRAULIQUE A PLUSIEURS ETAGES.

Publication
EP 0491882 B1 19940921

Application
EP 91905621 A 19910312

Priority
• DE 4023451 A 19900724
• EP 9100459 W 19910312

Abstract (en)
[origin: WO9201858A1] The multi-height pit prop proposed comprises an outer tube (1) fitted with a foot (4), a central piston rod (3) fitted with a head (6), an inner tube (2) with a floor (5) and guide bushes (12 and 13) located at the head end of the outer tube (1) and inner tube (2), respectively. In order to increase the scope of utility of the pit prop, the foot (4) and the head (6) are fitted detachably to the outer tube (1) and inner tube (2), respectively. To set up the pit prop, the foot (4) of the outer tube and the floor (5) of the inner tube are removed and the inner tube (2) and piston rod (3) pushed out through the hole in the floor of the outer tube (1) and inner tube (2), respectively. The guide bushes (12, 13) are integral components of the outer and inner tubes (1, 2).

IPC 1-7
E21D 15/51

IPC 8 full level
E21D 15/44 (2006.01); **E21D 15/51** (2006.01)

CPC (source: EP)
E21D 15/44 (2013.01)

Designated contracting state (EPC)
BE DE FR GB

DOCDB simple family (publication)
WO 9201858 A1 19920206; DE 59103043 D1 19941027; DE 9116604 U1 19930311; EP 0491882 A1 19920701; EP 0491882 B1 19940921; PL 294208 A1 19930208

DOCDB simple family (application)
EP 9100459 W 19910312; DE 59103043 T 19910312; DE 9116604 U 19910312; EP 91905621 A 19910312; PL 29420891 A 19910312