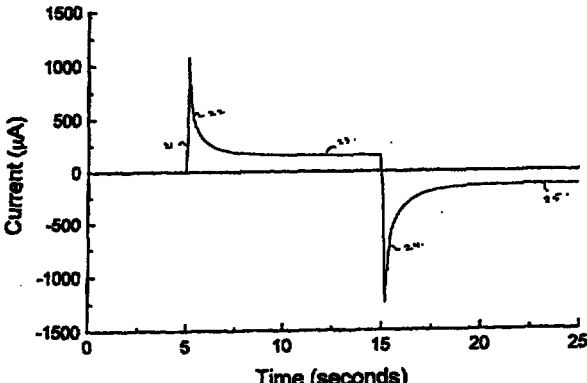
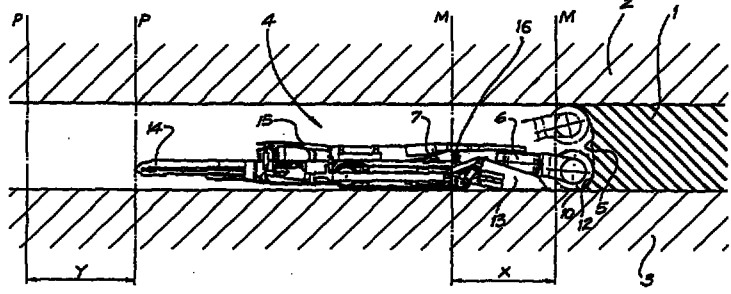


G01N

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 (57) Abstract A method for determining the concentration of a reduced or oxidized form of a redox species in an electrochemical cell of the kind comprising a working electrode and a counter electrode spaced from the working electrode such that reaction products from the counter electrode arrive at the working electrode, the method comprising the steps of applying (21) an electric potential between the electrodes, such that the electro-oxidation of the redox species is diffusion controlled, determining the current as a function of time, estimating the magnitude of the steady state current (23), reversing the potential, again determining current as a function of time and estimating the reverse potential steady state (25).		

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 (57) Abstract A mining machine (4) has a vertically movable jib (6) mounted in front of it and carrying a drum shaped drilling head (12) at its forward end. The drilling head is provided with radially projecting picks which rip coal out of a coal seam (1) located between an underburden (3) and an overburden (2). A forward-facing directional microphone (16) is mounted on the forward end of the machine (4) between the lines M where it can monitor the resonant frequencies of the picks. Electrical circuitry mounted on the machine controls the position of the jib (6) in accordance with the relative amplitudes of a unique set of natural resonant frequencies produced by the picks during mining.		