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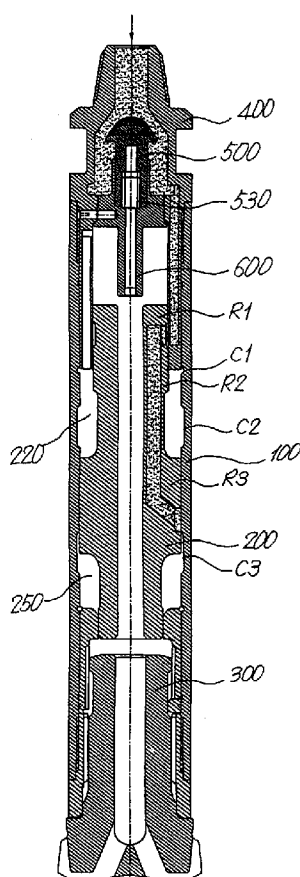
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(54) Title: A GROUND DRILLING HAMMER AND THE DRIVING METHOD



(57) Abstract: Disclosed herein is a pneumatic operated hammer for rock drilling, the hammer comprising a cylindrical casing, a back head mounted at an upper portion of the casing, a check valve for opening/closing a compressed air passageway in the casing, a guide for supporting the check valve, a piston adapted to ascend and descend with compressed air in the casing, and a button bit for performing a drilling work through the striking of the piston. The piston is extended to a certain length to conform to the work condition of the pneumatic hammer to thereby prevent a water back-flow phenomenon in which underground water, etc., is introduced into the drilling equipment during the drilling work, compressed air passageways and variable compressed air chambers are formed between the piston and the casing so that when the piston ascends by the compressed air, it abruptly ascends at a load-free state, and the piston has axial portions with a reference diameter and different outer diameters so that it is possible to manufacture a hammer bit having a plurality of variable compressed air chambers formed between the casing the piston to fit for the work capacity. The piston ascended in a load-free state strikes the button bit with its rapid and strong striking force produced by the compressed air supplied from the variable chambers while abruptly descending to thereby perform the drilling work.



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