Title (en)
   CIRCULAR HEADING MACHINE

Publication
   EP 0153935 B1 19880107 (EN)

Application
   EP 84903078 A 19840817

Priority
   GB 8322467 A 19830820

Abstract (en)
   [origin: WO8501081A1] Circular heading machines for excavating tunnels by advancing a machine in step-wise fashion and erecting tunnel
   supports. The circular heading machine has an elongate machine body (10) at the forward end of which a forwardly directed cutter boom (11) is
   mounted, rams advance the machine body in step-wise fashion acting against grippers (23) and a profile ring (18, 18') limits peripheral movement of
   the cutter boom to form an accurate profile. A gathering apron (16) is provided at the forward extremity of the machine body. The cutter boom (10)
   is mounted on a sliding carriage (12) longitudinally movable on and independently of the machine body and a hood (17) overlies the apron. A cage
   structure (21) extends rearwardly from the hood structure and surrounds the boom cutter (11) and sliding carriage (12) and tunnel support erecting
   means (20) are provided externally of the cage structure, directly behind the hood structure. Thus the tunnel support structures are erected over the
   machine body rather than behind the machine, and also erection of the tunnel support structures takes place simultaneously with operation of the
   cutter. The hood (17) is a semi-circular member supported by hydraulic rams (17A) for height adjustment.

IPC 1-7
   E21D 9/10; E21D 9/08; E21D 11/40

IPC 8 full level
   E21D 9/08 (2006.01); **E21D 9/10** (2006.01); **E21D 11/40** (2006.01)

CPC (source: EP)
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   DE 3468480 D1 19880211; EP 0153935 A1 19850911; EP 0153935 B1 19880107; ES 535264 A0 19850601; ES 8505761 A1 19850601;
   GB 2145134 A 19850320; GB 2145134 B 19870204; GB 8322467 D0 19830921; IN 161662 B 19880109; IT 1179051 B 19870916;
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   JP 50313184 A 19840817; MX 20242484 A 19840817; ZA 846294 A 19840814